

# *news from* **FUEL CELLS 2000**

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## **Fuel Cell Technology Update – June 1, 2004**

**To: Reporters, editors and investors following business, energy, automotive and technology news.**  
Let us know if you would prefer to receive the full updates via email, or if you wish to be removed from our list. For more information on stories, call (202) 785-4222.

### **TRANSPORTATION APPLICATIONS**

#### **Stuart Energy Receives Toyota FCHV.**

Stuart Energy Systems Corporation has received a Toyota fuel cell hybrid vehicle (FCHV), which is based on the automaker's Highlander mid-sized sport utility vehicle (SUV). Stuart Energy's California-based staff will drive the FCHV and provide on-road operational data to Toyota on the vehicle's performance. Stuart Energy will also use the vehicle in customer and public demonstrations of its Stuart Energy Station (SES-f) hydrogen fueling product line.

[http://www.stuartenergy.com/media\\_center/press\\_releases/press\\_may\\_19\\_2004.html](http://www.stuartenergy.com/media_center/press_releases/press_may_19_2004.html)

#### **Hydrogenics Delivers Fuel Cell to Quantum.**

Hydrogenics Corporation has sold and delivered a HyPM 10 power module to Quantum Fuel System Technologies Worldwide, Inc., in support of Quantum's contract with the U.S. Army TARDEC-NAC (National Automotive Center) to develop and demonstrate a high performance, hydrogen fuel cell powered light-duty, alternative mobility vehicle for military applications.

[http://www.hydrogenics.com/ir\\_newsdetail.asp?RELEASEID=135987](http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=135987)

#### **Munich Airport Receives Proton Fuel Cell Lift Truck.**

Cargogate GmbH, the Munich Airport logistics company, took delivery of a fuel cell-powered fork lift truck manufactured by Proton Motor Fuel Cell and its partners Linde and STILL. The vehicle can operate for a full eight-hour shift and its fuel cell can be refueled in about two minutes.

<http://www.proton-motor.de>

#### **Wal-Mart to Test Cellex Fuel Cell Lift Trucks.**

The logistics subsidiary of Wal-Mart Stores, Inc., will participate in a set of field trials later this year of electric lift trucks powered by Cellex Power's fuel cell products.

[http://www.cellexpower.com/about\\_news.php#14](http://www.cellexpower.com/about_news.php#14)

#### **University of Tasmania Develops Fuel Cell Scooter.**

Engineers from the University of Tasmania have developed a hydrogen-powered scooter as part of an Australian pilot program. Associate Professor Vishy Karri says applying the technology to cars is the group's next task.

<http://www.abc.net.au/tasmania/news/200405/s1103954.htm>

### **STATIONARY POWER**

#### **Hydrogenics to Provide Fuel Cell to Japanese Demonstration Project.**

Hydrogenics Corporation has been contracted by ITOCHU Corporation of Tokyo, Japan, to provide a 10 kilowatt HyPM fuel cell power module for a demonstration project in Mie Prefecture, Japan. Hitachi Zosen Corporation will supply the electrolysis equipment. Itochu will take delivery of the power module in June 2004.

[http://www.hydrogenics.com/ir\\_newsdetail.asp?RELEASEID=135825](http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=135825)

#### **Sanyo to Offer Residential System in 2005.**

Sanyo Electric Company will begin offering a residential fuel cell system starting April 2005. While Sanyo has yet to establish a price for the system, the company expects to lower the cost of the units, which are designed to provide power for such equipment as computers, televisions and air conditioners, to approximately 450,000 yen (about \$3,900) by 2010.

#### **FCT, Siemens Westinghouse Extend Agreement.**

Fuel Cell Technologies, Ltd. (FCT) recently announced that its second joint development agreement (JDA) with Siemens Westinghouse Power Corporation has been updated and extended to include supply of the Siemens Westinghouse standard tubular generator component subsystems for the manufacture of FCT's second-generation 5 kW product throughout 2004 and into 2005.

<http://www.fct.ca/index.php?pressid=25>

#### **PORTABLE/BACKUP POWER**

##### **Medis and Eastman Kodak Join Forces.**

Medis Technologies Ltd. has contracted with Eastman Kodak Company's Global Manufacturing Services (GMS) operation for advancing the development of refueling cartridges and chemicals, including those for fuel and liquid electrolyte that Medis has patented, to be used in its proprietary fuel cell products. These products are designed to power a variety of portable electronic devices.

<http://www.medistechnologies.com/show-news.asp?ID=69>

##### **Ballard Enters MOU with Alpha.**

Ballard Power Systems and Alpha Technologies have signed a memorandum of understanding (MOU) to develop and field test backup power systems for the Canadian cable television market. The system will consist of Ballard's Nexa® RM Series fuel cell modules and an Alpha Technologies' power supply and enclosure.

[http://www.ballard.com/pdfs/12%20Alpha%20MOU\\_0.pdf](http://www.ballard.com/pdfs/12%20Alpha%20MOU_0.pdf)

#### **FUELS/REFORMERS/STORAGE**

##### **University of Victoria Wins Hydrogen Fueling Design Contest.**

The University of Victoria from British Columbia, Canada, is the grand prize winner of the first Hydrogen Fueling Station Design Contest, sponsored by DOE, the National Hydrogen Association (NHA), ChevronTexaco, Natural Resources Canada, and Swagelok Company. Seventeen teams from universities in the United States and Canada participated in the competition, which challenged the teams to address the technical specifications, environmental impact, safety issues, profitability, and education and marketing for a hydrogen fueling station.

<http://www.hydrogenus.org/Press%20releases/NHA-Press-Release-042804.pdf>

##### **CHBC Launches New Website.**

The California Hydrogen Business Council (CHBC) recently launched a new website, <http://www.californiahydrogen.org/>. The site utilizes a one-stop-shop approach, enabling users to find information on upcoming meetings, register for conferences, join the organization, update company and/or individual profiles in the member directory, and browse related links.

#### **REPORTS/MARKET STUDIES**

##### **BTI and DOE Release Fuel Cell Vehicle World Survey.**

Breakthrough Technologies Institute, with funding from DOE, has released "Fuel Cell Vehicle World Survey 2003," which provides profiles of more than three dozen companies testing cars, trucks, buses and specialty vehicles worldwide. The report also contains pictures, a glossary of fuel cell terms, conversion tables, and commercialization timelines.

<http://www.fuelcells.org/info/charts/vehiclestudy.pdf>

##### **New Hydrogen Q&A.**

Robert Rose, of Breakthrough Technologies Institute, has compiled the most popular questions and concerns related to hydrogen and fuel cells and provided answers to each, complete with charts, quotes and references. The document can be found at <http://www.fuelcells.org/info/library/QuestionsandAnswers052104.pdf>

#### **2004 Fuel Cell T.I.P.**

The 2004 Fuel Cell T.I.P. (Technical Intelligence Profile) includes the latest patenting activity of many of the top commercial and academic institutions involved in fuel cell research. The report contains a detailed analysis of the patenting activity within the fuel cell industry and provides information on major competitors, who owns the core technology, and insight into how the patent landscape is evolving. <http://www.metricsgroup.com/fuelcell.cfm>

#### **Two NCSU Reports on State-Level Financial Incentives.**

The North Carolina Solar Center at North Carolina State University has published two related reports on state-level incentives for which stationary fuel cell are eligible. One report, titled *Financial Incentives for Stationary Fuel Cells: A Report on State-Level Policy in the United States*, provides a comprehensive overview of financial incentives and regulatory policies established by state governments to promote the adoption of stationary fuel cell technologies. *Developments in State-Level Financial Incentives for Stationary Fuel Cells in the United States, 2003-2004*, details how state-level incentive programs have changed from March 2003 to April 2004. [http://www.ncsc.ncsu.edu/news/news\\_story.cfm?ID=155](http://www.ncsc.ncsu.edu/news/news_story.cfm?ID=155)

#### **Fuel Cell Fuel Sources.**

Research and Markets Ltd. has just released "Fuel Cell Fuel Sources Market Opportunities, Strategies, and Forecasts, 2007 to 2013." <http://www.researchandmarkets.com/reports/c2076/>

#### **Hydrogen Infrastructure.**

"Hydrogen Infrastructure: Business Models, Adoption Cycles, and Scenario Forecasts for the Development of Fuel Cell Markets in North America," a new study from Allied Business Intelligence (ABI), details pathways for hydrogen production, distribution, and storage from 2005 to 2015 in major urban centers in the US, and in Canada. <http://www.abiresearch.com/reports/HYD.html>

### **REQUESTS FOR PROPOSALS**

#### **Hydrogen Basic Research Solicitation.**

DOE's Office of Basic Energy Sciences is accepting grant applications for projects on basic research for the Hydrogen Fuel Initiative. Areas of focus include: Novel Materials for Hydrogen Storage; Membranes for Separation, Purification, and Ion Transport; and Solar Hydrogen Production. <https://e-center.doe.gov/iips/faopor.nsf/UNID/467527601D6D8D5585256E830043045A?OpenDocument>

### **MISCELLANEOUS**

#### **AEC Becomes Astris VAR.**

Alternate Energy Corporation (AEC) has signed an agreement with Astris Energi Inc. to become a value added reseller (VAR) for Astris' alkaline fuel cell power generator products. <http://www.astris.ca/NE/NE10.php?item=1084766400>

### **CONFERENCES**

#### **Renewable Energy & Energy Efficiency Expo.**

The 7th Annual Congressional Renewable Energy & Energy Efficiency Expo will be held Tuesday, June 8, 2004, at the Cannon Caucus Room in the Cannon House Office Building in Washington, D.C. The hours are 10:00 am – 5 pm and it is open to the public. For more information, contact Ken Bossong at 202-293-2898, ext. 201.

**Hydrogen – Fueling the Clean Air Future.**

“Hydrogen – Fueling the Clean Air Future” will be held August 16-17, 2004, at the J.W. Marriott Desert Springs Resort, in Palm Desert, California. For more information, please visit <http://www.aqmd.gov/tao/new-events/hydrogen-conference.htm>.

**Fuel Cells Science and Technology 2004.**

“Fuel Cells Science and Technology 2004, Scientific Advances in Fuel Cells Systems” will be October 6-7, 2004, at the Hilton Munich Park Hotel in Munich, Germany. For conference details, go to <http://www.fuelcelladvances.com/>.

**Advanced Energy & Fuel Cell Technologies.**

“Advanced Energy & Fuel Cell Technologies: Manufacturing Opportunities & Challenges” takes place October 11-13, 2004, at the Hyatt Regency Dearborn in Dearborn, Michigan. For information, check out <http://www.sme.org/cgi-bin/get-event.pl?--001491-000007-018921--SME->.

**Shanghai International Industry Fair,**

Group Exhibit on Hydrogen + Fuel Cells will take place during the Shanghai International Industry Fair, November 4-9, 2004, at the Shanghai New International Expo Center. For more information, go to <http://www.fair-pr.com/china2004/index.php>.

*Fuel cells generate electricity without combustion by harnessing the energy created when hydrogen and oxygen are chemically combined. Fuel Cells 2000 is an independent, nonprofit activity dedicated to the commercialization of fuel cell technologies.*