

news from **FUEL CELLS 2000**

Fuel Cells 2000's Fuel Cell Technology Update – March 2010

Sorry the newsletter is out so late – I was in Tokyo for the past week and a half attending the 6th International Hydrogen and Fuel Cell Expo. It was a great show and there is a lot going on in Japan with regards to fuel cells. There are even commercials for the residential fuel cell system, ENEFARM, playing on the subways! Check out some of our reports from the show at www.fuelcellinsider.org. More coming soon. Comments Welcome!

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TRANSPORTATION APPLICATIONS

SunLine Enters Deal with Ballard, Unveils New Bus. SunLine Transit Agency has entered a contract with Ballard Power Systems for the supply of fuel cell power modules to power two different transit bus configurations at SunLine. Under the Advanced Technology (AT) program, Ballard, ISE Corporation and New Flyer Industries have struck a deal that will provide SunLine Transit with a 40-foot fuel cell hybrid bus powered by Ballard's FCvelocity™-HD6 power module. This bus has been delivered and was unveiled in February. Under the National Fuel Cell Bus Program, Ballard will also supply an FCvelocity™-HD6 power module for an El Dorado fuel cell hybrid bus featuring a series hybrid electric drive from BAE Systems, lead integrator for the bus. The fuel cell power module will be delivered this quarter and the bus will be delivered and operational in 2011.

<http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1397804&highlight=>
<http://www.mydesert.com/article/20100220/NEWS01/2200311/1006/news01/SunLine+unveils+new+hydrogen-powered+bus>

Oorja Protonics Introduces New Product. Oorja Protonics has added OorjaPac™ Model 1 to its product line. With a 4.5kW power output, the Model 1 is 50 times more powerful than other direct methanol fuel cell (DMFC) products available in the market, and with an operating cost of \$0.18/kW-hour, the Model 1 is an economical solution for forklift operators and fleet managers.

<http://www.oorjaprotonics.com/Oorja1/ONews.php>

Missouri S&T Students Entering Fuel Cell Vehicle in EcoCAR. Students at the Missouri University of Science and Technology (S&T) in Rolla, Missouri are re-engineering a compact crossover as a hydrogen fuel cell plug-in hybrid electric vehicle. The students are competing among 16 universities across North America in EcoCAR: The Next Challenge. The Missouri S&T team is the only U.S. team employing a fuel cell.

<http://ecocarchallenge.mst.edu/>

STATIONARY APPLICATIONS

Ceramic Fuel Cells Sells Unit to Alliander. Ceramic Fuel Cells Limited has sold a BlueGen power and heating unit to European utility Alliander, which supplies gas and electricity to 2.9 million customers in The Netherlands and Germany, including to the local Heinsberg area, where Ceramic Fuel Cells has opened a volume fuel cell stack manufacturing plant. Starting in the second quarter of 2010, Alliander will operate a BlueGen unit in one of its buildings in the Industriepark Oberbruch in Heinsberg, to evaluate the technology for further deployment and to demonstrate the product to customers and potential partners in that region. Alliander is evaluating the BlueGen product as part of its vision to create a smart grid network.

http://www.cfcl.com.au/Assets/Files/20100217_CFCL_Alliander_BlueGen.pdf

Solvay to Construct MW-sized Fuel Cell. Solvay will invest over EUR 5 million (US\$6.8 million) for the construction of a 1 megawatt (MW) test fuel cell at its plant in Lillo, Antwerp, Belgium. The investment is part of the Project Hydrogen Region Flanders - South Netherlands. The fuel cell will convert hydrogen produced by electrolysis at SolVin's plant into electricity and will also be used by WaterstofNet vzw for research and test programs to support and promote the development of the use of hydrogen in the region.

<http://www.solvaypress.com/pressreleases/0,,79029-2-0,00.htm>

UTC Power's PureCell® Model 400 Receives California Certification. UTC Power's new 400 kW fuel cell system, the PureCell® Model 400, has been certified to meet the latest emission standards of the California Air Resources Board (CARB), the strictest in the United States. The California Distributed Generation certification program requires manufacturers of electrical generation technologies that are exempt from district permit requirements to certify their technologies to specific emission standards before they can be sited in California. The standards required are expressed in pounds per megawatt-hour and regulate nitrogen oxides, carbon monoxide and volatile organic compounds.

http://www.utcpower.com/fs/com/bin/fs_com_Page/0,11491,0330,00.html

PORTABLE/BACKUP POWER

IdaTech Fuel Cell Powered Olympic Rings. IdaTech's ElectraGen™ H2 hydrogen fuel cell system provided power to the floating Olympic Rings in Vancouver's harbor during the 2010 Winter Olympics. The power source for the 30-foot tall rings alternated between a bio-diesel generator and IdaTech's fuel cell system.

http://www.idatech.com/uploadDocs/030210_Olympic_FC_Final.pdf

Protonex Selected by Lockheed Martin for Exoskeleton Power Supply; Receives Additional Award from CECOM. Protonex Technology Corporation has been selected by Lockheed Martin to develop power supply concepts that will enable its HULC robotic exoskeleton to support 72+-hour extended missions. Protonex will evaluate fuel cell-based power solutions that can be carried by the HULC, while at the same time powering the exoskeleton and the user's mission equipment during extended dismantled operations. Lockheed Martin's un-tethered HULC exoskeleton is an anthropomorphic, electro-hydraulic design that currently operates on lithium polymer batteries. In other Protonex news, the company received an incremental \$1.49 million contract award from the U.S. Army CECOM to deliver additional advanced portable battery charger/APU fuel cell products. This follows the US Army CECOM's decision to exercise an option in its original contract with the Company which was announced last month. This award increases the total funded value of the overall contract to \$3.34 million and additional options remain within the contract which, if awarded, could increase the total value of the contract to \$6.4 million. Under the terms of this eight-month, phase two program, Protonex is expected to deliver 30 additional portable battery charger/APU products to the U.S. Army for field use. The M250-CX units will include all of the next-generation improvements developed during the phase one program.

http://www.protonex.com/_assets/pressrelease/29bc00d3-cfb2-47f7-9caf-e879223365d9.pdf

http://www.protonex.com/_assets/pressrelease/2d4dd9c3-8263-40dc-b0d6-6f5d4afdcbf7.pdf

New Altec Camera Powered by SFC's Fuel Cell. Altec, a French specialist for innovative security, surveillance, and fire watch systems, has launched a new mobile Sentinelle visual and thermal camera system powered by an SFC Smart Fuel Cell EFOY Pro 2200 fuel cell. The Sentinelle system will be rolled out internationally to private and public operators of fire watch and surveillance equipment.

<http://www.efoy.com/en/press-release/11191-efoy-pro-brennstoffzelle-von-sfc-betreibt-das-neue-mobile-altec-ueberwachungs-und-feuermeldesystem.html>

MICRO FUEL CELLS

Neah Power Systems to Acquire CyVolt Energy Systems. Neah Power Systems, Inc. has signed documents with CyVolt Energy Systems to acquire all of its technology and assets. Neah intends to introduce its product, a hybrid fuel cell technology that recharges industry-standard lithium ion batteries, to the retail market within four to six months.

<http://www.neahpower.com/neh-power-to-acquire-cyvolt-energy-systems-with-proprietary-fuel-cell-technology-to-recharge-lithium-batteries>

FUELS/REFORMERS/STORAGE

NexTech's New Sensor Division Introduces New Product. NTM Sensors, a newly created division of NexTech Materials, Ltd., recently introduced its new hydrogen sensor, SenseH₂[™]. The SenseH₂[™] has been extensively beta tested for proton exchange membrane (PEM) fuel cell related applications, including forklift trucks, back-up power systems and electrolyzers. NTM Sensors intends to introduce other new products aimed at reduction of greenhouse gas and polluting emissions.

<http://www.ntmsensors.com/releases/12feb2010.html>

Air Products Awarded the Rushlight. Air Products has been awarded the Rushlight Hydrogen and Fuel Cell Industry Award for its innovative Series 100 Hydrogen Fueling Station technology. The Award promotes and celebrates leading environmental technologies in the United Kingdom (UK) and Ireland.

<http://finance.yahoo.com/news/Air-Products-is-Honored-with-prnews-3005608933.html?x=0&.v=1>

Acta Wins Qualitec Award. Acta's EL100 Hydrogen Generator has won the Qualitec Technology Award 2010 at the international Seatec trade exhibition for boats, yachts and ships. The Seatec exhibition is Italy's leading nautical and marine supplies exhibition and Acta exhibited its hydrogen generator coupled with a 1kW fuel cell power generator used to power an electric outboard motor.

http://www.acta-nanotech.com/index.php?option=com_content&task=view&id=218&Itemid=91

Catacel Corporation Honored with NorTech Innovation Award. Catacel Corporation is the recipient of a 2010 NorTech Innovation Award in the Advanced Energy, Power & Propulsion category for its Stackable Structural Reactor (SSR®) named Best Significant Advancement in Hydrogen Production. Catacel was one of more than 40 nominees from Northeast Ohio's manufacturing, industrial, medical and innovation industries. The SSR® is a catalyst-coated metal foil structure that enables the production of hydrogen gas with less consumption of fossil fuel and less greenhouse gas emission.

http://www.catacel.com/media/CAT_NorTechInnovationAward_Release_2.16.10.pdf

MATERIALS/COMPONENTS/TESTING

UPS Systems Launches REMO. UPS Systems has developed REMO, a new solution that provides remote monitoring for the majority of uninterruptible power supplies (UPS) and all generators.

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

REPORTS/MARKET STUDIES

2009 Legislative Wrap-up. Fuel Cells 2000 has posted its 2009 Legislative Wrap-up report, compiling all of the U.S. state policy changes, additions and updates from the last year.

<http://www.fuelcells.org/2009StatesH2FCWrapUp.pdf>

Order the Tenth Edition of the Fuel Cell Directory Today! The Tenth Edition of Fuel Cells 2000's Fuel Cell Directory is here! Get connected to the hydrogen and fuel cell industry with more than 850 companies and organizations in this comprehensive and searchable database. Listings include address, phone number, email, company URLs, stock symbols, investor, sales/purchasing, media and human resource contacts, and the name of the President or CEO, as well as a description of current research projects and fuel cell type. The Tenth Edition of the *Fuel Cell Directory* is available as a MS Excel database and costs \$500.00. <http://www.fuelcells.org/directoryorderform.pdf>

Fuel Cell Vehicles. A new report by Pike Research, "Fuel Cell Vehicles: Light Vehicles, Medium/Heavy-Duty Trucks, Transit Buses, and Hydrogen Refueling Infrastructure," predicts that sales of vehicles powered by hydrogen fuel cells will surge over the next 10 years. According to the report, by 2014 fuel cell vehicles will be a commercial reality, and by 2020 over 2.8 million fuel cell-powered cars and trucks will have been sold with about 37 percent of those vehicles will be sold in Western Europe, 36 percent in

the Asia-Pacific region, and 25 percent in North America.
<http://www.pikeresearch.com/research/fuel-cell-vehicles>

REQUESTS FOR PROPOSALS

Check out the [Fuel Cell RFPs](#) blog for more opportunities.

AQMD RFP for Hydrogen Station in Burbank. The South Coast Air Quality Management District (AQMD) has released a Request for Proposals (RFP) to provide operation and maintenance for the hydrogen fueling station at the City of Burbank. The current contract with BP has ended for the station, which uses a steam methane reformer to produce hydrogen. The hydrogen fueling facility is capable of storing and dispensing approximately 108 kg of hydrogen per day for use in fuel cell vehicles and hydrogen-ICE vehicles. The station is located at the City of Burbank Public Works Yard located at 124 S. Lake Street, Burbank, California.

<http://www.aqmd.gov/rfp/index.html> (scroll down to P2010-19)

CEDF Grant Program Seeking to Fund CHP, Renewable Energy Systems in Vermont. The Clean Energy Development Fund (CEDF) Grant Program is offering \$2.5 million in grants to promote the development and deployment of cost-effective and environmentally sustainable electric power and thermal resources in Vermont. There is a maximum award of \$75,000 for Pre-Project Financial Assistance, \$50,000 for Small-Scale Systems (including fuel cells), \$250,000 for Large-Scale Systems and Special Demonstration Projects, and \$500,000 for Community-Scale Systems. There will be two rounds of funding in 2010. The first round of proposals closes March 12, 2010.

http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=VT32F&re=1&ee=1

CONFERENCES

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

Climate Change Solutions. Climate Change Solutions 6th Annual International Conference and Exhibition: "Hydrogen & Fuel Cells for Clean Cities, Vehicles and Buildings", is scheduled for March 25, 2010, at the National Exhibition Centre in Birmingham, UK. For more information, go to <http://www.climate-change-solutions.co.uk/events.php>.

Green Fuels & Vehicles China 2010. Green Fuels & Vehicles China 2010: The Innovation & Industrialization in the Coexistence Era of Alternative & Conventional Vehicles will be held April 8-9, 2010, in Shanghai, China. For conference information, please visit <http://www.igvision.com/gfvc/>.

Small Fuel Cells 2010. Small Fuel Cells 2010: Portable & Micro Fuel Cells & Hybrid Devices for Commercial & Military Applications will be held April 12-13, 2010, in Cambridge, Massachusetts. For details, please go to <http://www.knowledgefoundation.com>.

HANNOVER MESSE 2010. The 16th Group Exhibit Hydrogen + Fuel Cells HANNOVER MESSE 2010 will take place April 19-23, 2010, in Hannover, Germany. For exhibition information, please visit <http://www.h2fc-fair.com/>.

Emerging Support Strategies for Fuel Cells and Hydrogen. Emerging Support Strategies for Fuel Cells and Hydrogen will be held on Wednesday, April 21, 2010, at the University of Glamorgan in Pontypridd, Wales. This event is free to attend. If you would like to join, please register by emailing natalia.zglobisz@energyktn.innovateuk.org.

NHA Hydrogen Conference & Expo. The 2010 NHA Hydrogen Conference & Exposition will be held May 3-6, 2010, in Long Beach, California. For conference details, please visit <http://www.hydrogenconference.org/>.

2010 Ohio Fuel Cell Symposium. The 2010 Ohio Fuel Cell Symposium will take place May 6-7, 2010, at the Great Lakes Science Center in Cleveland, Ohio. For conference info, please go to <http://www.fuelcellcorridor.com/>.

f-cell 2010. The f-cell 2010 conference takes place September 27-28, 2010, in Stuttgart, Germany. For registration or exhibitor information, please go to <http://www.f-cell.de/englisch/Home/>.
Remote 2010. The Remote 2010 Conference and Exposition will be held October 19-20, 2010 in Dallas, Texas. For conference details, please visit <http://www.RemoteExpo.com>.

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