

# Rhode Island Renewable Energy Standard

## Annual Report Compliance Year 2023



November 2025

Rhode Island Public Utilities Commission

89 Jefferson Boulevard

Warwick, Rhode Island 02888

# Table of Contents

Executive Summary.....	1
I. Introduction to the Renewable Energy Standard .....	1
II. Compliance Year 2023 Obligation and Sources of Compliance .....	4
III. Compliance by Fuel Type and Geographic Location .....	8
IV. Future Renewable Energy Standard Obligations.....	12
V. Authorized Rate Increases and RES Compliance Costs.....	16
VI. Renewable Energy Standard Implementation in New England.....	22
VII. Continuing and Developing Issues Related to the RES.....	28
VIII. Conclusion.....	31
Appendix 1: Alternative Compliance Payments .....	33
Appendix 2: Rhode Island RES 2023 Compliance Summary .....	34
Appendix 3: Historical Use of ACPs and Banking.....	35
Appendix 4: Voluntary Clean Energy Programs.....	36
Appendix 5: Current RES Annual Targets.....	37

## Figures

Figure 1. RES Annual Targets .....	1
Figure 2: Distribution of Compliance Sources for 2023 New and Existing RES Obligations.....	6
Figure 3: Total Annual ACPs and Non-Compliance Value.....	7
Figure 4: Distribution of Settled 2023 New RECs by Fuel Type .....	8
Figure 5: Distribution of Settled 2023 New RECs by State and Fuel Type.....	9
Figure 6: Historical New RECs by Generation Type .....	10
Figure 7: Historical New RECs by Geographic Source.....	11
Figure 8: Forecast of Pre-Amendment Contract Load Share.....	13
Figure 9: RES Forecast with Effect of Pre-Amendment Contracts.....	13
Figure 10: Technical Potential Supply of RI-Eligible New (Class I) RECs and Demand.....	15
Figure 11: RES Charges and Cost Rate to RIE’s Last Resort Service (Energy Supply) Customers .....	18
Figure 12: Compliance Costs to Retail Customers in RIE’s Territory .....	20
Figure 13: Forecast of New England States' New or Class I RES Obligations (GWh) .....	26
Figure 14: 2023 Aggregate New England New or Class I RES Demand .....	27
Figure 15: 2033 Aggregate New England New or Class I RES Demand Forecast.....	27
Figure 16: Number of Active Pre-Amendment Contracts (2023 – 2035) .....	29
Figure 17: Execution Month of Pre-Amendment Contracts (January 2021 – June 2022).....	29
Figure 18: Comparison of Length of Pre-Amendment Contract Term Before and After June 2022.....	30

## Tables

Table 1: Obligated Entities Required to Submit 2023 RES Compliance Filings to the PUC .....	4
Table 2: Summary of 2023 RES Compliance .....	5
Table 3: RES Forecast with Effect of Pre-Amendment Contracts .....	14
Table 4: Forecast of RES Compliance Year Obligations for New and Existing Resources.....	14
Table 5: Rate Impact of RES Compliance to RIE’s Last Resort Service (Energy Supply) Customers .....	17
Table 6: Summary of RIE’s RES Compliance Costs, 2007 through 2023 .....	19
Table 7: Summary of ACPs Made to Comply with New England States' New/Class I RES .....	24
Table 8: Projection of New England States' New RES Demand (%).....	25
Table 9: Projection of New England States' New RES Demand (GWh) .....	26

# Rhode Island Renewable Energy Standard

## Annual Compliance Report for Compliance Year 2023

### Executive Summary

#### Introduction

Compliance Year 2023, from January 1, 2023 through December 31, 2023, was the seventeenth Compliance Year of the Rhode Island Renewable Energy Standard (RES).<sup>E1</sup> Under R.I. Gen. Laws § 39-26-6, the Rhode Island Public Utilities Commission (PUC) implements the RES and ensures compliance by Obligated Entities.<sup>E2</sup> In 2023, each Obligated Entity was required to obtain at least 23% of electrical energy (including line losses) sold to Rhode Island end-use customers from Eligible Renewable Energy Resources, with no less than 21% of that obligation sourced from New (or Class I) Renewable Energy Resources, unless the retail consumption was served to a customer pursuant to a supply contract executed prior to July 1, 2022. The “Pre-Amendment Contracts” were subject to an 20.5% RES, with no less than 18.5% to be sourced from New Resources.<sup>E4</sup>

This Annual RES Compliance Report (Report) is intended to satisfy the requirement in R.I. Gen. Laws § 39-26-6(f) to report “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 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. This Report includes information about continuing and developing issues regarding the administration of the RES.

#### 2023 RES Obligation and Compliance

Rhode Island’s 2023 RES-obligated retail sales totaled 7,421,897 megawatt-hours (MWh) of electrical energy, which was served by twenty-six Obligated Entities<sup>E3</sup> including the Narragansett Electric Company d/b/a Rhode Island Energy (RIE). As shown in Table E.1 below, the total minimum obligation to be satisfied by New (or Class I) Renewable Energy Resources was 1,501,241 MWh.<sup>E5</sup> The obligation to be satisfied by either Existing (or Class II) or New Renewable Energy Resources was 148,450 MWh (2.0% of each Obligated Entity’s retail sales). Almost all (99.5%) of the combined New and Existing resource obligation was met through retirement of Rhode Island-eligible NEPOOL GIS Certificates, also referred to as Renewable Energy Certificates or RECs.<sup>E6</sup>

It is important to note that the terms “New Energy Resources” (“New RECs”) and “Existing Renewable Energy Resources” (“Existing RECs”) have statutory meanings. “New” does not mean a resource recently added, nor does “Existing” mean all resources that were in existence prior to the Compliance Year.

---

<sup>E1</sup> Renewable Energy Certificates (RECs) are generated during a Compliance Year in real time, but trading runs from July through June. Thus, trading and compliance for Compliance Year 2023 runs from July 2023 through June 2024.

<sup>E2</sup> Per R.I. Gen. Laws § 39-26-2, Obligated Entities, including but not limited to non-regulated power producers and electric utility distribution companies, sell electrical energy to end-use customers in Rhode Island. The Block Island Utility District and Clear River Electric and Water District (formerly Pascoag Utility District) are exempt from the RES.

<sup>E4</sup> Per R.I. Gen. Laws § 39-26-4(f), Pre-Amendment Contracts are subject to increases in New Resource requirements of 1.5% annually, which was the RES increase for all retail load before the RES was amended in 2022. More detail about these contracts is provided in Section VII; their impacts on RES forecasts is included in Section IV.

<sup>E3</sup> An individual Obligated Entity’s load obligation is rounded to the nearest whole megawatt-hour (MWh). In some cases, an Obligated Entity includes multiple ISO-NE Asset Numbers under a single compliance filing.

<sup>E5</sup> An individual Obligated Entity’s New and Existing obligation is rounded up to the nearest whole MWh.

<sup>E6</sup> NEPOOL GIS refers to the New England Power Pool Generation Information System, which as explained on its website, “issues and tracks certificates for each MWh of generation produced in the ISO New England control area, including imports from adjacent control areas, and all load served.” The terms “GIS Certificate” and “Renewable Energy Certificate,” or “REC,” are often used interchangeably in the marketplace. REC is a more general term, while it is the settlement of GIS Certificates that substantiates RES compliance.

Rather, “New” is essentially defined in Rhode Island law as renewable units in service after December 31, 1997.<sup>E7</sup> “Existing” is defined as renewable units in service before December 31, 1997.<sup>E8</sup>

The total number of New RECs held by Obligated Entities for Compliance Year 2023 was 1,762,924, including 72,115 RECs banked from Compliance Years 2021 and 2022. This is a 17.4% surplus of New RECs across all Obligated Entities. With this surplus in Compliance Year 2023, sixteen Obligated Entities combined to bank 203,372 RECs for use in Compliance Years 2024 or 2025. This total does not include 58,214 previously banked RECs that may be used in Compliance Year 2024. This surplus reflects a sustained adequacy of regional renewable energy supply through the construction of additional capacity and the retrofitting of existing resources in New England, and a significant increase in the quantity of RES-eligible imports during this period.

Taken as a whole, there was a New and Existing REC surplus among Obligated Entities. Four Obligated Entities chose to comply, partially, by making ACPs

totaling \$628,844 in lieu of retiring 7,803 RECs.<sup>E9</sup> This continues a recent trend of relatively low total ACP-costs paid by Obligated Entities.

Obligated Entities’ sustained reliance on RECs rather than ACPs and their increased banking of RECs is evidence that there was adequate supply of Rhode Island-eligible New RECs for Compliance Year 2023. The market price for New RECs has remained approximately stable since 2019 and near the ACP rate set for the Connecticut Renewable Portfolio Standard (RPS) for Class I RECs (\$40/MWh). This price stability may indicate that the supply of energy from renewable generators is keeping pace with the increase in demand from states with higher Class I ACP rates than Connecticut in 2023; those states are Rhode Island, New Hampshire, Maine, and Vermont. The PUC expects this trend should continue as the ACP in Massachusetts dropped to \$40 in 2023 (Massachusetts and Connecticut comprise approximately 75% of the New England demand for Class I RECs) and will likely persist until large offshore wind projects begin operating, at which time a temporary decrease in Class I REC prices becomes more likely to occur.

**Table E.1: Composition of 2023 RES Compliance**

	<b>New RES Obligation</b>	<b>Existing RES Obligation</b>
2023 Minimum Obligations (MWh) <sup>a</sup>	1,501,241 MWh	148,450 MWh
GIS Certificates Retired for 2023 RI RES Compliance (MWh, %)	1,493,567 MWh, (99.5%) <sup>b</sup>	148,321 MWh, (99.9%)
RI RES Compliance by Alternative Compliance Payments (MWh, \$)	7,674 MWh, \$618,448	129 MWh, \$10,396
Banked for Future Compliance	203,372 Certificates	Not Applicable
Over-compliance / RECs Not Banked	7,477 certificates <sup>c</sup>	2,444 Certificates
Outstanding REC / ACP obligation	0	0
<sup>a</sup> See note E3.		
<sup>b</sup> This value includes the application of 72,115 RECs banked from Compliance Years 2021 and 2022 plus the application of RECs minted and retired in Compliance Year 2023, but excludes RECs banked for future Compliance Years.		
<sup>c</sup> Banking is capped at 30% of an individual Obligated Entity’s Compliance Year obligation for New RECs.		

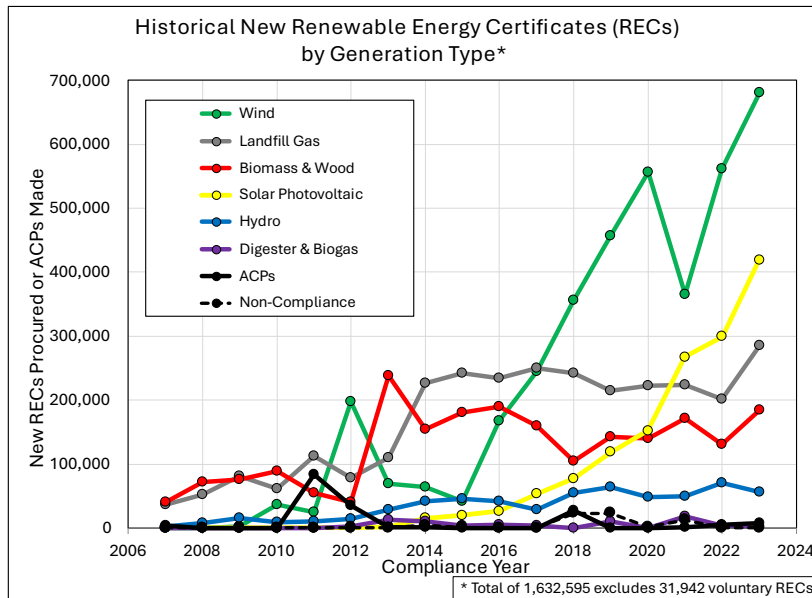
<sup>E7</sup> As stated in R.I.G.L. § 39-26-2(15), “New renewable energy resources’ means generation units using eligible renewable energy resources and first going into commercial operation after December 31, 1997; or the incremental output of generation units using eligible renewable energy resources that have demonstrably increased generation in excess of ten percent (10%) using eligible renewable energy resources through capital investments made after

December 31, 1997; but in no case involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less.”

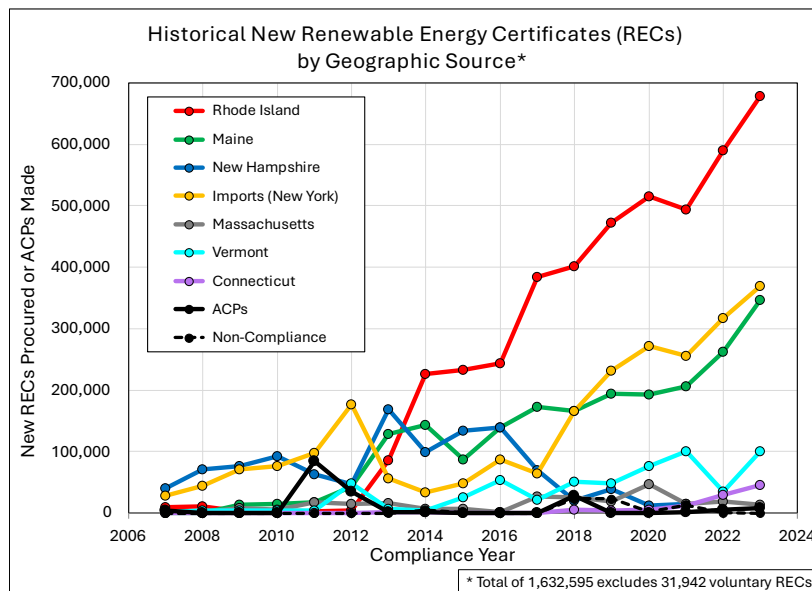
<sup>E8</sup> R.I.G.L. § 39-26-2(9).

<sup>E9</sup> In Compliance Year 2023, Alternative Compliance Payments (ACPs) in lieu of both New and Existing RECs were valued at \$80.59 per MWh.

**Figure E.1: Historical New RECs by Generation Type**



**Figure E.2: Historical New RECs by Geographic Source**



**2023 RES Resources**

Most New RECs settled in 2023 were generated at wind facilities (41.7%), followed by, solar photovoltaic (25.7%), landfill and other renewable gas (17.9%), biomass (11.3%), and hydroelectric (3.5%).<sup>E11</sup> This

continues a primary reliance on wind resources and a secondary reliance on solar resources (Figure E.1), which continues growing exponentially each Compliance Year.<sup>E12</sup> In terms of location, most New RECs settled in 2023 were sourced from Rhode Island

<sup>E11</sup> Not all the RECs purchased, minted, and settled in Compliance Year 2023 were used to meet Compliance Year 2023 obligations. Some RECs were banked for use in Compliance Years 2024 and 2025. Also, this summary excludes voluntary REC purchases above the RES. Voluntary

clean energy programs are summarized in Appendix 4 of this Report.

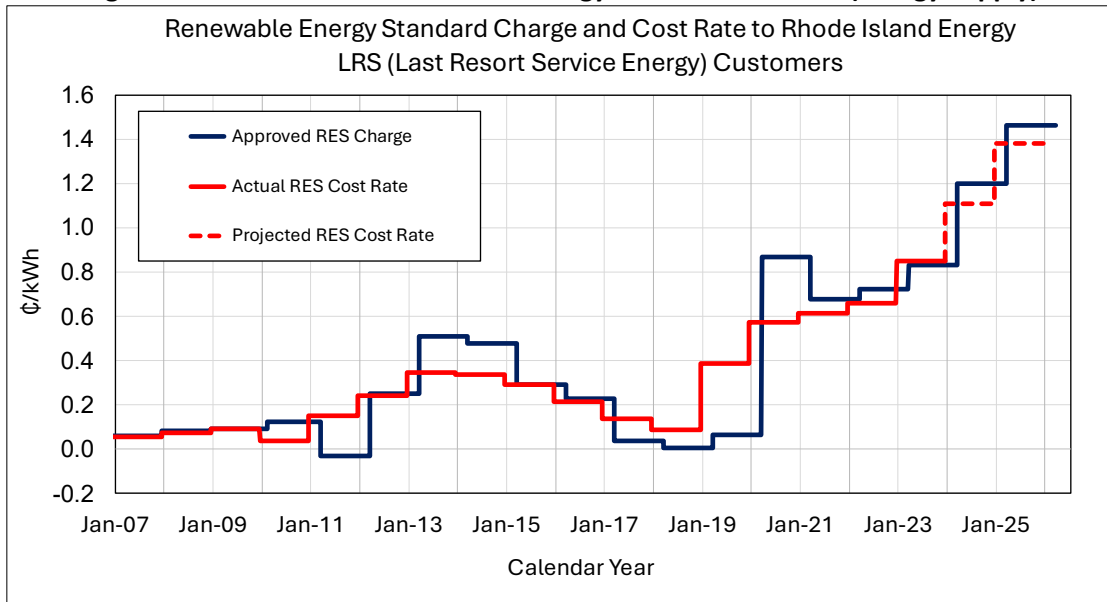
<sup>E12</sup> Additional information on the composition of 2023 RES compliance by fuel type and geographic location is provided in Section III of this Report.

**Table E.2: Rate Impact for RES Compliance to RIE’s Last Resort Service (Energy Supply) Customers**

Effective Date	Initially Projected REC Procurement Cost (per kWh) <sup>a</sup>	Adder for Previous- and Current-Year Costs (per kWh)	Authorized RES Charge (per kWh)	Monthly & Annual Charge to 500-kWh Ratepayer
Apr 25 – Future Filing	\$0.01379	\$0.00082	\$0.01461	\$7.31   \$87.66
Apr 24 – Mar 25	\$0.01109	\$0.00091	\$0.01200	\$6.00   \$72.00
Apr 23 – Mar 24	\$0.00875	(\$0.00042)	\$0.00833	\$4.17   \$49.98
Apr 22 – Mar 23	\$0.00728	(\$0.00007)	\$0.00721	\$3.61   \$43.26
Apr 21 – Mar 22	\$0.00678	(\$0.00013)	\$0.00665	\$3.33   \$39.90

<sup>a</sup> The projected compliance rate for Compliance Year 2023 was collected from April 2023 through March 2024.

**Figure E.3: RES Charges and Cost Rate to Rhode Island Energy Last Resort Service (Energy Supply) Customers**



(41.6%) (Figure E.2). The remaining RECs came from New York (22.6%), Maine (21.2%), Vermont (6.1%), New Hampshire (4.8), Connecticut (2.8%), and Massachusetts (0.8%). All Existing RECs were generated at hydroelectric facilities in Maine (78.5%), Massachusetts (14.9%), and New Hampshire (6.56%).

Finally, 26 projects were approved or conditionally approved as New Renewable Energy Resources by the PUC since the previous Report (May 2024). This represents 314 MW AC of incremental New RES-eligible capacity.<sup>E13</sup>

**2023 Customer Charges**

RIE is the only Obligated Entity for which the PUC collects data on the charges to electric ratepayers for complying with the RES.<sup>E14</sup> Early in each calendar year, RIE proposes a RES charge designed to collect the costs of compliance during the upcoming compliance year, outstanding costs for the remainder of the current compliance year, and to true up any outstanding cumulative under- or over-collection made during previous compliance years.<sup>E15</sup>

<sup>E13</sup> for a monthly status report on RES applications visit <https://rhodeislandres.com/application-status-report/>.

<sup>E14</sup> See Section V for the history of RES charges to Rhode Island Energy’s Last Resort Service customers.

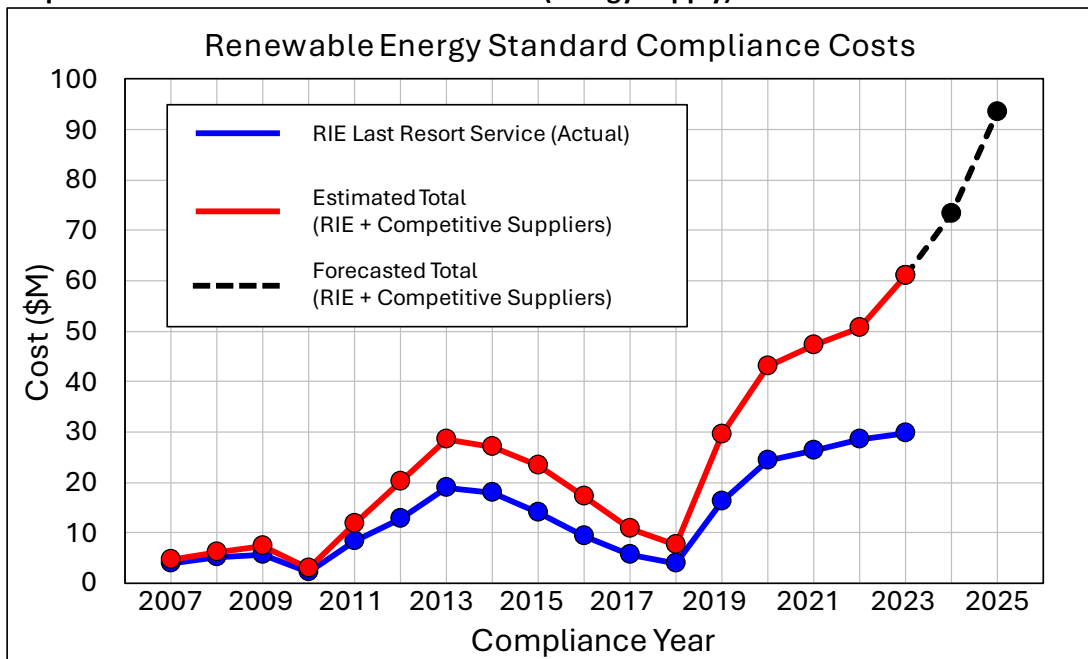
<sup>E15</sup> RIE typically files for a rate change to the RES Charge with effect on April 1<sup>st</sup>. Thus, changes in the RES charge occur three months into the Compliance Year, and three months before the REC-trading year turns over.

**Table E.3: Summary of Rhode Island Energy's RES Compliance Costs <sup>a</sup>**

Compliance Year	Total RES Costs (Millions)	New REC Costs (Millions)	Existing REC Costs (Millions)	ACP Costs (Millions)	Obligated Load (MWh)
2023	\$29.3	\$28.9	\$0.40	\$0	3,502,966
2022	\$28.6	\$27.4	\$1.2	\$0	4,344,029
2021	\$26.28	\$25.70	\$0.58	\$0	4,273,405
2020	\$24.29	\$24.20	\$0.09	\$0	4,245,056
2019	\$16.22	\$16.12	\$0.10	\$0	4,170,969

<sup>a</sup> See note E16.

**Figure E.4: Compliance Costs to RIE's Last Resort Service (Energy Supply) Customers**



**2023 Compliance Costs**

RIE is also the only Obligated Entity for which the PUC collects cost-of-compliance data.<sup>E16</sup> To meet its 2023 New and Existing RES obligations, RIE incurred \$29.3 million in compliance costs (Table E.3; Figure E.4).<sup>E17</sup> Approximately \$28.9 million was charged to Last Resort Service energy supply customers for purchases of NEW RECs, mostly for those RECs generated by projects in RIE's Long-term Contracting and Renewable Energy Growth programs in 2023<sup>E18</sup>.

The cost rate of the RES compliance to RIE's Last Resort Service energy supply customers (total RES

costs divided by Obligated Load) was approximately \$0.00848/kWh in Compliance Year 2023. (Figure E.3).

Information filed by RIE with the PUC indicates that on a per-kWh basis, compliance costs began to accelerate in Compliance Year 2023. The current and forecasted increases in compliance cost to RIE mostly reflect the increased percentage of renewable energy required by the RES, rather than an increase in the cost of RECs.

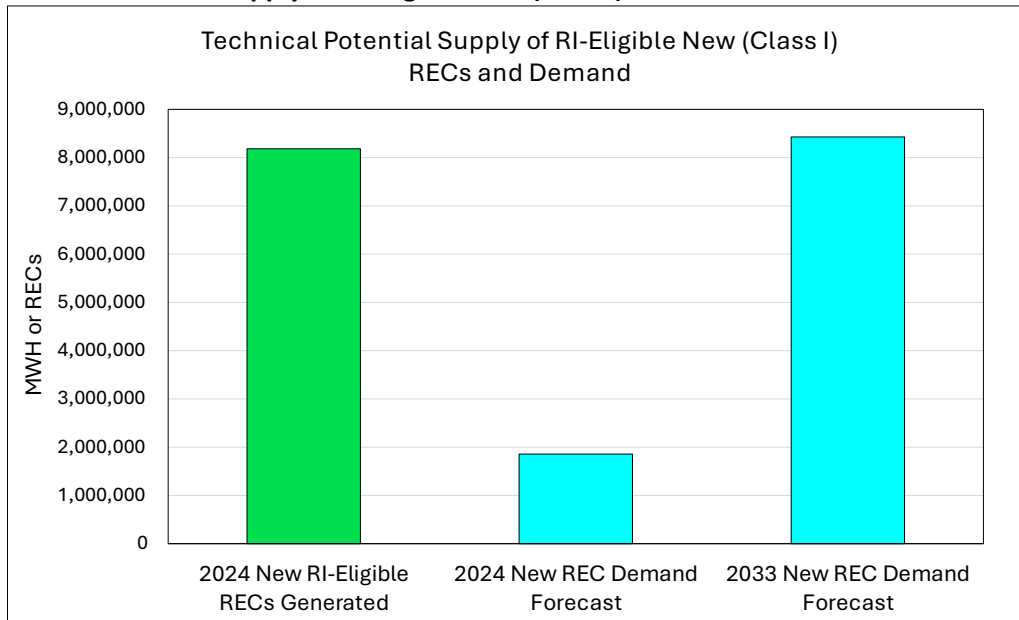
<sup>E16</sup> The complete history of RES cost to RIE's Last Resort Service customers is provided below in Section V, Table 5.

<sup>E17</sup> The \$29.3 million sum of New and Existing REC costs includes the cost of RECs purchased and banked in

previous Compliance Years that were used for Compliance Year 2023.

<sup>E18</sup> R.I. Gen. Laws § 39-26.1, § 39-26.2, and § 39-26.6.

**Figure E.5: Technical Potential Supply of RI-Eligible New (Class I) RECs and Demand**



It must be noted that this data only represents expenses incurred by RIE’s Last Resort Service customers, accounting for approximately 47.2% of all retail energy served statewide in 2023. The remaining 52.8% of statewide electric load is served by competitive energy suppliers for whom the PUC does not have compliance cost data. Other Obligated Entities also are likely experiencing accelerated increases in compliance costs in 2023, because all Obligated Entities are purchasing RECs from the same regional market. Along with the known historical costs to RIE supply customers, the PUC has provided calculated compliance costs for the total statewide obligated consumption, inclusive of costs to competitive suppliers and their customers, as well as a forecast of statewide compliance costs for 2024 and 2025 (Figure E.4).

**2023 Conclusions**

Together, the analyses in this Report conclude that (1) the Rhode Island RES continues to operate successfully, (2) retail energy suppliers are, as a whole, able to comply with the RES, and (3) the supply of eligible New RECs was adequate in 2023 and (4) the supply of eligible RECs will remain adequate in the near-term future.

In 2023, the cost of the RES certainly increased for RIE Last Resort Service supply customers and likely

increased for customers of competitive energy suppliers. There is evidence that compliance costs will continue to increase, even as some states in the region reduce the value of their ACPs, which tend to cap the maximum cost of compliance.

The number of Rhode Island-eligible generating units continues to grow. It appears that the supply of Rhode Island-eligible New RECs will continue to grow, and that Obligated Entities will be able to source RECs in a balanced marketplace over the next few years with minor reliance on ACPs.

The PUC notes that economic conditions, various permitting and interconnection issues, availability of long-term contracting for renewable projects, and other factors that impact investment decisions all have the potential to delay or decrease the number of resources that enter the marketplace. The timing of large facilities’ commercial operation could create volatility in New (or Class I) REC prices in the coming years. As a result, it is difficult to predict in which Compliance Years supply will balance with demand and in which years a gap between the two will exist.

The PUC also notes, however, that according to NEPOOL GIS public reports, there were 8,192,866 eligible RECs available to satisfy the New requirement of the RES in Compliance Year 2024

(Figure E.5).<sup>E19</sup> While this volume only represents the technical potential of New REC supply, it vastly outsizes the forecasted demand of 1,853,000 New RECs in Compliance Year 2024 and is over 97% of the of 8,418,000 New RECs need for the forecasted demand in Compliance Year 2033.

Finally, the balance of supply and demand will depend on changes in demand that are driven by changes in electricity use and changes in regional energy standards like Rhode Island's RES. At the time of this Report, no new and significant changes to demand in the region for New (or Class I) RECs is foreseen. In the coming year, the PUC will continue to monitor the regional renewable energy marketplace and the State's continued ability to achieve its established targets in a just and reasonable manner.

---

---

---

<sup>E19</sup> See NEPOOL GIS Public Report, GIS Certificate Statistics, accessible at <https://www1.nepoolgis.com/myModule/rpt/ssrs.asp?rn=104&r=%2FPROD%2FNEPOOLGIS%2FPublic%2FNEPOOL>

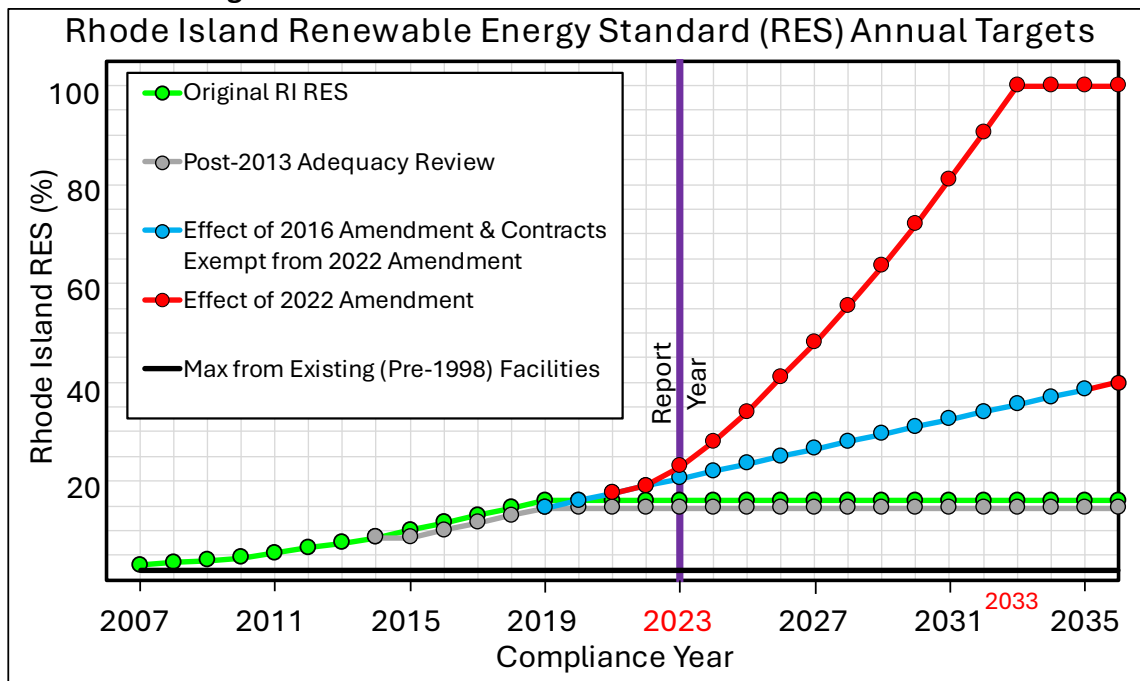
[CertificateStatistics&apxReportTitle=GIS%20Certificate%20Statistics.](#)

# Rhode Island Renewable Energy Standard Annual Compliance Report for Compliance Year 2023

## I. Introduction to the Renewable Energy Standard

The Rhode Island Renewable Energy Standard (RES) was enacted in 2004 via Chapter 39-26 of Rhode Island General Laws and requires the State’s retail electricity providers (referred to as Obligated Entities), excluding Pascoag Utility District and Block Island Power Company, to supply a defined proportion of their annual retail electricity sales from Eligible Renewable Energy Resources. The Rhode Island Public Utilities Commission (PUC) is the state agency that regulates and administers the RES. The PUC is required to report annually on the RES, as is provided in this document.

**Figure 1. RES Annual Targets**



Legislative and regulatory actions have altered the annual RES requirement since its original passage in 2004 (Figure 1). The original RES target was 16.0% renewable energy by 2019, remaining in effect thereafter, unless and until the PUC determined that the standard was no longer necessary.<sup>1</sup> Subsequently, in 2013, the PUC conducted a statutory review of the adequacy of renewable energy supplies and, because of that investigation, ordered a delay in the 1.5% increase in Compliance Year 2015. This decision resulted in a revised final target of 14.5% renewable energy in 2019.<sup>2</sup> In 2016, the RES statute was amended to require annual increases of 1.5%, to continue

<sup>1</sup> P.L. 2016, ch. 144, § 1 and P.L. 2016, ch. 155, § 1 deleted R.I. Gen. Laws § 39-26-4(a)(5), which previously provided: “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.” For P.L. 2016, ch. 155, § 1, see <http://webserver.rilin.state.ri.us/PublicLaws/law16/law16155.htm>.

<sup>2</sup> This review was mandated by R.I. Gen. Laws § 39-26-6(d). This section of the law was amended by P.L. 2016, ch. 144, § 1 and P.L. 2016, ch. 155, § 1. See also note 1.

from 2020 through 2035, resulting in a final target of 38.5% renewable energy.<sup>3</sup> Per the RES statute, the PUC conducted an adequacy review beginning in December of 2018. In that review the PUC found that there is likely to be adequate renewable energy supply to meet the RES increase in Compliance Year 2020 and maintained the scheduled RES increase.<sup>4</sup> In 2022, the RES statute was again amended so that the annual increases begin to escalate faster beginning in Compliance Year 2023 and culminating in a 100% RES in Compliance Year 2033 and each year thereafter.<sup>5</sup> The 2023 amendments also exempted power contracts executed prior to July 1, 2022 from the accelerated RES; instead these contracts are subject to an RES that continues increasing at only 1.5% annually through the life of the contract, and will be referred to as “Pre-Amendment Contracts.”

Compliance Year 2023 was the seventeenth compliance year for Rhode Island’s RES.<sup>6</sup> The RES required all Obligated Entities to obtain at least 23.0% of electricity sold in 2023 to Rhode Island end-use customers (inclusive of certain line losses) from Eligible Renewable Energy Resources. For Pre-Amendment Contracts, the RES was 21.5%. No more than 2.0% of the total 23.0% (or 21.5% for exempted consumption) could have been sourced from facilities certified to have begun operating before December 31, 1997, known as Existing Renewable Energy Resources.<sup>7</sup> Thus a minimum of 21.0% (or 18.5% for exempted consumption) must have been obtained from facilities certified to have begun operating after December 31, 1997, known as New Renewable Energy Resources (Table A5 in Appendix 5).<sup>8</sup> Other jurisdictions have different names for analogous vintage requirements. Massachusetts, for example, refers to a nearly identical resource vintage delineation of New and Existing resources as Class I and Class II resources, respectively. The region’s classes and obligations, as well as how they relate to Rhode Island RES, is discussed more in Section VI.

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 PUC. This Report is based on an aggregated summary of these compliance filings and is intended to satisfy the reporting requirements related to the enabling legislation at § 39-26-6(f), which directs the PUC to report annually to the Governor, the Speaker of the House, and the President of the Senate “the status of the implementation of the renewable energy standards in Rhode Island and other states.” The annual Reports must also include “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.”

---

<sup>3</sup> R.I. Gen. Laws §§ 39-26-1 to 10, as amended in 2016, did not explicitly maintain an RES proportion in 2036 and thereafter.

<sup>4</sup> For additional information, refer to materials filed in Commission Docket No. 4903 at: [http://www.ripuc.ri.gov/eventsactions/docket/4903-RESAdequacy-Ord23381%20\(1-4-19\).pdf](http://www.ripuc.ri.gov/eventsactions/docket/4903-RESAdequacy-Ord23381%20(1-4-19).pdf)

<sup>5</sup> R.I. Gen. Laws § 39-26-4(a); P.L. 2022, ch. 218, § 1, effective June 27 <http://webserver.rilin.state.ri.us/PublicLaws/law22/law22218.htm>.

<sup>6</sup> January 1, 2022 through December 31, 2022.

<sup>7</sup> The RES law states: “For each obligated entity and in each compliance year, the amount of retail electricity sales used to meet obligations under this statute that are derived from existing renewable-energy resources shall not exceed two percent (2%) of total retail electricity sales.” R.I. Gen. Laws § 39-26-4(b). The term “existing renewable-energy resources” is defined in as: “generation units using eligible renewable energy resources and first going into commercial operation before December 31, 1997.” R.I. Gen. Laws § 39-26-2(9).

<sup>8</sup> The term “new renewable energy resources is defined as: “generation units using eligible renewable energy resources and first going into commercial operation after December 31, 1997; or the incremental output of generation units using eligible renewable energy resources that have demonstrably increased generation in excess of ten percent (10%) using eligible renewable energy resources through capital investments made after December 31, 1997; but in no case involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less.” R.I. Gen. Laws § 39-26-2(15). These resources are analogous to what the general market and some jurisdictions refer to as “Class I” resources.

The RES statute defines the renewable resource technologies which are eligible to be claimed as New and Existing Renewable Energy Resources at § 39-26-5. All Renewable Energy Resources must be certified by the PUC (and the certification maintained) to participate in the RES program. An up-to-date status of all approved and pending eligibility applications can be found on the PUC website at <https://rhodeislandres.com/application-status-report>.

All Renewable Energy Resources must also establish and maintain an account with the New England Power Pool 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 is created for each megawatt-hour (MWh) of electrical energy production generated within, or imported into, the ISO New England (ISO-NE) control area, which includes Rhode Island. A single GIS Certificate for one MWh of eligible renewable energy generation is also commonly known as a Renewable Energy Certificate (REC).<sup>9</sup> The REC 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 throughout the ISO-NE control area. RECs used for RES compliance are created or imported, and later retired, exclusively through the NEPOOL GIS. This aspect of compliance, submission of annual compliance filings, and the Annual Report aid in the PUC's mission to ensure that RECs used to satisfy the RES obligations have not been used to satisfy another obligation in Rhode Island or any other jurisdiction. In this way, the PUC guards against any "double counting" of RECs.

---

<sup>9</sup> As explained on its website, NEPOOL GIS "issues and tracks certificates for each megawatt-hour (MWh) of generation produced in the ISO New England control area, including imports from adjacent control areas, and all load served." 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 2023 Obligation and Sources of Compliance

Rhode Island’s RES-obligated retail sales in 2023 totaled 7,421,897 MWh of electrical energy. As a result, the total obligation for 2023 was 1,664,537 MWh (i.e., slightly less than 23% because of the eligibility of Pre-Amendment Contracts). Of the obligation, the aggregate minimum amount of RECs that needed to be sourced from “New” Renewable Energy Resources was 1,501,241 MWh, while the aggregate maximum amount of RECs that could have been source from “Existing” Renewable Resources was 1,448,450 MWh.<sup>10</sup> Obligated Entities were required to meet the RES either through the purchase and retirement of RECs<sup>11</sup> or through the provision of Alternative Compliance Credits, obtained by making Alternative Compliance Payments (ACPs) to 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 2023, the ACP rate was \$80.59 per MWh of obligation.<sup>12</sup> The rate is the same for both New and Existing RES obligations. Additional information regarding ACP rates is found in Appendix 1.

**Table 1: Obligated Entities Required to Submit 2023 RES Compliance Filings to the PUC**

<b>Distribution Utilities</b>	
The Narragansett Electric Company d/b/a Rhode Island Energy	
<b>Competitive Retail Energy Suppliers (Non-regulated power producers)</b>	
Actual Energy, Inc.	ENGIE Retail, LLC d/b/a Think Energy
Ambit Northeast, LLC	First Point Power, LLC
Archer Energy, LLC	Moore Energy, LLC
BP Energy Retail Company, LLC	MP2 Energy NE, LLC
Calpine Energy Solutions, LLC	NextEra Energy Marketing Aggregated
Champion Energy Services, LLC	NextEra Energy Services Rhode Island, LLC
Clearview Electric, Inc.	North American Power and Gas, LLC
Constellation New Energy, Inc.	Public Power, LLC
Devonshire Energy, LLC	SmartEnergy Holdings, LLC
Direct Energy Business, LLC	Town Square Energy, LLC
Direct Energy Services, LLC	Viridian Energy, LLC
Discount Power, Inc.	XOOM Energy Rhode Island, LLC
ENGIE Resources, LLC	

In total, twenty-six entities were obligated to submit RES compliance filings to the PUC, including Rhode Island Energy (RIE) and twenty-five competitive retail energy suppliers (competitive suppliers), as shown in Table 1. Appendix 2 lists all entities from which compliance filings were required and provides a detailed summary of RES compliance for RIE, along with a more limited summary for competitive suppliers.

New this year to the RES was a review of retail sales pursuant to Pre-Amendment Contracts. Obligated Entities report the total annual sales associated with these contracts separately because they are subject to a lower RES. In Compliance Year 2023, eight Obligated Entities held 1,931 Pre-Amendment Contracts eligible for the lower RES, and reported 2,294,825 MWh were served under those contracts.

<sup>10</sup> Note that the total New and Existing RES obligations are subject to rounding protocols for individual Obligated Entities.

<sup>11</sup> RECs are issued about seven months after they are generated. Thus, January 2023 RECs are issued June 15, 2023. Because of this lag, trading for 2023-vintage RECs and the costs incurred by Obligated Entities for Compliance Year 2023 continued through June 15, 2024.

<sup>12</sup> See <https://rhodeislandres.com/wp-content/uploads/2023/02/ACP-Rate-2023.pdf>.

Twenty-two of these entities met their entire RES obligation by retiring RECs. Four competitive suppliers met a portion of their 2023 RES obligation by making ACPs to the Rhode Island Commerce Corporation. Thirteen Obligated Entities utilized some of their Banked Compliance to meet their 2023 obligation. Sixteen Obligated Entities banked RECs minted in 2023 for use in 2024 or 2025, which is the same population as Compliance Year 2022. A breakdown of compliance by the numbers is presented in Table 2.

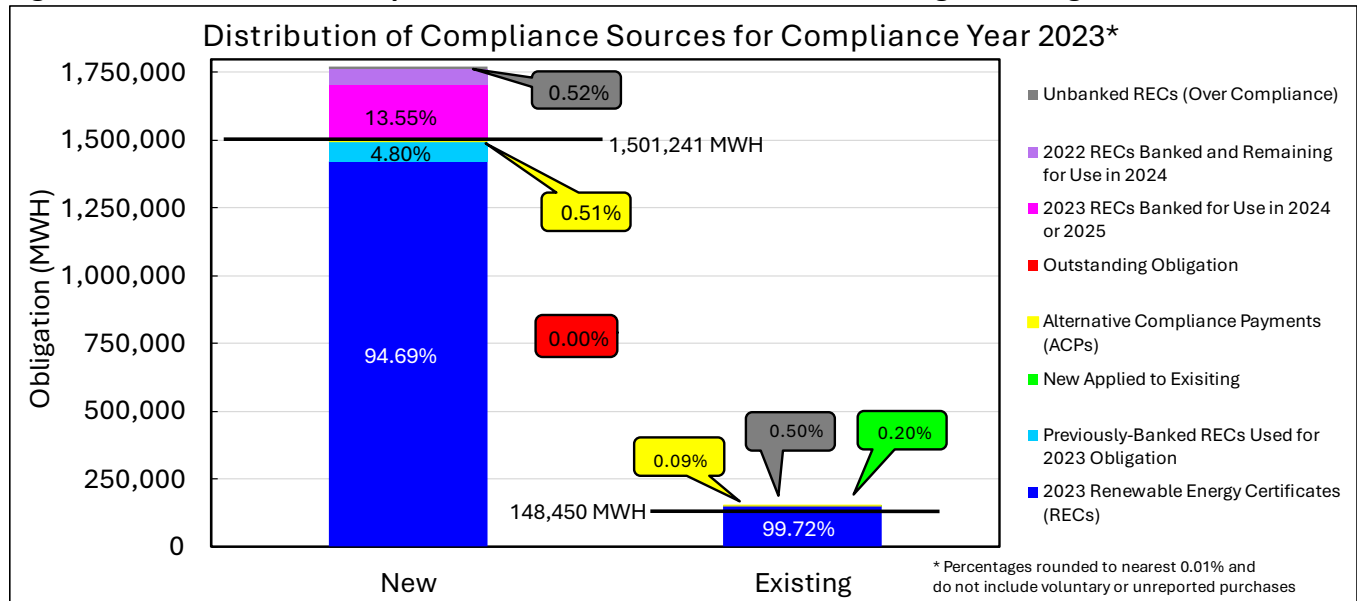
**Table 2: Summary of 2023 RES Compliance**

<b>Results for Compliance Year 2023</b>		<b>(MWh)<sup>a</sup></b>
<b>A</b>	<b>2023 RES Obligated Retail Sales</b>	<b>7,421,897</b>
A.1	Rhode Island Energy	3,502,966
A.2	Competitive Suppliers (25 total)	3,918,931
A.3	Competitive Suppliers Load Served (Full RES Obligation)	1,624,106
A.4	Competitive Suppliers Pre-Amendment Contract Load Served (Lower RES Obligation)	2,294,825
<b>New RES Obligations and New Renewable Energy Certificates</b>		
<b>B</b>	<b>Total New RECs Held for Compliance in Rhode Island (Excluding Reported Voluntary)<sup>b</sup></b>	<b>1,762,924</b>
B.1	2023 New RECs Purchased	1,632,595
B.2	Banked 2021 and 2022 New RECs Held	130,329
<b>C</b>	<b>New RES Obligations (21% of A.1+A.3 and 18.5% of A.4)</b>	<b>1,501,241</b>
C.1	Banked RECs Applied to 2023 New Obligations (subset of B.2)	72,115
C.2	2023 New RECs Applied to 2023 New Obligations (subset of B.1)	1,421,452
C.3	Alternative Compliance Payment Credits Applied to 2023 New RES Obligations	7,674
C.4	Outstanding Obligation (RECs or ACPs)	0
<b>D</b>	<b>Banked RECs Available for Compliance Year 2024 or 2025</b>	
D.1	Remaining 2023 New RECs Available after Meeting New RES Obligations (B.1 – C.2)	211,143
D.2	2023 New RECs Applied to 2023 Existing RES Obligations	294
D.3	2023 New RECs Purchased above 30% Banking Cap (not eligible for banking)	7,477
D.4	2023 RECs Banked for Future Use in Compliance Years 2024 or 2025 (D.1 – D.2 – D3) <sup>c</sup>	203,372
<b>Existing RES Obligations and Existing Renewable Energy Certificates</b>		
<b>E</b>	<b>Existing or New RES Obligations (2.0% of “A”)</b>	<b>148,450</b>
E.1	2023 Existing RECs Applied to 2023 Existing RES Obligations	148,027
E.2	2023 New RECs Applied to 2023 Existing RES Obligations (from D.2)	294
E.3	Alternative Compliance Payment Credits Applied to 2023 Existing RES Obligations	129
E.4	Outstanding Obligation (RECs or ACPs)	0
<b>F</b>	<b>Total 2023 Existing RECs Settled in Rhode Island (Excluding Reported Voluntary)</b>	<b>150,765</b>
F.1	2023 Existing and New RECs Applied to 2023 Existing RES Obligations (E.1 plus E.2)	148,321
F.2	2023 Existing RECs Purchased above 2023 RES Obligations (not eligible for banking)	2,444
<p>a. Values may not be additive due to rounding protocol with individual Obligated Entities.</p> <p>b. Includes previously banked and newly minted RECs and excludes RECs purchased on behalf of end-use customers for voluntary clean energy programs. See Appendix 4 for details on RECs purchased for voluntary programs.</p> <p>c. This figure represents newly banked RECs. It does not include 58,214 previously banked RECs that were not used for compliance in 2023 and may still be used for compliance in 2024, but after which they will expire.</p>		

For Compliance Year 2023, New RECs were used to meet 99.49% of Rhode Island’s New RES obligation (Figure 2). The total number of New RECs Obligated Entities had available to meet the New RES obligation was 1,762,924 including 1,632,595 New RECs minted in 2023 and 130,329 New RECs banked from Compliance Year 2021 or 2022. Of New RECs minted in 2023, 1,421,452 were retired for compliance this year while 203,372 were banked for use toward compliance in either Compliance Year 2024 or 2025. The total New RECs retired represents an 8.8% surplus compared to the 2024 New RES obligation for all Obligated Entities, a reversal of the small deficit last year, and continuing a multiyear trend toward a surplus in RI. The total New RECs available to meet the 2021 RES obligation including banked RECs represents a 17.4% surplus, up significantly from last year. This surplus in newly minted and New RECs to meet increasing compliance requirements may reflect a sustained increase in regional renewable energy supply during this period through the construction of additional capacity in the NEPOOL region and adjacent control areas.

Approximately 99.9% of the State’s 2023 Existing or New RES obligation was met through retiring RECs (Figure 2). four suppliers relied on ACPs to meet their obligation. Fourteen suppliers cumulatively retired 2,444 more Existing RECs than was necessary to meet their combined obligations (excluding reported voluntary purchases).<sup>13</sup> Unlike New RECs, banking of Existing RECs is not allowed under Rhode Island’s RES Rules and Regulations.

**Figure 2: Distribution of Compliance Sources for 2023 New and Existing RES Obligations**



Taken as a whole, there was a New and Existing REC surplus among Obligated Entities, although four Obligated Entities chose to comply, partially, by making ACPs totaling approximately \$628,844 in lieu of retiring 7,803 RECs<sup>14</sup>. This continues a recent trend of relatively low total ACP costs paid by Obligated Entities (Figure 3). The possibility that there was a surplus of New RECs in 2023 may also be supported by NEPOOL GIS records that show 7,401,552 RECs registered as eligible to meet the New requirement of the RES were created in Compliance Year 2023.<sup>15</sup>

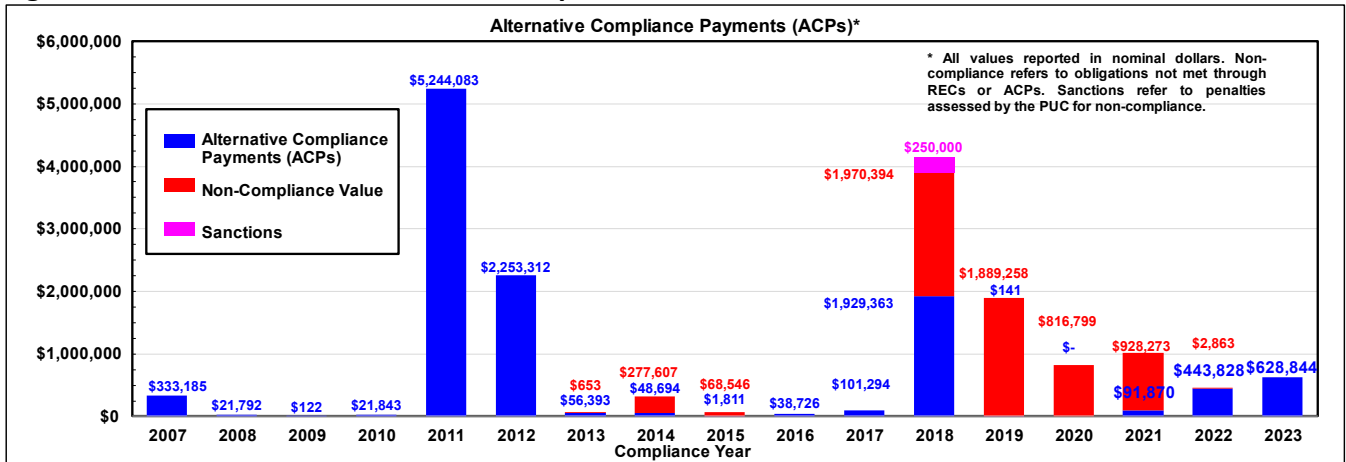
<sup>13</sup> It is possible that these companies injudiciously over-procured RECs or they purchased these RECs intentionally for some other purpose.

<sup>14</sup> In Compliance Year 2023, ACPs in lieu of both New and Existing RECs are valued at \$80.59 per MWh of obligated consumption.

<sup>15</sup> See NEPOOL GIS Public Report, GIS Certificate Statistics, accessible at [https://www1.nepoolgis.com/myModule/rpt/ssrs.asp?rn=104&r=%2FPROD%2FNEPOOLGIS%2FPublic%2FNEPOOL\\_CertificateStatistics&apxReportTitle=GIS%20Certificate%20Statistics](https://www1.nepoolgis.com/myModule/rpt/ssrs.asp?rn=104&r=%2FPROD%2FNEPOOLGIS%2FPublic%2FNEPOOL_CertificateStatistics&apxReportTitle=GIS%20Certificate%20Statistics).

While not all of these certificates are certainly available to be settled to meet the RES in Rhode Island, this number provides an indication that the technical potential supply of eligible certificates in 2023 was 4.9 times higher than the obligated requirement for those New RECs in 2023. This technical potential supply of New RECs is discussed more in Section IV.

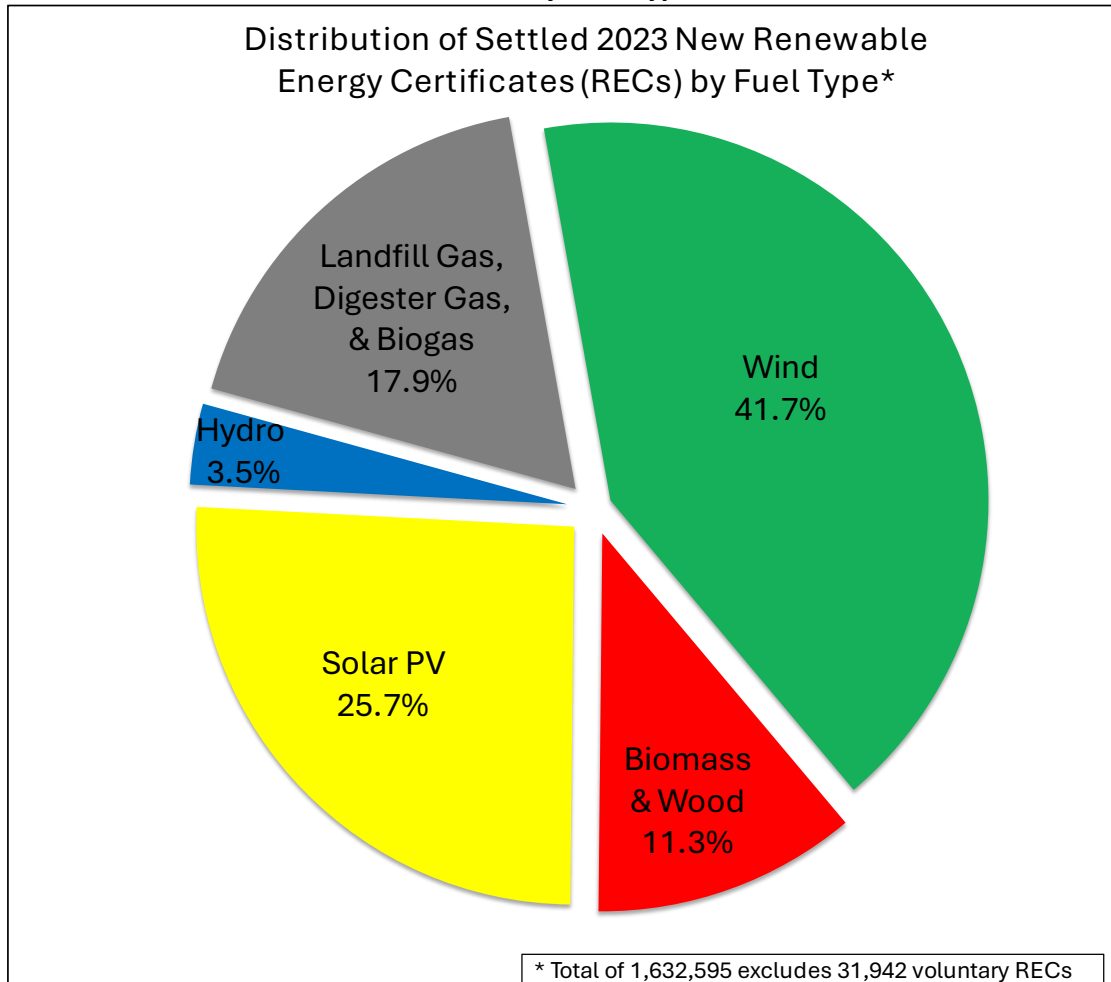
**Figure 3: Total Annual ACPs and Non-Compliance Value**



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

New RECs minted, purchased, and settled in Compliance Year 2022 were generated by five types of renewable energy generators: wind; solar photovoltaic (solar PV); hydroelectric; biomass and wood; and landfill gas, digester gas, and biogas (Figure 4).<sup>16</sup> For the seventh consecutive year most of the New RECs were generated by wind-powered facilities (41.7%). The remaining New RECs were generated by solar photovoltaic (25.7%); landfill gas, digester gas, and biogas (17.9%);<sup>17</sup> biomass and wood (11.3%); and hydroelectric (3.5%). In terms of resource location, the greatest source of New RECs settled in 2022 was Rhode Island (41.6%) with the rest coming from New York (22.6%), Maine (21.5%), Vermont (6.1%), New Hampshire (4.8%), Connecticut (2.8%), and Massachusetts (0.8%) (Figure 5).

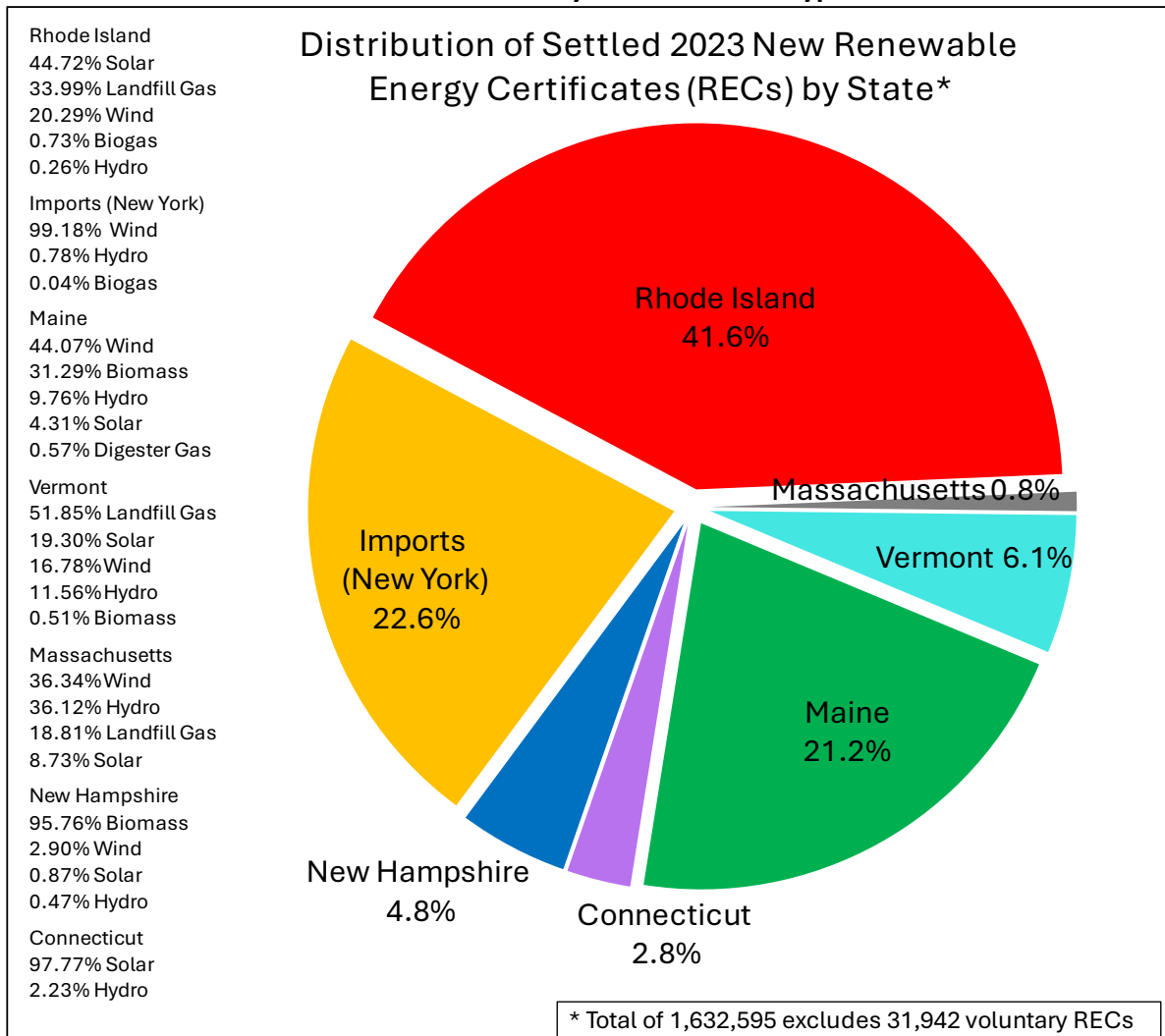
**Figure 4: Distribution of Settled 2023 New RECs by Fuel Type**



<sup>16</sup> Not all of the New RECs purchased and settled in Compliance Year 2023 were used to meet Compliance Year 2023 obligations. Some RECs were banked for use in Compliance Years 2024 and 2025, while others were purchased in excess of the obligation. This summary of New resources includes all RECs retired in 2023, excluding 31,942 RECs retired for the purpose of substantiating renewable energy claims associated with voluntary purchases to serve clean energy choices of end-use customers above and beyond the RES. Voluntary clean energy programs are summarized in Appendix 4 of this Report.

<sup>17</sup> Less than 0.3% of New RECs were sourced from biogas and 0.1% were sourced from digester gas facilities; data for these resources have been grouped with landfill gas in this Section and Figures unless otherwise noted.

**Figure 5: Distribution of Settled 2023 New RECs by State and Fuel Type**

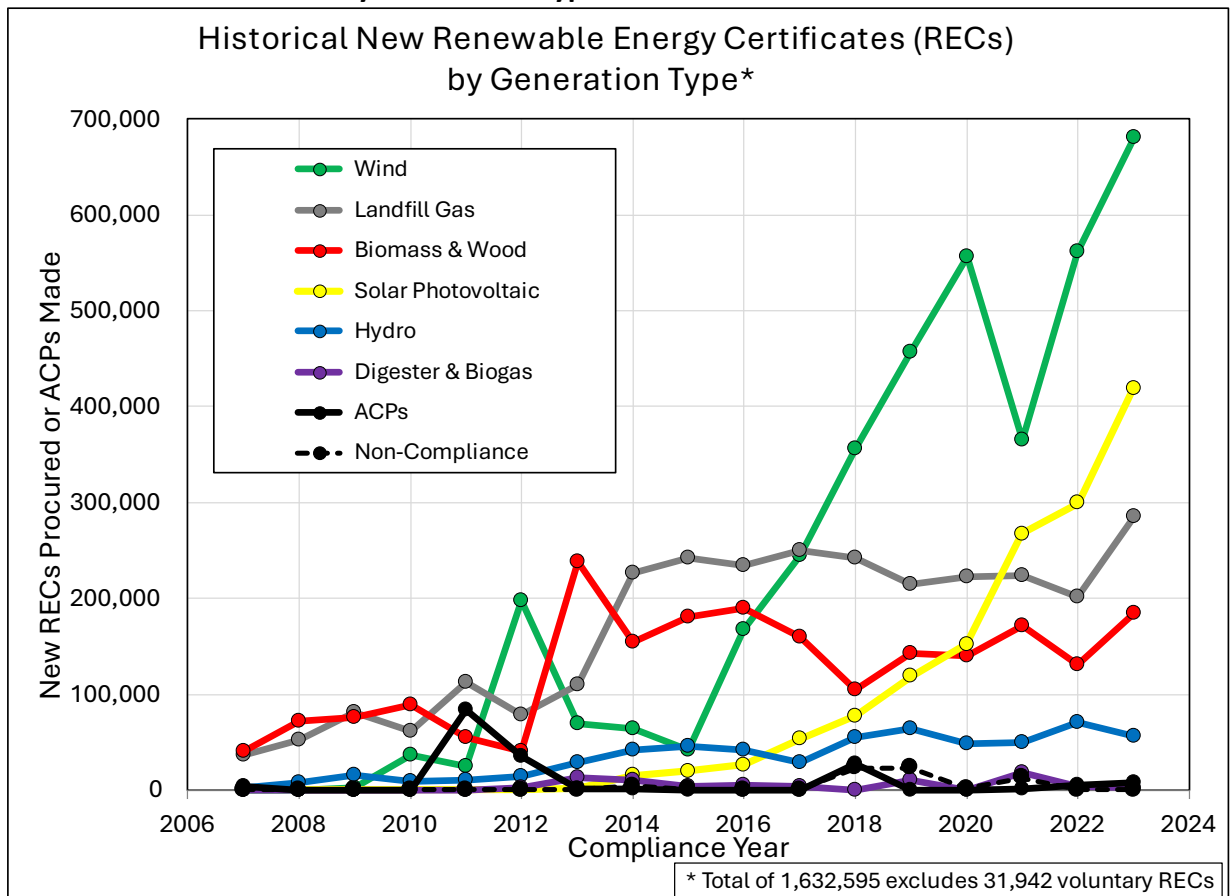


In Compliance Year 2023 the resource type with the largest gain in New RECs was solar PV, adding an additional 119,831 New RECs over the number retired in Compliance Year 2022; wind had nearly an identical increase (Figure 6). There were also notable increases in biogenic resources (biomass and wood, landfill gas, and digester and biogas) while reliance on hydroelectric RECs decreased.

The increase in New solar RECs was primarily driven by increases in wind RECs sourced from Rhode Island, while the increase in wind RECs was caused by significant increases in wind RECs from New York and Maine (there was a decrease in wind RECs from Rhode Island). The proliferation of solar resources in Rhode Island is being driven by Rhode Island Energy’s statutory long-term contracting and feed-in tariff programs,<sup>18</sup> as well as traditional rooftop and remote net metering projects. These programs are expected to continue the increase in Rhode Island-eligible solar PV resources, but it is not known if those resources’ RECs will be sold and retired for compliance in Rhode Island, sold to and retired in other states by entities fulfilling renewable compliance obligations in other states, or used for some other purpose.

<sup>18</sup> R.I. Gen. Laws § 39-26.1, § 39-26.2, and § 39-26.6.

**Figure 6: Historical New RECs by Generation Type**

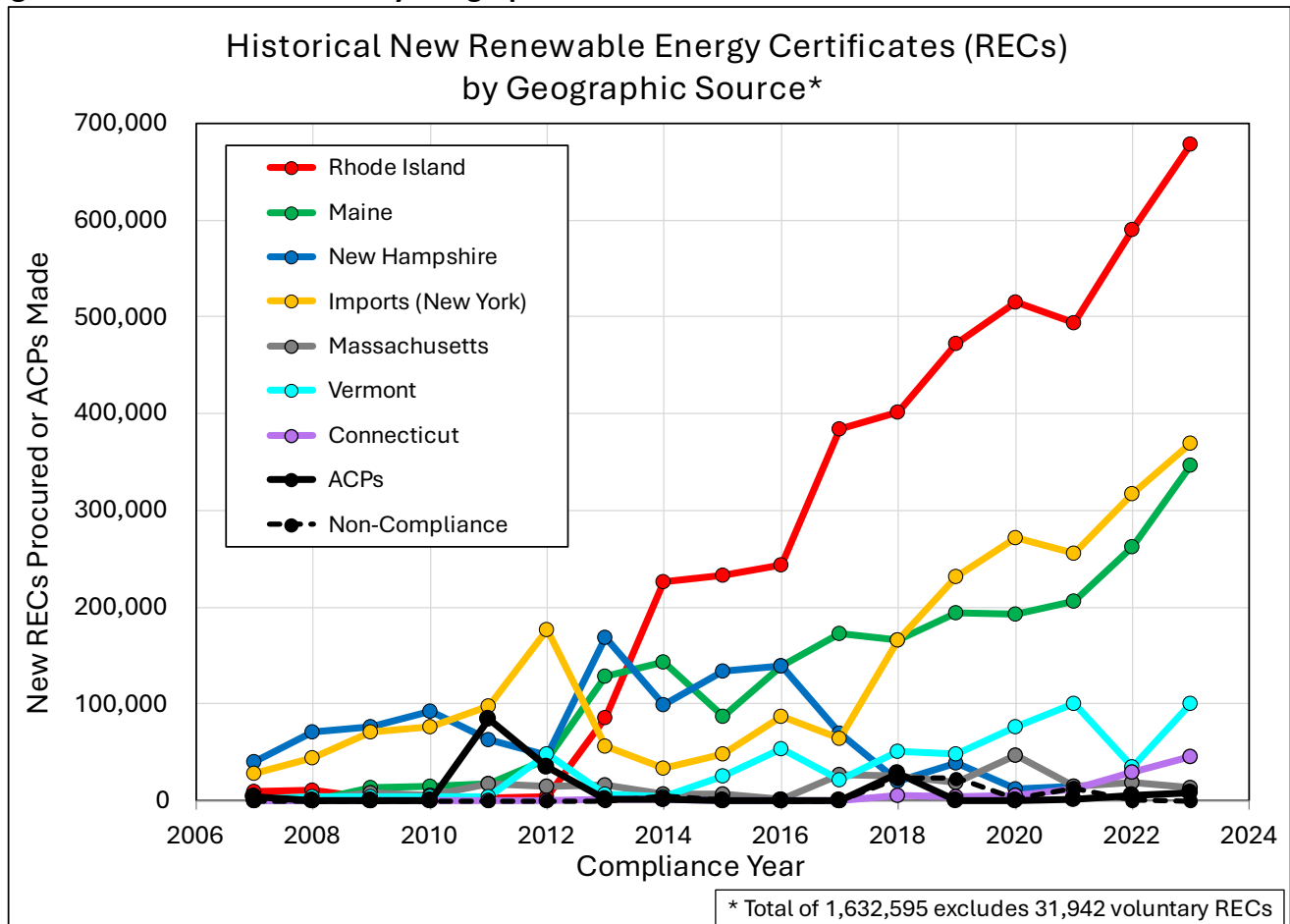


RECs sourced from Rhode Island continue to increase faster than reliance on RECs from any other jurisdiction, due mostly to growth solar resources, however the increase in reliance on Maine RECs was only slightly smaller. Reliance on RECs from New Hampshire, Vermont, and New York increased significantly, with small differences from other jurisdictions (Figure 7). The historical view of the number of New RECs presented in Figure 7, along with ACPs, illustrates the sustained reliance on RECs from Rhode Island and a sustained lack of reliance on ACPs in Compliance Year 2023.

In Compliance Year 2023, all the Existing RECs purchased and settled were generated by hydroelectric facilities. This year, the Existing hydroelectric RECs were sourced from Maine (78.5%), Massachusetts (14.9%), and New Hampshire (6.6%).<sup>19</sup>

<sup>19</sup> Unlike the reporting for New RECs, the percentages related to Existing REC procurement in this section of the discussion include reported purchases for mandatory compliance, voluntary programs, and over-compliance.

**Figure 7: Historical New RECs by Geographic Source**



## IV. Future Renewable Energy Standard Obligations

As in previous years, the PUC reports a forecast of retail consumption subject to the RES and the resulting compliance obligation. In prior Annual Reports, this forecast was calculated by multiplying total forecasted MWh sales<sup>20</sup> by the statutory RES percentage for each year, yielding the projected number of New and New or Existing RECs required for compliance

Beginning in Compliance Year 2023, however, there are effectively two RES schedules: one applicable to Pre-Amendment Contracts and another for all other retail consumption. Accordingly, the PUC's forecast must now include an estimate of the portion of retail consumption associated with Pre-Amendment Contracts that extend into future compliance years. To do this, the PUC uses the reported retail consumption covered by Pre-Amendment Contracts in Compliance Year 2023 as a baseline in two ways.

First, for contracts that reported actual consumption in 2023, the model assumes each continues to represent the same share of total retail load throughout its term. For example, if contract ABC123 accounted for 0.5% of total retail consumption in 2023 and remains in effect through 2028, the model assumes it continues to represent 0.5% of retail load in each year through Compliance Year 2028.

Second, for contracts that had no reported consumption in 2023—typically because they were executed before July 1, 2022, but commence delivery in later years (e.g., 2028)—the model assumes each such contract will represent the average per-contract share of consumption observed among active Pre-Amendment Contracts in 2023. Thus, if the average contract share in 2023 was 0.5% of total retail consumption and ten such contracts begin in 2028, the model projects an additional 5% of retail load in 2028 will be subject to the lower RES applicable to Pre-Amendment Contracts.

As a result of the PUC's review of submitted contracts, there are nine Obligated Entities (all of which were competitive suppliers) hold 2,353 eligible Pre-Amendment Contracts.<sup>21</sup> Of these, 1,931 were active in Compliance Year 2023 and reported 2,294,825 MWh of retail load served pursuant to the contracts.<sup>22</sup> As described above, these 1,931 Pre-Amendment Contracts and their associated load served in Compliance Year 2023 contribute to the baseline in the model and are assumed to maintain a constant load share throughout the contract life.

The PUC's forecast for the load share served by Pre-Amendment Contracts is presented in Figure 8. The actual load share in Compliance Year 2023 was approximately 31% of all retail load. For the average-baseline forecast, the load share declines rapidly to about 5% by the end of the decade as the terms of a significant number of Pre-Amendment Contracts expire in the next few years. The pattern is the same for both the 95%- and 5%-baseline forecast included in the figure, but the steady-like share each of those "extreme" forecasts reach at the end of the 2020s is closer to 12% and 1% of retail load, respectively.

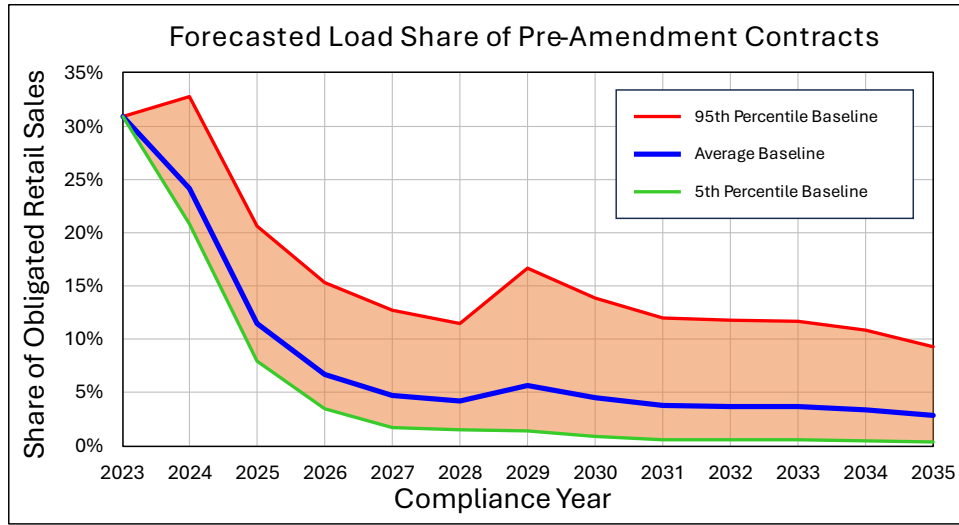
---

<sup>20</sup> The forecast of Rhode Island's obligated sales is based on the Forecast Data File of ISO-NE's 2023 Capacity, Energy, Loads, and Transmission (CELT) Report and applies a correction factor of a 2.94% reduction to the forecasted wholesale load served in Rhode Island for differences between actual 2023 load reported in the CELT data and the actual 2023 RES obligation reported here and based on RIE data. This reduction may approximate exempted load that would include some wholesale transmission losses as well as retail sales of both Clear River Electric and Water District (formerly Pascoag Utility District) and Block Island Power Utility District. ISO-NE 2023 CELT Forecast Data. See tab 2C, column K "NET". ISO-NE 2023 Forecast Data File, available at [https://www.iso-ne.com/static-assets/documents/2023/04/lf2023\\_forecastdata.xlsx](https://www.iso-ne.com/static-assets/documents/2023/04/lf2023_forecastdata.xlsx).

<sup>21</sup> Ten Obligated Entities sought Pre-Amendment Contract status for 2,535 supply contracts. Through the PUC's review process, 180 were found ineligible (two of which simply ended in Compliance Year 2022). More information on the review process is presented in Section VII.

<sup>22</sup> More information on the characteristics and statistics of Pre-Amendment contracts is presented in Section VII.

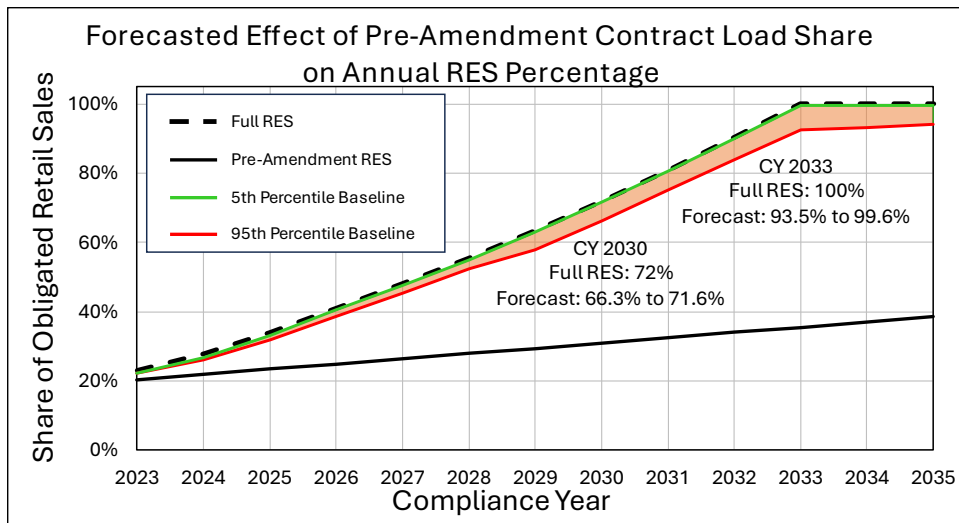
**Figure 8: Forecast of Pre-Amendment Contract Load Share**



The effect of the load share forecast on the total required RES in a given Compliance Year is presented in Figure 9. Some notable benchmark years are 2030, when the Act on Climate requires an economywide GHG emissions reduction below 1990 levels of 45%. In this year, the full RES is 72%; the PUC’s forecasted RES ranges between 66.3 and 71.6%.<sup>23</sup> Also, in 2033, when the full RES is 100%, the PUC’s forecasted RES ranges from 93.5% to 99.6%.

The forecasted average-baseline RES is presented in Table 3 alongside the Full RES. The column labeled “Weighted Forecasted New RES” is the load-share-weighted average forecast of RES and Pre-Amendment Contract RES percentages using the average-baseline forecast described above. The RES forecast in that column is then applied to forecasted load taken from ISO-NE forecasts. The resulting forecasted demand for New and Existing RECs is presented in Table 4.

**Figure 9: RES Forecast with Effect of Pre-Amendment Contracts**



<sup>23</sup> Note that the PUC reports three digits for informational purposes but does not intend to formally convey precision and accuracy of three significant digits.

**Table 3: RES Forecast with Effect of Pre-Amendment Contracts**

Compliance Year	Full New RES	New RES for Pre-Amendment Contracts	Weighted Forecasted New RES	Existing RES
2024	26.0%	20.0%	24.5%	2.0%
2025	32.0%	21.5%	30.8%	2.0%
2026	39.0%	23.0%	37.9%	2.0%
2027	46.0%	24.5%	45.0%	2.0%
2028	53.5%	26.0%	52.3%	2.0%
2029	61.5%	27.5%	59.6%	2.0%
2030	70.0%	29.0%	68.2%	2.0%
2031	79.0%	30.5%	77.2%	2.0%
2032	88.5%	32.0%	86.4%	2.0%
2033	98.0%	33.5%	95.6%	2.0%
2034	98.0%	35.0%	95.9%	2.0%
2035	98.0%	36.5%	96.2%	2.0%

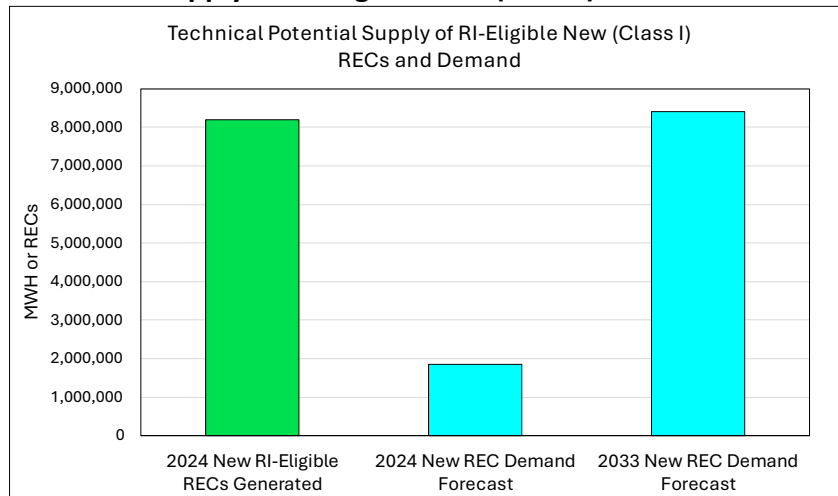
**Table 4: Forecast of RES Compliance Year Obligations for New and Existing Resources**

Compliance Year	Actual/Forecasted RES-Obligated Retail Sales (MWhs) <sup>a</sup>	Minimum MWhs from New Resources	MWhs from New or Existing Resources
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	162,469
2013 (Actual)	8,193,979	450,678	163,891
2014 (Actual)	7,985,473	519,067	159,720
2015 (Actual)	8,018,905	521,243	160,392
2016 (Actual)	7,954,467	636,372	159,103
2017 (Actual)	7,741,800	735,485	154,850
2018 (Actual)	7,914,524	870,612	158,306
2019 (Actual)	7,601,633	950,217	152,049
2020 (Actual)	7,528,108	1,053,949	150,597
2021 (Actual)	7,663,780	1,187,900	153,290
2022 (Actual)	7,661,156	1,302,473	153,244
2023 (Actual)	7,421,897	1,501,241	148,450
2024	7,562,000	1,853,000	151,000
2025	7,564,000	2,330,000	151,000
2026	7,602,000	2,881,000	152,000
2027	7,662,000	3,448,000	153,000
2028	7,820,000	4,090,000	156,000
2029	7,944,000	4,735,000	159,000
2030	8,125,000	5,541,000	162,000
2031	8,325,000	6,427,000	167,000
2032	8,575,000	7,409,000	171,000
2033	8,805,000	8,418,000	176,000

<sup>a</sup> Based on 2023 ISO-NE CELT forecast and assumes 2.94% downward correction factor to account for the difference in the CELT data for actual wholesale load for 2023 and the actual obligation reported here based on RIE data.

To put the forecasted demand for New RECs in perspective, the PUC notes that in 2024 NEPOOL GIS’s public report for certificate statistics indicates that 8,192,866 certificates were generated that were eligible as “RI New Renewable Energy Resource.”<sup>24</sup> This large quantity is not surprising given the size of the fleet of generators the PUC has approved as eligible, which by the end of 2024 comprised nearly 1,050 MW of solar PV, over 2,980 MW of onshore and offshore wind, and more than 750 MW of other facilities like bio-generators and small-scale hydroelectric facilities. While not all of these RECs are truly available to satisfy Rhode Island RES (for example, they may be under contract to settle in other states), the facility owners’ registration of their generation units with the PUC indicates some willingness to sell these RECs to Rhode Island’s Obligated Entities. In 2024, therefore, the technical potential supply of RECs to meet Rhode Island’s RES is 8,192,866, while the forecasted obligated requirement is only 1,853,000 MWh (Figure 10).

**Figure 10: Technical Potential Supply of RI-Eligible New (Class I) RECs and Demand**



Furthermore, in 2033, the final year of the PUC’s forecast described above, the forecasted obligation is 8,418,000. Thus, in 2024, there exists a fleet of renewable generators with the technical potential to supply enough renewable energy to meet over 97% of the forecasted requirements in Compliance Year 2033, and more than 100% in all years through 2032.

Whether or not that technical potential remains and becomes economically viable for use to meet the RES is a combination of Rhode Island’s ACP compared to other states, actual energy use in the region, the continued operation of an eligible fleet of at least the same technical potential, and the ability and willingness of RECs holders to sell their RECs for use in Rhode Island, among other factors. Notably, this technical potential only includes the output of operational generators that have taken the formal step of registering as renewable with the PUC—many more potentially eligible solar, wind, and other renewable facilities operate today that have not taken this formal step.

<sup>24</sup> See NEPOOL GIS Public Report, GIS Certificate Statistics, accessible at [https://www1.nepoolgis.com/myModule/rpt/ssrs.asp?rn=104&r=%2FPROD%2FNEPOOLGIS%2FPublic%2FNEPOOL\\_CertificateStatistics&apxReportTitle=GIS%20Certificate%20Statistics](https://www1.nepoolgis.com/myModule/rpt/ssrs.asp?rn=104&r=%2FPROD%2FNEPOOLGIS%2FPublic%2FNEPOOL_CertificateStatistics&apxReportTitle=GIS%20Certificate%20Statistics).

## V. Authorized Rate Increases and RES Compliance Costs

Per R.I. Gen. Laws § 39-26-6(b), the PUC is required to authorize rate recovery by electric distribution companies for prudent incremental costs arising from the RES, including the purchase of RECs, the payment of ACPs, required payments to support the NEPOOL GIS, assessments made for the Renewable Energy Development Fund pursuant to R.I. Gen. Laws § 39-26-7(c), and the incremental costs of complying with energy source disclosure requirements. To track the recovery of these costs, R.I. Gen. Laws § 39-26-6(f) requires that the annual Report includes the amount of rate increases authorized pursuant to subsection (b), described above. The only electric distribution company that qualifies as an Obligated Entity is Rhode Island Energy (RIE), as the statutory definition of “Obligated Entity” specifically excludes Block Island Power Company and the Pascoag Utility District.<sup>25</sup>

Regarding RIE’s rates, it is important to note that in Compliance Year 2023 RIE has two types of distribution customers: customers who get their energy supply from RIE Last Resort Service<sup>26</sup> and customers who get their energy supply from a competitive supplier. Only Last Resort Service customers pay RIE’s charges related to RES compliance; customers of competitive suppliers pay RES compliance costs through those competitive suppliers’ charges. These Last Resort Service customers accounted for approximately 47.2% of the energy used in Rhode Island in 2023. RES compliance costs (and related rates) of competitive suppliers for providing the remaining 52.8% of energy is unknown. Notably, Compliance Year 2023 marks the first year in which competitive suppliers’ aggregate load was larger than load served through LRS.

Early in each calendar year, RIE proposes a RES charge designed to collect the costs of RES compliance for Last Resort Service customers during the upcoming compliance year, outstanding costs for the remainder of the current compliance year, and to true up any outstanding cumulative under- or over-collection made during previous compliance years.<sup>27</sup> The reconciling nature of this charge ensures that when compliance costs are lower than RIE anticipates, the over-collections are returned to ratepayers. Symmetrically, when compliance costs are higher than anticipated, RIE can recover under-collections.

Table 4 provides data on the authorized RES charge (in dollars per kWh) billed to RIE’s Last Resort Service customers from 2007 through this Report date, as well as the total charges to a 500-kWh Residential Class ratepayer by month and year (*see also* the blue line in Figure 11). The factors of the approved charge are based on projected market conditions, anticipated REC pricing, estimates of electricity consumption, and estimates of market share, among other prudent considerations. Projected cost for the upcoming compliance year (mostly controlled by cost to procure New RECs rather than the cost to procure Existing RECs) is found in the second column; the reconciliation factor for previous compliance years is found in the third column. The charge of \$0.00833 per kWh, effective April 1, 2023, through March 31, 2024, comprises a \$0.00875 per kWh factor for projected costs for Compliance Year 2023 and a negative \$0.00042 reconciliation factor for a cumulative over-collection of costs for previous years, including costs for Compliance Year 2022 (*see* the yellow row in Table 4).

---

<sup>25</sup> R.I. Gen. Laws § 39-26-2(16).

<sup>26</sup> Last Resort Service refers to the energy supply commodity provided by Rhode Island Energy and regulated by the PUC. All Rhode Island Energy distribution customers have the option of taking supply service from a competitive market supplier or through RIE’s Last Resort Service.

<sup>27</sup> Rhode Island Energy typically files for rate change to the RES Charge in late winter for effect on April 1<sup>st</sup>. Therefore, the timing of changes in the RES charge occurs three months into the Compliance Year, and three months before the REC trading year turns over. For the example of the annual filing that first included Compliance Year 2023 compliance costs, *see here*: [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2023-02/2243-RIE-RESFactor-Reconcile\\_2-27-23.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2023-02/2243-RIE-RESFactor-Reconcile_2-27-23.pdf).

**Table 5: Rate Impact of RES Compliance to RIE’s Last Resort Service (Energy Supply) Customers**

Effective Date	Initially Projected REC Procurement Cost (per kWh) <sup>a</sup>	Adder for Previous- and Current-Year Costs (per kWh)	Authorized RES Charge (per kWh)	Monthly & Annual Charge to 500-kWh Ratepayer
Apr 25 – Future Filing	\$0.01379	\$0.00082	\$0.01461	\$7.31   \$87.66
Apr 24 – Mar 25	\$0.01109	\$0.00091	\$0.01200	\$6.00   \$72.00
<b>Apr 23 – Mar 24</b>	<b>\$0.00875</b>	<b>(\$0.00042)</b>	<b>\$0.00833</b>	<b>\$4.17   \$49.98</b>
Apr 22 – Mar 23	\$0.00728	(\$0.00007)	\$0.00721	\$3.61   \$43.26
Apr 21 – Mar 22	\$0.00678	(\$0.00013)	\$0.00665	\$3.33   \$39.90
Apr 20 – Mar 21	\$0.00606	\$0.00260	\$0.00866 <sup>c</sup>	\$4.33   \$51.96
Apr 19 – Mar 20	\$0.00183	(\$0.00120)	\$0.00063	\$0.32   \$3.78
Apr 18 – Mar 19	\$0.00190	(\$0.00186)	\$0.00004	\$0.02   \$0.24
Apr 17 – Mar 18	\$0.00264	(\$0.00224)	\$0.00040	\$0.20   \$2.40
Apr 16 – Mar 17	\$0.00405	(\$0.00117)	\$0.00288	\$1.44   \$17.28
Apr 15 – Mar 16	\$0.00366	(\$0.00072)	\$0.00294	\$1.47   \$17.64
Apr 14 – Mar 15	\$0.00430	\$0.00050	\$0.00480	\$2.40   \$28.80
Apr 13 – Mar 14	\$0.00371	\$0.00141	\$0.00512	\$2.56   \$30.72
Apr 12 – Mar 13	\$0.00209	\$.00044	\$0.00253	\$1.265   \$15.18
Apr 11 – Mar 12	\$0.00064	(\$0.00095)	(\$0.00031)	(\$0.156)   (\$1.86)
Mar 10 – Mar 11	\$0.00095	\$0.00028	\$0.00123	\$0.615   \$7.38
Jan 09 – Feb 10	\$0.00105	(\$0.00012)	\$0.00093	\$0.465   \$5.58
2008	\$0.00084	<sup>b</sup>	\$0.00084	\$0.42   \$5.04
2007	\$0.00062	N/A	\$0.00062	\$0.31   \$3.72

<sup>a</sup> The projected REC procurement cost is for current-year costs, i.e., the projected compliance rate for Compliance Year 2022 was \$0.00728/kWh and was collected from April 2022 through March 2023.

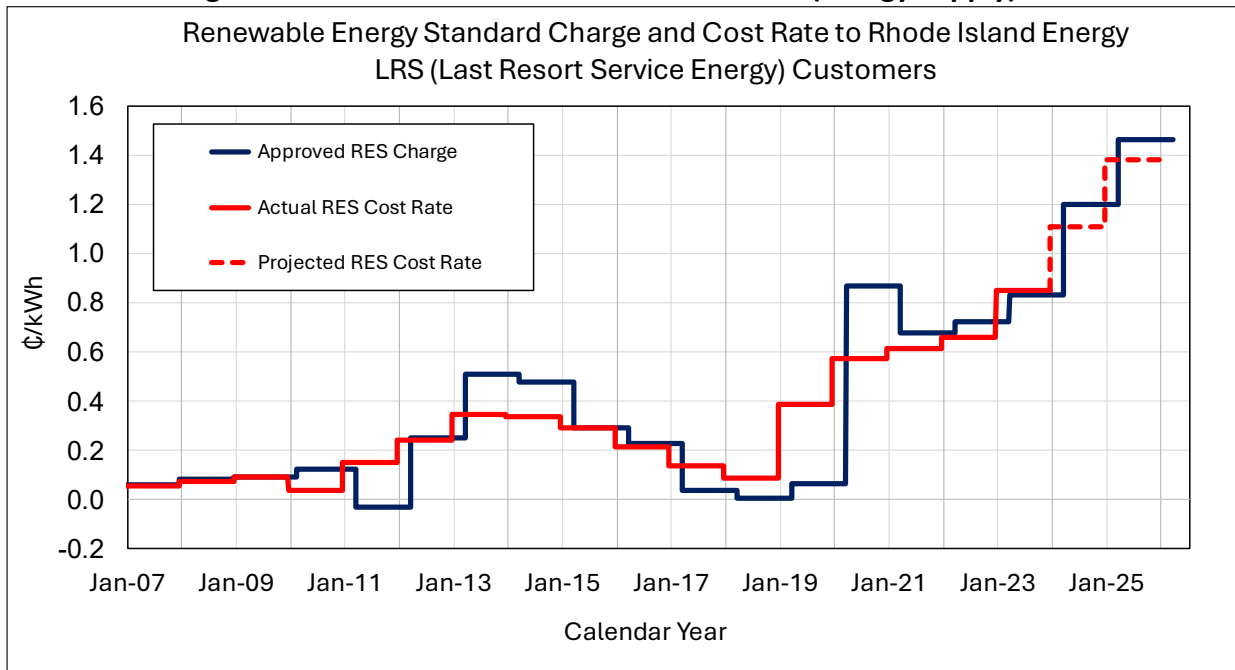
<sup>b</sup> In 2008, a specific RES reconciliation charge was not proposed in the RES Charge filing. Reconciliation of over- or under-collection would have occurred through Last Resort Service reconciliation filings.

While this Report focuses on Compliance Year 2023, it is noted that the PUC approved a charge of \$0.01200 per kWh with for effect on April 1, 2024, to keep pace with the expected rise in compliance costs.<sup>28</sup> The PUC also approved for RIE’s filing to increase the RES Charge to \$0.01461 per kWh, effective April 1, 2025, again to keep pace with the increase in costs of compliance.<sup>29</sup> In these instances, the expected increase is due to the increasing percentage of the RES (whereas the cost of RECs is not projected to increase significantly in 2024 or 2025).

<sup>28</sup> Rhode Island Public Utilities Commission, Order No. 24968 in Docket No. 24-08-EL, In Re: 2024 Renewable Energy Standard (RES) Procurement Plan: 2024 RES Charge and Reconciliation (Apr. 1, 2024), [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-04/2408-RIE-RESFactor-Ord24968\\_4-1-24.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-04/2408-RIE-RESFactor-Ord24968_4-1-24.pdf)

<sup>29</sup> Rhode Island Public Utilities Commission, Order No. 25311 in Docket No. 25-05-EL, In Re: 2025 Renewable Energy Standard (RES) Procurement Plan: 2025 RES Charge and Reconciliation (Apr. 25, 2025), [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-04/RI\\_Energy\\_25-05-EL\\_\(2025\\_RES\\_Factor\)\\_Ord25311.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-04/RI_Energy_25-05-EL_(2025_RES_Factor)_Ord25311.pdf).

**Figure 11: RES Charges and Cost Rate to RIE’s Last Resort Service (Energy Supply) Customers**



Based on the data reported below in Table 5 and in Appendix 2 Table A2, for Compliance Year 2023, RIE procured Rhode Island-eligible New RECs at an average price of approximately \$39.83 per New REC.<sup>30</sup> RIE’s most recent estimates of New REC prices is an average cost of \$39.15 per New REC in Compliance Year 2024<sup>31</sup> and \$39.75 per New REC in Compliance Year 2025.<sup>32</sup>

For Compliance Year 2023, most of the RECs RIE purchased to fulfill the RES obligation incurred by their Last Resort Service customers were from renewable generation projects that have long-term renewable energy power purchase agreements (PPAs) with RIE pursuant to R.I. Gen. Laws § 39-26.1 and § 39-26.2. RIE also uses RECs generated by projects enrolled in the Renewable Energy Growth Program (RE Growth Program) feed-in tariff (R.I. Gen. Laws § 39-26.6). As part of these programs, project owners receive a contract or tariff price payment from RIE, and RIE receives the projects’ energy and REC generation.<sup>33</sup>

Importantly, the costs of these programs are paid for by charges to all RIE’s distribution customers, which includes both Last Resort Service customers and competitive supply customers. Thus, simply retiring these RECs on behalf of Last Resort Service customers would deprive competitive supply customers of the value of the RECs from these programs (for which they are also charged).

<sup>30</sup> This average cost includes only the costs of RECs retired to meet compliance in Compliance Year 2023. Thus, this includes RECs minted and banked in Compliance Years 2021 and 2022 for use in Compliance Year 2023, but this excludes the costs of RECs minted and banked in Compliance Year 2023 for use in Compliance Years 2024 and 2025.

<sup>31</sup> Rhode Island Energy “Docket 24-08-EL 2024 Renewable Energy Standard (RES) Charge and Reconciliation,” Attachment 1, [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-02/2408-RIE-RES-2024Factor-Recon\\_2-26-2024.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-02/2408-RIE-RES-2024Factor-Recon_2-26-2024.pdf)

<sup>32</sup> Rhode Island Energy “Docket 25-05-EL 2025 Renewable Energy Standard (RES) Charge and Reconciliation,” Attachment 1, <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-02/25-05-EL-2025 RES Charge & Reconciliation - PUC%202-25-25.pdf>.

<sup>33</sup> Some PPAs and all RE Growth Program arrangements include transfer of the project’s capacity value to RIE.

**Table 6: Summary of RIE’s RES Compliance Costs, 2007 through 2023**

Compliance Year	Total RES Costs (Millions) <sup>a</sup>	New REC Costs (Millions) <sup>a</sup>	Existing REC Costs (Millions) <sup>a</sup>	ACP Costs (Millions)	Obligated Load (MWh)
2023	\$29.3	\$28.9	\$0.40	\$0	3,502,966
2022	\$28.6	\$27.4	\$1.2	\$0	4,344,029
2021	\$26.28	\$25.70	\$0.58	\$0	4,273,405
2020	\$24.29	\$24.20	\$0.09	\$0	4,245,056
2019	\$16.22	\$16.12	\$0.10	\$0	4,170,969
2018	\$3.91	\$3.76	\$0.15	\$1.92 <sup>b</sup>	4,370,298
2017	\$5.65	\$5.53	\$0.12	\$0	4,097,802
2016	\$9.20	\$9.10	\$0.10	\$0	4,282,268
2015	\$13.88	\$13.80	\$0.08	\$0	4,773,192
2014	\$18.00	\$17.93	\$0.07	\$0	5,317,349
2013	\$18.96	\$18.90	\$0.06	\$0	5,541,409
2012	\$12.80	\$12.75	\$0.05	\$0	5,272,388
2011	\$8.43	\$3.85	\$0.05	\$4.53	5,554,272
2010	\$2.07	\$2.02	\$0.05	\$0	5,695,951
2009	\$5.51	\$5.28	\$0.22	\$0	5,902,667
2008	\$5.21	\$5.02	\$0.19	\$0	7,123,559
2007	\$3.97	\$3.79	\$0.19	\$0	7,177,538

<sup>a</sup> Total RES costs reported here are based on data provided by RIE to PUC staff. These values represent the funds expended by RIE in a given Compliance Year. The costs associated with banked RECs are incurred and included in the Compliance Year during which the RECs are used for compliance, rather than the year in which the RECs are procured and retired.

<sup>b</sup> In 2021, National Grid (now RIE) filed a revised Compliance Filing for Compliance Years 2017 and 2018, and it was determined National Grid (now RIE) owed an ACP in 2018. The ACP was paid, and National Grid (now RIE) has not sought to recover those costs from LRS customers.

To prevent this inequity, each quarter RIE collects market data regarding New REC prices in the Rhode Island-eligible market and uses that to provide an estimated market value for the RECs from the PPAs and RE Growth Program. This estimated market rate is then charged to Last Resort Service energy customers for the RECs generated by the PPA and RE Growth Program resources that quarter. Meanwhile, the revenue from that charge to Last Resort Service customers is used to offset the cost of the PPAs and RE Growth Program to benefit all RIE’s distribution customers.<sup>34</sup> RIE’s remaining REC needs for LRS customers are purchased through a request-for-proposal procurement process approved annually by the PUC through a docketed proceeding.<sup>35</sup>

In addition to RES charges and rate impacts, a more accurate and complete picture of compliance costs includes REC procurement expenses, since these reflect actual costs rather than projected costs and reconciliations. To meet its 2023 New and Existing RES obligations, RIE incurred \$29.3 million in compliance costs (Table 5; Figure 12). This is an increase of approximately 3.7% from the cost incurred to comply with the 2022 RES obligation. This increase in compliance cost to RIE is mostly caused by the increase in volume of RECs needed to comply with the

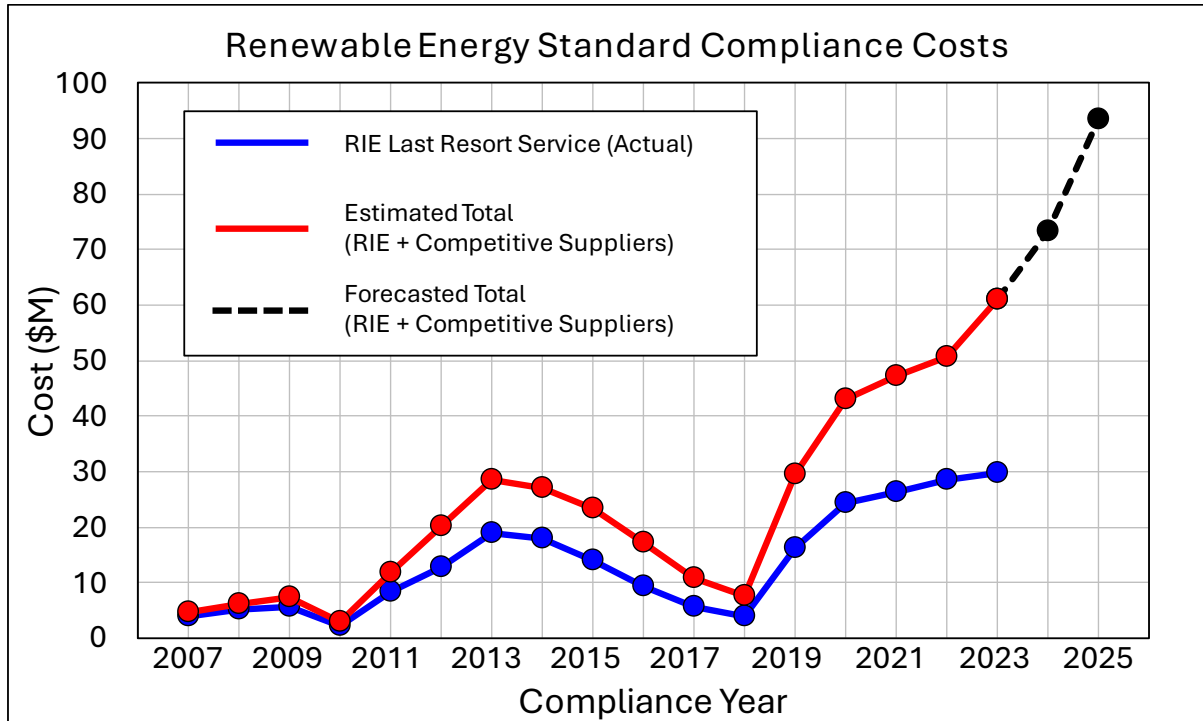
<sup>34</sup> The remaining over- or under-recovery for these PPAs is then reconciled through a charge to all RIE distribution ratepayers. Distribution customers are all electric customers in RIE’s territory; Last Resort Service customers are the subset of distribution customers that buy their energy supply from RIE rather than from a competitive supplier.

<sup>35</sup> Rhode Island Energy, “2023 Renewable Energy Standard Procurement Plan,” Docket No. 22-43-EL (Nov. 2, 2022), [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2022-11/2243-RIE-RESProcurement2023\\_11-2-22.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2022-11/2243-RIE-RESProcurement2023_11-2-22.pdf)

increase in the RES. That volume did increase, but at a slower pace than the RES itself because many of the retail customers served by LRS in Compliance Year 2022 are now served by competitive suppliers.

Notably, RIE’s most recent public information projects that the company will have more New REC’s supplied through long-term renewable energy contracts (PPAs) and the RE Growth Program than their projected annual New REC obligation by Compliance Year 2026.<sup>36</sup> RIE’s current RES Procurement Plans include the option to sell REC’s into the regional market should the number of REC’s from the contracts and RE Growth Program exceed the company’s obligation and banking allowance.

**Figure 12: Compliance Costs to Retail Customers in RIE’s Territory**



It is again noted that the data in this section of the report only represents expenses incurred by Last Resort Service customers of RIE, accounting for approximately 47.2% of all obligated retail energy use in 2023. Competitive energy suppliers served the remaining 52.8% of obligated energy use, and the PUC does not have access to compliance costs for these Obligated Entities.<sup>37</sup> Lacking data from these businesses, it can still be presumed that, among all Obligated Entities, compliance costs have increased. It also is noted that RIE bears no REC market risk because the utility passes all savings and expenses resulting from changes in the REC market onto Last Resort Service customers and distribution customers through compulsory reconciliations. Competitive energy suppliers, on the other hand, may assume some of the REC market risk rather than pass it onto their customers dollar-for-dollar.

The PUC notes the share of customer load served by competitive energy suppliers increased rapidly in June 2023, when municipalities throughout Rhode Island implemented community choice aggregation plans that moved the vast majority of residential and small commercial customers in their jurisdictions off of RIE’s LRS supply and onto a retail supply plan with a competitive supplier.<sup>38</sup> Thus, projecting future total costs to LRS supply customers

<sup>36</sup> Rhode Island Energy “2025 Renewable Energy Standard Procurement Plan Docket No. 24-47-EL” Plan at 5, <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-11/24-47-EL - 2025 RES Procurement Plan – PUC 11-8-24.pdf>.

<sup>37</sup> The share of obligated energy served by competitive suppliers was 43.3% in 2022 and 44.3% in 2021.

<sup>38</sup> See data on page 10 of <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-02/2515 RIE Q4-2023.pdf>.

becomes difficult, however, in Figure 12 the PUC provides a projected RES costs of all customers using RIE's future-year New REC forecast prices and the future obligations presented above in Table 3.

Finally, in addition to the costs enumerated above, the Commission incurred approximately \$100,000 in expenses related solely to the administration of the RES for Compliance Year 2023.

## 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 in the other five New England states.

All six New England states have active Renewable Energy Standards (RES, as known in Rhode Island and Vermont) or Renewable Portfolio Standards (RPS, as known in Massachusetts, Connecticut, New Hampshire, and Maine). Each of the established RES programs (referring to both RES and RPS programs) has multiple classes<sup>39</sup> that are used to differentiate each state’s compliance obligations (and programmatic objectives) by technology, vintage, emissions, or other characteristics. Class I requirements (equivalent to Rhode Island’s “New” RES 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 RES requirements<sup>40</sup> generally focus on supply that was in operation prior to the creation of the applicable state’s RES program. Compliance targets set minimum obligations for the purchase of Renewable Energy Certificates (RECs) from certified sources. New/Class I targets are intended to spur new development and construction. Existing/Class II/III/IV targets are generally intended to provide enough incentive to maintain economic viability within the existing renewable energy fleet.

In addition to distinguishing between New and Existing renewable energy obligations, some RES programs include specific requirements for solar, biomass, hydroelectric, combined heat and power (CHP), waste-to-energy, thermal resources, or energy efficiency. These technology-specific requirements are implemented differently, by state. In Massachusetts, the solar obligation has historically been calculated annually and subtracted from the Class I requirement. This is referred to as a carve-out. New Hampshire’s solar requirement was not implemented as a carve-out; it stands alone as the Class II obligation. Connecticut has a Class III requirement for conservation and load management resources, as well as CHP. Massachusetts has two Class II requirements; one is specific to waste-to-energy facilities while the other is intended for existing resources more generally. Massachusetts also has an Alternative Energy Portfolio Standard (APS) for CHP, flywheel storage, coal gasification, renewable thermal, and efficient steam technologies, as well as a Clean Peak Energy Standard (CPS) designed to incentivize clean energy technologies that can supply electricity or reduce demand during defined periods.

The remainder of this section focuses on the class or portion of each state’s RES requirement that is most analogous to Rhode Island’s New RES requirement.

### **Massachusetts**

Massachusetts has New England’s longest-running RES. The Massachusetts Class I RES increases each year – implicitly until reaching 100%. Class I targets increase 2% per year through 2029 and 1% per year thereafter. Since its inception in 2002, the Massachusetts Class I market has experienced periods of shortage, equilibrium, and surplus – producing a wide range of REC prices, Alternative Compliance Payment (ACP) collections, and aggregate compliance costs. Table 6 summarizes aggregate Massachusetts Class I ACPs from 2017 to 2022<sup>41</sup>. Notably, In July 2021, final proposed amendments to the Class 1 Regulations went into effect.<sup>42</sup> The amended Regulations lower the Class I ACP to \$60 in 2021, \$50 in 2022, and \$40 in 2023 and thereafter. The Class II ACP was raised from \$30.91 in 2021 to \$33.06 in 2022, and further raised to \$34.20 in 2024 and to \$35 in 2025.

---

<sup>39</sup> Referred to as “Tiers” in Vermont.

<sup>40</sup> Including Class II in Massachusetts, Connecticut, and Maine; Class III and Class IV in New Hampshire; Tier 1 in Vermont; and Existing in Rhode Island.

<sup>41</sup> MA has not yet published a 2023 compliance report; the most recent data available are from 2022.

<sup>42</sup> See, <https://www.mass.gov/regulations/225-CMR-1400-renewable-energy-portfolio-standard-class-i>.

The Massachusetts Department of Energy Resources (MA DOER) also administers the Class I solar carve-out. Eligible facilities generate SRECs for ten years (which are used to demonstrate compliance with the carve-out) and generate Class I RECs thereafter. MA DOER also established an SREC successor program, known as the Solar Massachusetts Renewable Target (SMART). SMART is a declining-block incentive for solar supply. SMART is not a carve-out; eligible facilities generate Class I RECs. In December 2021, the Massachusetts Department of Public Utilities (MA DPU) issued an order doubling the capacity of solar resources eligible for the SMART incentives from 1,600 MW to 3,200 MW.<sup>43</sup>

In August 2020, MA DOER issued regulations to implement a Clean Peak Energy Standard. The regulations require a minimum percentage (starting at 1.5% in 2020) of retail electricity sales during peak hours to come from “clean peak resources,” which include new Class I resources, existing Class I or Class II resources paired with energy storage and demand response resources. The ACP is set to \$45 from 2020 to 2024, and starting in compliance year 2026 through 2032 the ACP is set to \$65. Thereafter the ACP rate will remain fixed at \$45 through the remainder of the program.<sup>44</sup>

### **Connecticut**

Connecticut had its first RES compliance year in 2004. Due to differences between its RES eligibility standards compared to the rest of the region (Connecticut does not have a vintage requirement, except for hydroelectric, which must be run-of-river constructed or converted after July 1, 2003), Connecticut has historically had access to a larger pool of eligible supply and therefore lower RPS compliance costs. As RES targets increase over time, however, new supply is required to fulfill New England’s aggregate obligations, leaving states to compete for marginal supply.

Connecticut’s RPS statute requires by 2030 renewable energy supply of 40% Class 1; 4% Class 2; and 4% Class 3. The state’s draft Integrated Resources Plan (IRP), released December 2020, proposes pathways for achieving 100% zero-carbon electricity by 2040. Incremental increases to Class 1 targets beyond 2030 are likely required to meet this goal, but no specifics had been identified at the time of this Report. Public Act No. 18-50 reduced the Class 1 ACP to \$40/MWh, effective January 1, 2021.<sup>45</sup>

### **Maine**

Maine’s first Class I RES<sup>46</sup> compliance year was 2008. Maine has broader Class I eligibility criteria than the other New England states, resulting in ample supply to fill Class I demand. In 2019, Maine expanded its RES to include incremental procurement of energy from a newly designated Class IA resources. Class I and Class IA are similar to Rhode Island’s New requirement in that they both have a post-2005 vintage requirement. Class I, however, allows certain facilities that did not operate as capacity resources in the wholesale electricity market for at least two years, and then regained capacity resource status after 2005, to be eligible for Class I status. This allows these facilities, which would otherwise only be recognized as Class II, a pathway for the more valuable Class I status. The exemption does not exist for Class IA.<sup>47</sup>

---

<sup>43</sup> See, <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/14355548>.

<sup>44</sup> See, <https://www.mass.gov/doc/225-cmr-21-clean-peak-energy-portfolio-standard-cps/download>.

<sup>45</sup> CT Gen Stat § 16-244c(h) (2013). See, <https://law.justia.com/codes/connecticut/2020/title-16/chapter-283/section-16-244c/>.

<sup>46</sup> 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.

<sup>47</sup> Maine’s RES expansion was accomplished through the creation of a Class 1A, with similar eligibility criteria to Class 1. [35-A ME Rev Stat § 3210 \(2021\)](http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html) See, <http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>.

Class I targets increased to 10% in 2017 and remain thereafter. Class IA targets are additive to Class I targets, start at 2.5% in 2020, and increase to 40% in 2030, so that the total Class I and IA targets are 50% in 2030. The 2019 RES revisions also set the ACP at the statutory maximum of \$50/MWh for Class 1 and Class 1A resources.

In 2025, Maine’s RPS was again amended to increase the Class IA requirements by an additional 1% in 2021, and continuing to a final requirement of 50% in 2040 and each year thereafter.

**Table 7: Summary of ACPs Made to Comply with New England States' New/Class I RES**

Year	MA (\$M)	CT (\$M)	RI (\$M)	ME (\$M)	NH (\$M)	VT (\$M)
2019	\$0.0006	\$1.6	\$0.0001	\$0	\$0.110	<sup>a</sup>
2020	\$0.046	\$6.9 <sup>b</sup>	\$0.049	\$0.0771	\$0.228	<sup>a</sup>
2021	\$0.136	\$11.5	\$0.136	\$0.0028	\$0.003	<sup>a</sup>
2022	\$0.666	\$22.6	\$0.444	\$0	\$0.102	<sup>a</sup>
2023	<sup>a</sup>	<sup>a</sup>	\$0.628	<sup>a</sup>	\$0.112	<sup>a</sup>

<sup>a</sup> The applicable data is not yet reported or was not identified.

<sup>b</sup> Figure includes \$5.8 million of non-compliance.

### **New Hampshire**

New Hampshire’s first Class I compliance year was 2009. New Hampshire is unique in that it has a Class II obligation dedicated to new solar, a Class III obligation dedicated to existing biomass, and a Class IV obligation for existing hydroelectric facilities. Due to the absence of a vintage requirement in Connecticut, NH Class III overlaps with CT Class 1. In March 2024, based on a finding that the availability of eligible Class III RECs was low, the NH Department of Energy set the Class III requirement at 0.5% for Compliance Year 2023, rather than the 8% that would otherwise have been required.<sup>48</sup>

### **Vermont**

Vermont’s RES has both Total Renewable Energy and Distributed Renewable Generation requirements, both of which were amended in 2024.<sup>49</sup> The minimum obligation for “Total Renewable Energy” is 63% beginning in 2025; that obligation increases by 4% every three years, culminating at 100.0% in 2032 and remaining each year thereafter.<sup>50</sup> It is expected that much of this obligation can be met with existing resources, although the law has nested requirement for new and smaller generation facilities. Nested within the Total Renewable Energy requirement are the Distributed Renewable Generation and New Renewable Energy requirements, which more closely resemble RI’s “New” RES obligation.<sup>51</sup> The minimum obligation for Distributed Generation is set at 5.8% for 2025 and increases by 2% each year until reaching 20% in 2032,<sup>52</sup> and thereafter.<sup>53</sup> Meanwhile, the New Renewable Energy requirement is increments upward at multi-year intervals: 4% in 2027, 10% in 2030, 15% in 2032, and 20% in 2035.<sup>54</sup> The ACPs for each class generally move with the Consumer Price Index, but are officially

<sup>48</sup> New Hampshire Department of Energy, *Order on Renewable Portfolio Standard / DOE Petition* (date), <https://www.energy.nh.gov/sites/g/files/ehbemt551/files/inline-documents/sonh/rps-doe-order.pdf>

<sup>49</sup> Vermont Act 179 (2024), “*An Act Relating to the Renewable Energy Standard.*”

<sup>50</sup> Except for municipal electric utilities and electricity providers that serve a single customer at 115 kilovolts (e.g., GF Power). These providers must reach 100% in 2035.

<sup>51</sup> The RI RES limits eligibility of hydroelectric plants to 30 MW. R.I. Gen. Laws. § 29-26-2(18), and “New” is defined as later than January 1, 1997, whereas Vermont allows for hydroelectric facilities of up to 200 MW that meet other unit-specific requirement and defines “New” as beginning operation after January 1, 2010.

<sup>52</sup> Staff assumes the final increment in 2032 is therefore 2.2%.

<sup>53</sup> Except for municipal electric utilities and electricity providers that serve a single customer at 115 kilovolts (e.g., GF Power). These providers have an annual increase of 1.5% until reaching 20% in 2035.

<sup>54</sup> The New Renewable Energy requirement remains at 20% thereafter. Municipal electric utilities and electricity providers that serve a single customer at 115 kilovolts (e.g., GF Power) must achieve 5% in 2030 and 10% in 2035.

set by order of the Vermont PUC annually. The most recent order is for Compliance Year 2026, which set Total Renewable Energy rate at \$13.13 per REC in and the Distributed Renewable Generation and Energy Transformation ACPs at \$78.79.<sup>55</sup>

**Summary Projection of Regional RES Targets and Demand**

In aggregate, New England’s RES targets and the associated demand for renewable energy are projected to increase over the next ten years. Table 7 provides a summary of “New” RES targets throughout New England based on statute and regulation in effect at the time this report was drafted. Table 8 provides an estimate of the corresponding gigawatt-hours (GWh) of “New” RES demand through 2033. The forecasted RES obligations are based upon ISO-NE’s forecast of Annual Energy Net of Behind-the-Meter PV and Energy Efficiency, found in their 2024 CELT Report,<sup>56</sup> and adjusted to exclude an estimate of public or other utilities and load exempted from the states’ RES obligations. For example, both Pascoag Utility District and Block Island Power Company are exempt from Rhode Island’s RES.<sup>57</sup>

**Table 8: Projection of New England States' New RES Demand (%)**

Year	MA Class I	CT Class I	RI New <sup>a</sup>	VT DG	ME Class I <sup>b</sup>	NH Class I <sup>c</sup>
2023	22.0%	26.0%	20.2%	4.6%	21.0%	11.0%
2024	24.0%	28.0%	24.5%	5.2%	25.0%	11.9%
2025	27.0%	30.0%	30.8%	5.8%	29.0%	12.8%
2026	30.0%	32.0%	37.9%	7.8%	33.0%	12.8%
2027	33.0%	34.0%	45.0%	13.8%	37.0%	12.8%
2028	36.0%	36.0%	52.3%	15.8%	41.0%	12.8%
2029	39.0%	38.0%	59.6%	17.8%	45.0%	12.8%
2030	40.0%	40.0%	68.2%	25.8%	50.0%	12.8%
2031	41.0%	40.0%	77.2%	27.8%	51.0%	12.8%
2032	42.0%	40.0%	86.4%	35.0%	52.0%	12.8%
2033	43.0%	40.0%	95.6%	35.0%	53.0%	12.8%

<sup>a</sup> RI New is adjusted for the forecasted effect of Pre-Amendment Contract load share. See Section IV.  
<sup>b</sup> Maine RPS obligation for Class 1 and Class 1A resources  
<sup>c</sup> New Hampshire RES obligation is presented **net** of renewable thermal carve-out.

Under current laws and regulations, Massachusetts creates the majority of New England’s RES demand through 2033 (Figure 13). In 2023, Massachusetts comprises approximately 45% of clean energy demand, whereas Rhode Island represented 7.1% of the region’s 2023 demand (Figure 14). By 2032, the projected allocation of New/Class I REC demand across the region is: Massachusetts – 45.2%; Connecticut – 21.2%; Rhode Island 16.4; Maine – 15.7%; Vermont – 4.2%; and New Hampshire – 3.2% (Figure 15).

<sup>55</sup> Vermont Public Utility Commission, *Order Setting Renewable Energy Standard Alternative Compliance Payment Rates for 2026*, Case No. 25-2215-INV (September 17, 2025), <https://epuc.vermont.gov/?q=node/64/207090/FV-BDIssued-PTL>

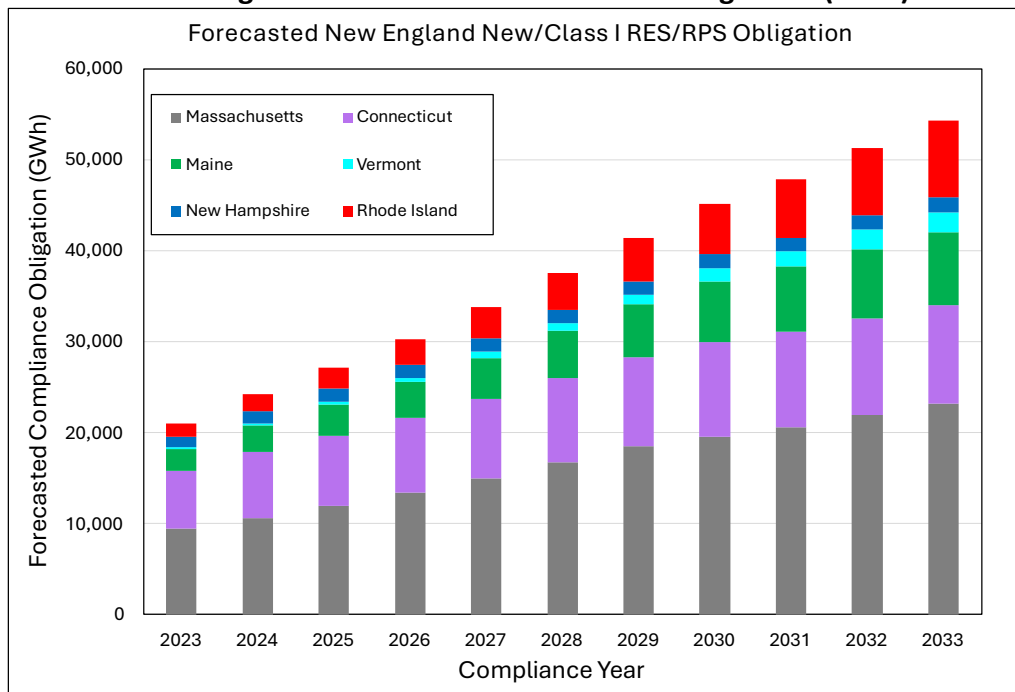
<sup>56</sup> The ISO-NE 2024 CELT Report is available at: <http://www.iso-ne.com/system-planning/system-plans-studies/celt>. Additional data can be found in the ISO-NE 2024 Forecast Data File, available at <https://www.iso-ne.com/static-assets/documents/100011/lf2024-forecast-data.xlsx>.

<sup>57</sup> Unless the jurisdiction requires or publishes specific exemptions, this analysis compares the most recently reported wholesale load served as reported by ISO-NE and compares that to the retail load reported by various entities in each jurisdiction. The fractional difference is then assumed to persist throughout the forecast.

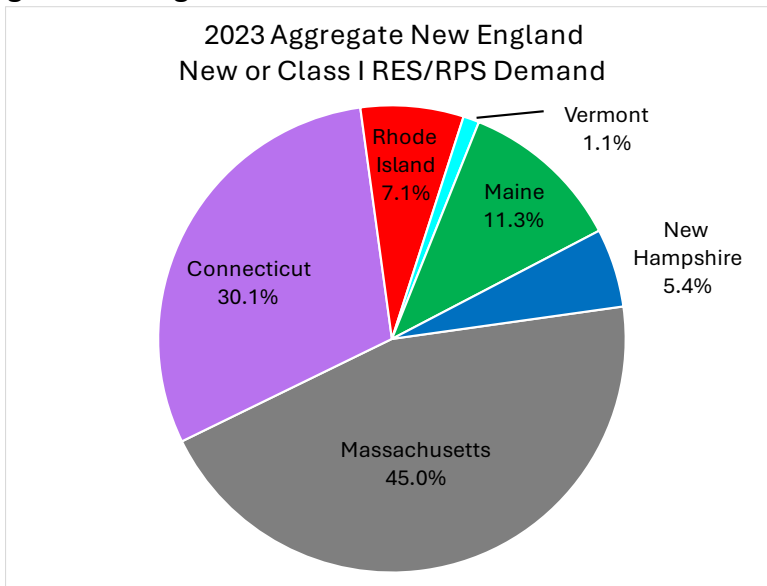
**Table 9: Projection of New England States' New RES Demand (GWh)**

Year	MA Class I	CT Class I	RI New	VT DG	ME Class I	NH Class I	Total
2024	10,642	7,219	1,853	274	2,916	1,298	24,201
2025	11,993	7,697	2,330	306	3,412	1,399	27,137
2026	13,457	8,185	2,881	414	3,946	1,412	30,295
2027	15,006	8,684	3,448	740	4,511	1,428	33,816
2028	16,771	9,248	4,090	862	5,160	1,457	37,587
2029	18,529	9,781	4,735	990	5,838	1,479	41,351
2030	19,530	10,392	5,541	1,469	6,728	1,510	45,169
2031	20,632	10,508	6,427	1,624	7,133	1,545	47,868
2032	21,909	10,683	7,409	2,106	7,589	1,588	51,283
2033	23,167	10,848	8,418	2,168	8,049	1,625	54,275

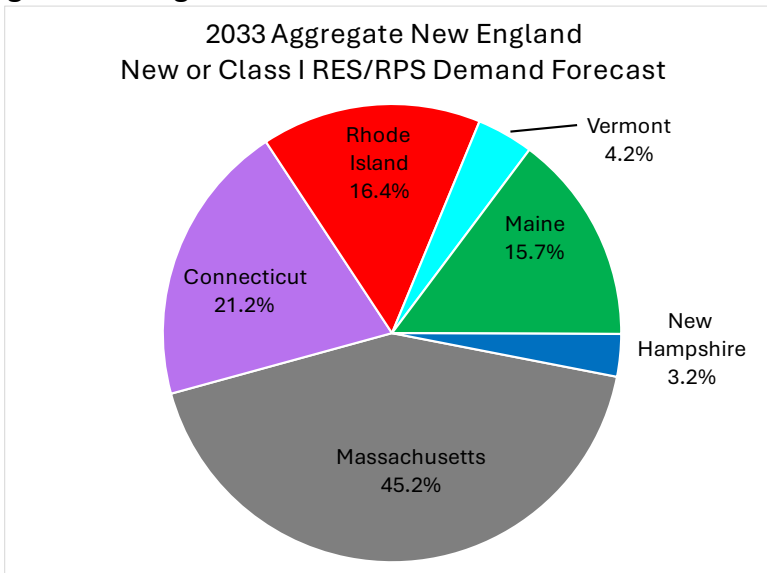
**Figure 13: Forecast of New England States' New or Class I RES Obligations (GWh)**



**Figure 14: 2023 Aggregate New England New or Class I RES Demand**



**Figure 15: 2033 Aggregate New England New or Class I RES Demand Forecast**



## VII. Continuing and Developing Issues Related to the RES

This section of the Report describes important issues that the PUC has identified, worked on, and in some cases, resolved, in its role of administering and regulating the RES. The issues here are relevant to the time since the last Report was published but may span multiple Compliance Years.

### Pre-Amendment Contracts

As described and referenced throughout this report, the 2023 amendments to the RES exempted power contracts executed prior to July 1, 2022, from the accelerated RES. Instead of increasing at the new and more rapid increasing RES, these contracts are subject to an RES that continues increasing at only 1.5% annually through the lives of each contract and have been referred to as “Pre-Amendment Contracts.”

Compliance Year 2023 was the first year in which the 2022 amendments to the RES effected the percentages of renewable energy Obligated Entities had to procure, with the previous requirement being 18.5% and the amended requirement being 21% (Figure 1 and Table A5.1). Thus, 2023 is the first Compliance Year in which Obligated Entities had the opportunity to claim some of the retail load they served was subject to a Pre-Amendment Contract, and thus subject to a reduced RES.

Ten suppliers submitted 2,533 contracts to the PUC for review. The initial review of these contracts was provided by PUC Staff and its consultant, InClimate Inc., which examined whether contracts had been fully executed (signed) by both the power supplier and the customer before July 1, 2022, and identification of the end date of the term for which the lower RES would apply. PUC Staff’s initial review found 180<sup>58</sup> of these were ineligible and reported the initial findings to the ten Obligated Entities so they could seek formal review by the PUC.

On November 22, 2024, ENGIE Resources, LLC filed a petition for review with the PUC seeking eligibility for 46 contracts that staff indicated were not eligible to be treated as Pre-Amendment Contracts.<sup>59</sup> On January 31, 2025, Constellation NewEnergy Inc. filed a petition seeking eligibility for 108 contracts that staff indicated were not eligible. Among the issues were whether both parties had executed the contracts, whether the date of execution was specified and before the deadline, and whether the term of the contract executed extended into Compliance Year 2023 and beyond. The PUC heard oral arguments from the parties on April 15, 2025, and rendered a written decision on May 13, 2025, affirming PUC staff’s initial analysis, and ruled all 156 contracts ineligible.<sup>60</sup>

With the appeal period having run (seven days later), the final set of Pre-Amendment Contracts was known. This allowed PUC staff to begin finalizing its review of Compliance Year 2023, and to begin revising the various forecasts provided in this Annual Report (e.g., Rhode Island and New England’s future demand in Sections IV and VI, and future RES costs in Section V). Here, we provide some statistics regarding the Pre-Amendment Contracts.

In the final count, nine Obligated Entities hold 2,353 eligible Pre-Amendment Contracts. Of these, 1931 reported serving retail load in Compliance Year 2023 (Figure 16).<sup>61</sup> An additional 316 contracts become active in future

---

<sup>58</sup> Two of which were contracts with terms that ended in Compliance Year 2022, and were not specifically found to be ineligible, but could not serve eligible consumption in Compliance Year 2023 or later.

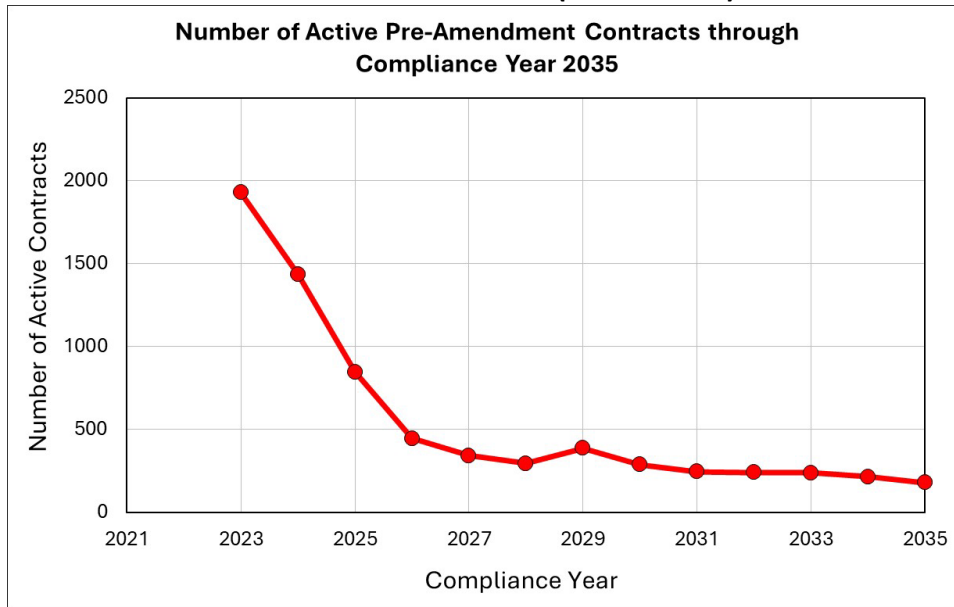
<sup>59</sup> ENGIE Resources LLC, Petition for Review of Contracts Submitted for Consideration under R.I. Gen. Laws § 39-26-4(f), filed November 22, 2024, [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-12/ENGIE\\_Petition\\_RI\\_39-26-4\\_0.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-12/ENGIE_Petition_RI_39-26-4_0.pdf)

<sup>60</sup> Rhode Island Public Utilities Commission. *In re ENGIE Resources LLC & Constellation NewEnergy, Inc.*, Docket Nos. RES-24-47 & RES-25-07, Order No. 25345 (May 13, 2025). [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-05/RES-24-47\\_&RES-25-07\\_Contracts\\_Ord25345\\_w-Seal\\_-5-13-25.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-05/RES-24-47_&RES-25-07_Contracts_Ord25345_w-Seal_-5-13-25.pdf)

<sup>61</sup> Obligated Entities held 106 Pre-Amendment Contracts with terms that included all or part of Compliance Year 2023, but for reasons unknown, did not report serving load pursuant to these contracts.

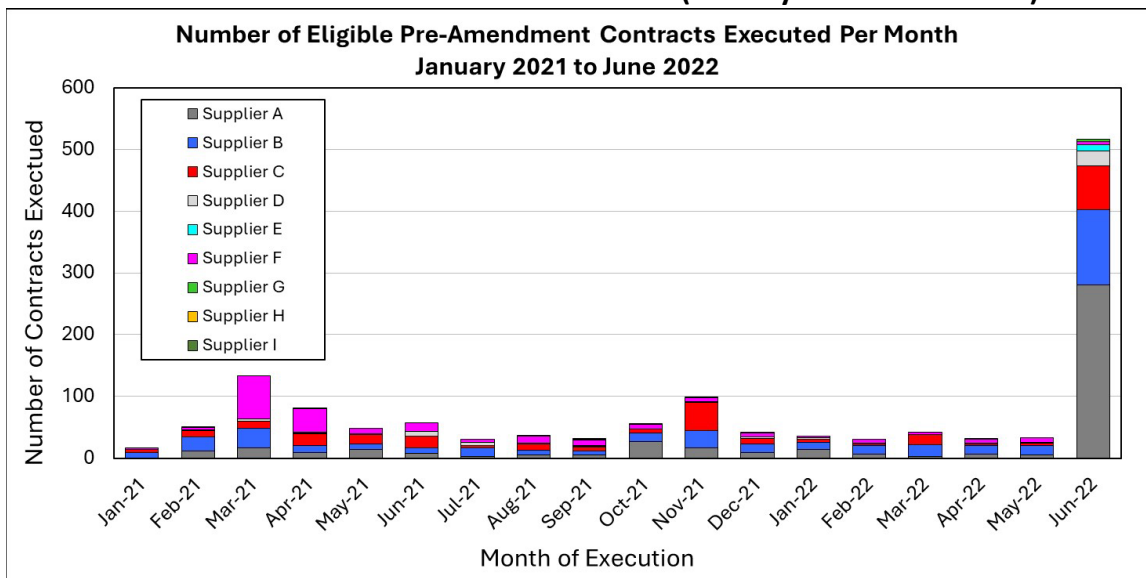
Compliance Years, although whether actual load is recorded under these contracts remains unknown. Over the next few years, the number of active Pre-Amendment contracts drops quickly to under 300 each year, but then approximately 250 contracts persist until 2035. It should also be noted that, although data here and forecasts above focus on Compliance Years 2023 through 2035, there are Pre-Amendment Contracts with eligible terms that expire in December 2099.

**Figure 16: Number of Active Pre-Amendment Contracts (2023 – 2035)**



An interesting market result is the execution date of contracts, and the length of contract terms associated with contracts executed most recently. In the 18 months preceding the enactment of the 2022 amendments to the RES, Obligated Entities were executing about 50 contracts per month that would later be approved as Pre-Amendment Contracts. In June 2022, more than 500 such contracts were signed (Figure 17).

**Figure 17: Execution Month of Pre-Amendment Contracts (January 2021 – June 2022)**

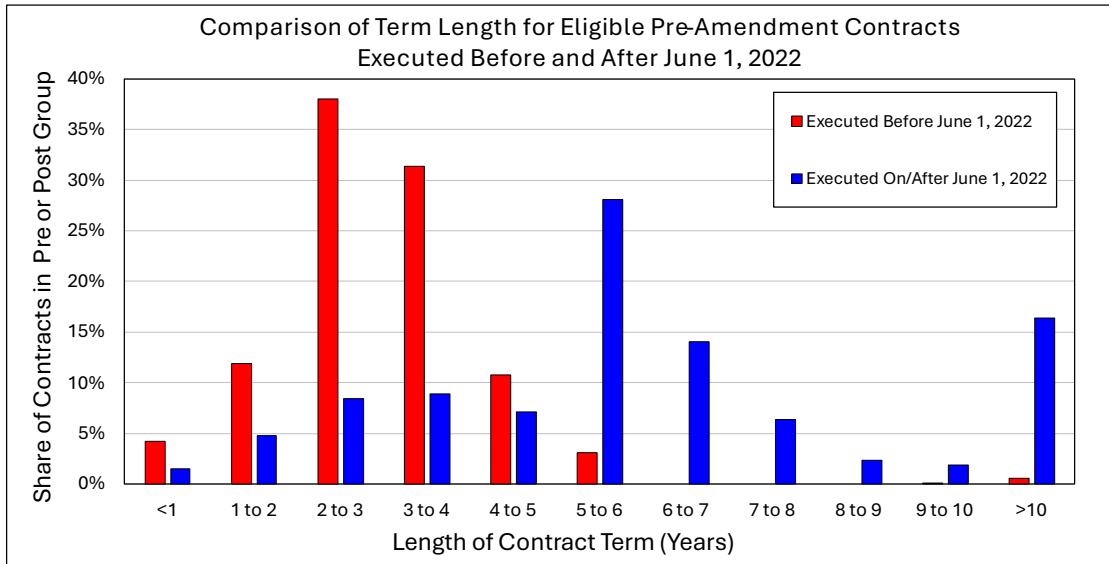


Notably, the Rhode Island Senate bill to amend the RES was passed on May 31, 2022, and the analogous House of Representatives bill was passed on June 17, 2022. The bills were transmitted to Governor McKee on June 22,

2022, and signed and effective on June 27, 2022. The timing of enactment likely provided competitive suppliers both time and high confidence that new contracts signed in June 2022 would have a cost advantage over future contracts.

In addition, the length of the terms of contracts shifted as the market gained certainty about the changes to the RES. Of all 2353 Pre-Amendment Contracts, those that were signed in the period before June 1, 2022, had an average term of approximately 3.3 years (Figure 18). For those contracts signed on or after June 1, 2022, the average term grew to approximately 6.1 years, with a notable 85 contracts having terms greater than ten years.

**Figure 18: Comparison of Length of Pre-Amendment Contract Term Before and After June 2022**



Taken together, the rapid increase of contracts and the lengthening of the contract terms seen in June 2022, may indicate that sophisticated competitive suppliers and customers were aware of the potential cost increases associated with the RES amendments, and actively sought to avoid those costs. While no new contracts can be included in the pool of Pre-Amendment Contracts today, the impact on the RES will last for many years. The PUC will continue to report useful statistics and forecasts of these impacts in future Annual Reports.

## VIII. Conclusion

Based upon the PUC's analysis of regulated utility data; competitive supplier data; and general market trends, the PUC concludes that the supply of, and demand for, Rhode Island-eligible New RECs were adequate to meet obligations in Compliance Year 2023. The evidence for adequate supply is mainly Obligated Entities' low reliance on ACPs for RES compliance as in Compliance Years dating back to 2018.

Another line of evidence is that Obligated Entities banked a significant number of RECs for future years. While 1,501,241 RECs were needed to meet Rhode Island's "New" (Class I) RES requirement, NEPOOL GIS data shows 7,401,552 eligible RECs were available to meet that requirement. While not all of these certificates were actually available for sale (because of existing contracts, for example), this does reveal the technical potential to meet Rhode Island's RES was almost five times higher than regulatory demand in Compliance Year 2023.

Furthermore, the PUC's forecast of the demand for RECs to meet the RES does not exceed the current supply of RECs (i.e., 8,192,866 New RECs Compliance Year 2024) until the last year of the forecast period, 2033, when 8,417,532 New RECs might be needed to meet the RES. In other words, there exists today a technically available potential supply of renewable energy to meet Rhode Island's RES through at least 2032 and would supply over 97% of what is required in 2033. This forecast does not include the significant supply of eligible RECs anticipated from the 400-MW Revolution Wind offshore wind farm, under contract with Rhode Island Energy, and expected to deliver more than 1 million eligible New RECs per year.

There is some evidence that supply is increasing at the same pace or slightly slower than increases in demand in recent years. The evidence is the known increase in compliance costs to Rhode Island Energy and other market data that shows New/Class I REC prices increased significantly in the region in 2019 and those prices have sustained through Compliance Year 2023. Thus, while Obligated Entities were able to find adequate, and even surplus, supply, they likely paid significantly more to comply in the last five Compliance Years than in the immediately preceding years. That Obligated Entities were willing to pay the increased prices for 2023 New RECs in order to bank them for use in 2024 or 2025 may indicate that market participants expect REC prices will continue to hold at the current price for upcoming Compliance Years.

The PUC expects that, even if demand for New/Class I RECs exceeds any increase to the regional supply, it is likely to remain that compliance with Rhode Island's RES will be through a high percentage of RECs rather than through ACPs. This is because beginning in Compliance Year 2021, Rhode Island has highest ACP rate for general New/Class I RECs (excluding carveouts) in the region. Therefore, Rhode Island's RES represents the highest value for the RECs from New/Class I resources beginning in 2021, and through the foreseeable future.

The increase of New Renewable Energy Resources tends to stabilize compliance costs. This trend likely continues today, but it is difficult to judge the effect of increased supply on the market because the cost of New RECs appears to be trending close to Connecticut's ACP rate, which could potentially stabilize REC prices over a wide range of equilibrium quantities. Price volatility, however, may be created by news of the expected timing of commercial operation of particularly large projects, such as offshore wind farms. This is because these projects represent enough new supply to serve a significant portion of, and in some cases more than all of, the region's annual increase in demand for New/Class I RECs.

Since the last RES Report, the PUC has approved or conditionally approved 26 renewable energy facilities for RES certification with the RES eligibility designation of "New," which will increase the quantity of RECs in the market certified to contribute to Rhode Island RES compliance. These generators combined for approximately 314 MW

AC of additional certified New nameplate capacity that are eligible to contribute to meeting the RES targets in future Compliance Years.<sup>62</sup>

The PUC believes that the RES and similar programs throughout New England, combined with important renewable financing programs, will continue to spur renewable energy development in the region. It is important to note, however, that the continued ability to finance and site renewable energy projects is important to sustaining the growth of renewable resources that produce the new RECs used for complying with the increasing RES obligation. Based on recent policies established and revised within Rhode Island, the State remains in a good position to support local and regional renewable energy resource growth in the near term. These policies include long-term contracting statutes, the Renewable Energy Growth program, net metering, and cooperative long-term contracting initiatives between Massachusetts, Connecticut, and Rhode Island. Additionally, the ability to site and operate already planned large facilities, such as offshore wind farms, in New England and New York will have positive impact on the supply of RECs for meeting renewable portfolio standards in the region. Notably, recent federal action has likely increased uncertainty regarding the siting and operation of large offshore wind farms within the New England and New York region.

The PUC regards Compliance Year 2023 a relative success because the supply of available resources in the regional marketplace, particularly through increased wind and solar PV resources, was able to meet REC demand for Compliance Year 2023 and allow a significant share of Obligated Entities the opportunity to bank RECs for future Compliance Years.

In the coming year, the PUC will continue to monitor the regional renewable energy marketplace and the State's continued ability to achieve its established targets in a just and reasonable manner.

---

<sup>62</sup> The PUC publishes a monthly public report indicating the status of RES applications. The report can be accessed here: <https://rhodeislandres.com/application-status-report/>.

## Appendix 1: 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 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, the RES Rules states that the PUC will publish the ACP rate by January 31 of each Compliance Year. For Compliance Year 2023, the ACP rate was \$80.59 per MWh of obligation.

**Table A1.1: Historical Rhode Island ACP Rate**

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
2015	\$67.07
2016	\$67.00
2017	\$67.71
2018	\$68.96
2019	\$70.45
2020	\$71.58
2021	\$72.51
2022	\$75.34
2023	\$80.59
2024	\$83.37
2025	\$86.19

Connecticut, Maine, Massachusetts, and New Hampshire all have similar ACP mechanisms. The Table below shows the 2023 ACP rates used by other New England states for the various REC classes defined in each state.

**Table A1.2: Regional ACP Rates for Compliance Year 2023**

2023 ACP Rates	CT	NH	MA	ME	VT
Class I	\$40	\$61.18	\$40	\$50	\$11.97
Class II	\$25	\$61.18	\$33.06	2	\$71.83
Class III	\$31	\$38.89	N/A	N/A	\$71.83
Class IV	N/A	\$32.72	N/A	N/A	N/A

## Appendix 2: Rhode Island RES 2023 Compliance Summary

Table A2.1: 2023 Compliance Summary by Obligated Entity <sup>63</sup>

Obligated Entity	Retail Sales (from filing)	RES Obligations (MWh)			NEPOOL GIS Certificates				Alternative Compliance Payments		Banked "New" RECs for Future Compliance
	Load (MWh)	21% "New" Obligation	18.5% "New" Obligation Pre-Amendment Contracts	2.0% "Existing" Obligation	"New" RECs	Banked from 2021 or 2022	Total "New" RECs	"Existing" RECs	"New" (MWh)	"Existing" (MWh)	RECs Eligible for 2023 or 2024
<b>Distribution Companies</b>											
The Narragansett Electric Company, d/b/a Rhode Island Energy	3,502,966	735,623	0	70,060	735,843	49,542	789,522	70,060	0	0	49,762
<b>Competitive Suppliers</b>											
Actual Energy Inc.											
Ambit Northeast, LLC											
Archer Energy, LLC											
BP Energy Retail Company, LLC											
Calpine Energy Solutions, LLC											
Champion Energy Services, LLC											
Clearview Electric, Inc.											
Constellation NewEnergy, Inc.											
Devonshire Energy LLC											
Direct Energy Business, LLC ( Assets 37830, 66610)											
Direct Energy Services											
Discount Power, Inc.											
ENGIE Resources LLC											
ENGIE Retail, LLC											
First Point Power, LLC											
Moore Energy, LLC											
MP2 Energy NE LLC											
NextEra Energy Marketing, Aggregated											
NextEra Energy Services Rhode Island, LLC											
North American Power and Gas, LLC											
Public Power, LLC											
SmartEnergy Holdings											
Town Square Energy, LLC											
Viridian Energy, LLC											
XOOM Energy LLC											
<b>Competitive Supplier Subtotal</b>	<b>3,918,931</b>	<b>341,062</b>	<b>424,543</b>	<b>78,390</b>	<b>896,752</b>	<b>22,573</b>	<b>919,325</b>	<b>186,540</b>	<b>7,674</b>	<b>129</b>	<b>153,610</b>
<b>Totals</b>	<b>7,421,897</b>	<b>1,076,685</b>	<b>424,543</b>	<b>148,450</b>	<b>1,632,595</b>	<b>72,115</b>	<b>1,708,847</b>	<b>256,600</b>	<b>7,674</b>	<b>129</b>	<b>203,372</b>

<sup>63</sup> The limited competitive supplier data presented in Appendix 2 is a result of the Commission's confidential treatment of competitive energy suppliers' filings. Information within this Report regarding competitive energy suppliers is presented in a summarized fashion to avoid the potential identification of proprietary business activities.

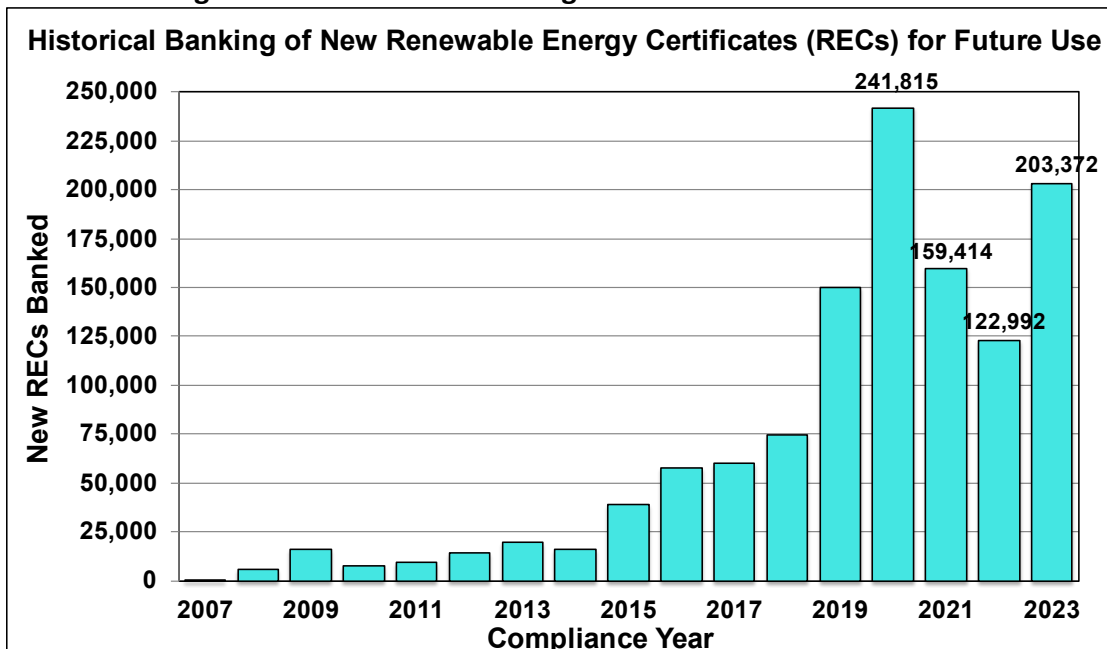
### Appendix 3: Historical Use of ACPs and Banking

The charts below provide additional detail on the breakdown of Alternative Compliance Payments and compliance banking by Rhode Island’s Obligated Entities for the period 2007-2023. Non-compliance is not included.

**Table A3.1: Historic Utilization of Alternative Compliance Payments (ACPs)**

	New		Existing		Total	
	MWh	\$	MWh	\$	MWh	\$
2007	3,563	203,519	227	12,966	3,790	216,485
2008	295	17,281	77	4,511	372	21,792
2009	1	61	1	61	2	122
2010	192	11,699	166	10,114	358	21,813
2011	84,402	5,243,896	3	186	84,405	5,244,083
2012	35,195	2,253,184	2	128	35,197	2,253,312
2013	803	52,412	61	3,981	864	56,393
2014	732	48,429	4	265	736	48,694
2015	18	1,207	9	604	27	1,811
2016	576	38,592	2	134	578	38,726
2017	0	0	1496	101,294	1496	101,294
2018	188	12,964	0	0	188	1,929,363
2019	1	70	1	70	2	141
2020	627	44,881	63	4,510	690	49,390
2021	1,698	123,122	173	12,544	1,871	135,666
2022	5,816	438,177	75	5,572	5,816	444,752
2023	7,674	618,448	129	10,396	7,803	628,844

**Figure A3.1: Historical Banking of New RECs for Future Use**



## Appendix 4: 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.<sup>64</sup> RIE’s “GreenUp” program is just one example.

**Table A4.1 Recent History of Voluntary REC Purchases on Behalf of Rhode Island Customers**

<b>Voluntary New RECs</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Total	111	513	502	964	1,692	4,643	4,402	4,505	4,834	7,033	31,942
<i>RIE</i>	111	513	502	964	1,692	4,643	4,402	4,505	4,834	5,467	4,137
<i>All Competitive Suppliers</i>	0	0	0	0	0	0	0	0	0	1,566	27,805
<b>Voluntary Existing RECs</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Total	2,181	119	718	759	1,007	4	0	13,632	122,250	99,767	105,835
<i>RIE</i>	1,181	119	718	759	1,007	0	0	53	24	964	0
<i>All Competitive Suppliers</i>	1,000	0	0	0	0	4	0	13,579	122,226	98,803	105,835

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.

It is noted that RIE only reports RECs retired by GreenUp suppliers on behalf of GreenUp customers that are Rhode Island-eligible. Most of the RECs retired by GreenUp suppliers to meet sales to GreenUp customers in Rhode Island are from facilities that do not have Rhode Island RES certification, and therefore are not eligible to be used for RES compliance. Since these RECs are not Rhode Island-eligible RECs they are excluded from the totals in Table A4.1.

<sup>64</sup> By comparison, the RES is referred to as the “mandatory” or “compliance” renewable energy market.

## Appendix 5: Current RES Annual Targets

Table A5.1: RES Compliance Year Targets for New and Existing Resources

Compliance Year	Minimum percentage from New Renewable Energy Resources	Minimum percentage from New Renewable Energy Resources for Contracts Exempt from Accelerated RES	Percentage from <i>either</i> Existing <i>or</i> New Renewable Energy Resources
2007	1.0%	N/A	2.0%
2008	1.5%	N/A	2.0%
2009	2.0%	N/A	2.0%
2010	2.5%	N/A	2.0%
2011	3.5%	N/A	2.0%
2012	4.5%	N/A	2.0%
2013	5.5%	N/A	2.0%
2014	6.5%	N/A	2.0%
2015 <sup>a</sup>	6.5%	N/A	2.0%
2016	8.0%	N/A	2.0%
2017	9.5%	N/A	2.0%
2018	11.0%	N/A	2.0%
2019	12.5%	N/A	2.0%
2020	14.0%	N/A	2.0%
2021	15.5%	N/A	2.0%
2022	17.0%	N/A	2.0%
<b>2023</b>	<b>21.0%</b>	<b>18.5%</b>	<b>2.0%</b>
2024	26.0%	20.0%	2.0%
2025	32.0%	21.5%	2.0%
2026	39.0%	23.0%	2.0%
2027	46.0%	24.5%	2.0%
2028	53.5%	26.0%	2.0%
2029	61.5%	27.5%	2.0%
2030	70.0%	29.0%	2.0%
2031	79.0%	30.5%	2.0%
2032	88.5%	32.0%	2.0%
2033	98.0%	33.5%	2.0%
2034	98.0%	35.0%	2.0%
2035	98.0%	36.5%	2.0%
...	...	...	...
2075	98.0%	98.5%	2.0%

<sup>a</sup> After conducting a review pursuant to R.I. Gen. Laws Sec. 39-26-6(d) (prior to the 2016 amendment), in Docket No. 4404, the PUC delayed implementation of the scheduled 1.5% increase in 2015.

<sup>b</sup> R.I. Gen. Laws § 39-26-4(f) exempts power supply contracts executed prior to July 1, 2022, from the accelerated RES. Instead, for retail energy supply consumed pursuant to these contracts, the RES maintains a 1.5% increase annually for the energy consumed pursuant to any such contracts, as was the requirement before the RES was amended in 2022.