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Bill Horvath: Forests can ease our energy needs

By Bill Horvath
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The Future of Farming and Rural Life in Wisconsin project is looking at all of the state's working lands, and that includes forests.

Wood utilization has always been a major factor in Wisconsin's economy. The paper industry benefits from an integrated primary and secondary wood industry, but there are changes in the wind, some bad and some good.

A major negative is the continual parcelization and resulting fragmentation of our industrial forestland. In addition, about 8 million acres of private forestland is owned by some 270,000 private landowners, and on many of these parcels, wood production is at best a secondary consideration.

On the positive side, Wisconsin gained more than 500,000 acres of forestland in the last decade, due in part to the downsizing of farming in Wisconsin.

Our forest assets have a great potential for additional usage in biofuel production, thermal energy and to some degree electrical energy production. Our forests can also help reduce the flow of nonrenewable energy into this energy-dependent state.

Wisconsin has about 1 billion wet tons of wood growing in our forests. That's measuring everything 1 inch in diameter. It excludes the additional millions of urban woodland. About 30 percent of the annual growth goes unused, and if Wisconsin had a program to grow additional trees, the base could be increased dramatically.

The uses are many. Exel Energy, which supplies electrical power to western Wisconsin, has two wood-burning power plants. As society relies more on producing energy from alternative fuels, wood will become a bigger part of the equation.

Dependence on foreign oil and its spiraling cost have spurred a great interest in biofuels and biochemicals. Ethanol is but one of these. The scientific community is offering the cellulosic approach to energy production as one long-term solution. Cellulose is the stuff trees are made of. As one university researcher said at a recent biomass conference, "You can get the same chemicals out of a tree as you can

get out of oil." All it takes is investment and some good old ingenuity to perfect technology that already exists.

Another opportunity is the use of wood for thermal energy, such as heating homes, businesses and public facilities.

The last inventory of wood-burning facilities in Wisconsin prepared by the Department of Administration found 175 businesses and institutions burning wood to meet their energy needs. They used 2 million tons in 1994, or about 1.6 percent of Wisconsin energy use. The Division of Forestry found 905 companies producing wood waste in their business operations. The biggest producer and user is the papermaking industry.

Yet there is a great shortage of residue for fuel, in part because of market demands for the residue, such as mulch, wood shavings and wood pellets. There is also the cost of removing and transporting small diameter trees and treetops.

While we are short of wood residue, we are still burying our wood waste. A 1992 study of seven southeast Wisconsin counties by the University of Wisconsin-Milwaukee and UW-Extension found that the area generated 275,000 tons of wood waste per year. Seventy-one percent of that wood waste wound up in a landfill, costing \$18 million in tipping fees. It did not include collection costs. The study found a lack of public policy for collection and separation of wood waste for use.

Nine of the 426 school districts in the state burn wood for heat. With school districts pinched for cash, burning wood can result in substantial savings. All of Vermont's school districts burn wood, as does its state capitol. What Vermont did was provide funding for the necessary capital investment, something we need in Wisconsin to wean our public facilities off oil and natural gas.

The Wisconsin Forestry Council Woody Biomass Task Force, which I chair, has been at work for two years looking at all issues of woody biomass production and utilization and has basically boiled the issue down to supply and demand. Wisconsin has the supply, including wood waste that is unevenly distributed throughout the state.

There are great opportunities to increase both the supply and demand.

The task force is preparing a comprehensive set of state policies to do both. It will include mandates such as disposal of wood waste. It will recommend incentives for public facility conversion to wood heat. It will include business incentives to stimulate wood usage and incentives for private landowners to produce more wood for energy purposes.

The comprehensive legislation, with its package of recommendations, has never been done in the United States. When Wisconsin passed its comprehensive recycling legislation years ago, it was plowing new ground. We expect our legislative package on the production and utilization of woody biomass to be in that tradition.

Public policy in reducing demand for nonrenewable energy sources can bring into play our working forests. It will put our forests to work, producing a whole new set of products to stimulate our economy and, equally important, stimulate the need for managing our forests in a sustainable way.

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