news from
FUEL CELLS 2000

Fuel Cell Technology Update – September 1, 2005

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

APFCT to Deliver 40 Fuel Cell Scooters in Taiwan.
Asia Pacific Fuel Cell Technologies, Ltd. (APFCT) has been awarded a 40-vehicle fleet demonstration project for hybrid fuel cell-powered scooters by the Taiwan Ministry of Economics. The total proposed program budget is over US$4.6 million.
http://www.apfct.com/

Teledyne Delivers Fuel Cell to NASA.
Teledyne Energy Systems, Inc. delivered a 12-kW PEM fuel cell power plant to NASA's Glenn Research Center in Cleveland, Ohio. The delivery completes Phase II of Teledyne Energy Systems' contract awarded in 2001 to develop a more reliable, powerful, and low maintenance fuel cell power plant for use in future NASA spacecraft.
http://www.investquest.com/iq/t/tdy/ne/news/tdy080905pem.htm

KRRI Working on Fuel Cell Bimodal Vehicle.
The Korea Railroad Research Institute (KRRI) is developing a fuel cell bimodal (bus/train) vehicle that can run on asphalt roads and on magnetic railways like a subway train. The bimodal vehicles are now being developed for the Bus Rapid Transit (BRT) system, which reserves dedicated lanes along major roads for exclusive bus use. KRRI plans to complete the buses' development by 2009. For more information on BRT, visit http://www.gobrt.org.
http://world.kbs.co.kr/english/news/news_zoom_detail.htm?No=829

Nuvera Achieves Several Milestones with Automotive Fuel Cell.
Nuvera Fuel Cells, Inc. announced its next-generation automotive fuel cell stack, called Andromeda II, achieved several major milestones during recent qualification tests conducted at the company's facility in Milan, Italy. The new stack, which is capable of generating 125 kW of power (168 horsepower) and is currently available for delivery to qualified customers developing fuel cell vehicles, exceeded key product milestones for power density, cold-start capability, system efficiency, durability, and high-volume production cost.
http://www.nuvera.com/news/press_release.php?ID=9

STATIONARY POWER

HydroGen Receives $1.25 Million for Fuel Cell Project and Headquarters.
HydroGen Corporation has secured a $1.25 million grant from the Ohio Department of Development, through its Ohio Fuel Cell Initiative, to locate a 400 kW air-cooled phosphoric acid fuel cell commercial demonstration fuel cell project in Ohio and establish its corporate headquarters there as well. The project will also initiate HydroGen's efforts to develop an accelerated manufacturing facility in the state of Ohio between 2006-2008, which is expected to create approximately 200 jobs.
http://www.fuelcellsohio.org/pages/944592/index.htm

Acumentrics Signs Contract with MTS Group.

Acumentrics Corporation has signed an engineering development contract with Merloni Termosanitari S.p.A. (MTS Group) headquartered in Fabriano, Italy. The overall objective of the agreement is the joint development of at least two commercial micro combined heat and power (CHP) appliances targeting specific segments of the European heating, cooling and ventilation (HVAC) market. The specific markets are single and two-family homes and multi-family and small-commercial buildings. The units would supply both heat and electric power and would use Acumentrics tubular Solid Oxide Fuel Cell (SOFC) technology integrated into an MTS heating appliance.
http://www.acumentrics.com/MTS05.htm

New Energy Bill Includes Stationary Fuel Cell Tax Credit.
The Energy Bill signed by the President includes a fuel cell tax credit up to $1,000 per kilowatt on the purchase of fuel cells used in residential or commercial applications. The tax credit will be available in January 2006 and specifically includes telecommunications carriers among the eligible end users for the tax credit. Additionally, the bill includes an authorization for $3.7 billion for hydrogen and fuel cell research and development, demonstration and market transition over the next 10 years.

PORTABLE/BACKUP POWER

H.M. Cragg Installs GenCore® Unit at MN Telecom Company.
H.M. Cragg has installed a Plug Power GenCore® 5-kW fuel cell backup system at Loretel Systems, at their central office in Glyndon, Minnesota. Loretel Systems was one of two telecom providers to receive a grant from the Minnesota Department of Commerce.
http://www.hmcragg.com/index-fuel-cells.html

Ultracell Develops Reformed Methanol Fuel Cell, Receives Contract from U.S. Army.
UltraCell Corporation has developed a new fuel cell power source for portable electronic devices that has twice the energy density of lithium batteries. UltraCell's reformed methanol fuel cell (RMFC) technology uses a revolutionary micro reformer to generate fuel-cell-ready hydrogen from a highly concentrated methanol solution. Weighing just 40 ounces, the power unit is about the size of a paperback novel. UltraCell has also been awarded a contract by the U.S. Army's Communications-Electronics Research, Development and Engineering Center (CERDEC) to deliver a lightweight, energy-dense, pouch-pocket sized fuel cell power system to assist U.S. forces on extended missions.
http://www.ultracellpower.com/assets/pdf/8-19-05-press-IDF.pdf
http://www.ultracellpower.com/assets/pdf/8-19-05-CERDEC.pdf

SFC Cartridges to be Available Throughout Europe, SFC Enters Deal with German Army.
SFC Smart Fuel Cell AG (SFC) announced the introduction of a Europe-wide methanol fuel distribution network. From September 2005, SFC's methanol fuel cartridges will be available at over 200 sales points from Portugal to Poland and from Italy to Norway. Also, SFC entered into a cooperation agreement with the German Federal Army's Military Vehicle and Tank Technology Department WTD 41. Under this agreement, SFC will develop a next generation portable fuel cell as power supply for soldiers in the field.
http://www.smartfuelcell.de/index.php?id=146&L=1&tx_ttnews[tt_news]=70&tx_ttnews[backPid]=1&cHash=7de893ce19
http://www.smartfuelcell.de/index.php?id=146&L=1&tx_ttnews[tt_news]=65&tx_ttnews[backPid]=128&cHash=1b7d095bad

Ovonic Receives Grant for UPS Fuel Cell.
Ovonic Fuel Cell Company LLC has been awarded a $400,000 grant by Michigan Public Service Commission. This Michigan Energy Efficiency Grant will support a nine-month program for the development of a prototype fuel cell system for uninterruptible power supply (UPS) and emergency power applications.
http://www.ovonic.com/news_events/5_2_press_releases/20050824.htm

Fuel Cell Power Pack Design Contest.
Medis Technologies is soliciting design ideas for its fuel cell Power Pack design. The contest winner, to be determined by Medis Technologies executives, will receive a trip for two to the company's

manufacturing facility to view production of the Power Pack. Applications and design illustrations must be submitted to and received by Medis by September 20, 2005.
http://www.medistechnologies.com/show-news.asp?id=236

FUELS/REFORMERS/STORAGE

DOE Posts New Hydrogen Cost Goal for Program.
The Department of Energy has developed a new hydrogen cost goal of $2.00-3.00/gasoline gallon equivalent, or gge, (delivered, untaxed, in 2005 dollars, by 2015). The previous hydrogen cost goal of $1.50/gge, developed in 2002, was based on hydrogen produced from distributed natural gas reforming. The new cost goal is independent of the pathway used to produce and deliver hydrogen and reflects a new methodology that accounts for the energy efficiency of the gasoline hybrid vehicle and the fuel cell vehicle on a cost-per-mile basis.
http://www.hydrogen.energy.gov/pdfs/h2_cost_goal.pdf

DMFCC Develops New Fuel Cartridge.
Direct Methanol Fuel Cell Corporation (DMFCC) has designed a new plastic-based methanol fuel cartridge for direct methanol fuel cells.
http://www.viaspace.com/press_content.asp?id=1026

FuelCell Energy to Modify Fuel Cell to Switch Fuels.
FuelCell Energy, Inc. was selected by Concurrent Technologies Corporation (CTC) to modify its DFC300A fuel cell power plant to run on HD-5-grade propane and switch rapidly between fuels. The system and engineering enhancements will enable the stationary power plant to generate base load electricity even in situations when fuel supplies are threatened due to natural disaster or security issues.
http://www.fce.com/

Air Products Selects FuelCell Energy to Demonstrate HES.
Air Products has awarded a subcontract to FuelCell Energy, Inc., under a United States Department of Energy (DOE) Cooperative Agreement, to evaluate, design and demonstrate a next-generation Hydrogen Energy Station (HES). The HES will build upon FuelCell Energy's ultra-clean Direct FuelCell® (DFC®) power plants and Air Products' advanced gas separation technologies.
http://www.airproducts.com/PressRoom/CompanyNews/Archived/2005/03Aug05.htm

ECD Ovonics Planning Hydrogen Testing Facility in Ohio.
Energy Conversion Devices, Inc. is considering plans to open an Ovonic solid hydrogen testing facility in Akron, Ohio. The testing laboratory will have the capability to test and certify Ovonic metal hydride storage containers for use with portable fuel cell generators, on-board storage of hydrogen for internal combustion engine and fuel cell vehicles, and for solid hydrogen dispensing stations to refill canisters and vehicles, and other stationary uses. The laboratory is expected to employ up to 25 people in the first three years of operation.
http://www.ovonic.com/news_events/5_2_press_releases/20050815.htm

FUEL CELL COMPONENTS

SatCon Receives $1.3 Million PCU Order.
SatCon Technology Corporation has received a new purchase order totaling in excess of $1.3 million for its fuel cell Power Conditioning Units (PCUs). Delivery of the units is scheduled over the next six to twelve months.
http://www.satcon.com

REPORTS/MARKET STUDIES

Fuel Cells 2000 Updates Worldwode Fuel Cell Installation Chart.
Fuel Cells 2000, an activity of the Breakthrough Technologies Institute, has posted an update to its comprehensive Worldwide Fuel Cell Installations chart, increasing the chart to 65 pages of operational

and technical data on worldwide fuel cell installations. The chart is a work in progress and Fuel Cells 2000 welcomes any additions or corrections, including technical data and photographs. http://www.fuelcells.org/info/charts/FCInstallationChart.pdf

Fuel Cells in Distributed Telecom Backup.
Citigroup has published "Switch Signals: Fuel Cells in Distributed Telecom Backup," a report taken from in-depth survey and discussions with more than 50 telecommunications industry contacts to assess the state of fuel cell commercialization as a backup power solution. According to survey results, the primary criteria power purchasers use to judge backup power solutions are cost and reliability. Citigroup estimates show that fuel cells are 32% and 35% less expensive than battery backup power solutions based on a ten- and 15-year useful life and a five-year battery replacement cycle, including energy tax credits. Without the credits, fuel cell life cycle costs are 12% and 18% less expensive on the same bases. The report can be downloaded at https://www.citigroupgeo.com/pdf/SZA34560.pdf.

REQUESTS FOR PROPOSALS

Ohio's Third Frontier Fuel Cell Program Issues Request for Proposals.
The Third Frontier Fuel Cell Program provides grants to companies, not-for-profit organizations, educational institutions, government research institutes, or public body seeking to commercialize new products, manufacturing processes, technologies, or adopting or modifying existing components or systems that can reduce the cost of fuel cell systems or address technical and commercialization barriers. This RFP will award of up to $5 million.
http://thirdfrontier.com/open_rfps.asp

CCEF Accepting Proposals for Operational Demonstration Program.
The Connecticut Clean Energy Fund (CCEF) is accepting proposals for its new $4 million Operational Demonstration Program. CCEF's Operational Demonstration Program will provide up to $500,000 per project for companies that want to establish product viability and a track record of performance for their near-commercial clean energy technologies. The funding will support those goals by helping companies install and test their technologies in real-world operating environments.
http://www.ctcleanenergy.com/funding/operational_demo_program.html

MISCELLANEOUS

Ameren Offers Grants for Fuel Cell Kits.
Ameren Corporation announced the addition of fuel cell kits to its line-up of education programs. The second 2005 application period for Ameren Power Up grants opens today and continues through Oct. 15. For all grant programs, educators must be affiliated with schools that are electric and/or natural gas customers of AmerenCILCO, AmerenCIPS, AmerenIP or AmerenUE to be eligible to apply. Through the Ameren Power Up Fuel Cell Kit Program, Ameren is providing self-contained solar hydrogen fuel cell energy systems – kits that high school science teachers can use to build awareness of renewable energy sources through hands-on experiments – and a curriculum that explains energy generation through renewable resources. For information, go to http://www.ameren.com/education.

Millennium Cell Awarded Phase II Funding.
Millennium Cell Inc. has been awarded Phase II funding to continue its program with the U.S. Air Force's Advanced Power Technology Office (APTO) and the Department of Defense (DoD) Fuel Cell Test and Evaluation Center (FCTec) operated by Concurrent Technologies Corporation (CTC). In the second year of the program, Millennium Cell will develop an advanced solid borohydride fuel module for the 5-kW system that was successfully demonstrated at FCTec during the program's first phase.
http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=MCEL&script=410&layout=-6&item_id=750022

CONFERENCES

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

Grove Fuel Cell Symposium.
Review the latest technological advances and developments in fuel cell applications across all market sectors at the Ninth Grove Fuel Cell Symposium – October 4-6, 2005, in London, United Kingdom. Over 50 expert presentations are supplemented by a major exhibition and fuel cell demonstration area. Book your delegate place and free exhibition tickets now at www.grovefuelcell.com.

Fuel Cell Summit 2005.
Two Conferences in One: SME's: *Manufacturing…Alternative Energy's Future* and CCEF's: *Solutions to Barriers…Finding the Tipping Points* both take place October 23-25, 2005, at the Mohegan Sun Casino in Uncasville, Connecticut. For registration information, please visit http://www.sme.org/aet.

AIChe 2005.
The American Institute of Chemical Engineers is holding its 2005 Annual Meeting and Fall Showcase October 30 – November 4, 2005, at the Cincinnati Convention Center in Cincinnati, Ohio. For details, go to http://www.aiche.org/annual.

CETEX 2005.
The Clean Energy Technology Conference and Exhibition will take place December 8-9, 2005, at the Berliner Congress Center, Berlin Alexanderplatz, Germany. For more information, visit http://www.cetex-germany.com.

NHA Annual Conference/Hydrogen Expo.
The NHA Annual Conference 2006 and the Hydrogen Expo US will take place March 12-14, 2006, at the Convention Center in Long Beach, California. For conference details, please go to http://www.hydrogenconference.org.

SWITCH 2006.
Switch 2006: Powering Future Transport will be held April 27-29, 2006, in Earls Court, London. For information, visit http://www.switchexpo.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.