



US Fuel Cell Council

Fuel Cells: Portable Power Applications

Individual fuel cells can be “stacked” together depending on how much — or how little — power your application requires. That’s one of the technology’s most appealing aspects, and is a major reason why so many companies are working to develop fuel cells for small and portable power applications.

Fuel Cells for Consumer Electronics

How many times has it happened that you’ve tried to use your cellular telephone only to find that you forgot to recharge your battery? If this has happened to you, then you’ve already come to realize the limitations of battery powered electronics. A fuel cell system for portable power applications would provide long-lasting power, and could be refueled quickly and easily.

BIC, Gillette, Millennium Cell, Motorola, MTI MicroFuel Cells, Neah Power, Panasonic, and Smart Fuel Cell GmbH are just a few of the many companies looking to fuel cells to power small electronics. Fuel cell-powered cell phones, such as the Motorola phone below, could be refueled quickly by replacing a cartridge similar to a fountain pen ink cartridge. Motorola expects its fuel cells



Motorola is developing fuel cell-powered cell phones that refuel quickly with cartridges of methanol.

to run about 10 times longer than today’s batteries before needing new fuel supplies.

Voller Energy and Smart Fuel Cell are both selling small port-able fuel cell products. Voller is selling a 100-Watt fuel cell system that can run on stored

hydrogen, butane or propane. The fuel cell can supply electricity for devices such as laptop computers and power tools.

Smart Fuel Cell is selling a wide range of products, from 50-Watt units targeted to the recreational vehicle market, to portable docking stations for laptop computers.



Smart Fuel Cell’s C25 unit provides 7 hours of power, at 20 W output, on one cartridge of methanol fuel.

“Fuel Cells for Portable Power: Markets, Manufacture and Cost,” a study by the US Fuel Cell Council, notes even a conservative forecast estimates a \$2 billion market for handheld fuel cells by 2011, with 19 million fuel cell units expected to be shipped in 2006, increasing to 105 million units in 2011.

Fuel Cells for Remote/Portable Power

Fuel cells will also come in handy for people who need power for remote sites, or sites where the power grid is not available. Examples of remote power applications would be construction sites, campgrounds, and even festival tents.

For more information, visit our web site at www.usfcc.com.

Ballard Power System’s Nexa(TM) power module for portable power. (courtesy of Ballard)

