

Gevo Announces First Retrofit of Ethanol Demonstration Plant to Biobutanol for the Oil and Chemical Industries

September 30, 2009 2:03 AM ET

ENGLEWOOD, Colo., Sept. 30 -- Gevo, Inc. today announced the start up of the first biobutanol demonstration plant in the world designed from retrofitting an existing demonstration scale ethanol plant to produce biobutanol. In successfully producing biobutanol at the one million gallon per year pilot plant in St. Joseph, Missouri, Gevo is demonstrating the viability of its technology for retrofitting existing ethanol plants to make biobutanol, an advanced biofuel. Biobutanol can be blended directly into gasoline and be used to make renewable hydrocarbons ("green gasoline"), diesel and jet fuel, chemical intermediates and biobased plastics. The retrofit of the pilot plant was completed in less than three months. This successful retrofit also represents the first step along the route to produce cellulosic biobutanol which will be possible once biomass conversion technology becomes commercially available.

"When applied at commercial scale, this technology can give ethanol plants a new future. Retrofitting existing plants represents a quick and cost-efficient way to get to advanced biofuels," said Pat Gruber, CEO of Gevo. "We congratulate the team in St. Joseph for their success in commissioning the plant and look forward to working with ethanol producers to convert existing plants to butanol."

This is the first time that an existing ethanol operation has been successfully retrofitted to produce biobutanol instead of ethanol. ICM's pilot plant at St. Joseph has been designed and constructed as a reduced scale replica of a dry-milled ethanol production process. Additionally, Gevo's biobutanol has higher energy content than ethanol and a lower Reid Vapor Pressure (RVP) – which means lower volatility and evaporative emissions. Importantly, standard automobile and small engines can run on biobutanol blended into gasoline at any ratio.

"As a leader in biofuels technology design and engineering, ICM continues to support the growth of the renewable fuels industry through establishing strategic partnerships, including our collaboration with Gevo. It was a pleasure working with Gevo's team at our pilot plant in St. Joseph," said Dave Vander Griend, President and CEO of ICM. "Gevo's biobutanol retrofit technology is an exciting option for ethanol producers looking to expand their routes to produce advanced biofuels and renewable chemical products."

In a separate release today, Gevo announced the formation of Gevo Development, LLC to finance and develop retrofit projects.

Gevo's biobutanol is produced via fermentation similar to ethanol and its process, and can utilize the bulk of the equipment in an ethanol plant. Gevo's biorefinery process replaces the ethanol producing yeast with yeast that produces biobutanol. Gevo has also developed a proprietary separation process technology for the economical recovery of the product. The additional cost of this capital equipment is projected to be approximately 30 cents per gallon of installed ethanol capacity. Retrofit facilities will have the flexibility to produce either ethanol or biobutanol.

Gevo and ICM have established an exclusive arrangement to provide engineering solutions for the development of butanol and other related isomers at North American facilities that utilized dry milled corn and grain sorghum feedstocks.

About Gevo

Gevo is pioneering the development of capital efficient biorefinery systems to provide renewable, cost effective building block products to the fuel and chemical industries. Gevo's biorefineries will convert renewable raw materials into biobutanol and renewable hydrocarbons that can be directly integrated into existing processes to deliver environmental and economic benefits. Gevo is committed to a sustainable biobased economy that meets society's need for plentiful food and clean air and water.

About ICM

Established in 1995 and headquartered in Colwich, Kan., ICM, Inc., has focused on sustaining agriculture through innovation by engineering, building, and supporting the renewable fuel industry's leading biorefineries. ICM is North America's leading engineering company serving the biofuels industry and has designed nearly 60% of the ethanol plants in North America. Proprietary ICM process technology is behind approximately 6.6 billion gallons of ethanol production per year. Additionally, ICM backs every facility it designs with the most aggressive yield, energy, and emissions guarantees available. The full-service provider

also offers a comprehensive line of more than 30 products and services tailored to make biofuels production more efficient and more profitable. ICM is further upholding its responsibility as an industry leader by heavily investing in the continued advancement of renewable energy technologies. In an effort to speed that advance, ICM has been conducting research and testing at its two state-of-the-art research facilities in Colwich and St. Joseph, MO, in conjunction with a growing list of strategic partners spanning multiple industries. For more information, visit icminc.com.

For More Information:

Jack Huttner
Executive Vice President, Commercial & Public Affairs Gevo, Inc.
E-mail: JHuttner@Gevo.com
Phone: +1-303-858-8358