

**Existing Policy**

**RENEWABLE PORTFOLIO STANDARD (RPS)**

**Policy summary:** The Massachusetts RPS was created as part of electricity restructuring in Massachusetts in 1997 and then expanded in the Green Communities Act of 2008<sup>38</sup>. The RPS requires retail electricity suppliers — both distribution companies and other retail suppliers — to buy a percentage of their portfolio of electricity sales from eligible resources.

Economy-wide GHG emissions reduced 2020	1.1 million metric tons, 1.2%
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**Clean energy economy impacts:** Over the period from 2010 to 2020, the Massachusetts RPS classes will stimulate \$360 million in annual investment, or \$3.9 billion in cumulative investment in clean power generation that would have not occurred on its own. This is expected to create approximately 900 full-time construction jobs throughout that period.

**Rationale:** Because of low prices for fossil fuels, the lack of a market price for the negative impacts of pollution from fossil fuels (“externalities”), and other market barriers, the private market is not, on its own, supplying as much renewable, low-carbon power as society needs. By creating market demand, Renewable Portfolio Standards drive investments in renewable energy supply.

**Policy design:** The Massachusetts RPS includes “technology banding” in classes, with the Green Communities Act expanding the number of renewable classes to the following: Class 1 — New Renewables; Class 1 — Solar Carve-Out; Class 2 — Existing Renewables; and the Alternative Portfolio Standard (APS). Suppliers meet their commitments by buying Renewable Energy Credits (RECs), the accounting mechanism for ensuring that every unit of renewable energy generated is counted exactly once in terms of state requirements. As a result of the Green Communities Act, the RPS will require 15 percent of electricity supply to be from new Class 1 renewable resources, such as wind, solar, small hydro and eligible biomass and anaerobic digestion, by 2020. In total, all classes will account for 27 percent of electricity supply in that year.

**GHG impact:** 1.1 million tons of emissions will be avoided in 2020, from the expansion of the RPS due to the Green Communities Act, not including the RPS requirements that existed prior to the Act.

**Other benefits:** As with other electric sector policies, the RPS results in reduced burning of fossil fuels and therefore reduced local air pollution and improved public health. For example, a study by the independent National Research Council found that coal use around the country resulted in 20,000 premature deaths annually.<sup>39</sup>

**Cost:** There is a great deal of uncertainty in cost estimates for the RPS, due to unknown future changes in fuel prices, federal policies, and technology. Just in the last three years REC prices have dropped by a factor of three. A more detailed electricity supply study is underway. Although

<sup>38</sup> The GCA’s annual report for 2009 has a more detailed summary and charts at: <http://www.mass.gov/Eoeea/docs/doer/rps/rps+aps-2009annual-rpt.pdf>

<sup>39</sup> Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use, National Research Council. [www.nap.edu/catalog.php?record\\_id=12794](http://www.nap.edu/catalog.php?record_id=12794)

some renewable power is relatively high-cost, the RPS also helps to reduce electricity prices throughout New England, due to the mechanics of the regional electricity market. Power, like many other commodities, is bought and sold both under longer-term contracts and in a “spot” market. The spot market price is set by the most expensive supply needed to meet demand at a particular time. New renewable resources that have low operating costs displace the most expensive supply needed to meet demand, thereby reducing prices for all spot market power and providing savings to all customers.

**Experience in other states:** Twenty-four states have some type of Renewable Portfolio Standard. Key features of successful programs are those which provide transparency, longevity, and certainty to the market. Repeated changes to the program design create concern in the market.

**Legal authority:** RPS authority derives from electricity restructuring statutes from the late 1990s as well as the Green Communities Act.

**Implementation issues:** The RPS (Class I) program compliance began in 2003. After several years in which eligible renewable generation fell short of requirements, and while project development continued to make progress, the program has successfully met its annual compliance obligation with new renewable energy since 2007. In 2009, the minimum standard of 5 percent was met, though an increasing portion of the generation is coming from imports from New York and adjacent Canadian provinces into the New England region.

Since the restructuring of energy markets in Massachusetts in 1997, supply contracts between the electric distribution companies and power generators have typically been for only three months to one year, far too short a period to allow financing of the high capital costs involved in developing renewable generating facilities. This has been a contributing factor in limiting supplies of RPS-eligible renewables in Massachusetts. To rectify this problem, the Green Communities Act required that the distribution companies solicit proposals from renewable energy developers and enter into cost-effective long-term contracts for at least a limited amount of renewable energy, in order to facilitate the financing of renewable energy generation. Such contracts can assist renewable energy developers in obtaining financing by providing assurance of revenues from sales of RECs and electricity over a number of years.

**Uncertainty:** Siting constraints both for generation nearby or for transmission to remote resources could constrain the renewable supply. In addition, restructured markets like New England may lack parties to enter into long-term power purchase agreements that are often required for financing of renewable energy projects, particularly at a time of low natural gas prices.