Annual Report on New Renewable Resource Portfolio Requirement

Report for 2023 Activity

Submitted to the Joint Standing Committee on
Energy, Utilities and Technology

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Maine Public Utilities Commission
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I. EXECUTIVE SUMMARY

This report, prepared for the Joint Standing Committee on Energy, Utilities, and Technology, provides an overview of the State's Renewable Portfolio Standard (RPS) implementation and compliance during the 2023 calendar year. It highlights the development of renewable resources, compliance outcomes, cost to ratepayers, and areas for improvement.

In 2023, approximately 91% of Class I RECs (Renewable Energy Credit), 90% of Class IA RECs, and 54% of Class II RECs were sourced from Maine facilities. In all three of these categories, RECs primarily came from biomass and hydroelectric generators. Every TREC came from a facility in Maine, however 74% of the total TREC obligation was met using alternative compliance payments (ACPs).

The total cost of compliance with the RPS for 2023 was about $83.2 million or 0.696 cents per kilowatt-hour. Of the total cost, the approximate cost of RECs in each category was:

- Class I: $38.8 million,
- Class IA: $20.4 million,
- Class II: $21.1 million,
- TRECs: $2.9 million.

The average price per REC in each category was:

- Class I: $33.96,
- Class IA: $21.15,
- Class II: $5.93,
- TRECs: $24.14.

Development of Class I, Class IA, and Class II resources is sufficient to meet current requirements, with significant contributions from Maine located resources. However, persistent underdevelopment of thermal resources necessitates reliance on ACPs despite substantial growth of these resources in 2023. More time is needed to determine if policy changes are needed to stimulate growth in thermal energy resources.

The Commission recommends maintaining current incentives for Class I and IA resources. The State should also continue to monitor and assess the slow development of thermal resources and consider policy adjustments if the market remains underdeveloped by the end of 2026. Finally, the State should continue to monitor and assess average REC prices to ensure ACP mechanisms are optimized to balance resource development with cost-effectiveness for ratepayers.

II. INTRODUCTION

During its 2007 and 2019 sessions, the Legislature expanded the State's Renewable Portfolio Standard (RPS). In 2007, the Legislature enacted an Act to Stimulate Demand for Renewable Energy (2007 Act).[1] The 2007 Act added a mandate that specified percentages of electricity that supply Maine's consumers come from Class I renewable resources. Legislation enacted in 2019, An Act to Reform Maine's Renewable Portfolio Standard (2019 Act), created two new categories, Class IA resources and Thermal renewable energy credits (RECs), each with its own increasing requirement schedule. [2]

The Acts contain an annual reporting requirement on the status of Class I and Class IA renewable resource development and compliance with the portfolio requirement. Reports are due on March 31st of each year. The reporting provisions are identical and specify:

> Annual Reports. … the Commission shall submit a report regarding the status of Class I resources in the State and compliance with the portfolio requirement under paragraph A to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters. The report must include, but is not limited to, a description of Class I resources available to meet the portfolio requirement under paragraph A, documentation of the loss of any existing renewable generation capacity in the State, the status of implementation of portfolio requirements under paragraph A, including any suspensions pursuant to paragraph B, and recommendations to stimulate investment in Class I resources.[3]

The reporting provision for Class IA resources further specifies:

> If the commission has reliable information about benefits and costs of the portfolio requirements under paragraph A, over both the short and long terms with respect to the State's economy, environmental quality or electricity consumers, the commission shall include that information in the report.[4]

The Commission includes in this report similar information on Class II and Thermal REC resources and compliance.

Additionally, the 2019 Act allowed customers receiving service at transmission or subtransmission voltage levels who made an election prior to December 31, 2019, to exempt themselves from the Class IA and Thermal REC requirements. This provision specifies that "[t]he commission shall review and report on the use of the election allowed under this subsection as part of its annual report on Class IA resource portfolio requirements under subsection 3-B, paragraph C."[5]

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[1] P.L. 2007, Ch. 403 (codified at 35-A M.R.S. § 3210(3-A)).
[2] P.L. 2019, Ch. 477 (codified at 35-A M.R.S. § 3210)
[3] 35-A M.R.S. §3210(3-A)(C). This passage is identical to 35-A §3210(3-B)(C) except that references to Class I are instead to Class IA.
[4] 35-A M.R.S. § 3210(3-B)(C).
[5] 35-A M.R.S. § 3210(10)

This report is based on the most recently filed Competitive Electricity Provider (CEP) annual compliance reports, which were filed in July 2024 for calendar year 2023. Therefore, this report generally presents information on implementation and compliance with the portfolio requirement for calendar year 2023.

III. BACKGROUND

A. Portfolio Requirements

Maine's RPS consists of four categories: Class I resources, Class IA resources, Class II resources, and Thermal RECs. Each category has its own percentage requirement in each calendar year. The annual percentage requirements for each resource category can be found in Appendix A. The four resource categories are described in detail below.

1. Class I resources

The 2007 Act specifies the resource type, capacity limit and the vintage requirements for the Class I resource requirement. A new renewable capacity resource used to satisfy the Class I portfolio requirement must be of the following types:

- fuel cells;
- tidal power;
- geothermal installations;
- hydroelectric generators that meet all state and federal fish passage requirements;
- biomass generators that are fueled by wood, wood waste or landfill gas;
- anaerobic digestion of by-products of waste from animals or agricultural crops, food or vegetative material, algae or organic refuse;
- solar power installations; or
- wind power installations.

In addition, except for wind and solar power installations, the generating resource must not have a nameplate capacity that exceeds 100 MW. Moreover, the resource must satisfy one of four vintage requirements. These are specified under 35-A M.R.S. § 3210(2)(B-4) as:

1) Having an in-service date after September 1, 2005;
2) An addition to an existing facility after September 1, 2005;
3) Renewable capacity that has not operated for at least two years or was not recognized as a capacity resource by the New England Independent System Operator (ISO-NE) or the Northern Maine Independent System Administrator (NMISA) and has resumed operation or has been recognized by the ISO-NE or NMISA after September 1, 2005; and
4) Renewable capacity that has been refurbished after September 1, 2005, and is operating beyond its useful life or employing an alternate technology that significantly increases the efficiency of the generation process.

2. Class IA resources

The 2019 Act added Class IA resources to the RPS. Class IA resources are a subset of Class I resources consisting of those resources that qualify as "new" under paragraphs 1, 2, and 4 but exclude those that qualify under paragraph 3 of 35-A M.R.S. § 3210(2)(B-4).

3. Class II resources

Maine's original restructuring legislation, which became effective in March 2000, included an eligible resource portfolio requirement.[6] The eligible resource portfolio requirement, now referred to as Class II, mandated that each retail competitive electricity supplier meet at least 30% of its retail load in Maine from "eligible resources." Eligible resources are defined in statute as either renewable resources or efficient resources. Renewable resources are defined in statute as fuel cells, tidal power, solar arrays, wind power, geothermal installations, hydroelectric generators, biomass generators, and municipal solid waste facilities. Renewable resources may not exceed a production capacity of 100 megawatts. Efficient resources are cogeneration facilities that were constructed prior to 1997, meet a statutory efficiency standard and may be fueled by fossil fuels.

4. Thermal RECs

The 2019 Act added a thermal REC requirement to the RPS. A thermal REC is equivalent to one megawatt (MW) of electricity and represents 3,412,000 British thermal units (BTU). Thermal energy that may be used to generate thermal RECs comes from heat, steam, hot water, or another form produced directly by a facility using sunlight, biomass, biogas or liquid biofuel or produced as a byproduct of electricity generated by a Class I or Class IA resource. The facility must have begun operation after June 30, 2019. The energy must be delivered to an end user by an auditable means and be used to meet a need of the end user that would otherwise be met using another energy source.

B. Implementing Rule

Chapter 311 of the Commission's rules implements the State's RPS.[7] The implementing rule establishes a certification process that requires generators to pre-certify facilities for Class I, Class IA, or thermal RECs and provides for a Commission determination of resource eligibility on a case-by-case basis.[8] The rule also specifies that the Commission may revoke a certification if there is a material change in circumstance that renders the generation facility ineligible. Under the rules, a generator does not have to be located in Maine to be eligible as long as its power is used to serve load in New England.

In accordance with statute, the rule includes an alternative compliance mechanism that allows suppliers to make an alternative compliance payment (ACP) into the Energy Efficiency and Renewable Resource Fund in lieu of compliance with the portfolio requirement. The ACP rates vary by category. For the 2023 compliance period, the ACP rates are shown in Table III-1.

[6] 35-A M.R.S. § 3210(3).
[7] Order Adopting Rule and Statement of Factual and Policy Basis, Docket No. 2007-391 (Oct. 22, 2007).
[8] Chapter 311 § 3(C) for Class I and IA, § 5(B) for thermal RECs.

Table III-1: ACP Rates in 2023

	Class I[9]	Class IA[10]	Class II[11]	Thermal[12]
ACP Rate per MWh	$50	$50	$5	$25

The implementing rules allow suppliers to satisfy or "cure" a compliance deficiency in one calendar year during the following calendar year. This cure provision only applies if the supplier has satisfied at least two-thirds of its calendar year requirement. In effect, this allows suppliers to defer up to one-third of their obligation to the following year. Additionally, a supplier may "bank" any excess renewable credits in a calendar year for use in the next calendar year. However, a supplier may not use banked credits to satisfy more than one-third of the requirement in any year.[13]

C. Renewable Energy Credits

Most of the compliance with Maine's portfolio requirements occurs through the purchase of RECs. The New England Power Pool (NEPOOL) has established a REC trading and tracking mechanism referred to as the Generation Information System (GIS). This system allows for the trading of the renewable attribute of a MWh separately from the energy value of the MWh. The GIS serves to significantly simplify compliance by suppliers and verification by regulatory commissions and avoids double counting. Consistent with statutory direction, the Commission requires suppliers in ISO-NE to verify compliance with the portfolio requirement through the GIS.[14] In Docket No. 2017-00050, the NMISA requested and was granted permission to use a tracking and verification system in northern Maine. The tracking and verification system used by NMISA is the North American Renewables Registry (NAR) and

IV. IMPLEMENTATION AND COMPLIANCE

A. Available Resources

The implementing rules require generation facilities to be certified by the Commission as a Class I/IA or Thermal renewable resource before such facilities can be used to satisfy Maine's renewable resource portfolio requirement. Class II resources are not certified by the Commission but self-certify through NEPOOL GIS. Not all of the facilities that have been certified are in service and many of the facilities are also eligible for portfolio requirements in other New

[9] Chapter 311 § 3(D).
[10] Chapter 311 § 3(D).
[11] Chapter 311 § 4(C)(2)
[12] Chapter 311 § 5(C).
[13] Chapter 311 § 8(A) and (B).
[14] The portfolio requirement statute states that the Commission shall allow competitive electricity providers to satisfy the portfolio requirements through the use of RECs if it determines that a reliable system of electrical attribute trading exists. 35-A M.R.S.§ 3210(8). The Commission has determined that the GIS is a reliable system.

England states. Additionally, there are renewable generator facilities physically located in Maine that are not certified as Maine renewable resources.[15]

As of January 2, 2025, there were 565 certified Class I facilities, with a total capacity of approximately 5,436 MW.[16] The Commission currently has nothing to report on the loss of any existing renewable generation capacity in the State.[17]

1. Class I

As shown in Table IV-1 below, RECs from 79 facilities were used by suppliers to comply with the 2023 Class I resource requirement. Eleven of the facilities use biomass as the fuel source, 22 are hydroelectric, 41 use solar, and 5 use wind. Seventy of the facilities are located in Maine, which is an increase from 58 facilities the prior year. These Maine facilities contributed about 91.1% of the total Class I RECs. The largest portion of Class I RECs came from biomass facilities (61.6%), followed by hydroelectric (33.9%), and the remainder came from solar (2.69%) and wind facilities (0.46%).

Table IV-1: Class I Facilities and RECs by Fuel Source and Location

Fuel Source	Location	Number of Generators	Number of RECs	% of Total RECs
Biomass	Connecticut	1	5,578	0.49
	Maine	10	698,588	61.14
Hydroelectric	Connecticut	1	66,963	5.86
	Maine	17	297,088	26.00
	Massachusetts	2	5,115	0.45
	Rhode Island	1	258	0.02
	Vermont	1	18,369	1.61
Solar	Maine	41	30,733	2.69
Wind	Maine	2	14,615	1.28
	New York	3	5,228	0.46
Total		79	1,142,535	100.00

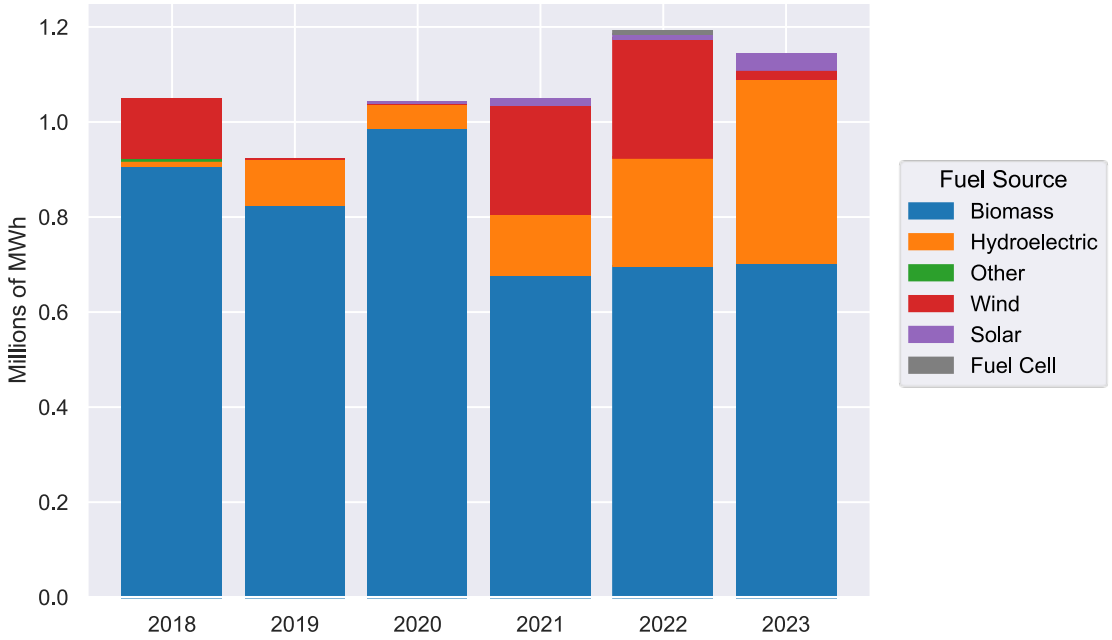
[15] Based on data from NEPOOL-GIS Regulator Reports, 64% of the NEW (since 1/1/2019) solar generation physically located in Maine that registered with NEPOOL GIS only registered their RECs for sale outside the State of Maine.

[16] Information on the RPS Class I Renewable Resource Applications can be found at https://www.maine.gov/mpuc/regulated-utilities/electricity/renewable-programs/rps

[17] In 2024, three RPS certified solar facilities requested that their certification be revoked because they had not ever marketed or sold Maine RECs and had no plans to do so in the future.

Figure IV-1 below shows how the fuel source mix of Class I RECs has changed over the last 6 years. The share of Class I RECs from biomass resources has declined over this time with more coming from hydroelectric and solar resources. The percentage of RECs coming from wind facilities has fluctuated over the last 6 years.

Figure IV-1: Class I REC Fuel Source Mix, 2018-2023



2. Class IA

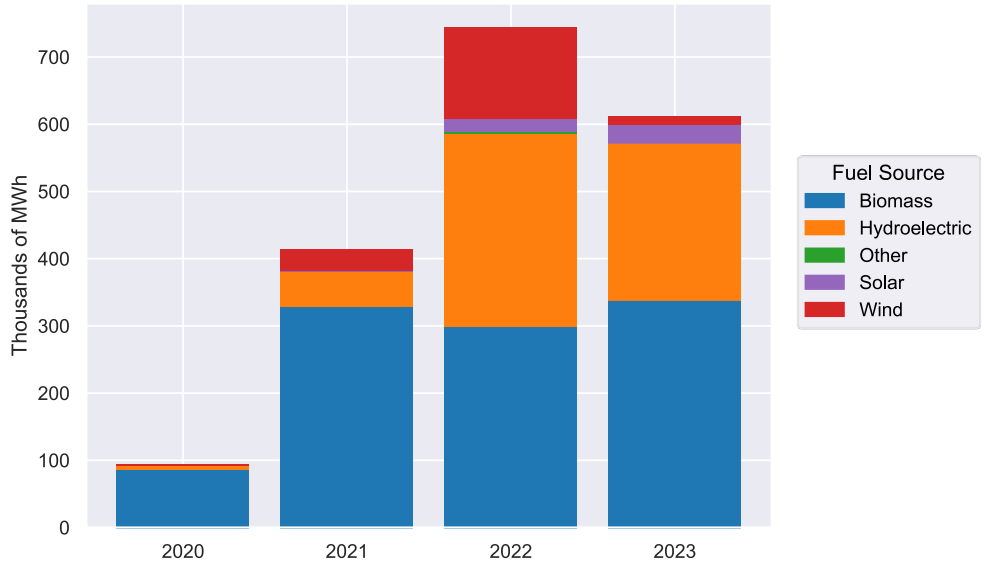
As Table IV-2 below shows, RECs from 75 facilities were used by suppliers to comply with the 2023 Class IA resource requirement. Thirteen of the facilities use biomass fuel, 20 are hydroelectric, 39 use solar, and 3 use wind. Sixty-seven of the facilities used to generate Class IA RECs in 2023 are located in Maine which is an increase from 48 the prior year. Maine facilities contributed 90% of Class IA RECs. The largest share of REC's came from biomass facilities (55.7%), followed by hydroelectric facilities (38.3%), solar (4.5%), and wind facilities (1.4%).

Table IV-2: Class IA Facilities and RECs by Fuel Source and Location

Fuel Source	Location	Number of Generators	Number of RECs	% of Total RECs
Biomass	Maine	12	334,956	54.90
	New Hampshire	1	4,805	0.79
Hydroelectric	Connecticut	1	19,633	3.22
	Maine	15	186,355	30.54
	Massachusetts	1	6,915	1.13
	New Hampshire	2	12,162	1.99
	Vermont	1	8,853	1.45
Solar	Maine	39	27,312	4.48
Wind	Maine	1	566	0.09
	New York	2	8,602	1.41
Total		75	610,159	100.00

Shown below in Figure IV-2, the fuel source mix of Class IA RECs has changed over the last 4 years since the category's inception. Most Class IA RECs continue to come from biomass and hydroelectric resources. While the contribution of solar resources has been growing over this period, it still contributes a relatively small portion of Class IA RECs. Class IA RECs coming from wind generators grew until 2022 but dropped in 2023.

Figure IV-2: Class IA REC Fuel Source Mix, 2020-2023



3. Class II

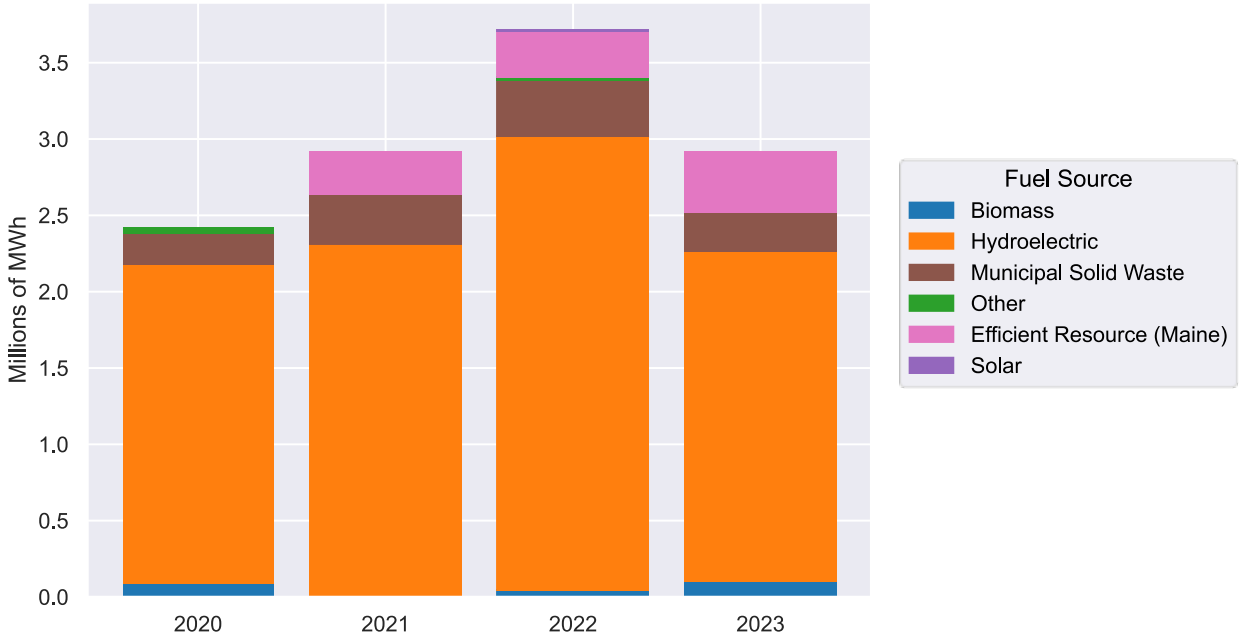
Table IV-3 shows the mix of resources used to satisfy Maine's Class II renewable resource portfolio requirement during 2023. Forty-six of the 83 facilities are located in Maine and contributed 54.1% of Class II RECs. Most of the Class II RECs in 2023 were contributed by hydroelectric generators (74.2%). Efficient Resource generators contributed 13.4%, Municipal Solid Waste generators contributed 8.7%, and Biomass generators contributed 3.8%.

Table IV-3: Class II Facilities and RECs by Fuel Source and Location

Fuel Source	Location	Number of Generators	Number of RECs	% of Total RECs
Biomass	Maine	1	102,055	3.50
	New Hampshire	1	4,958	0.17
Efficient Resource (Maine)	Maine	4	15,924	0.55
	Massachusetts	1	374,231	12.84
Hydroelectric	Connecticut	4	21,033	0.72
	Maine	39	1,277,074	43.83
	Massachusetts	6	110,944	3.81
	New Brunswick	2	105,796	3.63
	New Hampshire	10	107,053	3.67
	Quebec	7	416,479	14.29
	Vermont	4	123,945	4.25
Municipal Solid Waste	Maine	2	180,945	6.21
	Massachusetts	1	255	0.01
	New Hampshire	1	73,095	2.51
Total		83	2,913,787	100.00

Figure IV-3 below shows the change in the fuel source mix of Class II RECs over the last 3 years. Hydroelectric resources have contributed the majority of Class II RECs for all 3 years. Trash-to-energy resources have contributed a small but growing share. RECs from Municipal solid waste resources eligible for the 300% multiplier have been steady.

Figure IV-3: Class II REC Fuel Source Mix, 2020-2023



4. Thermal

The Thermal REC requirement began in calendar Year 2021. The market for Thermal RECs is still forming, but 2023 saw a significant expansion of potential Thermal REC supply. In 2021, there was one certified facility able to generate and sell Thermal RECs and three by the end of 2022. In 2023, 37 thermal facilities were certified with an additional 12.59 MW-equivalent capacity which more than doubled the existing capacity of 11.2 MW-equivalent in 2022. This brought the total thermal capacity to 23.7 MW-equivalent by the end of 2023.[18]

B. Total Retail Sales, Exemptions, and Obligations

For the 2023 compliance period, CEPs reported a total of 11,214,635 MWh of net retail electricity sales. To obtain the gross sales subject to the RPS requirements, net retail sales must be grossed-up to include line losses. Gross sales are then reduced by any applicable exemptions to obtain the adjusted gross sales subject to the RPS requirements.

[18] NEPOOL GIS State Regulator GIS Generators Report.

Currently, electricity sales to Pine Tree Development Zone (PTDZ) businesses established under Title 30-A and consumer-owned utilities are exempt from all RPS requirements.[19,20] Sales to certain transmission/subtransmission customers and sales under contracts entered into prior to September 19, 2019 are exempt from the Class IA and Thermal requirements.[21] Finally, sales under contracts entered into prior to September 20, 2007 are exempt from the Class I requirement.[22]

In 2023, all exemptions reduced total gross retail electricity sales subject to the RPS by 4.4% for the Class I requirement, 17.8% for Class IA, 0.9% for Class II, and 17.7% for Thermal. The Commission is required to report specifically on the usage of the transmission/subtransmission exemption by CEPs. CEPs claimed exemption of 51,392 MWh (0.4% of gross sales) sold to transmission/subtransmission customers from both the Class IA and Thermal requirements which is about 71% less than the number of sales exempted under this provision the prior year.[23] Exemptions claimed for each category are summarized in Table IV-4 below.

Table IV-4: Exemptions

Exemption Type	**Class I**	**Class IA**	**Class II**	**Thermal**
Consumer-Owned Utility	137,835	137,835	0	137,835
Legacy Contracts	94,739	1,641,292	0	1,632,247
Pine Tree Development Zone	293,839	293,839	102,753	293,839
Transmission/Subtransmission	0	51,392	0	51,392
Total	526,414	2,124,359	102,754	2,115,314

After exempt sales are excluded, the remaining adjusted gross sales are multiplied by the applicable portfolio requirement percentages to obtain the final obligation amounts for the current compliance period. The obligation is the number of RECs that must be obtained to comply with the RPS.

[19] PTDZ sales exempt pursuant to Title 35-A M.R.S. § 3210-E(5). 35-A M.R.S. § 3207 (1) allows COUs to purchase electricity at wholesale which is not subject to the RPS requirements.
[20] Title 35-A § 3210-E (5) (B) also provides an exemption from the RPS requirements for businesses that meet certain employment expansion qualifications and are certified by the Department of Economic and Community Development. To date, no CEPs have claimed this exemption.
[21] Transmission/subtransmission sales exempt pursuant to 35-A M.R.S § 3210 (10). Legacy contract sales entered into prior to September 19, 2019, exempt pursuant to 35-A § 3210 (3-B) and (3-C).
[22] 35-A M.R.S § 3210 (3-A).
[23] The Commission is required to report on the use of the transmission/subtransmission exemption pursuant to 35-A M.R.S § 3210 (10).

Table IV-5 below shows exemptions and obligations for each category of the RPS during the 2023 compliance period.

Table IV-5: Sales, Exemptions, and Obligations Summary

Net Sales (MWh)	11,214,635			
Gross Sales (Including Line Losses)	11,956,880			
	Class I	**Class IA**	**Class II**	**Thermal**
Exemptions	526,414	2,124,359	102,754	2,115,314
Adjusted Gross Sales	11,430,466	9,832,521	11,854,126	9,841,566
Portfolio Requirement	10%	11%	30%	1.2%
Current Obligation	1,143,049	1,081,579	3,556,238	118,098

C. Compliance

The methods of compliance are summarized in Table IV-6. For calendar year 2023, the vast majority of Class I RPS obligation was fulfilled by the retirement of RECs. RECs were used to fulfill 99.96% of the Class I obligation with the remaining 0.04% deferred to the following year. The ACP was not used to fulfill the Class I obligation.

Most of the Class IA RPS obligation was also satisfied using RECs. About 89% of the obligation was met with RECs, and the remaining 11% was deferred to 2024. The ACP was not used to fulfill the Class IA obligation.

About 99.8% of the Class II obligation was fulfilled using RECs, 0.2% was fulfilled using the new Class II ACP option, and the remaining 0.02% was deferred to 2024. This may indicate that the Class II ACP rate is not distorting the market for Class II RECs, however the use of the Class II ACP should be monitored.

Of the total 2023 Thermal REC obligation, only about 26% was fulfilled using RECs and the remaining 74% was fulfilled by an ACP (none of the obligation was deferred). The portion of the Thermal obligation fulfilled by RECs is an increase from 23.2% in 2022.

Table IV-6: Obligation Compliance Summary

	Class I	Class IA	Class II	Thermal
Current Obligation	1,143,049	1,081,579	3,556,238	118,098
Fulfilled by:				
RECs	1,142,535	965,980	3,547,553	30,683
ACP	0	0	8,026	87,414
Deferred	514	115,599	655	0

Note: Fulfillment may not sum up the full obligation due to rounding of individual CEPs' obligations.

D. Cost to Ratepayers

The cost to ratepayers of Maine's resource portfolio requirement is estimated by the cost of compliance reported by suppliers, primarily through their purchase of RECs. The Commission understands that the cost of RECs paid by suppliers to generators and any ACP amount is passed on to ratepayers through their electric supply rates. Therefore, the cost of compliance with the RPS is a cost to ratepayers. During 2023, this cost includes RECs purchased and retired in 2023 and RECs purchased and banked in 2022 then retired in 2023.

Table IV-7: Cost of Compliance Summary

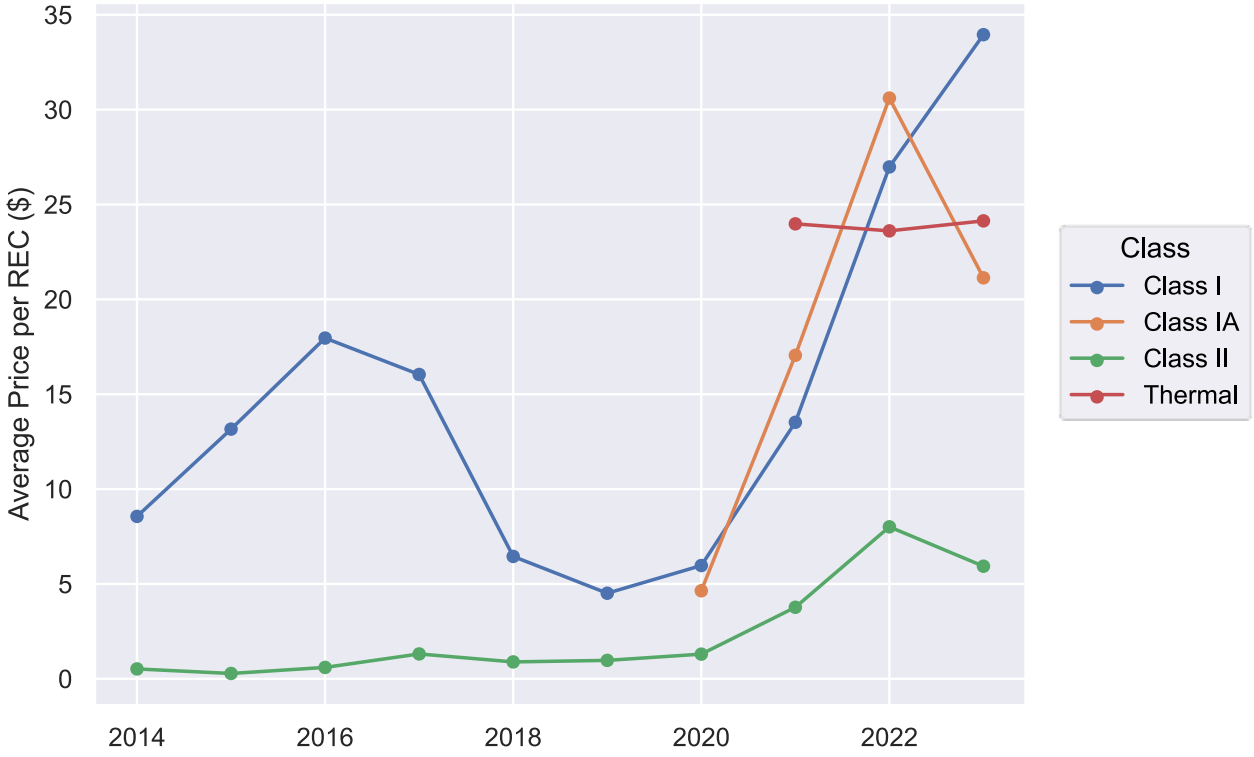
	Class I	Class IA	Class II	Thermal
Minimum Price per REC ($)	3.00	0.00	0.00	24.00
Maximum Price per REC ($)	39.50	40.15	14.97	24.50
Average Price per REC ($)	33.95	21.14	5.93	24.14
REC Cost ($)	38,791,613	20,416,396	21,048,807	740,595
ACP Cost ($)	0	0	40,130	2,185,350
Total Cost ($)	38,791,613	20,416,396	21,088,937	2,925,945
Cost per kWh (cents)	0.324	0.171	0.176	0.024

The total cost of RPS compliance in 2023 was $83,222,891 or 0.696 cents per kWh[24]. This cost includes about $81 million spent on RECs and about $2.2 million spent on ACPs.

[24] The cost per kWh is calculated as total cost divided by total sales including line losses. It is possible that large customers that are exempt from the RPS may negotiate supply contracts that specifically exclude the costs of RPS compliance from their supply rate. If this were the case, the reported cost of compliance per kWh would be understated. However, the Commission has no direct knowledge of the content of these contracts.

Figure IV-4 below shows the change in the average cost of RECs paid by suppliers over the last ten years. The average price of Class I RECs has continued to climb since 2019 with an increase of $6.98 (about 26%) from 2022. The average price of Class IA RECs dropped for the first time with a decrease of $9.46 (about 31%) from 2022. Class II average REC prices also decreased from its high in 2022 by $2.08 (about 26%). The average price of Thermal RECs increased slightly by $0.53 (about 2.2% from 2022) in 2023 but remained close to its 2021 introductory year average price. Thermal REC prices will likely remain high, close to the ACP price of $25, in the near future due to slow development of thermal energy resources and the increasing percentage requirement.

Figure IV-4: Average REC Price by Class, 2011-2023



E. Portfolio Requirement Percentage Suspension

The Acts allow the Commission to suspend scheduled percentage increases in the Class I and Class IA portfolio requirements if it finds that investment in new renewable resources has not been sufficient for suppliers to satisfy the requirement, the requirement has burdened electricity customers without providing the benefits from new renewable resources, or that there has been an overreliance on the ACP. As specified above, the vast majority of the compliance with the Class I and Class IA portfolio requirements occurred through the purchase of RECs at an average REC cost that is substantially less than the alternative compliance payment. Thus, renewable resource development and operation has been sufficient for suppliers to satisfy the Class I and IA portfolio requirement without reliance on the ACP. Accordingly, the Commission did not act to suspend percentage increases in the portfolio requirement in 2023.

While there is no statutory allowance for the Commission to suspend the scheduled percentage increase for Thermal RECs, there does appear to be a substantial shortage of them on the market, which is driving the high percentage of the Thermal REC requirement being met by the ACP.

F. Recommendations for Resource Development

Maine's portfolio requirement operates in conjunction with the portfolio requirements in the other New England states.[25] The ISO-NE interconnection queue, which includes proposed generation projects that have initiated the review process for interconnection to the regional grid, includes a significant number of renewable projects.[26] Although all of the projects in the queue may not be developed, there appears to be adequate renewable resource development in the region to meet the requirements of the RPS.

The Commission makes no recommendations regarding mechanisms to stimulate investment in Class I/IA renewable resources beyond those that already exist on the state, regional, and federal levels.

Thermal resources have been in short supply since the Thermal REC requirement was established. There was a significant expansion of thermal REC capacity in 2023, but not enough to relieve the supply shortage. It may still be too early to determine whether or not existing incentives to develop Thermal resources are sufficient to keep pace with the growing requirement. If development of Thermal resources remains slow, the Commission will consider recommendations for stimulating growth in the category.

G. Benefits and Costs of Class IA Requirement

In 2023, the Legislature enacted An Act to Promote Economic Reuse of Contaminated Land Through Clean Energy Development[27] which included a provision that the responsibility for reporting on the impacts of the RPS including the benefits and costs on greenhouse gas emissions and the State's economy be given to the Governor's Energy Office (GEO) and changed the frequency of that reporting from every 5 years to every 3 years. The GEO report was completed in March 2024.[28]

V. CONCLUSION

During 2023, Maine's electricity suppliers complied with the State's Class I/IA, Class II and Thermal portfolio requirements. The total cost of compliance was $83,222,891 or 0.696 cents per kWh. The cost of compliance was about $38.8 million for Class I, $20.4 million for Class IA, $21.1 million for Class II, and $2.9 million for Thermal. For each of Class I, Class IA, and Class II, suppliers' obligations were mostly fulfilled by purchasing and retiring RECs which supported

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

[26] MW values represent net generating capacity and are obtained from ISO New England Interconnection Request Tracking Tool at https://www.iso-ne.com/system-planning/transmission-planning/interconnection-request-queue In calculating these numbers, projects listed with an operational or withdrawn date before 3/1/2023 have been removed.

[27] P.L. 2023, c 321.; 35-A M.R.S. § 3210(11).

[28] https://www.maine.gov/energy/sites/maine.gov.energy/files/inline-files/Maine-RPS-Impacts-and-Procurement-Policy-Options-Report-Master-FINAL.pdf

renewable generation facilities. For Thermal RECs, suppliers fulfilled their obligations mostly by ACPs.

The growth of Class IA resources appears to have kept pace with the rising Class IA requirement as evidenced by the average price paid for RECs remaining well below the ACP rate and, in fact, declining in 2023. A decrease in the market price of Class II RECs and very little use of the ACP indicates there is an adequate supply of these RECs. However, with a static, perhaps dwindling, pool of Class II resources it is possible that a shortage of Class II RECs could occur.

Thermal resources are growing slowly and there are substantially less Thermal RECs than are required to fulfill supplier's obligations. Compliance with the Thermal requirement is expected to continue to mostly take the form of ACPs rather than RECs, but the prevailing market price just below the ACP rate should provide incentive for growth in this category. It may take longer for development of Thermal resources to take off. Existing incentives should be left unchanged before additional steps are taken to further stimulate development of Thermal resources.

APPENDIX

RPS Requirements by Calendar Year

Calendar Year	Class I	Class IA	Class II	Thermal RECs	Total Renewable Portfolio
2008	1%		30%		31%
2009	2%		30%		32%
2010	3%		30%		33%
2011	4%		30%		34%
2012	5%		30%		35%
2013	6%		30%		36%
2014	7%		30%		37%
2015	8%		30%		38%
2016	9%		30%		39%
2017	10%		30%		40%
2018	10%		30%		40%
2019	10%		30%		40%
2020	10%	2.50%	30%		43%
2021	10%	5%	30%	0.40%	45%
2022	10%	8%	30%	0.80%	49%
2023	10%	11%	30%	1.20%	52%
2024	10%	15%	30%	1.60%	57%
2025	10%	19%	30%	2.00%	61%
2026	10%	23%	30%	2.40%	65%
2027	10%	27%	30%	2.80%	70%
2028	10%	31%	30%	3.20%	74%
2029	10%	35%	30%	3.60%	79%
2030	10%	40%	30%	4.00%	84%
For each year thereafter	10%	40%	30%	4.00%	84%