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RE: APS COMMENTS

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Good Morning:

I have read over the revised draft *Alternative Energy Portfolio Standards* as well as the *Guideline on Biomass, Biogas & Biofuels for APS Renewable Thermal Generation Units* and am submitting the following comments.

My family has owned about 150 acres of woodlands in the town of Hawley in the northern Berkshires since the 1920s. These woodlands have been managed since the mid 1970's and each woodland is certified as a Tree Farm in accordance with the American Forest Foundation's *Standards for Sustainability* since those standards were first established in the 1990's. Our woodlands drain into the Upper Clesson Brook in the Deerfield River watershed, and the Swift River in the Westfield River watershed.

Each of our management plans have been created by professional foresters to meet the goals we have for our properties. While we try to grow higher value trees for timber on most of our acreage, we also manage some of it for early successional wildlife habitat, to protect the trout streams that flow through it, and as a working and future sugarbush for maple sugaring. Each of the timber harvests that we have had since the 1970s have been done to carry out parts of the management plans under Forest Cutting Plans approved by state foresters.

My understanding is that the APS standards are being created to provide financial incentives for building owners to reduce or eliminate the use of fossil fuels by switching to renewable and sustainable fuels such as wood where possible. This is clearly a worthwhile goal because any fossil fuel use is neither sustainable nor renewable.

We have operated a wood/oil furnace to heat our residence using wood derived from managing our woodlands since 1987. My cousin next door heats his home and hot water with a highly efficient wood boiler and associated thermal storage. Burning wood saves us more than 1,000 gallons of heating oil per winter, and thousands of dollars that

aren't exported to pay for fossil fuels. In a normal winter we burn 6 to 8 cords of wood, all which comes from thinnings, maintenance, salvage, or cleanup of storm damage on our lands. In the process, we create more space for better trees to grow in our woods, and increase the growth rate and hence the amount of carbon which is stored in the wood. We have also created areas of early forest habitat for species such as eastern towhee, ruffed grouse, chestnut sided warblers, white throated sparrows, and woodcock, whose populations have been declining statewide in recent decades.

I applaud the efforts of DOER to develop guidelines for AECs for renewable thermal energy including wood heat. I would emphasize the importance of making sure such credits are available for landowners who utilize their own wood as cordwood derived from managing their woodlands in a sustainable manner. The state estimates that 30,000 individual landowners own 10 or more acres of woodlands here, which would provide a wide base of potential users of renewable thermal heat under the guidelines.

I am sure that many of those landowners, like myself, have older heating units that don't meet current EPA or state standards for emissions. Providing incentives to replace those older, less compliant units with newer, more efficient and cleaner burning heaters through the AEP regulations would help both the homeowners and the state's environment.

Specific suggestions:

Add Wood Derived from Normal Maintenance in Agriculture to the list of Non-Forest Derived Residues

Every year we, and others with farmland, generate a number of cords of wood from doing normal maintenance such as pruning fruit trees, trimming back trees along field edges and access roads, doing sugarbush maintenance, etc. On our properties, this maintenance generates 2 to 10 cords of wood each year, wood which we add to other wood from forest residues, thinnings and salvage for our eventual winter heat (we cut wood 2 years in advance of burning it to allow it to dry sufficiently to generate the maximum amount of heat).

This wood is not from agricultural land clearing because the farmland doesn't change in size, it is just from maintenance because trees grow larger every year and they need to be trimmed back and sometimes removed to allow safe operations.

Add a Definition of a Long Term Management Plan

The regulations as written require in 16:05(4)(d)(ii) that forest derived residues and thinnings be obtained from forests meeting sustainable forestry practices as independently verified under the Guidelines. Under the guidelines, suppliers can either have a licensed forester verify that the fuel was derived from woods managed under a long term forest management plan or third party certifiers such as FSC or Tree Farm may do so.

The proposed guidelines confuse matters by stating that a long term forest management plan would be an approved Forest Cutting plan under the long term option. This is false. I think a definition of a Long Term Forest Management Plan should be added in the definition section and it should not be equated with a Chapter 132 Forest Cutting Plan which is simply the permit requirement to carry out a harvest. A harvest may be part of a long-term sustainable management plan but it is not the plan itself. A MGL Chapter 61 management plan or Forest Stewardship Plan covers a lot more than just a harvest operation.

Simplify Qualification of Eligible Woody Fuels

16:05(4)(d)(iii) requires that no more than 50 percent of the biomass woody fuel be from thinnings and at least 50 percent by from residues or salvage. When you thin trees in a woodlot, the trees cut fall into two categories: the bole which counts as a thinning, and the tops and limbs, which are normally left as residues. Damaged, diseased or dying trees which are cut are considered salvage.

To meet the requirements of the above section, the Guidelines would require that someone certify that wood derived from salvage, normal maintenance or residues at least equal that derived from bolewood.

On our properties, since the 2008 ice storm, virtually all the wood we've cut has been generated from either ice storm salvage and from cleanup of residues from a harvest done to regenerate a stand badly damaged by the ice. We've been swimming in residues, so called, for the last 10 years.

In normal forestry, however, giving high value well formed trees room to grow by thinning out poorly formed low value trees is a better long term practice than just cutting dead trees killed by ice or insect damage.

I think that it is important to make this a simple process that recognizes the variability of individual woodlots.

For individual landowners who are using their own wood to fuel a boiler or furnace, a practical questionnaire would be: What percentage of the fuel is bolewood derived from thinnings, what percentage from tops, and what percentage from general salvage or routine maintenance. It would also be helpful to use an averaging system over time to reflect that sometimes, all your wood may be from salvage or residues, and other times more may be from bolewood. An averaging system would make it easier to comply with the desired percentages of residues and salvage.

Require Landowner Certification of Moisture content

As the Guidelines point out, properly seasoning cordwood is essential to maximum efficiency of wood boilers and furnaces, and to minimize polluting emissions. While

wood users who purchase their wood may not be able to afford to buy and store wood 2 years in advance, and can't thus control how long it has seasoned, users who supply their own wood can certainly do so.

Requiring such users to keep a chart of which wood is burned when, when it was cut and how long it has been seasoned might be appropriate

Limit Size of Wood Burning Appliance

An important factor in minimizing emissions in wood burning is to make sure the appliances aren't too large for the intended use. As a firefighter, we often respond to chimney fires caused by homeowners installing too large a stove for their use, then burning it with restricted draft all the time, which creates smoldering fires with more smoke output and builds up creosote.

Wood heating systems burn cleanest when they burn hot with unrestricted draft. Unlike fossil fuel systems, wood burning systems should not be sized to be able to heat all the building all the time under extreme conditions, but rather to provide efficient heat under normal conditions.

A reasonable limitation might be to restrict size to no more than 100 percent of normal load, or 90 percent of maximum load

Thank you for the opportunity to comment.

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