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Accelergy secures license to Exxon's coal liquefaction tech

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When Tim Vail joins an alternative energy company, it's because he's hired to bring it to commercialization. And he has a track record in his entrepreneurial career to prove he can do it—now on his fourth company.

Before the CEO joined Houston-based [Accelergy](#) [1] in April of 2006, he was previously the CEO of Houston-based [Synthesis Energy Systems](#) [2] (Nasdaq:[SYM](#)X [3]), a global developer of coal gasification facilities that the company says cleanly produces high quality transportation fuels from low rank coal resources.

He helped the company raise more than \$200 million, build its first commercial facility, and list on the Nasdaq Stock Exchange (see [Cars, energy storage and windy dealmaking](#) [4] and [China clean coal IPO](#) [5]).

He told the Cleantech Group he's not starting from scratch with Accelergy. The company announced today it has secured a potentially perpetual global licensing agreement with ExxonMobil Research and Engineering, a division of Irving, Texas-based [ExxonMobil](#) [6] (NYSE:[XOM](#) [7]).

The intent is to take to market liquid fuels and chemicals from coal, using Exxon's technology coupled with Accelergy's advanced biomass conversion technology, Vail said. Financial details were not disclosed.

Vail said Accelergy has “put together a suite of technologies, both internally and licensed, to take coal and biomass and cleanly and efficiently turn them into useful fuel—primarily jet fuel.”

Accelergy said its coal-to-liquid technology offers double the efficiency of traditional technologies, and can do it with half the carbon dioxide emissions. Traditional processes emit 0.8 tons of carbon dioxide for every ton of coal processed, compared to Accelergy's 0.38 tons of carbon dioxide emitted for four barrels. One ton of dry ash free coal makes approximately four barrels of crude equivalent, Vail said.

As part of its “coming out party” today, Vail said Accelergy also has a new strategic partnership with the Energy & Environmental Research Center (EERC) at the University of North Dakota. According to the agreement terms, Accelergy is licensing EERC's technology as part of its coal biomass-to-liquids process to accelerate developing specialty jet fuels used by the military from cleaner, non-petroleum sources.

The direct liquefaction technology has applications for military around the world, but is attracting interest from the U.S. military, which is the company's first focus, Vail said.

Though oil from soy beans, corn, or eventually algae could be used, the company's initial feedstock is the crambe, a drought-tolerant oilseed crop that grows in North Dakota. It is being used to produce a distillate, which is different from the one that comes from coal. The company plans to eventually pursue algae technology, Vail said.

The EERC's technology won a challenge from the U.S. Department of Defense's Defense Advanced Research Projects Agency (DARPA) for biomass fuel in April. A \$4.7 million contract between EERC and DARPA has been awarded to fund developing what would be the first renewable JP-8 jet fuel. Vail said the U.S. Air Force uses JP-8 in its aircraft, and is under a mandate for 50 percent of its fuel to come from domestic, greener sources by 2016.

Accelergy is hoping to build a commercial facility with the EERC in 2010. Vail said his company is currently negotiating with a large undisclosed refiner that would host the technology in the United States. He is anticipating an announcement in the second quarter of 2010.

Accelergy is also planning to build a demonstration facility at the EERC for the technology it's licensing from Exxon, and Vail said both operations could be up and running in late 2010/early 2011.

With Exxon's microcatalytic direct coal liquefaction technology (MCL), Vail said "it means you use a nanocatalyst and blend it with the coal under certain heat and pressure, and you create a high grade distillate product that can be upgraded to diesel or jet fuel."

Exxon has spent about \$1.5 billion on renewable energy and efficiency projects over the past five years, and took its MCL technology to commercial readiness. The world's largest publicly traded oil company had a plant in Texas that was producing 1,000 barrels a day. However, Vail said the company chose not to commercialize it for a variety of reasons.

Exxon was widely criticized by shareholders last year for not doing enough in the renewables sector (see [More investors join call for Exxon Mobil to go green](#) [8] and [Rockefellers push for more renewables at Exxon Mobil](#) [9]).

Vail said Exxon has focused its efforts on other oil and gas production, including yesterday's announcement that it plans to acquire Fort Worth, Texas-based XTO Energy (NYSE:[XTO](#) [10]) for \$31 billion in stock to increase its presence in the natural gas sector.

Accelergy brought on four employees that helped develop the MCL technology for Exxon to head its science team.

“It took decades for a company as massive as Exxon to bring its technology to market,” Vail said. “It’s not easy to do. It’s a godsend for us to be able to capture a technology that has gone through full commercial readiness to the standards of ExxonMobil Research and Engineering. That advances our efforts tremendously.”

Accelergy raised \$25 million in Series B financing in 2006 from investors including Goldman Sachs, Sequoia Capital China and Lux Capital. Existing investors Nth Power, Technology Partners, Mobius VC and Advent International also participated in the round (see [New biofuel and solar IPOs](#) [11]).

Vail wouldn’t disclose the amount of the company’s Series A round or other government support it has received, but said Accelergy is bringing in revenue from engineering sales and specialty work with project developers.

The company is well capitalized, and not looking for financing in the near term. However, Vail said Accelergy will likely be doing some fundraising in 2010.

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