news *from*
FUEL CELLS 2000

Fuel Cell Technology Update – March 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.*

Fuel Cells 2000 will be exhibiting at the Fuel Cell Investment Summit (www.fuelcellis.com) on March 14-16 at the Mohegan Sun Casino in Uncasville, Connecticut. If you are attending, be sure to stop by our booth!

TRANSPORTATION APPLICATIONS

Hydrogenics to Develop Fuel Cell Delivery Van and Refueling Station.
Purolator Courier Ltd. has contracted Hydrogenics Corporation to develop and deploy a fuel cell hybrid delivery van and an on-site hydrogen refueling system as part of their "Greening the Fleet" initiative to explore the use of clean transportation technologies.
http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=129590

Hydrogenics Launches Commercialization Initiative For Off-Road Mobility.
Hydrogenics Corporation announced a new initiative to develop fuel cell-based powertrains for off-road light vehicles. Hydrogenics is seeking original equipment manufacturers (OEM) to partner with in the development of a range of fuel cell vehicles in the sub-automotive power range for use in airport ground support, materials handling, underground mining, grounds maintenance and military applications.
http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=128878

Consortium Unveils Conceptual Design of Fuel Cell Locomotive.
The conceptual design of a fuel cell locomotive has been unveiled by an international consortium funded by the U.S. Army Research, Development, and Engineering Command's National Automotive Center, and headed by Vehicle Projects, LLC. The goal of the project is to develop a 1.2 MW locomotive, powered by eight 150-kW PEM fuel cells, for defense and commercial railway applications.
http://www.vehicleprojects.com

Hyundai to Display New Fuel Cell-powered SUV in Geneva.
Hyundai plans to display a fuel cell-powered version of its Tucson compact sport utility vehicle (SUV) at the 74th International Motor Show in Geneva, Switzerland. The fuel cell Tucson is expected to be utilized in the U.S. by year's end as part of a small business-users fleet.

STATIONARY POWER

GM and Dow Begin Largest Installation.
The Dow Chemical Company and General Motors Corp. began the Phase 1 installation operations of a single fuel cell that will convert hydrogen into electricity for four to six months. More fuel cells and electrical generating capacity added during the summer months, and Dow and GM plan to ultimately install up to 400 fuel cells to generate 35 megawatts of electricity – enough power for 25,000 homes.
http://www.dow.com/dow_news/feature/2004/02_09_04/index.htm

IdaTech and RWE Fuel Cells Install Fuel Cell Systems in Germany.
IdaTech and RWE Fuel Cells will install two 5-kW, combined heat and power fuel cell systems operating on natural gas at the representative office of the State of North Rhine-Westphalia in Berlin as part of a

new energy technologies demonstration project. Together with a 28-kW micro gas turbine, the fuel cells will augment the supply of electricity, heating and cooling used in the building.
http://www.idatech.com/media/news.html?article=59

PORTABLE/BACKUP POWER

Manhattan Scientifics Delivers Fuel Cell to U.S. Army.
Manhattan Scientifics has delivered a 700-watt NovArs prototype fuel cell system to the U.S. Army for evaluation as a possible battery charger for tactical units. The contract was awarded as part of the Army's Communications-Electronics Command's (CECOM) competitive Foreign Technology Evaluation Program.
http://www.mhtx.com/media_center/pressrelease53.htm

Medis Develops Disposable Power Pack Fuel Cell.
Medis Technologies, Inc. announced that its first fuel cell product will be a new disposable Power Pack scheduled to be in distribution channels by the end of the year. The disposable power pack is expected to have a suggested retail price of $14.99 and provide 15 hours of talk time.
http://www.medistechnologies.com/show-news.asp?ID=70

Millennium Cell and Protonex Sign Agreement.
Millennium Cell, Inc. and Protonex Technology Corporation have signed a joint development and licensing agreement to commercialize compact, portable fuel cell power systems. The two companies will integrate the Millennium Cell Hydrogen on Demand™ system with Protonex's fuel cell power technology to bring to market a clean, safe, durable system for portable power.
http://www.millenniumcell.com/cgi-bin/news.pl?function=detail&id=021204

FUELS/REFORMERS/STORAGE

Stuart Energy Receives Orders for Hydrogen Stations.
Stuart Energy Systems Corporation has secured orders for Hydrogen Energy Stations (HES) for the industrial utility market worth approximately CAN$5.0 million. These HES systems will reliably generate hydrogen for cooling generators and process requirements within power plants. Orders for these systems were received from companies in North America, Europe and Asia.
http://www.stuartenergy.com/media_center/press_releases/press_feb_17_2004.html

Researchers Develop New Hydrogen Production Technology.
The University of Minnesota developed a new reactor that utilizes ethanol to produce hydrogen which, when coupled with a hydrogen fuel cell, could potentially produce one kilowatt of power.
http://www.ur.umn.edu/FMPro?-db=releases&-lay=web&-format=unsreleases/releasesdetail.html&-RecID=33795&-Find

CSA America to Help Develop New Hydrogen Standards.
CSA America, Inc. has entered into an agreement with the Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) to develop new standards for hydrogen gas dispensing systems and pressure relief devices for use on hydrogen fuel containers. Under the terms of the agreement, CSA America said it will work with the American Society of Mechanical Engineers (ASME) as well as other standards developers to create new standards for composite containers for bulk hydrogen storage.

DOE Announces New Hydrogen Education Tour.
Department of Energy (DOE) Secretary Spencer Abraham announced plans to launch a six-city national tour, titled "Hydrogen Power: The Promise, The Challenge," to state and local officials who do not have technical backgrounds. The tour will provide information about hydrogen and fuel cell technologies, hydrogen safety and challenges to achieving the "hydrogen vision."
http://www.energy.gov/engine/content.do?PUBLIC_ID=15085&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE

FUEL CELL COMPONENTS

Maxwell, Hydrogenics Enter Into Strategic Alliance.
Maxwell Technologies, Inc has entered into a strategic alliance with Hydrogenics Corporation to integrate Maxwell's BOOSTCAP ultracapacitors into Hydrogenics' fuel cell power systems in an effort to optimize system performance and reduce cost.
http://www.maxwell.com/news/archives/2004/february25-04.html

REPORTS/MARKET STUDIES

Fuel Cells Industry Worldwide.
Fuel Cells Industry Worldwide: A Market/Technology Report, from Materials Technology Publications, provides detailed information on commercially available fuel cells, as well as discussing the potential for those near commercialization and those with longer-term potential. For more information, email nick.dellow@ntlworld.com.

Fuel Cells.
Fuel Cells, a new study from The Freedonia Group, predicts that US commercial market for fuel cell products and services — including revenues associated with prototyping and test marketing activities, as well as actual product sales — will increase tenfold to $1.1 billion in 2008 and reach $4.6 billion in 2013.
http://www.freedoniagroup.com/pdf/1759embro.pdf

REQUESTS FOR PROPOSALS

NIST Opens 2004 Advanced Technology Program Competition.
The U.S. Department of Commerce, National Institute of Standards and Technology, has opened its 2004 Advanced Technology Program (ATP) Competition. ATP's early stage investment is accelerating the development of innovative technologies that promise significant commercial payoffs and widespread benefits for the nation, including fuel cell and hydrogen projects.
http://www.atp.nist.gov

MISCELLANEOUS

Clean Energy States Alliance Formed.
Seventeen public funds from twelve states have agreed to support a new Clean Energy States Alliance (CESA) to promote clean energy projects and companies. The funds expect to have about $3.5 billion collectively for these efforts over the next decade.
http://www.cleanenergystates.org/library/Press/CESA%20Press%20Release%20-%2001.29.04.Final.pdf

Avista Labs to Change Name to ReliOn.
Avista Labs will begin doing business under the new name ReliOn
http://www.avistalabs.com

CONFERENCES

2nd Fuel Cell Investment Summit.
The Connecticut Clean Energy Fund is holding the Second Annual Fuel Cell Investment Summit, March 14-16, 2004, at the Mohegan Sun Casino in Uncasville, Connecticut. For registration, exhibitor and sponsor information, visit http://www.fuelcellis.com.

4th Annual Fuel Cell Investor.
The 4th Annual Fuel Cell Investor will be held March 25-26, 2004, at the Sheraton Society Hill in Philadelphia, Pennsylvania. For conference information, please visit http://www.srinstitute.com/ApplicationFiles/web/WebFrame.cfm?web_id=207.

Hannover Fair 2004.

The Hannover Fair takes place April 19-24, 2004, in Hannover Germany. Join more than 100 Exhibitors and Forum participants from all over the world presenting their latest H2/FC developments and products. Visit http://www.fair-pr.com/ or contact arno@fair-pr.com for more information. Click on www.virtual-fair.com to visit the virtual exhibits.

IDEA04.
The IDEA04 International Engineered Fabrics Conference & Exposition will be held April 27-29, 2004, in Miami Beach, Florida. For conference details, go to http://www.idea04.com.

Fuel Cells Italia 2004.
Conference Fuel Cells Italia 2004 will be held May 11, 2004, in Milan, Italy. For more information, go to http://www.h2it.org.

Ohio Fuel Cell Symposium.
The 2004 Ohio Fuel Cell Symposium will be held at the Conference Center at North Pointe in Columbus, Ohio on May 24-25, 2004. To register, go to www.cesnet.org.

Hydrogen & Fuel Cells 2004.
The Hydrogen & Fuel Cells 2004 Conference and Trade Show will be held September 25-28, 2004, at the Sheraton Centre Toronto Hotel in Toronto, Ontario, Canada. For information, go to http://www.hydrogenfuelcells2004.com/.

Fuel Cells Science & Technology 2004.
Fuel Cells Science & Technology 2004 will be held October 6-7, 2004, at the Hilton Munich Park Hotel in Munich, Germany. For further information visit www.fuelcelladvances.com.

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.