news from
FUEL CELLS 2000

Fuel Cell Technology Update – May 1, 2006

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

DaimlerChrysler Introduces First Fuel Cell-Powered Police Car.
The Wayne State University Police Department in Detroit will operate a DaimlerChrysler Mercedes F-Cell fuel cell police car on and in the immediate vicinity of the campus. Outfitted with a third-generation police radio, decals, lights and sirens, the fuel cell-powered police car will be refueled at NextEnergy's new hydrogen fueling station and will serve as a learning laboratory for students in WSU College of Engineering Alternative Energy Technology, the nation's first master's-degree program in alternative energy.
http://cgmedia.daimlerchrysler.com/newsrelease.do;jsessionid=D68E087F0A807BA9C39DBCD13FDB4C4E?id=4985&roomid=6

ECN and Piaggio Successfully Operate Fuel Cell Scooter.
Piaggio & C Spa teamed up with the Energy research Centre of the Netherlands (ECN) and successfully tested a fully integrated hydrogen fuel cell scooter, the FRESCO. Although the FRESCO project officially ended in July 2005, an additional effort was made by the project partners and University of Pisa to enhance the vehicle performance and effectiveness. In these tests, propulsion relied completely on the fuel cell alone.
http://www.ecn.nl/en/h2sf/

Georgetown Selects EPRI to Lead Generation III Fuel Cell Bus Project.
Georgetown University has announced that a team led by the Electric Power Research Institute (EPRI) has won the contract to design, develop, and fabricate a fuel cell power plant operating on methanol as a subsystem for a next generation, heavy-duty transit bus. Other team members are the Center for Solar Energy and Hydrogen Research (ZSW - Zentrum für Sonnenenergie und Wasserstoff-Forschung, Baden Württemberg) and NuCellSys GMbH.
http://fuelcellbus.georgetown.edu/

STATIONARY APPLICATIONS

Russian Companies Invest in Plug Power.
Interros, a major Russian investment firm, and Norilsk Nickel agreed to make a $217 million cash investment in Plug Power. The investment is being made through Smart Hydrogen, a joint venture of the principal Interros investors and Norilsk Nickel, which was formed to participate in the global hydrogen economy.
http://www.plugpower.com/news/press.cfm

FuelCell Energy Sells 1 MW System to California State University.
FuelCell Energy, Inc. and its partner Alliance Power Inc., have sold a 1 megawatt (MW) fuel cell power plant to California State University, Northridge (CSUN) for a combined heat and power application to help the university meet its goals for greater energy independence, capital growth, cost management and increased use of green power. The Direct FuelCell® (DFC®) power plant will generate base load electricity for the university's facilities and surplus heat for hot water. The university also plans on routing

exhaust from the heat exchanger into an adjacent greenhouse and arboretum to enhance photosynthesis, boosting plant growth and harvests by 10 to 40 percent.
http://www.fce.com/#

PORTABLE/BACKUP POWER

Voller Launches New Fuel Cell System.
Voller Energy Group PLC has launched a new hydrogen-fueled industrial fuel cell system, the VE100 Rack Mount (VE100RM). The new fuel cell system can charge remote monitoring equipment, surveillance cameras and industrial equipment in remote locations and can be used in conjunction with other power sources such as Photo-Voltaic (PV) solar panels or wind turbines to provide continuous power over an extended period of time.
http://www.voller.com/downloads/New%20Fuel%20Cell%20System%20VE100RM%2024%20April%202006.pdf

ReliOn Introduces New Products.
ReliOn has introduced two new products, the T-1000™ and T-2000™. Designed specifically for communications backup power applications, the T-1000™ is a scalable hydrogen fuel cell capable of providing power architectures from under 600 Watts to 1,200 Watts. The T-2000™ provides up to 2,000 Watts and can be configured to work in combination for power requirements up to 12 kilowatts.
http://www.relion-inc.com/news.asp#14

Smart Fuel Cell Raises Capital.
SFC Smart Fuel Cell AG has successfully raised 15 million Euro in equity capital from several renowned European institutional investors.
http://www.smartfuelcell.de/index.php?id=146&L=1&tx_ttnews[tt_news]=96&tx_ttnews[backPid]=1&cHash=a03888bd31

FUELS/REFORMERS/STORAGE

DOE to Release $52.5 Million Hydrogen Solicitation.
The U.S. Department of Energy (DOE) will release a three-year, $52.5-million solicitation to support basic research in hydrogen storage materials, catalysts, and membranes. It will also address the challenges identified in the report "Basic Research Needs for the Hydrogen Economy," released by DOE last year.
http://www.energy.gov/news/3439.htm
http://www.sc.doe.gov/bes/hydrogen_fuel_initiative_notices.html

Ohio State to Unveil Hydrogen Fueling Station.
Ohio State's Center for Automotive Research (CAR) will unveil the first hydrogen refueling station in Ohio this week The refueling station will further CAR's research opportunities into fuel cell and alternative powertrain technologies for the future of transportation.
http://engineering.osu.edu/news/archive/2006/hydrogenfuelingstation.php

CB&I to Build Hydrogen Plant in Texas.
Chicago Bridge & Iron Company N.V. (CB&I) has been awarded a $40 million contract by a major U.S. refiner to supply a large-scale hydrogen plant for one of its refineries located in Texas. The plant will use CB&I's proprietary HYFORMING™ box furnace technology for steam methane reforming that provides superior process performance within a robust mechanical environment. Delivery of the plant is scheduled for summer 2007.
http://www.cbi.com/ir/release.aspx?releaseid=192318

Linde Gas to Build Reformer at Shell Plant.
Linde Gas LLC will build and operate an on site hydrogen steam methane reformer at the Shell Chemical LP plant in Mobile, Ala. From this facility, Linde will supply industrial grade hydrogen facilitating Gas Oil Hydrotreating by Shell at Mobile. The scheduled start-up for the Linde facility is November 2007. this

latest contract represents Linde's fourth on site hydrogen generation plant serving the North American marketplace.
http://www.us.lindegas.com/international/web/lg/us/likelgus.nsf/docbyalias/news_shell

QuestAir Signs Licensing Agreement with Hydro-Chem.
QuestAir Technologies Inc. has signed a licensing agreement with Hydro-Chem, to manufacture QuestAir's H-3100 pressure swing adsorption (PSA) systems for incorporation in Hydro-Chem's industrial hydrogen plants sold to customers world-wide. QuestAir will receive a licensing fee for the supply of its proprietary rotary valves and process design. The initial term of the agreement is five years.
http://www.questairinc.com/investor_relations/press_releases/archived_releases/2006/04-03.htm

FUEL CELL COMPONENTS

Freudenberg-NOK Purchases Fuel Cell Test Stations from FuelCon.
Freudenberg-NOK purchased two fuel cell test stations from FuelCon Systems, Inc. These new stations enable the company to perform completely automated full frequency scans at its Plymouth, Michigan. headquarters and $30 million Technical Concept Center.
http://freudenberg-nok.mediaroom.com/index.php?s=press_releases&item=128

Catacel Receives Grants for Fuel Cell Component Development.
Catacel Corporation has received more than $1.5 million in grant funding for design and development of components for the fuel cell industry. Two grants have been awarded by the Edison Materials Technology Center (EMTEC). A third grant was awarded by the National Science Foundation, and a fourth one comes from the Ohio Department of Development (as part of the Ohio Third Frontier Fuel Cell Program funding). Each of the projects is being undertaken with the assistance of collaborative partners including the University of Toledo, Patriot Engineering Co., Inc., Creative Processing Inc., NexTech Materials, Ltd. and EMTEC.
http://www.catacel.com

PolyFuel to Provide Membranes to Johnson Matthey.
PolyFuel, Inc. has entered into an agreement with Johnson Matthey to provide hydrocarbon direct methanol fuel cell (DMFC) membranes for fuel cells to power portable devices. Johnson Matthey will use these membranes in the manufacture of catalyst coated membranes (CCMs) and membrane electrode assemblies (MEAs), which are the part of a fuel cell that actually transforms fuel into electricity.
http://www.polyfuel.com/pressroom/press_pr_041106.html

FuelCon Extends its Product Line.
FuelCon introduced a new line of diagnostic tools, the TrueData product line that includes a variety of analytical tools and accessories to assist investigators in the field of fuel cell, battery, super capacitor or general electrochemistry research.
http://www.fuelcon.com/en/news/index.html

Phil-Lu Receives Patent.
Phil-Lu Inc. has received a patent for a non-platinum membrane and is waiting on two patents for hydrogen generators that are galvanic with no moving parts and an oxygen generator.
www.phil-luinc.com

REPORTS/MARKET STUDIES

BTI Releases State-by-State Analysis of Fuel Cell and Hydrogen Activities.
Breakthrough Technologies Institute, the parent organization of Fuel Cells 2000 (www.fuelcells.org), has just released *State Activities That Promote Fuel Cells and Hydrogen Infrastructure Development*, a comprehensive state-by-state analysis of state programs and incentives that specifically include hydrogen, fuel cells and zero emission vehicles. The 230-page report is available FREE at http://www.fuelcells.org/info/StateActivity.pdf.

Fuel Cell Quarterly Now Electronic, Now Free.
Fuel Cells 2000's Fuel Cell Quarterly will no longer be distributed in hard copy format. It will now be free and sent via email. The Quarterly is aimed at a non-technical audience and delves a little deeper into various applications and interesting stories in the industry. If you would like to subscribe, go to http://v2.listbox.com/subscribe/?listname=fuelcellgeneral@v2.listbox.com.

Fuel Cells Journal.
Fuel Cells – From Fundamentals to Systems is a journal that publishes peer-reviewed original research papers and reviews on all aspects of fuel cells, ranging from their molecular basis to application in systems.
http://www3.interscience.wiley.com/cgi-bin/jhome/84502986?CRETRY=1&SRETRY=0

REQUESTS FOR PROPOSALS

Fuel Cell Bus Program.
The Department of Transportation is inviting applications for the National Fuel Cell Bus Technology Development Program, which seeks to develop commercially viable fuel cell bus technology and related infrastructure for transit revenue service operations. Approximately $49 million is expected to be available for awards. Up to three projects will be selected to receive funding through this solicitation. White papers are due May 10, 2006. Proposals are due July 14, 2006.
http://www.grants.gov/search/search.do?mode=VIEW&oppId=9008

MISCELLANEOUS

FuelCon Receives Hugo-Junkers-Innovation-Award 2006.
FuelCon received the prestigious Hugo-Junkers-Innovation-Award 2006 for outstanding business performance. The minister of economic affairs of the federal state Sachsen-Anhalt, Dr. Horst Rehberger, presented the award to FuelCon's managing directors Dr. Ingo Benecke and Mathias Bode. This award recognizes the development and market introduction of FuelCon's "TrueData" line of diagnostic tools and devices for fuel cell and fuel cell system evaluation.
http://www.fuelcon.com/en/news/index.html

CONFERENCES

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

Fuel Cell 2006.
Fuel Cell 2006 will be held June 6-7, 2006, at the Sheraton Imperial Hotel and Convention Center in Raleigh-Durham, North Carolina. Reduced registration fee ($595) if FC-2000 is entered as Source Code for the web site registration. For details, go to http://www.fuelcell-magazine.com/fc_conf_index.htm.

GenerationFC 2006.
"GenerationFC 2006: Shaping the Southern Fuel Cell Economy" will take place December 4-6, 2006, at the Emory Conference Center Hotel in Atlanta, Georgia. For more information, please go to http://www.sfcc.tv/genfc.html.

FC Expo 2007.
The 3rd International Hydrogen and Fuel Cell Expo will take place February 7-9, 2007, at Tokyo Big Sight in Tokyo, Japan. For details, please visit http://www.fcexpo.jp/english/.

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.