

INEOS New Planet BioEnergy Commercializes Bioenergy Technology in Florida

Project produces renewable biofuels and clean energy from waste



Indian River County BioEnergy Center, Florida

INEOS Bio and its joint venture partner, New Planet Energy, have invested millions of dollars to build an advanced bioethanol facility, bringing clean energy jobs to Florida. The Indian River County BioEnergy Center (Center), near Vero Beach, Florida, will produce eight million gallons of third-generation bioethanol per year from renewable biomass, including vegetative, yard, and municipal solid waste (MSW). The Center will also generate 6 megawatts (gross) of clean renewable power to run the facility with the excess exported to the local community. The total project investment is more than \$130 million dollars and created 400 direct and indirect jobs, including 60 full-time jobs. For more information, visit the [INEOS Bio website](#).

Project Description

The Center is the first commercial scale facility employing the INEOS Bio Bioenergy technology. The project broke ground in February 2011 and construction was completed in the second quarter of 2012 with commissioning and start-up in the third and fourth quarters. Utilizing a unique combination of gasification and fermentation processes, the facility is demonstrating key equipment at full commercial scale, using vegetative, yard, and MSW as feedstock.

Through a proprietary process, the feedstock is heated to produce a

synthesis gas that is cooled and cleaned before being fed to naturally occurring bacteria. These patented bacteria convert the synthesis gas into ethanol, which is purified for use as fuel in the transportation market. This unique “feedstock flexible” process has been in development for more than 20 years, with nine years of pilot-plant testing. In addition to building its own plants, INEOS Bio will enter into licensing agreements with third parties to build similar commercial bioenergy plants to supply ethanol and renewable power around the United States and the world.

Potential Impacts

This project has had significant positive impact on the local community. Building the facility has meant more than \$25 million of direct investment into Florida’s economy with more than \$4 million in payroll and benefits given to the local economy. More than 90% of

the equipment is from U.S. manufacturers. The biomass gasification process produces renewable power from a steam turbine, which will run the plant and deliver electricity to 1,400 homes in the local community. The availability of ethanol for fuel in the region significantly reduces the costs and environmental impacts of transporting ethanol great distances to fulfill Florida’s E10 ethanol standard, while providing energy security to Florida and the nation.

Other Participants

Key participants include INEOS Bio, New Planet Energy, USDA, AMEC, Air Products, and CDM-Smith.

Prime	INEOS New Planet BioEnergy
Location	Vero Beach, Florida
Feedstock (s)	Vegetative and yard waste, MSW
Size	300 dry tons per day
Primary Products	Cellulosic ethanol, renewable power
Capacity	8 million gallons per year and 6 megawatts (gross) of electricity generation
Award Date	August 2011 (Final)
GHG Reduction	More than 90% GHG reduction compared to gasoline
Anticipated Job Creation	400 direct and indirect jobs; 60 full-time jobs
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