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ClearEdge Targets Niche DG-CHP Markets for Natural Gas-Fed Fuel Cell

Oregon-based ClearEdge is touting a novel distributed generation (DG) system that taps pipeline natural gas to feed a relatively small, integrated steam-methane reformer (SMR) and fuel cell for high-end residential and certain commercial or government consumers looking for competitive combined heat and power (CHP).

Showing a knack for “green” publicity, ClearEdge touted the recent installation of its “ClearEdge5” 5-kiloWatt (KW) DG/CHP system at the posh Palm Springs, Calif., home of Jackie Autry, the former owner of the Los Angeles Angels baseball team and widow of singer, actor and businessman Gene Autry.

“Since the adoption of this technology for residential use by pioneers like Autry, almost 30 additional Palm Springs area homeowners have also purchased the system,” according to the company.

“It is 11 times more productive than comparable solar solutions and only requires 35 square feet for installation and service. It can be located indoors or outdoors and incorporates a robust system for monitoring performance over a standard IP connection,” according to the company.

But in an interview with Hart Energy, Mike Upp, ClearEdge marketing vice president, made it clear that wealthy homeowners aren’t the only market target for a system that sells for around \$56,000 plus installation (but not including some hefty federal and state tax credits along with certain utility rebates).

Rather, ClearEdge is also targeting certain commercial and government customers that would be able to realize big energy cost savings, including “schools with pools,” he explained. Payback on such systems could be recouped in as little as 3.5 years, depending upon local electric utility rates, he said.

“We’re the only one in the [fuel cell CHP] market with this type of system today,” Upp said. “Most others are in the 100- to 400-KW range, or else at 1- to 2-KW range, just for back-up power,” he added.

The ClearEdge system is designed for “grid-parallel” operation such that customers can still tap the grid whenever the fuel cell system requires maintenance. On the other hand, ClearEdge customers can sell their excess power to the grid, where allowable, he said.

Among potential ClearEdge customers: “boutique” hotels, restaurants, health clubs, spas and others with a need for water heating in addition to electric power.

Initial target markets are in Oregon, California and in South Korea, where ClearEdge has a contract with LCIS, described as a “spin-off” from industrial giant LG, Upp said.

“Korea is a hot-bed for fuel cells” because of a government mandate requiring that 10% of building construction budgets be dedicated for “alternative energy,” he said.

ClearEdge meanwhile is in the running for funding from a special U.S. Department of Energy fuel-cell program that will help pay for installation of its system at 10 different types of facilities, Upp told us.

Resulting publicity from those future installations is likely help grab the attention of a wider variety of commercial customers of looking for energy cost-savings plus a “green” image, he said.

The ClearEdge scheme includes a novel “hybrid” combination of liquid phosphoric acid (LPA) and “the best low-temperature” proton exchange membrane (PEM) fuel-cell technology, he said.

Since the system doesn’t store hydrogen, but instead immediately converts it to electricity, there’s none of the hefty safety-permitting requirements for typical hydrogen production and storage facilities, he said.

Instead, only routine plumbing and electrical permitting are required for installing the system, with installations typically costing between \$10,000 and \$20,000, he said.

– Jack Peckham

TRANSPORTATION & LOGISTICS

China Will Continue EV, Hybrid Tax Breaks – Minister

Although China’s break-neck automotive sales expansion has slowed in 2011, tax incentives will continue for electric vehicles (EVs) and hybrids, according to China’s Industry and Information Technology Minister Miao Wei.

In a March 10 interview with *Nikkei* news service, Miao “made clear that subsidies for fuel-efficient compacts, plug-

in hybrids, electric cars and the like will continue,” according to the report, as the minister “stressed the importance of such problems as energy supplies, pollution and traffic.”

A shift from focus on mostly quantity to higher quality, such as high-tech EVs, “is likely to benefit Japanese companies ahead of the technological curve,” according to the report.