Technology Promises to Make Biofuels Affordable; Contributes to Energy Independence

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A partnership between two Clarkson University researchers and John Gaus, an entrepreneur, is transferring chemical process technology from the laboratory to the biofuels marketplace. Their efforts promise to contribute to energy independence and economic development in northern New York state.

Last year, Clarkson Professor of Chemical Engineering Roshan Jachuck and Research Associate Philip Leveson teamed up with John Gaus, principal with the technology investment and management firm of Golden Technology Management, to form the company NextGen Fuel Inc. The goal of the company is to build technology based on Jachuck's and Leveson's research to advance alternative energy production and create a more cost-effective approach to making biodiesel. The team also hopes to give a much needed boost to the region's rural economy.

"Biodiesel is a renewable fuel extracted from sources such as vegetable oils or animal fats," says Jachuck. "For example, recycled cooking grease from restaurants and food processors, soybeans or canola oil can be used separately or in combination to provide fuel to heat buildings or to power trucks."

"The technology we've developed reduces the costs of building and operating a biofuel plant by more than half," adds Jachuck. "The result is that we are significantly improving the economics of the biodiesel

industry.”

This year New York State Governor George Pataki and State Senator James Wright provided NextGen with approximately $350,000 of grant money to build a processing plant and help develop renewable energy markets in the state. The U.S. Department of Agriculture also awarded a $99,500 Rural Business Enterprise Grant to Operation Oswego County to help the company with the project. This nonprofit organization will use the money to assist NextGen Fuel in building a state-of-the-art biodiesel fuel plant in Fulton, N.Y.

“The plant will be able to produce as much as five-million gallons per year of transportation biodiesel or bio-heating fuel,” says Gaus, who is also a 1989 graduate of Clarkson. “This will help offset the use of imported petroleum products while also reducing emissions. The output will then be sold to fuel distributors, who will blend it with petroleum-based fuel and sell it to truck fleets or heating fuel customers.” The company also plans to sell its patented process and equipment, which is manufactured by O'Brien & Gere, Syracuse, to other biodiesel plants.

“I enjoy working with my alma mater, the local community, the state and federal governments, and private investors to commercialize cutting-edge technology in a manner that contributes to energy independence and economic development,” says Gaus. “It is a great example of how technology transfer can be successful.

Clarkson University is a private, nationally ranked university attracting enterprising, high-ability scholars from diverse backgrounds who thrive in a rigorous, collaborative learning environment. Learning is in a positive, friendly and supportive atmosphere that spans the boundaries of traditional disciplines and knowledge. Faculty pursue research and connect students to their leadership potential in the marketplace through dynamic, real-world problem solving. The University enrolls 3,000

students.

Source: Clarkson University