Comments on Biomass and Pellet Burning Regulations

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The risks outweigh the benefits.

Carbon emissions reached an all-time record 409PPM in the atmosphere this month. Today (6-27-16) it is still 405.85ppm. It will take drastic, mostly voluntary measures within all public and private sectors to reduce these emissions to *the upper limit* of 350ppm. What has become clear is that processes used to produce heat and/or power, such as wood chips or pellets, in and of themselves, or through their life cycle, produce high amounts of CO2. In accordance with the carbon emissions controls mandated by the Paris Accords (2015) and the Global Warming Solutions Act (2008), these antiquated methods of producing heat and/or power must be replaced by cleaner, solar-based technologies, ***not incentivized by DOER or any agent of the Commonwealth.***

Since 2014 I have been facing two physical battles: lung cancer and Multiple Myeloma, a chronic cancer of the Plasma. As the push for more forest cutting and burning in Western Massachusetts looms large, I ask myself regularly, "*did these diseases arise directly or indirectly from air pollution*?" A former public school teacher and professional Social Worker, I am no scientist, but I can tell you that I would l not teach at a school (or allow my three children to attend a school) that used either a pellet or biomass burner for heat or heat and power production, due to its health hazardous particulate and gaseous emissions. (much of which has not been monitored or adequately tested and whose data is reliant upon manufacturers' claims) No, I would not risk my health that way, and now, I am requesting that, to protect the health of school children, DOER *cease and desist* in granting replacement pellet burners via the SAPPHIRE program. To do otherwise is both unwise and irresponsible and appears to unfairly advantage manufacturers and timber companies at the expense of public health. (and a worsening climate)

A Life Cycle Analysis, which must include accounting for (A) the immediate and long-range releases of carbon from the forest floor upon logging trees (deforestation) and the (B) loss of carbon sequestration per acre, (Standard: 30,000 lbs. of CO2 per mature-50 year-old acre, per year-Cornell) (C) the loss of oxygen releases (22,000 lbs. per acre per year-EPA) and (D) immeasurable value of the cleansing of toxins contained in other Greenhouse Gases(GHG) by leaves in dense forests. A robust, third-party particulate and toxic emissions evaluations of biomass and pellet burning should be completed ***prior to*** developing meaningful standards, but at very least ought to be part of setting standards/regulations. DOER standards must leave no room for loopholes (as they do under the current regulations) which could compromise health and climate. **To do otherwise is irresponsible and endangers both climate and public health.** ***The risks outweigh the benefits.***

Biomass and pellet energy being supported by the Massachusetts Forest Alliance and the Commonwealth are antiquated burning methods for heat and power that have <u>two major problems:</u>

1) **They accelerate climate change.** (CO2 in the atmosphere on 5-13-16 was 407.50ppm) By the 16th it was over 409ppm.

a) Through the loss of the "Carbon Sink" effects of sequestration due to deforestation. (Just 1 acre of mature forest sequesters 30,000 pounds of CO2(Cornell)
b) Through massive, immediate releases of CO2 from the soil after logging operations are completed, which continue on for decades as the soil continues to decompose.
c) Both pellets and biomass burning from cutting to burn emit more CO2 than coal.
d) Pellet manufacture and biomass chipping disrupt the ecosystem within the forest, a system with which human life is intertwined. .Logging destroys interdependent plant and animal species, including interwoven life forms within the forest floor.

2) **Biomass and Pellet burning are bad for health.**

a) Pellets in particular emit large amounts of particulate matter, often containing considerable amounts of heavy metals.

b) The American Lung Association has come out against both biomass and pellet burning, and in particular, **The Mohawk Trail Woodlands Partnership,** a 25-50 million dollar proposal promoting cutting forests in Franklin and Berkshire Counties for pellet manufacturing (to be located In Franklin County) This kind of project would create an endless cycle of deforestation and increased carbon emissions, accelerating climate change and endangering health.

Even so, DOER is *already funding/promoting* the installation of pellet burners in dozens of Massachusetts schools through SAPPHIRE grants!

c) Bad for health through the loss of oxygen (22,000 pounds per acre) and trees' filtering mechanisms. Yes, it is obvious, ***the risks outweigh the benefits!***

Shouldn't the taxpayers of Massachusetts be spending our energy dollars to transition to greener, cleaner heating, cooling and power options? We could first and foremost continue to fund school building retrofits, (Bravo!); then install air source heat pumps and mini splits, individualizing heating and cooling in each school room. Our agents in government ought to help lift the cap on solar installation, and support offshore wind and wave energy, not waste our energy dollars on dirty, unhealthy, pellet and biomass burning, so detrimental to climate and public health.

There are some specific concerns that the current regulations fail to address: definitions for "sustainability", "sustainable forestry – or sustainable forestry management practices"," long-term forest management plan". I would caution DOER staff that, given our out-of-control climate and biodiversity losses, "sustainability" is a meaningless word, and anything DOER can do to slow down climate change and species losses by dis-incentivizing biomass and pellet burning would be of benefit to the well-being of our children, grandchildren and future generations. ***The risks outweigh the benefits.***