MAINE PUBLIC UTILITIES COMMISSION

ANNUAL REPORT ON NEW RENEWABLE RESOURCE PORTFOLIO REQUIREMENT

Report for 2012 Activity

Presented to the
Joint Standing Committee on
Energy, Utilities and Technology
March 31, 2014[1]

[1] The report submitted on March 31, 2014 inadvertently contained two outdated numbers regarding the number of RECs purchased to meet the RPS requirement in 2012 on page 7 and the percentage of the requirement that was satisfied using RECs banked from 2011 on page 8. These numbers have been updated from 453,630 to 559,645 on page 7 and 5.08% to 0.02% on page 8.

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The corrected report also notes on page 8 that the number of RECs purchased in 2012 and banked for future use was 59,790.

I. INTRODUCTION

During its 2007 session, the Legislature enacted an Act to Stimulate Demand for Renewable Energy (Act).[2] The Act added a mandate that specified percentages of electricity that supply Maine's consumers come from "new" renewable resources. Generally, new renewable resources are renewable facilities that have an in-service date, resumed operation or were refurbished after September 1, 2005. The percentage requirement began at one percent in 2008 and increases in annual one percent increments to ten percent in 2017 and remains at ten percent thereafter, unless the Commission suspends the requirement pursuant to the provisions of the Act.

The Act contains an annual reporting requirement on the status of Class I renewable resource development and compliance with the portfolio requirement. The reporting provision specifies:

> Annual Reports. No later than March 31, 2008 and annually thereafter, the Commission shall submit a report regarding the status of new renewable capacity resources in the State and New England, and compliance with the portfolio requirement required by this section to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters. The report shall include, but is not limited to, a description of new renewable capacity resources available to meet the portfolio requirement required by this section, documentation of the loss of any existing renewable generation capacity in the State, the status of implementation of the new renewable resources portfolio requirement, including any suspensions pursuant to subsection D, and recommendations to stimulate investment in new renewable resources.

The Commission hereby submits its report to the Energy, Utilities and Technology Committee to describe the status of Maine's new renewable resource portfolio requirement. The Commission notes that this report is based on the most recently filed Competitive Electricity Provider annual compliance reports, which were filed in July 2013 for calendar year 2012. Therefore, this report generally presents information on implementation and compliance with the portfolio requirement for calendar year 2012.

II. BACKGROUND

A. New Renewable Resource Portfolio Requirement (Class I)

As stated above, the new renewable resource portfolio requirement, referred to as Class I,[3] requires that specified percentages of electricity that supply

[2] P.L. 2007, ch. 403 (codified at 35-A M.R.S. § 3210(3-A)).

[3] The "new" renewable resource requirement was designated as Class I in the Commission's implementing rules (Chapter 311) because the requirement is similar to portfolio requirements in other New England states that are referred to as "Class I." Maine's pre-existing "eligible" resource portfolio requirement is designated as Class II.

Maine's consumers come from "new" renewable resources.[4] The percentage requirement began at one percent in 2008 and increases in annual one percent increments to ten percent in 2017 and remains at ten percent thereafter. The Act specifies the resource type, capacity limit and the vintage requirements for the new renewable resource requirement. As specified in the Act, a new renewable resource used to satisfy the Class I portfolio requirement must be of the following types:

- fuel cells;
- tidal power;
- solar arrays and installations;
- wind power installations;
- geothermal installations;
- hydroelectric generators that meet all state and federal fish passage requirement; or
- biomass generators, including generators fueled by landfill gas.

In addition, except for wind power installations, the generating resource must not have a nameplate capacity that exceeds 100 MW. Moreover, the resource must satisfy one of four vintage requirements. These are:

1) Renewable capacity with an in-service date after September 1, 2005;

2) Renewable capacity that has been added to an existing facility after September 1, 2005;

3) Renewable capacity that has not operated for two years or was not recognized as a capacity resource by the New England Independent System Operator (ISO-NE) or the Northern Maine Independent System Administrator (NMISA) and has resumed operation or has been recognized by the ISO-NE or NMISA after September 1, 2005; and

4) Renewable capacity that has been refurbished after September 1, 2005 and is operating beyond its useful life or employing an alternate technology that significantly increases the efficiency of the generation process.

The Act also includes an "alternative compliance mechanism" (ACM) that allows suppliers to pay specified amounts into the Energy Efficiency and Renewable Resource Fund[5] in lieu of compliance with the new renewable resource portfolio requirement, and states that the Commission shall set the alternative compliance payment rate in its implementing rules. In addition, the Act allows the Commission to suspend scheduled percentage increases in the portfolio requirement if it finds that investment in new renewable resources has not been sufficient for suppliers to satisfy the requirement, the requirement has burdened electricity customers without providing

[4] Contracts or standard offer arrangements that pre-date the effective date of the Act, 35-A M.R.S. § 3210(3-A)(D), and sales to qualified Pine Tree Development Zone businesses, 35-A M.R.S. § 3210-B(4), are exempt from the portfolio requirement.

[5] The Energy Efficiency and Renewable Resource Fund was established to fund research, development and demonstration projects related to energy technologies. 35-A M.R.S. § 10121.

the benefits from new renewable resources or that there has been an over reliance on the ACM.

B. Class I Implementing Rules

As required by the Act, the Commission modified its portfolio requirement rule (Chapter 311) to implement the "new" renewable resource requirement.[6] The implementing rules establish a certification process that requires generators to pre-certify facilities as a new renewable resource under the requirements of the rule and provide for a Commission determination of resource eligibility on a case-by-case basis.[7] The rule also specifies that the Commission may revoke a certification if there is a material change in circumstance that renders the generation facility ineligible as a new renewable resource. Under the rules, a generator does not have to be located in Maine to be eligible as long as its power is used to serve load in New England.

As required by the Act, the rules establish an ACM that allows suppliers to make a payment in lieu of compliance with the new renewable resource portfolio requirement.[8] The rule established a base alternative compliance payment rate of $57.12 per megawatt-hour that is adjusted annually based on the Consumer Price Index. The alternative compliance payment rate in 2012 was $64.03 per MWh.

Finally, the implementing rules allow suppliers to satisfy or "cure" a compliance deficiency in one calendar year during the following calendar year. This cure provision only applies if the supplier has satisfied at least two-thirds of its calendar year requirement. In addition, a supplier may "bank" any excess renewable credits in a calendar year for use in the next calendar year. However, a supplier may not use banked credits to satisfy more than one-third of the requirement in any year.[9]

C. Maine's Eligible Resource Portfolio Requirement (Class II)

Maine's original restructuring legislation, which became effective in March 2000, included a 30% eligible resource portfolio requirement.[10] The eligible resource portfolio requirement, now referred to as Class II, mandated that each retail competitive electricity supplier meet at least 30% of its retail load in Maine from "eligible resources." Eligible resources are defined in statute as either renewable resources or efficient resources. Renewable resources are defined in statute as fuel cells, tidal power, solar arrays, wind power, geothermal installations, hydroelectric generators, biomass generators, and municipal solid waste facilities. Renewable resources may not exceed a production capacity of 100 megawatts. "Efficient" resources are cogeneration facilities that were constructed prior to 1997, meet a statutory efficient standard and may be fueled by fossil fuels.

[6] *Order Adopting Rule and Statement of Factual and Policy Basis,* Docket No. 2007-391 (Oct. 22, 2007).

[7] Chapter 311, § 3(B)(4).

[8] Chapter 311, § 3(C).

[9] Chapter 311, § 7(A) and (B).

[10] 35-A M.R.S. § 3210(3).

D. Renewable Energy Credits

Most of the compliance with Maine's portfolio requirements occurs through the purchase of renewable energy credits (RECs). The New England Power Pool (NEPOOL) has established a REC creation and tracking mechanism referred to as the Generation Information System (GIS). This system allows for the trading of the renewable attribute separate from the energy commodity. This mechanism serves to significantly simplify compliance by suppliers and verification by regulatory commissions, and avoids double counting. Consistent with statutory direction,[11] the Commission requires suppliers in the ISO-NE to verify compliance with the portfolio requirement through the GIS. Because of its small size, northern Maine does not have REC system and therefore compliance is verified through contractual documentation and settlement data.

III. IMPLEMENTATION AND COMPLIANCE

A. Certified Generators

The implementing rules require generation facilities to be certified by the Commission as a Class I new renewable resource before such facilities can be used to satisfy Maine's new renewable resource portfolio requirement. To date, the Commission has certified approximately 75 facilities, with a total capacity of approximately 1000 MW. However, not all of the facilities that have been certified are in-service and many of the facilities are also eligible for portfolio requirements in other New England states.[12]

B. Exempt Sales

Electricity suppliers are required to demonstrate compliance with the five percent new renewable resource portfolio requirement for calendar year 2012. However, any retail electricity sales made pursuant to a supply contract or a standard offer service arrangement executed on or before September 20, 2007 (the effective date of the Act) are exempt from portfolio requirement compliance until the end of the current term of the arrangement.[13] During 2012, approximately 284,841MWh, or 2.37% of Maine's electricity sales, were exempt from the new renewable resource portfolio requirement as a result of the pre-existing contract exemption.

Electricity sales to serve qualified Pine Tree Development Zone businesses established under Title 30-A are exempt from the portfolio requirements.[14] During 2012, approximately 96,306 MWh, or 0.80% of Maine's electricity sales, were exempt from the new renewable resource portfolio requirement as a result of the Pine Tree Zone exemption.

[11] The portfolio requirement statute states that the Commission shall allow competitive providers to satisfy the portfolio requirements through the use of RECs if it determines that a reliable system of electrical attribute trading exists. 35-A M.R.S. § 3210(8). The Commission has determined that the GIS is such a reliable system.

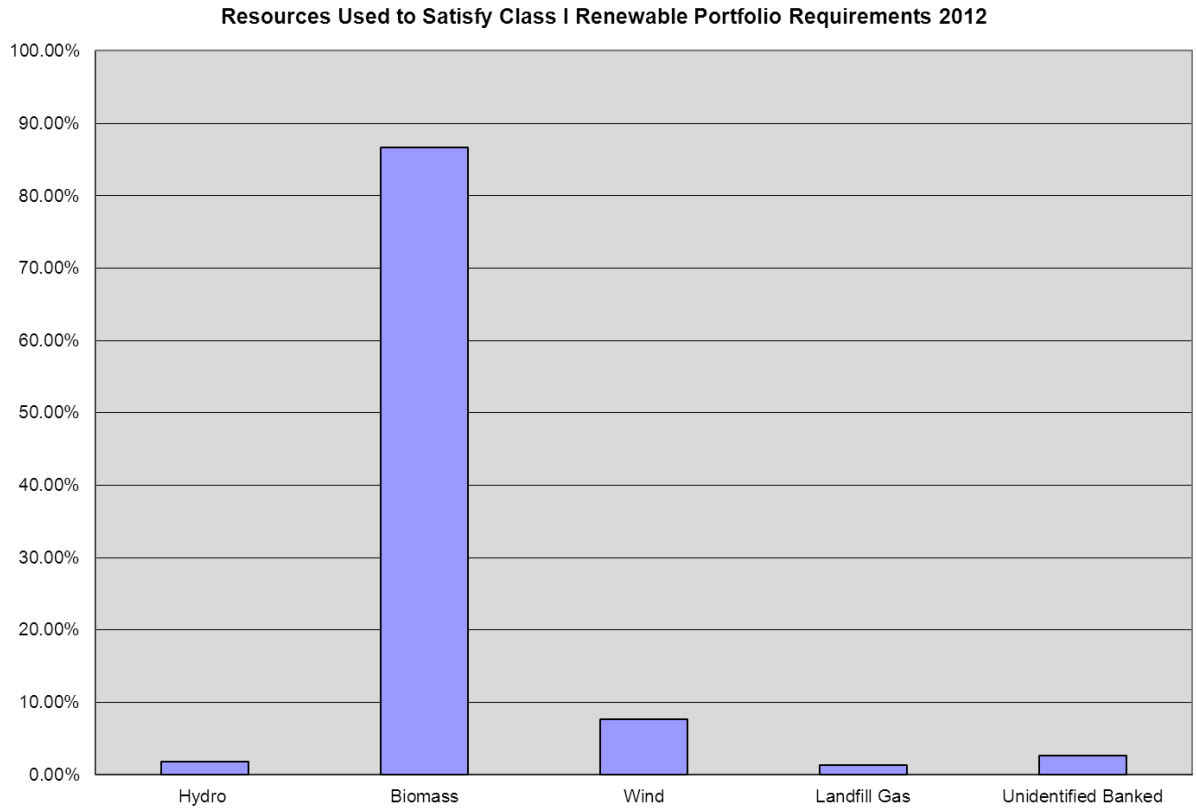
[12] A list of the certified facilities is attached to this Report as Attachment 1.

[13] 35-A M.R.S. § 3210(3-A)(D).

[14] 35-A M.R.S. § 3210-B(4).

C. New Renewable Portfolio Requirement (Class I); Resources and Cost Impacts

The following chart shows the mix of resources used to satisfy Maine's new renewable resource portfolio requirement during 2012.



As the table below shows, the RECs from twenty-two facilities were used by suppliers to comply with the 2012 new renewable resource requirement. Eleven of the facilities are biomass, six are hydro, two are wind facilities and three are landfill or digester gas facilities. Seventeen of the twenty-two facilities are located in Maine, one is located in Connecticut, one is located in New York, one is located in Massachusetts and two are located in Vermont. Of the approximately 559,645 RECs purchased to meet the portfolio requirement in 2012, 98% came from facilities located in Maine.

Fuel Type and State	No. of Facilities	GIS Certificates	% of Total
Hydro - ME	3	20,036	3.542%
Hydro - VT	1	155	0.03%
Hydro - CT	1	5,319	0.91%
Hydro - MA	1	463	0.08%
Biomass - ME	11	491,868	84.57%
Wind – ME	1	44,455	7.64%
Wind – VT	1	21	0.00%
Digester Gas - ME	2	3,286	0.57%
Landfill Gas - NY	1	590	0.10%
Banked from Previous Years		15,384	2.65%
Total – Overall	**22**	**581,645**	**100%**
Total – ME	**17**	**559,645**	**96.23%**

The cost to ratepayers of Maine's new renewable resource portfolio requirement is represented by the cost of compliance by suppliers, either through the purchase of RECs or payment under the ACM. For calendar year 2012, for which the 5% new renewable resource portfolio requirement applied, 95.97% of the requirement was satisfied through the purchase of RECs, 0.005% was satisfied through the ACM, 0.02% was satisfied using RECs banked from 2011 and 0.003% will be satisfied during the 2013 cure period allowed by the rule. In addition, 1.4% of RECs purchased in 2012 were used to satisfy the 2011 compliance requirements. Finally, 59,790 RECs were purchased in 2012 and banked for future use.

During 2012, the cost of RECs used for compliance ranged from approximately $11.75 per MWh to $60 per MWh, with an average cost of $31.98 per MWh and a total cost of $18,429,710. One supplier chose to satisfy the portfolio requirement through the ACM at the rate of $64.03 per MWh for a total cost of $1,665. Thus, the total cost to ratepayers during 2012 was $18,431,375, which translates into an average rate impact of about 0.16 cents per kWh (or about 80 to 85 cents monthly for a typical residential bill). In percentage terms, this translates to a residential customer bill impact of about 1%.

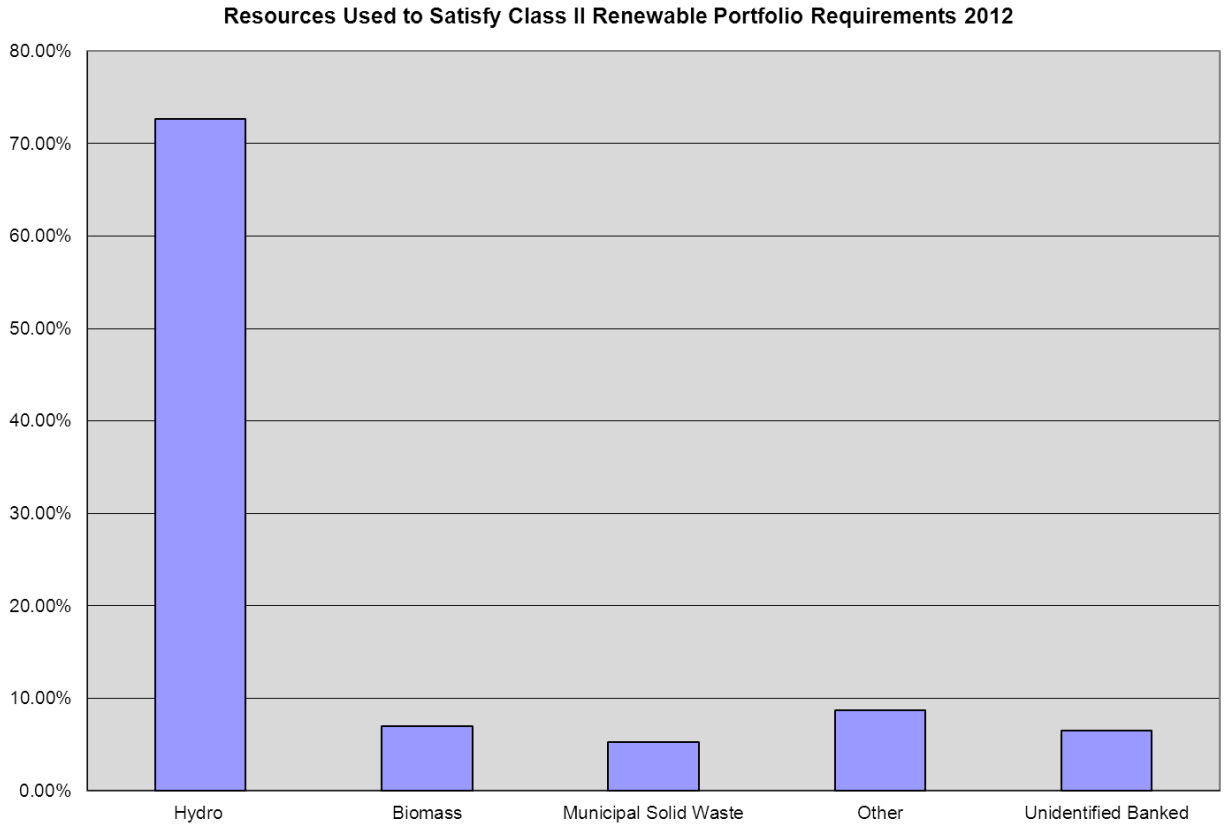
The Commission notes that the cost of Maine Class I RECs has dropped substantially since 2012 and they are currently trading in the range of $3.00 to $5.00. Consequently, the current cost of the RPS to ratepayers is much less than what it was in 2012. The Commission believes that, to a significant degree, the decline in price is due to the certification by the Commission of a number of resources under the "refurbishment" provision of the statute, which has had the effect of increasing supply.

During 2012, Maine's new renewable resource requirement provided a substantial source of revenue to qualified Maine Class 1 renewable generation resources. As noted above, in 2012, the requirement created an average premium of $31.98 per MWh, amounting to an 88% premium over the average wholesale market price of $36.00 per MWh. The fact that a negligible percentage (0.005%) of the requirement has been satisfied through the ACM indicates that the ratepayer premium

is going directly to eligible renewable generators, most of which were located in Maine.

D. Eligible Resources Portfolio Requirement (Class II); Resources and Cost Impacts

The following chart shows the mix of resources used to satisfy Maine's Class II renewable resource portfolio requirement during 2012.



During 2012, the costs of RECs used to satisfy the eligible resource portfolio requirement ranged from $0.00 per MWh (some RECs were provided for free as part of an energy transaction) to $1.00 per MWh, with an average cost of $0.15 per MWh and a total cost of $533,247. This translates into less than three cents per month on a typical residential bill.

E. Portfolio Requirement Percentage Suspension

The Act allows the Commission to suspend scheduled percentage increases in the Class I portfolio requirement if it finds that investment in new renewable resources has not been sufficient for suppliers to satisfy the requirement, the requirement has burdened electricity customers without providing the benefits from new renewable resources or that there has been an over reliance on the ACM. As specified in section III(C) above, nearly all of the compliance with the Class I portfolio

requirement occurred through the purchase of RECs with extremely limited reliance on the ACM. In addition, the REC prices during 2012 (an average cost of $31.98 per MWh) were substantially lower than the alternative compliance payment ($64.03 per MWh). This indicates that renewable resource development has been sufficient for suppliers to satisfy the Class I portfolio requirement without significant reliance on the ACM. Accordingly, the Commission did not act to suspend percentage increases in the portfolio requirement in 2012.

F. Status of Renewable Resource Development

Maine's portfolio requirement operates in conjunction with the portfolio requirements in the other New England states to promote the development of renewable resources in Maine and New England.[15] The ISO-NE interconnection queue represents proposed generation projects that have initiated the review process for interconnection to the regional grid. A review of the interconnection queue shows that there are a significant number of renewable projects under development in New England and in Maine. New England wide, the proposed projects total 2312 MW (wind-2097 MW, biomass-137 MW, hydro-62 MW, solar-16 MW). The proposed projects in Maine total 1348 MW (wind-1337 MW, hydro-12 MW). Although not all of the projects in the queue will be successfully completed, there are renewable resources other than those in the queue (such as on-site and behind the meter renewable resources, renewable projects not yet in the queue, and imported energy from renewable project in adjacent regions) that may be developed. Thus, there continues to be significant renewable resource development in both New England and Maine that will be available to meet the requirements of the RPS.

The primary indicator of whether new renewable resource development has been sufficient to meet Maine's portfolio requirement is the degree to which compliance is satisfied through the ACM. In the event that a significant degree of compliance occurs through ACM over a number of years, this would indicate that the portfolio requirements in Maine and the other New England states are not satisfying their goals of fostering new renewable resource development in the region.[16] There has been very little reliance on the ACM by suppliers in 2012 or in prior years.

At this time, the Commission makes no recommendations regarding mechanisms to stimulate investment in renewable resources beyond those that already exist on the State and federal levels.

IV. CONCLUSION

Maine's new renewable resource portfolio requirement, during 2012, provided a substantial source of revenue to some Maine generation resources. Since it was enacted in 2008, the new renewable resource portfolio requirement has operated as

[15] Generally, newly developed renewable resources located within or adjacent to New England can be used to satisfy the various New England state's portfolio requirements.

[16] As required by the Act, the implementing rules specify that the Commission shall temporarily suspend the scheduled percentage increases in the new renewable resource requirement if reliance on the ACM in the aggregate is more than 50% of the statewide obligation in three consecutive years. Chapter 311, § 3(D)(1).

intended to create a premium over market prices to help promote renewable project development. The price impact on customers has been relatively small. In the Commission's view, there has been a reasonable relationship between the new renewable resource portfolio requirement and financial support provided to new and refurbished renewable resources and, therefore, the Commission does not recommend any corrective statutory changes at this time. In light of the sharp reduction in prices for Maine Class I RECs in the past year, however, the Commission will continue to evaluate this issue.

The Commission will continue to monitor the operation of the new renewable resource portfolio requirement and the development of new renewable resources in the region, and will act to notify the Legislature of any significant issues with the implementation and operation of Maine's portfolio requirement.