Fuel Cell Technology Update – October 1, 2002

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

Boeing to Design FC Propulsion System.  
Boeing Company has been awarded a contract by the Pentagon's Defense Advanced Research Projects Agency (DARPA) to design a fuel cell-powered propulsion system for a new unmanned aerial vehicle (UAV). The contract is valued at approximately $300,000.  

Piper to Provide Powertrain, Suspension for Microcab.  
Piper International Design Group will provide the powertrain and suspension design for a new hydrogen-powered fuel cell vehicle called the Microcab. The Microcab is a zero-emission, three-wheeled taxi that can carry two passengers and achieve speeds of up to 30 miles per hour.  
http://www.piperdesign.co.uk

PEEI Opens Facility in Pittsburgh.  
A new Pittsburgh Electric Engines, Inc. (PEEI) fuel cell development and manufacturing facility was recently opened in Derry, PA. PEEI is currently developing a Turbo Fuel Cell Engine (TFCE) primarily intended for transportation applications. The TFCE combines a solid oxide FC with a turbo-alternator and is able to operate on either liquid or gaseous hydrocarbon fuels, including diesel, gasoline, ethanol, natural gas and methanol.

STATIONARY POWER

HARC and Entergy Connect Fuel Cell to TX Grid.  
The Houston Advanced Research Center (HARC) has successfully connected a five-kilowatt (kW) proton exchange membrane (PEM) fuel cell system to the electricity grid in Texas. The unit is the first residential-sized system in Texas to be connected to the power grid.  
http://www.harc.edu/pressroom/02_0903.html
DOD to Install Fuel Cell System.
The Department of Defense Fuel Cell Test and Evaluation Center (FCTec) has purchased and will install a Plug Power 5-kW residential combined heat and power fuel cell system. The system is the first of several different manufacturers' systems that will be purchased and tested by FCTec as part of a DOD project to develop and validate a test protocol for residential fuel cells in cooperation with the National Rural Electric Cooperative Association.

Navy Awards $1.15 Million to Plug Power.
The Navy Renewable Energy Division at NAVAIR China Lake, California, awarded a $1.15 million contract to Plug Power for residential fuel cells. Eight of the fuel cell systems will be installed on the Naval Air Station North Island and Submarine Base San Diego, and another will be installed at China Lake. The systems use natural gas as the source of hydrogen.

Acumentrics and Sumitomo Sign Stock and Study Deal.
Acumentrics Corporation has signed a stock purchase agreement with Tokyo, Japan-based trading house Sumitomo Corporation as well as a deal to conduct a one-year study of Japan's residential and commercial markets for Acumentrics' proprietary solid oxide fuel cells (SOFCs) and line of ruggedized uninterrupted power supply (UPS) products. Under the terms of the stock purchase agreement, Sumitomo has acquired an approximate three percent stake in the company.
http://www.acumentrics.com/sumitomo9-5-02.html

PORTABLE/BACKUP POWER

Smart Fuel Cell Introduces Commercial Product.
Smart Fuel Cell has launched its first commercial product, a portable stand-alone fuel cell fueled with methanol. The system, called SFC 25.2500 R, has a power output of 25 W continuous and up to 80 W peak. The exchangeable 2.5 liter methanol cartridge yields 2500 Watt-hours of electrical energy.
http://www.smartfuelcell.de/en/presse/c020911.html

Virgin Atlantic, Air France to Offer Electric Fuel Chargers.
Electric Fuel Corporation announced that both Virgin Atlantic and Air France will be offering its Instant Power™ 3-in-1 Cellphone Chargers to passengers on flights as of October 2002. The INSTANT POWER 3-in-1 charger kit includes a car adapter, a USB adapter and a replaceable zinc air PowerCartridge for use where no electric power is available. Also included is a model-specific SmartCord for connecting the three power sources to the user's cellphone or PDA.
http://biz.yahoo.com/prnews/020918/nyw118_1.html
http://biz.yahoo.com/prnews/020903/nytu177_1.html
Plug Power Inc. announced the availability of a direct-hydrogen fuel cell system designed to provide extended outage coverage for critical industrial operations. The 5-kilowatt, 48 volt DC, hydrogen-fueled system will support premium power applications. The Long Island Power Authority (LIPA) has received three systems, which are expected to be installed this fall. The systems will be utilized to support uninterruptible power supply requirements for facilities at the U.S. Merchant Marine Academy, a federal facility in Kings Point, N.Y.
http://biz.yahoo.com/prnews/020930/nym080_1.html

Metallic Power Zinc Fuel Cell Provides Backup Power for Cell Site.
One of Metallic Power’s zinc fuel cells successfully provided backup power to a cell site during power interruptions. The device evaluated provided 1.8kW of backup power in a rack-mounted configuration that included a 6kWh fuel tank to supply over three hours of continuous power under full load. The fuel cell was connected to a three-Radio Base Station and operated over varied conditions including cold-start, full discharge, partial discharge, and regeneration.

FUELS/REFORMERS/STORAGE

DOE Selects DTE Energy for Hydrogen Power Park Project.
DOE has selected DTE Energy as its partner in a 3-year hydrogen power park project. Under the contract, DTE Energy will develop, build and operate an integrated hydrogen energy system capable of delivering 15,000 kilowatt-hours of electricity per year.
http://biz.yahoo.com/prnews/020923/dem005_1.html

Hoekloos to Supply Hydrogen Station to GVB.
Hoekloos has signed an agreement with Hydrogen Systems to integrate a Hydrogen Systems "IMET" power water electrolyser into a hydrogen fueling station for installation at the North Amsterdam facilities of GVB, a local public bus transportation company. Beginning next year, GVB will operate three fuel cell-powered buses utilizing the hydrogen fuel as participation in the Clean Urban Transport for Europe (CUTE) project.
http://www.hydrogensystems.com

Ohio to Receive Hydrogen Station.
The Ohio Department of Development’s Office of Energy Efficiency has awarded AltFuel Solutions at 50/50 grant for the first phase of a demonstration hydrogen fueling station project. The new facility will refuel natural gas, hydrogen, and hydrogen fuel cell vehicles, utilizing on-site natural gas. It will include a small stationary fuel cell fueled by excess station hydrogen and, in return, supplying power to the station and local power grid. It also will include rooftop solar panels to supply additional power.
BP, Aral to Build Hydrogen Fueling Station in Germany.
BP will join with German retail company Aral to build a hydrogen fueling station at a DaimlerChrysler automotive factory near Stuttgart. The station will fuel vehicles participating in a demonstration program to begin later this year.

Stuart Energy Achieves Second Milestone, Enters Alliance with Hamilton.
Stuart Energy Systems Corporation has successfully achieved, on schedule, the second of three milestones in its project with Cheung Kong Infrastructure Holdings Limited (CKI) of Hong Kong to develop and supply Hydrogen Back-up Power Systems (H2BPS) for the Hong Kong and Asia Pacific marketplace. The milestone was achieved with the demonstration and initial testing of the alpha prototype H2BPS installed at Stuart Energy's head office in Mississauga, ON. In other news, Stuart Energy and Hamilton Sundstrand Space Systems International, Inc., have entered into a Strategic Alliance Agreement to jointly develop and market integrated hydrogen generation products for vehicles, power generation and industrial uses.
http://biz.yahoo.com/prnews/020925/to101_1.html

QUANTUM Wins Suzuki Contract.
QUANTUM Fuel Systems Technologies Worldwide, Inc., was recently awarded a contract from Suzuki Motor Corporation to develop and supply complete hydrogen fuel storage systems for Suzuki's fuel cell vehicle. The 5,000 psi (350 bar) systems will be designed and tested to meet industry standards in the U.S. (NGV2), Japan (KHK), and Europe (EIHP).

InnovaTek Demonstrates Fuel Processor.
InnovaTek demonstrated its InnovaGen™ fuel processor technology for the U.S. Army, meeting an important milestone in its development program. The company demonstrated an alpha-stage laboratory prototype that converts diesel fuel to hydrogen using a proprietary catalytic process and an advanced separations membrane. The system produces pure hydrogen at a rate of 12 liters per minute, enough to produce 1 kW electrical energy from a fuel cell.

Researchers Produce Hydrogen from Peanut Shells.
A team of researchers from the National Renewable Energy Laboratory, Clark Atlanta University, Georgia Institute of Technology, Scientific Carbons and Enviro-tech have successfully demonstrated the use of biomass from peanut shells to produce hydrogen. NREL and Scientific Carbons filed for patent protection on a new slow-release fertilizer made while producing biomass-based hydrogen and a sequestered carbon.
FUEL CELL COMPONENTS

Avista and 3M Enter MEA Agreement.
Avista Labs announced a strategic supply agreement to purchase membrane electrode assemblies (MEAs) exclusively from 3M for integration into its commercial fuel cell products. 3M will supply MEAs for use in Avista Labs’ 250 and 650 series fuel cell cartridges, which are integral components in the company’s Independence(TM) product line.
http://biz.yahoo.com/prnews/020923/sfm011_1.html

SwRI Opens MEA Pilot Plant.
Southwest Research Institute (SwRI) has opened a pilot plant for the high-volume production of fuel cell electrodes, key components of membrane electrode assemblies (MEAs) and fuel cell systems. The plant was built as part of a $12 million contract, funded by the U.S. Department of Energy, with cost share provided by SwRI, W.L. Gore and Associates, and General Motors Corp.
http://www.swri.org/

Advanced Measurements Awarded SOFC Test Stand Contract.
A multinational fuel cell developer in North Eastern US has issued a contract to Advanced Measurements Inc. to build two SOFC Fuel Cell Test Stands for delivery in fall of 2002.
http://64.69.77.104/generic_frames.asp?content_page=news.htm

Hydrogenics Receives Orders From Japan and China.
Hydrogenics Corporation has received orders for its FCATS test systems from two separate organizations in China, as well as a repeat order from a major automaker in Japan. The Chinese FCATS orders were placed by the Dalian Institute of Chemical Physics (DICP) and the Chinese Academy of Sciences' Shanghai Institute of Organic Chemistry (SIOC).

REPORTS/MARKET STUDIES

The Breakthrough Technologies Institute (BTI) released "Fuel Cells and Hydrogen: The Path Forward," for a coalition of 26 leading fuel cell companies to answer the Congressional call for a national fuel cell and hydrogen strategy. The report details a 10-year, cost-shared program that would require $5.5 billion in federal funds. The report also offers specific recommendations in several program areas, including research and development; demonstration programs; federal purchases; investment in fuel infrastructure; market entry support; removal of barriers; and education and outreach.
http://www.fuelcellpath.org/
Fuel Cells for Large Scale Applications.  
Business Communications Company, Inc. will release a new study, Fuel Cells for Large Scale Applications, which estimates that the North American fuel cell market for large-scale applications is currently valued at about $251 million. The market is expected to increase over the next five years at an AAGR (average annual growth rate) of 20.7% reaching $642 million by 2007.  
http://www.buscom.com/energy/E122.html

Fuel Cells: Applications And Opportunities.  
EscoVale Consultancy Services has released Fuel Cells: Applications And Opportunities, a report examining a wide range of potential markets - from power sources for electronic products, through the transport sector, and across the power plant spectrum. The report has worldwide scope and covers the present through 2025.  

RFA Releases Paper on Ethanol in Fuel Cells.  
The Renewable Fuels Association (RFA) has released Ethanol and Fuel Cells: Converging Paths of Opportunity, a white paper on the potential synergies for ethanol and fuel cells. According to RFA, tests have demonstrated that ethanol is more efficient to reform than gasoline to provide hydrogen for fuel cells.  
http://www.ethanolrfa.org/pr020904.html

MISCELLANEOUS

New Fuel Cell Collaborative Group Formed.  
ALLIED Utility Network (ALLIED) announced the formation of the Fuel Cell Collaborative Group. The goal of the group is to produce flexible, ready-to-install fuel cell systems for both electricity and water production for commercial and industrial applications. ALLIED will facilitate the group in conjunction with Cenergie Corporation, NEETRAC, Georgia Tech Research Institute, Alternative Fuel Systems, Ltd., Fuel Cell Controls, Ltd. and other interested parties and key players.  
http://www.alliedutility.com/fuelcell/index.html

The North of England Inward Investment Agency and the Michigan Economic Development Corporation (MEDC) have partnered to drive new and renewable energy research. The collaboration will accelerate research in new and renewable energy, specifically fuel cells and wind power, by facilitating academic exchange, research and information sharing between respective facilities located in both the North of England and Michigan.  
http://www.onenortheast.co.uk/newscentre/#341

Estonian Government to Fund Fuel Cell R&D.
Estonian Technology Agency (ESTAG) and Elcogen AS signed a contract under which the Estonian government will be funding the development of fuel cell technology. In the first phase, Elcogen will receive a grant in the amount of EUR 218,000 earmarked for co-financing R&D. At present, Elcogen has invested over EUR 300,000 of own funds in the project.

REQUESTS FOR PROPOSALS

DOE to Issue Fuel Cell Solicitation.
DOE has announced it will issue a solicitation for the research and development of stationary and automotive fuel cell technology. The solicitation will include teaming requirements. Subject to the availability of funds, DOE expects to allocate $7 million in FY2003 for the selected projects. Total estimated Government funding for the solicitation is approximately $70 million for the period of performance. The solicitation is expected to be issued in mid-October 2002. [http://www.energy.gov/HQPress/releases02/seppr/pr02193_v.htm]

CONFERENCES/CALL FOR PAPERS

ISAF XIV.

Fuel Cell Seminar.
The 2002 Fuel Cell Seminar will be held November 18-21, 2002, at the Palm Springs Convention Center in Palm Springs, California. For more information, go to [www.gofuelcell.com].

The Shanghai Fuel Cell Vehicle Forum, “Commercializing Fuel Cell Vehicles in China: 21st Century Fuel Cell Vehicle And Components Technology” will be held December 4-5, 2002, in Shanghai, China. For more information, please email senzheng@online.sh.cn.

ACS Symposium.

2nd European PEFC Forum.
The 2nd European Polymer Electrolyte Fuel Cell Forum will be held June 30 – July 4, 2003, at the Kulter- und Kongresszentrum Luzern, in Lucerne, Switzerland. For more information, go to www.efcf.com.

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*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.*