

February 16, 2017



## Pacific Ethanol To Produce Cellulosic Ethanol at its Madera Plant

**Edeniq's yield-enhancing Pathway Technology will now be installed at two Pacific Ethanol plants**

SACRAMENTO, Calif., Feb. 16, 2017 (GLOBE NEWSWIRE) -- **Pacific Ethanol, Inc.** (NASDAQ:PEIX), a leading producer and marketer of low-carbon renewable fuels in the United States, and Edeniq, Inc., a biorefining and cellulosic technology company, announced they have entered into a technology licensing and purchase agreement to enable the production of cellulosic ethanol at Pacific Ethanol's Madera, California plant using Edeniq's Pathway and Cellunator™ Technologies.



The Madera plant has a total annual production capacity of 40 million gallons, and is expected to produce up to one million gallons per year of cellulosic ethanol with Edeniq's Pathway process. Installation is expected to be completed in the third quarter of 2017.

Neil Koehler, Pacific Ethanol's president and CEO, stated: "Consistent with our strategy to improve yields and increase production of advanced biofuels at our plants, we are expanding cellulosic ethanol production to our Madera facility. We began producing cellulosic ethanol using Edeniq's technology at our Stockton plant in December 2015, and the resulting bottom line contribution is significant. Once commercial scale production is reached at Madera, we expect the technology will increase earnings by over \$2 million annually. We will be working with the EPA to qualify this production for generating D3 cellulosic RINs, which provide an important premium, and we expect the approval to be received near or shortly after we begin commercial operations. We are also working with the California Air Resources Board to qualify our cellulosic production at both our Stockton and Madera facilities for additional carbon credit under the California Low Carbon Fuel Standard."

Brian Thome, president and CEO of Edeniq, stated: "We are pleased to expand our relationship with Pacific Ethanol and provide our Pathway and Cellunator Technologies to its second ethanol plant. The low-cost profile of our technologies offers ethanol producers an

attractive option for enhancing ethanol and corn oil yields and producing high-value cellulosic ethanol using existing fermentation and distillation equipment. We are excited to have over 2 billion gallons of ethanol capacity either already under license or committed to commercial trials for our Pathway Technology, with additional plants being added each month.”

Edeniq’s Pathway Technology is a low-cost solution for producing and measuring cellulosic ethanol from corn kernel fiber utilizing existing fermenters at corn ethanol plants. The Cellunator high-shear milling equipment is a leading yield-enhancement technology that offers the most significant and consistent increase in ethanol yield and corn oil recovery, and produces cellulosic ethanol when integrated with Edeniq’s Pathway Technology. The technology features a proprietary technical validation process, quantifies the amount of cellulosic ethanol produced and complies with the registration, recordkeeping, and reporting required by the EPA to generate cellulosic D3 Renewable Identification Numbers (RINs) as defined by the Renewable Fuel Standard.

#### **About Edeniq, Inc.**

Edeniq has developed leading processes for producing low-cost cellulosic sugars and cellulosic ethanol. Edeniq’s capital light and operationally efficient solutions can be easily integrated into existing biorefineries that produce ethanol, other biofuels, biochemicals, and/or bio-based products. Edeniq currently sells or licenses its technologies to biorefineries in the United States. Edeniq was founded in 2008 and is headquartered in Visalia, California with a field office in Omaha, Nebraska. More information can be found at [www.edeniq.com](http://www.edeniq.com).

#### **About Pacific Ethanol, Inc.**

Pacific Ethanol, Inc. (PEIX) is the leading producer and marketer of low-carbon renewable fuels in the Western United States. With the addition of four Midwestern ethanol plants in July 2015, Pacific Ethanol more than doubled the scale of its operations, entered new markets, and expanded its mission to advance its position as an industry leader in the production and marketing of low carbon renewable fuels. Pacific Ethanol owns and operates eight ethanol production facilities, four in the Western states of California, Oregon and Idaho, and four in the Midwestern states of Illinois and Nebraska. The plants have a combined production capacity of 515 million gallons per year, produce over one million tons per year of ethanol co-products – on a dry matter basis – such as wet and dry distillers grains, wet and dry corn gluten feed, condensed distillers solubles, corn gluten meal, corn germ, corn oil, distillers yeast and CO<sub>2</sub>. Pacific Ethanol markets and distributes ethanol and co-products domestically and internationally. Pacific Ethanol’s subsidiary, Kinergy Marketing LLC, markets all ethanol for Pacific Ethanol’s plants as well as for third parties, approaching one billion gallons of ethanol marketed annually based on historical volumes. Pacific Ethanol’s subsidiary, Pacific Ag. Products LLC, markets wet and dry distillers grains. For more information please visit [www.pacificethanol.com](http://www.pacificethanol.com).

#### **Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995**

Statements and information contained in this communication that refer to or include the Pacific Ethanol’s estimated or anticipated future results or other non-historical expressions of fact are forward-looking statements that reflect Pacific Ethanol’s current perspective of existing trends and information as of the date of the communication. Forward looking statements generally will be accompanied by words such as “anticipate,” “believe,” “plan,” “could,” “should,” “estimate,” “expect,” “forecast,” “outlook,” “guidance,” “intend,” “may,” “might,” “will,” “possible,” “potential,” “predict,” “project,” or other similar words, phrases or

expressions. Such forward-looking statements include, but are not limited to, production levels of cellulosic ethanol and premiums and enhanced profitability from cellulosic ethanol; the timing of installation of Edeniq's Pathway process; and Pacific Ethanol's other plans, objectives, expectations and intentions. It is important to note that Pacific Ethanol's plans, objectives, expectations and intentions are not predictions of actual performance. Actual results may differ materially from Pacific Ethanol's current expectations depending upon a number of factors affecting Pacific Ethanol's business. These factors include, among others, adverse economic and market conditions, including for ethanol and its co-products; prices for and premiums attributable to D3 cellulosic RINs. These factors also include, among others, the risks and uncertainties normally incident to the installation of new technologies; and other events, factors and risks previously and from time to time disclosed in Pacific Ethanol's filings with the Securities and Exchange Commission including, specifically, those factors set forth in the "Risk Factors" section contained in the Company's Form 10-Q filed with the Securities and Exchange Commission on November 8, 2016.

Pacific Ethanol Contacts:

Company IR Contact:

Pacific Ethanol, Inc.

916-403-2755

[Investorrelations@pacificethanol.net](mailto:Investorrelations@pacificethanol.net)

IR Agency Contact:

Becky Herrick

LHA

415-433-3777

Media Contact:

Paul Koehler

Pacific Ethanol, Inc.

503-235-8241

[paulk@pacificethanol.net](mailto:paulk@pacificethanol.net)

Edeniq Contact:

Michael Russell

559-302-1777

[mrussell@edeniq.com](mailto:mrussell@edeniq.com)



Pacific Ethanol, Inc.

Source: Pacific Ethanol, Inc.