STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Rhode Island

Renewable Energy Standard (RES)

Annual RES Compliance Report

For Compliance Year 2012

(Revised 3/25/14)

February 2014

Rhode Island Public Utilities Commission

89 Jefferson Boulevard

Warwick, Rhode Island 02888

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Executive Summary

Compliance Year 2012, from January 1, 2012 through December 31, 2012, was the sixth compliance year for the Rhode Island Renewable Energy Standard (RES). Under R.I. Gen. Laws § 39-26-6, the Rhode Island Public Utilities Commission (Commission or PUC) is charged with implementing the RES and ensuring compliance by Obligated Entities.[1] In 2012, each Obligated Entity was required to obtain at least 6.5% of electricity (including line losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than 4.5 % from New Renewable Energy Resources.

This sixth Annual RES Compliance Report is intended to satisfy the statutory requirement in R.I. Gen. Laws § 39-26-6(f) 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 (RECs) and alternative compliance payments (ACPs) 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 2012 RES-obligated retail sales totaled 8,123,025 MWh. As shown in Table 1 below, the total minimum obligation to be satisfied by New Renewable Energy Resources was 365,545 MWh (4.5% of each Obligated Entity's retail sales). All but approximately 10% of this obligation was met through retirement of Rhode Island-eligible RECs. The obligation to be satisfied by either Existing or any remaining New Renewable Energy Resources was 162,469 MWh (2.0% of each Obligated Entity's retail sales).

Table 1: Composition of 2012 REC Compliance

	New RES Obligation	Existing RES Obligations
2012 Minimum Obligations[2]	365,545 Certificates	162,469 Certificates
GIS Certificates Retired for 2012 RI RES Compliance (MWh, %)	330,350 (90.4%)[3]	162,467 (99.99998%)
RI RES Compliance by Alternative Compliance Payments (MWh, %, $)	35,195 MWh (9.6%) $2,253,183.76	2 MWh (0.00001%) $128.04
Banked for Future Compliance	14,296 MWh[4]	Not Applicable
Over-compliance / RECs Not Banked	0	50,114

In 2012, New England Power Pool Generation Information System Certificates (NEPOOL GIS Certificates), also known as RECs[5], were used to meet more than 90% of Rhode Island's New renewable energy supply totaled 343,385 MWh, including 9,028 Certificates banked from 2010 or 2011. This

[1] Per R.I. Gen. Laws § 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 or Pascoag Utility District.

[2] Please note that the total New and Existing RES obligations may be higher than the 4.5% New and 2.0% Existing of total obligated retail sales due to rounding protocols for individual Obligated Entities.

[3] This value includes the application of 9,028 banked RECs from the 2010 and 2011 Compliance Years.

[4] Includes 1,261 RECs procured by an Obligated Entity that originally had not been recognized by the Commission as eligible for compliance, resulting in an ACP being made to meet their obligation. Following review of supporting documentation, these RECs were determined to be eligible, with the Obligated Entity choosing to bank them for use in Compliance Year 2013 rather than receive a refund from the Rhode Island Economic Development Corporation, now known as the Rhode Island Commerce Corporation.

[5] 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.

represented a 6.1% deficit compared to the state's New 2012 RES obligation for all Obligated Entities. This deficit is much less than the 26.3% deficit that existed in Compliance Year 2011. The reduction in this deficit could reflect the easing of supply constraints in the New England REC market that were especially felt in the latter part of 2011, or it could reflect the implementation of more focused REC-purchasing strategies for Obligated Entities when complying with Renewable Portfolio Standard (RPS) obligations in other New England states. While the 2012 REC deficit is lower than it was in Compliance Year 2011, the cost that The Narragansett Electric Company d/b/a National Grid (National Grid) incurred while procuring RECs has increased significantly, for a second year in a row. More information on compliance costs can be viewed below in Tables 2 and 3 and in Section V of this report. The remaining 35,195 MWh New REC obligation was met through approximately $2.2M in ACPs. An additional 14,296 New RECs were retired by Obligated Entities and banked for Rhode Island compliance in future years.

Also as shown in Table 1, RECs retired by Obligated Entities to meet Rhode Island's Existing 2012 renewable energy supply requirements totaled 162,467 MWh. This represents nearly 100% of the state's Existing 2012 RES obligations (162,469). The remaining 2 MWh Existing REC obligation was met through $128.04 in ACPs. After meeting their respective obligations, Obligated Entities also combined to procure an excess of 50,114 RECs above the 2012 Existing RES requirement, a 30.8% surplus. It is important to note that banking of Existing RECs is not allowed under Rhode Island's Renewable Energy Standard Rules and Regulations.

A total of 35,197 MWh of the 2012 obligations, including New and Existing, were met through ACPs. Compared to compliance year 2011, this marks a decrease in the obligations met through ACP by nearly 49,208 MWh (59%). At the 2012 rate of $64.02 per one MWh of compliance, these ACPs resulted in total payments of more than $2.25 million to the Rhode Island Economic Development Corporation ("RI EDC"), consistent with the requirements of R.I Gen. Laws §§ 39-26-4(c) et seq. This is down from $5.24 million in 2011.

Nineteen load-serving entities had Rhode Island RES obligations during the 2012 Compliance Year.[6] Twelve of these entities met their entire New and Existing RES obligations with GIS Certificates, as compared to Compliance Year 2011 when only ten of seventeen entities met their obligations through RECs. Seven competitive suppliers met a portion of their 2012 individual RES obligations by making ACPs to the Rhode Island Commerce Corporation. Of these, three competitive suppliers met all of their New obligations by making ACPs and of those three, one utilized ACPs to meet their entire New and Existing obligations.

Nine Obligated Entities utilized some of their authorized Banked Compliance in 2012. Collectively, they applied 9,028 RECs, which had been banked in either 2010 or 2011, towards their respective 2012 obligations. Ten Obligated Entities banked excess 2012 RECs for use in 2013 or 2014.

Additional information on the composition of 2012 RES compliance by fuel type and geographic location is provided in Section III of this report.[7]

[6] See Table 5 for a complete list of load-serving entities.

[7] This summary of New and Existing RES compliance excludes RECs 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.

As shown in Table 2, the authorized RES charge to National Grid consumers remained a bill credit during the first three months of 2012. However, this is not a true indication of market conditions and compliance costs, and the reader should consider the impact of ratemaking procedures and fluctuating market conditions to place these values into their appropriate context. The bill credit indicated below for January 2012 through March 2012 is the result of the reconciling nature of utility rate making. In short, at the beginning of a calendar year, the electric distribution company proposes prospective RES rates based upon detailed market projections and estimated electricity usage in the coming year. These collections are then reconciled against the actual costs incurred to procure RECs or make ACPs throughout the compliance year based upon the electric load served. Thus, the charge of $0.00253 per kWh for the period April through December 2012 indicates that National Grid under-collected revenues during the previous year due to changes in a complex set of assumptions designed to project future obligations.

Table 2: Estimated Rate Impact for 2012 RES Compliance

Compliance Year	Total RES Load Obligation (MWh)	Authorized RES Charge per kWh	Renewable Energy Charge Billings (est.)[8]	Average Monthly/Annual Ratepayer Impact (500 kWh)
January 2012 - March 2012	1,302,702	($0.00031)	($393,697)	($0.155) / ($1.86)
April 2012 - December 2012	3,969,686	$0.00253	$9,370,994	$1.265 / $15.18

In late 2011, underlying market conditions changed dramatically. Shortage conditions in the regional REC marketplace and increasing demand due to rising annual obligation targets across the New England states helped raise REC prices substantially toward the end of 2011 and throughout 2012. As a result, the 2012 RES rate (effective April 1, 2012 through March 31, 2013) increased from the $.00031 per kWh *credit* indicated in Table 2 to a *charge* of $.00253 per kWh, or $1.27 per month for the average residential ratepayer (500 kWh per month).[9] The 2013 RES rate (effective April 1, 2013 through March 31, 2014) further increases the charge to $.00512 per kWh.

Moreover, overall compliance costs have increased dramatically and will likely rise further, particularly in the short-term, as shortage conditions persist and the state's renewable targets increase. For example, as indicated in Table 3 below, National Grid incurred costs of $12.8 million to meet its 2012 New and Existing RES obligations. This represented a 52% increase above those costs incurred to comply with 2011 RES targets ($8.43 million) and a six-fold increase from 2010 compliance costs ($2.07 million). All of these costs will ultimately be recovered from ratepayers utilizing the rate making mechanism indicated above. It should also be noted that this data only represents charges incurred by customers of National Grid, which accounts for approximately 65% of all retail load statewide. The remaining 35% of statewide electric load is serviced by competitive suppliers for whom the Commission does not have access to compliance cost data. Thus, the true total ratepayer cost for implementation of Rhode Island's RES is unknown.

[8] 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 65% of the total retail load delivered in Rhode Island.

[9] For additional information, see Commission Docket 4315 at: www.ripuc.org/eventsactions/docket/4315page.html.

Table 3: Summary of National Grid's 2012 REC Compliance Costs

	TOTAL RES COSTS	New REC Costs	Existing REC Costs	ACP Costs	Obligated Load (MWh)
2012	$12.8 million	$12.75 million	$0.05 million	N/A	5,272,388

Overall, despite an apparent continued shortage of New Rhode Island-eligible RECs and shortage conditions throughout New England, the state's Renewable Energy Standard continues to operate successfully. All of the state's Obligated Entities met their obligations in full, either by the retirement of RECs or through the use of ACPs. The number of Rhode Island-eligible generating units continues to grow, including facilities located within the state, as does the number of new renewable energy projects proposed throughout the region and adjacent control areas. Moreover, the Alternative Compliance Payment mechanism is working as intended, resulting in payments to the Rhode Island Commerce Corporation during a period of constrained REC supply. These dollars are being used to spur new renewable development throughout the state and, over time, may help alleviate some of those supply pressures.

In conjunction with the numerous mandates passed in recent years designed to support renewable development in Rhode Island, the Commission remains cautiously optimistic that the supply of Rhode Island-eligible New Renewable Energy Resources will continue to grow and that Obligated Entities will be poised to take full advantage of new supply when it is made available. However, continued economic stagnation, various project-specific permitting issues, uncertainty over the long-term availability of federal incentives, and other factors impacting investment decisions – coupled with increasing renewable energy mandates throughout the region – all have the potential to delay the large pipeline of projects currently under development. As a result, it is difficult to predict in which year supply will again balance with demand. To alleviate this pressure, the PUC, by divided opinion,[10] followed the recommendations of the Division of Public Utilities and Carriers and delayed the implementation of a scheduled 1.5% increase in the RES obligation for year 2015, finding a "potential inadequacy" of REC supply to meet Rhode Island's 2015 RES obligation.[11]

[10] For additional information, refer to materials filed in Commission Docket 4404 at: http://www.ripuc.org/eventsactions/docket/4404page.html. In particular, Commission Report and Order No. 21353 which can be viewed at: http://www.ripuc.org/eventsactions/docket/4404-RES-Adequacy-Ord21353_2-10-14.pdf.

[11] R.I. Gen. Laws § 39-26-6 (d) requires the Commission to "determine…on or before January 1, 2014, the adequacy or potential adequacy, of renewable energy supplies to meet the increase in the %age requirement of energy from renewable energy resources to go into effect in 2015. In making such determinations the [Commission] shall consider among other factors the historical use of alternative compliance payments in Rhode Island and other states in the NEPOOL region. In the event that the [Commission] determines an inadequacy or potential inadequacy of supplies for scheduled percentage increases, the [Commission] shall delay the implementation of the scheduled percentage increase for a period of one year or recommend to the general assembly a revised schedule of percentage increases, if any, to achieve the purposes of this chapter."

I. Introduction to the Renewable Energy Standard

The Rhode Island Renewable Energy Standard ("RES") was enacted in 2004 via R.I. Gen. Laws §§ 39-26-1 to 10 and requires the state's retail electricity providers, excluding Pascoag Utility District and Block Island Power Company, to supply 14.5%[12] 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 or PUC) determines that the standard is no longer necessary.

As shown in Table 4, the RES required all Obligated Entities to obtain at least 6.5% of electricity sold to Rhode Island end-use customers (inclusive of losses) from Eligible Renewable Energy Resources for the 2012 Compliance Year (January 1, 2012 through December 31, 2012). No more than 2.0% could be from Existing Renewable Energy Resources and a minimum of 4.5% must have been obtained from New Renewable Energy Resources.

Table 4: 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 *either* Existing *or* New Renewable Energy Resources
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[1]	8.5%	6.5%	2.0%
2016[1]	10.0%	8.0%	2.0%
2017[1]	11.5%	9.5%	2.0%
2018[1]	13.0%	11.0%	2.0%
2019[1]	14.5%	12.5%	2.0%
2020 and thereafter[1,2]	14.5%	12.5%	2.0%

[1] After conducting a review pursuant to R.I. Gen. Laws Sec. 39-26-6(d), in Docket No. 4404, the Commission delayed implementation of the scheduled 1.5% increase in 2015. This resulted in a delay of all subsequent increases for a period of one year

[2] R.I. Gen. Laws Sec. 39-26-4(a)(5) states, "In 2020 and each year thereafter, the minimum renewable energy standard established in 2019 shall be maintained…."

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 report is based on an aggregated summary of these compliance filings and is

[12] Following the Commission's decision on Docket No. 4404, to delay the 1.5% increase in New RES in 2015 to 2016, will establish a maximum RES target of 14.5% in 2019 (12.5% New and 2.0% Existing). This 14.5% target will remain in effect in 2020 and each year thereafter, unless and until the PUC determines that the standard is no longer necessary.

intended to satisfy the reporting requirements related to the enabling legislation at §39-26-6(f) which directs the Commission to:

> 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 Certificate – also known as a Renewable Energy Certificate (REC)[13] – 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 PUC 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.

[13] 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 2012: Obligation and Sources of Compliance

Compliance Year 2012 (from January 1, 2012 through December 31, 2012) was the sixth compliance year for Rhode Island's RES. Each Obligated Entity was required to obtain at least 6.5% of electricity (including line losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than 4.5% from New Renewable Energy Resources.

Rhode Island's actual 2012 RES-obligated retail sales totaled 8,123,025 MWh. As a result, the aggregate minimum New RES Obligation (4.5%) was 365,545 MWh, while the aggregate New or Existing RES Obligation (2.0%) was 162,469 MWh.[14] 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, now known as the Rhode Island Commerce Corporation. The Rhode Island Commerce Corporation sets these funds aside in the Renewable Energy Development Fund, established under R.I. Gen. Laws § 39-26-7, to support investments in renewable energy. In 2012, the ACP rate was $64.02 per MWh of obligation. The rate is the same for both New and Existing obligations. See Appendix 3 for additional information regarding ACPs.

In total, nineteen entities submitted RES Compliance Filings to the Commission for 2012 including National Grid and eighteen competitive electricity providers, as shown in Table 5. Appendix 4 lists all entities from whom Compliance Filings were received and provides a detailed summary of RES compliance for National Grid Company along with a more limited summary for competitive retail electricity providers.[15]

Table 5: Obligated Entities Submitting 2012 REC Compliance Filings to the Commission

Distribution Utilities	
The Narragansett Electric Company d/b/a National Grid	
Competitive Retail Providers	
Consolidated Edison Solutions, Inc.	Liberty Power Holdings, LLC
Constellation New Energy, Inc.	Mint Energy, LLC
Devonshire Energy, LLC	NextEra Energy Services Rhode Island, LLC (Gexa Energy LLC)
Direct Energy Business, LLC	Noble Americas Energy Solutions LLC (Sempra Energy Solutions LLC)
Direct Energy Services, LLC	People's Power & Gas, LLC
First Point Power, LLC	SJH Energy LLC (St. Joseph Health Services)
Glacial Energy of New England, Inc.	South Jersey Energy Company
Hess Corporation	TransCanada Power Marketing, LLC
Integrys Energy Services, Inc.	Westerly Hospital Energy Company LLC

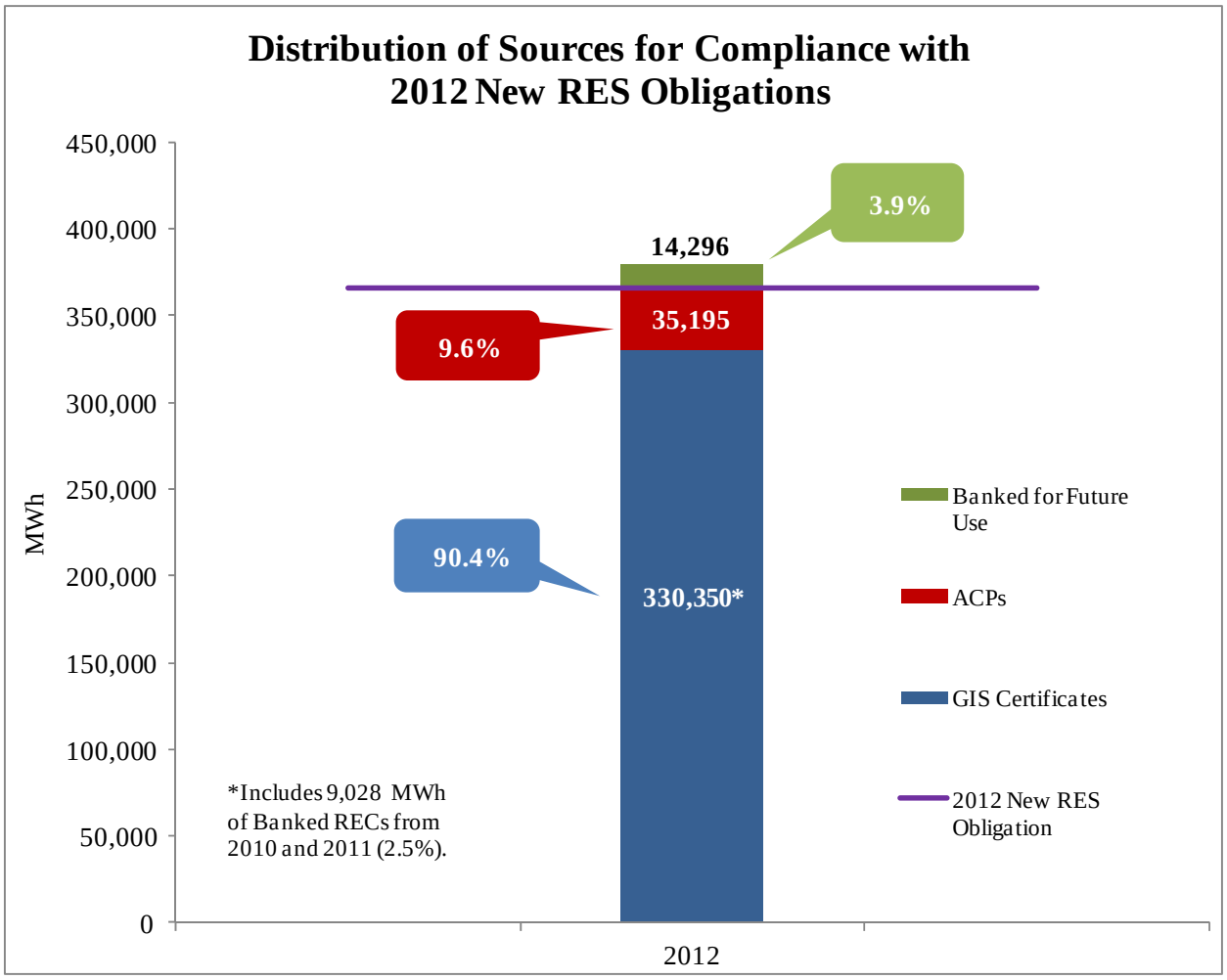
Twelve of the state's Obligated Entities, including, National Grid, met all of their respective New and Existing RES obligations with GIS Certificates. Seven entities met a portion of their individual RES obligations by making ACPs to the Rhode Island Commerce Corporation. Of these companies, three

[14] Please note that the total New and Existing RES obligations are slightly higher than the 4.5% New and 2.0% Existing of total obligated retail sales due to rounding protocols for individual Obligated Entities.

[15] 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.

competitive suppliers met all of their New obligations by making ACPs and one additional entity utilized ACPs to meet their entire New and Existing obligations.

Figure 1: Distribution of Sources for Compliance with 2012 New RES Obligations

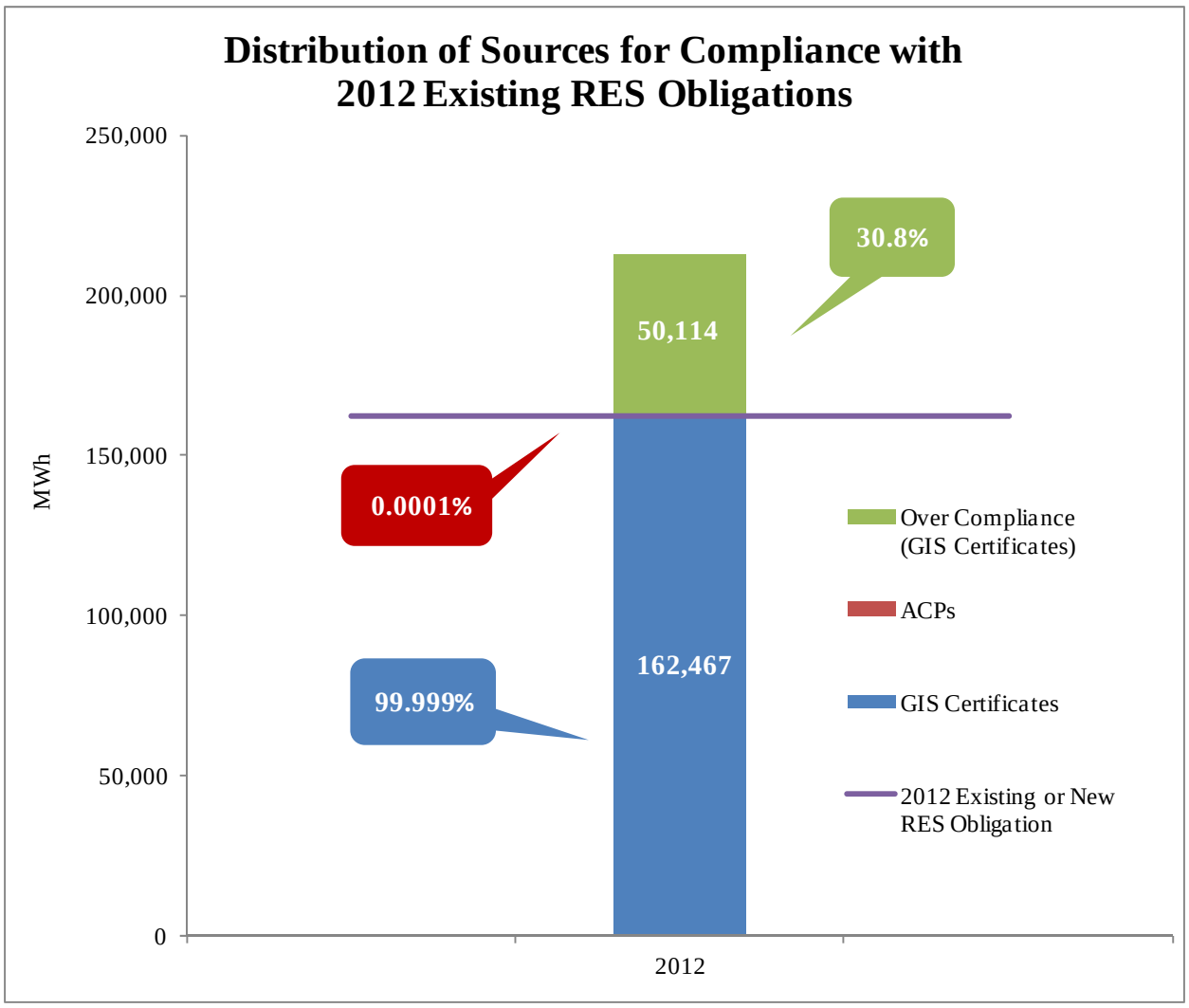


As shown in Figure 1 above, 90.4% of New RES compliance was met with GIS Certificates, with the other 9.6% being met by ACPs. Nine of the state's nineteen Obligated Entities made use of the Banked Compliance flexibility mechanism in 2012. Under the RES rules, Obligated Entities are allowed to bank excess compliance (New RECs only) for up to two subsequent compliance years, capped at 30% of the current year's obligation. Together, these entities applied 9,028 Certificates banked in either 2010 or 2011 towards their respective 2012 obligations. In addition, ten Obligated Entities banked a combined 14,296 MWhs of New RES compliance for use against future New RES Obligations.

In regards to Existing RES Obligations, nearly 100% of compliance was realized through the retirement of GIS Certificates. One Obligated Entity submitted an ACP for a total of 2 MWh of Existing RES obligations, resulting in a payment of $128.04 to the Rhode Island Commerce Corporation. Also, as shown in Figure 2, a surplus of 50,114 RECs were obtained from Existing resources in 2012, resulting in

Figure 2: Distribution of Sources for Compliance with 2012 Existing RES Obligations

significant over-compliance.[16] Unlike New RECs, RECs generated by Existing renewable facilities cannot be banked for future use.



Overall, the ACPs made for 2012 obligations resulted in total payments of $2,253,312 to the Rhode Island Commerce Corporation, nearly all of which was for New RES obligations. The use of ACPs decreased compared to Compliance Year 2011 when ACPs totaled $5,244,083. While ACPs made in 2012 were significantly lower than in 2011, they were still much higher than ACPs made in the 2008, 2009, and 2010 Compliance Years. In 2008, retail electricity providers relied on ACPs to meet just 0.13% of their total New and Existing obligations, resulting in payments of $21,792 to the Rhode Island Commerce Corporation. This limited use of ACPs for New RES compliance continued into the 2009 ($122) and 2010 ($21,813) compliance years.

[16] Obligated Entities settled a total of 50,114 Existing RECs above their 2012 RES Obligations. It is possible that these companies inadvertently over-purchased RECs anticipating higher sales or they purchased them intentionally to promote a "green" image, or corporate responsibility.

There are several factors which may have contributed to the continued constrained renewable supply that began in the latter part of 2011 and remained throughout 2012. For instance, recent increases to the nation's natural gas supply and its impact on natural gas fuel prices has been a factor in making gas-fired power plants in New England and elsewhere more economical to run. As those plants are economically dispatched to generate more power, other resources – particularly some renewables – are displaced because they have become more expensive to run, relatively speaking. When renewable generation units are not running, they are also not creating RECs. Furthermore, in past years, the region has benefited from additional renewable energy supply and RECs exported from our neighboring control area of New York. More recently, those New York-based units have been increasingly contracted to meet the renewable needs of the Empire State itself, resulting in fewer exports and further reductions to potential REC supply in New England. Finally, a continuation of stagnant economic conditions and uncertainly related to federal renewable tax credits likely restrained the ability of renewable developers to invest in and finance new projects.

On the demand side, each New England state's renewable energy targets are increasing on an annual basis. In general, individual state targets (including Rhode Island's) have been increasing at one %age point per year, as noted in Section VI of this report. When combined with lower regional supply, this incremental, collective growth in regional renewable mandates is contributing to a general supply and demand imbalance, thus placing upward pressure on REC prices.

A summary of 2012 RES Compliance, including information on ACPs and banked certificates, is presented in Table 6.

Table 6: Summary of 2012 REC Compliance

Results for 2012 Compliance Year		(MWh)
A	**2012 RES Obligated Retail Sales**	**8,123,025**
A.1	National Grid	5,272,388
A.2	Competitive Suppliers (18 in total)	2,850,637
	New RES Obligations and New Renewable Energy Certificates	
B	**Total 2012 New RECs Settled in Rhode Island[1]**	**343,385**
B.1	2012 New RECs Purchased	334,357
B.2	Banked 2010 and 2011 New RECs Applied	9,028
C	**New RES Obligations (4.5% of "A")**	**365,545**
C.1	Banked RECs Applied to 2012 New Obligations (from B.2)	9,028
C.2	2012 New RECs Applied to 2012 New Obligations (Subset of B.1)	321,322
C.3	Alternative Compliance Payment Credits Applied to 2012 New RES Obligations	35,195
D	**Banked RECs Available for Compliance Year 2013 or 2014**	
D.1	Remaining RECs Available after Meeting Obligations[2]	14,296
D.2	2012 New RECs applied to 2012 Existing RES Obligations	0
D.3	RECs banked for future use in Compliance Years 2013or 2014[2]	14,296
D.4	2012 New RECs purchased above 30% banking cap (not eligible for banking)	0
	Existing RES Obligations and Existing Renewable Energy Certificates	
E	**Existing RES Obligations (2.0% of "A")**	**162,469**
E.1	2012 Existing RECs applied to 2012 Existing RES Obligations	162,467
E.2	2012 New RECs applied to 2012 Existing RES Obligations	0
E.3	Alternative Compliance Payment Credits Applied to 2012 Existing RES Obligations	2
F	**Total 2012 Existing RECs Settled in Rhode Island[1]**	**212,581**
F.1	2012 Existing RECs applied to 2012 Existing RES Obligations (from E.1)	162,467
F.2	2012 Existing RECs purchased above 2012 RES Obligations (not eligible for banking)	50,114

[1] 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.

[2] Includes 1,261 RECs procured by an Obligated Entity that originally had not been recognized by the Commission as eligible for compliance, resulting in an ACP being made to meet their obligation. Following review of supporting documentation, these RECs were determined to be eligible, with the Obligated Entity choosing to bank them for use in Compliance Year 2013 rather than receive a refund from the Rhode Island Commerce Corporation.

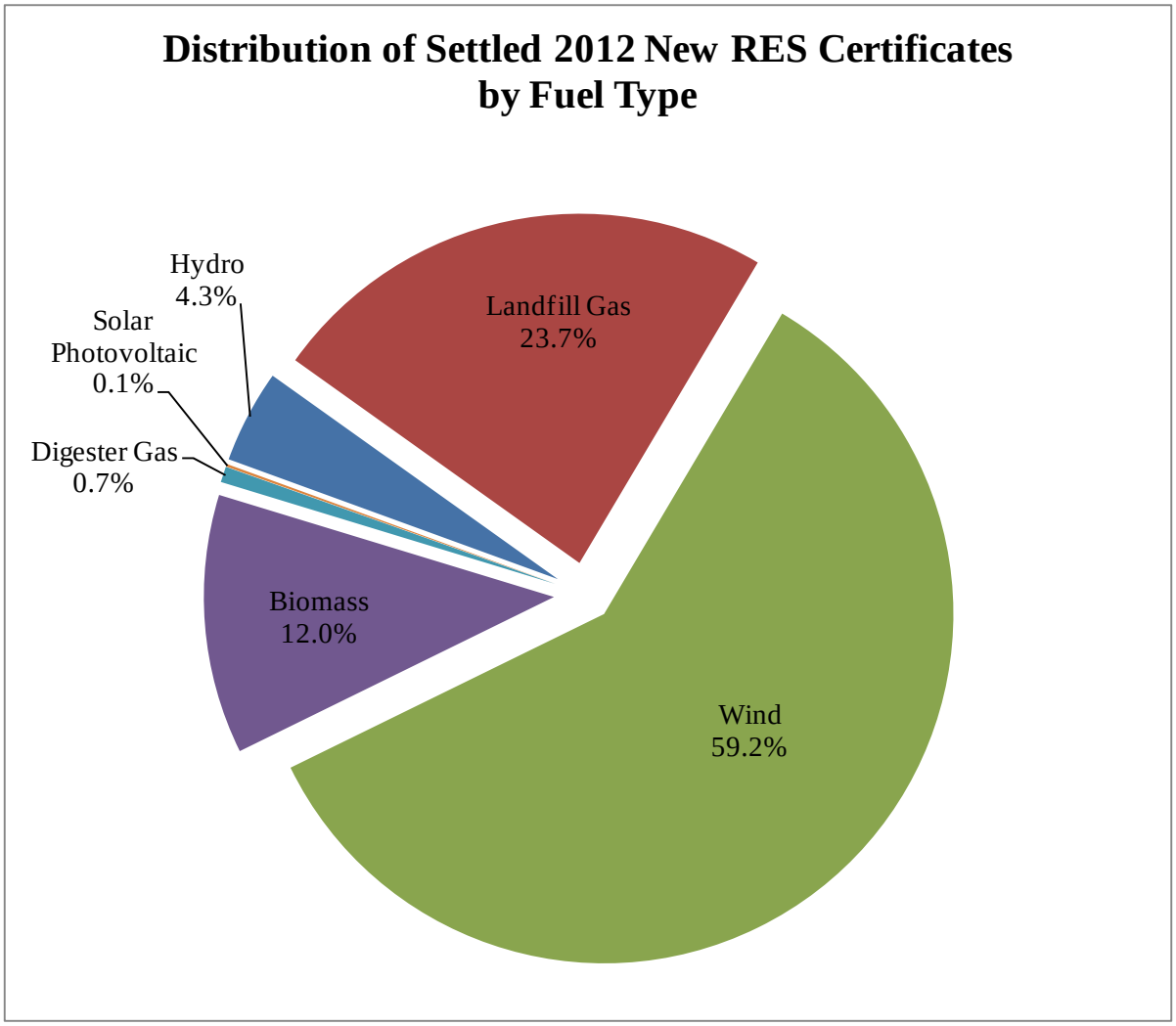
Values may not be additive due to rounding protocol with individual Obligated Entities.

III. 2012 RES Compliance by Fuel Type and Geographic Location

In 2012, RES compliance was fulfilled by six types of renewable energy generators: biomass, landfill gas, wind, hydroelectric, digester gas, and solar photovoltaic. As shown in Figure 3, New RECs purchased by Obligated Entities for the 2012 Compliance Year were primarily generated by wind (59.2%) and landfill gas (23.7%) facilities throughout New England and the adjacent control area of New York.[17] Compared to 2011, this represents a significant increase in the utilization of RECs generated by wind facilities (12.2% in 2011), but a noted decrease in landfill gas RECs (55.6% in 2011) used for New RES obligations.

Hydroelectric generators produced 4.3% of the New RECs retired for Rhode Island obligations, while 2012 marked the first year where digester gas and solar photovoltaic made an appearance, comprising 0.7% and 0.1% of New RECs retired in 2012 respectively. For this 2012 Compliance Year, biomass comprised 12.0% of the New RECs retired for Rhode Island obligations. This is down from 27.3% in Compliance Year 2011.

Figure 3: Distribution of Settled 2012 New RES Certificates by Fuel Type



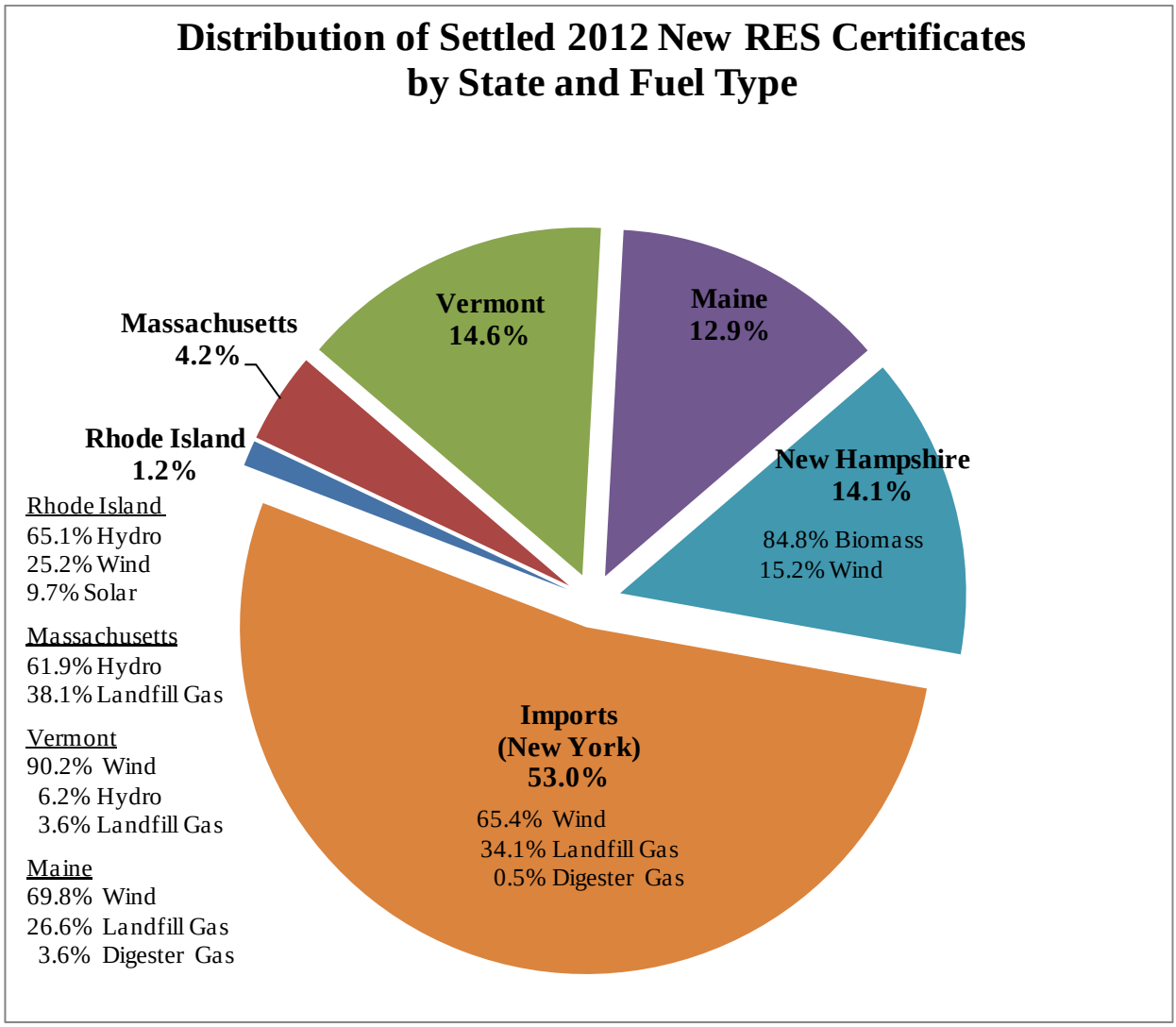
[17] Charts in Section III of this report do not include any RECs purchased by Obligated Entities on behalf of their customers as part of any voluntary clean energy programs. Voluntary RECs are summarized in Appendix 6 of this report.

As shown in Figure 4 below, renewable energy facilities located within Rhode Island accounted for 1.2% of the ***New*** RECs retired for 2012 obligations, a slight decrease from the 1.5% reported in 2011. These Rhode Island-based generating facilities were fueled by hydro (65.1%), wind (25.2%) and solar (9.7%). In contrast, nearly half (53.0%) of all New RECs purchased to meet Rhode Island-based obligations were derived from generating facilities in New York. The remaining RECs came from Vermont (14.6%), New Hampshire (14.1%), Maine (12.9%), and Massachusetts (4.2%). Renewable energy certificates imported from New York were primarily derived mainly from wind facilities (65.4%), with the balance coming from landfill gas (34.1%) and digester gas (0. 5%). Vermont based RECs retired to meet Rhode Island obligations were predominately from wind (90.2%), along with some small amounts of hydro (6.2%) and landfill gas (3.6%). New Hampshire-based RECs retired in for use in Rhode Island largely came from biomass plants (84.8%), along with some wind (15.2%).

New RECs retired for Rhode Island obligations were also generated by facilities in Maine (12.9%), comprised mostly of wind (69.8%) with some landfill gas (26.2%) and a small amount of digester gas (3.6%). Finally, RECs from Massachusetts (4.2%) rounded out the settled RI-RES certificates for compliance year 2012 contributing RECs from hydro (61.9%) and landfill gas (38.1%).[18]

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

Figure 4: Distribution of Settled 2012 New RES Certificates by State and Fuel Type



As in 2009, 2010, and 2011, all of the RECs used to fulfill ***Existing*** RI-RES Obligations in 2012 were attributable to hydroelectric generators (see Figure 5). More than one-third of these facilities were located in Vermont (36.0%), and about another third were in Maine (33.5%). The final third were from a combination of Massachusetts (18.2%) and New Hampshire (12.3%). Figure 6 shows the breakdown of Existing RECs that were settled, by state, for 2012.

Figure 5: Distribution of Settled 2012 Existing RES Certificates by Fuel Type

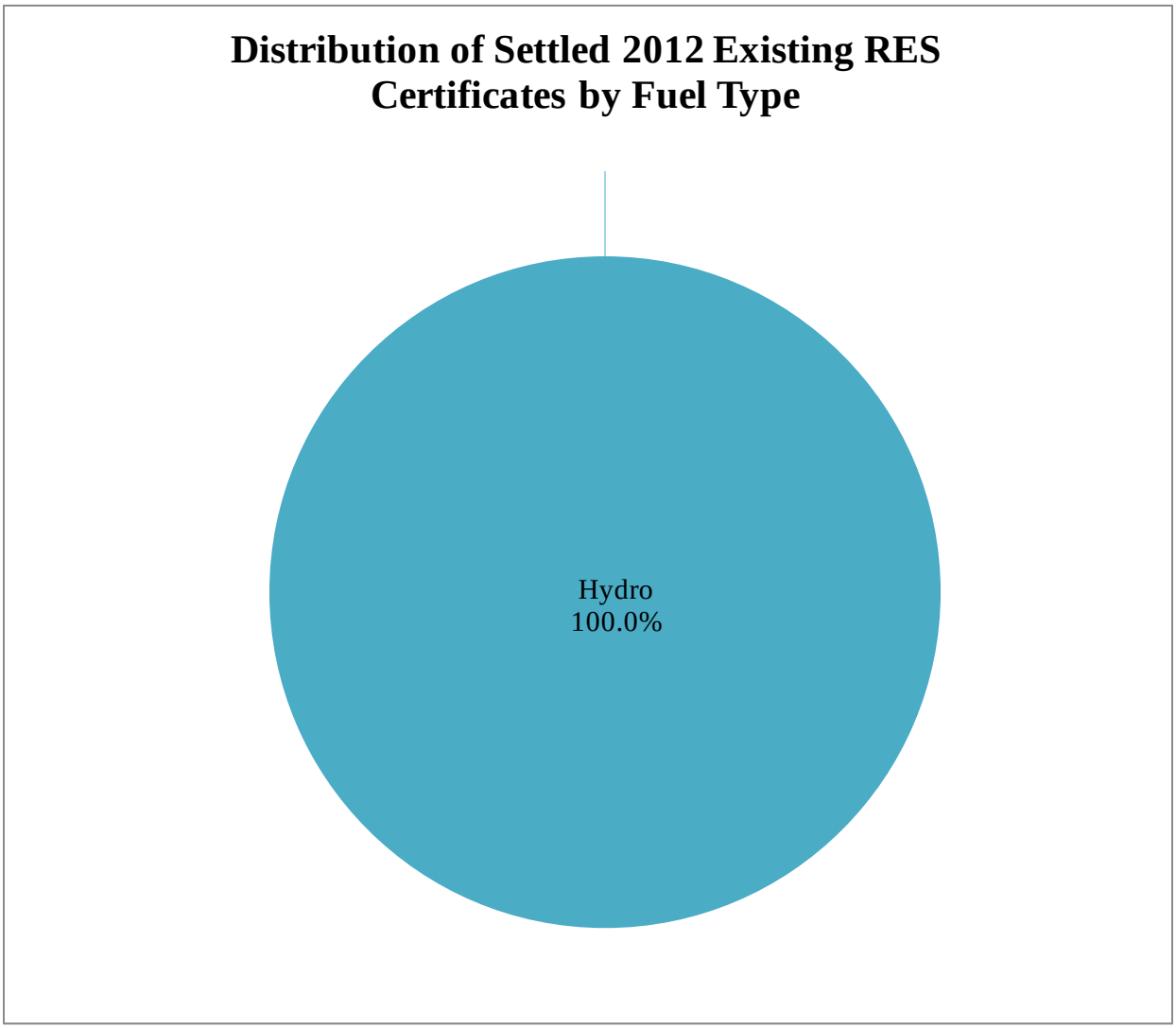
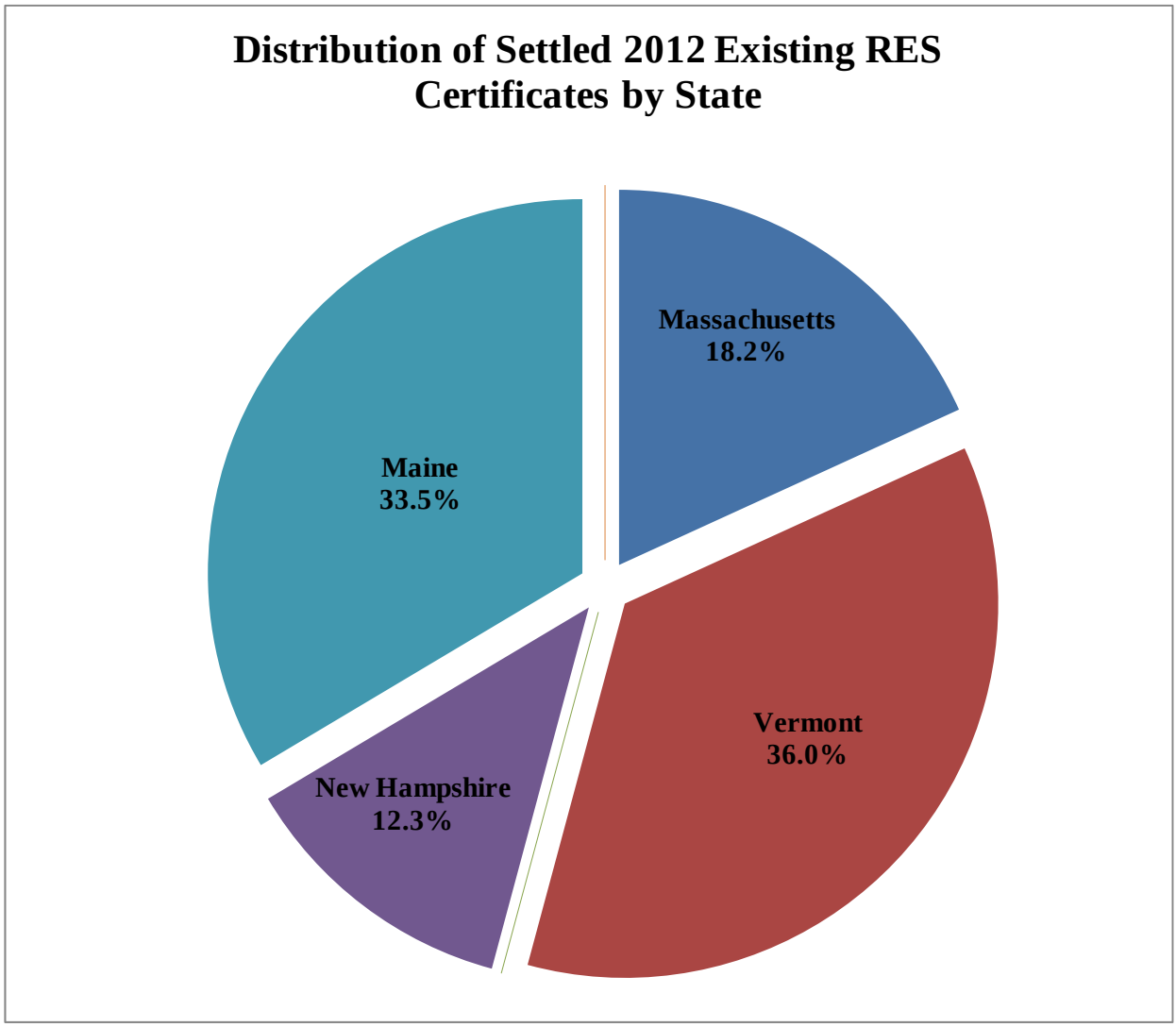


Figure 6: Distribution of Settled 2012 Existing RES Certificates by State



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." At § 39-26-4(a)(4), the legislation provides for an additional 1.5% 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 PUC will fulfill the requirement to determine supply adequacy, as well as the timing and implications of the PUC's decision-making authority, is clearly articulated in the RES Regulations under § 39-26-6(d). By statute, the PUC was directed to determine on or before January 1, 2014 the adequacy or potential adequacy of renewable energy supplies to meet the increase in the RES targets scheduled for 2015.

In a January 2010 Order for Docket 4050, the PUC determined that adequate renewable energy supplies existed to meet the RES target increase scheduled for 2011. Additional information on this proceeding and the PUC's complete Order can be found at the PUC website.[19]

In a February 2014 Order for Docket 4404, the PUC determined there was potential inadequacy of renewable energy supply to meet the target increase of 1.5% scheduled for 2015. The result of this determination was to delay the scheduled increase in the RES by a period of one year. Additional information on this proceeding and the PUC's complete Order can be found at the PUC website.[20]

The percentage targets shown in Table 4 earlier in this report, and the calculated future RES obligations in Table 7 below, are adjusted to reflect the Commission's one-year delay of the original 2015 1.5% RES increase to Compliance Year 2016. 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 2013 Capacity, Energy, Loads, and Transmission ("CELT") Report[21] and the exemption of both Pascoag Utility District and Block Island Power Company.[22]

[19] For additional information, refer to materials filed in Commission Docket 4050 at: www.ripuc.org/eventsactions/docket/4050page.html

[20] For additional information, refer to materials filed in Commission Docket 4404 at: http://www.ripuc.org/eventsactions/docket/4404page.html. In particular, Commission Report and Order No. 21353 can be viewed at: http://www.ripuc.org/eventsactions/docket/4404-RES-Adequacy-Ord21353_2-10-14.pdf.

[21] ISO-NE 2013 CELT Forecast Data: See tab 2, column R – Annual Energy Net Passive Demand Response

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

Table 7: 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 4 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*	*164,866*
2011 (Actual)	*8,157,796*	*285,531*	*163,165*
2012 *(Actual)*	*8,123,025*	*365,545*[1]	*162,469*[1]
2013	8,249,708	453,734	164,995
2014	8,247,724	536,103	164,955
2015[2]	8,179,266	531,653	163,586
2016[2]	8,157,438	652,596	163,149
2017[2]	8,107,831	770,244	162,157
2018[2]	8,057,231	886,296	161,145
2019[2]	8,006,632	1,000,829	160,133
2020[2,3]	7,950,080	993,760	159,002
2021[2,3]	7,896,504	987,063	157,931
2022 and thereafter[2,3,4]	7,845,904	980,738	156,919

[1]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.
[2]After conducting a review pursuant to R.I. Gen. Laws § 39-26-6(d), in Docket No. 4404, the PUC delayed implementation of the scheduled 1.5% increase in 2015. This resulted in a delay of all subsequent increases for a period of one year.
[3]Duration of continuation after 2020 is subject to Commission determination.
[4]The 2013 CELT forecast ends in 2022.

V. Authorized Rate Increases and RES Compliance Costs

R.I. Gen. Laws § 39-26-6(f) states that the annual report shall include "the amount of rate increases authorized pursuant to subsection (b)" where subsection (b) of R.I. Gen. Laws § 39-26-6 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." The only electric distribution company that qualifies as an Obligated Entity is National Grid, 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.

Table 8 provides data on the authorized RES charge (per kWh) billed to National Grid's customers from 2007 to 2012, as well as the resulting total estimated billings and average ratepayer impact by month and year. Please note that a rate change was approved during the 2012 calendar year. As of April 1, 2012, the RES charge increased to $0.00253 per kWh from a ***credit*** of $0.00031 per kWh representing an increase of $1.48[23] per month for the average residential ratepayer (using 500 kWh per month.)

Table 8: Authorized Rate and Renewable Energy Charge Billings

Compliance Year	Total RES Load Obligation (MWh)	Auth. RES Charge/kWh	Renewable Energy Charge Billings (est.)[24]	Average Monthly/ Annual Ratepayer Impact (500 kWh)
January 2012 - March 2012	**1,302,702**	**($0.00031)**	**($393,697)**	**($0.155) / ($1.86)**
April 2012 - December 2012	**3,969,686**	**$0.00253**	**$9,370,994**	**$1.265 / $15.18**
2011	5,554,272	($0.00031)[25]	$432,548	($0.155) / ($1.86)
2010	5,695,951	$0.00123	$6,261,356	$0.615 / $7.38
2009	5,902,667	$0.00093	$5,261,980	$0.465 / $5.58
2008	7,733,583	$0.00084	$5,585,948	$0.42 / $5.04
2007	7,177,539	$0.00062	$4,177,598	$0.31 / $3.72

From a regulatory ratemaking and reconciliation procedure, National Grid recovered from its customers the estimated cost associated with the 2012 RES obligation year and the estimate of the remaining cost associated with the 2011 RES obligation year. Thus, the charge of $0.00253 per kWh in 2012 indicates that National Grid under-collected revenues during the previous year due to changes in a complex set of assumptions designed to project future obligations. These assumptions include projected market conditions, anticipated REC pricing, and estimates of electricity consumption. As these variables change from month to

[23] This includes gross earnings tax of 4%.
[24] This column represents standard offer and last resort deliveries to customers multiplied by the approved RES charge. For more information on standard offer and last resort deliveries, please go to: http://www.ripuc.org/utilityinfo/electric/4thQrt2013.pdf.
[25] As of April 1, 2011.

month and the electric distribution utility incurs costs to procure RECs or make ACPs relative to their realized obligations, the amount of revenue collected must ultimately be reconciled to actual costs. As of April 1, 2012, National Grid determined that their compliance costs through the end of 2011 were greater than they had originally projected, resulting in an increase to the RES charge in 2012 that allowed for the recovery of those under-collections. As noted below, contributing factors to this scenario were a shortfall of REC supply resulting from a recent decrease in supply added to an increase in RES obligations (demand for RECs) around New England states and a sharp increase in New REC prices to over $55 in Rhode Island as compared to $20 in early 2011[26]. The reconciling nature of this charge ensures that any over-collections charged to ratepayers are ultimately returned and that the electric distribution company can recover under-collections when compliance costs are higher than anticipated.

While the rate impact of the RES mandate is important, a more accurate and complete picture of compliance costs can be seen through the lens of REC procurement expenses. In order to meet its 2012 New and Existing RES obligations, the National Grid incurred $12.8 million in compliance costs. As indicated in Table 9, this represented an increase of 52% above those costs incurred to comply with 2011 RES targets ($8.43 million)[27] and a six-fold increase from 2010 costs ($2.07 million).

Table 9: National Grid's RES Compliance Costs, 2007 - 2012

	TOTAL RES COSTS	New REC Costs	Existing REC Costs	ACP Costs	Obligated Load (MWh)
2012	**$12.8 million**	**$12.75 million**	**$0.05 million**	**N/A**	**5,272,388**
2011	$8.43 million	$3.85 million	$0.05 million	$4.53 million	5,554,272
2010	$2.07 million	$2.02 million	$0.05 million	N/A	5,695,951
2009	$5.51 million	$5.28 million	$0.22 million	N/A	5,902,667
2008	$5.21 million	$5.02 million	$0.19 million	N/A	7,123,559
2007	$3.97 million	$3.79 million	$0.19 million	N/A	7,177,538

As indicated earlier in this report, supply shortages for Rhode Island-eligible RECs are placing upward pressure on REC prices. To alleviate the pressure, the PUC, by divided decision,[28] followed the recommendation of the Division of Public Utilities and Carriers and delayed the implementation of the scheduled 1.5% increase in the RES obligation for year 2015.[29] Despite the fact that the electric distribution

[26] For additional information, refer to materials filed in Commission Docket 4227 at: http://www.ripuc.org/eventsactions/docket/4227page.html. In particular, National Grid's "2012 Renewable Energy Standard Charge and Reconciliation" filing can be viewed at: http://www.ripuc.org/eventsactions/docket/4227-NGrid-RES-Reconciliation(2-21-12).pdf.

[27] At a high level, the increase in compliance costs between 2011 and 2012 may partially be attributed to an increase in REC market prices and decreased renewable generation resulting from lower cost natural gas fired generation.

[28] For additional information, refer to materials filed in PUC Docket 4404 at: http://www.ripuc.org/eventsactions/docket/4404page.html. In particular, Commission Report and Order No. 21353 which can be viewed at: http://www.ripuc.org/eventsactions/docket/4404-RES-Adequacy-Ord21353_2-10-14.pdf.

[29] R.I. Gen. Laws § 39-26-6 (d) requires the Commission to "determine…on or before January 1, 2014, the adequacy or potential adequacy, of renewable energy supplies to meet the increase in the %age requirement of energy from renewable energy resources to go into effect in 2015. In making such determinations the [Commission] shall consider among other factors the historical use of alternative compliance payments in Rhode Island and other states in the NEPOOL region. In the event that the [Commission] determines an inadequacy or potential inadequacy of supplies for scheduled percentage increases, the [Commission] shall delay the implementation of the scheduled percentage increase for a period of one year or recommend to the general assembly a revised schedule of percentage increases, if any, to achieve the purposes of this chapter."

company's total load obligation has continued to decrease annually since 2007[30] – albeit slightly in more recent years – the supply and demand pressures throughout the REC market have created a substantial REC imbalance, raising the ACP costs in 2012 and throughout 2013. It is likely that compliance costs will continue to increase, at least in the near term, as supply shortages persist and scheduled annual targets increase.

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 National Grid accounted for approximately 65% of total electric load in the 2012 Compliance Year, eighteen 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.

[30] The reasons behind this decrease in load may include economic recession and the implementation of robust energy efficiency programs throughout Rhode Island.

VI. Renewable Energy Standard Implementation in New England

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 RPS outside of Rhode Island – in the other five New England states.

Four of the remaining five New England states each has an active RPS. 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 2012, each of the established RPS programs had multiple tiers – also 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 which meets maximum emissions thresholds, as well as other eligibility criteria. Existing requirements[31] 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 beyond the New and Existing convention. For example, 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.[32] New Hampshire's solar requirement stands alone and is referred to as its Class II obligation. Connecticut has a Class III requirement for conservation and load management resources, as well as combined heat and power (CHP). In 2011, Connecticut also established incentive programs for zero and low emission distributed energy systems as well as 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. Finally, Vermont's Sustainably Priced Energy Enterprise Development (SPEED) long-term (standard offer) contracting program effectively creates a policy carve-out for a specified quantity of renewable distributed generation facilities of 2.2 MW or less.

The remainder of this section focuses exclusively on the Class I portion of each state's RPS requirement, including the interaction between Class I and other Classes in certain limited circumstances.

Massachusetts has the longest-running RPS; the first Compliance Year was 2003. Through the use of Early Compliance in 2002 (a one-time opportunity to use all qualifying generation in 2002 toward the 2003 obligation), Massachusetts' RPS supply met demand in 2003. As demand grew more quickly than supply in the RPS market's early years, Massachusetts fell short of RPS compliance by 35% in 2004 and 2005, and by 25% in 2006. For Compliance Years 2007 through 2010, the Massachusetts RPS market had been in approximate equilibrium. Since RECs were not evenly distributed among Obligated Entities, however, several suppliers made ACPs in years when the market had an overall surplus. Class 1 ACPs in

[31] Including Class II in MA, CT and ME; Class III in NH; Class IV in NH; and Existing in RI.
[32] Massachusetts is currently drafting a regulation that would create a separate long-term carve-out to support new emerging technologies.

Massachusetts totaled approximately $9,000 in 2003;[33] $13.6 million in 2004; $19.6 million in 2005; $17.8 million in 2006; $620,000 in 2007; $70,000 in 2008, $0 in 2009, and $240,000 in 2010. In 2011, the Massachusetts RPS market returned to shortage conditions, with $6,600,000 in ACPs. At the time this report was drafted, Massachusetts had not yet released its 2012 Compliance Report.

In June 2013, the Massachusetts Department of Energy Resources adopted a revised Class I regulation, with changes targeting Class 1, including the Solar Carve-Out program. The new regulation increases the maximum size of eligible hydroelectric facilities from 25 to 30 MW. It also expands the eligibility rules for landfill gas and anaerobic digester gas by pipeline, such that gas would be allowed to be transported to a Generation Unit within the ISO-NE Control Area or an adjacent Control Area via common carriers of natural gas, provided that the gas is produced entirely within the ISO-NE Control Area or an adjacent Control Area under specific conditions.

In April 2013, the state's four investor-owned distribution companies issued a request for proposals for long-term renewable contracts with new Class I renewable facilities. In late September, six proposals were selected for a total of 565 MW of renewable energy. Since then, however, three projects have determined that they are unable to continue and their contracts have been terminated. The remaining contracts total approximately 410 MW. All selected projects were for on-shore wind in Maine and New Hampshire. The procured energy can be used by the distribution companies to satisfy RPS compliance or resold to other obligated entities.

Massachusetts Department of Energy Resources is also implementing a legislative mandate for long-term renewable energy contracts with newly developed, small and emerging renewable energy technologies that are qualified as a Class I resource. The mandate is for 0.4% of distribution company load from 2013 through 2016. In May 2013, the Department of Energy Resources released a draft determination of eligible technologies that would include biogas, biomass, hydrokinetic energy, emerging run-of-river hydroelectric, fuel cells, small-scale or emerging wind technologies, solar thermal electric, and geothermal electric technologies. The program requires that prior to the end of 2016, distribution companies must individually solicit proposals for long-term Power Purchase Agreements with eligible generation facilities, with each utility organizing its own competitive procurement.

After qualifying over 675 MW of solar capacity in a program designed to support 400 MW, the Massachusetts Department of Energy Resources is in the process of developing the second phase of the Class I Solar Carve-Out program, which is intended to move Massachusetts to 1,600 MW of installed solar PV by 2020. Together, Phase I and Phase II of the program will be capped at 1,600 MW – all of which will count towards achieving the RPS obligation.

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. Thereafter, Penalty Payments – for Class I only – totaled $115,335 in 2007; $60,240 in 2008; and $46,850 in 2009. In 2010, as the regional market began to trend towards REC shortage, the differential between Connecticut's Penalty Payment (fixed at $55) and the other

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

New England states' ACP ($60.93 in 2010, escalating each year with the Consumer Price Index) caused available RECs to seek higher value markets outside of Connecticut (when eligibility allowed), leaving Connecticut load serving entities to rely on alternative compliance mechanisms to fulfill their RPS obligations – ultimately making payments of $1,792,945 for the 2010[34] compliance year. The Connecticut Public Utilities Regulatory Authority (formerly known as the DPUC) has not yet released a comprehensive RPS compliance report for 2011 or 2012.

There have been a number of significant RPS developments in Connecticut in 2013. First, the Department of Energy and Environmental Protection (DEEP) released the "Restructuring Connecticut's Renewable Portfolio Standard" study. The study intended to evaluate the impact of increasing the Class I RPS target and simultaneously allowing large hydropower to qualify as a Class I Resource. In the final report, DEEP recommended the adoption of a more targeted and flexible approach that would allow large hydropower to be used to meet a portion of the Class I RPS requirements, but only in the event of insufficient supply from currently eligible Class 1 resources.

In June, the Connecticut Legislature passed Public Act 13-303 to adopt the various recommendations from the RPS study. Through the Act, Connecticut made several changes to its RPS. A "large scale hydropower" definition was added.[35] Such hydro supply is not specified as a Class I resource, due in part to the legislative requirement that the production be "verifiable" and the Canadian provinces are currently without a REC tracking system. Large hydro facilities may become eligible, under limited circumstances, if both the verification and insufficiency of other Class 1 supply criteria are met. The legislation also requires DEEP to establish a "biomass and landfill gas phase-down" that would reduce (but not eliminate) the number of RECs per MWh granted to Class I biomass and landfill gas resources. Further, the legislation modified the definition of Class I renewable energy source to specifically state that generation counted towards another state's RPS targets or renewable energy goals cannot be counted toward the Connecticut RPS.

Under the new legislation, DEEP can also solicit proposals for long-term contracts (10-20 years) with Class I renewable facilities or, under limited circumstances, verifiable large-scale hydropower facilities, to meet a portion of the distribution companies' load. In July 2013, DEEP issued a request for proposals for long-term contracts with new Class I renewable resources for up to 4% of the state's load. Two proposals were selected for a total of 270 MW of renewable energy (250 MW of Maine wind and 20 MW of Connecticut solar). DEEP also released an additional RFP for new and existing biomass, landfill gas, and run-of-the-river hydro resources in late October 2013 for up to 4% of the state's load. Biomass and landfill gas projects entering into long-term power purchase agreements under this solicitation will be exempted from the aforementioned REC value phase-down. DEEP selected three proposals for a total of 29.6 MW of renewable energy (21.5 MW of existing New Hampshire biomass and 8.1 MW of existing Vermont biomass).

Connecticut regulators are also in the process of developing a 2014 Integrated Resource Plan. In the Integrated Resource Plan, DEEP will establish a schedule for the biomass and landfill gas phase-down based

[34] According to the Public Utility Regulatory Authority's *Second Revised Draft Decision* on the *Annual Review of Connecticut Electric Suppliers' and Electric Distribution Companies Compliance With Connecticut's Renewable Energy Portfolio Standards in the Year 2010*, issued September 20, 2013.

[35] The definition states: A hydropower facility that has a generating capacity of more than 30 megawatts and is located in ISO New England, adjacent control areas, or Newfoundland and Labrador.

on future resource adequacy. It will also develop a procurement strategy that benefits ratepayers and supports the state's RPS targets.

Maine's first compliance year for its Class 1 RPS requirement was 2008.[36] While there was eligible supply sufficient to meet the one % requirement, an uneven distribution of REC ownership led to the payment of $693,103 in ACPs. ACPs decreased to $319,233 in 2009 and remained constant at $319,252 for the 2010 Compliance Year.

In the 2013 legislative session, Maine's Governor proposed a bill to remove the current 100 MW capacity cap on qualifying RPS Class I resources, which would allow large hydro to satisfy the state's RPS. This bill, which had also been introduced in 2012, was ultimately carried over to the 2014 session. Maine has also approved several applications from biomass plants seeking to qualify as Class I RPS resources under the refurbishment and resumed operations provisions of the Vintage section of their existing regulations. Certification of these facilities has likely relieved Maine of the need to build new generation in order to satisfy near-term annual increases in Class 1 RPS targets.

New Hampshire's first Compliance Year for Class I was 2009. It was reported that no ACPs were made for Class I RPS compliance due to market surplus. In 2010, $26,321 in ACPs were made, reflecting a similar trend as Massachusetts, in which modest shortage conditions returned to the market. In 2011, the New Hampshire Public Utilities Commission received a record $19.1 million in ACPs. However, these payments primarily resulted from a chronic shortage in the state's Class III market (which targets existing biomass facilities).

In July 2013, the New Hampshire Legislature passed House Bill 542 and Senate Bill 148, which altered several aspects of the state's RPS. These bills sharply reduced the Class III target to 1.4%, 1.5% and 3% (previously 6.5%, 6.5% and 7.0%) for 2012, 2013 and 2014, respectively. This change is largely in reaction to substantial Class III shortages and related high ACPs, as the majority of the NH Class III-eligible supply was sold into the Connecticut Class I market. Importantly, the bills also clarify that the New Hampshire RPS will continue after 2025 at a constant level. Further, the bills also established an RPS Study Committee. The Committee is charged with the responsibility to assess whether New Hampshire should alter the Class III ACP rates in 2018 and subsequent years and the Class I, II, and IV ACP rates in 2015 and onward. The RPS Study Committee is also responsible for recommending changes to New Hampshire's RPS policies. In November, the Committee issued a one-page report, recommending no changes at this time.

Vermont's Legislature, in May 2012, the passed Senate Bill 214, expanding the Sustainably Priced Energy Enterprise Development (SPEED) program. The SPEED program includes voluntary goals for 2012 and 2020, as well as a Standard Offer contracts program to provide long-term price certainty to small[37] renewable energy projects.[38] The bill was originally drafted to include a binding RPS, but was later rewritten to maintain the current voluntary program. The bill expanded the Standard Offer program from 50 MW to 127.5 MW, with the incremental 77.5 MW phased-in over ten years. RPS legislation was not seriously discussed during the 2013 session. Until a binding RPS is implemented, Vermont utilities will be allowed to sell the Renewable Energy Credits associated with their electricity purchases to Obligated Entities in other New England states.

[36] 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.
[37] The VT Sustainably Priced Energy Enterprise Development (SPEED) Program is open to projects less than or equal to 2.2 MW.
[38] Retirement of GIS Certificates is not required to meet the Vermont goals.

Table 10 provides a summary of renewable energy standard annual %age targets throughout New England, while Table 11 provides an estimate of the corresponding GWh RPS demand through 2020. The forecasted RPS obligations are based upon ISO-NE's forecast of "Annual Energy Net of Passive Demand Resources," found in their May 2013 CELT Report[39] and adjusted to exclude any public or other utility exempted from a state's RPS. For example, both Pascoag Utility District and Block Island Power Company have been removed from the forecast of Rhode Island REC demand.

Table 10: Summary of New England States' New Renewable RPS Targets (%)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
MA Class I	7.0%	8.0%	9.0%	10.0%	11.0%	12.0%	13.0%	14.0%	15%
CT Class I	9.0%	10.0%	11.0%	12.5%	14.0%	15.5%	17.0%	19.5%	20.0%
RI-New[40]	4.5%	5.5%	6.5%	6.5%	8.0%	9.5%	11.0%	12.5%	12.5%
ME Class I	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%	10.0%	10.0%	10.0%
NH Class I[41]	3.0%	3.8%	5%	6%	6.9%	7.8%	8.6%	9.2%	11.1%

Table 11: Projection of New England States' New Renewable RPS Demand (GWh)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
MA Class I	3,420	3,989	4,507	5,024	5,572	6,080	6,584	7,085	7,588
CT Class I	2,599	2,950	3,274	3,778	4,319	4,803	5,287	5,768	6,254
RI New	365	445	526	522	640	756	870	982	975
ME Class I	571	693	804	920	1,044	1,161	1,160	1,159	1,158
NH Class I	349	453	606	739	864	984	1,104	1,223	1,345
Total	**7,304**	**8,531**	**9,718**	**10,983**	**12,439**	**13,784**	**15,004**	**16,217**	**17,320**

As can be seen in Figure 7 below, Massachusetts and Connecticut represent the majority of New England's RPS demand through 2019. In 2012, these two states accounted for 47% and 36% of demand, respectively. Rhode Island represented 5% of the region's 2012 New Renewable RES demand, as shown in Figure 8, which is the same as 2011. By 2016, the allocation of New Renewable RES demand across the region is projected as follows: Massachusetts – 45%; Connecticut – 35%; Maine – 8%; New Hampshire – 6%; and Rhode Island –5%, as shown in Figure 9.

[39] The ISO-NE 2013 CELT Report is available at: www.iso-ne.com/trans/celt/report/2012/2012_celt_report.xls

[40] After conducting a review pursuant to R.I. Gen. Laws § 39-26-6(d), in Docket No. 4404, the PUC delayed implementation of the scheduled 1.5% increase of the minimum RES %age from New Renewable Energy Resources in 2015. This resulted in a delay of all subsequent increases for a period of one year.

[41] Beginning in 2013, a set %age of the annual NH Class 1 incremental demand must come from qualifying renewable producing useful thermal energy. The set %age is 0.4% in 2014, 0.6% in 2015, 1.3% in 2016, increasing annually thereafter by 0.1% from 2017 through 2023. As a result, the renewable electricity obligation is reduced. The net RPS requirement for electric power is shown here.

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

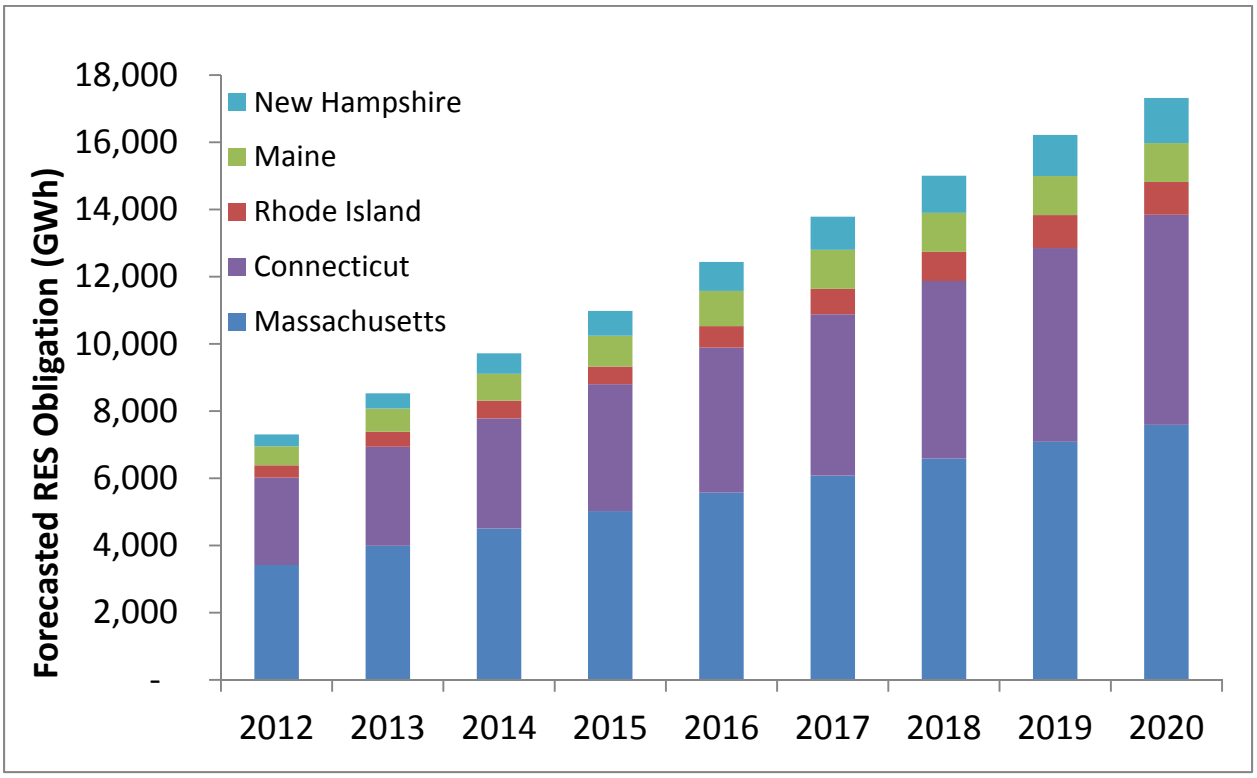


Figure 8: 2012 Composition of Aggregate RES Demand in New England

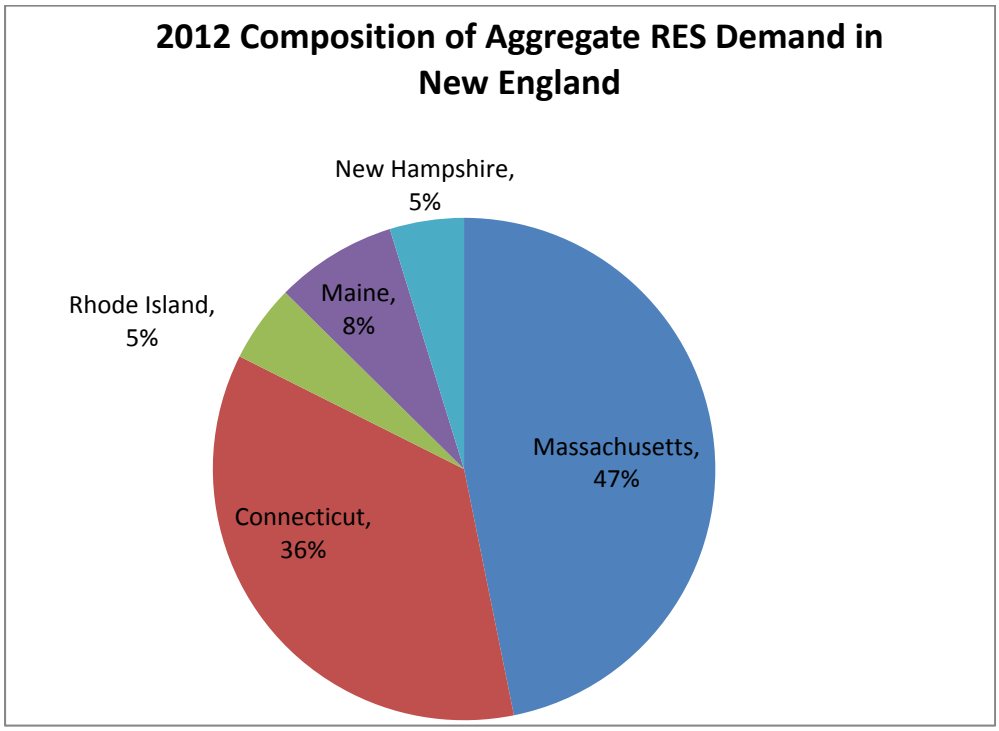
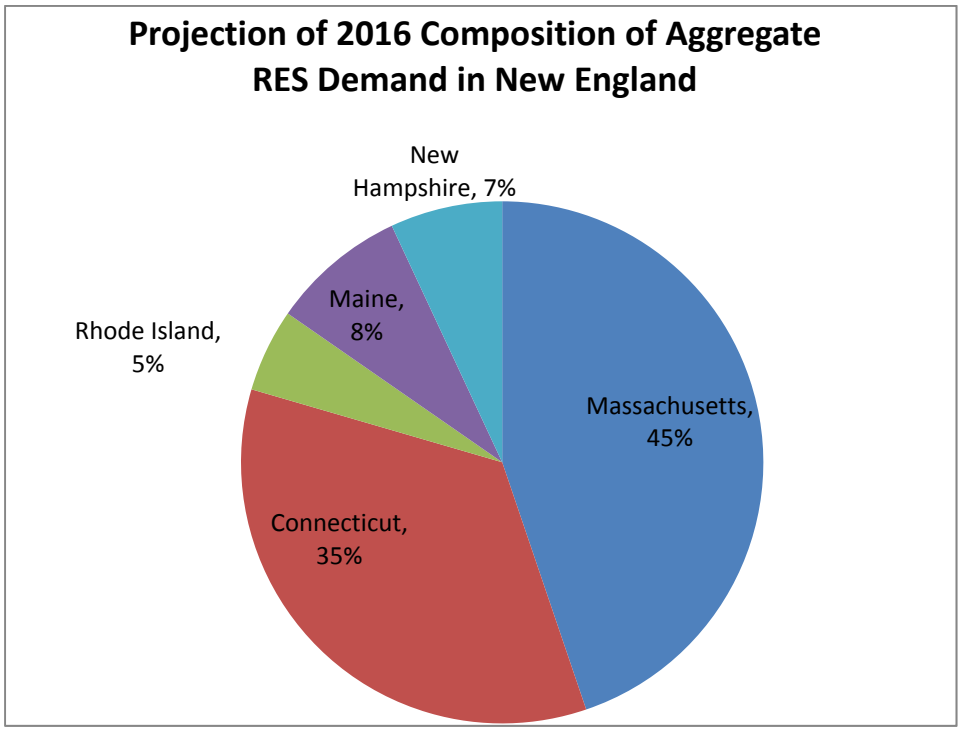


Figure 9: Projection of 2016 Composition of Aggregate RES Demand in New England



VII. Conclusion

Based upon the Commission's analysis of regulated utility data and general market trends, a shortage of New/Class 1 RECs persisted in the 2012 Compliance Year, leading to higher REC prices across the region and a continued reliance on the Alternative Compliance Payment for a portion of compliance. As a result, Obligated Entities paid more than $2.25 million to the Rhode Island Economic Development Corporation to satisfy 35,197 MWh of 2012 RES compliance. National Grid's RES compliance costs rose to more than $12.8 million, a significant increase over Compliance Year 2011 when compliance costs totaled $8.4 million. While Compliance Year 2012 had a smaller REC deficit (6.1%) in the Rhode Island market compared to Compliance Year 2011(26.3%), compliance costs remained high. These costs will ultimately be passed on to Rhode Island's ratepayers, either through regulated rates (i.e. National Grid) or through the prices offered to consumers by competitive suppliers. RES compliance costs may continue to increase – at least in the short-term – if new, imported and discretional supply is unable to keep pace with annual mandates increase.

Despite the rising costs associated with achieving compliance with the RES, the Standard itself is being successfully implemented. Each of Rhode Island's Obligated Entities met their 2012 obligations, either through the retirement of RECs and/or the payment of ACPs. The increased utilization of ACPs is consistent with identified supply constraints and these dollars should be utilized by the Rhode Island Commerce Corporation to spur new renewable development throughout the Ocean State. Over time, this should help create new supply sources for RECs and help ease market tensions.

The number of facilities and the amount of potential generation certified under the Rhode Island RES also continues to increase. Since January 1, 2012, the PUC has approved or conditionally approved 44 renewable energy facilities for RES certification – 31 New, 6 Existing, and 7 units with split eligibility, comprised of both New and Existing generation. These generators combined for 792.3MW of additional certified nameplate capacity. Facility certifications in 2013 (32 in total) considerably out-paced those of 2012 (12 in total). There were more facility certifications in 2013 than in any past year since Rhode Island approved the first renewable energy facility in 2006. Overall, as of December 31, 2013, there were 135 qualified renewable energy resource facilities approved or conditionally approved under the Rhode Island RES, accounting for more than 1,594.5 MW of renewable energy nameplate capacity. Growth should continue as new policy initiatives supporting the renewable energy industry take hold, and local and regional economic conditions improve. The Commission will continue to examine and report on these trends in future compliance reports.

The success of the state's Renewable Energy Standard and growth in the number of qualified renewable energy facilities since 2007 leaves the PUC cautiously optimistic that the RES and similar programs throughout New England will continue to spur renewable energy development. It is important to note, however, that the continued availability of long-term contracts and access to renewable energy financing are important to sustaining regional RPS success. Based on recent policies established and revised within Rhode Island, including long-term contracting statutes and the Distributed Generation Standard Contracts law, the state remains a leader in this critical area of policy support. 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.

While the PUC regards the 2012 RES Compliance Year a success, it also recognizes the rising costs associated with fulfilling this and other renewable energy mandates, and remains concerned about their impact on Rhode Island's ratepayers. In the coming year, the Commission will continue to monitor the regional renewable energy marketplace and the state's ability to achieve its established targets in a just and reasonable manner.

Appendix 1: Certified New Renewable Energy Resources

The following pages list generating units that have been *approved* by the Rhode Island Public Utilities Commission, either in whole or in part, as New Renewable Energy Resources (as of December 31, 2013). 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 1	Johnston, RI	LFG	2.4	100%	2007
Johnston Landfill Expansion Phase 2	Johnston, RI	LFG	6	100%	2007
Pawtucket Hydropower	Pawtucket, RI	Hydro	1.35	47%	2007
Portsmouth Abbey Wind Turbine	Portsmouth, RI	Wind	0.67	100%	2007
North Hartland Hydroelectric Project	Hartland, VT	Hydro	4.664	25.60%	2007
Schiller Station Unit 5	Portsmouth, NH	Biomass	50	100%	2007
Pioneer Hydro Electric Co., Inc.	Ware, MA	Hydro	1.6	50.40%	2007
Coventry Landfill Units 1 - 3	Coventry, VT	LFG	4.8	100%	2008
Coventry Landfill Unit 4 & 5	Coventry, VT	LFG	3.2	100%	2008
Attleboro Energy - QF	Attleboro, MA	LFG	1.5	100%	2008
Pepperell Hydro	East Pepperell, MA	Hydro	1.92	53.20%	2008
Woronoco Hydro	Russell, MA	Hydro	2.7	37.40%	2008
Quarry Energy Project	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 LLC	Gardner, MA	LFG	1.62	100%	2010
Bay Center	Providence, RI	Solar	0.02	100%	2010
Rhode Island LFG Genco*	Johnston, RI	LFG	33.4	100%	2010
Stetson Wind Farm	Stetson Mountain, ME	Wind	57	100%	2011
Stetson II Wind Farm	Stetson Mountain, ME	Wind	25.5	100%	2011
Toray Solar #1	North Kingstown, RI	Solar	0.405	100%	2011
Sheffield Wind Plant	Sheffield, VT	Wind	40	100%	2012
Putts Bridge Project	Ludlow, MA	Hydro	3.9	19.19%	2012
Red Bridge Project	Wilbraham, MA	Hydro	4.5	20.06%	2012
Berkshire Wind Power	Lanesborough, MA	Wind	15	100%	2012
Record Hill Wind	Roxbury, ME	Wind	50.6	100%	2012
Granite Reliable Wind Project	Coos County, NH	Wind	99	100%	2012
Sandywoods Farm 275kW Vergnet Turbine	Tiverton, RI	Wind	0.275	100%	2012
Orono B Hydroelectric Project*	Orono, ME	Hydro	3.75	100%	2012
Exeter Agri-Energy	Exeter, ME	Biomass	0.98	100%	2012
Ipswich Wind I	Ipswich, MA	Wind	1.6	100%	2012
* Conditionally approved.					
Shading indicates newly approved facility since last compliance report					

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:					
Ice House Partners, Inc.	Ayer, MA	Hydro	0.28	100%	2013
Hopkinton Hydro Project	Contocook, NH	Hydro	0.25	42.75%	2013
Kingdom Community Wind	Lowell, VT	Wind	63	100%	2013
WED NK GREEN	North Kingstown, RI	Wind	1.5	100%	2013
Georgia Mountain Community Wind	Milton, VT	Wind	10	100%	2013
Narragansett Bay Commission Field's Point Wind Turbines	Providence, RI	Wind	4.5	100%	2013
Camelot Wind	Plymouth, MA	Wind	1.5	100%	2013
Newport Hydro	Newport, VT	Hydro	4	22%	2013
ACP Solar I	Middletown, RI	Solar	0.49	100%	2013
West Greenwich Solar	West Greenwich, RI	Solar	2.158	100%	2013
North Hartland Bypass Flow Turbine	North Hartland, VT	Hydro	0.138	100%	2013
Covanta West Enfield	West Enfield, ME	Biomass	27.2	80%	2013
Wyre Wynd Hydroelectric Project	Jewett City, CT	Hydro	2.78	20%	2013
CMS Solar	Jamestown, RI	Solar	0.1283	100%	2013
Comtram Cable Plant	Cumberland, RI	Solar	0.49838	100%	2013
Pemwigas-Indeck Alexandria	Alexandria, NH	Biomass	15.2	100%	2013
Verso Bucksport LLC-TG5	Bucksport, ME	Biomass	24	100%	2013
CCI New England 500 kW (DC) Solar PV	Portsmouth, NH	Solar	0.498	100%	2013
West Davisville Solar	North Kingstown, RI	Solar	2	100%	2013
Forbes Street Solar	Riverside, RI	Solar	3	100%	2013
Orange #1 and Orange #2 (Mini-Watt Hydro)	Orange, MA	Hydro	0.455	37%	2013
* Conditionally approved.					
Shading indicates newly approved facility since last compliance report					

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as New	Year Approved
The following generators are located in control areas adjacent to ISO-NE:					
Higley Hydro	Colton, NY	Hydro	6.2	100%	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
Mill Seat Landfill	Bergen, NY	LFG	6.4	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
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	1.6	100%	2009
Cohocton & Dutch Hill Wind Farm	Cohocton, NY	Wind	125	100%	2011
Synergy Biogas, LLC	Wyoming, NY	Biomass	1.426	100%	2012
Steuben Landfill	Bath, NY	LFG	3.2	100%	2013
Noble Altona Windpark	Altona, NY	Wind	97.5	100%	2013
Noble Wethersfield	Bliss, NY	Wind	126	100%	2013
Noble Chateaugay	Churubusco, NY	Wind	106.5	100%	2013
Gouldtown Development	Lyondsdale, NY	Hydro	2	100%	2013
* Conditionally approved.					
Shading indicates newly approved facility since last compliance report					

Appendix 2: Certified Existing Renewable Energy Resources

The following pages list generating units that have been *approved* by the Rhode Island Public Utilities Commission, either in whole or in part, as Existing Renewable Energy Resources (as of December 31, 2013). 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 Hydropower	Pawtucket, RI	Hydro	1.35	53.0%	2007
North Hartland Hydro	Hartland, VT	Hydro	4.664	74.4%	2007
Blackstone Hydro Associates	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 Electric Co., Inc.	Ware, MA	Hydro	1.6	49.6%	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 Associates	Nashua, NH	Hydro	1.1	100%	2007
Briar Hydro Assoc - Rolfe Canal	Penacook, NH	Hydro	5.58	100%	2007
Penacook Lower Falls	Boscawen, NH	Hydro	4.69	100%	2007
Benton Falls Associates	Benton, ME	Hydro	4.468	100%	2007
Springfield Power	Springfield, NH	Biomass	16	100%	2008
Lower Lamoille Composite Hydro	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	East Pepperell, MA	Hydro	1.92	46.8%	2008
Woronoco Hydro	Russell, MA	Hydro	2.7	62.6%	2008
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	74.1%	2009
Shading indicates newly approved facility since last compliance report					

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:					
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
Bath Electric Hydro	Bath, NH	Hydro	0.4	100%	2012
Putts Bridge Project	Ludlow, MA	Hydro	3.9	80.81%	2012
Red Bridge Project	Wilbraham, MA	Hydro	4.5	79.94%	2012
Hopkinton Hydro Project	Contocook, NH	Hydro	0.25	57%	2013
Highate Falls Unit #5	Highgate, VT	Hydro	0.572	100%	2013
Newport Hydro	Newport, VT	Hydro	4	78%	2013
Highgate Falls	Highgate, VT	Hydro	11.392	100%	2013
Enosburg Hydro	Enosburg Falls, VT	Hydro	0.975	100%	2013
Barton Hydro	Barton, VT	Hydro	1.4	100%	2013
Covanta West Enfield	West Enfield, ME	Biomass	27.2	20%	2013
Wyre Wynd Hydroelectric Project	Jewett City, CT	Hydro	2.78	80%	2013
Wolcott Hydro #1	Wolcott, VT	Hydro	0.815	100%	2013
Orange #1 and Orange #2 (Mini-Watt Hydro)	Orange, MA	Hydro	0.455	63%	2013
The following generators are located in control areas adjacent to ISO-NE:					
High Acres I	Fairport, NY	LFG	3.2	64.2%	2009
Shading indicates newly approved facility since last compliance report					

Appendix 3: Alternative Compliance Payments

Section 7.3 of the Rhode Island Rules and Regulations Implementing a Renewable Energy Standard (RES Rules) permits Obligated Entities to meet the RES either through the purchase and retirement of NEPOOL GIS Certificates or through the provision of Alternative compliance payments (ACPs), obtained by making payment to the Rhode Island Economic Development Corporation, now known as the Rhode Island Commerce Corporation. The Rhode Island Commerce Corporation 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 RES 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 2012 Compliance Year, the ACP rate was $64.02 per MWh of obligation.

Compliance Year	ACP Rate
2007	$57.12
2008	$58.58
2009	$60.92
2010	$60.93
2011	$62.13
2012	$64.02
2013	$65.27
2014	$66.16

Connecticut, Maine, Massachusetts, and New Hampshire all have similar ACP mechanisms – although New Hampshire passed legislation in 2012 to adjust the 2013 ACP downward to $55.00 with subsequent escalations of only one-half of the Consumer Price Index thereafter. The Table below shows the 2012 ACP rates used by other New England states for the various REC classes defined in each state.

2012 ACP Rates	CT	ME	MA	NH
Class I	$55	$64.03	$64.02	$64.02
Class II	$55	N/A	$26.28	$168.13
Class III	$31	N/A	N/A	$31.39
Class IV	N/A	N/A	N/A	$31.39

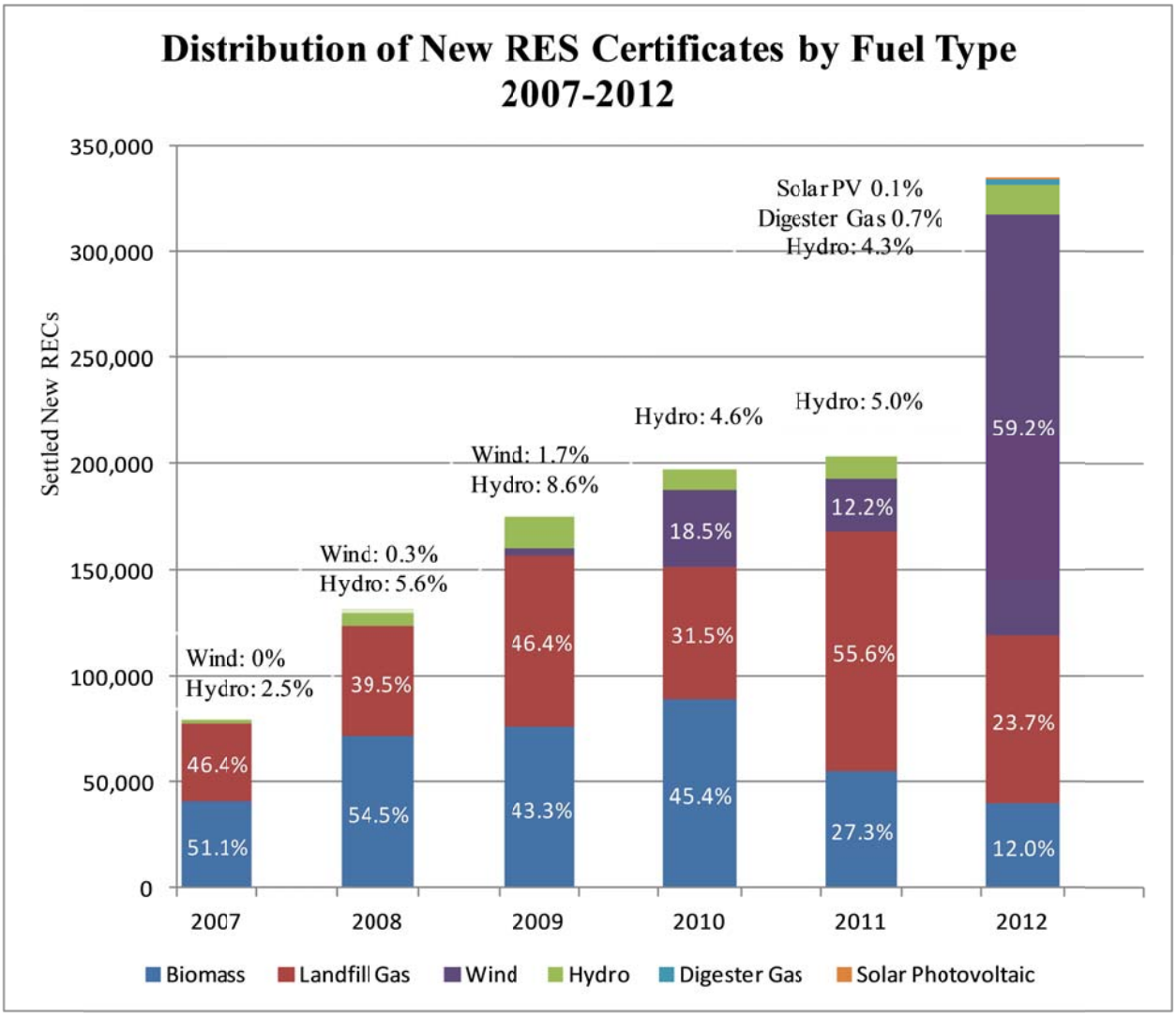
Appendix 4: Rhode Island RES 2012 Compliance Summary[42]

Obligated Entity	Retail Sales (from filing)	RES Obligations (MWh)		NEPOOL GIS Certificates					Alternative Compliance Payments		Banked "New" RECs for Future Compliance
	Load (MWh)	4.5% "New" Obligation	2.0% "Existing" Obligation	"New" RECs	Banked from 2010 or 2011	Total "New" RECs	"Existing" RECs	"New" Applied to Existing	"New" (MWh)	"Existing" (MWh)	RECs Eligible for 2013 or 2014
Distribution Companies											
Narragansett	5,272,388	237,258	105,448	241,850	0	241,850	105,448	0	0	0	4,592
Competetive Suppliers											
ConEdison Solutions											
Constellation New Energy, Inc											
Devonshire Energy											
Direct Energy Services, LLC											
Direct Energy Business, LLC											
First Point Power, LLC											
Gexa Energy LLC (NextEra Energy Services)											
Glacial Energy of New England,											
Hess Corporation											
Integrys Energy Services, Inc.											
Liberty Power Holdings LLC											
Mint Energy, LLC											
People's Power & Gas, LLC											
Sempra Energy Solutions LLC (Nobel Americas Energy Solutions)											
SJH Energy LLC (St. Joseph Health Services)											
South Jersey Energy Co. (Halifax American Operating Co. and Emera Energy)											
TransCanada Power Marketing, LLC											
Westerly Hospital Energy Company LLC											
subtotal	2,850,637	128,287	57,021	92,507	9,028	101,535	107,133	0	35,195	2	9,704
Totals	8,123,025	365,545	162,469	334,357	9,028	343,385	212,581	0	35,195	2	14,296

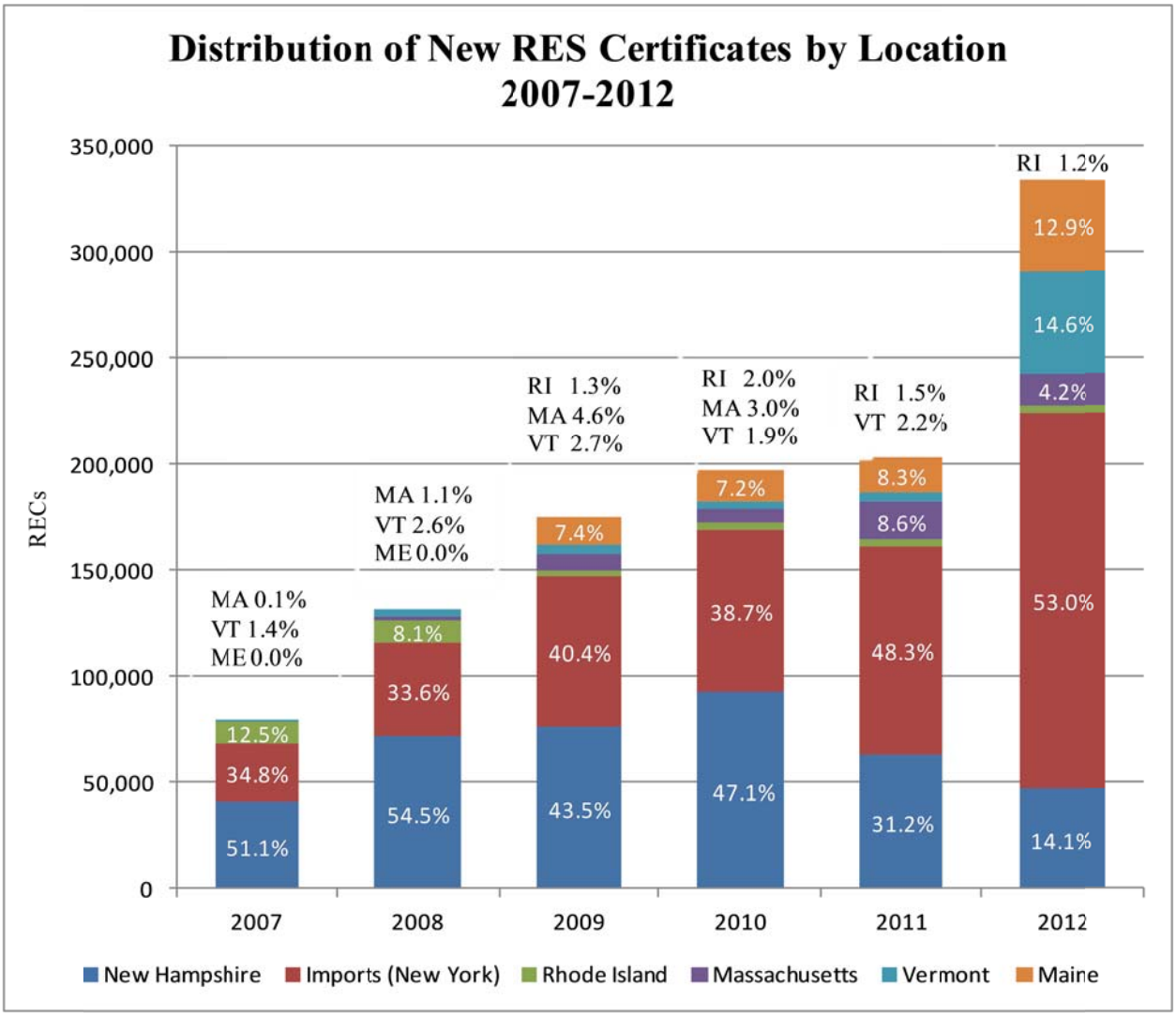
[42] Please note that data for individual competitive suppliers is confidential and not subject to public release.

Appendix 5: Historical Breakdown of Compliance Sources

The charts below provide additional detail on the breakdown of New and Existing RECs purchased by Rhode Island's Obligated Entities for the period 2007-2012.

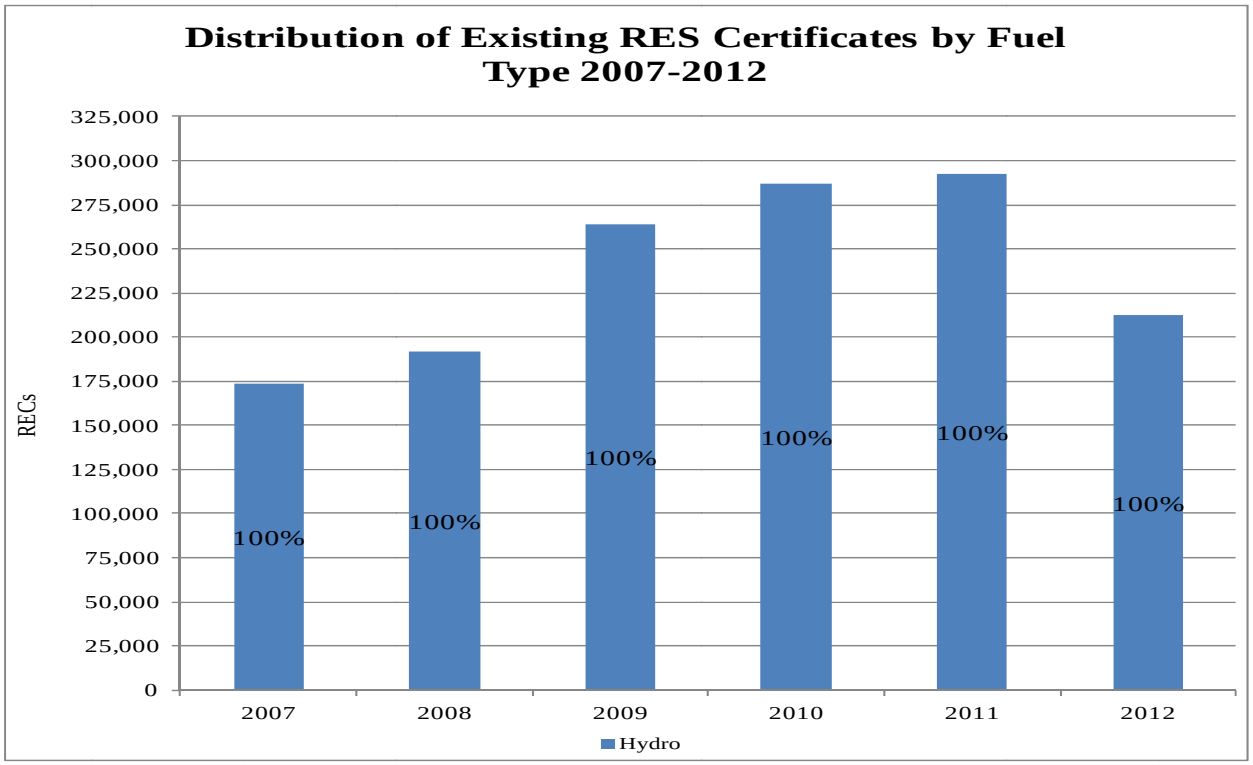


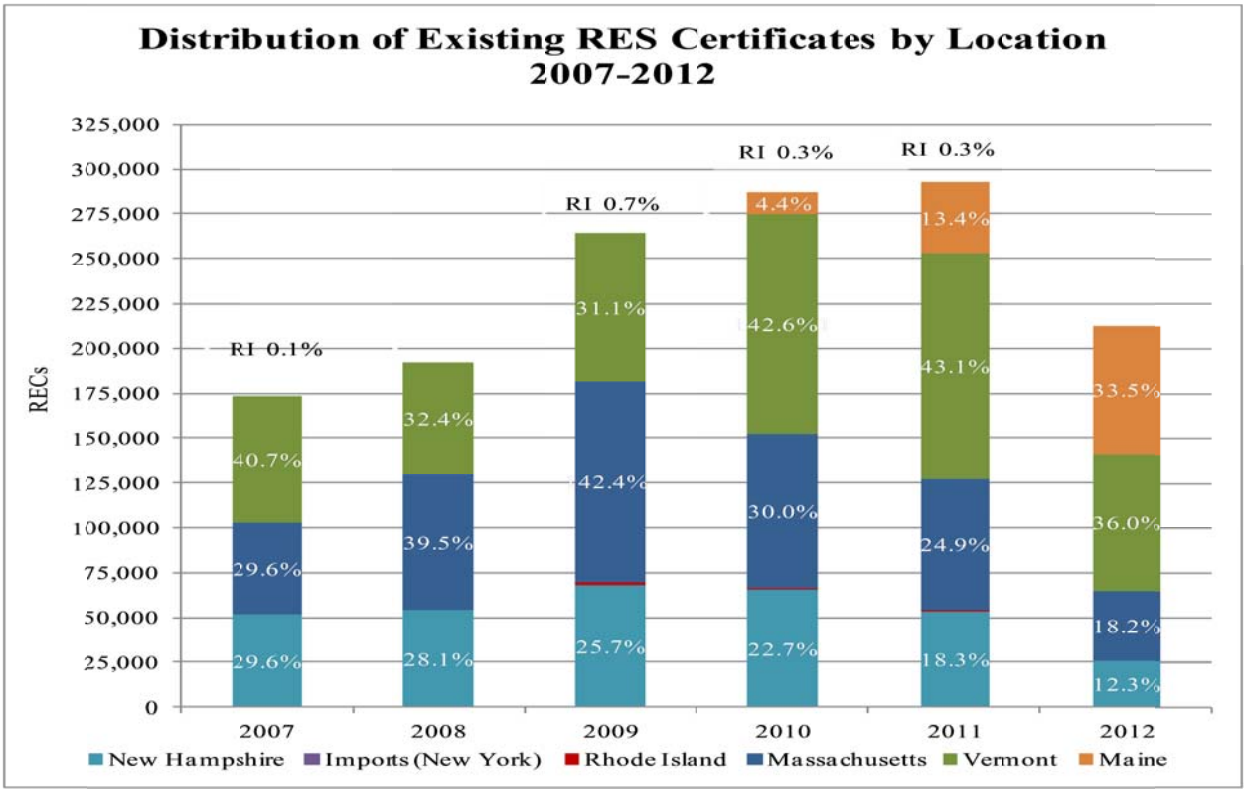
In 2012, there was a continued lower reliance on biomass generation than in the past four years due, in part, to curtailed operations at facilities across New England. There was also a decrease in the reliance on landfill gas to meet the 2012 RES. In 2011, 55.6% of settled New RECs were from landfill gas generating facilites. In 2012, this figure decreased to 23.7%. There was a significant increase in the percentage of New RES obligations met with wind-generated RECs. The share of New RES Certificates from wind resources applied to Rhode Island obligations increased from 12.2% in 2011to 59.2% in 2012, marking a 47% increase in just one year.



Historic Utilization of Alternative Compliance Payments (ACPs)

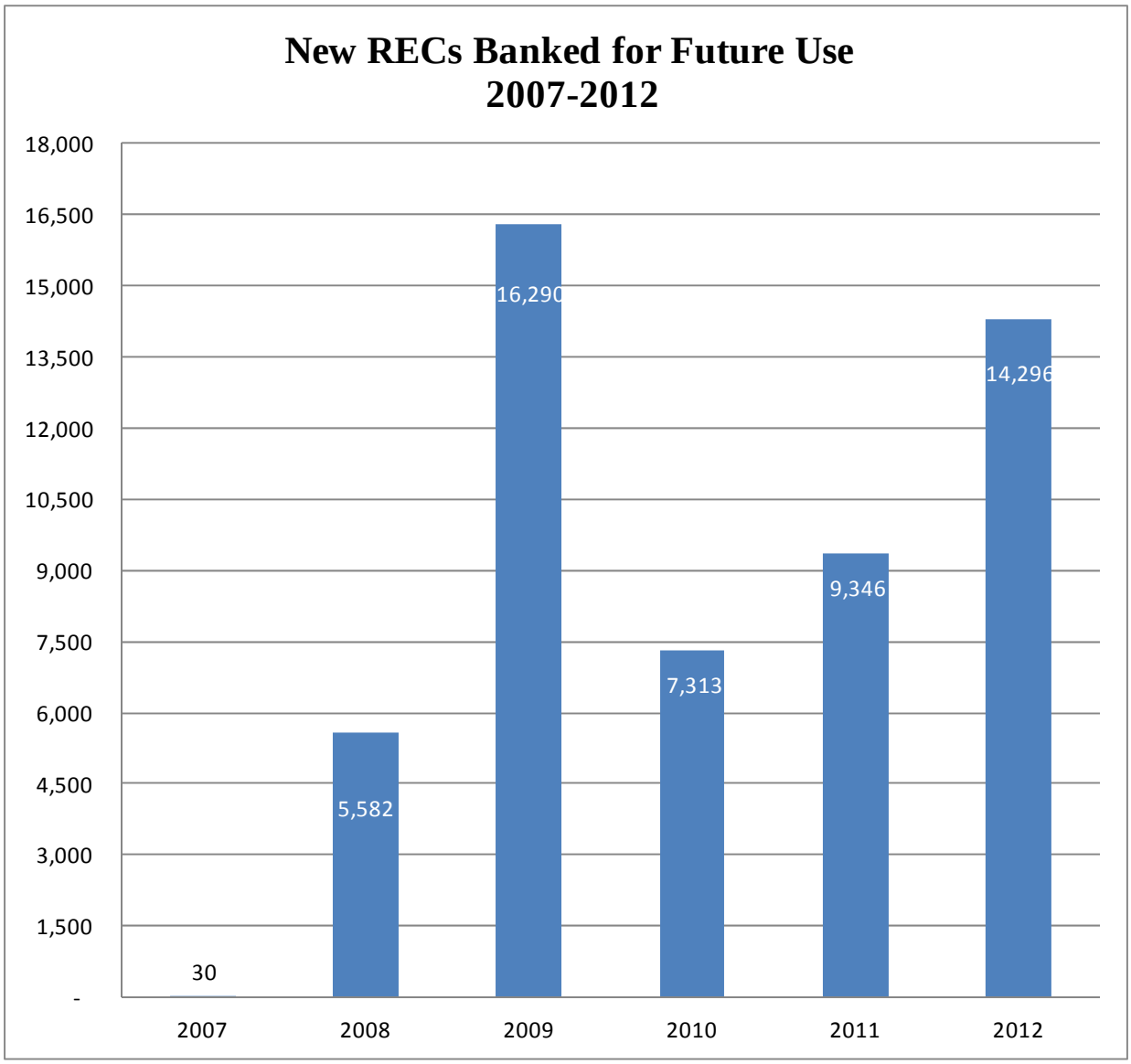
	2007		2008		2009		2010		2011		2012	
	MWh	$	MWh	$	MWh	$	MWh	$	MWh	$	MWh	$
New	3,653	203,519	295	17,281	1	61	192	11,699	84,402	5,243,896	35,195	2,253,184
Existing	227	12,966	77	4,511	1	61	166	10,114	3	186	2	128
Total	**3,790**	**$216,485**	**372**	**$21,792**	**2**	**$122**	**358**	**$21,813**	**84,405**	**$5,244,083**	**35,197**	**$2,253,312**





There were no Existing RES Certificates from Rhode Island-based hydro facilites applied to 2012 obligations. In 2011, 901 Existing RES Certificates from Rhode Island-based hydro facilities were applied to obligations; 905 in 2010; 1,964 in 2009; 0 in 2008; and 156 in 2007. The 2012 Compliance Year marked an increase in the use of Maine-based hydro facilites for Exisitng RES obligations and decreases in reliance

on New Hampshire, Massachusestts, and Vermont based generation facilities (compared to Compliance Year 2011). RECs from Maine-based hydro facilities made up 33.5 % (about one third) of the existing RECs settled to meet the state's Existing RES obligation for 2012. This marks about a 20 % increase over 2011. There have been no New York-based Existing RECs utilized for compliance since 2007.



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 voluntary clean energy programs or as the voluntary green power market.[43] National Grid's "GreenUp" program is just one example.

For the 2012 Compliance Year, National Grid 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	2011	2012
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**	**3,750**	**689**
A.1	*New Voluntary RECs – National Grid*	*5,161*	*6,833*	*4,366*	*1,474*	*689*
A.2	*New Voluntary RECs – All Competitive Suppliers*	*189*	*647*	*2,276*	*2,276*	*0*

Existing RECs		2008	2009	2010	2011	2012
B	Existing RECs settled in Rhode Island on behalf of end-use customers for voluntary clean energy programs	**7,624**	**2,603**	***0***	***0***	***538***
B.1	*Existing Voluntary RECs – National Grid*	*7,624*	*2,603*	*0*	*0*	*338*
B.2	*Existing Voluntary RECs – Competitive Suppliers*	*0*	*0*	*0*	*0*	*200*

The NEPOOL GIS Certificate, or REC, 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 PUC ensures that a NEPOOL GIS Certificate used for RES compliance has not also been used to satisfy another obligation in Rhode Island or any other jurisdiction.

[43] By comparison, the RES is referred to as the "mandatory" or "compliance" renewable energy market.

For example, National Grid hosts voluntary renewable energy programs in both Rhode Island and Massachusetts. The use of NEPOOL 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 RES Rules, 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 NEPOOL GIS Certificates, it is nonetheless important to the integrity of both programs that all certificates are tracked and settled appropriately.