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Beaverton's Hydra Fuel Cell records its first sale as sector grows in popularity

Fuel speed ahead

Portland Business Journal - by [Matthew Kish](#) Business Journal staff writer

A local company may have claimed first-mover status in an industry that could eventually top \$2 billion in annual sales.

The company, **Hydra Fuel Cell Corp.**, makes residential fuel cells, essentially hydrogen-powered generators that allow homeowners to take their houses off the grid.

The technology has several significant upsides. It produces no emissions except water. It's also abundantly renewable. Hydrogen is one of the most prevalent elements on earth. Homeowners with fuel cells can also sell unused power.

Last month, Beaverton-based Hydra Fuel Cell announced an order for 10 units, its first sale. The announcement followed the installation of a pilot project in a home outside Houston.

Despite the big news, Wall Street remains unconvinced.

Hydra Fuel Cell is owned by Houston-based **American Security Resources Corp.**, a holding company that trades over the counter. The company also owns a wind power business and a company developing technology to convert ammonia to hydrogen -- a necessary process for some fuel cells.

American Security Resources acquired Hydra Fuel Cell for roughly \$2 million in stock two years ago, but its shares have floundered recently. At the time of the acquisition, shares traded for 17 cents. They rose to around 60 cents a few months after the acquisition, but then collapsed, trading for around a nickel today.

Big growth coming

Despite the low stock price, the U.S. fuel cell industry is growing.

The industry is a \$350 million business that employs 7,000, according to Washington, D.C.-based trade group U.S. Fuel Cell Council. Investors pumped \$800 million into fuel cell research in 2006.

Worldwide, it's easily a \$1 billion business, if not double that, said Bob Rose, the Fuel Cell Council's executive director.

And it could get significantly bigger.



Cathy Cheney | Portland Business Journal

Hydra Fuel Cell Corp. of Beaverton doesn't hold any patents yet, though it has half-a-dozen in the pipeline. "This is an early technology. It's in the Model A stage," says company CEO Jim Twedt.

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A soon-to-be released report by the U.S. Department of Energy estimates the industry could employ as many as 500,000 by 2030, said Rose, who reviewed a draft.

A similar study across the Atlantic predicts Europe could employ another 500,000 by 2030.

Advocates say fuel cells are a perfect complement to wind and solar energy and could eventually supply most of the nation's power.

"There are some people who see a gradual shift to smaller-scale generation of power closer to the point of demand," Rose said. "They see it as being compelled by fundamental forces such as the cost of building and maintaining grids and the relative vulnerability [of the nation's power supply] to attack or disruption. If those people are right ... then at some point down the road this strategy could provide a majority of electricity."

But several hurdles remain for Hydra Fuel Cell.

The company has yet to earn revenue. Numerous shortcomings need to be addressed before the company can start commercial production, including several technical questions. Costs also need to come down. Hydra Fuel Cell's units sell for around \$35,000 fully outfitted.

The eight-employee company does not hold any patents, but has six patent applications pending.

"This is an early technology. It's in the Model A stage," said Jim Twedt, Hydra Fuel Cell CEO, referring to Ford's first mass-produced roadster.

Nevertheless, Hydra Fuel Cell's Nov. 7 sale -- technically an agreement to buy 10 fuel cells by June 2008 -- validates the technology, Twedt said.

The company's first customer, Florida-based **Conexa**, could turn out to be a big fish. The company is a green builder with operations in the United States and South America. As a home builder, it could build "micro-grids" of fuel cells by plopping one huge fuel cell in the middle of a new development, reducing installation costs and making the technology more palatable to homeowners.

"It's going to be very big," Twedt said. "Most of our economy is going to be hydrogen, wind and solar [at some point]. Oil is getting very, very expensive. There's more and more demand for [fuel cell technology] around the world."

Under the agreement, Conexa has until June 30, 2008, to complete the purchase.

Two other fuel cell companies call Oregon home.

Bend-based **IdaTech LLC** is developing the technology for use in backup power applications, like cell phone towers.

Hillsboro-based **ClearEdge Power Inc.** has raised more than \$10 million from investors and is targeting backup power and residential applications.

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