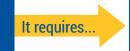


Understanding the Massachusetts Renewable Portfolio Standard (RPS)

Massachusetts' RPS is an economic engine & important climate change strategy.

What is an RPS: A requirement that a minimum percentage of electricity be supplied by eligible renewable resources. The foundation for clean energy markets, RPS is a policy tool proven to support successful, cost effective renewable energy development at the state level.

The MA **Renewable Portfolio Standard** (RPS) is a law.



All electricity suppliers must source 12% of their supply from "Class I" renewables in 2017.

The percentage required goes up 1% every year.

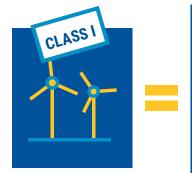
Class I

In Massachusetts, "Class I" means "new" (built since 1997) and includes technologies like solar, wind, and anaerobic digestion.

Massachusetts is one of 29 states and Washington, D.C. with an RPS in place.

As a driver of renewable energy development, MA's RPS helps to:

- Spur local/regional clean energy job growth.
- Promote energy diversity.
- Displace fossil fuels and reduce GHG emissions.
- Stabilize energy prices.



By creating annually increasing demand, more and more renewables must come online so suppliers can meet the mandate.



Renewable Energy Certificates (RECs)

Represent the value of the green attribute associated with clean energy generation and a source of revenue for renewable energy developers.

- Green attribute is separate from electricity generated and is tracked by ISO-NE and DOER.
- 1 MWh = 1 REC
- Electricity suppliers buy RECs to demonstrate compliance with the RPS.
- Failure to comply results in suppliers having to pay a fine, or Alternative Compliance Payment (ACP)
- Renewable developers rely on revenue generated from the sale of RECs to help make projects financeable.



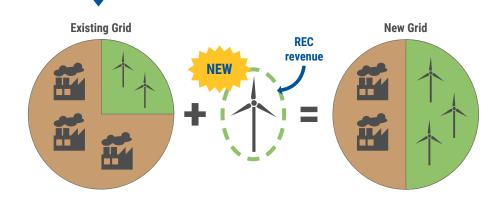
At 12%, the 2017 RPS will mandate that retail electricity suppliers source approximately 5.76 million MWh from Class I renewables - enough electricity to power more than 800,000 Massachusetts homes per year. Assuming a similar mix of resources as in recent years, this amount of Class I supply could be provided by a combination of:

- 1,223 MW of wind;
- 644 MW of solar:
- 166 MW of landfill gas;
- and 107 MW of biomass

MA's RPS requirement in 2017 is enough renewable energy to power more than 800,000 MA homes.

Massachusetts' RPS is integral to GWSA compliance.

Global Warming Solutions Act (GWSA): Mandates that Massachusetts reduce economy-wide emissions 25% by 2020 and 80% by 2050, relative to 1990 levels. Grid decarbonization is the most cost-effective way to reduce GHG emissions. Accelerating clean energy development in MA and New England is essential if climate obligations are to be met, especially as we begin to electrify transportation and space heating.



Strengthening the RPS is **necessary**, **doable**, and **beneficial** for the economy, the environment, to consumers, and for public health.

	Base Case	2% Increase	3% Increase
Creates Jobs	9	+24k	+45k
Lowers Wholesale Electricity Prices	♣ 2%/yr	♦ 1.3%/yr	♦ 4.2%/yr
Reduces Emissions	€ 60%	1 66%	1 71%
Diversifies Energy Sources	14.6 GW	17.0 GW	19.2 GW

Source: NECEC

50% Renewable by 2030: Analysis supports an increase in the RPS of 3% per year, which is about equivalent to 50% Class I by 2030. A 3% per year increase would:

- Help drive new, incremental renewables by 2030 (in addition to OSW required under 2016 energy bill, solar through SMART, and supply procured through 3-state joint procurement);
- Decrease wholesale electricity prices.
- Drive job growth in New England.
- Displace fossil fuels and reduce GHG emissions.
- Have only a modest impact on monthly bills. Depending on level of RPS increase, monthly electric bills for residential ratepayers in Massachusetts would rise between \$0.15 and \$2 per month relative to the current RPS.