Fraunhofer Institut
Solare Energiesysteme

Press Release

Freiburg
27th March 2003
No. 03/03
Page 1

Off-Grid Power Supply

Mobile Power Box from Fraunhofer ISE about to enter the Market

Fraunhofer ISE's goal, to develop a fuel-cell system for off-grid power supply up to the series production stage, will soon be achieved. Together with the Masterflex company, the Freiburger researchers have developed a system to supply electronic appliances with power of up to 100 W - the Mobile Power Box - and will present it this April at the Hanover Trade Fair. The route to market introduction in 2004 is now clear. The reliability and high power density of the fuel-cell system, which is designed for operation with hydrogen, are convincing. The opportunity to combine it with hydrogen storage units of various sizes makes its application very flexible. A primary objective of the joint development was cost-effective series production of the complete system.

The capacity to work on the move is increasingly important in the current, rapidly changing working environment. The Mobile Power Box allows equipment to be operated for long periods off the grid, both in the commercial sector - the mobile office - and in leisure activities such as camping or sailing.

With the same volume, the presented fuel-cell system guarantees higher power and supplies more energy than previously demonstrated prototypes. For example, a metal hydride storage unit designed to supply 300 Wh electricity will keep a laptop operating for up to ten hours, five times as long as with a conventional rechargeable battery. "Today, we already achieve continuous power of more than 50 W

Fraunhofer Institute for Solar Energy Systems ISE
Heidenhofstr. 2
79110 Freiburg
Germany
Press and Public Relations
Karin Schneider
Tel.: +49 (0) 7 61/45 88-51 50
Fax: +49 (0) 7 61/45 88-93 42
E-mail: info@ise.fhg.de

www.ise.fhg.de

during operation over several days, but also peak power exceeding 100 W", explained Marco Zobel, an engineer and the project leader at Fraunhofer ISE. "In future, we plan to raise the power further to meet the demand of laptops, printers, camcorders or beamers. In this way, we can enter a market which cannot be served by battery technology."

Power Supply for Film and Television Cameras

Fraunhofer ISE has developed a further prototype power supply for electronic appliances, an adaptable fuel-cell system for professional cameras, which also uses hydrogen as the fuel. The fuel cell for professional film and television cameras, which was developed together with Ambient as the industrial partner, will also be shown at the Hanover Fair.

Up to now, a cameraman's work is frequently interrupted by the need to change batteries. The problem is solved by the new fuel-cell prototype, which is tailored to the application in professional cameras. The compact system is simply attached to the camera, as usual, is easy to handle and provides continuous power of 40 W. The hydrogen storage units were designed to provide enough energy to run a film camera for a complete day of filming (8 hours).

"We are convinced", stated David Pocza, the project leader at Fraunhofer ISE, "that completely integrated systems for specific applications will become established in parallel to external mobile power supplies, both based on hydrogen."

Fraunhofer Institute for
Solar Energy Systems ISE
Heidenhofstr. 2
79110 Freiburg
Germany
Press and Public Relations
Karin Schneider
Tel.: +49 (0) 7 61/45 88-51 50
Fax: +49 (0) 7 61/45 88-93 42
E-mail: info@ise.fhg.de

www.ise.fhg.de

Press Release

Fraunhofer Institute for Solar Energy Systems ISE
Hanover Trade Fair: 7th - 12th April 2003
Hall 13, G72

Contacts for further information:

Ulf Groos, Fraunhofer ISE, Marketing
Tel.: +49 (0) 7 61/45 88-52 02
Fax: +49 (0) 7 61/45 88-92 02
E-mail: Ulf.Groos@ise.fhg.de

Masterflex AG, Fuel-Cell Technology
Willfried Müller, Project Manager, Fuel-Cell Technology
Tel.: +49 (0) 23 66/305-190
Fax: +49 (0) 23 66/305-195
E-mail: mueller@masterflex-bz.de

Ambient Recording GmbH
Chris Price, Director, Technology
Tel.: +49 (0) 89/6 51 85-35
Fax: +49 (0) 89/6 51 85-58
E-mail: info@ambient.de

Fraunhofer Institute for Solar Energy Systems ISE
Heidenhofstr. 2
79110 Freiburg
Germany
Press and Public Relations
Karin Schneider
Tel.: +49 (0) 7 61/45 88-51 50
Fax: +49 (0) 7 61/45 88-93 42
E-mail: info@ise.fhg.de

www.ise.fhg.de