

MARBLEHEAD REPORTER

Sustainable Marblehead: Biomass has nothing to do with your waistline

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When you're getting dressed in the morning, you might glance in the mirror and think: "Oh boy, I have quite a bit of biomass in my center!" However, the biomass we are referring here to are the trees and agricultural products that are burned to produce energy. You have done just that if you've ever built a fire while camping or burned wood in your fireplace or wood stove.

Our state wants to categorize biomass as "clean" renewable energy, but is it? If you have a wood burning stove or fireplace, you know that it's hardly spick and span. Now imagine all that dirt and soot multiplied thousands of times. Is that clean energy?

Biomass is far from "clean." These plants release pollutants like mercury and lead along with fine particulate matter that create air pollution which can cause a sweeping array of health problems, from asthma attacks to cancer to heart attacks, resulting in emergency room visits, hospitalizations, and premature deaths. Too often things like old railroad ties, which have been soaked in creosote, are burned releasing hazardous toxins.

While touted as "green" and "renewable," a megawatt of electricity produced by a biomass plant actually releases more carbon dioxide into the atmosphere than a megawatt of electricity generated by a coal plant. Burning wood to create electricity is also inefficient since it creates a lot of thermal waste. According to a recent story on WBUR, the average coal plant is about 37% efficient while new natural gas plants can reach 60% efficiency. Most wood-burning biomass plants are in the high teens or low twenties.

In addition, a biomass plant like the one being proposed for Massachusetts in East Springfield — on property owned by Palmer Paving, doing business as the Palmer Renewable Energy Company — would have diesel-burning trucks delivering wood every hour, adding even more pollution to an area of our state already ranked as the No. 1 Asthma Capital of the U.S. by the Asthma and Allergy Foundation of America. If built, the facility would be the state's only large-scale biomass plant, burning about 1,200 tons of wood a day.

You might ask why wood, which comes from trees, is not a renewable source of energy. Trees are critical to our environment, absorbing CO₂ and removing and storing it while releasing oxygen

back into the air. It has been estimated that in one year, an acre of mature trees can absorb the same amount of carbon as driving your car 26,000 miles.

Burning trees and tree products would promote greater deforestation, which is already a critical problem. And even if new trees were planted to replace those used to feed these plants, it would take 20-30 years to recoup the carbon debt from burning trees — time we don't have to solve the climate crisis.

In 2010, Gov. Deval Patrick's administration ordered a study of biomass. The so-called Manomet study became the basis for the state's criteria for using biomass as a renewable energy source. Under the resulting rules, adopted in 2012, a biomass facility could only be eligible for state subsidies if it used sustainable forest products, reached an efficiency standard of 60%, and had fewer net carbon emissions than a gas-fired plant over 20 years. No large biomass facility could meet this standard, so most proposals were withdrawn.

Now Gov. Charlie Baker's administration has proposed changes to the state's renewable energy rules that would provide substantial subsidies to encourage the development of large-scale biomass power plants. A spokesman for the Massachusetts Department of Energy Resources has been quoted as saying that the proposed regulatory changes will support development of clean energy in the Commonwealth as the state pushes toward a target of zero greenhouse gas emissions by 2050.

We are pleased that Sens. Ed Markey and Elizabeth Warren and our local legislators are all opposed to the East Springfield plant. In addition, we are grateful to the Marblehead Municipal Light Department, our local utility, which has chosen not to buy into the plant to meet our town's energy needs. We thank them for their foresight and concern for the environment and the well-being of all Massachusetts residents. We can and must do better.

If you'd like to learn more about biomass, please check out the links below. You can also submit your comments to the Governor's Office at <https://mass.gov/forms/email-the-governors-office>.

Sources

<https://wbur.org/earthwhile/2020/12/22/biomass-palmer-springfield-asthma-rps-change>

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<https://mass.gov/doc/rps-guideline-on-eligible-biomass-fuel-for-renewable-generation-units/download>

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