

So what about the forest?

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Vermont now has over 40 public schools that are heated with wood. Several municipalities including Brattleboro, Randolph, Montpelier, and Middlebury may soon be joining the pack.

The process of moving from concept to a functioning wood burning facility has been very similar in each case. First the community is encouraged to consider substituting forest fuels for fossil fuels by a variety of state and non government entities. They are told at numerous public meetings that burning wood is 'carbon neutral' and cheap, that using it will enhance forest health and that it will keep money in the local community. They are told that wood will rise a bit in price but much more slowly than other fuels. And they are told that wood fuel is often a waste product and always abundant. It is also secure and renewable.

Second the community is invited to apply for significant funding from the state or federal government. Early on, this funding covered 90% of the design and construction costs. Fuel purchase was left up to the community but they were assured that there was nothing to worry about because the sources were cheap and abundant.

Third the community's facility was designed. A key element in that design is to show a very rapid payback for the community. This is where it gets tricky. The down-side of wood energy plants is that they are expensive to build -- hence the need for such large subsidies -- and to operate relative to other heating plants. It is therefore important, even with all of the subsidies, that the price of the wood fuel be cheap in order for the endeavor to be financially viable for the community. Until recently, the wood fuel for some operators was subsidized to the tune of \$55 per cord.

Forth, the plant is built, ribbons are cut, and contracts are sought and signed with suppliers. Unfortunately, the fuel procurement figures built into the business model are quite low if one is to accomplish the promised benefits of burning wood fuels. So, pesky standards for procurement were left out because they complicated matters, reduced potential sources, and increased fuel procurement costs. This helped to get fuel in the bin but many high quality logging operators could not or would not compete.

Even though there are no procurement standards and there is no monitoring -- as these would raise costs and reduce potential supply -- communities were told not to worry, that the chips would come from well-managed forests, and that the work in the forest could be improved over time once the plants were built.

In fact, the communities could not afford to worry about these things. They now had a plant to feed and only so much money budgeted to procure the fuel. "Local", "sustainable", "fair" were trumped by "cheap" and the community's hands are tied.

The fact of the matter is that wood fuel is likely not carbon neutral unless it comes from forests that are very carefully tended. This is not cheap and there are not many good examples to point to. Wood fuels are bulky and expensive to remove from the forest especially if one wants to do it in ways that minimize negative impacts. Wood fuel removal has historically been 'subsidized' by high quality timber and landowners have received very little for it. Also, many of the costs associated with wood fuel production – costs such as soil erosion, stream sedimentation, reductions in carbon sequestration potential, and the introduction of invasive exotics -- were not accounted for in the business model.

And wood fuels are not as abundant as once thought. In the Five Town Forest for example, we estimate that our forests produce only 1 cord of wood suitable for burning per resident per year.

The bottom line is that there appears to be a very significant gap between the pitch and the reality when it comes to community wood energy. This gap must be addressed if the promise of a carbon-neutral, local, secure, abundant, source of fuel that enhances forest health is to be realized. A first step would be to conduct an independent, credible, systematic look at what is actually happening in the source forests – economically, ecologically, energetically, and ethically. We now have an extensive track record to examine and we should take this opportunity to use full cost and benefit analyses to see how well we are doing.

It would be very good to involve fresh players in this comprehensive assessment. And this comprehensive assessment should be completed before any more forest-based biomass plants are subsidized and built in Vermont.