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Boise startup lights way to 'smart grid'

Inovus' SmartPole sets the company up to be a local leader in a national energy revolution

BY ROCKY BARKER - rbarker@idahostatesman.com

Inovus' SmartPole sets the company up to be a local leader in a national energy revolution

A Boise company's solar-powered streetlight doesn't just save electricity by tapping the sun to run its lamp - it one day may feed power back to the grid at times of peak demand.

The Inovus Solar SmartPole - created and marketed from a small office in Downtown Boise - demonstrates the promise of "smart grid" technology, which could revolutionize electric power in the United States.

And the young outfit behind it represents what some local business leaders say could help define Boise's future: A cluster of high-tech energy companies that could tap into the nation's "green" revolution and attract the kind of creative professionals that Micron and Hewlett-Packard have brought here for years.

Inovus is emblematic of the companies to be discussed at the Northwest Energy Innovation Summit that begins Monday at the Boise Centre on The Grove. The summit will bring top experts to talk about the opportunities in the new industry.

Inovus was one of the first tenants of the Water Cooler, a tech-friendly and low-cost business center built by the summit's organizer, Mark Rivers. The Water Cooler and the conference were both designed to help bring together the creative forces that can encourage and attract new industry.

"We need to be doing everything and anything we can to turn this tiny industry into a new strategic industry in Idaho," Rivers said.

INTELLIGENT STREET LIGHTS?

The SmartPole doesn't need to be hooked to the electric grid at all, which makes it ideal for areas wires don't reach - whether they're in the outskirts of Boise or in Third World nations like Vietnam.

But on the grid, its computer can automatically reduce energy use when power demand is high. And the light's battery, which holds enough power to operate for more than six days without sun, could even send power back in times of peak need - which can reduce the need for electricity companies like Idaho Power to build new plants.

Inovus Solar's outdoor lighting system has caught the attention of Southern California Edison, which has 600,000 street lights. The utility is looking at upgrading its electric power grid with computerized appliances with batteries - even electric cars - to maximize the efficient use of each electron in the system.

"We're really focused on the smart grid technology," said Clay Young, Inovus Solar's president and CEO. "We are trying to make street lights a more intelligent part of the grid."

Young and solar inventor Seth Myer started Inovus Solar in 2007. They now have eight employees and contractors with more than 35 employees across the Valley are building the lights for shipment across the country and overseas.

The startup has raised enough capital to carry through its plan for two years. Young and Myer expect to grow three to four times in size by the end of 2009 - but others are even more optimistic.

"I honestly think this is going to scale to a company that is going to do hundreds of millions of dollars worth of sales in a couple of years," said Chris Winn, principal of SSI, a technical marketing company in Orange County that is partnering with Inovus. "It's going to create a lot of jobs."

LIGHTING DESOLATE (FOR NOW) SPOTS AT HOME

The city of Boise installed eight SmartPole lights along a road past Idaho IceWorld where WinCo Foods is building a new warehouse. With the cost of running electrical lines to the isolated location, the street lights would have cost WinCo \$12,000 each. Inovus Solar's lights cost \$8,000 each - a \$32,000 savings on eight lights.

And consider the electricity savings, too, since the sun powers the light, said Hank Alarcon, Boise Public Works lighting tech. "Also the maintenance for the light is going to be reduced."

The light-emitting diode - LED - lamp lasts 10 to 15 years instead of a normal street lamp's five, Alarcon said. And the computer tells the city when the light isn't working.

The company's main market today is in areas without existing power lines. That includes new developments, which can avoid the costs of burying wire, and it includes the developing world, where countries are leapfrogging past old power technologies just as they are going directly to cell phones instead of traditional phone lines, Young said.

Young was a co-founder of ProClarity, the Boise software company sold to Microsoft in 2006, so he knows how to take a company through startup.

When he worked at Extended Systems, he launched that company's highest-growth product lines and helped the company prepare to go public. He's a Boise State University graduate and a Hewlett-Packard alumni.

Myer, an engineer and Idaho State University graduate, had been working on solar systems for more than 20 years when he came up with the idea for the SmartPole seeking to design lighting for Tamarack Resort. He wrapped the solar collector around the pole and placed the battery and the controls in the base so it was all one streamlined system.

The computerized control reduces the power needs so the battery doesn't drain. This same control is what makes it so useful for smart grid planners.

The two men also were concerned about the effects of outdoor lighting on the night sky, so they designed the light to focus on the ground, minimizing the light that escapes upward.

They hope their system will dramatically reduce carbon emissions that they say contribute to global warming. One pole can reduce 10 tons of carbon dioxide from the atmosphere over a traditional street light, Young said.

"We are very much a mission-based business," Young said.

CONNECTING THE DOTS

In southeastern Idaho, Pocatello is developing an alternative energy cluster around solar and wind generation manufacturing. Closer to home, Micron Technology recently revealed it is looking at alternative energy technology as a way to refill its closed manufacturing facilities.

Winn said Boise is well-positioned to become a center of the new industry, and Rivers hopes to help make that happen.

"The talent is here, the ideas are here and the resources are here," Rivers said. "We need to connect the dots and make the energy industry a growth industry in Idaho."

Rocky Barker: 377-6484