

## **logen's advanced cellulosic biofuel technology reaches critical production milestone**

**Ottawa, Canada, December 17, 2014** - logen Corporation, a leading developer of cellulosic biofuel technology, and Raízen, one of the world's largest producers of sugarcane ethanol, are pleased today to announce they have begun production of cellulosic ethanol on schedule at Raízen's newly expanded Costa Pinto sugar cane mill in Piracicaba, São Paulo, Brazil.

Raízen broke ground on the \$US100 million "biomass-to-ethanol" expansion just over one year ago. The new facility will convert biomass such as sugar cane bagasse and straw into 40 million litres per year of advanced, second generation cellulosic biofuel. It will also be the first large-scale commercial implementation of logen Energy's cellulosic ethanol technology, which the company developed and has extensively proven in its Ottawa demonstration facility.

"Biofuel production at this facility represents the next step in our partnership with logen," says João Alberto Abreu, agroindustrial director from Raízen. "We believe logen Energy has the most robust, well proven, and competitive technology platform in the cellulosic ethanol business. We see tremendous potential for this to meet the world's growing demand for cleaner and more sustainable fuels, and we anticipate a long and profitable future."

"We are very excited to have been able to make this start-up a success" says Brian Foody CEO of logen Corporation. "We have a great team of engineers, scientists and operators who've been working tirelessly with Raízen's own excellent team. It has been a great partnership and we're very pleased to be collaborating with a major ethanol industry player and committed partner like Raízen" Foody says. "Large scale commercialization in Brazil will open the door for global deployment of our technology."

"Continuous commercial production will commence with the upcoming 2015 harvest season," says Pedro Mizutani, Raízen's Executive Vice President. Raízen has already announced that, given a success at Costa Pinto, it intends to deploy logen Energy's technology in seven more Raízen sugar cane mills. "We plan to be producing up to 1 billion liters of cellulosic biofuel from bagasse and cane straw by 2024," says Mizutani.

Raízen's initial commitment to logen came in July 2012, after Raízen concluded that logen Energy had the most advanced cellulosic biofuels technology, ideally suited for building co-located commercial plants at Raízen's sugar cane ethanol facilities.

"The technology being deployed has undergone extensive testing and validation work," says Foody. "We have ten years of demonstration scale operating experience, and by operating over 6 months with Brazilian bagasse, we were able to troubleshoot problems, collect information, and adapt designs for reliable low-cost operation in Brazil."

About Raízen:

Raízen is a joint venture between Royal Dutch Shell and Brazilian ethanol company Cosan S.A..Raízen produces more than 2.2 billion liters of ethanol annually, 4.5 million tons of sugar, and has installed capacity of 934 MW of electric energy derived from sugar cane bagasse. The company has over 5,200 service stations for retail fuel distribution in Brazil, over 900 convenience stores, 60 fuel distribution depots, and aviation fuel businesses in 58 airports in Brazil. For more information, visit [www.raizen.com](http://www.raizen.com)

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About Iogen Corporation:

Iogen is a leading technology firm specializing in cellulosic biofuels – fully renewable transportation fuels made from agricultural residue that can be used in today's cars. The company has been producing cellulosic ethanol at its Ottawa demonstration plant since 2004 where it has manufactured over two million litres. Iogen is a privately held company located in Ottawa, Canada. For more information, visit [www.ioegen.ca](http://www.ioegen.ca)

About Iogen Energy:

Iogen Energy is a joint venture between Iogen Corporation and Raízen that develops sugar and ethanol technology.

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