

A recent study determined Nebraska has an assured wood supply to support strategically located woody biomass-based enterprises across the state.

With funding from a U.S. Forest Service grant, the Nebraska Forest Service analyzed the amount of wood available for woody biomass applications and identified potential woody biomass consumers.

According to the study, Nebraska has 1.3 million acres of timberland containing more than 41 million oven-dry tons of standing woody biomass.

“Woody biomass is the low-hanging fruit for alternative energy applications,” said Scott Josiah, state forester and director, Nebraska Forest Service. “It’s our state’s untapped resource, and it’s ready to be used.”

Each year’s net growth on Nebraska timberland produces nearly one million net tons of wood. Additionally, 270,000 tons of wood are generated each year from forest fuels treatment programs, range improvement activities, timber harvest operations, urban wood waste and wood processing operations.

Currently, less than 10 percent of this waste wood is used. Progress is underway to geospatially map Nebraska’s available wood resource.

Chadron State College burns 9,000 tons of wood each year to heat and cool more than one million square feet of building space, reducing its energy costs by more than 30 percent.

The Arbor Day Foundation’s Lied Lodge uses 3,200 tons of woody biomass annually. A number of alfalfa dehydration and wood processing plants also take advantage of available woody biomass.

Woody biomass is a proven, reliable energy source for both heating and cooling, as well as industrial applications, electricity generation and ethanol production, Josiah said. Woody biomass also can be used to co-fire coal-burning power plants, reducing air pollution and offsetting carbon emissions.

“Years of steadily rising energy costs have negatively impacted Nebraska’s rural communities, some of which were already facing serious economic decline,” he said.

“Woody biomass utilization serves as a catalyst for rural economies. In the Pine Ridge, fuels treatment projects and the associated woody biomass utilization have resulted in six full-time, year-round jobs and more than \$1 million in economic impacts for the area,” he added.

Five institutions across the state have recently completed feasibility studies that show woody biomass conversion is a viable option. If converted, these institutions could save a combined \$1.6 million in annual energy costs and reduce carbon emissions by 600,000 tons over the 30-year life span of the boilers.

The Nebraska Forest Service is a part of the university’s Institute of Agriculture and Natural Resources.