

Success Story



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BDR Technologies Inc. | Ottawa

OCE fuels BDR Technologies' drive for cleaner biodiesel

New processing technology produces better fuel at lower cost

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Ken Lawless
Chief Executive Officer
BDR Technologies Inc.

Biodiesel made from common ingredients like vegetable oil is fueling demand for alternatives to standard diesel. However, with most new fuels, quality control and conversion costs are significant challenges that hinder mainstream adoption.

Ottawa start-up, Biodiesel Reactor Technologies Inc. (BDR) has developed a unique membrane reactor that offers improved product quality and higher processing margins to the global biodiesel industry.

BDR's technology reduces the number of steps required to produce biodiesel. A special membrane helps separate the product (biodiesel) from the raw materials (vegetable oils). This prevents the biodiesel from being contaminated, greatly reducing the amount of downstream processing required.

Conceived by André Tremblay and Marc Dubé, two University of Ottawa professors, the biodiesel membrane reactor is a disruptive technology that produces consistently clean biodiesel, unobtainable in current commercial systems, and surpasses today's international standards.

Ontario Centres of Excellence (OCE) recognized the potential of this progressive technology and supported the project's early development with targeted funding. Shortly after the project was completed, Tremblay and Dubé formed a start-up company to take the technology to market and Ken Lawless joined the two researchers as BDR's CEO.

“We've built a wonderful relationship between the source of the technology and the new company,” says Lawless. “I want to highlight that because it's where the help from OCE has focused.”

OCE continued investing in the project through its Market Readiness program. This support helped BDR study the biodiesel market, resolve technical issues related to engineering of the reactor units, and lay the groundwork to undertake the next phase of commercialization - building a pilot plant.

“We would not have been able to advance this fast without funding from OCE,” says Lawless. “It was quite integral to the spin-off of the company and to the advancement of the technology.”

The pilot plant will allow BDR to successfully demonstrate the technology on a commercial scale, develop a quality standard and determine the signature design of the reactors that will sell in North America by 2011.

“We anticipate the global demand for biodiesel will grow more than six fold to somewhere near 120 billion litres by 2016,” says Lawless. “Ontarians alone consume about 40 per cent of Canada's diesel so there will be a movement towards having more biodiesel plants set up in Ontario.”

