

# Rhode Island Renewable Energy Standard

# Annual RES Compliance Report For Compliance Year 2008

February 2010

**Rhode Island Public Utilities Commission** 

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### **Executive Summary**

Compliance Year 2008 (from January 1, 2008 through December 31, 2008) was the second compliance year for the Rhode Island Renewable Energy Standard ("RES"). Under Rhode Island General Law §39-26-6, the Rhode Island Public Utilities Commission ("Commission") is charged with implementing the RES and ensuring compliance by obligated entities. In 2008, each Obligated Entity¹ was required to obtain at least three and one-half percent (3.5%) of electricity (including retail losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than one and one-half percent (1.5%) from New Renewable Energy Resources. This second Annual RES Compliance Report is intended to satisfy the legislative requirement at §39-26-6 for a filing on "the status of the implementation of the renewable energy standards in Rhode Island and other states." The legislation specifically requests a summary of the role of both renewable energy certificates and alternative compliance payments in meeting the RES obligation, as well as the amount of rate increases authorized to recover costs arising from the implementation of the RES.

The state's 2008 RES-obligated retail sales totaled 8,279,006 MWh. As shown in Table 1, the total minimum obligation to be satisfied by New Renewable Energy Resources was 124,190 MWh (1.5% of obligated retail sales). The obligation to be satisfied either by Existing or any remaining New Renewable Energy Resources was 165,584 MWh (2.0% of obligated retail sales). GIS Certificates<sup>2</sup> from eligible "New" renewable energy supply totaled 131,280 MWh (including 25 Certificates banked from 2007), representing a 5.7 percent surplus compared to the minimum New RES obligation. Similarly, GIS Certificates from eligible "Existing" renewable energy supply totaled 192,091 MWh. This equated to a 16.0 percent surplus above the Existing RES obligation. The composition of 2008 RES compliance, both by technology and by generators' geographic location, is discussed in Section III of this report.

Table 1: Composition of 2008 RES Compliance

-	New RES Obligation	Existing RES Obligation
2008 Obligations <sup>3</sup>	124,190 Certificates	165,584 Certificates
GIS Certificates Applied to 2008 RI RES Compliance (MWh, %)	123,895 (99.76%) <sup>4</sup>	165,507 (99.95%) <sup>5</sup>
RI RES Compliance by Alternative	295 MWh (0.24%)	77 (MWh) (0.05%)
Compliance Payments (MWh, %, \$)	\$17,281.10	\$4,510.66
Banked for Future Compliance	5,582 MWh	Not Applicable

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<sup>&</sup>lt;sup>1</sup> The RES applies only to Investor Owned Utilities. Therefore, Pascoag Utility District and Block Island Power Company are not Obligated Entities under the RES.

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> Please note that the total New and Existing RES obligations are slightly higher than the 1.5% and 2.0% of total obligated retail sales due to rounding protocols for individual Obligated Entities.

<sup>&</sup>lt;sup>4</sup> In aggregate, Obligated Entities over-complied with the New RES Obligation, demonstrating the purchase of a total 125,527 GIS Certificates from New Renewable Energy Resources (not including those banked for future use or applied to the Existing portion of the obligation).

<sup>5</sup> In aggregate, Obligated Entities over-complied with the New RES Obligation, demonstrating the purchase of a total 125,527 GIS Certificates from New Renewable Energy Resources (not including those banked for future use or applied to the Existing portion of the obligation).

<sup>&</sup>lt;sup>5</sup> In aggregate, Obligated Entities over-complied with the Existing RES Obligation, demonstrating the purchase of 192,091 GIS Certificates from Existing Renewable Energy Resources. Additionally, of the 165,507 Certificates applied to the "New or Existing Renewable Energy Resources" obligation, 171 were GIS Certificates from New Renewable Energy Resources.

Compliance with the 2008 RES targets by the electric distribution company resulted in total ratepayer billings of approximately \$6.5 million, as shown in Table 2. For the average household using 500 kWh per month, this equated to an estimated monthly bill impact of \$0.42, or \$5.04 annually. Section V provides additional rate impact data.

Table 2: Estimated Rate Impact for 2008 RES Compliance

Compliance Year	Authorized RES Charge per kWh	Renewable Energy Charge Billings (est.) <sup>6</sup>	Average Monthly/Annual Ratepayer Impact (500 kWh)
2008	\$0.00084	\$6,496,210	\$0.42 / \$5.04

Eleven load-serving entities had Rhode Island RES obligations for compliance year 2008. Seven entities – Narragansett Electric and six competitive retail electric providers – met 100 percent of their RES obligations with GIS Certificates. An additional three entities successfully met their individual RES obligations *either* through the purchase 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 ("RIEDC"). The remaining entity has not yet made ACPs sufficient to fulfill its RES obligations as of the filing of this report. The Commission is working with this entity to ensure RES compliance.

With respect to the minimum New RES Obligation, 99.76 percent of compliance was realized through the retirement of GIS Certificates, while the remaining 0.24 percent of compliance was (or will be) comprised of ACPs. The relative use of GIS Certificates and ACPs has changed somewhat since 2007, when competitive retail electric providers relied on ACPs for meeting approximately 30 percent of their collective New RES Obligation. The 2007 Annual RES Compliance Report noted that, due to the market's lack of experience with implementing the RES regulations, this result was not uncommon for an RES or RPS program in its first compliance year. In 2008, competitive retail electric providers relied on ACPs for meeting just 1.7 percent of their collective New RES Obligation.

For the Existing RES Obligation, 99.95 percent of compliance was realized through the retirement of GIS Certificates, while the remaining 0.05 percent of compliance was (or will be) comprised of ACPs. Narragansett Electric was the only Obligated Entity to make use of the Banked Compliance flexibility mechanism in 2008, applying 25 Certificates banked in 2007 towards its 2008 obligation. However, Narragansett Electric (981 MWhs) and six competitive suppliers (4,601 MWhs) banked a combined 5,582 MWhs of New RES compliance for use against their New RES Obligation in either the 2009 or 2010 Compliance Years. This is a significant increase when compared to the 30 MWhs of New RES compliance banked in the 2007 Compliance Year.

<sup>7</sup> See Table 4 for a complete list of load-serving entities.

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<sup>&</sup>lt;sup>6</sup> This data is based upon calendar year kWh deliveries and provides an approximate cost to ratepayers for RES compliance.

Overall, the Commission's review and analyses reveal success in the RES program's second compliance year. The dramatic increase in the number of new renewable energy projects proposed throughout the region and in adjacent control areas during the past several years leaves the Commission optimistic that both the Rhode Island RES and similar programs throughout New England will continue to spur renewable energy development and allow these programs to meet their objectives.

### I. Introduction to the Renewable Energy Standard

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

As shown in Table 3, the RES required all Obligated Entities to obtain at least 3.5 percent of electricity sold to Rhode Island end-use customers (inclusive of losses) from Eligible Renewable Energy Resources for the 2008 Compliance Year (January to December 2008). No more than 2.0 percent may be from Existing Renewable Energy Resources, and a minimum of 1.5 percent must be from New Renewable Energy Resources. Table 3 provides the target percentages for each category by year.

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

Compliance Year	Total Target Percentage	Minimum Percentage from New Renewable Energy Resources	Percentage from 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*	10.0%	8.0%	2.0%
2016*	11.5%	9.5%	2.0%
2017*	13.0%	11.0%	2.0%
2018*	14.5%	12.5%	2.0%
2019*	16.0%	14.0%	2.0%
2020 and thereafter**	16.0%	14.0%	2.0%

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

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 July 25, 2007. The RES Regulations require, among other provisions, that all Obligated Entities submit annual compliance filings to the Commission. This Annual Report is

<sup>\*\*</sup> Duration of continuation subject to Commission determination.

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

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

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

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 – including generator location, fuel type and actual emissions. One GIS Certificate<sup>8</sup> is created for each MWh of energy production. The GIS Certificate is the "currency" used to demonstrate compliance with the RES, as well as both mandatory renewable energy requirements in other states and voluntary renewable energy transactions. Through the use of GIS Certificates, which are created and transferred exclusively within the NEPOOL GIS, and the annual submission of RES compliance reports, the Commission ensures that a GIS Certificate used for RES compliance has not also been used to satisfy another obligation in Rhode Island or any other jurisdiction.

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<sup>&</sup>lt;sup>8</sup> 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 2008: Obligation and Sources of Compliance

Compliance Year 2008 (from January 1, 2008 through December 31, 2008) was the second compliance year for Rhode Island's RES. Each Obligated Entity was required to obtain at least 3.5 percent of electricity (including retail losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than 1.5 percent from New Renewable Energy Resources.

Rhode Island's actual 2008 RES-obligated retail sales totaled 8,279,006 MWh. As a result, the aggregate minimum New RES Obligation (1.5%) was 124,190 MWh, and the aggregate New or Existing RES Obligation (2.0%) was 165,584 MWh. Obligated Entities were required to meet the RES either through the purchase and retirement of GIS Certificates or through the provision of Alternative Compliance Payments ("ACPs"), obtained by making payment to the Rhode Island Economic Development Corporation ("RIEDC"). The RIEDC sets these funds aside in the Renewable Energy Development Fund to support activities such as the Portsmouth Abbey Wind Turbine, Rhode Island Wind Alliance, and the Rhode Island Wind Mapper. For 2008, the ACP rate was \$58.58 per MWh of obligation. The rate is the same for both New and Existing obligations. See Appendix 4 for more information about Alternative Compliance Payments.

In total, eleven entities submitted RES Compliance Filings to the Commission for 2008 – Narragansett Electric and ten competitive electricity providers. Table 4 provides a list of these Obligated Entities.

Table 4: Obligated Entities submitting 2008 RES Compliance Filings to the Commission

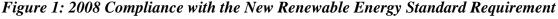
Distribution Utilities				
The Narragansett Electric Company d/b/a N	National Grid			
Competitive Retail Providers				
TransCanada Power Marketing Ltd.	Integrys Energy Services, Inc.			
Constellation NewEnergy, Inc.	SJH Energy LLC			
Direct Energy Services, LLC	Westerly Hospital Energy Company LLC			
Hess Corporation	Glacial Energy of New England, Inc.			
Gexa Energy Rhode Island, LLC	South Jersey Energy Company d/b/a Halifax			
	American Operating Company			

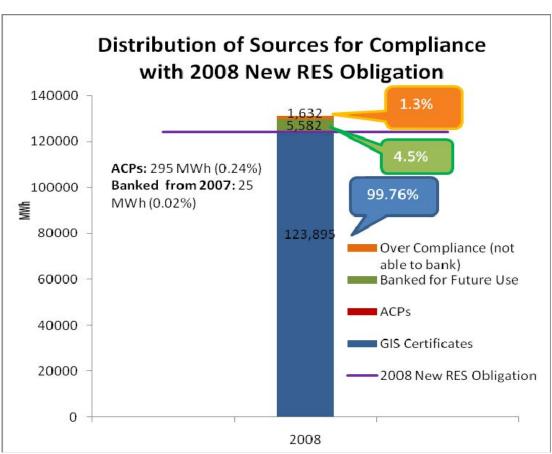
Seven of these entities – Narragansett Electric and six competitive retail electric providers – met their entire RES obligations with GIS Certificates. An additional three entities successfully met their individual RES obligations *either* through the purchase of GIS Certificates *or* through the provision of Alternative Compliance Credits, obtained by making Alternative Compliance Payments to the Rhode Island Economic Development Corporation. The remaining one entity has not yet made ACPs sufficient to fulfill its RES obligations. The Commission is working with this entity to ensure RES compliance. Appendix 3 lists all entities from whom Compliance Filings were received and provides a detailed summary of RES compliance for Narragansett

Electric Company along with a more limited summary for each competitive retail electric provider.<sup>9</sup>

As shown in Figure 1, for the minimum New RES Obligation, 99.76 percent of compliance was realized through the retirement of GIS Certificates, and the remaining 0.24 percent of compliance was (or will be) comprised of ACPs, resulting in total expected payments of \$17,281 to the RIEDC (of which \$13,180 have already been received at the time of this filing).

The relative use of GIS Certificates and ACPs has changed somewhat since 2007, when competitive retail electric providers relied on ACPs for meeting approximately 30 percent of their collective New RES Obligation. In 2008, competitive retail electric providers relied on ACPs for meeting just 1.7 percent of their collective New RES Obligation. As noted in the Executive Summary, the heavy reliance on the use of ACPs in 2007 was most likely due to the market's lack of experience with implementing the RES regulations. This result has not been uncommon in other jurisdictions during the first compliance year of similar standards.





<sup>&</sup>lt;sup>9</sup> The limited competitive supplier data presented in Appendix 3 is a result of the Commission's confidential treatment of their filings. Thus, completive supplier information within this report is only presented in a summarized fashion to avoid the potential identification of specific market activities.

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For the Existing RES Obligation, nearly 100 percent of compliance was realized through the retirement of GIS Certificates. One entity submitted an ACP for 1 MWh of Existing RES obligation, and another entity must still make compliance payments for 76 MWh. When combined, ACPs comprised just 0.05 percent of the state's total aggregated obligation, as shown in Figure 2. Also, as shown in this figure, compliance filings demonstrated that a surplus of nearly 26,800 GIS certificates was obtained from Existing resources in 2008, resulting in significant over-compliance. <sup>10</sup>

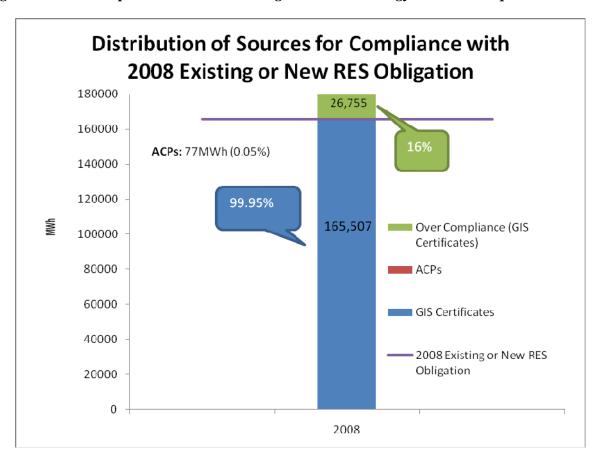


Figure 2: 2008 Compliance with the Existing Renewable Energy Standard Requirement

Narragansett Electric was the only Obligated Entity to make use of the Banked Compliance flexibility mechanism this year, applying 25 Certificates banked in 2007 towards its 2008 obligation. However, Narragansett Electric (981 MWhs) and six competitive suppliers (4,601 MWhs) banked a combined 5,582 MWhs of New RES compliance for use against their New RES Obligation in either the 2009 or 2010 Compliance Year. This is compared to just 30 MWhs of New RES compliance banked in the 2007 Compliance Year. Additionally, three competitive suppliers purchased even more New RECs than the Rules permit to be banked for future use (capped at 30% of the current year's New RES obligation), totaling 1,632 RECs (see footnote

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<sup>&</sup>lt;sup>10</sup> Obligated entities settled a total of 26,755 Existing RECs above their 2008 RES Obligations, and 1,632 New RECs above the 30% cap eligible for banking. It is possible that these companies inadvertently over-purchased RECs anticipating higher sales, or that they purchased them intentionally to promote green company image, corporate responsibility, etc.

10). It is important to note that only compliance with the New RES Obligation may be banked. A summary of 2008 RES Compliance, including banked certificates for 2009 or 2010, is presented below in Table 5.

Table 5: Summary of 2008 RES Compliance

	Results for 2008 Compliance Year	(MWh)
A	2008 RES-Obligated Retail Sales	8,279,006
A.1	Narragansett Electric	7,123,559
A.2	Competitive Suppliers (10 in total)	1,155,447
	New RES Obligation and New Renewable Energy Certif	ïcates
В	New RES Obligation (1.5% of "A")	124,190
B.1	2008 New RECs applied to 2008 New RES Obligation	123,870
B.2	Banked 2007 New RECs applied to 2008 New RES Obligation	25
B.3	Alternative Compliance Payment Credits Applied to 2008 New RES Obligation	295
C	Total 2008 New RECs Settled in Rhode Island*	131,255
C.1	2008 New RECs applied to 2008 New RES Obligation	123,870
C.2	2008 New RECs applied to 2008 Existing RES Obligation	171
C.3	2008 New RECs banked for use in Compliance Years 2009 or	5,582
	2010	
<i>C.4</i>	2008 New RECs purchased above 30% banking cap	1,632
	(not eligible for banking)	
	Existing RES Obligation and Existing Renewable Energy Co	
D	Existing RES Obligation (2.0% of "A")	165,584
D.1	2008 Existing RECs applied to 2008 Existing RES Obligation	165,336
D.2	2008 New RECs applied to 2008 Existing RES Obligation	171
D.3	Alternative Compliance Payment Credits Applied to 2008	77
	Existing RES Obligation	400.004
E	Total 2008 Existing RECs Settled in Rhode Island*	192,091
E.1	2008 Existing RECs applied to 2008 Existing RES Obligation	165,336
E.2	2008 Existing RECs purchased above 2008 RES Obligation	26,755
	(not eligible for banking) ot include RECs purchased on behalf of end-use customers for voluntary clean energy progr n RECs purchased for voluntary programs.	ams. See Appendix 6 for

### III. 2008 RES Compliance by Fuel Type and Geographic Location

In 2008, RES compliance was fulfilled by four types of renewable energy generators – wood-fired, landfill gas, wind, and hydroelectric. As shown in Figure 3,<sup>11</sup> the 2008 New RECs purchased by obligated entities were comprised almost entirely by biomass facilities (54.5%) and landfill gas (39.5%) from New England and the adjacent control area of New York. A small fraction of GIS Certificates came from hydroelectric (5.6%) and wind (0.3%).

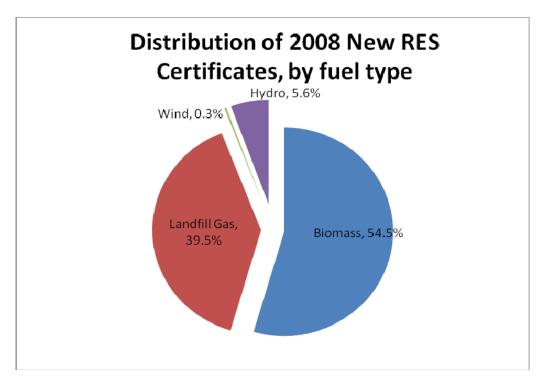


Figure 3: Distribution of Settled 2008 New RECs by renewable fuel type

In 2008, more than half of all 2008 New RECs purchased by obligated entities were attributable to biomass generating facilities located in New Hampshire. New York-based facilities accounted for a significant portion of the 39.5 percent share of New GIS Certificates attributed to landfill gas, and for one-third of all New RECs. Facilities located in Massachusetts and Vermont accounted for 1.1 percent and 2.6 percent of all New RECs, respectively. Renewable energy facilities within the Ocean State accounted for 8.1 percent of New RES compliance in 2008, as shown in Figure 4.

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<sup>&</sup>lt;sup>11</sup> 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.

Figure 4: Distribution of Settled 2008 New RECs by geographic location

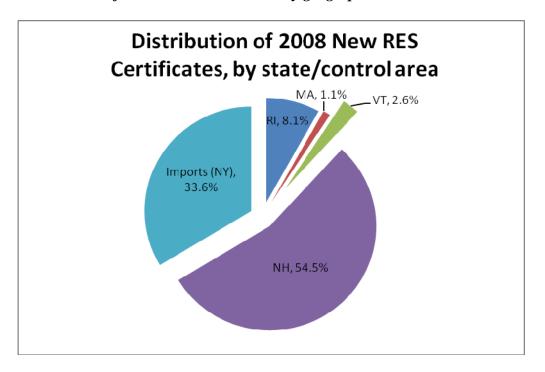
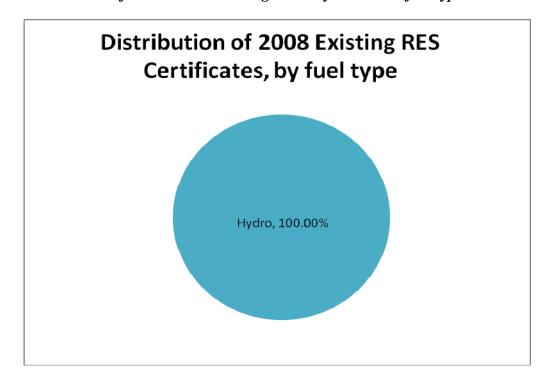
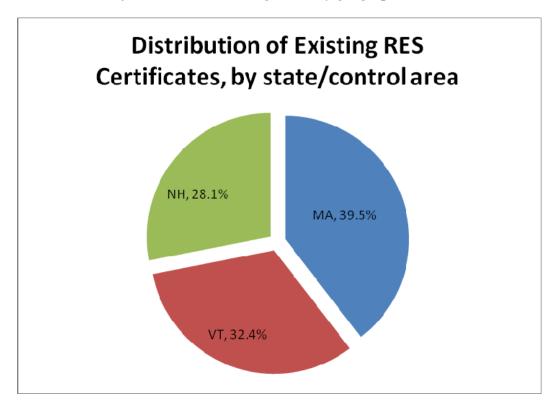


Figure 5: Distribution of Settled 2008 Existing RECs by renewable fuel type



As to the 2008 Existing RES Obligation under the state's RES, all RECs were attributable to hydroelectric generators, as shown in Figure 5 above. Production from these generators was distributed more or less evenly between New Hampshire, Massachusetts and Vermont. Overall compliance with the Existing RES Obligation by geographic location is shown in Figure 6.

Figure 6: Distribution of Settled 2008 Existing RECs by geographic location



Appendix 5 contains historical data for the distribution of New and Existing RECs purchased by fuel type and location for 2007 and 2008.

### IV. Renewable Energy Standard –Future Obligations

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

The manner in which the Commission will fulfill the requirement to determine supply adequacy, as well as the timing and implications of the Commission's decision-making authority, is clearly articulated in the RES Regulations under §39-26-6(d). By statute, the Commission is directed to open a docket on or before January 1, 2010 and on or before January 1, 2014 to determine the adequacy or potential adequacy of renewable energy supplies to meet the increase in the RES targets scheduled for 2011 and 2015, respectively. The Commission will make its determination of adequacy based not only on the historic availability of GIS Certificates, historic prices for GIS Certificates, and utilized quantities of ACPs, but also on the future potential availability of GIS Certificates based on the status of projects under development in the region, the magnitude and timing of other states' RPS requirements, cost trends for renewable energy technologies, and the benefits to Rhode Island and the region.

To meet its statutory mandate, the Commission determined in Docket 4050 that there exists a potential adequacy of renewable energy supplies to meet the 2011 increase in the percentage requirement. A similar process will be conducted in 2013 for the 2014 compliance year. Additional information on this proceeding, including witness testimony and the Commission's complete order, can be found at: <a href="https://www.ripuc.org/eventsactions/docket/4050page.html">www.ripuc.org/eventsactions/docket/4050page.html</a>.

The percentage targets shown in Table 3 earlier in this Report, and the calculated future RES obligations in Table 6 below, assume that the Commission determines a continued adequacy of renewable energy supply. The quantity (in MWhs) of future years' RES obligations are estimated by multiplying the forecasted value of total obligated retail sales in Rhode Island by the RES target for each year. The forecast of Rhode Island's obligated retail sales is based on ISO-NE's 2008 CELT Report (adjusted for losses) and the exemption of both Pascoag Utility District and Block Island Power Company from the RES. Actual 2007 and 2008 retail sales and RES obligation are provided in italics.

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<sup>&</sup>lt;sup>12</sup> Due to the current recession, 2008 load fell relative to the 2008 CELT, and load for 2009 and thereafter is also expected to be lower than the 2009 CELT forecast.

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

Compliance Year	Actual/Forecasted RES-Obligated Retail Sales (MWhs)	Minimum MWhs from New Renewable Energy Resources (per Table One targets)	MWhs from either New or Existing Renewable Energy Resources (2%)
2007 (Actual)	8,335,706	83,357	166,715
2008 (Actual)	8,279,006	124,190	165,584
2009	8,419,466	168,389	168,389
2010	8,482,552	212,064	169,651
2011*	8,545,637	299,097	170,913
2012*	8,603,870	387,174	172,077
2013*	8,662,102	476,416	173,242
2014*	8,720,335	566,822	174,407
2015*	8,768,862	701,509	175,377
2016*	8,822,242	838,113	176,445
2017*	8,875,622	976,318	177,512
2018*	8,931,469	1,116,434	178,629
2019*	8,987,668	1,258,274	179,753
2020 and thereafter**	9,044,220	1,266,191	180,884
* Increases in 2011 and 2015 su	bject to Commission determinati	on, as described in Section IV.	

<sup>\*\*</sup> Duration of continuation subject to Commission determination.

#### V. Authorized Rate Increases

The RES enabling legislation specifies that the annual report shall include "the amount of rate increases authorized pursuant to subsection (b,)" where subsection (b) reads that the Commission shall "[a]uthorize rate recovery by electric distribution companies of all prudent incremental costs arising from the implementation of this chapter, including, without limitation, the purchase of NE-GIS certificates, the payment of alternative compliance payments, required payments to support the NE-GIS, assessments made pursuant to §39-26-7(c) and the incremental costs of complying with energy source disclosure requirements." This section provides an update on authorized rates and their impact in the 2008 Compliance Year.

The Commission approved for effect January 1, 2008 a Renewable Energy Charge of \$0.00084 per kWh. As shown in the chart below, this rate equated to an estimated monthly increase of \$0.42 for a typical residential ratepayer consuming 500 kWh per month, or \$5.04 annually. The only electric distribution company that qualifies as an Obligated Entity is Narragansett Electric, as the definition of "Obligated Entity" in Section 3.25 of the RES Rules and Regulations specifically excludes Block Island Power Company and the Pascoag Utility District from RES mandates. Overall, the total estimated 2008 Renewable Energy Charge billings by Narragansett Electric to its customers was nearly \$6.5 million. This is calculated by multiplying Narragansett's total electric deliveries of 7.7 billion kWh by the Renewable Energy Charge of \$0.00084 per kWh, providing an approximate cost of compliance. It is important to note that through a Commission-approved reconciliation mechanism, any over-collections by the electric distribution company to meet the RES are refunded back to ratepayers.

Compliance Year	Authorized RES Charge per kWh	Renewable Energy Charge Billings (est.)	Average Monthly/Annual Ratepayer Impact (500 kWh)
2008	\$0.00084	\$6,496,210	\$0.42 / \$5.04
2007	\$0.00062	\$4,450,074	\$0.31 / \$3.72
Difference	+\$0.00022	+\$2,046,136	+\$0.11 / +\$1.32

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

The RES enabling legislation also requests a report on "the status of the implementation of the renewable energy standards in Rhode Island <u>and other states</u>" [emphasis added]. This section provides a status update on the implementation of similar programs, known as Renewable Portfolio Standards ("RPS") outside of Rhode Island, in other New England state jurisdictions.

Five of the six New England states have active Renewable Portfolio Standards, while Vermont does not have a binding program. However, that state's legislature has set non-binding renewable energy goals for 2012 and beyond. Following recent legislation, as of 2010, each state has multiple classes within its RPS requirement. Class I or "New" requirements focus on supply that was either constructed after a date-certain or supply which meets maximum emissions thresholds, as well as other eligibility criteria. "Existing" requirements focus on supply that was in operation prior to the creation of the applicable state's program. In addition, Connecticut has a Class III requirement for conservation and load management resources, and combined heat and power (CHP) resources. New Hampshire also has a Class II requirement for new solar. This status update focuses exclusively on the New (or Class I) portion of each state's RPS requirement.

Massachusetts has the longest-running RPS; the first compliance year was 2003. In aggregate, Massachusetts' RPS supply exceeded its RPS demand in 2003; fell short of demand in each of 2004 through 2006; and then once again exceeded RPS demand in the 2007 Compliance Year (which, like Rhode Island, is January to December). Since compliance is not evenly distributed, however, several suppliers made ACPs in years when the market had an overall surplus. ACPs in Massachusetts totaled approximately \$9,000 in 2003; \$13.6 million in 2004; \$19.6 million in 2005; \$17.8 million in 2006; and \$620,000 in 2007. The Massachusetts Department of Energy Resources ("DOER") – the state agency responsible for managing their RPS program – expects this recent downward trend in the magnitude of ACPs to persist into the 2008 RPS Compliance Year.

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. Reports for the 2008 compliance year in both Connecticut and Massachusetts were not available for review at the time of this report's filing date.

<sup>&</sup>lt;sup>13</sup> Retirement of GIS Certificates is not required to meet the Vermont goals.

<sup>&</sup>lt;sup>14</sup> Including Class II in MA, CT and ME; Class III in NH; and Class IV in NH.

<sup>&</sup>lt;sup>15</sup> An Early Compliance provision qualifying renewable energy produced in 2002 for the 2003 RPS requirement almost entirely alleviated the need for ACPs.

Maine and New Hampshire also have RPS legislation and regulations in place. Maine's first compliance year for its New RPS<sup>16</sup> requirement is 2008; the first compliance year for New Hampshire Class I is 2009. As a result, there are no compliance statistics yet available.

Table 7 provides a summary of renewable energy standard annual percentage targets throughout New England, while Table 8 provides an estimate of the corresponding GWh RPS obligations for each of the five states with RPS requirements for the period 2007 through 2015 (projected). The forecasted Massachusetts RPS obligation is based on the assumption that retail sales in that state remain constant beginning in 2008. This is the assumption made by the Massachusetts DOER in its official Annual RPS Report for Compliance Year 2007. That assumption is maintained in this report for consistency. The forecasted RPS obligations for the remaining states are based on the base case load growth forecast in ISO-NE's April 2008 CELT Report.

Table 7: Summary of New England States' New Renewable RPS Targets (%)

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

Table 8: Projection of New England States' New Renewable RPS Demand (GWh)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
MA Class I	1,529	1,798	2,055	2,569	3,082	3,596	4,110	4,623	5,137
CT Class I	1,206	1,728	2,095	2,469	2,851	3,238	3,629	4,022	4,603
RI-New	83	124	168	212	299	387	476	567	702
ME Class I	0	124	251	380	511	646	782	919	1,058
NH Class I	0	0	66	135	274	418	567	719	875
Total	2,818	3,775	4,636	5,765	7,019	8,285	9,563	10,850	12,374

These summaries are also shown graphically in Figure 7 and Figure 8 below. As can be seen in these charts, Massachusetts and Connecticut represent a majority of the demand for New Renewable Resources during the period of 2007 through 2015, at 48 percent and 46 percent respectively in 2008. Rhode Island represents 3 percent of the region's 2008 New Renewable RES demand. By 2015, the allocation of New Renewable RES demand across the region is projected as follows: 41% Massachusetts; 37% Connecticut; 9% Maine; 7% New Hampshire; and 6% Rhode Island, as shown in Figure 9.

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<sup>&</sup>lt;sup>16</sup> Maine has had an "Existing" RPS requirement since 2000. An abundance of qualifying in-state supply enable's the state to easily meet this requirement each year.

Figure 7: Projection of New England States' New Renewable RES Demand

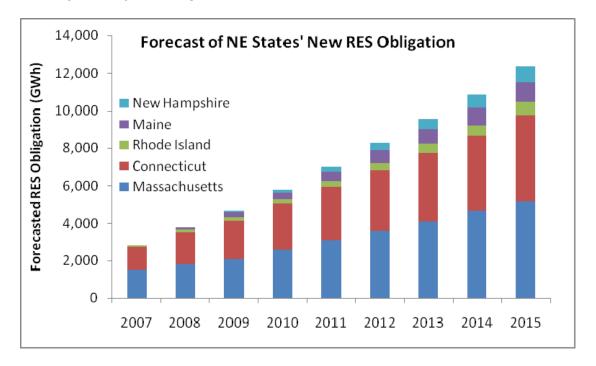


Figure 8: Composition of 2008 Aggregate New RES Demand in New England

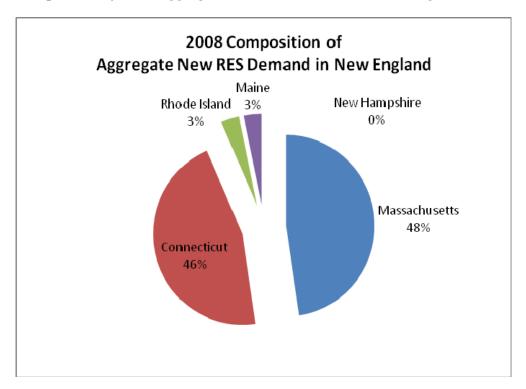
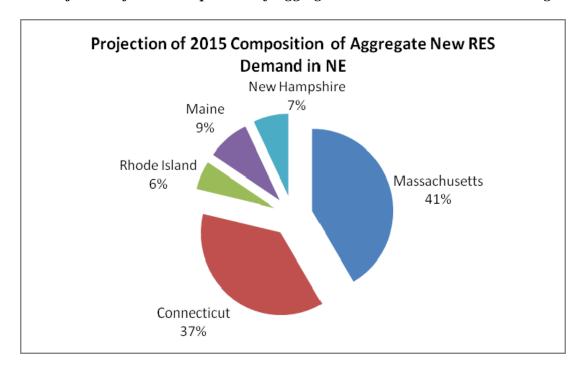


Figure 9: Projection of 2015 Composition of Aggregate New RES Demand in New England



### VII. Conclusion

Overall, the Commission's review and analysis reveal success in the RES program's two compliance years. Approximately 99.76 percent of the New RES Obligation was met with GIS Certificates in 2008, and the majority of the small amount (0.24%) of ACPs required was made to the RIEDC on time and in the proper amounts. In aggregate, GIS Certificates from both new and existing renewable energy supply exceeded the RES Obligation. Two-thirds of the New RES Obligation was met by ISO-NE supply, with the remainder imported from the adjacent New York control area. The entire Existing RES obligation was met by generation within ISO-NE.

Finally, the Commission has witnessed a significant increase in the number of new renewable energy projects proposed throughout the region and its adjacent control areas, spurred, in part, by New England's RES and RPS programs. For example, as of the date of this filing, there were 74 qualified renewable energy resource facilities approved or conditionally approved under the Rhode Island RES, comprising 547.4 MW of renewable energy nameplate capacity. Since October 2008, there has been an increase of 29 renewable energy facilities certified under the state's RES, equal to a growth rate of 64.4 percent. These facilities have increased certified renewable energy capacity, from which RECs can be generated, by 232.4 MW, or 73.8 percent. The Commission will continue to examine these trends and report on them in future compliance reports.

The success of the state's RES program and growth trends in the number of qualified renewable energy facilities since 2007 leaves the Commission optimistic that the Rhode Island Renewable Energy Standard and similar programs throughout New England will continue to spur renewable energy development and allow these programs to meet their objectives in the near future.

### Appendix 1: New Renewable Energy Resources certified by the PUC

The following generating units have been *approved* by the Rhode Island Public Utilities Commission, either in whole or in part, as New Renewable Energy Resources:

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as New
The followin	g generators are locate	ed within ISO-N	E:	
Johnston Landfill Expansion Phase 1	Johnston, RI	LFG	2.4	100%
Johnston Landfill Expansion Phase 2	Johnston, RI	LFG	6	100%
Pawtucket Hydro	Pawtucket, RI	Hydro	1.35	47%
Portsmouth Abbey	Portsmouth, RI	Wind	0.67	100%
North Hartland Hydro	Hartland, VT	Hydro	4.664	25.6%
Schiller Station Unit 5	Portsmouth, NH	Biomass	50	100%
Pioneer Hydro	Ware, MA	Hydro	1.6	50.4%
Coventry Landfill Units 1 - 3	Coventry, VT	LFG	4.8	100%
Coventry Landfill Unit 4	Coventry, VT	LFG	1.6	100%
Attleboro Landfill	Attleboro, MA	LFG	1.5	100%
Pepperell Hydro	Pepperell, MA	Hydro	2.7	53.2%
Woronoco Hydro	Russell, MA	Hydro	2.7	37.4%
Quarry Energy <sup>1</sup>	Quincy, MA	LFG	0.6	100%
UNH Power Plant	Durham, NH	LFG	4.6	100%
Portsmouth Wind	Portsmouth, RI	Wind	1.5	100%
Lempster Wind	Lempster, NH	Wind	24	100%
Pine Tree Landfill	Hampden, ME	LFG	3.17	100%
Fitchburg Landfill	Westminster, MA	LFG	4.8	100%
Crossroads	Norridgewock, ME	LFG	3.2	100%
Thundermist Hydropower	Woonsocket, RI	Hydro	1.1	25.9%
The following generato	rs are located in contr	ol areas adjacen	t to ISO-NE:	
Higley Hydro	Colton, NY	Hydro	6.2	100% <sup>2</sup>
Colonie	Cohoes, NY	LFG	4.8	100%
Model City	Youngstown, NY	LFG	5.6	100%
Modern	Youngstown, NY	LFG	6.4	100%
DANC	Rodman, NY	LFG	4.8	100%
Ontario	Stanley, NY	LFG	5.6	100%
Mill Seat Landfill	Bergen, NY	LFG	4.8	100%
Chaffee Landfill	Chaffee, NY	LFG	4.8	100%
Hyland Landfill	Angelica, NY	LFG	4.8	100%
Clinton Landfill	Morrisonville, NY	LFG	4.8	100%
Munnsville Wind Farm	Bouckville, NY	Wind	34.5	100%

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as New
High Acres I	Fairport, NY	LFG	3.2	35.8%
High Acres II	Fairport, NY	LFG	6.4	100%
Madison County <sup>1</sup>	Canastota, NY	LFT	4.8	100%

<sup>&</sup>lt;sup>1</sup> Conditionally approved.
<sup>2</sup> Subject to PUC review; portion of unit may be classified as an Existing Resource.

Shading indicates newly approved facility since last compliance report

### **Appendix 2: Existing Renewable Energy Resources certified by the PUC**

The following generating units have been *approved* by the Rhode Island Public Utilities Commission, either in whole or in part, as Existing Renewable Energy Resources:

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as Existing	
The follo	wing generators are locate	ed within ISO-N	<b>E</b> :		
Hosiery Mills	Hillsboro, NH	Hydro	1.2	100%	
Kelley's Falls	Manchester, NH	Hydro	0.45	100%	
Mascoma	West Lebanon, NH	Hydro	1.5	100%	
Salmon Falls	South Berwick, ME	Hydro	1.2	100%	
Pontook Hydro	Dummer, NH	Hydro	10.8	100%	
Fife Brook	Florida, MA	Hydro	10	100%	
Pawtucket Hydro	Pawtucket, RI	Hydro	1.35	53%	
North Hartland Hydro	Hartland, VT	Hydro	4.664	74.4%	
Blackstone Hydro <sup>1</sup>	Central Falls, RI	Hydro	0.818	100%	
McIndoes Station	McIndoe Falls, VT	Hydro	10.63	100%	
Lower Deerfield Stations	Conway, Shelburne Falls, Buckland, MA	Hydro	19.5	100%	
Deerfield Unit 5	Florida, MA	Hydro	13.99	100%	
Sherman Station	Rowe, MA	Hydro	6.237	100%	
Searsburg Station	Wilmington, VT	Hydro	4.96	100%	
Pioneer Hydro	Ware, MA	Hydro	1.6	49.6%	
Wells River	Boltonville, VT	Hydro	1.318	100%	
Penacook Upper Falls	Boscawen, NH	Hydro	3.67	100%	
Dodge Falls	Bath, NH	Hydro	5.76	100%	
Nashua Hydro	Nashua, NH	Hydro	1.1	100%	
Briar Hydro	Penacook, NH	Hydro	5.58	100%	
Penacook Lower Falls	Boscawen, NH	Hydro	4.69	100%	
Benton Falls	Benton, ME	Hydro	4.468	100%	
Springfield Power	Springfield, NH	Biomass	16	100%	
Lower Lamoille Composite Hydro	Milton, VT	Hydro	16.85	100%	
Middlebury Composite Hydro	Leicester, VT	Hydro	6.4	100%	
North Rutland Composite Hydro	Rutland, VT	Hydro	5.6	100%	
Putnam Hydro	Putnam, CT	Hydro	0.575	100%	
Pepperell Hydro	Pepperell, MA	Hydro	2.7	46.8%	

Unit Name	Location: City, State	Fuel Type	Nameplate Capacity (MW)	% of output approved as Existing			
Woronoco Hydro	Russell, MA	Hydro	2.7	62.6%			
Williams Project	Solon, ME	Hydro	14.8	100%			
Monty Project	Lewiston, ME	Hydro	27	100%			
Cataract Project	Saco, ME	Hydro	6.65	100%			
Hiram Project	Baldwin, ME	Hydro	10.9	100%			
North Gorham Project	Gorham, ME	Hydro	2.25	100%			
Shawmut Project	Shawmut, ME	Hydro	8.1	100%			
Skelton Project	Dayton, ME	Hydro	16.8	100%			
Weston Project	Skowhegan, ME	Hydro	13.4	100%			
Brunswick Project	Brunswick, ME	Hydro	19.0	100%			
Bar Mills Project	Hollis, ME	Hydro	4.0	100%			
Bonny Eagle Project	Hollis, ME	Hydro	7.2	100%			
West Buxton Project	Buxton, ME	Hydro	7.9	100%			
Deer Rips Project	Auburn, ME	Hydro	7	100%			
Gulf Island Project	Lewiston, ME	Hydro	23.4	100%			
Androscoggin Project	Lewiston, ME	Hydro	3.6	100%			
Thundermist Hydropower	Woonsocket, RI	Hydro	1.1	74.1%			
The following generators are located in control areas adjacent to ISO-NE:							
High Acres I							
<sup>1</sup> Conditionally approved.							
Shading indicates newly approved facility since last compliance report							

## **Appendix 3: Rhode Island Renewable Energy Standard 2008 Compliance Summary**

	Retail Sales (from filing)	RES Obligation (calculated)		GIS Certificates (from GIS)		"New" Renewable Energy Resources (from filing)		"Existing" Renewable Energy Resources (from filing)		Banked New RECs for Future Compliance			
	Load	1.5% "New" Obligation	2% "Existing" Obligation	"New" RECs	"Existing" RECs	Applied Banked Attributes ("New")	Alternative Compliance Credits ("New")	Total "New" RES Attributes	Alternative Compliance Credits ("Existing")	Total "Existing" RES Attributes	Excess "New" Attributes	Banking Limit (30%)	Banked Attributes
Units	MWh	MWh	MWh			MWh		MWh		MWh			
<b>Distribution Companie</b>	s												
Narragansett	7,123,559	106,853	142,471	107,809	144,749	25	0	107,834	0	144,749	981	32,055	981
Competetive Suppliers	3												
Transcanada													
Constellation													
Gexa Energy													
Glacial Energy													
Direct Energy Services													
Hess													
South Jersey Gas													
Integrys													
SJH Energy													
WHEC													
subtotal	1,155,447	17,337	23,113	23,446	47,342	0	295	23,741	77	47,419	6,233	5,201	4,601
Totals	8,279,006	124,190	165,584	131,255	192,091	25	295	131,575	77	192,168	7,214	37,256	5,582

### **Appendix 4: Alternative Compliance Payments**

Section 7.3 of the Rules permits Obligated Entities to meet the RES either through the purchase and retirement of GIS Certificates or through the provision of Alternative Compliance Payments ("ACPs"), obtained by making payment to the Rhode Island Economic Development Corporation ("RIEDC"). The RIEDC sets these funds aside in the Renewable Energy Development Fund to support activities such as the Portsmouth Abbey Wind Turbine, Rhode Island Wind Alliance, and the Rhode Island Wind Mapper. The ACP rate is the same for both New and Existing obligation.

Section 3.2 of the Rules states that ACPs must be made at a rate of \$50 per MWh of renewable energy obligation, in 2003 dollars, adjusted annually by the annual change in the United States Bureau of Labor Statistics' Consumer Price Index. Additionally, Section 7.9 of the Rules states that the Commission will publish the ACP rate by January 31 of each Compliance Year. For 2008, the ACP rate was \$58.58 per MWh of obligation.

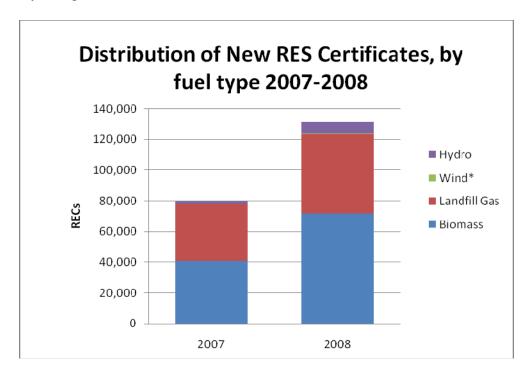
Compliance Year	ACP Rate
2007	\$57.12
2008	\$58.58
2009	\$60.92
2010	\$60.93

Connecticut, Maine, Massachusetts, and New Hampshire all have similar ACP compliance mechanisms. The Table below shows the 2008 ACP rates used by other New England states for the various class RECs defined in each state. New Hampshire published ACP rates for 2008, although their first Compliance Year will be 2009. Additionally, in 2009, Massachusetts will also require Obligated Entities to purchase a percentage of Class II RECs, and the ACP rate will be \$25 in 2009.

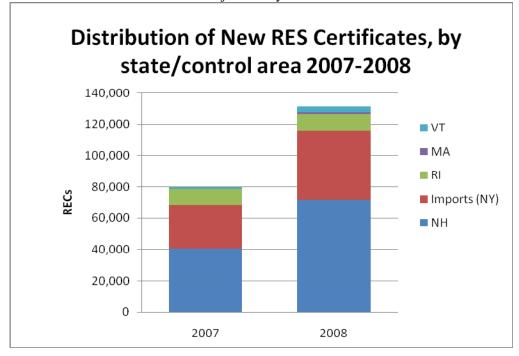
2008 ACP	CT	ME	MA	NH
Rates				
Class I	\$55	\$58.58	\$58.58	\$58.58
Class II	\$55	N/A	N/A	\$153.84
Class III	\$31	N/A	N/A	\$28.72
Class IV	N/A	N/A	N/A	\$28.72

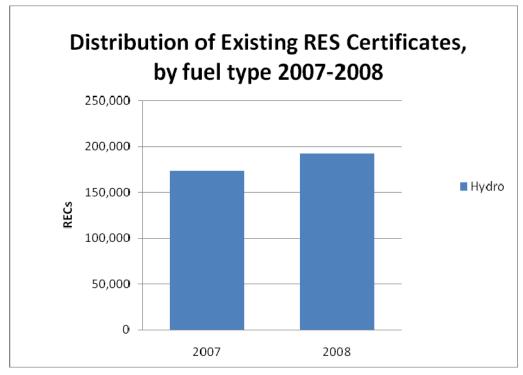
### **Appendix 5: Historical Breakdown of Compliance Sources**

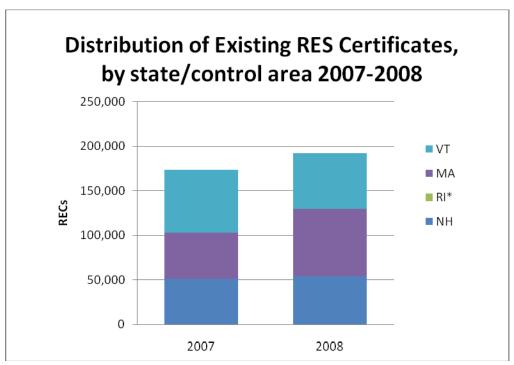
The charts below provide additional detail on the breakdown of New and Existing RECs purchased by Obligated Entities for 2007-2008.



\*There were 389 New RES Certificates from wind resources applied to Obligated Entities' obligations in 2008, and 0 in 2007. The 389 Certificates are just barely visible in the 2008 bar.







<sup>\*</sup>There were 156 Existing RES Certificates from Rhode Island applied to Obligated Entities' obligations in 2007, and 0 in 2008. The 156 Certificates represent too small a portion of the nearly 175,000 Existing Certificates in 2007 to be visible in this chart.

### **Appendix 6: Voluntary Clean Energy Programs**

Narragansett Electric and one competitive supplier indicated that they had additionally purchased some RECs on behalf of end-use customers as part of voluntary clean energy programs. These RECs cannot be used to meet the Obligated Entity's RES obligation, and were not reported in Table 1 of the Annual Compliance Filings for 2008. Table 6 below presents the quantities of voluntary REC purchases on behalf of customers.

#### Summary of 2008 Voluntary REC Purchases on Behalf of RI Customers

	New RECs					
A	2008 New RECs settled in Rhode Island for voluntary clean	5,350				
	energy programs					
A.1	2008 New RECs purchased on behalf of end-use customers for	5,161				
	voluntary clean energy programs – Narragansett Electric					
A.2	2008 New RECs purchased on behalf of end-use customers for	189				
	voluntary clean energy programs – Competitive Suppliers					
	Existing RECs					
В	B 2008 Existing RECs settled in Rhode Island for voluntary 7,624					
	clean energy programs					
B.1	2008 Existing RECs purchased on behalf of end-use customers	7,624				
	for voluntary clean energy programs – Narragansett Electric					
B.2	2008 Existing RECs purchased on behalf of end-use customers	0				
	for voluntary clean energy programs – Competitive Suppliers					