



2020 ANNUAL COMPLIANCE REPORT

EXECUTIVE SUMMARY

RENEWABLE ENERGY PORTFOLIO STANDARD (RPS) ALTERNATIVE ENERGY PORTFOLIO STANDARD (APS) CLEAN PEAK ENERGY STANDARD (CPS) CLEAN ENERGY STANDARD (CES)

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Department of Energy Resources
Executive Office of Energy and Environmental Affairs
Commonwealth of Massachusetts**

Executive Summary

The Renewable Energy Portfolio Standard (RPS) is a statutory obligation created by the Electricity Restructuring Act of 1997 and activated by regulations in 2002. The statute was first revised by the Green Communities Act of 2008, which identified the original RPS as Class I, added a second class of RPS, Class II, and created the Alternative Energy Portfolio Standard (APS). The RPS and APS statutes were further modified by the Competitively Priced Electricity Act of 2012,¹ the Renewable Thermal Act of 2014,² the Energy Diversity Act of 2016,³ and the Act to Advance Clean Energy of 2019.⁴

The Clean Energy Standard (CES) was successfully introduced in 2018 and complements the other portfolio standards to ensure that the greenhouse gas emission reductions set by the Commonwealth can be achieved. The CES is administered by the Massachusetts Department of Environmental Protection (MassDEP).⁵

The Clean Peak Standard (CPS), created under An Act to Advance Clean Energy⁶ which was signed into law in August 2018, provides incentives to clean energy technologies that can supply electricity or reduce demand during seasonal peak hourly demand periods. In 2020, the CPS had its first positive minimum standard of 1.5%.

The RPS, APS, CPS, and CES regulations require Massachusetts Retail Electricity Suppliers to obtain, each year, a certain percentage of their retail customers' electricity supply from resources qualified under each portfolio standard. The RPS, APS, CPS, and CES requirements do not apply to municipal light plants.

Overall, the RPS, APS, CPS and CES programs operated successfully in 2020. In part the success was the result of a lower load obligation, and therefore a lower portfolio standard obligation, due to the reduction in business demand related to the Covid-19 pandemic.

Load Obligation

In 2020, the load obligation was 43,673,802 MWh, a 2.3% decrease from 2019 (44,705,757 MWh), and the lowest load obligation on record since the RPS program began in 2003.

In accordance with MassDEP's Clean Energy Standard (310 CMR 7.75 (9)(b)4), the reported 2020 load (43,673,802 MWh) was equivalent to 94% of the reported 2018 load (46,409,960MWh).

Three Retail Electricity Suppliers did fail to meet their 2020 compliance requirements, two of which had also been non-compliant in 2019. The obligations of the non-compliant suppliers accounted for approximately 2% of the total obligation of the RPS Class I. In 2021, the Department of Energy Resources (DOER) incorporated financial security provision into its regulations as a protection mechanism for rate payers should Retail Electricity Suppliers fall into non-compliance.

Renewable Energy Certificates (RECs)

To achieve RPS, APS, CPS and CES compliance, each Retail Electricity Supplier must obtain enough renewable generation certificates to satisfy its minimum standard obligation or make an Alternative Compliance Payment for enough credits to satisfy the minimum standard obligation.

¹ Chapter 209 of the Acts of 2012

² Chapter 251 of the Acts of 2014

³ Chapter 188 of the Acts of 2016

⁴ Chapter 227 of the Acts of 2019

⁵ In agreement with the Massachusetts Department of Environmental Protection, DOER's annual report on RPS and APS will also serve as the Annual Clean Energy Resource Report as specified in 310 CMR 7.75(9)(b), Clean Energy Standard

⁶ [An Act to Advance Clean Energy](#)

Each renewable generation certificate represents the renewable generation attributes of one MWh of electricity generated during the Compliance Year by a qualified Generation Unit (however, the MWh value of some SREC II generation is discounted by SREC factors related to project size or type of location, and Clean Peak Energy Certificates may represent more or less than one MWh of generation because of locational, seasonal, or peak hour factors and the vintage of the generation unit.

Under the APS program, an Alternative Energy Certificate (AEC) represents either the MWh-equivalent of the fuel savings in thermal energy or the direct Useful Thermal Energy generated from APS-qualified facilities as determined by the APS regulations for each specific alternative energy technology.

In 2020, no separate qualifying generators were eligible to produce stand-alone Clean Energy Credits (CECs). Therefore, RPS Class I RECs were used to meet the meet the CES obligation.

Eligible Resources and Fuel Types

Eligible RPS Class I resources include post-1997 renewable generation units located in New England or in adjacent electricity control areas⁷, while eligible resources for RPS Class II - Renewable include pre-1998 renewable generation units (primarily small hydropower) located in New England or in adjacent electricity control areas. The following fuel types are eligible for RPS Class I and RPS Class II:

- solar photovoltaic or solar thermal;
- wind;
- ocean thermal, wave or tidal energy;
- fuel cells using an eligible RPS Class I or II renewable fuel;
- landfill methane gas;
- hydroelectric;
- low-emission, advanced biomass power conversion technologies using an eligible biomass fuel such as wood, manufactured biomass fuel, by-products or waste from animals or agricultural crops, food or vegetative material, algae, organic refuse derived fuel, anaerobic digester gas and other biogases that are derived from such resources;
- marine or hydrokinetic energy; and
- and geothermal energy.

Eligible Class II waste-to-energy generation units must be pre-1998 waste-to-energy plants located in Massachusetts which meet certain MassDEP recycling requirements.

Eligible APS resources include air and ground source heat pumps, solar thermal or solar thermal electric energy, woody biomass, liquid biofuels, biogas, fuel cells, and waste-to-energy thermal in addition to Combined Heat and Power (CHP).

Eligible CPS resources included RPS Class I resources qualified after January 1, 2019, qualified RPS resources paired with battery storage, stand-alone batteries, and demand response assets.

Certificate Production

The total number of RPS Class I RECs generated (net of SRECs and SREC IIs) equaled 9,896,519 MWh, which represents a growth rate of 18.4%, a slight decline from the 19.8% increase in 2019. Some of these RECs also qualified for portfolio standards in other jurisdictions and may have been used for compliance in other New England states (mostly Connecticut, New Hampshire, and Rhode Island). In addition, some RECs were used to

⁷ These include New York (NYISO), New Brunswick, Nova Scotia, Prince Edward Island and Quebec.

meet voluntary green product requirements that exceed RPS requirements.⁸ In addition, RPS Class I RECs can also be used to meet the CES obligation.

Compliance

RPS Class I

An adequate supply of RECs existed in the market to meet the RPS and CES obligations with suppliers banking 256,982 Class I RECs, the lowest in five years.

Overall, wind resources accounted for 48.9% of the total RPS Class I REC generation (including SRECs and SREC IIs) while solar photovoltaic arrays accounted for 39.9%

Solar Carve-Out (SCO)

The SCO market was slightly over-supplied in 2020 with suppliers banking 42,190 SRECs, the highest in five years. Participants also provided 23,864 SRECs to the clearinghouse auction, also the highest in five years. ACP receipts for SCO fell to \$438,528 in 2020 from \$9,642,672 in 2019.

Solar Carve-Out II (SCO II)

The SCO II program was more in-balance in 2020 than previous years with suppliers banking 40,299 SREC IIs, the highest in five years. ACP receipts fell to \$3,807,168 in 2020, down from \$15,572,070 in 2019.

RPS Class II Renewable and RPS Class II Waste-to-Energy

The RPS Class II Renewable Energy program was comparatively more out of balance than previous years because of the increase in the minimum standard from 2.6884% in 2019 to 3.2056% in 2020. ACP credits increased from \$364,324 in 2019 to \$4,037,699 in 2020.

The RPS Class II waste-to-energy program was mostly in balance.

Alternative Portfolio Standard (APS)

The APS market was over-supplied. Only 265 ACP credits were utilized for compliance, totaling ACP payments of \$6,228, down from \$205,394 in 2019. Suppliers banked 477,619 AECs, a record.

Clean Peak Energy Standard (CPS)

The CPS program was under-supplied. However, 76% of the obligation was met with exempt load credits. ACP credits amounted to 146,935 MWh totaling \$6,612,075 in ACP receipts.

⁸ Class I RECs retired as “Voluntary Renewable Energy (VRE) purchases,” will reduce the number of emissions allowances that can be sold in the RGGI Auction for a future year which will serve to reduce the regional emissions allowance cap for non-renewable thermal power plants. See 225 CMR 13.14, DOER CO2 budget trading program auction regulation. More information about RGGI can be found at <http://www.rggi.org/>.

Clean Energy Standard (CES)

The minimum standard was 20% in 2020 and exemption of load was not allowed. All CECs used to meet the CES obligation were eligible RPS Class I RECs. Only 2,825 ACP credits were used for \$151,646 in ACP receipts, down from \$1,250,752 in 2019.

Supplier Compliance

Sixty-two (62) Retail Electricity Suppliers (including the three state-regulated investor-owned utilities) served Massachusetts retail customers in 2020 (see Tab 13. Suppliers), a decrease of two from 2019. Fifty-nine (59) suppliers fully discharged their compliance obligations through the purchase of the required number of renewable certificates or by making ACPs. Three suppliers were non-compliant as noted above (see Tab 14. Non-Compliance).

A summary of the 2020 compliance is shown in the table below.

Summary of Compliance, 2020

RPS/APS Class	Net Minimum Standard*	Net Total Obligation (MWh)	Renewable Certificates Used to Meet Obligations (MWh)	ACP Credits Used to Meet Obligations (MWh)	Alternative Compliance Payments (\$)
RPS CLASS I (NET)	10.43%	4,554,489	4,509,034	643	\$ 46,020
RPS SCO *	1.61%	703,774	694,189	1,142	\$ 438,528
RPS SCO II *	3.77%	1,645,162	1,613,833	12,048	\$ 3,807,168
RPS CLASS II Renewable	3.21%	1,400,048	1,246,261	137,477	\$ 4,037,699
RPS CLASS II Waste-to-Energy	3.50%	2,183,727	1,499,756	10,497	\$ 123,340
APS	5.00%	2,161,580	2,161,580	265	\$ 6,228
CPS	0.41%	179,230	31,189	146,935	\$ 6,612,075
CES **	4.19%	1,831,367	1,808,026	2,825	\$ 151,646
TOTAL***	21.0319%	14,659,377	13,563,868	311,832	\$ 15,222,703

* Solar carve out requirements are subsets of the overall RPS Class I requirement of 16%

** CES total obligation is 20%. The RPS Class I obligation counts towards meeting the overall obligation making the net minimum standard 4%.

*** Total number of certificates and ACP credits may not exactly match total obligation due to 1) rounding of individual obligations, and 2) the non-compliance of three suppliers (See Tab 14). Certificates Used to Meet Obligations includes banked certificates from prior compliance years.