



May 11, 2009

Stacy DeGabriele
Department of Environmental Protection
Bureau of Waste Prevention
One Winter Street, 6th Floor
Boston, MA 02108

And Via Email: climate.strategies@state.ma.us

Re: 310 CMR 7.71, Greenhouse Gas Emissions Reporting Regulations

Dear Ms. DeGabriele:

On behalf of Mass Audubon, I submit the following comments on proposed amendments to 310 CMR 7.71. These regulations are being amended to address the Greenhouse Gas (GHG) emissions reporting requirements of the Massachusetts Global Warming Solutions Act (GWSA). Mass Audubon recognizes that rapid climate warming is a major threat to land conservation and wildlife in the Commonwealth and on the planet. Current climate change expectations also create challenges for our economy, security, and health. The GWSA sets the stage for Massachusetts to aggressively reduce its GHG emissions and play a leadership role in responding to climate change.

Mass Audubon supports the goals of the GWSA and is pleased to see the commonwealth moving forward with implementation. These comments focus on the proposed separation of reporting requirements for “biogenic” GHG emissions from other emissions. Mass Audubon does not object to this distinction, but we note the need for the commonwealth to further refine its approach in order to address the degree to which various biogenic emissions are or are not “carbon neutral.” In particular, emissions from burning of woody biomass should be evaluated in the context of the sources and methods used in obtaining and transporting this material. The important role of forestland in sequestering carbon must be considered as part of both the baseline and future trends measurements of net GHG emissions. We recommend that Massachusetts adopt an approach similar to the “carbon intensity” rules applied by California to biofuels. The factors applied to determine the carbon intensity of various liquid biofuels could be adapted to woody biomass fuel sources.

Mitigation and Adaptation

The International Panel on Climate Change (IPCC) recommends a dual approach to addressing human-induced climate change, including both mitigation and adaptation. Mitigation involves measures that reduce GHG emissions, such as energy efficiency and conservation and a shift from burning fossil fuels to renewable energy sources. Adaptation involves strategic planning, projects and programs that help people, plants, animals and natural communities cope with, adjust to, and manage the impacts of climate change. Adaptation can help prevent local extinction of plant and animal species by restoring, protecting and connecting lands and waters. These efforts build healthy and resilient ecosystems and allow species to migrate as temperatures change.

Massachusetts Forests and GHGs

According to data from MassGIS, forests cover approximately 61% of Massachusetts’ land area. These forests provide numerous ecosystem services, including carbon sequestration, habitat for plants and animals, clean

air and water, recreation and tourism, and community character. The ecosystem service value of Massachusetts forests is estimated to be approximately \$2.9 billion annually¹.

Forests in the northeastern U.S., including Massachusetts, annually capture approximately two to four tons per hectare per year. Taken together, the midlatitudinal forests of North America, from the Carolinas into Canada and across to the Midwest, are reducing the global increase in carbon by over 10%². Although most Massachusetts forests are relatively mature, many stands continue to increase their net carbon sequestration on an annual basis.

Large blocks of unfragmented forest also are important for climate change adaptation. Large intact habitats are relatively resilient to a variety of stresses, support a wide range of species, and provide opportunities for plants and animals to migrate across the landscape in response to climate induced habitat changes.


The net carbon effects of burning woody biomass depends on many factors including the source of the material, the harvesting methods, whether the burned material is mill waste or whole trees that otherwise would remain standing or in durable forest products, the distance between source and the biomass facility, and the efficiency of the facility. Large scale power-only biomass plants are relatively inefficient, in the range of 25-30% efficiency, whereas combined heat and power (CHP) facilities are up to 80% efficient, producing more useable energy per unit of GHG emitted³. Small scale facilities based on local markets that focus on use of clean wood waste and selective sustainable thinning of forests have a much different net carbon footprint than large utility scale facilities relying on burning of whole trees harvested over an extensive area.

Recommendation

In conclusion, Mass Audubon recommends that the Department of Environmental Protection work with the Department of Energy Resources and Department of Conservation and Recreation to further evaluate the relative carbon intensity of various sources and uses of woody biomass. Regulation of GHG emissions and provision of renewable energy credits should be adjusted accordingly, to provide incentives for biogenic GHG emissions to be kept as close to carbon neutral as possible. State policies and regulations should be designed to ensure that public and private forests are managed sustainably to retain their integrity and resilience in adapting to climate change, and to maintain ecosystem service values including high rates of carbon sequestration.

Thank you for considering these comments.

Sincerely,



E. Heidi Ricci
Senior Policy Analyst

cc: Bob O'Connor, EEA
Ken Kimmell, Massachusetts Clean Energy Technology Center, EEA
Dwayne Breger, DOER
Laurie Burt, Commissioner, DEP
Richard Sullivan, Commissioner, DCR

¹ Mass Audubon, 2003. *Losing Ground: At What Cost?*

² Julian Hadley, Harvard Forest, as stated in *NY Times Magazine*, http://www.nytimes.com/2009/04/19/magazine/19Forest-t.html?_r=2&scp=2&sq=harvard%20forest&st=cse. Harvard Forest publications are available at: <http://harvardforest.fas.harvard.edu/publications.html>.

³ Massachusetts Sustainable Forest Bioenergy Initiative, http://www.mass.gov/?pageID=eoeaterminal&L=4&L0=Home&L1=Energy%2c+Utilities+%26+Clean+Technologies&L2=Renewable+Energy&L3=Biomass&sid=Eoea&b=terminalcontent&f=doer_renewables_biomass_bioenergy_initiative&csid=Eoea