

ClearEdge hums along

Fuel cell company lands capital, customers, wants more growth

BY ERIK SIEMERS
BUSINESS JOURNAL STAFF WRITER

In the past six months, ClearEdge Power Inc.'s hydrogen fuel cells have grown from a concept into a real product.

Since May, ClearEdge's work force grew from 40 to 150 employees. The company sold and installed its first six \$50,000 power-generating fuel cells and opened three sales offices in California, with a fourth coming this year.

FAST FACTS

CLEAR EDGE POWER is a member of the U.S. Green Building Council.

Now, its 55,000-square-foot Hillsboro headquarters is growing to 80,000 square feet as ClearEdge ramps up to full-scale production.

It's all happening with a fresh \$15 million infusion of capital and the guidance of new CEO Russell Ford, who expects ClearEdge to grow to \$50 million in sales and employ 300 by this time next year.

"We are creating and introducing technologies that are fundamentally changing the way power is produced in the U.S.," said Ford, an enthusiastic Southerner who took over May 1. "It's like this is 1967 and we're inventing the microwave oven."

The company's core product is the ClearEdge5, a combined heat and power device capable of generating five kilowatts of power an hour using hydrogen extracted from natural gas. Aside from the electricity it generates, the heat produced by the system can be used for water or space heating.

The system, a rectangular box akin to a refrigerator, is designed as a power source for small businesses or residences larger than 4,000 square feet.

For now, ClearEdge is focused mainly on California, where the available government incentives and increasingly high



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CEO Russell Ford envisions ClearEdge as a \$50 million company by the end of next year.

cost of power conspire to form the most palatable market for adopting new energy technologies.

ClearEdge's \$50,000 fuel cells for commercial customers, for example, become \$22,500 after a federal tax credit worth about \$15,000 and a California rebate for self-generated power worth \$12,500. The company boasts of a return on investment within four years or less.

Since October, the company has sold and installed six units in commercial businesses and residences. Four are in California, including one bought by the wife of country music legend Gene Autry. Two are in the Portland area, including one installed Tuesday at a McDonald's on Jantzen Beach.

More are on the way.

Two weeks ago, ClearEdge signed a contract to sell four fuel cells to Universal Studios. They will be installed by the end of the year and showcased outside the iconic Hollywood studio.

The company's order backlog has now reached 300 units. ClearEdge is hoping by the end of 2010 to be manufacturing at capacity, which is now 2,400 units per year on a single shift or 6,000 units on multiple shifts.

David Link, a senior analyst at Pike Research in Boulder, Colo., called fuel cells a technology that "is perpetually around the corner."

While there are several players deploying fuel cells for use as backup power systems for large industrial customers, neither Link nor Bud Deflaviis of the Washington,

CLEAR EDGE: For now, company focuses on California

NEW CEO EMPHASIZES LEAN

Russell Ford arrives at ClearEdge as an expert in lean manufacturing techniques, with an impressive roster of executive positions dotting his resume.

He was most recently CEO of Michigan-based Prestolight Electric Co., a supplier of electrical systems for buses, trucks and military transportation.

Before that, he was chief operating officer at The Holley Group, a Kentucky-based maker of high performance carburetors.

Ford has also been vice president of operations for Lockheed Martin Corp., where he oversaw nine aircraft programs, and vice president and general manager for Allied Signal Inc.'s industrial and marine engines division, among other positions.



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HYDRA SEEKS FINANCING

While ClearEdge might be among the first with a product to hit the market, it isn't the only Washington County company that's trying.

Beaverton-based Hydra Fuel Cell Corp., a division of Houston-based American Security Resources Corp., has been working the past few months to receive necessary safety certifications for its HydraStax 5000 — a 5-kilowatt fuel cell it plans to sell for around \$20,000.

CEO James Twedt said Hydra Fuel, which employs 10, has orders for 200 fuel cells putting the value of its backlog at \$10 million. The vast majority of the customers are in Florida, making it the company's largest initial market.

But unlike ClearEdge, Hydra Fuel Cell doesn't have a venture capital benefactor like Kohlberg Ventures LLC. Since 2005, the company has received just \$6 million in investment, Twedt said.

The company at the moment needs about \$500,000 to finish its certifications and start production, he said.

"A lot of this stuff is all up in the air depending on financing, so we'll just have to wait and see," he said. "This is a rough time of year."

Former CEO Jon Slangerup is now on the ClearEdge board of directors.

D.C.-based U.S. Fuel Cell Council, could think of any other companies that have brought a fuel cell to the residential and small commercial market.

That puts ClearEdge at the envious position in the still-evolving industry, and one the company has achieved with a steady flow of new venture capital investment.

Since its founding in 2003, ClearEdge has received \$55 million in venture capital, with about 95 percent of it coming from Kohlberg Ventures LLC, a Portola Valley, Calif.-based private equity firm that invests in early-stage clean technology companies.

Other investors include Saratoga, Calif.-based Big Basin Partners LP, and Applied Ventures LLC, the venture capital fund of Santa Clara, Calif.-based Applied Materials Inc.

ClearEdge has received two investment rounds from Kohlberg already this year: \$11 million in January and another \$15 million round that closed in August.

Ford said the company hopes to close on another investment round in February.

'It's like this is 1967 and we're inventing the microwave oven.'

Russell Ford
ClearEdge CEO

While the amount isn't determined, Ford said it's likely to be in the range of \$15 million to \$30 million.

Until May, the company was led by Jon Slangerup, who Ford described as "the visionary of a new type of product."

Slangerup now sits on the company's board.

Ford acknowledges that the company's U.S. market, for now, is limited to regions saddled with high-cost power.

"I don't know if you'll ever see these in Idaho or Montana," he said.

But the company's reach could expand beyond U.S. borders. Ford said ClearEdge is in discussions with international companies seeking overseas distribution rights that could "double the size of the company almost immediately," he said.