

Ian A. Bowles, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Suite 900
Boston, MA 02114

November 22, 2009

Dear Secretary Bowles,

I'm writing to share with you a resource that I have discovered on the web. It was put together by the National Renewable Energy Laboratory and it maps and models how many MW of power can be supported by the biomass resources on a given area of land (the model is at <http://rpm.nrel.gov/biopower/biopower/launch>). Using the model, I just ran an analysis that is quite relevant to the \$100,000 biomass sustainability study recently commissioned by the state.

The NREL model assumes that only the residues that are generated from existing forestry operations are available to be used as biomass fuel. In this sense, it is happily congruent with the recent paper in Science by Searchinger et al, which concludes

“harvesting existing forests for electricity adds net carbon to the air. That remains true even if limited harvest rates leave the carbon stocks of regrowing forests unchanged, because those stocks would otherwise increase and contribute to the terrestrial carbon sink.”

In other words, while collecting forestry waste that is already being generated is arguably simply use of a resource that would decompose anyway, as soon as you cut a tree for biomass fuel that would not otherwise have been cut, you have caused a net emission of carbon (I want to say, however, that the excellent foresters of my acquaintance agree that real sustainable forest management requires leaving those residues in the forest to maintain soil nutrient stocks and build soil carbon).

The Searchinger article goes on to explain that the assumption of carbon neutrality, the justification upon which almost all the incentivization of biomass power rests, exists largely because we do not do carbon accounting correctly here in the US.

I have included a screenshot of the NREL model as I ran it tonight. Assuming a 90% capacity factor and 50% availability of forest harvesting residues, the model estimates that a **total of 6.35 MW of biomass power could be fueled by the amount of wood generated in the five counties of western Massachusetts**. This is just 6 percent of the 105 MW of biomass power that

would be fueled with forest biomass at the Greenfield, Russell, and Springfield plants (approximately 30 MW of the Springfield plant would be fueled by C&D waste).

I know the state is looking for places to cut the budget. Quite a few people who have taken an interest in the biomass issue thought the allocation of \$100,000 to a new “sustainability study” for biomass was not money well-spent, since the unsustainability of the current proposals seems quite clear (even DOER’s original biomass availability study concluded there were only about 110,000 tons of forestry residues generated in the state yearly, a small fraction of the 1.4 million tons that would be required by the three plants currently being permitted).

While I have nothing but the greatest respect for the scientists at Manomet, and I’m sure they’ll bring much to the sustainability study, I’d like to know what the study is going to add to the work that we have already done here in western Massachusetts, the conclusions of which are substantially borne out by this model from NREL. (To give you an overview of some of our work, I am also including our most recent biomass briefing, which contains a variety of information about the three plants currently proposed.)

I hope that your office will consider the implications of incentivizing large-scale biomass power as carbon neutral, when it is not. These include environmental damage, increased carbon dioxide emissions, increased air pollution, and market distortions that bleed resources away from real renewable energy solutions.

As always, we stand prepared to assist however we can in making the transition to a truly sustainable energy policy in the Commonwealth.

Sincerely,

Mary S. Booth
Massachusetts Environmental Energy Alliance

cc: Rob Rizzo, DOER
John Gunn, Manomet
John Hagan, Manomet
Bob O’Connor, EOEEA