
Making Jet Fuel from Wood Waste

BBER Partners with Northwest Advanced Renewables Alliance

60 billion gallons of petroleum-based fuels are burned by the world's airlines each year. Meanwhile, millions of tons of wood residue from timber harvests and beetle-killed trees goes unused, burned in slash piles, or left to create fire hazards in our Pacific Northwest forests. The BBER's Forest Industry Research Program is helping scientists determine whether they can develop ways to turn one of the region's most plentiful and underused commodities – wood waste – into jet fuel.

This year the forest products team joined the Northwest Advanced Renewables Alliance (NARA) in securing a \$40 million grant from the U.S. Department of Agriculture. Led by Washington State University, the project aims to create a sustainable industry to produce aviation biofuels and valuable co-products using forest and mill residues, construction waste, and new energy crops.

BBER's role is to evaluate logging and mill residue across the targeted four-state region – Oregon, Washington, Idaho, and Montana – including the quantity of material, its characteristics, and where it is found. The Bureau is also facilitating outreach, helping to connect researchers to community stakeholders who have economic development and environmental interests in the project and increase public literacy in bioenergy.

NARA partners include public universities, government laboratories, and private industry from throughout the Northwest and beyond. Scientists on the team are developing the chemical process of breaking the wood down into base materials which can be used to make biofuel and other chemicals like solvents for paints and renewable rubber. Other researchers are assessing sustainability – the environmental, social, and economic viability of the overall wood-to-biofuels supply chain. Willing purchasers of the finished product such as Boeing, Alaska Airlines, the U.S. Navy and Airforce are also partners.

Forest Products Industry Research Program Director **Todd Morgan** sees numerous potential benefits to the NARA project, particularly creating markets for low-value wood in western Montana. "After the Smurfit-Stone closure in Frenchtown, groups interested in forest industry retention have been seeking new types of industries that will fill the void and complement existing industries," Morgan said. "The biofuel industry could use material not currently used, help landowners manage land, and reduce fire hazards. We are capitalizing on a resource and helping to make the U.S. more self-reliant for our energy needs."