CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: March 31, 2022

TO: Edward Blazel and Michael Queensland, Chief Clerks

FROM: Collin Buntrock, Wisconsin Department of Natural Resources

SUBJECT: Forest Energy Resources Report per s. 26.36, Wis. Stats.

This summary highlights the extent of forest lands in the state and the potential of such lands to provide fuel for use in electric generating facilities, industrial facilities, and home heating systems. Wisconsin's forests have long supported renewable energy development among commercial, industrial, and residential sectors. Examples range from small home and commercial heating appliances, to wood-fired boiler systems at schools, hospitals, and wood manufacturing firms. Forest energy feedstocks include timber harvest residues (e.g. treetops, limbs, and culled trees), firewood, and dedicated wood energy crops. Forest energy continues to play an important role in reducing the state's dependence on fossil fuels while also improving forest health and enhancing rural economies. Moreover, forest energy feedstocks are relatively available and price stable compared to other fuels.

An examination of Wisconsin's forest acreage, tree volume, annual net growth, and removals provides a general assessment of resource availability. Of Wisconsin's 35 million acres of land, about 17 million acres are forested. Forestland area in the state has steadily increased since 1983, mostly due to the conversion of marginal agricultural land into forests (Figure 1). The recent peak in forest area came in 2012 when Wisconsin recorded more than 17 million acres, which has remained statistically unchanged to the present. Furthermore, for several decades, annual forest growth has outpaced removals by nearly two-fold, resulting in a 30% increase in available volume since 1983. This volume does not account for the potential availability of treetops, limbs, and other tree sections, which amounts to an estimated 15-20% additional volume.

In conclusion, long-term increases in the total standing timber volume and acreage, coupled with the consistently high net annual growth to removals, suggest that Wisconsin's forests are poised to meet current demand and potential growth in forest energy needs. It should also be noted that other wood feedstocks, including unmerchantable urban tree removals and wood manufacturing byproducts (e.g. bark, sawdust, slabs and chips), support renewable energy development but were not included in this summary. A detailed raw material analysis is highly recommended prior to pursuing any forest energy project.

Figure 1: Wisconsin Forest Statistics, 1983 - 2019

	1983	1996	2004	2012	2019
Forest Land Area[1] (Thousand Acres)	15,353	15,962	16,037	17,072	16,959
Total Merchantable Volume[2] (Million Cubic Feet)	15,515	19,345	19,393	21,149	22,426
Net Annual Growth[2] (Million Cubic Feet)	493	490	653	554	573
Annual Removals[2] (Million Cubic Feet)	(236)	(332)	(346)	(307)	(280)

Data in this summary was sourced from the USDA Forest Service, Forest Inventory and Analysis Program, St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northern Research Station.

[1]Calculated across FIA defined "Forest Land." [2]Calculated across FIA defined "Timberland."