

Renmatix commissions King of Prussia cellulosic sugar facility

Renmatix (King of Prussia, PA), a cellulosic sugar start-up backed by Kleiner Perkins Caufield & Byers (Menlo Park, CA) and BASF, has commissioned a plant-to-sugar processing facility at King of Prussia. Financial terms and capacity were not disclosed.

Renmatix breaks down cellulose through supercritical hydrolysis, a process by which heat and pressure are applied to a slurry until the chains of sugar break down into the smaller components usable by biofuel and biochemical producers. The company says its technology will be able to extract sugar more cheaply than other cellulosic technologies because its technology does not require pretreatments or enzymes.

The company says the new BioFlex Conversion Unit (BCU) at King of Prussia builds on the company's success with hardwood biomass at its flagship facility, in Kennesaw, GA, and will test and convert a range of nonfood plant materials through its water-based process, Plantrose. In

addition to hardwood, the company will begin conversion of four locally available feedstocks: perennial grasses, agricultural residues, softwoods, and waste streams. The cellulosic sugars produced on-site via the BCU will support downstream fuel and chemical strategic partners and data analysis at the company's technical center, which was opened in September 2012.

"Rural America holds tremendous promise today, thanks in large part to innovation taking place in the biobased economy," says Department of Agriculture (USDA) secretary of agriculture Tom Vilsack, who attended the commissioning ceremony. "Since 2009, USDA has



BIOECONOMY BREAKTHROUGH: Supercritical hydrolysis yields cheap sugar for biobased production.

made tremendous investments in the research necessary to develop the next generation of biobased products. Such research is validated when companies like Renmatix can convert locally relevant feedstocks into the very low-cost sugar intermediates demanded by global fuel and chemical markets." —REBECCA COONS

Edeniq signs ethanol deal with Pacific Ethanol

Biomaterials and sustainable fuel company Edeniq (Visalia, CA) announced earlier this month that it has entered into an agreement with Pacific Ethanol to install Edeniq technology at Pacific Ethanol's (Stockton, CA) ethanol plant. Pacific Ethanol will install Edeniq's proprietary Cellunators to boost ethanol yields, and will also deploy Edeniq's patented OilPlus corn oil extraction process to increase corn oil recovery.

Edeniq's Cellunator technology mills corn and other plant materials into appropriately sized particles of feedstock that can be more efficiently converted into the plant sugars needed to produce biofuels.

With four ethanol plants in the western United States, including in California, Oregon, and Idaho, Pacific Ethanol's facilities have the combined ethanol production capacity of 200 million gal/year. The Stockton plant was built in 2008 and has the capacity to produce 60 million gal/year. Edeniq's technology is expected to increase the facility's ethanol yields by 2–4%. —REBECCA COONS

Hemlock Semiconductor reports layoffs and production cuts

Hemlock Semiconductor, a leading producer of polysilicon, has announced plans to cut approximately 400 employees from its 2 US manufacturing sites and reduce polysilicon production. The company cites "significant" polysilicon oversupply and the threat of tariffs on polysilicon sales into China, one of the company's largest markets. Dow Corning holds a 63.25% stake in Hemlock. Shin-Etsu Handotai and Mitsubishi Materials own the remaining stakes in Hemlock, at 24.5% and 12.25%, respectively.

Hemlock says the layoffs include approximately 300 at its Clarksville, TN, site, which is still under construction, and 100 employees at its Hemlock, MI, site. The company adds that "[s]hould market conditions persist, these layoffs could become permanent." According to Hemlock's website, the company has over 1,000 direct and contract employees.

"This is a difficult but necessary decision to enable Hemlock Semiconductor to navigate the volatility in the polysilicon and solar industries," says Andrew Tometich, president of Hemlock Semiconductor. "The unresolved trade disputes among the US, China, and Europe are a major factor in Hemlock Semiconductor's actions, as the threat of tariffs on US polysilicon imported into China has significantly decreased orders from China, which is home to one of the largest markets for our products."

Hemlock says it will continue to reduce production at its Hemlock site "to align [output]

with current customer demand." The Clarksville facility—originally slated to come online late last year—is nearing the end of the construction phase, and a "minimum workforce focused on safely maintaining the site for eventual production," will be maintained there, Hemlock says. "A number of factors will impact the exact timing of the start-up of the facility, including customer demand and resolution of the trade disputes," Hemlock adds.

The Clarksville facility is part of a \$4.5-billion expansion program Hemlock kicked off in 2005 to max out polysilicon capacity at the Michigan site and build a second manufacturing base.

Deteriorating economic conditions in Europe, cuts in government incentives, aggressive polysilicon expansion plans by tier-1 producers, and a solar trade war between the United States and China have contributed to massive oversupply in polysilicon, according to IHS iSuppli. Making matters worse, China has initiated an antidumping and antisubsidy investigation into solar-grade polysilicon from the United States. China's investigation is one of six different solar trade wars proceeding, involving China, Europe, the United States, and India, IHS says.

The announcement comes just a week after Dow Corning, Hemlock's majority owner, said it planned on laying off 500 employees, or 4% of its workforce, to better align its cost structure with the "realities of today's volatile global economy." —REBECCA COONS