

November 15, 2017

Public Statement for the Biomass Research and Development Board

Both the State of Minnesota and the federal government have made long-term commitments to attract and develop renewable biofuels and bio-based chemicals industries. These emergent sectors provide opportunities for economic development and job creation in rural communities, which have been hurt by the decline of the paper industry, shuttering of many wood products manufacturing plants, and the cyclical nature of the mining sector. It is possible to develop this new industry while preserving natural resources and ensuring long-term economic viability of our incumbent forest products industry. The use of cellulosic feedstocks from highly productive, managed plantations and farms is supported through federal bioenergy research and incentive programs. However, there are gaps in support for currently underutilized biomass from private, state, county, and federal forest lands that need management for fire hazard reduction and productivity.

Excluding certain forestlands from the biomass market is a missed opportunity to create a public policy synergy between public interests. Developing a bioeconomy sector resourced in part by the currently unmerchantable portion of timber harvests is both economically and ecologically sustainable; providing economical biomass feedstocks while supporting jobs and maintaining ecosystem services in these forests. For example, landowners with fire prone forests and low value trees depend on healthy biomass markets for forest management. Also, because existing forest harvest operations rely primarily on Forest Inventory Analysis data and cut-to-length round wood harvest, they leave behind the unmerchantable small diameter trees, limbs and tops to be burned. Improved markets for the unmerchantable portion of forest harvests can have a positive effect on legacy sawtimber and pulpwood markets by improving economic return from private forest harvest as well as from other management operations.

In Minnesota, there have been efforts to develop biomass markets to address this opportunity. The Minnesota State Wood Innovation team, funded by the U.S. Forest Service, has worked with public, private industrial and family-owned forestlands to connect these resources to markets. These efforts leverage sawtimber and pulpwood operations that already have well developed wood supply chain partnerships to supply the traditional forest products industry. The Laurentian Energy Authority was created as the managing partner of a joint venture between the public utilities of two cities to incorporate the use of biomass for power production. Laurentian Energy also has a power purchase agreement to sell 35 megawatts of biomass-produced power to Xcel Energy.

These tasks, however, are often dominated by competing interests. Competition from subsidized wind energy and natural gas is reducing demand for biomass energy production. This dynamic led the Minnesota Legislature to permit Xcel Energy to buy out their long-term biomass energy contract. The ripple effects of this decline are now being felt by landowners who no longer have markets for forest thinnings, the forest harvest industry which has made investments in workers and equipment, and the pulpwood and sawtimber industries whose market development depend indirectly on the lower-value biomass markets. Long-term there is concern that forestlands will continue to become overgrown thereby increasing the risks from wildfires.

There is an unmet opportunity to reconnect forest management activities to biomass markets through both research and public policy. Addressing the gap in support for use of forest thinnings and residuals from harvesting in renewable energy markets will require public funding similar to that given to biomass production in tree plantations and croplands.

Publicly supported research will provide data and decision making tools to public and private land managers to help foster the development of the 21st century bio-economy by:

- 1) assessing the availability of forest resources, particularly on private forest lands;
- 2) predicting how future management decisions will affect wood availability for new and existing industries;
- 3) developing understanding of the potential for conversion of a portion of forest resources into bio-based chemicals and advanced biofuels
- 4) ensuring the sustainability of forest ecosystem services.

Changes in public policy to level the playing field between forest biomass thinnings and harvest residuals and bioenergy from row crops will encourage the development of markets. A significant impact of these changes will be the creation of well-paying jobs throughout the spectrum of workforce positions needed for resource management, and establishment of new businesses in depressed rural economies.

Eric Singaas
Initiative Director for Wood Products & Bioeconomy
Natural Resources Research Institute
University of Minnesota

Mike Reichenbach, EdD
Extension Professor
University of Minnesota

Neil Nelson
Acting Manager, Production Forestry Group
Natural Resources Research Institute
University of Minnesota

George Host
Initiative Director for Forest and Land
Natural Resources Research Institute
University of Minnesota