

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

---

## **Fuel Cell Technology Update – March 3, 2008**

**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**

#### **Morgan to Unveil LifeCar at Geneva Motor Show.**

Morgan Motor Company is slated to unveil its new hydrogen-powered LifeCar, based on the design of its Aero-8 roadster, at the Geneva Motor Show next week. The vehicle combines fuel cells and an energy storage system for a driving range of 250 miles (400km) per tank of hydrogen. Morgan's collaborators on the project were Oscar Automotive, Cranfield University, Oxford University and Linde AG.  
<http://www.morgan-motor.co.uk/lifecar/lifecar.html>

#### **Virgin to Offer Limo Service in Fuel Cell Equinoxes from LAX.**

Virgin Atlantic will offer passengers a Chevrolet Equinox Hydrogen Fuel Cell car as part of its Upper Class limo service. Initially passengers in Los Angeles will take part in the trial but the service is expected to be extended to New York City later this year. Initially three Equinox vehicles will become part of the fleet of cars used to transport Upper Class passengers to and from Los Angeles International Airport.  
<http://biz.yahoo.com/pnews/080303/nym049.html?v=101>

#### **Airbus Successfully Tests Fuel Cells in Aircraft.**

Airbus has successfully tested a fuel cell system for the first time on a civil aircraft, powering the back-up hydraulic and electric power systems. During the test, the fuel cell generated up to 20 kW of electrical power to the aircraft's electric motor pump, the back-up hydraulic circuit and the aircraft's ailerons.  
[http://www.airbus.com/en/presscentre/pressreleases/pressreleases\\_items/08\\_02\\_19\\_emission\\_free\\_power.html](http://www.airbus.com/en/presscentre/pressreleases/pressreleases_items/08_02_19_emission_free_power.html)

#### **H2 Logic to Supply Vehicles and Fueling Stations to Denmark Project.**

H2 Logic A/S has been selected to supply seven fuel cell hybrid vehicles and six hydrogen filling stations to a \$2.5 million project called "Hydrogen Link West Denmark." The vehicles and stations are to be delivered and opened in June 2008.  
<http://www.h2logic.com/com/shownews.asp?lang=en&id=194>

#### **Ballard Signs Five Year Agreement With New Flyer.**

Ballard Power Systems has signed a five-year agreement with New Flyer Industries Inc. to supply fuel cell modules for use in New Flyer shuttle buses and work on joint preparation of bids for transit agency shuttle bus programs, with an initial focus on publicly-funded programs in Canada. Under the agreement, New Flyer will develop and manufacture a shuttle bus specifically suited for Ballard's fuel cell technology and Ballard's existing fuel cell module will be integrated into the New Flyer shuttle bus chassis.  
<http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1107523&highlight=>

#### **South Carolina Welcomes First Hydrogen Vehicle.**

The Center for Hydrogen Research in South Carolina and URS Washington Division rolled out the state's first hydrogen fueled vehicle, the eTec Hydrogen Internal Combustion Engine (HICE) vehicle, a 2007 Chevrolet Silverado 1500. The vehicle was converted to be fueled by pure hydrogen from gasoline by Electric Transportation Engineering Corporation (eTec) with technical assistance from project partners

Roush Industries and Powertech Labs. A \$175,000.00 grant provided by URS Washington Division was used to fund the project.

<http://www.scch2r.org/news.php?id=22>

#### **Versa Power Systems Integrates SOFC into UUV.**

Versa Power Systems, Inc. successfully integrated its solid oxide fuel cell (SOFC) technology into an experimental propulsion system for stealth Unmanned Undersea Vehicles (UUV) under development by the US Navy. In tests by the Naval Undersea Warfare Center (NUWC) in Newport, R.I., the SOFC stack would allow a UUV that is 21 inches in diameter and approximately 20 feet long to run continuously for 30-60 hours, depending on the power demand.

[http://www.versa-power.com/news/NUWC-VERSA\\_press\\_release\\_2-26-2008.pdf](http://www.versa-power.com/news/NUWC-VERSA_press_release_2-26-2008.pdf)

#### **Adaptive Materials Receives Military Funding.**

A Phase II SBIR grant of \$2.35 million was awarded to Adaptive Materials to fund the continuing development of its portable solid oxide fuel cell technology for unmanned aerial vehicles (UAV), military robots and communications devices. This award is an extension of Adaptive Materials' DARPA-sponsored project through the Air Force Research Laboratory at Wright-Patterson Air Force Base to improve power sources for UAVs, including integration and flight testing.

<http://www.adaptivematerials.com/news.php>

### **STATIONARY APPLICATIONS**

#### **CFCL Receives Potential 50,000 Unit Order, Invest in New Manufacturing Plant.**

Ceramic Fuel Cells Ltd (CFCL) has received a volume order from Nuon, The Netherlands' largest energy company. CFCL and Nuon have agreed on a set of performance targets for a commercial unit and on CFCL's achievement of these targets, Nuon will order 50,000 fuel cell systems, to be delivered over a five year period from June 2009. CFCL is also investing €12.4 million in the construction of a manufacturing plant in Heinsberg, Germany for the commercial production of its fuel cell systems.

<http://www.cfcl.com.au/Assets/Files/Capex%20investment%20and%20Nuon%20order.final.ASX.pdf>

#### **New Residential Fuel Cell Program in Japan.**

The Fukuoka prefectural government in Japan will start an experiment using fuel cells at 150 households in two housing complexes, claiming to be the world's first example of setting up household fuel cell systems on such a large scale, with 100 units in a single concentrated area. The program will be conducted jointly along with Nippon Oil Corp and Saibu Gas Energy Co.

<http://www.japantoday.com/jp/news/429322>

#### **Wärtsilä to Deliver SOFC Fueled by Landfill Gas.**

Wärtsilä will deliver a fuel cell power plant based its planar SOFC technology fueled by biogas or methane originating from a nearby landfill to the Vaasa Housing Fair site in Western Finland. At the first stage, it will produce an electric output of approximately 20 kW and a thermal output of 14 to 17 kW. The fuel cell will produce both electricity and heating for the fair site.

[http://www.wartsila.com/en\\_press\\_0\\_pressrelease\\_CD27BA10-D09C-40B0-A99F-3D40B6D97AA7\\_B9393A1C-3E3F-40A1-AA10-C589484EBA44,,.htm](http://www.wartsila.com/en_press_0_pressrelease_CD27BA10-D09C-40B0-A99F-3D40B6D97AA7_B9393A1C-3E3F-40A1-AA10-C589484EBA44,,.htm)

#### **HydroGen Ships 400 kW Module.**

HydroGen Corporation has produced and delivered its first phosphoric acid fuel cell (PAFC) 400 kW module ahead of schedule. The module was shipped to the Company's 400 kW commercial demonstration power plant at the chlor-alkali facility owned and operated by ASHTA Chemicals, Inc. in Ohio.

<http://hydrogenllc.net/hydrov2/index.php?id=18,0,0,1,0,0>

#### **Ansaldo Enters Partnership with Enel.**

Ansaldo Fuel Cells has signed a partnership agreement with Enel to develop, build and test an integrated trigeneration system with a molten carbonate fuel cells generation plant using Ansaldo Fuel Cells

technology. The agreement covers the joint construction of a 0.5 MW power plant by mid-2009 at Enel's research center in Livorno, Italy.

[http://www.ansaldoenergia.com/PDF/ComFin\\_AnsaldoFCEnel\\_26\\_02\\_08\\_ING.pdf](http://www.ansaldoenergia.com/PDF/ComFin_AnsaldoFCEnel_26_02_08_ING.pdf)

#### **Acumentrics Selected for CAN\$6 Million Project.**

The Ontario Centres of Excellence (OCE) Inc. and its partners will invest CAN\$28 million in the research and development of six groundbreaking clean energy projects for Ontario. Acumentrics has been selected for a \$6 million project to install a 50kW SOFC fuel cell system to provide heat and power for the University of Toronto at Mississauga's Hazel McCallion Academic Learning Centre.

[http://www.oce-ontario.org/documents/media/Energy\\_launch\\_media\\_release.pdf](http://www.oce-ontario.org/documents/media/Energy_launch_media_release.pdf)

### **PORTABLE/BACKUP POWER**

#### **New Mexico National Guard Installs Fuel Cells.**

The New Mexico National Guard has installed 20 Plug Power GenCore® fuel cell units, most of them at the Guard's headquarters, along with some at its Rio Rancho armory and at Santa Fe Aviation, to provide backup electricity in emergencies for statewide communications and computer systems. The demonstration project will be monitored by the U.S. Army Construction Engineering Research Laboratory, as partners to the National Automotive Center.

[http://biz.yahoo.com/ap/080221/nm\\_hydrogen\\_fuel\\_backup.html?.v=1](http://biz.yahoo.com/ap/080221/nm_hydrogen_fuel_backup.html?.v=1)

#### **Emerson to Integrate ReliOn Fuel Cells into Outside Plant Enclosures.**

ReliOn and Emerson Network Power have entered an agreement that will integrate ReliOn's fuel cell products to the Emerson suite of NetXtend™ Integrated Enclosure Solutions for backup power.

<http://www.relion-inc.com/news.asp#24>

#### **IdaTech Provides Power for Motorola Exhibit.**

IdaTech plc installed and operated its ElectraGen™5 XTR system in Motorola's "Real World Showcase" exhibit at the GSMA Mobile World Congress conference in Barcelona, Spain a few weeks ago. The IdaTech fuel cell powered Motorola's telecommunications equipment - including a BTS station, LCD display and a PC - for the duration of the event.

<http://www.idatech.com/press192891821.asp>

#### **ElectroPS to Introduce New Unit.**

Electro Power Systems (ElectroPS) will be introducing the Electro7™ 19" rack mountable power system, at an upcoming trade show. The Electro7 19" has been specifically designed for streamlined integration with the new generation of shelters being deployed within the telecom industry, and can deliver up to 7-kW of 24/7 on-demand power for critical backup applications in any number of business sectors.

<http://www.electrops.it/pr.html>

#### **SFC Smart Fuel Cell Joins with Two More Manufacturers; Awarded Another Defense Contract.**

Two electric vehicle manufacturers have opted to integrate SFC Smart Fuel Cell's EFOY fuel cell as serial equipment in their vehicles. The Dutch bicycle company van Raam and Veloform GmbH, the German manufacturer of the well-known CityCruiser Velotaxi, will both start manufacturing particular product lines with EFOY power supply as standard equipment. SFC Smart Fuel Cell AG has also been awarded another commercial order worth 350,000 Euros for its portable fuel cells in a defense application for an international peace-keeping mission.

[http://www.efoy.de/index.php?option=com\\_content&task=view&id=922&Itemid=177](http://www.efoy.de/index.php?option=com_content&task=view&id=922&Itemid=177)

[http://www.efoy.de/index.php?option=com\\_content&task=view&id=921&Itemid=177](http://www.efoy.de/index.php?option=com_content&task=view&id=921&Itemid=177)

### **MICRO FUEL CELLS**

#### **MTI Unveils New Prototype.**

MTI MicroFuel Cells (MTI Micro) unveiled its new Mobion® powered direct methanol fuel cell (DMFC) camera-grip prototype that works like a camera battery-pack grip for digital single-lens reflex (DSLR)

cameras. The prototype is designed to provide twice the power as existing camera battery-pack grips and can be refilled with methanol for instant power.

<http://www.mticrofuelcells.com/news/article.asp?id=315>

### **H2Go RC Car Wins 2008 ToyAward.**

Corgi International's H2Go hydrogen-powered remote-controlled (RC) car has won the 2008 ToyAward in the Electronics & Technology category. A total of 24 products in eight categories were nominated for the innovation award. The car incorporates a fuel cell from Horizon Fuel Cell Technologies – it is very cool, I saw it first hand at the FC Expo in Tokyo.

<http://www.corgi.co.uk/>

## **FUELS/REFORMERS/STORAGE**

### **NHA Launches New Website.**

The National Hydrogen Association's Hydrogen Education Foundation has launched [www.H2andYou.org](http://www.H2andYou.org) to increase understanding about hydrogen. The site will answer common questions; present examples of market-ready hydrogen products that provide real energy solutions today; and offer video, podcasts and links to hydrogen news stories.

## **MATERIALS/COMPONENTS/TESTING**

### **IKTS Opens SOFC Test Center.**

The Fraunhofer-Institute for Ceramic Technologies and Systems (IKTS) in Germany has recently opened its new SOFC test center for verifying the practical performance of SOFC stacks and systems using FuelCon's Evaluator-S test stations.

[http://www.fuelcon.com/cms/pressemitteilungen\\_details.html?&L=1&tx\\_ttnews\[tt\\_news\]=131&tx\\_ttnews\[backPid\]=34&cHash=5fb8b416ef](http://www.fuelcon.com/cms/pressemitteilungen_details.html?&L=1&tx_ttnews[tt_news]=131&tx_ttnews[backPid]=34&cHash=5fb8b416ef)

## **REPORTS/MARKET STUDIES**

### **Fuel Cells: A Global Strategic Business Report.**

"Fuel Cells: A Global Strategic Business Report", published by Global Industry Analysts, Inc., provides a comprehensive review of market trends, major developments, mergers, acquisitions, profiles of major players and other strategic industry activities. Analyses are presented for major geographic markets such as US, Canada, Japan, France, Germany, Italy and the UK for the period 2003 through 2012.

[http://www.strategyr.com/Fuel\\_Cells\\_Market\\_Report.asp](http://www.strategyr.com/Fuel_Cells_Market_Report.asp)

## **MISCELLANEOUS**

### **Pacific Fuel Cell Relocates.**

Pacific Fuel Cell Corp. is relocating its Riverside, California-based membrane electrode assembly (MEA) research and development facility to its 24,000-square-foot Willoughby, Ohio-based plant.

## **CONFERENCES**

For a complete list of conferences, please go to <http://www.fuelcells.org/news/conf.html>

### **European Fuels Conference.**

The 9<sup>th</sup> Annual Meeting of The European Fuels Conference and Alternative Fuels Symposium will take place March 11-13, 2008, in Paris, France. For more information, please visit

<http://www.wraconferences.com/EFC9/EFC9overview.html>.

### **25<sup>th</sup> International Battery Seminar and Exhibit.**

The 25<sup>th</sup> International Battery Seminar and Exhibit: Primary & Secondary Batteries - Small Fuel Cells - Other Technologies will be held March 17-20, 2008, at the Broward County Convention Center in Fort Lauderdale, Florida. For more information, please go to

<https://powersources.net/florida/frameset.html>.

### **NHA Annual Hydrogen Conference & Hydrogen Expo US 2008.**

The National Hydrogen Association's National Conference 2008, "Ramping Up Commercialization" and the Hydrogen Expo US 2008 exhibition will be held at the Sacramento Convention Center in Sacramento, California on March 30-April 4, 2008. For details on both events, go to <http://www.hydrogenconference.org/>.

### **Group Exhibit H2/FC at Hannover Messe 2008**

The Group Exhibit H2/FC is a specialized exhibit area inside the Hannover Industry Fair, which will be held in Hannover, Germany from April 21-25, 2008. For more information, please go to [www.fair-pr.com/hm08/for-visitors/index.html](http://www.fair-pr.com/hm08/for-visitors/index.html).

### **Small Fuel Cells 2008.**

The 10<sup>th</sup> Annual International Conference Small Fuel Cells<sup>SM</sup> 2008: Portable & Micro Fuel Cells For Commercial & Military Applications will be held at the Omni Hotel at CNN Center in Atlanta, Georgia, from April 30-May 2, 2008. For details, go to <http://www.knowledgepress.com/events/8011207.htm>.

### **2008 Ohio Fuel Cell Symposium.**

The 2008 Ohio Fuel Cell Symposium: Energy through Synergy: Industry, Entrepreneurship and Academics Fueling Economic Growth will be held May 13-14, 2008, at the Quaker Square Inn at the University of Akron. For details, go to <http://www.fuelcellsohio.org/events/2008ohiofuelcellsymposium.html>.

### **Fuel Cell 2008.**

The 2008 Fuel Cell Conference will take place May 21-22, 2008, at the Hyatt Regency Long Beach in Long Beach, California. For more information, please go to [http://www.fuelcell-magazine.com/FC\\_2008/2008.htm](http://www.fuelcell-magazine.com/FC_2008/2008.htm).

The Fourth International Hydrail Conference will be held on June 9, 2008, at The Oceanographic City of Science in Valencia, Spain. For conference information, please go to <http://www.hydrail.org>.

### **Hydrogen on Islands.**

An International Conference on Hydrogen on Islands will be held in Bol, Island of Brač, Croatia, on October 22-25, 2008. For details, go to <http://www.em.com.hr/hydrogenislands/home>.

*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.*