

NEW HAMPSHIRE RENEWABLE ENERGY FUND

ANNUAL REPORT

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Submitted to:

THE LEGISLATIVE OVERSIGHT COMMITTEE
ON ELECTRIC UTILITY RESTRUCTURING

Representative David Borden, Chair

THE SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

Senator Russell Prescott, Chair

THE HOUSE SCIENCE, TECHNOLOGY AND ENERGY COMMITTEE

Representative David Borden, Chair

Overview

This report provides an overview of the Renewable Energy Fund (REF) established pursuant to RSA 362-F, New Hampshire's Renewable Portfolio Standard (RPS) law and managed by the Public Utilities Commission (Commission), as well as information about renewable energy facilities whose electricity production is "net metered" pursuant to RSA 362-A:9. The report is filed annually as required by RSA 362-F:10, IV.

The REF is a dedicated, non-lapsing fund whose purpose is to support electrical and thermal renewable energy initiatives, pursuant to RSA 362-F:10, I. Electricity suppliers must obtain renewable energy certificates (RECs) for set percentages of their electric load, as required by the RPS statute. A REC represents a megawatt-hour (MWh) of electricity or an equivalent amount of thermal energy (3,412,000 Btu), generated from a renewable generation source.

There are four classes of renewable energy resources as defined by RSA 362-F:4, and electric suppliers must obtain RECs for each of the four classes.¹ In 2012, the RPS law was amended pursuant to SB 218 to add a subclass to Class I for renewable thermal energy. If electricity suppliers cannot or choose not to purchase or obtain sufficient RECs to comply with the RPS law, they make alternative compliance payments (ACPs) to the REF. ACPs are the sole source of funding for the REF. Total ACPs fluctuate from year to year, depending on the price and availability of RECs in the regional market (made up of CT, RI, MA, ME and NH). The revenue received for 2012, by class and by company, is found below in Table 2.

Pursuant to RSA 362-F:10, the Commission uses the REF to fund rebate and grant programs covering a range of thermal and electrical renewable technologies. Programs serve both the residential and non-residential sectors.

The statute mandates one-time incentive payments or rebates for small residential renewable generators (RSA 362-F:10, V). It also authorizes further rebate and grant programs for renewable thermal and electric energy projects (RSA 362-F:10, VIII). For all rebates and grants, the project funded must be located in New Hampshire. A summary of these rebate programs is found below in Table 4. Results of all rebate programs are found below in Tables 5 and 6.

The statute also mandates an annual RFP for competitive grant awards to renewable projects in the non-residential sector (RSA 362-F:10, XI). A summary of the grants awarded in 2011 and 2012 is found below in Table 7. A review of 2013 grant proposals is currently underway and it is anticipated that a new round of grant awards will be made in October, 2013, subject to approval by Governor Hassan and the Executive Council.

This report documents REF revenues for calendar year 2012 compliance and expenditures, and program activities during state fiscal year 2013.

REF program budgets and program expenditures in FY13 are presented in Tables 8 and 9.

¹ Class I resources include renewable energy sources that began operation after January 1, 2006 and include 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 I includes a subcategory for useful thermal energy, per amendment to RSA 362-F:3, enacted in 2012. Class II sources include generation facilities that produce electricity from solar technologies and began operation after January 1, 2006. Class III sources include existing landfill methane gas facilities and eligible biomass facilities that began operation on or before January 1, 2006. Class IV sources include qualified hydroelectric facilities that began operation on or before January 1, 2006.

Looking forward, Table 11 shows how ACP funds are allocated between the residential and non-residential sectors in FY14. Lastly, data on net metered renewable energy systems in New Hampshire can be found in Table 12.

REF Revenues and Administrative Costs

ACPs from electric service providers are made annually on or about July 1, in concert with annual RPS compliance reports filed with the Commission, for the prior calendar year. Thus, ACPs for 2012 should be remitted by June 30, 2013. Entities paying ACPs include New Hampshire’s electric utilities as well as competitive electric suppliers. Table 2, below, lists the utilities and energy suppliers who filed compliance reports for calendar year 2012 and documents each company’s total ACP payments, and further breaks down these payments by renewable energy class. Where no revenue appears for a class, it is because the company obtained RECs to satisfy its obligation for that class.

ACP REF revenues, by due date, have been:

TABLE 1 – ACP REVENUES BY YEAR

| | |
|-----------------------|---------------------------------|
| July 2009 for CY 2008 | \$ 4,483,917 |
| July 2010 for CY 2009 | \$ 1,348,294 |
| July 2011 for CY 2010 | \$ 2,625,499 |
| July 2012 for CY 2011 | \$19,121,853 |
| July 2013 for CY 2012 | \$9,323,198 |
| Total: | <u>\$36,902,761²</u> |

ACP revenues in 2013 (for compliance year 2012) were \$9,323,198, significantly lower than the prior year’s revenue of \$19,121,853. This decline can mainly be attributed to Commission and legislative action to reduce the requirement for Class III RECs. (Class III includes existing biomass power plants and landfill gas-to-energy plants). In 2012 Class III revenues had spiked to \$15.1 million, raising concerns of an imbalance between Class III REC requirements and available Class III REC supplies. As a result, in January, 2013 the Commission opened docket DE 13-021, requesting public comment on whether the Class III REC requirements should be adjusted. In April, 2013 the Commission issued an order sharply reducing the Class III REC requirements for compliance years 2012 and 2013. Specifically, the requirements were reduced from 6.5% to 1.4% for compliance year 2012, and from 6.5% to 1.5% for compliance year 2013. As a direct result, Class III ACPs declined from \$15.1 million in 2012 to \$4.6 million in 2013. In July, the legislature enacted HB 542 and SB 148, both of which amended the RPS law to reduce the Class III REC requirements in compliance years 2012 and 2013 to the same levels as specified by the Commission in its April order. In addition, the legislation reduced the Class III REC requirement for compliance year 2014 from 7% to 3%.

² In June of 2013 the General Court in HB 2 authorized the transfer of \$16.1 million of these revenues to the General Fund. In addition, HB 2 authorized the transfer of \$533,000 to the Office of Energy and Planning, \$500,000 to Tri-County Community Action Agency, and \$250,000 to the Department of Administrative Services for a revolving loan fund for Tri-County. Another \$400,000 was authorized to be transferred from these revenues to the Office of Energy and Planning, pursuant to SB 99 and SB 191. Thus total revenues to the Renewable Energy Fund were effectively reduced from \$36,902,761 to \$19,119,761.

ACP revenues for Classes I, II and IV all saw increases in 2013. Class I ACPs increased from \$2.3 million in 2012 to \$3 million in 2013; Class II ACPs increased from \$91,000 to \$180,000; and Class IV ACPs increased from \$1.2 million to \$1.46 million.

The ACP revenue received for compliance year 2012, by class and by company, is found below in Table 2.

TABLE 2 - ACP REVENUE FOR COMPLIANCE (CALENDAR) YEAR 2012

| ACP Revenue for Compliance (Calendar) Year 2012 | | | | | |
|---|---------------------|---------------------|-------------------|---------------------|---------------------|
| Company | ACP | Class I | Class II | Class III | Class IV |
| Distribution Utilities | | | | | |
| Liberty Utilities | \$ 298,940 | \$ - | \$ 39,847 | \$ 248,515 | \$ 10,578 |
| NHEC | \$ 311,833 | \$ 52,112 | \$ - | \$ 259,721 | \$ - |
| PSNH | \$ 5,068,922 | \$ 2,256,769 | \$ 4,035 | \$ 2,039,785 | \$ 768,333 |
| Unitil | \$ 561,760 | \$ 136,363 | \$ - | \$ 347,016 | \$ 78,381 |
| Unitil (Green Energy Rate)* | \$ 6,154 | \$ 5,314 | \$ 841 | | |
| Competitive Suppliers | | | | | |
| Competitive Energy/Hannaford | \$ 111,422 | \$ 46,415 | \$ 9,415 | \$ 32,426 | \$ 23,166 |
| Con Ed | \$ 266,509 | \$ 55,441 | \$ 25,051 | \$ 108,515 | \$ 77,502 |
| Constellation | \$ 440,088 | \$ - | \$ - | \$ 440,088 | \$ - |
| Devonshire | \$ - | \$ - | \$ - | \$ - | \$ - |
| ENH | \$ 150,839 | \$ 103,328 | \$ 6,893 | \$ 23,699 | \$ 16,919 |
| FairPoint Energy | \$ 6,128 | \$ - | \$ 1,513 | \$ 2,700 | \$ 1,915 |
| Glacial Energy | \$ 334,166 | \$ 263,570 | \$ - | \$ 70,596 | \$ - |
| Hess | \$ 378,469 | \$ - | \$ - | \$ 288,349 | \$ 90,121 |
| Integrus Energy | \$ 222,634 | \$ 39,756 | \$ - | \$ 179,927 | \$ 2,951 |
| NextEra | \$ 338,478 | \$ - | \$ - | \$ 197,443 | \$ 141,035 |
| Noble America | \$ 13,401 | \$ - | \$ 1,849 | \$ 6,749 | \$ 4,803 |
| North American Power | \$ - | \$ - | \$ - | \$ - | \$ - |
| PNE | \$ 76,962 | \$ 27,209 | \$ - | \$ 35,659 | \$ 14,094 |
| South Jersey | \$ 87,706 | \$ 47,119 | \$ - | \$ 40,148 | \$ 439 |
| Texas Retail/Walmart | \$ 24,456 | \$ 11,075 | \$ 2,018 | \$ 6,623 | \$ 4,740 |
| TransCanada | \$ 624,331 | \$ - | \$ 89,445 | \$ 312,017 | \$ 222,869 |
| Totals** | \$ 9,323,198 | \$ 3,044,471 | \$ 180,907 | \$ 4,639,975 | \$ 1,457,845 |

* Unitil paid ACPs for the green energy rate instead of buying RECs.

**Totals may not add due to rounding.

REF administrative costs to date have been consistently below state budget appropriations:

TABLE 3 – ADMINISTRATIVE EXPENSES, BY YEAR

| Fiscal Year | Appropriation | Actual |
|--------------------|----------------------|------------------|
| 2010 | \$376,735 | \$217,581 |
| 2011 | \$360,326 | \$226,042 |
| 2012 | \$237,594 | \$224,754 |
| 2013 | \$391,670 | \$369,260 |

REF Rebate and Grant Programs

Pursuant to RSA 362-F:10, the Commission administers three residential renewable energy rebate programs, a commercial and industrial renewable energy rebate program, and a competitive grant program for commercial-scale renewable energy projects.

Renewable Energy Rebate Programs

Rebate programs funded by the REF are described below in Table 4.

TABLE 4 – SUMMARY OF RENEWABLE ENERGY REBATE PROGRAMS

| REF REBATE PROGRAMS | Eligible Technologies and capacity limits | Incentive Levels | Authority, date of inception |
|---|---|---|-------------------------------------|
| Residential electrical renewable energy rebate | Solar electric panels (PV systems), wind turbines, and other renewable electric generation up to and including 10 kilowatts | \$.75 per watt up to a maximum of \$3,750 or 50% of the total cost of the facility, whichever is less | RSA 362-F:10, V July 2009 |
| Residential solar hot water rebate | Solar water heating systems w/ capacity of 5.5 MMBtu's or greater | \$1,500, \$1,700, or \$1,900 depending on system capacity | RSA 362-F:10, VIII April 2010 |
| Residential wood pellet boiler/furnace rebate | Bulk-fed wood pellet central furnaces/boilers | 30% of the system cost and installation, or \$6,000, whichever is less | RSA 362-F:10, VIII April 2010 |
| Commercial & Industrial Solar Technologies rebate | PV systems and solar water heating systems up to and including 100 kW or thermal equivalent | \$.80 per watt (A/C) for solar electric systems and \$.07/rated or modeled kBtu/year (\$0.12 per thousand-Btu/year for systems of fifteen collectors or fewer in size) for solar thermal systems and capped at \$50,000 or 25% of the total cost of the facility, whichever is less | RSA 362-F:10, VIII October 2010 |

During FY13 the Commission augmented the wood pellet boiler/furnace rebate program with federal ARRA funds previously provided by the Office of Energy and Planning (OEP) under a memorandum of Agreement (MOA) approved by the Governor and Executive Council in April, 2010. Total funding through the MOA was \$600,000, with the final \$139,161 distributed to rebate applicants during the first quarter of FY13. Since that time the rebate program has continued to operate with funding provided solely by ACP revenues to the Renewable Energy Fund.

Program results for the REF rebate programs in FY13 are summarized below in Table 5.

TABLE 5 – REF REBATE PROGRAM RESULTS FOR FY13

| REF Rebate Program | # of applications | # rebates awarded ³ | Rebate funds disbursed | Average rebate award |
|--|-------------------|--------------------------------|------------------------|----------------------|
| Residential PV/Wind | 235 | 234 | \$830,845 | \$3,551 |
| Residential Solar Water Heating | 58 | 70 | \$109,600 | \$1,570 |
| Residential wood pellet furnace/boiler | 52 | 38 | \$216,391 | \$5,694 |
| C&I solar electric and solar thermal | 59 | 44 | \$607,216 | \$13,800 |
| Totals | 404 | 386 | \$1,764,051 | \$4,570 |

Cumulative results for the rebate programs since their inception are shown below in Table 6.

TABLE 6 – CUMULATIVE REBATE PROGRAM RESULTS

| REF Programs | # of applications | # of rebates awarded | Rebate funds disbursed | Rebate funds reserved or in process | Average rebate award | Aggregate applicant investment |
|--|-------------------|----------------------|------------------------|-------------------------------------|----------------------|--------------------------------|
| Residential PV or wind | 1086 | 945 | \$4,472,502 | \$338,928 | \$4,733 | \$16,424,729 |
| Residential solar water heating | 434 | 405 | \$874,850 | \$24,300 | \$2,160 | \$1,732,526 |
| Residential wood pellet | 168 | 161 | \$789,712 | \$144,243 | \$4,905 | 3,629,374 |
| C & I solar electric and solar thermal rebates | 159 | 103 | \$1,318,472 | \$859,104 | \$12,801 | \$11,294,107 |
| Totals | 1,847 | 1614 | \$7,455,536 | \$1,366,575 | \$4,619 | \$33,080,736 |

³ The number of rebates awarded may exceed the number of rebate applications in instances where payments are made on applications received during the prior fiscal year.

Commercial and Industrial Competitive Grant Program

In 2010, the Legislature amended RSA 362-F:10 to require the Commission to issue an annual Request for Proposals (RFP) for non-residential renewable energy projects that are not eligible to participate in incentive and rebate programs developed under RSA 362-F:10, V and RSA 362-F:10, VIII.

Accordingly, the Commission has issued RFPs for renewable energy projects annually in 2011, 2012 and 2013. Five grants were awarded in 2011 and seven in 2012.

Below is a summary table of the grants awarded in 2011 and 2012.

TABLE 7 – COMPETITIVE GRANTS 2011-2012

| Grantee/Year | Grant Amount | Technology | Grant expenditures to date | Total Project Cost |
|--|--------------|---|----------------------------|--------------------|
| Cartographic Associates, Inc. (2012) | \$43,000 | Wood pellet boiler (Littleton) | \$43,000 | \$65,762 |
| Claremont Fire Dept. (2012) | \$52,000 | Wood pellet boiler | \$52,000 | \$65,000 |
| Mascenic Regional School District (2011) | \$51,850 | Wood pellet boiler at Greenville Elementary School | \$51,850 | \$86,883 |
| University of NH (2012) | \$59,750 | Solar hot air system at Kingsbury Hall | \$59,750 | \$119,500 |
| Northeast BioEnergy Systems, LLC (2012) | \$93,000 | Wood chip boiler at elementary school in Rumney | \$0.00 ⁴ | \$372,000 |
| Revolution Energy (2011) | \$100,000 | Photovoltaic array at Favorite Foods, Rochester | \$100,000 | \$728,000 |
| Colby Solar, LLC (2012) | \$100,000 | Photovoltaic array at Colby Sawyer College | \$100,000 | \$474,622 |
| Walker Wellington, LLC (2012) | \$100,000 | Hydrokinetic turbine at Dover wastewater treatment plant | \$99,142 | \$129,000 |
| Monadnock Paper Mills (2011) | \$151,040 | Hydroelectric dam upgrade | \$151,040 | \$151,040 |
| Spaulding Ave. Industrial Complex (2011) | \$165,000 | Hydroelectric facility upgrade | \$165,000 | \$315,000 |
| Sullivan County (2012) | \$300,000 | Wood chip district heating system at Sullivan County Complex | \$300,000 | \$3,180,000 |
| Carbon Harvest Energy (2011) | \$500,000 | Landfill gas-to-energy plant (combined heat and power) in Lebanon | \$183,806 ⁵ | \$6,658,000 |
| Totals | \$1,715,640 | --- | \$1,305,588 | \$5,314,807* |

*This figure does not include project costs for two projects that did not go forward: Carbon Harvest and Northeast Bioenergy Systems.

⁴ This project was canceled after the town's school board declined to approve funding for the new heating system. No grant expenses were incurred prior to the project's cancellation. The grant funds were liquidated and added to the budget for the commercial and industrial solar rebate program.

⁵ Grant funds in the amount of \$183,806 were expended by the Commission in FY12, but in FY13 the developer encountered financial difficulties and was not able to move forward with the project. The remaining funds for this grant were liquidated and added to the budget for the commercial and industrial solar rebate program.

The Commission issued its third annual RFP for renewable energy projects on May 6, 2013. Thirty five grant proposals requesting a total of \$21 million were submitted to the Commission. The grant review process is nearing completion and is anticipated that a new round of grants will be awarded in October, 2013, subject to the approval of Governor Hassan and the Executive Council.

REF Program Budgets, Expenditures and Current Balance

The Commission’s state appropriation for the REF for Fiscal Year 2013 (July 1, 2012 – June 30, 2013) was \$5,667,120. Funds for rebate and grant programs, net of administrative expenses, totaled \$4,733,271 and were allocated between the residential and non-residential (commercial and industrial) sectors as follows:

Residential sector: \$1,940,641
Non-residential: \$2,792,630

Budgets for the rebate and grant programs are shown below in Tables 8 and 9.

TABLE 8 – FY 13 REF REBATE AND GRANT PROGRAM BUDGETS

| REF PROGRAM | FY13 Program Budget | FY13 Program Expenditures | Program Balances as of June 30, 2013 | Funds encumbered for FY 14 |
|------------------------------------|---------------------------|---------------------------|--------------------------------------|----------------------------|
| Residential PV/wind | \$1,290,641 ⁶ | \$830,845 | \$459,796 | \$396,891 |
| Residential solar hot water | \$200,000 ⁷ | \$109,600 | \$90,400 | \$20,500 |
| Residential wood pellet | \$450,000 | \$216,391 | \$233,609 | \$75,819 |
| C & I Solar (photovoltaic & solar) | \$1,351,105 ⁸ | \$607,216 | \$5,692 | \$738,197 |
| C & I RFP ⁹ | \$1,790,525 ¹⁰ | \$0.00 | \$1,790,525 | \$1,790,525 |
| Totals | \$5,082,271 ¹¹ | \$1,764,051 | \$2,580,022 | \$3,021,932 |

TABLE 9 – ARRA REBATE PROGRAM SUMMARY FOR FY13

| ARRA PROGRAM | FY13 Program Budget | FY13 Program Expenditures | Program Balances as of June 30, 2013 |
|-------------------------|---------------------|---------------------------|--------------------------------------|
| Residential wood pellet | \$150,773 | \$139,161 | \$11,612 |

⁶ The budget for this program was initially \$1,040,641. In April, 2013 the budget was increased by \$250,000 to \$1,290,641 due to strong program demand.

⁷ The budget for this program was initially \$450,000. In April, 2013 the budget was decreased by \$250,000 to \$200,000 because the program was undersubscribed.

⁸ The budget for this program was initially \$300,000. In April, 2013 the budget was increased by \$702,105 to \$1,002,105. Later that month the budget was increased a second time, by \$349,000, using grant funds that had been awarded in FY12 but were liquidated when the grant projects did not go forward, for a new budget of \$1,351,105.

⁹ Encumbered funds for prior year C&I RFPs are not included.

¹⁰ The budget for this program was initially \$2,492,630. In April, 2013, the budget was reduced by \$702,105 to provide funds needed for the C & I Solar program.

¹¹ Total funding of \$4,733,271 was increased by \$349,000 in liquidated grant funds. See footnote 7.

Table 10 below documents available funds for grant and rebate programs in FY14, net of transfers, administrative costs, and funds previously encumbered or committed.

TABLE 10 – APPORTIONMENT OF FUNDS FOR FY14

| | |
|----------------|--|
| \$19,156,443 | Prior years' cash balance |
| \$9,323,198 | CY12 ACP payments received in FY13 |
| (\$17,783,000) | Transfers to General Fund, Office of Energy and Planning, Dept. of Administrative Services, and Tri County Community Action Agency, per HB 2, SB 99 and SB 191 |
| \$10,696,641 | FY14 Cash Available to REF programs |
| \$7,838,062 | FY 14 Legislative Appropriation |
| (\$518,501) | FY14 Administrative Costs (budgeted) |
| \$2,665,987 | FY 13 encumbered and committed program funds |
| \$9,960,548 | FY14 Program funds available |
| (\$1,231,407) | Rebates Committed |
| (\$1,846,056) | RFP/Grants Committed |
| \$6,883,084 | FY14 funds available for REF program budgets |
| \$2,200,000 | FY14 funds allocated to residential sector |
| \$4,683,084 | FY14 funds allocated to C & I sector |

Allocation of funding between residential and non-residential sectors

In 2010, the New Hampshire legislature enacted amended RSA 362-F:10,X to require the Commission, *inter alia*, to reasonably balance REF expenditures between the residential and non-residential sectors over each two-year period beginning July 1, 2010, in proportion to each sector’s share of total retail electricity sales. In [SB 218 \(Chapter 272, laws of 2012\)](#), enacted in 2012, the legislature modified this requirement such that the Commission must reasonably balance the amounts expended, **allocated or obligated** during each two year period.

For the two year period ending June 30, 2014, the Commission budgeted REF funds as follows:

TABLE 11 – ALLOCATION BETWEEN RESIDENTIAL AND NON-RESIDENTIAL

| 2011-2012 Retail Sales Ratios | Year One Budgeted (7/1/12-6/30/13) | Year Two Budgeted (7/1/13-6/30/14) | 2 Year Budget average |
|--------------------------------|------------------------------------|------------------------------------|-----------------------|
| Residential 41% | 41% | 32% | 36% |
| Commercial & Industrial 59% | 59% | 68% | 64% |

Funding cap for residential renewable electricity program

RSA 362-F:10, VI places a cap on spending for one of the residential rebate programs in particular: the rebate program for solar electric panels and wind turbines up to and including 10 kilowatts in capacity. No more than 40% of the REF can be allocated to this program, measured over two-year periods commencing July 1, 2010.

In FY 2013, the REF budget for this program was \$1,290,641. This figure represents 27.3% of the \$4,733,271 in REF program funding for FY 2013. The FY14 budget for this program, \$1,500,000, represents 21.8% of the \$6,883,084 in REF program funding for FY14. The combined FY13-FY14 budget for this program totaled \$2,790,641, or 24% of all REF program funds budgeted for FY13 and FY14, well below the 40% cap.

Use of Class II revenues for solar technology incentives

Prior to a recent amendment, RSA 362-F:10, I required that “Class II moneys shall only be used to support solar energy technologies in New Hampshire.” HB542, enacted in July, 2013, modified this requirement such that “Class II moneys shall be used *primarily* to support solar energy technologies in New Hampshire.” For calendar year 2012 ACPs for Class II were received (in July, 2013) in the amount of \$180,907. These funds and many millions more will be budgeted and expended on various REF rebate and grant programs for solar energy technologies.

2013 Legislative Changes to RPS law

In July of 2013, HB 542 and SB 148 were enacted by the General Court, both of which made several changes to the RPS law, among them:

- The restriction that Class II moneys could only be used to support solar energy technologies in New Hampshire was modified to require that the moneys be used *primarily* for such purposes.
- The residential electrical renewable energy program established pursuant to RSA 362-F:10, I was modified by increasing the limit on system capacity from less than 5 kilowatts to 10 kilowatts or fewer.
- Language was added to RSA 362-F:3 to clarify that the RPS law will remain in effect after the year 2025.
- The Class III REC requirement as a percentage of total retail electric sales was reduced from 6.5% to 1.4% in 2012, 6.5% to 1.5% in 2013, and 7% to 3% in 2014.
- Implementation of the new Class I thermal REC requirement was delayed from 2013 to 2014, and the percentage requirements over the following several years were slightly increased, while requirements in later years were decreased, with no net increase over the period 2014 – 2025.
- A legislative RPS Study Committee was established to study various aspects of the state’s RPS program.
- The emissions standards for biomass thermal energy units seeking to qualify for New Hampshire thermal RECs were clarified.

Inclusion of thermal RECs in RPS

When the RPS law was enacted in 2007 its scope applied exclusively to *electrical* renewable energy resources. RSA 362-F:3 was modified in June, 2012, however, to create a Class I subcategory for useful thermal energy and to require electricity suppliers to obtain thermal RECs beginning in 2013. Eligible thermal technologies include biomass, solar hot water or air, and geothermal heating and cooling systems, also known as

ground source heat pumps. The Commission was charged with developing administrative rules to “adopt procedures for the metering, verification, and reporting of useful thermal output.” RSA 362-F:13, VI-a.

In Order 25,484, issued in April 2013, the Commission noted that due to technical challenges with thermal metering standards, the rulemaking required by the statute could not be completed in time to certify facilities for the production of useful thermal energy RECs in 2013. Pursuant to its authority under RSA 362-F:4,V, the Commission delayed the implementation of the thermal REC requirement from January 1, 2013 to January 1, 2014.

The Commission is well along in the process of drafting the required administrative rules. An engineering consultant is providing technical assistance, and the Commission has sponsored a series of three public comment workshops for interested stakeholders. The Commission anticipates final rules will be in place within a timeframe that will allow electricity suppliers to meet their thermal REC requirements for calendar year 2014.

Net Metered Facilities and Allowed Net Metered Capacity

Each utility’s total capacity of net metered facilities is listed in Table 12. The amounts of energy net-metered by each utility are well below the allowed net metered capacity per utility as set forth in RSA 362-A:9, I, with the total installed net metered capacity less than 14% of the allowed capacity.

Table 12 – Total Net Metered Facilities, as of December 31, 2012

Net Metered Facilities - 2012 and Total

| Electric Utility | # of Installs 2012 | Total Installs to Date | 2012 Capacity Added (MW-DC) | Total Capacity to Date | Peak Load (MW)* | Allowed Net Metered Capacity (MW)* |
|--|--------------------|------------------------|-----------------------------|------------------------|-----------------|------------------------------------|
| Granite State Electric dba National Grid | 9 | 63 | 0.03285 | 0.2153 | 189 | 4.12 |
| New Hampshire Electric Cooperative | 54 | 276 | 0.36046 | 1.5233 | 124 | 3.16 |
| Public Service Company of NH | 169 | 697 | 2.1430 | 5.1202 | 1,588 | 36.55 |
| Unitil Energy Systems, Inc. | 25 | 83 | 0.23069 | 0.7495 | 268 | 6.17 |
| Total Net Metered Facilities 2011 | 257 | 1,119 | 2.76700 | 7.6083 | 2,169 | 50.00 |

* Based on the share of 2010 peak load pursuant to Puc 900 and RSA 362-A:9

Conclusion

Since its inception in July 2009, the Renewable Energy Fund has established five grant and rebate programs that have seen substantial demand and growth over time. The REF has awarded 1,614 rebates for renewable energy systems, and provided New Hampshire homeowners, businesses, schools, towns, non-profit organizations and other eligible entities with \$7,455,536 in funding towards these systems. In addition the Commission's competitive grant program has provided close to \$2 million in funding for renewable projects featuring technologies from biomass heating systems to hydroelectricity upgrades to photovoltaic, solar hot air, and landfill gas to energy, among others. In 2013, it is expected that an additional \$4 million will be awarded through additional grants for renewable energy projects.

These rebate and grant funds have been leveraged with \$38.4 million in private investment, providing a boost to the state's economy and creating jobs for electricians, plumbers, and alternative energy businesses. In addition, there has been substantial growth in distributed generation renewable energy systems that serve to diversify our energy sources, reduce our reliance on fossil fuels, and increase our energy independence.