



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Rhode Island
Renewable Energy Standard
Annual RES Compliance Report
For Compliance Year 2010

February 2012

Rhode Island Public Utilities Commission

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Executive Summary

Compliance Year 2010 (from January 1, 2010 through December 31, 2010) was the fourth compliance year for the Rhode Island Renewable Energy Standard (“RES”). Under Rhode Island General Law §39-26-6, the Rhode Island Public Utilities Commission (“Commission”) is charged with implementing the RES and ensuring compliance by Obligated Entities. In 2010, each Obligated Entity¹ was required to obtain at least four and one-half percent (4.5%) of electricity (including line losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than two and one-half percent (2.5%) from New Renewable Energy Resources. This fourth Annual RES Compliance Report is intended to satisfy the legislative requirement at §39-26-6 for a filing on “*the status of the implementation of the renewable energy standards in Rhode Island and other states.*” The legislation specifically requests a summary of the role of both renewable energy certificates and alternative compliance payments in meeting the RES obligation, as well as the amount of rate increases authorized to recover costs arising from implementation of the RES.

The state’s 2010 RES-obligated retail sales totaled 8,242,937 MWh. As shown in Table 1, the total minimum obligation to be satisfied by New Renewable Energy Resources was 206,082 MWh (2.5% of obligated retail sales). The obligation to be satisfied by either Existing or any remaining New Renewable Energy Resources was 164,866 MWh (2.0% of obligated retail sales).

In 2010, New England Power Pool (“NEPOOL”) Generation Information System (“GIS”) Certificates² from Rhode Island-eligible “New” renewable energy supply totaled 213,357 MWh (including 16,457 Certificates banked from 2008 or 2009), representing a 3.5 percent surplus compared to the minimum New RES obligation. Similarly, GIS Certificates from Rhode Island-eligible “Existing” renewable energy supply totaled 287,181 MWh. After meeting their respective obligations, Obligated Entities procured an excess of 122,537 RECs above the 2010 requirement, a 74.3 percent surplus. An additional 358 MWh of “New” and “Existing” obligation was met through Alternative Compliance Payments (“ACPs”). The composition of 2010 RES compliance by fuel type and geographic location is discussed in Section III of this report.³

¹ Per §39-26-2, ‘Obligated Entity’ means a person or entity that sells electrical energy to end-use customers in Rhode Island, including, but not limited to: non-regulated power producers and electric utility distribution companies, as defined in § 39-1-2, supplying standard offer service, last resort service, or any successor service to end-use customers; including Narragansett Electric, but not to include Block Island Power Company as described in § 39-26-7 or Pascoag Utility District.

² The terms GIS Certificate and Renewable Energy Certificate, or REC, are often used interchangeably in the marketplace. While REC is the more general term used to denote a generator’s descriptive characteristics (i.e. fuel type, vintage and geographic location) it is the settlement of GIS Certificates within the Obligated Entity’s NEPOOL GIS account that substantiates RES compliance.

³ This summary of New and Existing RES compliance excludes NEPOOL GIS Certificates retired for the purpose of substantiating renewable energy claims associated with end-use customer voluntary purchases above and beyond the RES. Voluntary clean energy programs are summarized in Appendix 6 of this Report.

Table 1: Composition of 2010 RES Compliance

	New RES Obligation	Existing RES Obligation
2010 Minimum Obligations ⁴	206,082 Certificates	164,866 Certificates
GIS Certificates Applied to 2010 RI RES Compliance (MWh, %)	205,890 (99.9%) ⁵	164,700 (99.9%) ⁶
RI RES Compliance by Alternative Compliance Payments (MWh, %, \$)	192 MWh (0.1%) \$11,698.56	166 (MWh) (0.1%) \$10,114.38
Banked for Future Compliance	7,313 MWh	Not Applicable

As shown in Table 2, compliance with the 2010 RES targets by the electric distribution company resulted in total ratepayer billings of approximately \$6.7 million, up from approximately \$5.5 million in 2009. For the average household using 500 kWh per month, this equated to an estimated monthly bill impact of \$0.615 and an estimated annual impact of \$7.38. Section V provides additional rate impact data.

Table 2: Estimated Rate Impact for 2010 RES Compliance

Compliance Year	Total RES Load Obligation (MWh)	Authorized RES Charge per kWh	Renewable Energy Charge Billings (est.)⁷	Average Monthly/Annual Ratepayer Impact (500 kWh)
2010	5,695,951	\$0.00123 ⁸	\$6,720,009	\$0.615 / \$7.38 ⁹

Fifteen load-serving entities had Rhode Island RES obligations during the 2010 compliance year.¹⁰ Eleven of these fifteen entities – Narragansett Electric and ten competitive retail electric providers – met 100 percent of their RES obligations with GIS Certificates. Three entities met a portion of their individual RES obligations through the provision of Alternative Compliance Credits, obtained by making Alternative Compliance Payments (“ACPs”) to the Rhode Island

⁴ Please note that the total New and Existing RES obligations may be higher than the 2.5% New and 2.0% Existing of total obligated retail sales due to rounding protocols for individual Obligated Entities.

⁵ In aggregate, Obligated Entities over-complied with the New RES Obligation, demonstrating the purchase of 213,357 GIS Certificates from New Renewable Energy Resources. This value includes the application of 16,457 banked RECs from the 2008 and 2009 Compliance Years.

⁶ In aggregate, Obligated Entities over-complied with the Existing RES Obligation, demonstrating the purchase of 287,181 GIS Certificates from Existing Renewable Energy Resources. Of the total 164,700 Certificates listed in the table, 56 were from New Renewable Energy Resources, but applied to an entity’s Existing obligation. See Table 5 for more information.

⁷ This data is based upon the distribution utility’s (Narragansett Electric) calendar year deliveries and represents an approximate cost to ratepayers for RES compliance. Narragansett Electric’s customers represent approximately 69 percent of the total deliverables in Rhode Island.

⁸ Please note that the authorized Renewable Charge for the period January 1, 2010 through February 28, 2010 was \$0.00093 per kWh. During the period of March 1, 2010 through December 31, 2010, the charge was \$0.00123 per kWh.

⁹ Average ratepayer impact as of March 1, 2010 through December 31, 2010.

¹⁰ See Table 4 for a complete list of load-serving entities.

Economic Development Corporation (“EDC”). Just one entity utilized ACPs to meet its entire annual obligation.

With respect to the minimum New RES Obligation, 99.9 percent of compliance was realized through the retirement of GIS Certificates, with the balance comprised of ACPs for 192 RECs. This continues a pattern of low utilization of ACPs that has been present since compliance year 2008. The use of ACPs has changed dramatically since 2007, when competitive retail electric providers relied on ACPs to meet approximately 30 percent of their collective New RES Obligation. The 2007 Annual RES Compliance Report noted that, due to the market’s lack of experience with implementing the RES regulations, this result was neither unexpected, nor uncommon when compared to the first compliance year of other similar programs throughout the region. In 2008, competitive retail electric providers relied on ACPs for meeting just 1.7 percent of their collective New RES Obligation. This trend continued into the 2009 compliance year, with only one payment made to the Rhode Island EDC for 2009 New RES compliance and one payment made for Existing RES compliance. While ACPs increased on a dollar basis in compliance year 2010, with total payments of \$21,813, the reliance on ACPs as a percentage of total compliance remained extremely low at 0.1 percent of total obligations.

Twelve of the fifteen Obligated Entities (including Narragansett Electric) utilized some of their authorized Banked Compliance RECs in 2010. Collectively, they applied 16,457 Certificates, which had been banked in either 2008 or 2009, towards their respective 2010 obligations. In addition, the market’s current surplus enabled Narragansett Electric (2,168 MWhs) and seven competitive suppliers (5,145 MWhs) to bank a combined 7,313 MWhs of New RES compliance for use against their New RES Obligation in either the 2011 or 2012 Compliance Years.

Overall, the Commission’s review and analysis reveal continued success in the RES program’s fourth compliance year. A growing number of new renewable energy projects proposed throughout the region and adjacent control areas leaves the Commission optimistic that the Rhode Island RES will continue to meet its targets in the short term. However, continued economic stagnation, availability of federal incentives, access to capital, and other factors impacting investment decisions, coupled with increasing renewable energy mandates throughout the states, all have the potential to tighten renewable energy supply in the coming years. The Commission will continue to follow these developments and their potential impact on the RES.¹¹

¹¹ For additional information on the adequacy of renewable energy supply, you may review the materials and Commission findings for Docket 4050 at: www.ripuc.org/eventsactions/docket/4050page.html.

I. Introduction to the Renewable Energy Standard

The Rhode Island Renewable Energy Standard (“RES”) was enacted in 2004 via Rhode Island General Laws §39-26-1 *et seq* and requires the state’s retail electricity providers, excluding Pascoag Utility District and Block Island Power Company, to supply 16.0 percent of their retail electricity sales from eligible renewable energy resources by 2019. The RES remains in effect (at 2019 levels) in 2020 and each year thereafter, unless and until the Rhode Island Public Utilities Commission (“Commission”) determines that the standard is no longer necessary.

As shown in Table 3, the RES required all Obligated Entities to obtain at least 4.5 percent of electricity sold to Rhode Island end-use customers (inclusive of losses) from Eligible Renewable Energy Resources for the 2010 Compliance Year (January 1, 2010 through December 31, 2010). No more than 2.0 percent may be from Existing Renewable Energy Resources and a minimum of 2.5 percent must be from New Renewable Energy Resources. Table 3 provides the target percentages for each category by year.

Table 3: RES Targets, by compliance year, for both new and existing resources

Compliance Year	Total Target Percentage	Minimum Percentage from New Renewable Energy Resources	Percentage from <i>either Existing or New Renewable Energy Resources</i>
2007	3.0%	1.0%	2.0%
2008	3.5%	1.5%	2.0%
2009	4.0%	2.0%	2.0%
2010	4.5%	2.5%	2.0%
2011*	5.5%	3.5%	2.0%
2012*	6.5%	4.5%	2.0%
2013*	7.5%	5.5%	2.0%
2014*	8.5%	6.5%	2.0%
2015*	10.0%	8.0%	2.0%
2016*	11.5%	9.5%	2.0%
2017*	13.0%	11.0%	2.0%
2018*	14.5%	12.5%	2.0%
2019*	16.0%	14.0%	2.0%
2020 and thereafter**	16.0%	14.0%	2.0%

* Under §39-26-6(d), the Commission had to determine by January 1, 2010, and will again have to determine by January 1, 2014, the adequacy or potential adequacy of renewable energy supplies to meet the increase in the percentage requirements for 2011 and 2015, respectively. In Docket 4050, the Commission found that potential adequate supply did exist for 2011.

** Duration of continuation subject to Commission determination.

Additional design elements of the RES were developed through a stakeholder process and adopted via the Rules and Regulations Governing the Implementation of a Renewable Energy Standard, which first became effective on December 7, 2005. Revised RES Regulations became effective on July 25, 2007. The RES Regulations require, among other provisions, that all

Obligated Entities submit annual compliance filings to the Commission. This Annual Report is based on an aggregated summary of these compliance filings and is intended to satisfy the reporting requirements related to the enabling legislation at §39-26-6(f) which states that the Commission:

Report, by February 15, 2006, and by February 15 each year thereafter, to the governor, the speaker of the house and the president of the senate on the status of the implementation of the renewable energy standards in Rhode Island and other states, and which report shall include in 2009, and each year thereafter, the level of use of renewable energy certificates by eligible renewable energy resources and the portion of renewable energy standards met through alternative compliance payment.

The RES statute defines eligible New and Existing Renewable Energy Resources at §39-26-5. All Renewable Energy Resources must be certified by the Commission (and maintain this certification) in order to participate in the RES program. Lists of New and Existing Renewable Energy Resources currently certified by the Commission are provided as Appendices 1 and 2, respectively. An up-to-date status of all approved and pending eligibility applications can be found on the Commission website at www.ripuc.org/utilityinfo/res.html.

All Renewable Energy Resources must also establish and maintain an account with the NEPOOL Generation Information System (“NEPOOL GIS”). NEPOOL GIS maintains a record of each generator’s monthly production, as well as the generator’s descriptive characteristics such as generator location, fuel type and actual emissions. One GIS Certificate¹² is created for each MWh of energy production. The GIS Certificate is the currency used to demonstrate compliance with the RES, as well as mandatory renewable energy requirements in other states and voluntary renewable energy transactions. Through the use of GIS Certificates, which are created and transferred exclusively within the NEPOOL GIS, and the annual submission of RES compliance reports, the Commission ensures that a GIS Certificate used for RES compliance has not also been used to satisfy another obligation in Rhode Island or any other jurisdiction.

¹² The terms GIS Certificate and Renewable Energy Certificate, or REC, are often used interchangeably in the marketplace. While REC is the more general term used to denote a generator’s descriptive characteristics (i.e. fuel type, vintage and geographic location) it is the settlement of GIS Certificates within the Obligated Entity’s NEPOOL GIS account that substantiates RES compliance.

II. Compliance Year 2010: Obligation and Sources of Compliance

Compliance Year 2010 (from January 1, 2010 through December 31, 2010) was the fourth compliance year for Rhode Island’s RES. Each Obligated Entity was required to obtain at least 4.5 percent of electricity (including line losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than 2.5 percent from New Renewable Energy Resources.

Rhode Island’s actual 2010 RES-obligated retail sales totaled 8,242,937 MWh. As a result, the aggregate minimum New RES Obligation (2.5%) was 206,082 MWh, while the aggregate New or Existing RES Obligation (2.0%) was 164,866 MWh.¹³ Obligated Entities were required to meet the RES either through the purchase and retirement of GIS Certificates or through the provision of Alternative Compliance Credits, obtained by making Alternative Compliance Payments (“ACPs”) to the Rhode Island Economic Development Corporation (“EDC”). The Rhode Island EDC sets these funds aside in the Renewable Energy Development Fund, established under §39-26-7, to support investments in renewable energy. In 2010, the ACP rate was \$60.93 per MWh of obligation. The rate is the same for both New and Existing obligations. See Appendix 3 for additional information regarding Alternative Compliance Payments.

In total, fifteen entities submitted RES Compliance Filings to the Commission for 2010 consisting of Narragansett Electric and fourteen competitive electricity providers, as shown in Table 4.

Table 4: Obligated Entities Submitting 2010 RES Compliance Filings to the Commission

Distribution Utilities	
The Narragansett Electric Company d/b/a National Grid	
Competitive Retail Providers	
Constellation New Energy, Inc.	Integritys Energy Services, Inc.
Devonshire Energy, LLC	Liberty Power Holdings, LLC
Direct Energy Services, LLC	Sempre Energy Solutions, LLC
First Point Power, LLC	SJH Energy LLC
NextEra Energy Services Rhode Island, LLC	South Jersey Energy Company
Glacial Energy of New England, Inc.	TransCanada Power Marketing Ltd.
Hess Corporation	Westerly Hospital Energy Company LLC

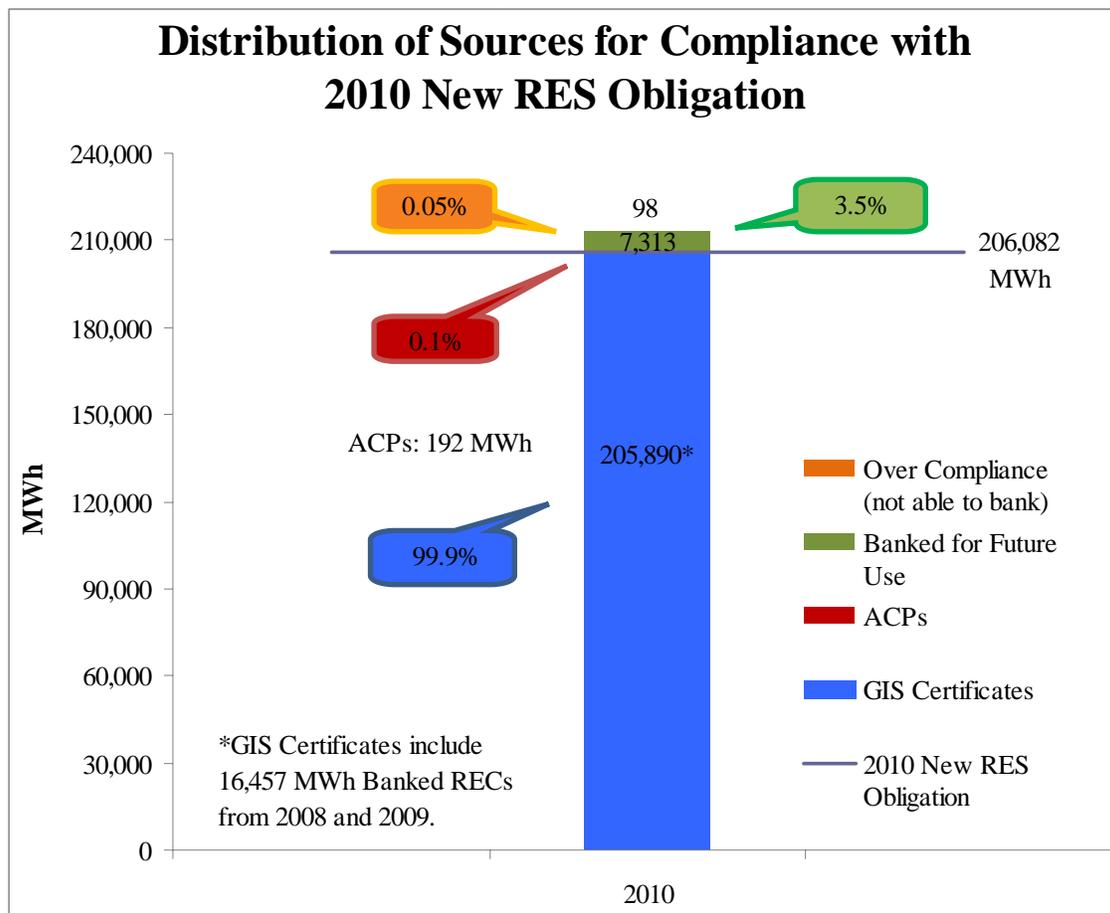
Eleven Obligated Entities – Narragansett Electric and ten competitive retail electric providers – met their entire 2010 RES obligation with GIS Certificates. Three entities utilized ACPs to meet a portion of their RES obligations, while one entity met their entire obligation through ACPs. When combined, ACPs resulted in total payments of \$21,812.94 to the Rhode Island EDC. Appendix 4 lists all entities from whom Compliance Filings were received and provides a

¹³ Please note that the total New and Existing RES obligations are slightly higher than the 2.5% New and 2.0% Existing of total obligated retail sales due to rounding protocols for individual Obligated Entities.

detailed summary of RES compliance for Narragansett Electric Company along with a more limited summary for competitive retail electric providers.¹⁴

As shown in Figure 1 below, nearly 100 percent of New RES compliance was realized through the retirement of GIS Certificates, with the remaining fraction comprised of ACPs (192 MWh; \$11,699).

Figure 1: Distribution of Sources for Compliance with 2010 New RES Obligation

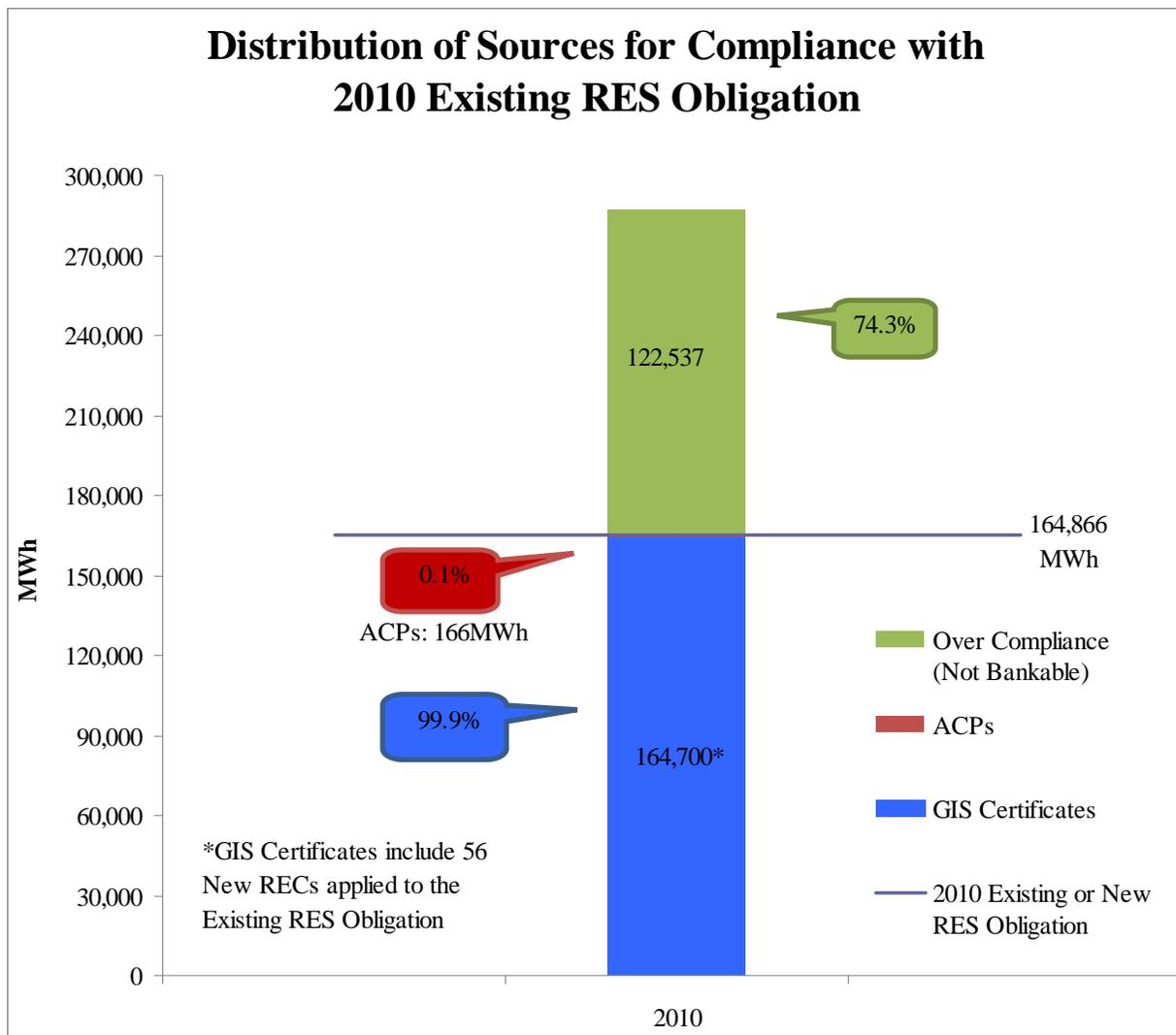


Similarly, for the Existing RES Obligation, nearly 100 percent of compliance was realized through the retirement of GIS Certificates. Three Obligated Entities submitted ACPs for 166 MWh of Existing RES obligation, totaling \$10,114. This comprised just one-tenth of a percent of the state’s total aggregated Existing REC obligation, as shown in Figure 2. Also, as shown in

¹⁴ The limited competitive supplier data presented in Appendix 4 is a result of the Commission’s confidential treatment of their filings. Thus, competitive supplier information within this report is only presented in a summarized fashion to avoid the potential identification of proprietary business activities.

this figure, compliance filings demonstrated that a surplus of 122,537 GIS certificates was obtained from Existing resources in 2010, resulting in significant over-compliance.¹⁵

Figure 2: Distribution of Sources for Compliance with 2010 Existing RES Obligation



Overall, the relative use of GIS Certificates and ACPs has changed dramatically since 2007, when competitive retail electric providers relied on ACPs to meet approximately 30 percent of their collective New RES Obligation. The 2007 Annual RES Compliance Report noted that, due to the market’s lack of experience with implementing the RES regulations, this result was neither unexpected, nor uncommon when compared to the first compliance year of other similar programs throughout the region. In 2008, competitive retail electric providers relied on ACPs to meet just 1.7 percent of their collective New RES Obligation. This sharply downward trend in

¹⁵ Obligated Entities settled a total of 122,537 Existing RECs above their 2010 RES Obligations and 98 New RECs above the 30% banking cap. It is possible that these companies inadvertently over-purchased RECs anticipating higher sales or they purchased them intentionally to promote a “green” image, corporate responsibility, etc.

the use of ACPs for REC compliance continued into the 2009 compliance year, with only one \$60.92 payment made to the Rhode Island EDC for 2009 New RES compliance and one \$60.92 payment made for Existing RES compliance, totaling \$121.84. The use of ACPs remained low in 2010, as obligated entities made total ACPs for New and Existing Obligations of \$21,813 (358 MWh). This accounted for just 0.1 percent of the state's total minimum obligation.

Twelve of the fifteen Obligated Entities, including Narragansett Electric, made use of the Banked Compliance flexibility mechanism in 2010. Under the RES rules, Obligated Entities are allowed to bank excess compliance (New RECs only) for up to two subsequent compliance years, capped at thirty percent of the current year's obligation. Together, these entities applied 16,457 Certificates banked in either 2008 or 2009 towards their respective 2010 obligations. In addition, Narragansett Electric (2,168 MWhs) and seven competitive suppliers (5,145 MWhs) banked a combined 7,313 MWhs of New RES compliance for use against their future New RES Obligations.¹⁶ This is a significant increase when compared to the 30 MWhs banked in 2007 and 5,582 MWhs banked in 2008, but a decrease from the 16,290 MWhs of New RES compliance banked in 2009.

A summary of 2010 RES Compliance, including information on ACPs and banked certificates, is presented in Table 5.

¹⁶ One competitive supplier purchased an excess of 98 New RECs which were not eligible to be banked under the RES rules, as they exceeded the entity's annual cap.

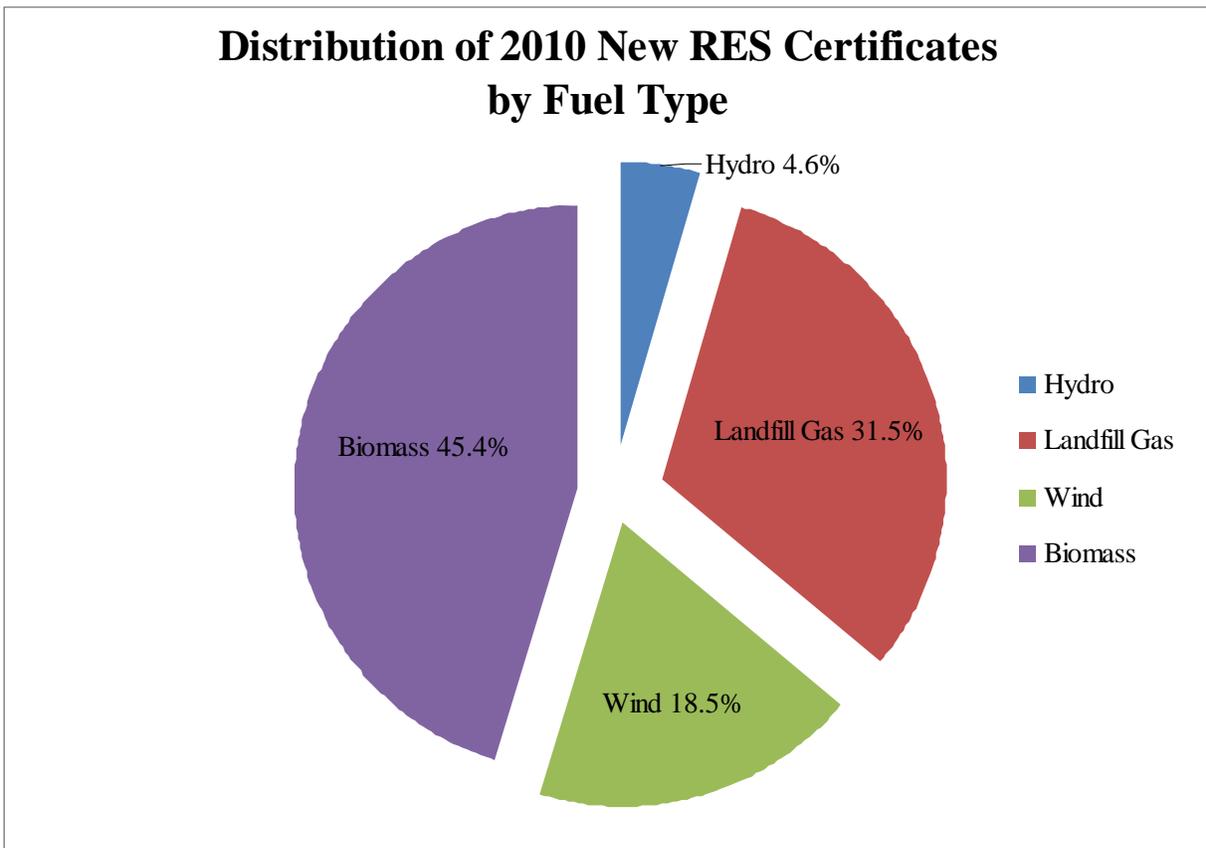
Table 5: Summary of 2010 RES Compliance

Results for 2010 Compliance Year		(MWh)
A	2010 RES Obligated Retail Sales	8,242,937
A.1	<i>Narragansett Electric</i>	5,695,951
A.2	<i>Competitive Suppliers (14 in total)</i>	2,546,986
New RES Obligation and New Renewable Energy Certificates		
B	Total 2010 New RECs Settled in Rhode Island*	213,357
B.1	<i>2010 New RECs Purchased</i>	<i>196,900</i>
B.2	<i>Banked 2008 and 2009 New RECs Applied</i>	<i>16,457</i>
C	New RES Obligation (2.5% of “A”)	206,082
C.1	<i>Banked RECs Applied to 2010 New Obligations (from B.2)</i>	<i>16,457</i>
C.2	<i>2010 New RECs Applied to 2010 New Obligations (from B.1)</i>	<i>189,433</i>
C.3	<i>Alternative Compliance Payment Credits Applied to 2010 New RES Obligation</i>	<i>192</i>
D	Banked RECs Available for Compliance Year 2011 or 2012	
D.1	<i>Remaining RECs Available after Meeting Obligations</i>	<i>7,467</i>
D.2	<i>2010 New RECs applied to 2010 Existing RES Obligation</i>	<i>56</i>
D.3	<i>RECs banked for future use in Compliance Years 2011 or 2012</i>	<i>7,313</i>
D.4	<i>2010 New RECs purchased above 30% banking cap (not eligible for banking)</i>	<i>98</i>
Existing RES Obligation and Existing Renewable Energy Certificates		
E	Existing RES Obligation (2.0% of “A”)	164,866
E.1	<i>2010 Existing RECs applied to 2010 Existing RES Obligation</i>	<i>164,644</i>
E.2	<i>2010 New RECs applied to 2010 Existing RES Obligation</i>	<i>56</i>
E.3	<i>Alternative Compliance Payment Credits Applied to 2010 Existing RES Obligation</i>	<i>166</i>
F	Total 2010 Existing RECs Settled in Rhode Island*	287,181
F.1	<i>2010 Existing RECs applied to 2010 Existing RES Obligation</i>	<i>164,644</i>
F.2	<i>2010 Existing RECs purchased above 2010 RES Obligation (not eligible for banking)</i>	<i>122,537</i>
<p><i>*Does not include RECs purchased on behalf of end-use customers for voluntary clean energy programs. See Appendix 6 for details on RECs purchased for voluntary programs. Please note that not all of the values are additive.</i></p>		

III. 2010 RES Compliance by Fuel Type and Geographic Location

In 2010, RES compliance was fulfilled by four types of renewable energy generators – biomass (wood-fired), landfill gas, wind, and hydroelectric. As shown in Figure 3,¹⁷ New RECs purchased by Obligated Entities for the 2010 Compliance Year were primarily generated by biomass (45.4%) and landfill gas (31.5%) facilities throughout New England and the adjacent control area of New York. Wind generators produced 18.5 percent of retired New RECs, a notable increase from the 1.7 percent share reported in 2009. Hydroelectric facilities comprised the remaining 4.6 percent of New RECs retired for 2010 compliance.

Figure 3: Distribution of Settled 2010 New RECs by Renewable Fuel Type

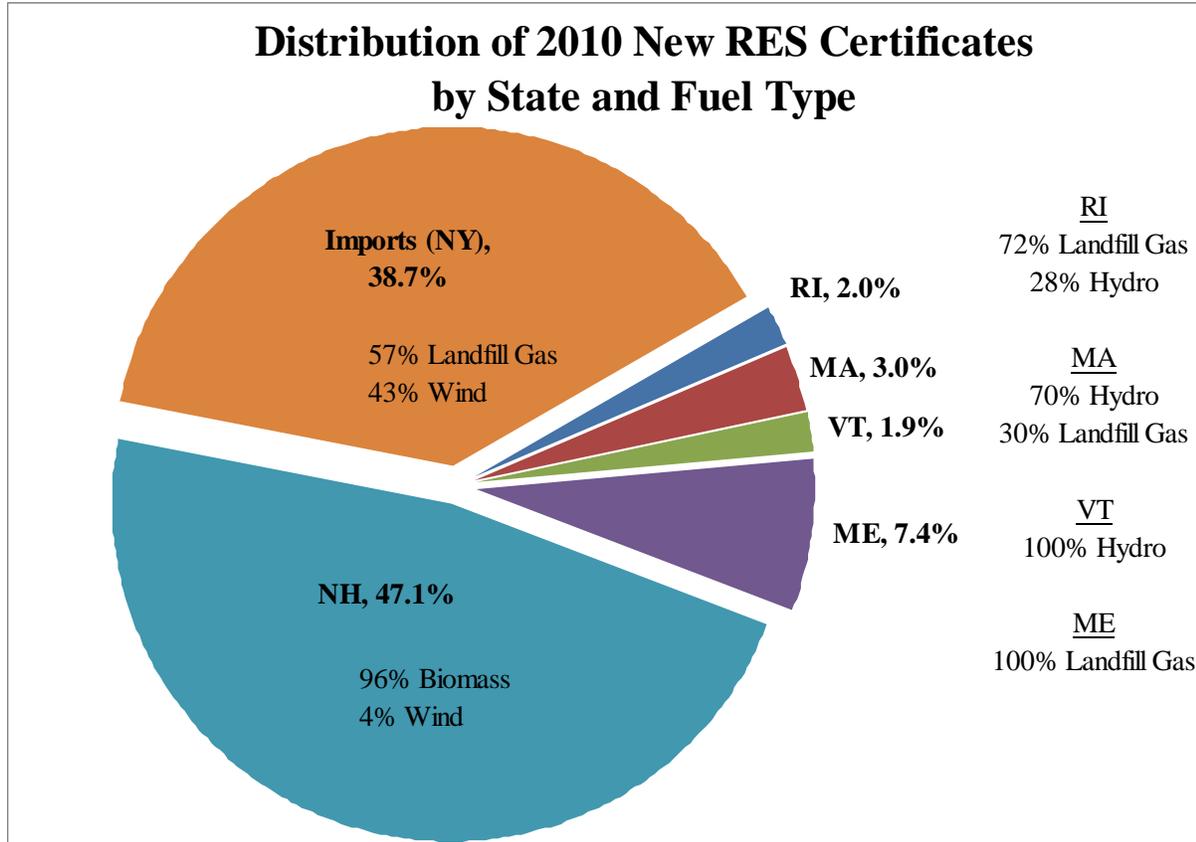


As shown in Figure 4, more than 85 percent of all RECs purchased by Obligated Entities to meet Rhode Island’s “New” RES compliance requirements were derived from generating facilities in two states – New Hampshire (47.1%) and New York (38.7%). Within the Granite State, the predominant fuel used to generate these RECs was biomass (96%), with a fraction of RECs derived from wind turbines (4%). Retired certificates from New York-based facilities were split between landfill gas (57%) and wind (43%).

¹⁷ Charts in Section III of this report do not include any RECs purchased by Obligated Entities on behalf of their customers as part of any voluntary clean energy programs.

New RECs retired for Rhode Island obligations were also generated by facilities located in Maine (7.4%), Massachusetts (3.0%), and Vermont (1.9%), all of which were powered by hydro or landfill gas. Renewable energy facilities located within the Ocean State accounted for 2.0 percent of the New RECs retired for 2010 obligations, a slight increase from the 1.3 percent reported in 2009. These Rhode Island-based generating facilities were fueled by landfill gas (72%) and hydro (28%).¹⁸

Figure 4: Distribution of Settled 2010 New RECs by Geographic Location and Facility Type



As in 2009, all of the RECs used to fulfill Existing RES Obligations in 2010 were attributable to hydroelectric generators (Figure 5). These hydro facilities were primarily located in Vermont (42.6%), Massachusetts (30.0%) and New Hampshire (22.7%). Maine-based hydro facilities accounted for 4.4 percent of Existing RECs retired for Rhode Island obligations, while less than one percent (0.3%) of Existing RES certificates were derived from hydro facilities located in Rhode Island, as shown in Figure 6.

¹⁸ Appendix 5 contains historical data for the distribution of New and Existing RECs by fuel type and location for 2007 through 2010.

Figure 5: Distribution of Settled 2010 Existing RECs by Renewable Fuel Type

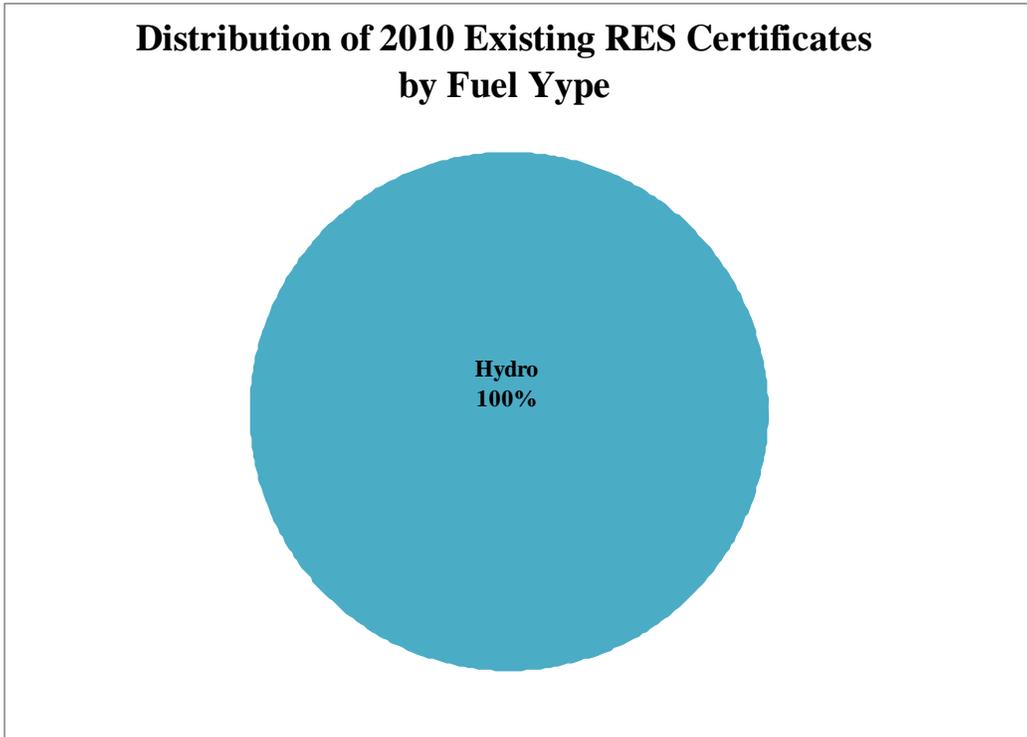
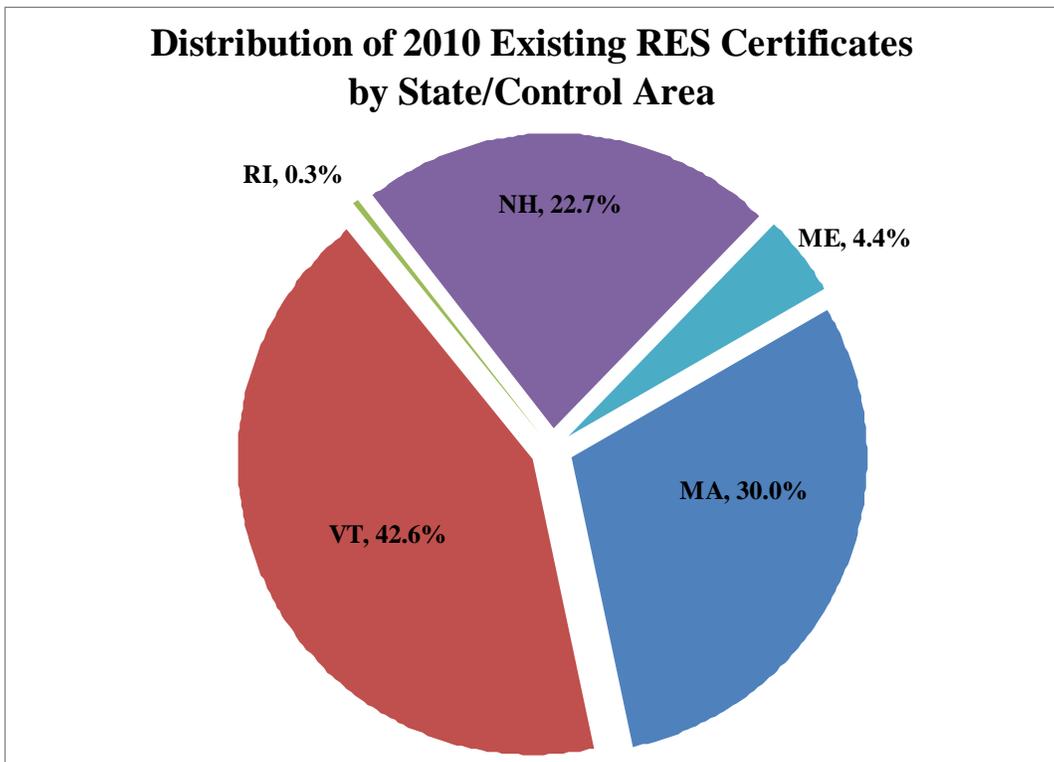


Figure 6: Distribution of Settled 2010 Existing RECs by Geographic Location



IV. Renewable Energy Standard – Future Obligations

The RES enabling legislation at §39-26-4 establishes annual targets for both New and Existing Rhode Island RES Obligations through 2019. At §39-26-4(a)(3), the enabling legislation provides for “*An additional one percent (1%) of retail electricity sales in each of the following compliance years 2011, 2012, 2013, 2014, provided that the commission has determined the adequacy, or potential adequacy, of renewable energy supplies to meet these percentage requirements;*” and at §39-26-4(a)(4) the legislation provides for an additional 1.5 percent per year through 2019 with the same Commission requirement to determine the adequacy of supply. Finally, at §39-26-4(a)(5) the enabling legislation states that “*In 2020 and each year thereafter, the minimum renewable energy standard established in 2019 shall be maintained unless the commission shall determine that such maintenance is no longer necessary for either amortization of investments in new renewable energy resources or for maintaining targets and objectives for renewable energy.*”

The manner in which the Commission will fulfill the requirement to determine supply adequacy, as well as the timing and implications of the Commission’s decision-making authority, is clearly articulated in the RES Regulations under §39-26-6(d). By statute, the Commission is directed to open a docket on or before January 1, 2014 to determine the adequacy or potential adequacy of renewable energy supplies to meet the increase in the RES targets scheduled for 2015. The Commission will make its determination of adequacy based not only on the historic availability of GIS Certificates, historic prices for GIS Certificates, and utilized quantities of ACPs, but also on the future potential availability of GIS Certificates based on the status of projects under development in the region, the magnitude and timing of other states’ RPS requirements, cost trends for renewable energy technologies, and the benefits to Rhode Island and the region.

The Commission determined in Docket 4050 that adequate renewable energy supplies exist to meet the RES target increase scheduled for 2011. A similar process will be conducted in 2013 or 2014 for the 2015 compliance year. Additional information on this proceeding, including witness testimony and the Commission’s complete order, can be found at: www.ripuc.org/eventsactions/docket/4050page.html.

The percentage targets shown in Table 3 earlier in this Report, and the calculated future RES obligations in Table 6 below assume that the Commission determines a continued adequacy of renewable energy supply. The quantity (in MWhs) of future years’ RES obligations are estimated by multiplying the forecasted value of total obligated sales in Rhode Island by the RES target for each year. The forecast of Rhode Island’s obligated sales is based on ISO-NE’s 2011 CELT Report¹⁹ and the exemption of both Pascoag Utility District and Block Island Power Company.²⁰

¹⁹ ISO-NE 2011 CELT Report: See tab 2, column R – Annual Energy Net Passive Demand Response

²⁰ The exempt load of Block Island and Pascoag is based on www.eia.doe.gov/cneaf/electricity/page/eia861.html.

Table 6: Forecast of RES MWh, by compliance year, for both new and existing resources

Compliance Year	Actual/Forecasted RES-Obligated Retail Sales (MWhs)	Minimum MWhs from New Renewable Energy Resources (per Table 1 targets)	MWhs from either New or Existing Renewable Energy Resources (2.0%)
2007 (Actual)	8,335,706	83,357	166,715
2008 (Actual)	8,279,006	124,190	165,584
2009 (Actual)	7,910,112	158,212	158,212
2010 (Actual)	8,242,937	206,082 ^a	164,866 ^a
2011	8,286,592	290,031	165,732
2012	8,380,860	377,139	167,618
2013	8,416,582	462,912	168,332
2014	8,502,911	552,690	170,059
2015*	8,607,101	688,569	172,143
2016*	8,715,261	827,950	174,306
2017*	8,815,482	969,703	176,310
2018*	8,914,710	1,114,339	178,295
2019*	8,994,093	1,259,174	179,882
2020 and thereafter**	9,072,484	1,270,148	181,450

^a Please note that the total New and Existing RES obligations are slightly higher than the % New and % Existing of total obligated retail sales due to rounding protocols for individual Obligated Entities.
* Increases in 2015 subject to Commission determination, as described in Section IV.
** The 2011 CELT forecasts ends in 2020. Duration of continuation after 2020 is subject to Commission determination.

V. Authorized Rate Increases

The RES enabling legislation specifies that the annual report shall include “*the amount of rate increases authorized pursuant to subsection (b),*” where subsection (b) reads that the Commission shall “[a]uthorize rate recovery by electric distribution companies of all prudent incremental costs arising from the implementation of this chapter, including, without limitation, the purchase of NE-GIS certificates, the payment of alternative compliance payments, required payments to support the NE-GIS, assessments made pursuant to §39-26-7(c) and the incremental costs of complying with energy source disclosure requirements.” This section provides an update on authorized rates and their impact during the 2010 Compliance Year.

The only electric distribution company that qualifies as an Obligated Entity is Narragansett Electric, as the definition of “Obligated Entity” in Section 3.25 of the RES Rules and Regulations specifically excludes Block Island Power Company and the Pascoag Utility District. Overall, estimated 2010 Renewable Energy Charge billings by Narragansett Electric to its customers totaled approximately \$6.7 million.²¹ This estimated cost of compliance is calculated by multiplying Narragansett Electric’s total electric deliveries for the period of January 1, 2010 through February 28, 2010 (953,369 MWh) and March 1, 2010 through December 31, 2010 (4,742,582 MWh) by the authorized Renewable Energy Charge then in place.²² It is important to note that any over-collections for RES compliance by the electric distribution company are ultimately refunded to ratepayers through a Commission-approved reconciliation mechanism. Thus, Narragansett Electric ratepayers only pay what is necessary for the company to meet its compliance obligations on an annual basis.

Table 7: Authorized Rate and Renewable Energy Charge Billings

Compliance Year	Total RES Load Obligation (MWh)	Auth. RES Charge/kWh	Renewable Energy Charge Billings (est.)	Average Monthly/ Annual Ratepayer Impact (500 kWh)
2010	5,695,951	\$0.00123²³	\$6,720,009	\$0.615 / \$7.38²⁴
2009	5,902,667	\$0.00093	\$5,489,480	\$0.465 / \$5.58
2008	7,733,583	\$0.00084	\$6,496,210	\$0.42 / \$5.04
2007	7,177,539	\$0.00062	\$4,450,074	\$0.31 / \$3.72

²¹ Narragansett Electric’s load obligation represents approximately 69% of the total retail electrical energy sold to end-use customers in Rhode Island.

²² Please note that during the period of January 1, 2010 through February 28, 2010, the authorized RES charge was \$0.00093 per kWh. For the remainder of 2010, the authorized rate was \$0.00123 kWh.

²³ As of March 1, 2010.

²⁴ Average ratepayer impact as of March 1, 2010 through December 31, 2010.

Finally, it should be recognized that the true cost of RES compliance for *all* electric supply customers in Rhode Island is difficult to calculate. While Narragansett Electric accounted for approximately 69 percent of total electric load in the compliance year, fourteen competitive suppliers combined to service the rest. Their costs to procure the required RECs and/or make ACPs are proprietary in nature, but are likely recovered in some fashion through the rates they charge their contracted customers throughout the Ocean State.

VI. Status of Implementation of Renewable Energy Standards in Other States

The RES enabling legislation requests a report on “*the status of the implementation of the renewable energy standards in Rhode Island and other states*” [emphasis added]. This section provides an update on the implementation of similar programs, known as Renewable Portfolio Standards (“RPS”) outside of Rhode Island, in the other five New England states.

Four of the remaining five New England states have active Renewable Portfolio Standards. While Vermont has legislated renewable energy goals, these goals are voluntary and do not constitute a binding RPS comparable with the rest of New England. As of the end of 2011, each of the five active RPS programs has multiple tiers – referred to as classes – used to distinguish compliance requirements associated with new and existing renewables, and sometimes other energy-related objectives, including combined heat and power, energy efficiency, or others. Class I requirements (equivalent to Rhode Island’s “New” obligation) focus on supply that has either been constructed after a specified date or supply which meets maximum emissions thresholds, as well as other eligibility criteria. “Existing” requirements²⁵ generally focus on supply that was in operation prior to the creation of the applicable state’s RPS program, and compliance targets are generally intended to provide the minimum amount of additional revenue believed to be necessary to keep these existing renewable energy facilities in operation. To this end, RPS requirements for existing resources are intended to maintain the current fleet rather than spur the development of new generating facilities.

Several states have additional requirements outside of the “New” and “Existing” convention. Massachusetts and New Hampshire both have solar-specific RPS requirements. In Massachusetts, the solar obligation is calculated annually and subtracted from the Class I requirement. This is referred to as a solar “carve-out.” New Hampshire’s solar requirement stands alone and is referred to as Class II obligation. Connecticut has a Class III requirement for conservation and load management resources, as well as combined heat and power (CHP) resources. In 2011, Connecticut also established incentive programs for zero and low emission distributed energy systems and a residential solar rebate program. While not explicitly within the RPS, these new programs effectively create solar and fuel cell “carve-outs” within the Connecticut RPS. The remainder of this section focuses exclusively on the Class I portion of each state’s RPS requirement.

Massachusetts has the longest-running RPS; the first compliance year was 2003. In aggregate, Massachusetts’ RPS supply exceeded its RPS demand in 2003; fell short of demand in 2004 through 2006; and then once again exceeded RPS demand in the 2007 Compliance Year (which, like Rhode Island, is January to December). Since compliance is not evenly distributed, however, several suppliers made ACPs in years when the market had an overall surplus. Class I ACPs in Massachusetts totaled approximately \$9,000 in 2003;²⁶ \$13.6 million in 2004; \$19.6

²⁵ Including Class II in MA, CT and ME; Class III in NH; Class IV in NH; and “Existing” in RI.

²⁶ An Early Compliance provision qualifying renewable energy produced in 2002 for the 2003 RPS requirement almost entirely alleviated the need for ACPs.

million in 2005; \$17.8 million in 2006; \$620,000 in 2007; \$70,000 in 2008; \$0 in 2009; and \$240,000 in 2010. The absence of ACPs in 2009 demonstrates a market in supply/demand balance. It is not clear whether the ACPs paid in 2010 is anomalous or constitutes evidence of a departure from market equilibrium. Looking forward, the increase in 2011-vintage Class 1 REC prices offered in the market throughout 2011 may suggest a tightening of supply. Proposed changes to the Massachusetts RPS which impact the eligibility of biomass-fired power plants for the RPS program may further impact the supply and demand balance by removing historically-eligible supply from the market. If adopted, the changes would require both new *and existing*²⁷ biomass facilities to meet a new definition of “Eligible Biomass Woody Fuel”²⁸ in order to receive and maintain a Statement of Qualifications to participate in the Massachusetts RPS program. An additional proposed eligibility criterion would require 60 percent “Overall Efficiency”²⁹ in order to generate one Massachusetts-eligible REC³⁰ per MWh. Facilities realizing 40 percent overall efficiency would receive 0.5 Massachusetts RECs per MWh, while generators with demonstrated overall efficiency between 40 percent and 60 percent will be awarded fractional RECs (above 0.5 per MWh) on a sliding scale. Facilities operating at less than 40 percent overall efficiency will not generate Massachusetts-eligible RECs. These proposed efficiency standards would apply to new facilities upon commercial operation and would also apply to *existing facilities* beginning in 2015. Although first proposed in 2010, these regulatory changes have still not received final approval as of the publication of this Report. Biomass generators accounted for 27 percent of Massachusetts Class I RECs in the 2009 compliance year. If operating facilities are unable to meet these incremental eligibility requirements over time, then the composition of Massachusetts RPS compliance will need to change fairly dramatically in order to maintain its current supply and demand balance.

Connecticut had its first RPS compliance year in 2004. Due to variations in its RPS eligibility standards compared to the rest of the region, Connecticut has historically had access to a larger pool of eligible supply. As a result, no penalty payments (Connecticut did not formally adopt the term ACP) were required in either the 2004 or 2005 compliance years. In 2006, both investor-owned utilities plus one competitive supplier made penalty payments totaling nearly \$3.5 million to compensate for an overall shortfall of renewable energy supply compared to RPS demand. In 2007, obligated entities made penalty payments totaling \$115,335 for Class 1. In 2008, obligated entities made cumulative Class 1 penalty payments of \$60,240. Connecticut’s public utilities regulatory authority – the Department of Energy & Environmental Protection (“DEEP”) – has not released a comprehensive RPS compliance report for 2009 or 2010, and has conducted an ongoing review of its RPS for most of 2011. After a series of stakeholder meetings and the completion of a study commissioned by the Connecticut Energy Advisory Board (“CEAB”), the passage of Public Act No. 11-80, called for further study of the RPS and delayed any discussion

²⁷ Sustainable harvesting standards would apply to new facilities immediately, and to existing facilities beginning in 2013.

²⁸ Eligible Biomass Woody Fuel refers to “fuel sources that are derived from economic or ecological improvement activities limited to” certain forest derived residues, forest salvage, non-forest derived residues, and dedicated energy crops. Each of these four categories of fuel are further defined in 225 CMR 14.02.

²⁹ The Overall Efficiency of the Generation Unit each quarter shall be calculated as: the total of Renewable Generation plus Useful Thermal Energy plus Merchantable Bio-Products, divided by Biomass Input Heat Content.

³⁰ Here the terms REC (Renewable Energy Credit) and GIS Certificate are used interchangeably.

of potential RPS revisions which may have resulted from the CEAB study. This most recent directive requires DEEP to study the feasibility of increasing RPS targets; conduct a cost/benefit analysis of including large hydro as a Class 1 resource; and review options for minimizing the costs to ratepayers for procuring renewable resources. The bill also created a number of incentive programs for distributed renewable energy resources, most notably for residential solar (30 MW), RPS-eligible low-emissions resources (up to \$20M/yr phasing in over several years and sun-setting by 2030), and zero-emissions resources (up to \$48M/yr, also phasing in over several years and sun-setting by 2030). Resources developed through these incentive programs could assist Connecticut in meeting some of its incremental RPS demand over the next several years.

Maine's first compliance year for its Class 1 RPS³¹ requirement was 2008. While there was eligible supply sufficient to meet the 1 percent requirement, an uneven distribution of REC ownership led to the payment of \$693,103 in ACPs. For the 2009 compliance year, total ACP payments decreased to \$319,233. A report for the 2010 compliance year has not yet been released. In 2011, Maine policymakers engaged in discussions regarding potential revisions to their RPS. Legislation was introduced which first threatened to pare back or cap the RPS, but was later changed to require a detailed study of the current Class 1 RPS requirements. This study has not yet been completed. In late 2011, a citizen-initiated petition was established in an effort to get legislation for a 20 percent standard by 2020 on the November 2012 ballot. If sufficient signatures are obtained, such legislation could be filed. The legislature can then either act on the matter or craft a competing measure for the November ballot.

The first compliance year for New Hampshire Class I RPS was 2009. It is reported that no ACPs were made for Class I RPS compliance that year, and that there was a surplus of RECs on the market. In 2010, \$26,321 in ACPs were made, reflecting a similar upward trend as seen in neighboring Massachusetts. The New Hampshire Public Utilities Commission held a series of RPS workshops throughout the year, and submitted an RPS report to the New Hampshire General Assembly on November 1, 2011. Recommendations included allowing combined heat and power as a Class I or II resource; phasing out project-specific eligibility for Class 1 over time; and clarifying obligations beyond 2015. The state's Commission is also considering consolidating all four of its classes into one large class, and then utilizing multipliers³² to assign weighted compliance values to new, existing, and efficiency resources. The General Court is considering a major RPS re-write in 2012.

While Vermont does not yet have a binding renewable energy requirement, the state legislature directed the Vermont Public Service Board ("PSB") to study the issue in 2011. On October 3, 2011 the PSB submitted its study along with its recommendation that the legislature adopt an RPS comprised of requirements for 40 percent existing renewable energy, 25 percent new renewable energy, and 10 percent from in-state distributed generation by 2033, beginning in

³¹ Maine has had an "Existing" RPS requirement since 2000. An abundance of qualifying in-state supply has enabled the state to easily satisfy this requirement each year.

³² A "multiplier" is a factor which can be used to increase, or decrease, the compliance value of each MWh from a specified resource. For example, a new wind or solar facility may be assigned a multiplier of between 150% and 300%, while an existing biomass or hydroelectric facilities may be assigned 100%.

2014. An alternate RPS proposal – 90 percent by 2050 – was filed by the Department of Public Service as part of the state’s 2011 Comprehensive Energy Plan. In the 2012 session, legislation is expected to be filed that would establish a binding RPS and substantially revise the existing Sustainably Priced Energy Enterprise Development (“SPEED”) program, which includes voluntary goals for 2012 and 2020, as well as a Standard Offer program to provide long-term price certainty and guaranteed interconnection to small³³ renewable energy projects.³⁴

Table 8 provides a summary of renewable energy standard annual percentage targets throughout New England, while Table 9 provides an estimate of the corresponding GWh RPS obligations for each of the five states with RPS requirements for the period 2007 through 2015. The forecasted RPS obligations are based on ISO-NE’s forecast of “Annual Energy Net of Passive Demand Response” found in the April 2011 CELT Report³⁵ and adjusted to exclude any public or other utility exempted from the RPS. For example, both Pascoag Utility District and Block Island Power Company have been removed from the forecast of Rhode Island REC demand.

Table 8: Summary of New England States’ New Renewable RPS Targets (%)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
MA Class I	3.0%	3.5%	4.0%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%
CT Class I	3.5%	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%	11.0%	12.5%
RI New	1.0%	1.5%	2.0%	2.5%	3.5%	4.5%	5.5%	6.5%	8.0%
ME Class I	0.0%	1.0%	2.0%	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%
NH Class I	0.0%	0.0%	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%	6.0%

Table 9: Projection of New England States’ New Renewable RPS Demand (GWh)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
MA Class I	1,529	1,761	1,932	2,467	2,845	3,356	3,839	4,354	4,888
CT Class I	1,115	1,546	1,719	2,060	2,355	2,667	2,976	3,304	3,793
RI New	83	124	158	210	290	376	462	552	687
ME Class I	-	58	204	333	436	548	648	755	869
NH Class I	-	-	51	114	232	354	476	604	735
Total	2,727	3,490	4,064	5,183	6,158	7,301	8,401	9,569	10,972

As can be seen in Figure 7 below, Massachusetts and Connecticut represent a majority of the demand for New Renewable Resources during the period of 2007 through 2015. In 2010, these two states accounted for 47.6 percent and 39.7 percent of demand, respectively. Rhode Island represented just 4.1 percent of the region’s 2010 New Renewable RES demand, as shown in Figure 8. By 2015, the allocation of New Renewable RES demand across the region is projected

³³ The VT Sustainably Priced Energy Enterprise Development (SPEED) Program is open to projects less than or equal to 2.2 MW.

³⁴ Retirement of GIS Certificates is not required to meet the Vermont goals.

³⁵ The ISO-NE 2011 CELT Report is available at: www.iso-ne.com/trans/celt/report/2011/2011_celt_report.xls.

as follows: 44.5% Massachusetts; 34.6% Connecticut; 7.9% Maine; 6.7 % New Hampshire; and 6.3% Rhode Island (Figure 9).

Figure 7: Forecast of New England States' New RES Obligation

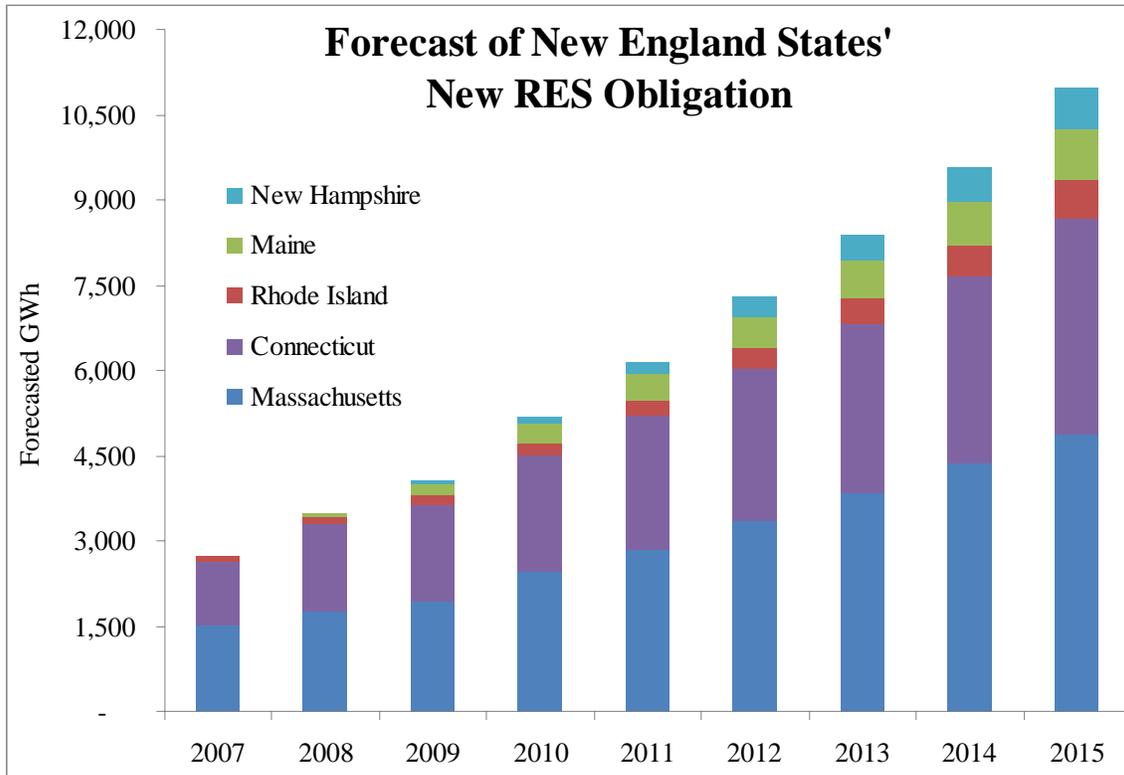


Figure 8: 2010 Composition of Aggregate RES Demand in New England

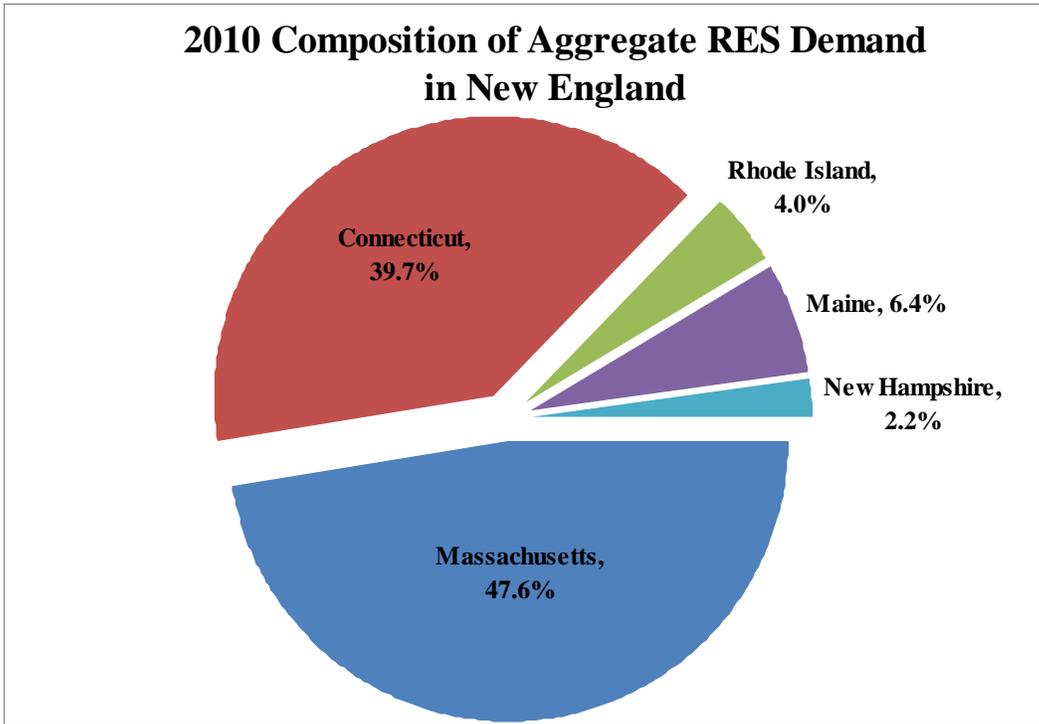
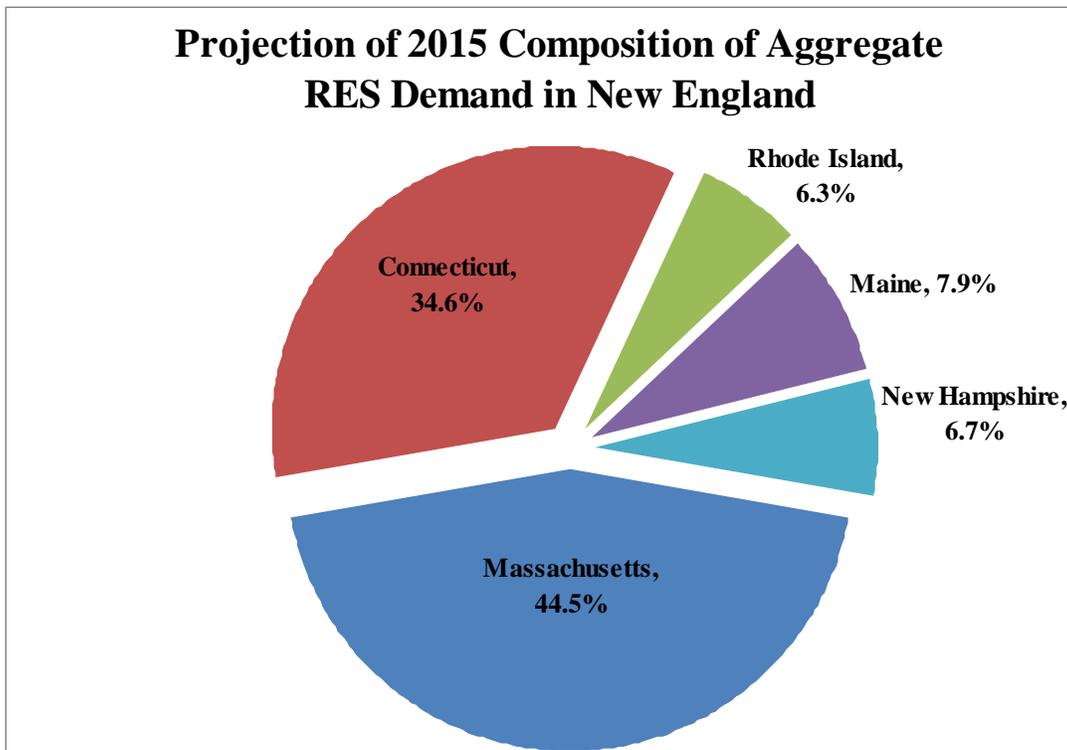


Figure 9: Projection of 2015 Composition of Aggregate RES Demand in New England



VII. Conclusion

Overall, the Commission's review and analysis reveal success through the first four years of the state's Renewable Energy Standard. Nearly 100 percent (99.9%) of the New and Existing RES Obligation was met through the retirement of GIS Certificates in 2010, with only a small amount of ACPs (358 MWh) required. These payments were made to the Rhode Island Economic Development Corporation on time and in the proper amounts, totaling \$21,812.94. In aggregate, GIS Certificates from both new and existing renewable energy supply exceeded RES Obligations. Approximately 61 percent of the New RES Obligation was met by renewable generating facilities located in New England, while the remainder was imported from the adjacent New York control area. The entire Existing RES obligation was met by hydro-powered generation within the New England control area.

The number of facilities and the amount of potential generation certified under the Rhode Island RES continues to increase. During the 2011 calendar year, the Commission approved or conditionally approved six (6) renewable energy facilities (4 New; 2 Existing) for state RES eligibility.³⁶ These generators combined for 210.1 MW of nameplate capacity. Although this annual increase in certified renewable energy facilities is less than that experienced in 2009 (26 facilities certified) and 2010 (14 facilities certified), it does show that the number of renewable energy generators seeking access to the Rhode Island REC market is still rising. This trend should continue as new policy initiatives supporting the renewable energy industry take hold, and local and regional economic conditions improve. Overall, as of the date of this filing, there were 93 qualified renewable energy resource facilities approved or conditionally approved under the Rhode Island RES, comprising a total of 834.2 MW of renewable energy nameplate capacity. The Commission will continue to examine these trends and report on them in future compliance reports.

The success of the state's Renewable Energy Standard and growth trends in the number of qualified renewable energy facilities since 2007 leaves the Commission optimistic that the RES and similar programs throughout New England will continue to spur renewable energy development and allow these programs to continue to meet their objectives in the short-term. It is important to note, however, that continued availability of long-term contracts and associated access to renewable energy financing are important to sustaining regional RPS success. Based on recent policies established within the Ocean State, including several long-term contracting statutes and the Distributed Generation Standard Contracts law, Rhode Island may be leading the region in this area. Elsewhere in New England, a shortage of long-term contracting appetite compared to the pipeline of renewable energy supply necessary to meet RES targets may affect New England's collective ability to meet established renewable energy standards in the mid- and long-term. Warning signs in the renewable energy marketplace, such as a significant increase in the use of ACPs, a reduction in banked compliance, and an increase in the magnitude and volatility of REC prices would alert us further. The Commission regards the 2010 Compliance

³⁶ Of the six renewable energy generating facilities certified in 2011, three (3) were wind generators; two (2) were small hydro facilities; and one (1) was solar powered. The latter facility is located in North Kingstown, Rhode Island, while the remaining generators were located in Massachusetts, Maine, and New York.

Year as a success and will continue to monitor the regional renewable energy marketplace as RES program implementation continues.

Appendix 1: Certified New Renewable Energy Resources

The following page lists generating units that have been *approved* by the Rhode Island Public Utilities Commission, either in whole or in part, as New Renewable Energy Resources. To view the most current RES applications status report, please visit: www.ripuc.org/utilityinfo/res.html

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as New	Year Approved
The following generators are located within ISO-NE:					
Johnston Landfill Expansion Phase	Johnston, RI	LFG	2.4	100%	2007
Johnston Landfill Expansion Phase	Johnston, RI	LFG	6	100%	2007
Pawtucket Hydro	Pawtucket, RI	Hydro	1.35	47%	2007
Portsmouth Abbey	Portsmouth, RI	Wind	0.67	100%	2007
North Hartland Hydro	Hartland, VT	Hydro	4.664	25.60%	2007
Schiller Station Unit 5	Portsmouth, NH	Biomass	50	100%	2007
Pioneer Hydro	Ware, MA	Hydro	1.6	50.40%	2007
Coventry Landfill Units 1 - 3	Coventry, VT	LFG	4.8	100%	2008
Coventry Landfill Unit 4	Coventry, VT	LFG	1.6	100%	2008
Attleboro Landfill	Attleboro, MA	LFG	1.5	100%	2008
Pepperell Hydro	Pepperell, MA	Hydro	2.7	53.20%	2008
Woronoco Hydro	Russell, MA	Hydro	2.7	37.40%	2008
Quarry Energy ¹	Quincy, MA	LFG	0.6	100%	2008
UNH Power Plant	Durham, NH	LFG	4.6	100%	2009
Portsmouth Wind	Portsmouth, RI	Wind	1.5	100%	2009
Lempster Wind	Lempster, NH	Wind	24	100%	2009
Pine Tree Landfill	Hampden, ME	LFG	3.17	100%	2009
Fitchburg Landfill	Westminster, MA	LFG	4.8	100%	2009
Crossroads	Norridgewock, ME	LFG	3.2	100%	2009
Thundermist Hydropower	Woonsocket, RI	Hydro	1.1	25.90%	2009
Seaman Energy	Gardner, MA	Biomass	1.62	100%	2010
Bay Center	Providence, RI	Solar	0.02	100%	2010
Genco ¹	Johnston, RI	Biomass	33.4	100%	2010
Stetson Wind Farm	North Washington, ME	Wind	57	100%	2011
Stetson II Wind Farm	North Washington, ME	Wind	25.5	100%	2011
Toray Solar #1	North Kingstown, RI	Solar	0.405	100%	2011
The following generators are located in control areas adjacent to ISO-NE:					
Higley Hydro	Colton, NY	Hydro	6.2	100% ²	2006
Colonie	Cohoes, NY	LFG	4.8	100%	2007
Model City	Youngstown, NY	LFG	5.6	100%	2007
Modern	Youngstown, NY	LFG	6.4	100%	2007
DANC	Rodman, NY	LFG	4.8	100%	2007
Ontario	Stanley, NY	LFG	5.6	100%	2007
Mill Seat Landfill	Bergen, NY	LFG	4.8	100%	2008
Chaffee Landfill	Chaffee, NY	LFG	4.8	100%	2008
Hyland Landfill	Angelica, NY	LFG	4.8	100%	2008
Clinton Landfill	Morrisonville, NY	LFG	4.8	100%	2008
Munnsville Wind Farm	Bouckville, NY	Wind	34.5	100%	2008
High Acres I	Fairport, NY	LFG	3.2	35.80%	2009
High Acres II	Fairport, NY	LFG	6.4	100%	2009
Madison County	Canastota, NY	LFG	4.8	100%	2009
Cohocton & Dutch Hill Wind Farm	Cohocton, NY	Wind	125	100%	2011
¹ Conditionally approved.					
² Subject to PUC review; portion of unit may be classified as an Existing Resource.					
Shading indicates newly approved facility since last compliance report					

Appendix 2: Certified Existing Renewable Energy Resources

The following page lists generating units that have been *approved* by the Rhode Island Public Utilities Commission, either in whole or in part, as Existing Renewable Energy Resources. To view the most current RES status report, please visit: www.ripuc.org/utilityinfo/res.html

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as Existing	Year Approved
The following generators are located within ISO-NE:					
Hosiery Mills	Hillsboro, NH	Hydro	1.2	100%	2007
Kelley's Falls	Manchester, NH	Hydro	0.45	100%	2007
Mascoma	West Lebanon, NH	Hydro	1.5	100%	2007
Salmon Falls	South Berwick, ME	Hydro	1.2	100%	2007
Pontook Hydro	Dummer, NH	Hydro	10.8	100%	2007
Fife Brook	Florida, MA	Hydro	10	100%	2007
Pawtucket Hydro	Pawtucket, RI	Hydro	1.35	53%	2007
North Hartland Hydro	Hartland, VT	Hydro	4.664	74.40%	2007
Blackstone Hydro ¹	Central Falls, RI	Hydro	0.818	100%	2007
McIndoes Station	McIndoe Falls, VT	Hydro	10.63	100%	2007
Lower Deerfield Stations	Conway, Shelburne Falls, Buckland, MA	Hydro	19.5	100%	2007
Deerfield Unit 5	Florida, MA	Hydro	13.99	100%	2007
Sherman Station	Rowe, MA	Hydro	6.237	100%	2007
Searsburg Station	Wilmington, VT	Hydro	4.96	100%	2007
Pioneer Hydro	Ware, MA	Hydro	1.6	49.60%	2007
Wells River	Boltonville, VT	Hydro	1.318	100%	2007
Penacook Upper Falls	Boscawen, NH	Hydro	3.67	100%	2007
Dodge Falls	Bath, NH	Hydro	5.76	100%	2007
Nashua Hydro	Nashua, NH	Hydro	1.1	100%	2007
Briar Hydro	Penacook, NH	Hydro	5.58	100%	2007
Penacook Lower Falls	Boscawen, NH	Hydro	4.69	100%	2007
Benton Falls	Benton, ME	Hydro	4.468	100%	2007
Springfield Power	Springfield, NH	Biomass	16	100%	2008
Lower Lamoille Composite	Milton, VT	Hydro	16.85	100%	2008
Middlebury Composite Hydro	Leicester, VT	Hydro	6.4	100%	2008
North Rutland Composite Hydro	Rutland, VT	Hydro	5.6	100%	2008
Putnam Hydro	Putnam, CT	Hydro	0.575	100%	2008
Pepperell Hydro	Pepperell, MA	Hydro	2.7	46.80%	2008
Woronoco Hydro	Russell, MA	Hydro	2.7	62.60%	2008

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as Existing	Year Approved
Williams Project	Solon, ME	Hydro	14.8	100%	2009
Monty Project	Lewiston, ME	Hydro	27	100%	2009
Cataract Project	Saco, ME	Hydro	6.65	100%	2009
Hiram Project	Baldwin, ME	Hydro	10.9	100%	2009
North Gorham Project	Gorham, ME	Hydro	2.25	100%	2009
Shawmut Project	Shawmut, ME	Hydro	8.1	100%	2009
Skelton Project	Dayton, ME	Hydro	16.8	100%	2009
Weston Project	Skowhegan, ME	Hydro	13.4	100%	2009
Brunswick Project	Brunswick, ME	Hydro	19	100%	2009
Bar Mills Project	Hollis, ME	Hydro	4	100%	2009
Bonny Eagle Project	Hollis, ME	Hydro	7.2	100%	2009
West Buxton Project	Buxton, ME	Hydro	7.9	100%	2009
Deer Rips Project	Auburn, ME	Hydro	7	100%	2009
Gulf Island Project	Lewiston, ME	Hydro	23.4	100%	2009
Androscoggin Project	Lewiston, ME	Hydro	3.6	100%	2009
Thundermist Hydropower	Woonsocket, RI	Hydro	1.1	74.10%	2009
Boatlock	Holyoke, MA	Hydro	2.9	100%	2010
Beebe Holbrook	Holyoke, MA	Hydro	0.516	100%	2010
Chemical	Holyoke, MA	Hydro	1.6	100%	2010
Riverside 4-7	Holyoke, MA	Hydro	3.04	100%	2010
Riverside 8	Holyoke, MA	Hydro	4	100%	2010
Skinner	Holyoke, MA	Hydro	0.3	100%	2010
Valley Hydro	Holyoke, MA	Hydro	0.79	100%	2010
Harris Energy	Holyoke, MA	Hydro	2.421	100%	2010
HG&E Hydro/Cabot 1-4	Holyoke, MA	Hydro	3.056	100%	2010
Aziscohos Project	Lincoln Plantation, ME	Hydro	7.5	100%	2010
Hydro Keenebec Project	Waterville, ME	Hydro	15.4	100%	2010
Brassua Project	Rockwood, ME	Hydro	4.2	100%	2010
Crescent	Russell, MA	Hydro	1.5	100%	2011
Glendale	Stockbridge, MA	Hydro	0.7	100%	2011
The following generators are located in control areas adjacent to ISO-NE:					
High Acres I	Fairport, NY	LFG	3.2	64.20%	2009
¹ Conditionally approved.					
Shading indicates newly approved facility since last compliance report					

Appendix 3: Alternative Compliance Payments

Section 7.3 of the Rules permits Obligated Entities to meet the RES either through the purchase and retirement of GIS Certificates or through the provision of Alternative Compliance Payments (“ACPs”), obtained by making payment to the Rhode Island Economic Development Corporation (“EDC”). The Rhode Island EDC sets these funds aside in the Renewable Energy Development Fund to support renewable energy development. The ACP rate is the same for both New and Existing obligations.

Section 3.2 of the Rules states that ACPs must be made at a rate of \$50 per MWh of renewable energy obligation, in 2003 dollars, adjusted annually by the annual change in the United States Bureau of Labor Statistics’ Consumer Price Index. Additionally, Section 7.9 of the Rules states that the Commission will publish the ACP rate by January 31 of each Compliance Year. For the 2010 Compliance Year, the ACP rate was \$60.93 per MWh of obligation.

Compliance Year	ACP Rate
2007	\$57.12
2008	\$58.58
2009	\$60.92
2010	\$60.93
2011	\$62.13

Connecticut, Maine, Massachusetts, and New Hampshire all have similar ACP compliance mechanisms. The Table below shows the 2010 ACP rates used by other New England states for the various class RECs defined in each state.

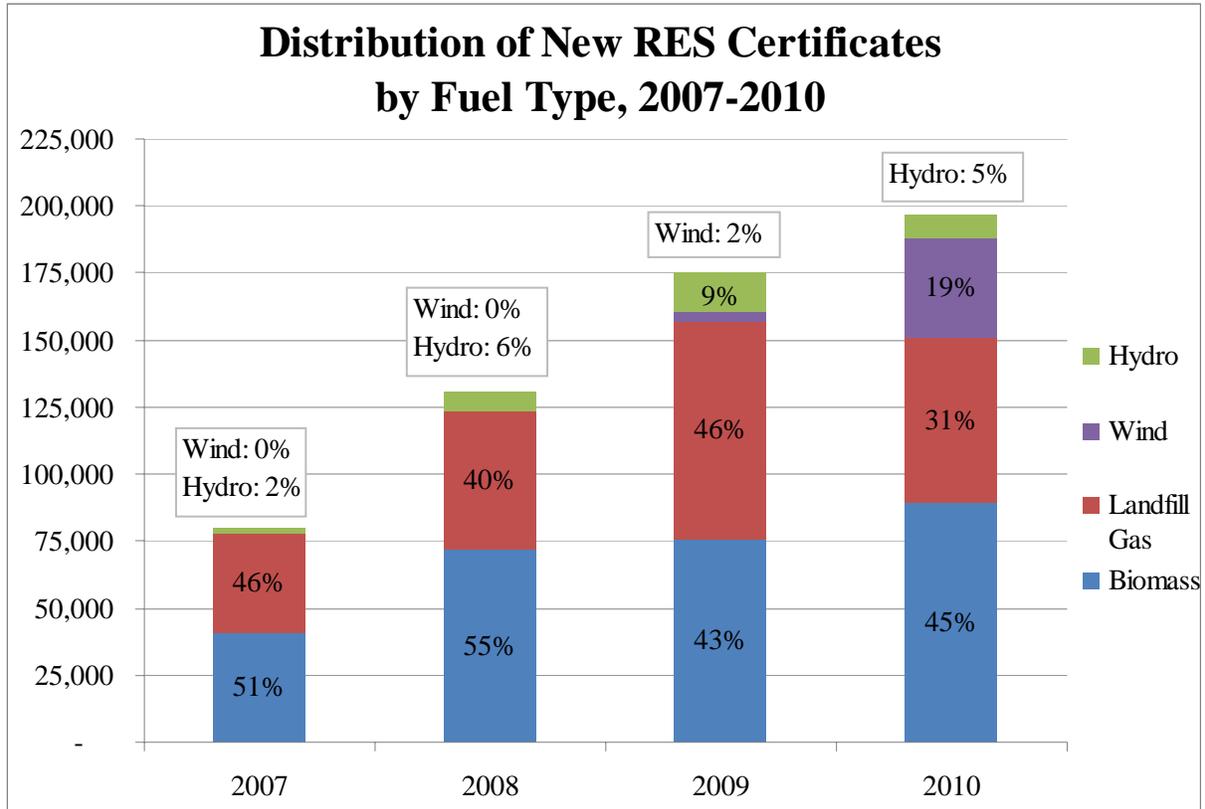
2010 ACP Rates	CT	ME	MA	NH
Class I	\$55	\$60.93	\$60.93	\$60.93
Class II	\$55	N/A	\$25	\$160.03
Class III	\$31	N/A	N/A	\$30.46
Class IV	N/A	N/A	N/A	\$30.46

Appendix 4: RI RES 2010 Compliance Summary

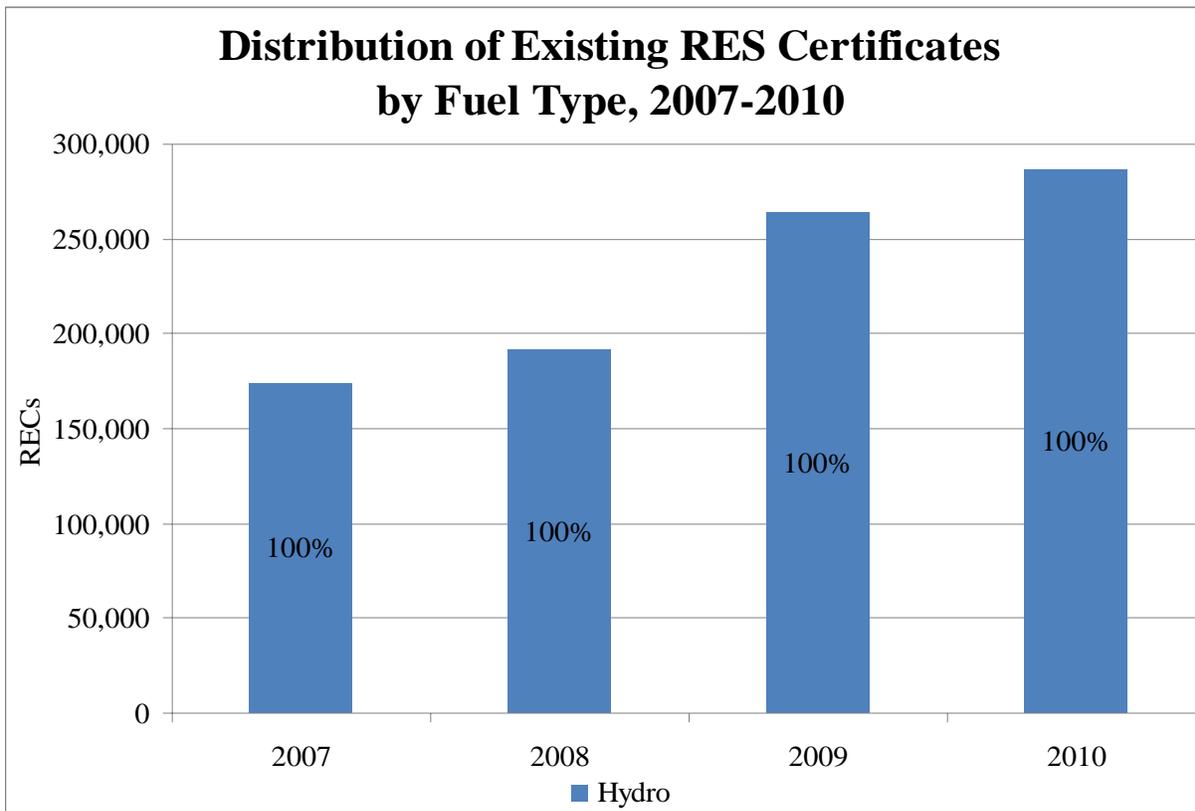
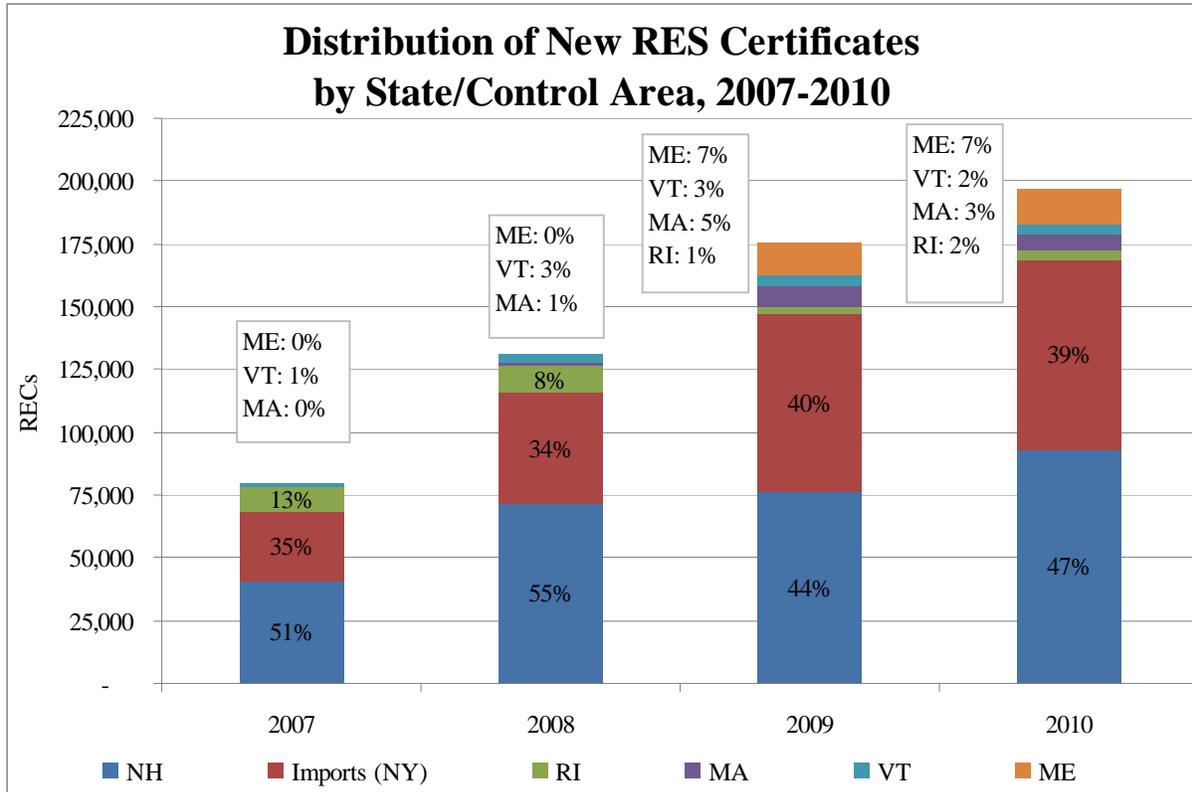
Data Based on MWh	Retail Sales (from filing)		RES Obligation (calculated)		GIS Certificates (from GIS)		"New" Renewable Energy Resources (from filing)			"Existing" Renewable Energy Resources (from filing)			Banked New RECs for Future Compliance		
	Load	2.5% "New" Obligation	2% "Existing" Obligation	"New" RECs	"Existing" RECs	Applied Banked Attributes ("New")	Alternative Compliance Credits ("New")	Total "New" RES Attributes	Alternative Compliance Credits ("Existing")	Total "Existing" RES Attributes	Excess "New" Attributes	Banking Limit (30% "New") Obligation	Eligible Banked Attributes		
Distribution Companies															
Narragansett Electric Co.	5,695,951	142,399	113,920	136,406	113,920	8,161	0	144,567	0	113,920	2,168	42,720	2,168		
Competitive Suppliers															
Constellation New Energy, Inc															
Devonshire Energy															
Direct Energy Services LLC															
NextEra Energy Services Rhode Island LLC															
Glacial Energy of New England, Inc.															
Hess Corporation															
Integrus Energy Services, Inc.															
Liberty Power Holdings LLC															
Sempra Energy Solutions LLC															
SIH Energy LLC															
South Jersey Energy Co.															
TransCanada Power Marketing, LLC															
First Point Power, LLC															
Westerly Hospital Energy Company LLC															
subtotal	2,546,986	63,683	50,946	60,494	173,261	8,296	192	68,982	166	173,427	5,243	19,103	5,145		
TOTALS	8,242,937	206,082	164,866	196,900	287,181	16,457	192	213,549	166	287,347	7,411	61,825	7,313		

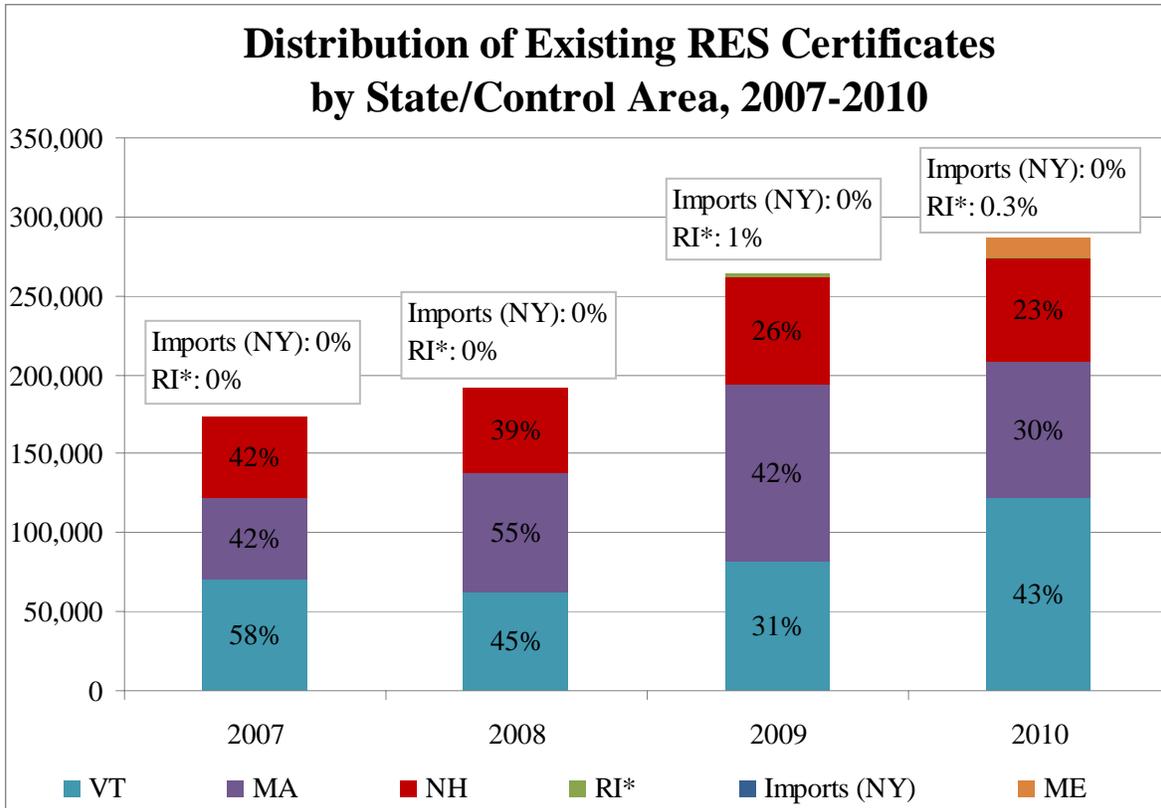
Appendix 5: Historical Breakdown of Compliance Sources

The charts below provide additional detail on the breakdown of New and Existing RECs purchased by Obligated Entities for 2007-2010.

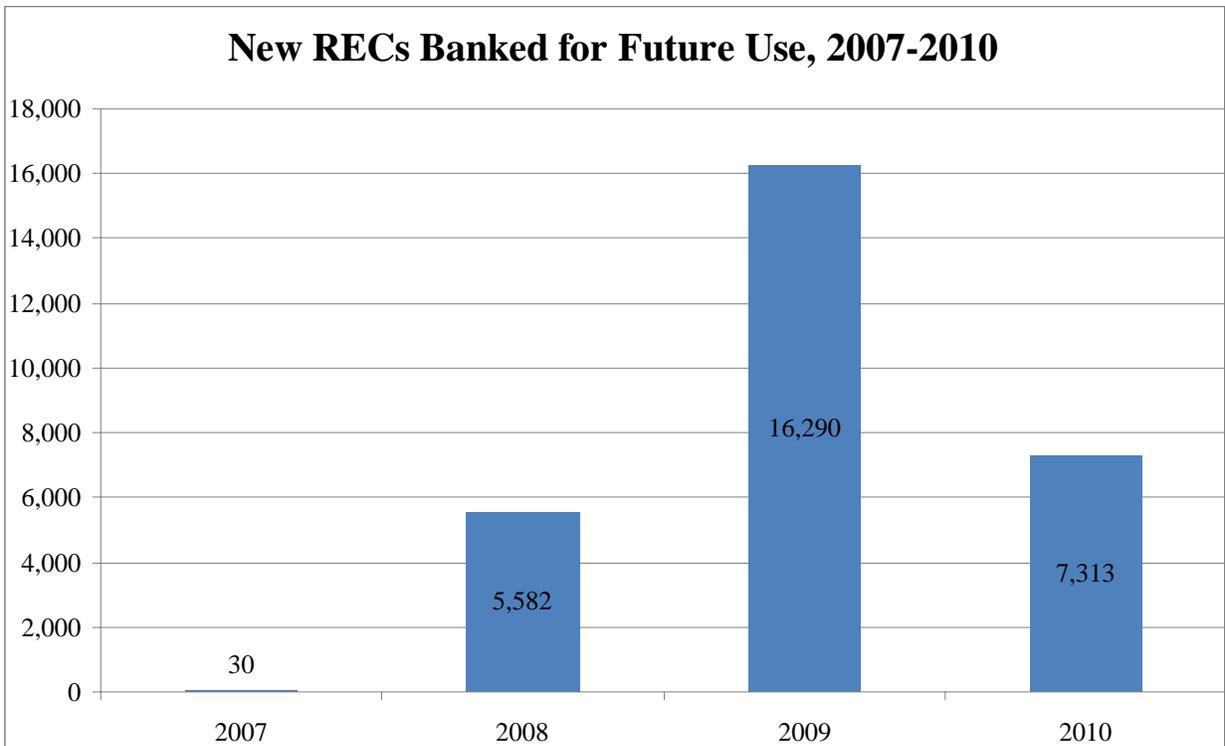
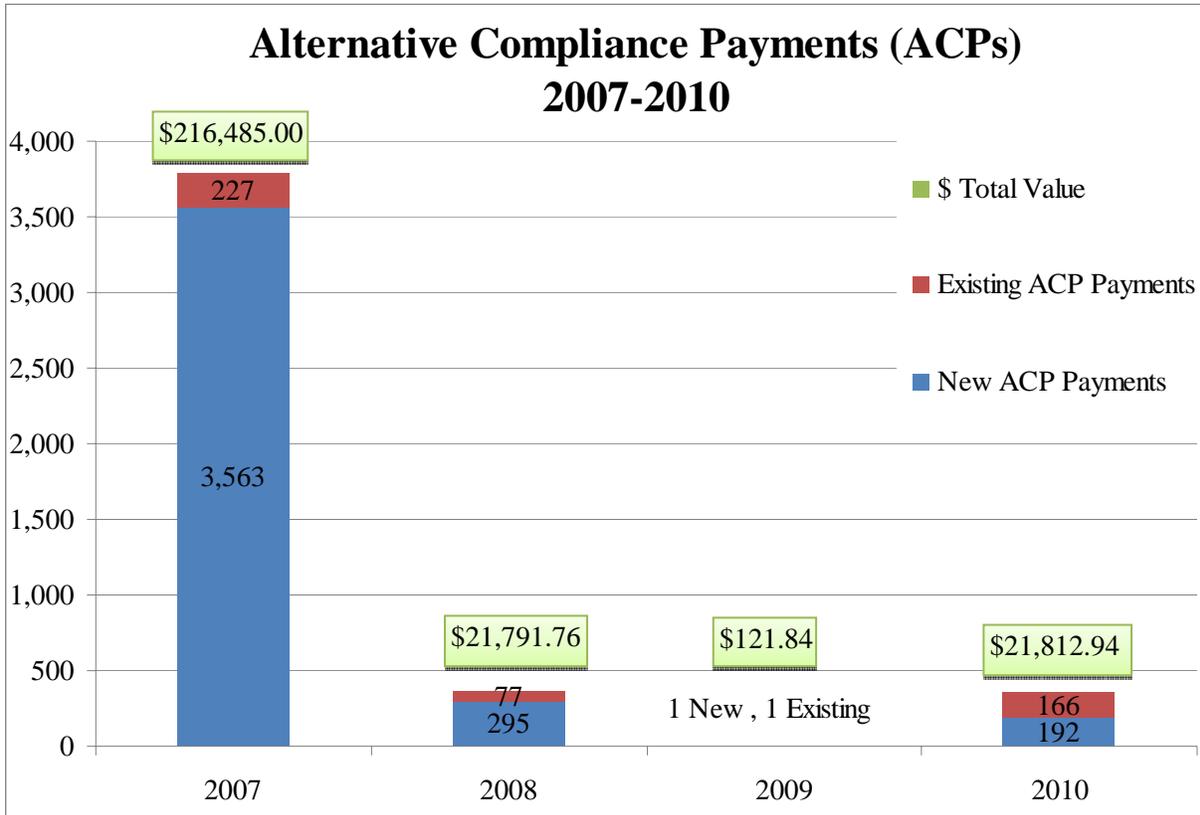


In 2010, there was an over-the-year increase of 17 percentage points (+33,521 RECs) in New RES Certificates from wind resources applied to Rhode Island obligations. Meanwhile, the number of New RES Certificates purchased from Landfill Gas resources decreased by 15 percentage point (-19,496 RECs) in 2010.





*There were 903 Existing RES Certificates from Rhode Island-based facilities applied to Obligated Entities' obligations in 2010; 1,964 in 2009; 0 in 2008; and 156 in 2007. These Rhode Island Certificates represent too small a portion of the Existing Certificates to be visible in this chart.



Appendix 6: Voluntary Clean Energy Programs

As a competitive retail electricity market, Rhode Island provides load serving entities with the opportunity to offer customized electric supply options to both their existing and prospective retail customers. One example of such an offer is for the voluntary purchase of renewable energy resources above and beyond the state’s minimum RES requirements. Collectively, the offers of such products are known as voluntary³⁷ clean energy programs or as the voluntary green power market. Narragansett Electric’s “GreenUp” program is just one example.

For the 2010 Compliance Year, Narragansett Electric and one competitive supplier reported the purchase of RECs on behalf of end-use customers as part of voluntary clean energy programs. The table below provides a summary of the quantities of voluntary REC purchases made on behalf of customers.

History of Voluntary REC Purchases on Behalf of RI Customers

New RECs		2008	2009	2010
A	Total New RECs settled in Rhode Island on behalf of end-use customers for voluntary clean energy programs	5,350	7,480	6,642
A.1	<i>New Voluntary RECs – Narragansett Electric</i>	<i>5,161</i>	<i>6,833</i>	<i>4,366</i>
A.2	<i>New Voluntary RECs – All Competitive Suppliers</i>	<i>189</i>	<i>647</i>	<i>2,276</i>

Existing RECs		2008	2009	2010
B	Existing RECs settled in Rhode Island on behalf of end-use customers for voluntary clean energy programs	7,624	2,603	0
B.1	<i>Existing Voluntary RECs – Narragansett Electric</i>	<i>7,624</i>	<i>2,603</i>	<i>0</i>
B.2	<i>Existing Voluntary RECs – Competitive Suppliers</i>	<i>0</i>	<i>0</i>	<i>0</i>

The GIS Certificate is the currency used to demonstrate compliance not only with the mandatory RES, but also with voluntary renewable energy transactions. Through the use of GIS Certificates, which are created and transferred exclusively within the NEPOOL GIS, and the annual submission of RES compliance reports, the Commission ensures that a GIS Certificate used for RES compliance has not also been used to satisfy another obligation in Rhode Island or

³⁷ By comparison, the RES is referred to as the “mandatory” or “compliance” renewable energy market.

any other jurisdiction. For example, National Grid hosts voluntary renewable energy programs in both Rhode Island and Massachusetts. The use of GIS Certificates and the annual review of RES Compliance Reports ensure that each MWh of renewable energy production is used to meet only one obligation. This prohibition on double-counting is codified at Section 7.10(iii)(e) of the Rhode Island RES Regulations, which states:

Assurances satisfactory to the Commission that the New or Existing Renewable NEPOOL GIS Certificates have not otherwise been, nor will be, sold, retired, claimed or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Rhode Island.

While voluntary markets represent only a small fraction of GIS Certificates, it is nonetheless important to the integrity of both programs that all certificates are tracked and settled appropriately.