



Comments on 2020 APS Minimum Standard Review

Dec. 3, 2020

The Massachusetts Sierra Club submits the following comments related to questions 3, 9 and 11 on behalf of our 130,000 Massachusetts members and supporters.

The 2020 APS Review is the moment to remove incentives for biomass from the APS. The GWSA Implementation Advisory Committee has [recommended](#) that biomass be removed from eligibility under all clean energy incentive programs administered by EEA, including the RPS, APS, CES, and CPS, and has further recommended that EEA address the localized public health impacts of other air pollutants (PM2.5, ozone, NOx, etc.) that co-occur with GHG emissions from combustion.

APS incentives should be entirely directed at the nascent market for air source heat pumps, which are now available for significant deployment in cold climates, and for geothermal heating.

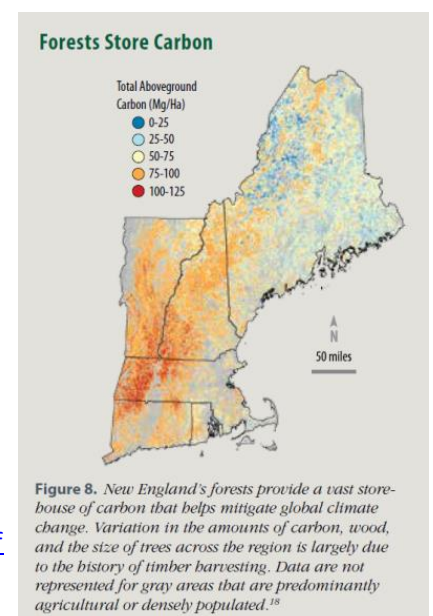
The APS was established in 2009 to offer “an incentive for alternative energy systems which contribute to the Commonwealth’s clean energy goals”. Burning biomass does not do this; it inhibits the attainment of the GWSA emissions mandates and impacts public health due to the associated particulate matter pollution.

DOER’s action (or inaction) reaches beyond our borders. Massachusetts is looked to as a climate leader, and we must lead, and we have led. If we don’t lead, who will?

The Problems with Biomass

Problem 1: Biomass produces more greenhouse gas emissions per unit of thermal energy produced than fossil fuels. According to the Manomet study, it would take approximately 10 years for emissions to reach parity when biomass replaces natural gas for thermal applications if only logging residues are burned, and about five years for oil.¹ Under the APS standards, which allow mixed wood, it could take much longer. *Converting from oil or gas heat to biomass increases greenhouse gas emissions.*

Problem 2: Trees are the only effective means to take CO2 out of the atmosphere. The Harvard Forest report, “Wildlands and Woodlands”² (Sep. 2017) states that, “Annually, New England’s forests take up a vast amount of carbon dioxide from the atmosphere, providing the critical service of mitigating climate change. Across the region this storage offsets approximately 20 percent of the total carbon dioxide that is released across New England through fossil fuel combustion”. The chart shows (in red) that



¹ <https://agris.fao.org/agris-search/search.do?recordID=US201500071629>

² <https://wildlandsandwoodlands.org/sites/default/files/W&W%20report%202017.pdf>

the forests of Massachusetts have the highest carbon storage rate in New England because our trees are actively growing.

Problem 3: The “renewable” aspect claimed for biomass is no longer valid. There is a misconception that trees are a renewable resource because we can plant new trees that will recapture the CO₂ released by burning. This would be true if our time horizon was hundreds of years. It is not. New trees cannot be grown in the time available to fight the climate crisis. In the New Yorker magazine article, “Don’t Burn Trees to Fight Climate Change – Let them Grow” (8/15/19), William Moomaw, Professor Emeritus of International Environmental Policy and founding director of the Center for International Environment and Resource Policy at Fletcher School, Tufts University, says, “A stand of white pines, for instance, will take up twenty-two tons of carbon by its fiftieth year, which is about when it would get cut down to make pellets. But if you let it grow another fifty years, it adds twenty-five tons. And in the next fifty years it adds 28.5 tons. It would be a mistake to cut them down when they’re forty and make plywood. *It’s really foolish to cut them down when they’re forty and burn them.*” He calls letting trees stand and accumulate carbon “proforestation” – as opposed to reforestation.

Problem 4: Burning biomass has terrible health impacts. Combustion of biomass releases fine particulates (soot) and other air pollutants. Low-income communities, communities of color, and sensitive populations such as children, the elderly, and people with respiratory ailments are at risk. Massachusetts already has the highest levels of particulate pollution in New England from residential wood burning. According to the most recent data from the National Emissions Inventory, wood-burning accounted for 83% of all Particulate Matter^{3,4} emissions from heating in Massachusetts in 2014, and a quarter of the state’s total Particulate Matter emissions. *There is a direct public and private health care cost from the use of biomass.*

Problem 5: Harvesting and burning depletes the soil needed for regrowth. Like fossil fuels, burning biomass is an extractive, not renewable, energy source. Nature’s balance requires that wood decay in place in the forests over an extended period of time.

Conclusion

DOER needs to seize this opportunity to reduce public and private health costs and step up its response to the climate crisis. We need aggressive emissions reductions by 2030. There is not a moment to waste.

Sincerely yours,

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³ <http://www.pfpi.net/massachusetts-tops-northeast-in-air-pollution-from-wood-burning>

⁴ <https://www.iso-ne.com/about/key-stats/resource-mix>