Silicon Valley Funds Ontario Green Energy Innovation

Sarnia Ontario, December 13, 2012:

It is not every day that Silicon Valley entrepreneurs like Peter Thiel (founder of PayPal and the first outside investor in Facebook) fund research projects in Canada, but Sarnia Ontario inventor Louis Michaud has the kind of innovative technology that attracts visionary investors looking for scalable projects at the forefront of science and technology.

Louis Michaud, inventor of the Atmospheric Vortex Engine ("AVE") and president of AVEtec Energy Corporation, announced today that the Thiel Foundation's Breakout Labs of Palo Alto California has agreed to fund a prototype AVE to be constructed in partnership with Lambton College in Sarnia Ontario.

The AVE uses low-temperature waste heat to create a tornado-like atmospheric vortex. In contrast with a real tornado, the vortex can't go anywhere because it is anchored to its heat source. So it is really more like a dust devil or waterspout, and it serves as a low-cost virtual chimney. A leading cooling tower engineering firm in Germany is discussing applications with its major clients. With the addition of a virtual chimney, a $15 million mechanical draft cooling tower would work even better than a $60 million natural draft cooling tower.

"The real prize will be using a large scale AVE to drive turbines", says Michaud. "Using the low temperature waste heat from a 500MW thermal power plant could generate an additional 200MW of power, increasing capacity by 40% and producing perfectly green electricity at less than three cents per kilowatt hour."

"We started with bench-top models and then did a CFD computer modeling study at the University of Western Ontario with Ontario Centres of Excellence funding. That led to the construction of a 4m diameter outdoor prototype which we built and tested successfully in Petrolia Ontario in 2009."

The 8m diameter prototype at Lambton College will produce a 40m tall vortex with a diameter of 30cm. It will power a 1m diameter turbine for testing purposes. "Power output increases geometrically with size, so commercialization will become economically viable when we build a 40m diameter prototype in 2015" says Michaud.

Lambton College has a well-respected Instrumentation and Control Engineering Technology (ICET) program that qualifies students to work as technologists in energy, chemical, bioprocess and refining industries. "Lambton College is the perfect partner for instrumentation and testing of this prototype, and we are looking forward to working with their faculty and students", said Michaud.

The AVE concept was presented at the 3rd International Solar Updraft Tower conference in Wuhan China in October 2012 and attracted great interest. Discussions are now underway with a Chinese university interested in working on the second stage prototype.

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