

Massachusetts Leads the Nation in Fighting Climate Pollution from Biomass Energy

On August 11, 2022, Massachusetts became the first state in the U.S. to end renewable energy subsidies for electricity from wood-burning biomass power plants, as part of a comprehensive [climate law](#), *An Act Driving Clean Energy and Offshore Wind*.

Massachusetts has a long history of climate leadership. It was one of the first states to set economy-wide greenhouse gas (GHG) emission reduction goals, and one of the first to create a Renewable Energy Portfolio Standard (RPS), requiring a certain percentage of the state's electricity to come from renewable energy. Today, 31 states and the District of Columbia have renewable portfolio standards or clean energy standards.

Massachusetts also continues to lead in fighting climate pollution from biomass energy. In 2012, Massachusetts adopted strict science-based criteria for efficiency and fuels at wood-burning biomass power plants that qualified for its RPS. Now, as the climate crisis calls for bolder action, Massachusetts lawmakers have stepped up and removed woody biomass from the RPS altogether, accelerating the state's commitment to power the grid with clean, renewable electricity.

How this happened was a combination of threat, opportunity, people power, science, and a commitment to achieving real emissions reductions.

Debunking the “Carbon Neutrality” of Biomass Energy

Around 2008, three large wood-burning power plants were proposed in Massachusetts, drawing protest from scientists, citizens, and activists who were alarmed about the impacts these plants would have on forests, air pollution, water resources, and the climate. At the time, Massachusetts considered biomass energy to be “carbon neutral” and renewable, making these plants eligible for lucrative subsidies through the RPS.

Responding to overwhelming public pressure, the Administration of Governor Patrick (D) commissioned a scientific study of the forest and GHG impacts of wood-burning power plants. The resulting “Manomet Study” concluded that not only do biomass power plants emit more CO₂ per unit energy than coal or gas-fired plants, but that the cumulative GHG impact continues to exceed that from fossil fuels for decades to over a century, even assuming forests regrow after being harvested for fuel.

In line with the findings of the study, the state eliminated renewable energy subsidies for electricity-only biomass power plants, restricting payments to efficient combined heat and power (CHP) plants that are projected to show a reduction in cumulative GHG emissions relative to fossil fueled plants over 20 years. The state also enacted new requirements on fuel harvesting to protect forest ecosystems. It took four years and thousands of hours of volunteered time by scientists and activists to secure those regulations.

Regulatory Rollbacks Proposed in 2019

The revised RPS rules were successful in largely ending development of biomass electricity plants in Massachusetts, and impacted plants in other Northeastern states as well that had been receiving lucrative renewable energy subsidies from Massachusetts ratepayers. After being expelled from the Massachusetts RPS, some plants have struggled for additional subsidies to survive, and some have closed down completely. Today only a very small fraction of Massachusetts' renewable energy comes from burning woody biomass. However, that would have changed under proposed RPS amendments advanced in 2019 by the administration of Governor Baker (R).

While there are only two small biomass CHP plants that currently qualify for the Massachusetts RPS, that number was poised to increase as a result of imminent changes to the program advanced by the Baker Administration. The [amendments](#) would have eliminated the 60% efficiency requirement for existing biomass power plants if they burned primarily "non-forest derived residues," expanded the definition of what that would include, eliminated the fuel tracking mechanism for assuring accountability, and rolled back restrictions on harvesting that are designed to protect forest ecosystems. Several biomass power plants across the U.S. Northeast which were too polluting and inefficient to qualify for Massachusetts' RPS would have potentially benefited from these rule changes.

Thousands of individuals testified and submitted comments over the past three years opposing the Baker Administration's plans to roll back the stringent health and environmental requirements for biomass power plants. In 2022, when the regulations were about to go into effect, more than one hundred groups, elected officials, and countless individuals across the state [called on](#) the Massachusetts State Legislature to change the law and end subsidies for woody biomass energy altogether under the RPS. The Legislature responded by including a measure in the climate law that removes woody biomass from the list of renewable electricity sources.

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