New study suggests ways to enhance payment for biomass fuel

Wood is the oldest form of raw material used to generate energy. Yet, the fact that trees have low energy density relative to other fuels and that in its natural state wood is usually one-half water by weight, challenges its competitive value in many places.

Results of a new study – "Balancing Biomass Harvesting and Drying Tactics with Delivered Payment Practice" – released today by the U.S. Endowment for Forestry and Communities (the Endowment) suggest that some relatively low tech approaches enhanced by modern measurement systems could help change that. “We asked scientists at North Carolina State University to explore ways to lower the cost of transporting waste wood for energy and to consider better ways to link energy value to purchase price,” said Endowment President Carlton Owen.

The NC State team looked at ways to lower moisture content in the woody material before it was delivered to a buyer. The team quickly abandoned “in transit” drying whereby moisture content would be reduced in the vans hauling chipped materials and instead turned to low-tech but very effective approaches to just leaving the material in the forest for a period of time and letting Mother Nature do the job. “Working with the natural drying processes proved to be the most efficient means,” said Owen.
As buyers, especially in the southeast, pay for woody biomass on a weight versus energy content basis, the next phase of the work turned to rapid and cost effective ways to link the energy value of the woody material to payment. The intent was to have buyers pay on energy content versus the traditional approach of rewarding sellers for water that actually has a negative transaction value. Early indications from the work suggest that in woods drying of up to one year and then measuring the energy value at the point of purchase using modern measuring devices should enhance value to all parts of the value chain – the landowner, the timber harvester/hauler and the end user of the material.

This study is one of several undertaken by the Endowment and the USDA Forest Service their “Wood-to-Energy Joint Venture Initiative” dedicated to finding ways to enhance forest health and landowner returns by providing markets for low-value wood.

READ THE STUDY

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