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Minnesota ethanol plant to produce n-butanol, acetone in 2016

By Holly Jessen | December 23, 2014

The sale of Central MN Ethanol Co-op, a 21 MMgy corn-ethanol plant in Little Falls, Minnesota, closed on Dec. 23. Green Biologics Inc. plans to continue ethanol production until sometime in 2016, when it will transition to produce commercial-scale volumes of renewable normal butanol (n-butanol) and acetone.

Green Biologics Inc. is a wholly owned U.S. subsidiary of a United Kingdom industrial biotechnology and renewable chemicals company, Green Biologics Ltd. The acquisition was made through Central MN Renewables LLC, an affiliate of Green Biologics Inc.

“We are extremely pleased with the successful closing and look forward to the leadership role that Green Biologics will play in bringing renewable chemicals to commercial reality,” said Dana Persson, CEO of Central MN Ethanol Co-op, in an Ocean Park Advisors press release. The company acted as the exclusive financial advisor to CMEC in the transaction. Persson added that the Ocean Park Advisors team did a great job on everything, including expanding the list of bidders to include renewable chemical companies.

“This is a great opportunity to help Minnesota maintain its leadership position in renewables, and kick start a new renewable chemicals industry in the state,” said Joel Stone, who is president of both Green Biologics Inc. and Central MN Renewables. “We’re pleased with the local and state support from Minnesota, and we’re particularly enthusiastic about the incredibly positive energy from our new team of employees and managers at CMR. We’re also grateful to our corn growers and we look forward to producing clean, renewable chemicals from Minnesota corn.”

At the Central MN Ethanol Co-op website a note from Stone and Persson, whose new title is general manager of Central MN Renewables LLC, said the website would be updated in the coming weeks and months. The note went on to say that corn suppliers would see no changes in 2015 and referred visitors to a link titled “Who is CMR?”

According to the link, the repurposing of the plant will have minimal impact. Although new distillation equipment will be needed to produce n-butanol and acetone, existing fermenters and most everything else in the plant will be used in the new production process. Clostridia will replace yeast as the agent for digestion and sugar conversion to alcohols and solvents. “Because changes are small, engineers can carefully design the upgrades around existing ethanol operations so that during construction, the plant can continue to operate in full production mode,” the document said.

The plant will be shutdown briefly in 2016 to make the change over to n-butanol and acetone production. The existing employees will be trained in the new process and most Central MN Ethanol Co-op vendors, suppliers and service providers will continue to do business at the plant.

N-butanol and acetone are chemical building blocks used in the manufacture of many consumer goods, the Central MN Renewables link said. N-butanol is an ingredient in products like moisturizers, fragrances and other personal care products and n-butanol derivatives are used in paints, inks and more. Acetone is a chemical found in nail polish remover and can also be transformed into rubbing alcohol, which can be an ingredient in flavor and fragrance compounds.

According to a Green Biologics press release, a consultant group has said the global n-butanol market is expected to reach \$9.4 billion by 2018. Growth of 4.4 percent is expected yearly. “Our downstream markets are robust and rapidly growing, with strong demand across a wide spectrum of customers in high value performance markets,” said Sean Sutcliffe, CEO of Green Biologics Ltd. and chairman of Green Biologics, Inc.



Green Biologics has been producing renewable n-butanol in China from corn cobs and corn stover since 2012. In 2016 the Little Falls plant will start producing the building block chemical from corn.
Green Biologics

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