

Executive Summary - *Harnessing the Power of Local Wood Energy* *

While energy costs continue to rise with no end currently in sight, one Vermont community is developing a community wood energy plan that saves money, reduces their dependence on foreign oil, combats climate change, improves forest health, and supports local industries and workers. *Harnessing the Power of Local Wood Energy* is a community resource guide that weaves technical information with the personal stories of community members who are working on heating their local school with sustainably produced woodchips. It details how a rural community can take advantage of the cost savings of wood energy while assuring that the wood is sourced and utilized in a “**Sustainable, Efficient, Local, and Fair (SELF)**” manner.

In 2006, Mt. Abraham Union High School (Mt. Abe), located in Bristol, Vermont, became the 29th school in the state to install a woodchip heating system. The Mt. Abe community switched to woodchips because it was an affordable, renewable, carbon-neutral energy source that could be produced locally. After completing the installation, the community realized that in using woodchips to meet their school’s long-term energy needs, they also wanted to conserve forest health, reduce carbon dioxide emissions, and support the local economy. To reach the goal of a sustainably produced, efficiently used, locally sourced, and fairly and equitably accessed wood heating system, they realized that they needed to address woodchip procurement at all points along the supply chain. Yet, as Robert Turner, Mt. Abe community member and forester, warned, “The natural resource world is being asked to absorb more stresses and provide more services than it ever has before, and we have to make sure as these demands are being made that we understand the limitations.”

In order to better understand the challenges to woodchip procurement, individuals from the Forest Guild, Vermont Family Forests, the Starksboro Conservation Commission, the Biomass Energy Resource Center, the Vermont Department of Forests, Parks and Recreation, and the Northern Forest Alliance launched the first phase of the Mt. Abe Community Wood Energy Pilot Project in May of 2007. The Forest Guild recruited Caitlin Cusack, a summer intern from the Yale School of Forestry and Environmental Studies (sponsored by the Doris Duke Charitable Fund) to work with Vermont Family Forests, Guild foresters, and Mt. Abe community members to identify key individuals and organizations and summarize the ecological, economic, and social challenges and opportunities to sourcing woodchips from small private and public forests.

Harnessing the Power of Local Wood Energy presents the results of the first phase of the pilot project. As a community resource guide, it uses the Mt. Abe pilot project as a case study to provide a framework that other communities can use to develop a standard for sourcing SELF woodchips. While the guide is specifically geared toward ensuring a sustainable supply of woodchips for schools, it is also applicable to other community buildings such as town offices and recreation centers.

The challenges to supplying the high school with wood from small, managed forests as summarized in the guide are economic, ecological, and social in nature. For one, the current low woodchip market price does not cover the harvesting and transportation costs on the small scale of most non-industrial private forestland. In addition, schools have depended on large customers and the forest products industry to support the harvesting and production infrastructure. There are both uncertainties over how much wood to leave to conserve forest health and disagreements over the long-term ecological impacts of harvesting wood. The costs and benefits of woodchip production are not evenly distributed, and the general public lacks a basic understanding of the goods and services that their forests provide. Furthermore, the standards used to define sustainable forestry vary widely in respect to protecting forest values.

In order to overcome these barriers, stakeholder needs should be identified and addressed. Loggers, woodchip producers, and landowners all need a reliable market and fair price for their wood. Woodchip producers and students, teachers, and administrators need a reliable supply of wood. Finally, landowners, students, and teachers want sustainably harvested woodchips.

Through the pilot project, the Mt. Abe community has had the opportunity to express its values and needs, an important process for building the trust and consensus necessary to identify and bridge potential obstacles to procuring woodchips that are “Sustainable, Efficient, Local and Fair.” First and foremost, the price paid for woodchips needs to increase and the associated costs and benefits shared among the landowners, loggers, woodchip producers, and school according to effort and risk. If Mt. Abe were to increase the amount they pay for woodchips to \$80/ton, equivalent to just \$1.60/gallon of heating oil, that would create a market incentive for excellent forest management. Loggers, forests, and woodchip producers could earn a livable wage, and the Mt. Abe community would still pay less than the current cost of heating oil. Greater collaboration among small heating facilities could increase their resilience to changing market conditions. The use of town forests as demonstration sites could help to educate the public about forest ecosystem goods and services.

Development of a local procurement standard to ensure protection of forest values during harvesting would help overcome the barriers to ensuring a sustainable supply. A community can use different standards to protect the forest’s ecological and socio-economic values. The standards used by the Mt. Abe wood suppliers range from minimal protection of forest values (such as harvesting wood according to local, state, and federal laws), to comprehensive protection of ecological and socio-economic values by using the “SELF” woodchips. In order for woodchips to be efficiently used, Mt. Abe plans to make basic energy-efficiency improvements, regularly maintain the woodchip heating system, and burn the right kind of wood at the appropriate range for moisture content. For Mt. Abe, there is plenty of forestland within five miles of the school. Their challenge is to determine if they can source their wood within that five-mile radius.

A number of steps that Mt. Abe is following to create a reliable supply of woodchips sourced using a SELF standard include: consulting with local experts (like David Brynn and Robert Turner who are Forest Guild foresters familiar with procurement standards), identifying the suppliers and elucidating the wood supply chain from forest to school, developing a community-accepted procurement standard, and increasing the number of local family-forest owners who contribute to the woodchip supply. These steps and other lessons learned from Mt. Abe are summarized in a series of toolboxes for quick reference.

By using this community reference guide, *Harnessing the Power of Local Wood Energy*, countless rural communities throughout New England can profit from the Mt. Abe community’s experience and follow in Mt. Abe’s footsteps toward the goal of developing their own community energy plan that saves money, reduces their dependence on foreign oil, combats climate change, improves forest health, and supports local industries and workers.

*Caitlin Cusack, 2008. *Harnessing the Power of Local Wood Energy: Ensuring a sustainable supply of woodchips for your school.*

Available for download at www.forestguild.org/publications/research/2008/Local_Wood_Energy.pdf