June 30, 2016

Michael Judge
Director, Renewables Division
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114
Attn: Samantha Meserve,
Via email to
Samantha.Meserve@state.ma.us

Re: Joint Comments on Proposed Changes to Alternative Portfolio Standard Regulations (225 CMR 16.00)

Dear Director Judge:

We are Massachusetts based ecosystem scientists and scientists who conduct research on the relationship among forests, the carbon cycle and climate change, and on renewable energy. We are writing in each of our individual capacities to provide our expert input on the proposed changes to Alternative Portfolio Standard Regulations (225 CMR 16.00).

The goal of these regulations appears to be to encourage the use of bioenergy and especially solid bioenergy derived from forests to produce heat. We wish to point out the negative consequences of such a change in policy for the climate and for forests and their multiple ecosystem services.

Our greatest concern is that an increase in the use of forest materials to produce heat will add additional carbon dioxide to the atmosphere, and when live trees are utilized will reduce the capacity of remaining forests to remove carbon dioxide from the atmosphere, for many decades. Lowering heat trapping greenhouse gases in the atmosphere is the primary goal of the Massachusetts Global Warming Solutions Act, which the Supreme judicial Court recently ruled must be implemented. Climate change is now a national priority since the United States agreed to reduce its emissions of heat trapping gases by 26-28% by 2025. The role of forests is an important component of meeting that goal.

The proposed regulations would increase carbon dioxide emissions in direct contradiction to these state and national requirements, for at least several decades. This “long term carbon debt” and its implications were identified in a DOER commissioned study of the implications of bioenergy for Massachusetts’ forests. Even more troubling, it appears that those who produce heat from forest materials would receive subsidies for adding additional carbon dioxide to the atmosphere.

In addition to the direct emissions during combustion, additional emissions come from soils during and after harvest, in the collection and transport of woody biomass, and in the drying and preparation of wood pellets in particular. The Intergovernmental Panel on

Climate Change makes clear that all of these emissions must be counted along with the emissions from combustion.

The claims that the utilization of forest biomass will be done sustainably are inconsistent with both scientific understanding of sustainability and current forest practices. In practice, entities that utilize thinnings from forest management, forest residues and waste for energy have proven unable to do so on a long-term basis without resorting to additional cutting of live trees. Even if all supply came from these stated sources, repeated harvests would ultimately diminish the fertility and carbon stocks of the soils. The provisions of the proposed regulations fail to assure that this does not happen.

It is also the case that burning wood releases substantially more particulates and other combustion materials than do fossil fuels. It has been shown that manufactured pellets contain a range of heavy metals and other pollutants that are released during combustion. These emissions would need to be tightly regulated to protect air quality and remain within the limits of existing clean air regulations. If the pellets are to be burned in schools, we could point out that those are the last places where we want to increase local air pollution.

It is difficult to understand why the Commonwealth is putting forth regulations that increase global warming and air pollution and as currently drawn would degrade the capacity of forests to provide the many ecosystem services they now provide for citizens for the Commonwealth. Recommendations for optimizing the management of forests to meet multiple goals are documented in the Forest Futures Visioning Recommendations commissioned by the Commonwealth and implemented by the Massachusetts Department of Conservation and Recreation in 2010. http://archives.lib.state.ma.us/discover The regulations developed to protect Massachusetts forests now and in the future are being overturned by these regulations. This is especially puzzling when truly clean and renewable energy sources have never been less expensive or more readily deployable. The price of solar energy, for example, has decreased by 80% in recent years, and can provide heat using efficient heat pumps with zero-carbon emissions and no air pollution. The State should be encouraging use of these zero-carbon renewable resources rather than the combustion of wood.

We respectfully request that the current regulations be withdrawn and a consultation process be enacted that would utilize multiple disciplines related to forests, the carbon cycle, climate change and renewable energy to develop regulations that would effectively address air quality, forest sustainability and climate change. We would be pleased to provide our expertise to DOER in an open and transparent proceeding.

Sincerely yours,

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