

# \$20M injection for Ottawa biofuel firm

## Ensyn Corp. to work with Brazilian pulp giant to product oil alternative

BY BERT HILL, OTTAWA CITIZEN    OCTOBER 5, 2012

OTTAWA — Ensyn Corp., a low-profile Ottawa biofuel company whose technology turns wood waste to fuel, has landed a \$20-million investment by Fibria Celulose, a Brazilian giant of the global pulp industry.

The injection effectively values Ensyn at more than \$330 million — a big-ticket price that could lead to a stock market launch or a takeover bid by big oil companies under pressure to meet government renewable energy targets.

Fibria chief executive Marcelo Castelli said in a statement that the Ensyn joint venture will “leverage our expertise in growing fibre and market position in Brazil to (create) a powerful non-food biofuels growth business over the coming years.”

The investment comes at a time when many green technology companies are challenged to prove their potential in the marketplace.

From the big layoffs at Iogen, an Ottawa company that partnered with Shell in a failed biofuels project in Saskatchewan, to Republican election attacks on troubled U.S. green companies financed by Democrat tax grants and incentives, the sector is under pressure.

Ensyn too has struggled to prove the technology in an overnight success story that has taken more than 30 years.

But by slowly building a profitable business model and bringing in major industry partners and some investors, founder and chief executive Bob Graham and senior executives have also kept control of their company.

Unlike many small technology companies, Ensyn has not faced pressure from venture capitalists or public shareholders for immediate results.

Ensyn also has an impressive investor lists including Credit Suisse, Impax Asset Management of London, CTTV Investments LLC (a division of Chevron U.S.A. Inc.), Felda Palm Industries of Malaysia and Investeco Capital Corp. of Toronto.

Graham and his co-founder and chief technology officer Barry Freel patiently developed a unique biofuels technology that generates fuel and chemicals used in everything from adhesives to food additives.

The process quickly heats wood chips and sawdust, sugar cane, palm stalks and other waste in the

absence of oxygen and generates “a liquid that looks like espresso,” according to Graham.

The technology is in operation at Ensyn plant in Renfrew and several Wisconsin plants. Trials projects are in the works including a Coll'Energia project in Tuscany, Italy, to support diesel-generated electricity and a Premium One Project in Malaysia that will process 400 tons of palm waste into energy daily.

While the Ensyn alternative oil is aimed at the energy market, it is revenue earned by the Renfrew plant from food additive customers that has paid the bills and generated profits. The company has 40 employees but won't disclose sales.

The global financial crisis has hit Ensyn's timetable of announced projects. The sharp drop in natural gas prices has postponed an \$80-million production facility at an Alberta wood mill.

The Brazil deal opens more opportunities but the joint venture doesn't spell out specific plans yet. The U.S. market could have 10 operations processing 400 tonnes daily within a decade. With pressure from U.S. laws for the production for 36 billion gallons of cellulosic renewable oil in 10 years, Ensyn is in a strong position.

“Our process can generate renewable gasoline, diesel and heating fuel at \$45 per barrel of oil equivalent compared to \$100 per barrel for conventional oil,” Graham said. “We can produce competitive green energy without any subsidies from government or taxpayers.”

Fibria, the world's biggest producer of hardwood pulp, is listed on the New York Stock Exchange with market capitalization of more than \$4 billion. It produces five million tons of pulp annually at four mills and fibre from a million hectares of land in seven Brazilian states.

In return for a \$20-million investment, it will get a six per cent stake in Ensyn that could grow to nine per cent with further investments and increased production.

Honeywell, the U.S. engineering giant, was the first big company to get aboard the Ensyn bandwagon in 2008. The joint venture with UOP, Honeywell's renewable energy arm, brought industry confidence in the Ensyn technology, Graham said.

It helped pave the way for deals in Malaysia and an investment by Felda, a big palm oil producer that had a \$3.1-billion initial public offering of stock in June, the second biggest global deal after Facebook this year.

Graham, 59, first started researching the technology at Forintek, a former Ottawa government-industry research centre, in the late 1970s. He took the ideas to the University of Western Ontario where he got a doctorate in chemical engineering and worked with a mentor to develop a high-yield update to ancient processes used to smoke bacon and create the pitch used to caulk boats.

The technology was proven at a Renfrew plant and at plants in Wisconsin. But because non-renewable oil was cheap there was little North American interest, so Ensyn turned to Europe and

demonstration projects at utilities in Finland, Italy and Sweden.

In an interview with the Citizen in 1997, Graham said: “We’ve taken the technology from our labs into the marketplace by becoming our own customer. By controlling the projects, we retain ownership and generate the revenues we need to finance development.”

He said the formula has not changed but the addition of major partners like UOP and Fibria have accelerated the process.

Then he was thinking about an initial public offering of stock in a couple of years. Now, “we continue to be interested in going there,” he said Thursday. “It depends on where the market is going and the investor interest.”

Another possibility is sell the company to a major industry player. While Ensyn is not saying anything for the record, it did sell an operation that uses the technology to upgrade heavy oil for use by refineries to Ivanhoe for \$100 million in stock in 2005.

Ivanhoe is developing the technology for use in the U.S. industry as well as a possible Canadian heavy oil property.

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