

Clean Energy Standard (CES)

Policy Summary: Over the past decade, the electricity portfolio serving Massachusetts became much cleaner. The major changes came from the substitution of natural gas for coal and oil, and the tripling of imports of hydro power from Canada into New England. This demonstrated that technologies that are not eligible for crediting under the Massachusetts *Renewable Portfolio Standard (RPS)* have made a significant contribution to a cleaner electricity grid. They can have an important role to play moving forward.

An additional policy under consideration is a market-based framework that could be used to provide a signal to the electricity market to improve upon the cleaner energy portfolios of the last few years and to provide additional revenue to support investment in transmission projects that can reach large-scale clean energy resources in Canada, northern New England, or other regions (see *Clean Energy Imports*). One such framework under consideration is the Clean Energy Standard (CES), which would require Massachusetts energy suppliers to purchase certificates similar to renewable energy certificates from eligible clean resources. At least initially, the standard would likely focus on large-scale hydroelectric power. Whether CES is necessary to secure additional hydroelectric power depends in large part on whether clean energy resources can be obtained at reasonable cost through other long-term contracting requirements without employing this additional purchase obligation.

The existing RPS fits neatly into this framework as a technology-specific means of meeting the standard.

Clean Energy Economy Impacts: The CES is a market-based framework that could provide market incentives and could enable making investments that otherwise would not occur.

Rationale: The CES would qualify technologies based on an emissions threshold, allowing the market to find the least-cost approach to achieving a cleaner energy portfolio. In addition, it could empower electricity suppliers to manage their portfolios, akin to the CAFE standard for vehicles, offering cleaner products to interested customers to help meet their portfolio targets.

Policy Design: A CES program, similar to the mechanics of the RPS, could be designed to promote a different set of clean energy technologies with retail electricity suppliers required to obtain clean energy credits, where such credits could be generated by new clean energy generators that deliver electricity to ISO-NE for use in Massachusetts. Facilities would qualify based on a technology-neutral emission threshold that would exclude natural gas generators unless carbon emissions were captured and permanently sequestered. While hydroelectric power is the primary short term focus of the CES, the CES could also create a framework for other technologies that could meet the emissions threshold, including next-generation nuclear power or carbon capture and sequestration, if such technologies were to become viable options over the longer term. The policy design could include a study of potential strategies to ensure that new clean energy displaces existing fossil generation, not existing clean energy.

The policy would also build on the tracking system used by RPS to ensure that clean energy developed to serve customers in Massachusetts is appropriately attributed to Massachusetts for the purpose of demonstrating compliance with the GWSA. However, since statutory requirements that mandate long-term contracts have proved critical to RPS implementation, it is not clear that a CES absent additional legislative authority for long term contracts would incent development of large-scale clean energy resources.

GHG Impact: Emission reductions in 2020 are estimated in the *Clean Energy Imports* policy description.

Other Benefits: Like other electric sector policies, by replacing polluting power plants with clean ones, a CES might serve as a catalyst to further reduce the emissions of harmful pollutants. These reductions would have public health and environmental benefits. A CES might furthermore assist the region in becoming less reliant on imported fossil fuels and increase energy diversification.

Cost: Suppliers would be required to either purchase certificates from eligible resources or make alternative compliance payments, which likely impact energy costs. A CES could present an opportunity to acquire clean energy resources at a lower cost than other existing clean energy alternatives that may be available.

Experience in Other States: The CES would build on the experience of Massachusetts and other states with similar programs that address renewable and alternative energy.

Legal Authority: The draft CES would be implemented by the Massachusetts Department of Environmental Protection (MassDEP) under the following authority: M.G.L. c. 111, sections 142A and 142B, and M.G.L. c. 21N.

Policy Website: <http://www.mass.gov/eea/agencies/massdep/climate-energy/climate/ghg/ces.html>