

## Alpena Prototype Biorefinery

The Alpena Prototype Biorefinery (APB) will be constructed in Alpena, Michigan at the Decorative Panels International (DPI) hardboard manufacturing facility.

The goal of the APB is to demonstrate a modular, technically successful, and financially viable process of making cellulosic ethanol from woody biomass extract in wood processing facilities.

### Project Description

The APB pilot biorefinery will produce 894,200 USG per year of cellulosic ethanol and 696,000 gallons per year of aqueous potassium acetate. The APB feedstock will be wood hydrolyzate from mixed northern hardwood, produced by DPI in the course of board manufacturing. The hardwood is sustainably harvested according to the renewable biomass standard legislated by the Renewable Fuels Standard.

The project objectives and the value proposition of APB promote the national goals of energy independence, greenhouse gas reduction, and green job creation and retention. They include:

- Begin operation of the APB pilot biorefinery by mid 2011.
- Demonstrate concentration, hydrolysis, and simultaneous fermentation of C5 and C6 sugars in near scale industrial facility.
- Gather metrics for the construction of the commercial plants.
- Demonstrate the business model of adding cellulosic ethanol production to wood processing



Alpena Prototype Biorefinery Project Site

facilities, such as biopower plants and pulp mills.

- Remain operational after the demonstration period and be available as a pilot plant “for hire” where the applicant’s team, and separate third parties, can perform trials on ethanologens.

### Potential Impact

The APB pilot is planned to startup mid-2011. The project will create 10 permanent jobs for direct employees and help retain 200 jobs associated with the existing DPI facility.

### Other Participants

The project has been declared as a Michigan Center of Energy Excellence and has received a \$4 million State grant. The APB has been designated as a Michigan Renewable Energy Renaissance Zone with 15 year property tax abatement. Equity funds have been committed to the project by Valero Energy Corporation and by American Process Inc.

Prime	<b>American Process Inc.</b>
Location	Alpena, Michigan
Feedstock (s)	Industrial wood hydrolyzate waste (from mixed northern hardwood)
Size	30 BDT/d
Primary Products	Cellulosic Ethanol and Potassium Acetate
Capacity	894,200 USG per year of cellulosic ethanol and 696,000 gallons per year of aqueous potassium acetate.
Award Date	April 2010
GHG Reduction	TBD
Anticipated Job Creation	Will create 10 permanent jobs for direct employees and help retain 200 jobs associated with the host facility, DPI
Company Point of Contact	Theodora Retsina, CEO of American Process, 404-872-8807, Theodora@americanprocess.com