



LEAF RESOURCES LIMITED

Sustainable products from plant biomass

Australian Securities Exchange Announcement

16th October 2014

Leaf Resources enters Collaboration Agreement with ZeaChem Inc, USA.

Highlights

ZeaChem and Leaf Resources to evaluate Leaf Resources' Glycell™ process at ZeaChem's demonstration facility at Boardman, Oregon.

The Directors of Leaf Resources are pleased to announce the signing of a Collaboration Agreement with ZeaChem Inc. of Lakewood, Colorado. The agreement covers the evaluation by ZeaChem and Leaf Resources of the Leaf Glycell™ process for the production of fermentable sugars at ZeaChem's demonstration plant at Boardman, Oregon. The trials will use Poplar as a feedstock.

Ken Richards, CEO of Leaf Resources, said:

"ZeaChem has been a leader in the cellulosic field for many years and has multiple patents in the field including for the production of acetic acid from cellulosic sugars.

ZeaChem's Boardman plant utilizes Andritz equipment and is very similar in configuration to the Andritz trial facility at Springfield, Ohio where Leaf Resources has been running development trials for almost one year."

ZeaChem's CEO, Tim Eggeman said;

"ZeaChem is excited to trial Leaf Resources' Glycell™ process at its Boardman demonstration plant. We are impressed with the results that Leaf Resources has achieved in pretreatment and saccharification, which, if replicated at Boardman, would be of significant economic benefit to ZeaChem's proposed operations. Based on Leaf's data, its Glycell™ process has the potential to deliver 30-40% more sugars in half the time at standard enzyme loadings, which would translate into significant efficiencies with limited effect on operations".



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About ZeaChem Inc

ZeaChem Inc. has developed a cellulose-based biorefinery platform capable of producing advanced ethanol, fuels and chemicals. Incorporated in 2002, ZeaChem is headquartered in Lakewood, Colorado and operates a research and development laboratory facility in Menlo Park, California as well as a 250,000 gallon per year demonstration biorefinery in Boardman, Oregon.

ZeaChem has considerable experience and engineering skills in the biorefining field having designed, commissioned and run the Boardman demonstration plant for over 3 years. The company is well advanced in the commercialisation of their technology, which is used to produce acetic acid and ethanol and has secured:

- A project site with complete utilities and transportation infrastructure,
- A 20 year feedstock supply contract,
- Significant loan guarantees from the USA Government,
- A design based on an input of 250,000 BDT per annum and,
- Are finalising long term product off take agreements.

About Leaf Energy Ltd (ASX: LER)

In virtually every industry consumer demand for greener more natural products is fuelling a surge of interest in bio-based alternatives to replace oil based products.

Leaf Resources is commercialising the Glycell™ pretreatment (bio-refining) technology: The first essential part of the process on a path to bio-based products.

The Glycell™ Process is an innovative technology that uses a low cost, recyclable, biodegradable reagent glycerol, in a simple process, to break down plant biomass into lignin, cellulose and hemicellulose at low temperature and pressure.

Cellulose, a critical building block for many bio-based products, produced by the Glycell™ processes can be used directly as cellulose fibre, chemically converted to cellulose derivatives or converted to cellulosic sugars using enzymatic hydrolysis. These cellulosic sugars can then be converted to bio-based materials, bio-plastics and green chemicals, the markets for which are extremely large and fast growing.

Leaf Resources commercialisation strategy is to partner with industry leaders across the breadth of product supply chains that will bring synergies and speed to the commercial adaption of our production process technology in a capital-efficient manner. Leaf sees this path as an effective means of deployment to multiple plants in diverse settings and the opportunity to further innovation in both product and process technologies.

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