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Frontier Awards \$2-Million Grant to Michigan State & Michigan Tech

Grant will boost sustainable forestry, help keep cellulosic ethanol low-cost, low carbon

KINROSS TOWNSHIP, Mich. - Frontier Renewable Resources, the Michigan-based company building the state's first cellulosic ethanol plant in the Upper Peninsula, has provided a \$2-million grant designed to strengthen the sustainable wood fiber supply, develop greater efficiencies in the harvest and transportation equipment and processes, and further reduce costs for the cutting edge project. The grant will fund critical research by Michigan State University and Michigan Technological University that brings the next-generation ethanol facility closer to construction.

"Frontier is committed to helping Michigan become an energy leader, create good-paying 21st century jobs and reduce our dependence on imported fuels - and this important grant assists us in our sustainable forest practices," Frontier CEO **Steve Hicks** said. "Thanks to the tremendous support of Gov. Jennifer Granholm and her outstanding team, Frontier and the state of Michigan are in position to write the next chapter of our nation's energy future."

This \$2-million grant will help Frontier, through our close working relationship with researchers at MSU and MTU, improve sustainable wood fiber supplies and identify cost-efficient and timely methods of harvest and transportation.

"As a Michigan company based right here in the Upper Peninsula, Frontier is committed to sustainable forestry and best management practices," **Hicks** said.

"Frontier and Mascoma have been blazing the trail on cutting-edge next generation ethanol research and development, and they are on the verge of producing billions of gallons of low-cost cellulosic biofuels," said MSU Professor **Bruce Dale**, who is also editor of the journal *Biofuels, Bioproducts and Biorefineries*. "Frontier is poised to change the biofuels landscape in Michigan and beyond."

"Michigan State and Michigan Tech have been working in partnership to encourage the development of Michigan's forest bioeconomy for almost two years," said **Steve Pueppke**, director of the MSU Office of Biobased Technologies and the Michigan Agricultural Experiment Station. "We welcome this support, which allows us to expand the work we've begun and increase the scope of our efforts to the entire state."

"Michigan Tech is delighted to be able to put our expertise in biomass-based fuel and renewable energy to work with Frontier Renewable Resources and Michigan State University, to ensure the economic and scientific success of this important alternative energy project," said **David Reed**, vice president for research at Michigan Tech. **Reed** played a key role in developing the research partnership.

Mascoma Corp. is a leader in advanced, low-carbon biofuels technology based in Boston, Mass. Using proprietary microorganisms and enzymes developed at the company's laboratories in Lebanon, New Hampshire, Mascoma is collaborating with research partners globally to identify, patent and deploy a new generation of microbes and low-cost processes for producing advanced cellulosic ethanol technologies across a range of non-food feedstocks. Mascoma is developing demonstration and commercial scale production facilities in locations across the United States. For more information: www.mascoma.com.

J.M. Longyear is a natural resources company based in Marquette, Mich. Founded in the late 1800s in the Upper Peninsula, JML owns and manages more than 100,000 acres of forest land in the u.P. and Canada, following best management practices to ensure forest sustainability for generations to come. For more information: www.jmlongyear.com.

Frontier Renewable Resources LLC is a joint venture between Mascoma and J. M. Longyear, with support from the federal and state governments, and major u.s. corporations. Frontier will build a cellulosic ethanol plant in Chippewa County in Michigan's Upper Peninsula that will be operational in 2013, producing up to 40 million gallons of low-cost, low-carbon cellulosic ethanol a year. The project is expected to create more than 150 local construction jobs, around 50 full-time facility positions and more than 700 additional jobs in manufacturing, agriculture and forestry, according to a State of Michigan 2008 estimate. www.frontier-renewable.com

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