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Headed to Palm Springs for the Fuel Cell Seminar? If so, stop by booth 121 (The U.S. Fuel Cell Council) to pick up some great resources, inquire about membership, fill us in about what your company is up to or just say hello! Pssst…Thursday night, Peabody’s.

TRANSPORTATION APPLICATIONS

Forklifts, Aisle 5.
Whole Foods Market has purchased 61 Plug Power GenDrive™ fuel cell-powered forklifts for use next year in its Landover, Maryland, distribution center. The funding for the fuel cells is part of a $6.1 million award made to GENCO Supply Chain Solutions in April of 2009 by the US Department of Energy (DOE) through the American Recovery and Reinvestment Act. Alliance Material Handling, a Maryland-based Crown lift truck supplier, will supply the 45 class-3 pallet jack and 16 class-2 standup reach trucks. [http://www.plugpower.com/newsroom/pressreleases.aspx?action=details&newsid=304](http://www.plugpower.com/newsroom/pressreleases.aspx?action=details&newsid=304)

Protonex Achieves Record Endurance with UAV.
Protonex Technology Corporation and the Naval Research Laboratory (NRL), through a program sponsored by the Office of Naval Research (ONR), has documented a flight endurance record on the unmanned aerial vehicle (UAV), the Ion Tiger which uses the latest generation Protonex fuel cell. The Ion Tiger UAV flew for over 23 hours, setting an unofficial endurance record for fuel cell powered flight. [http://www.protonex.com/_assets/pressrelease/1f1959ef-7f36-4934-913e-f249e683786b.pdf](http://www.protonex.com/_assets/pressrelease/1f1959ef-7f36-4934-913e-f249e683786b.pdf)

Jadoo Powers UAV.
Jadoo Power’s UAV-100 fuel cell system successfully powered the payload and avionics for a Mako unmanned aerial vehicle (UAV) recently flight-tested by The Office of Navy Research at the U.S. Army Yuma Proving Ground in Arizona. The Mako flew for more than an hour and consumed 8 grams of compressed hydrogen gas. The UAV-100 fuel cell system provided 63 Watts of power to the avionics and to the nose camera and video transmitter payload during the entire flight. [http://www.jadoopower.com/PDF/Press%20Releases/2009_10-13_Mako%20Successful%20Flight.pdf](http://www.jadoopower.com/PDF/Press%20Releases/2009_10-13_Mako%20Successful%20Flight.pdf)

STATIONARY APPLICATIONS

California’s SGIP Extended.
California Governor Arnold Schwarzenegger has signed legislation (SB412) that extends the availability of incentives for clean energy technologies through 2015, including the Self-Generation Incentive Program (SGIP) which provides funds for fuel cells. [http://gov.ca.gov/press-release/13551/](http://gov.ca.gov/press-release/13551/)

FuelCell Energy Installing Unit in Sonoma County.
FuelCell Energy has sold a 1.4 megawatt fuel cell to California’s Sonoma County to supply 100 percent of the baseload electricity for a county jail and county office buildings in Santa Rosa. The fuel cell, to be installed by AirCon Energy of Sacramento, will cost about $9 million. The County of Sonoma expects significant energy cost savings during the first year of operation since the byproduct heat will be recovered and used to replace approximately half the natural gas the County currently purchases to make hot water for space heating, cleaning, and cooking.
Fuel Cell to be Permanent Exhibit at CT Science Center.
The Connecticut Science Center is installing a UTC Power 200-kW fuel cell to light, heat and cool the $165 million facility. Once activated, the science center will be the nation's first museum or science center to rely on a fuel cell for most of its power demand during operating hours, including powering its 150 interactive exhibits, 10 galleries and a 206-seat 3-D movie theater. The science center will also sell the cell's surplus electricity to the power grid.

EBay Bidding on Fuel Cells.
EBay Inc. received final approval to construct and implement a 500 kW fuel cell system (five fuel cells) from Bloom Energy. More details on the project will be coming soon.

The Connecticut Department of Transportation (ConnDOT) will receive $7 million in economic recovery funds to purchase diesel-electric hybrid transit buses and stationary fuel cells for use in Connecticut's statewide bus system. The fuel cells will provide primary and emergency back-up power for the bus maintenance and storage facilities.

Ceramic Fuel Cells Opens Manufacturing Plant.
Ceramic Fuel Cells Limited opened a high volume manufacturing plant for the volume production of solid oxide fuel cell stacks in Germany.

FuelCell Energy Signs Licensing Agreement with POSCO.
FuelCell Energy, Inc. has signed a Licensing Agreement with POSCO Power, allowing POSCO to manufacture fuel cell stack modules from cell and module components provided by FuelCell Energy. These fuel cell modules will be combined with balance-of-plant manufactured in South Korea to complete fuel cell power plants for sale in South Korea.

PORTABLE/BACKUP POWER

b+w Delivers 22 IdaTech Systems to U.S. Army, MIRCOM Deploys 43 in Mexico.
IdaTech’s German OEM partner, b+w Electronic Systems, has successfully delivered 22 ElectraGen™ fuel cell systems to the United States Army in support of the Infrastructure Modernization (IMOD) program. The IMOD program supports the upgrade and modernization of enterprise enabled voice and data networks worldwide for the United States Army. The first ten ElectraGen™ systems were installed in Grafenwoehr, Germany, and the additional 12 systems have been scheduled for deployment to US military sites throughout Germany before the end of 2009. In other IdaTech news, Latin America partner MICROM Electronic SA de CV (MICROM) has deployed 43 of IdaTech’s ElectraGen™ XTRs for Radiomovil DIPSA SA de CV’s (Telcel) cellular network in Mexico. These systems will serve as the primary critical backup power at outdoor telecom sites.
http://www.idatech.com/uploadDocs/b+w_IMOD_FV2.pdf

Plug Power and SFO Enter Supply Agreement for India.
Plug Power Energy India Pvt. Ltd, an affiliate of Plug Power Inc., and SFO Technologies, (A NeST Group Company) have entered a five-year strategic manufacture and supply agreement for the build of Plug Power’s GenSys® fuel cell systems in India. The companies are currently preparing for the production of the first 200 GenSys units sold to WTTIL, the cell tower arm of Tata Teleservices Limited (TTSL), announced in July of this year. Plug Power expects to have all 200 units shipped by the end of March,
2010 and install approximately 1,000 systems throughout India by the end of the same year. The Indian telecommunications market is expected to grow with the approximate addition of 50,000 towers annually over the next three to five years.


PT CONSISTEL Selected as Spiro Fuel Cell Supplier.
PT CONSISTEL Indonesia has been selected by Hutchison CP Telecommunications (HCPT) to deploy 200 Spiro hydrogen fuel cells in Java, Sumatra and Bali region of Indonesia.


SFC Introduces EMILY, EFOY Pro 2200.
SFC Smart Fuel Cell AG has launched its new EMILY 2200 fuel cell for on- and off-vehicle defense applications. As an auxiliary power unit onboard military vehicles, the EMILY 2200 keeps vehicle batteries charged and delivers power for devices ranging from radios and other communication equipment to night-vision goggles, navigation devices and computers. Off-vehicle, the EMILY 2200 provides power for mobile and stationary defense applications. It is being used in unmanned applications as well as a field-based charging station for batteries. One fuel cartridge can power devices for more than 100 hours. SFC also introduced the EFOY Pro 2200, geared off-grid industrial systems such as security cameras, measurement and early warning sensors to traffic control systems.


MICRO FUEL CELLS

Toshiba Producing Dynario Fuel Cell Charger.
Toshiba will launch a limited production run of 3000 units of its new Dynario fuel cell charger. The device can charge two handsets from one refill of methanol.


ICAO Approves Several Changes to Transport Rules.
Thanks to hard work by the U.S. Fuel Cell Council, the International Civil Aviation Organization (ICAO) Dangerous Goods Panel approved several changes favorable to fuel cells and fuels to its Technical Instructions for the Safe Transport of Dangerous Goods by Air. They include: 1) Changes to allow the air shipment of fuel cell vehicles and fuel cell engines consistent with, and equivalent to, the shipping requirements for internal combustion vehicles and engines; 2) Changes to allow the air shipment of fuel cell engines that have been flushed, purged and filled with non-flammable gas as non-dangerous; 3) Changes to allow for flammable liquid fuels, corrosive fuels, liquefied flammable gas fuels, and hydrogen in metal hydride fuel cartridges to be carried in checked baggage by passengers on board passenger aircraft; 4) Changes to allow satellite cartridges to be carried on board and for fuel cell systems using an internal reservoir to be treated as fuel cells, not as fuel cell cartridges; and 5) Changes to allow fuel cell cartridges to be shipped as air cargo in "Limited Quantitative”.

FUELS/REFORMERS/STORAGE

Air Products Opens Hydrogen Station on Long Island, Set to Open 24-hour Station in Germany.
Air Products joined with the Town of Hempstead, the New York State Energy Research Development Authority (NYSERDA), National Grid, and Proton Energy Systems to open Long Island’s first hydrogen fueling station, located at the Conservation and Waterways facility in Point Lookout. Hydrogen for the station will be produced through an electrolysis process that generates hydrogen from water. Air Products is also building the world’s first 24-hour self-service hydrogen fuelling station, which will open at Hürth, Germany in March 2010. Waste hydrogen produced by local chlor alkali plants will be trucked 1.5 km to the station, and supply fuel to buses run by the local council.

FuelCell Energy Awarded $1.5 Million for Hydrogen Separator.
The U.S. Department of Defense's Engineer Research and Development Center - Construction Engineering Research Laboratory (ERDC-CERL) has awarded FuelCell Energy approximately $1.5 million to continue development of its electrochemical hydrogen separator (EHS). The EHS system separates pure hydrogen from gas internally generated in a fuel cell that can be used for industrial and transportation applications.


MATERIALS/COMPONENTS/TESTING

3M and Plug Power Enter Commercial Supply Agreement.
3M and Plug Power Inc. have entered into a commercial supply agreement for 3M membrane electrode assemblies (MEA), to be used as a critical component in Plug Power’s GenSys proprietary proton exchange membrane (PEM) reformate stacks. The continuous run GenSys’ prime power fuel cell systems are being deployed into rural India and will replace diesel generators at remote telecommunication sites. The design of the reformate stack allows customers to realize the economic and environmental benefits of fuel cells, while avoiding the logistics involved in transporting pure hydrogen to their remote cell sites. GenSys reformers Liquefied Petroleum Gas (LPG) into a hydrogen-rich reformate that is converted into electricity in the fuel cell stack. The GenSys reformer design is also proprietary to Plug Power. With minor adjustments, Plug Power’s system can process a variety of hydrocarbon based fuel stocks such as natural gas.


New Material Helps Solid Oxide Fuel Cells.
Researchers at Georgia Institute of Technology have developed a new ceramic material that could help expand the applications for solid oxide fuel cells. Though the long-term durability of the new mixed ion conductor material must still be proven, its development could address two of the most vexing problems facing the solid oxide fuel cells: tolerance of sulfur in fuels and resistance to carbon build-up known as coking. The new material could also allow solid oxide fuel cells to operate at lower temperatures, potentially reducing material and fabrication costs.


REPORTS/MARKET STUDIES

Pira Releases Three New Studies.
Pira International has published three new studies – Developments in Hydrogen Storage, Next Generation Hydrogen Production and Developments in PEM Fuel Cells.


REQUESTS FOR PROPOSALS

Check out the Fuel Cell RFPs blog for more opportunities.

NYSERDA Program Opportunity Notice (PON)
NYSERDA seeks proposals to support the development, demonstration, and commercialization of environmentally preferred power systems and electric energy storage technologies. One round is scheduled under this notice with $5,000,000 available in funding. All, or none, of the available funds may be allocated. Category descriptions are as follows: Category ‘A’ - Early Stage Innovative Product Development Feasibility and Technology Transfer Studies. Category ‘B’ - New Product Development. This includes renewable and other environmentally preferred technologies, including distributed generation (DG), electric energy storage, power quality/reliability components. Category ‘C’ - Demonstration Projects. This includes demonstration of innovative renewable and other environmentally preferred technologies that are past the “proof-of-concept” stage, including distributed generation (DG),
power quality/reliability components, and related technologies that improve performance, demonstrate application opportunities, and lead to the commercialization of products manufactured in New York State. All proposals are due December 10th. For more information, please visit: http://www.nyserda.org/funding/1670pon.asp.

**Missile Defense Agency BAA for Colleges and Universities.**
The Missile Defense Agency issued its Science and Technology Advanced Research (MSTAR) Broad Agency Announcement (BAA). Fuel cells and battery technology are included under the Research Topic of “Physics, Chemistry, and Materials.” The MSTAR program was instituted “to fund relevant advanced research at qualified accredited domestic colleges, universities or institutions of higher learning and to support training of future scientists and engineers in the field of missile defense.” Contracts are expected to be funded at a level between $600,000 and $800,000 for a period of two or three years. https://www.fbo.gov/index?s=opportunity&mode=form&id=c164a22fc06328822d935d6b3396739d&tab=core&cview=0

**MISCELLANEOUS**

**Department of Labor Seeking Input from Fuel Cell Engineers and Technicians.**
The U.S. Department of Labor is seeking help for its Occupational Information Network (O*NET®). The O*NET Program serves employers, human resource professionals, job counselors, and labor market analysts across the country who depend on occupational information to perform their daily work. The network is trying to identify Occupation Experts (OEs) for the occupation of Fuel Cell Engineers and Fuel Cell Technicians. For O*NET data collection purposes, OEs usually have five or more years of experience with an occupation. They may also have experience as a supervisor or trainer as well as the expertise to rate the occupation on skills, tasks, knowledge areas, work context factors, and work activities. Occupation experts will be asked to complete O*NET questionnaires to provide information on their field of expertise. Their contribution to this program will ensure that the occupational information provided in the O*NET database is current and accurate. For more information, please Ron Wandscher, Business Liaison, RTI International at rwandscher@onet.rti.org. You can also call (877) 233-7348 ext 108.

**Sanjay Diesels Seeks Fuel Cell Partner.**
Sanjay Diesels an ISO 9000 certified Diesel Generating Sets manufacturer with a sales turnover of US$12 million. The company seeks partnership with fuel cell systems integrators for marketing of products in India. Please email info@dgsets.com if interested.

**CONFERENCES**

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

**Fuel Cells Durability & Performance.**

**Piero Lunghi Fuel Cell Conference.**
The Third European Fuel Cell Technology and Applications Conference (Piero Lunghi Conference) will be held in Rome, Italy, December 15-18, 2009. For more information, go to http://www.asmeconferences.org/EFC09/.

**FC EXPO 2010.**

**Mountain States Hydrogen Business Council Conference.**

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/.

Fuel cells generate electricity without combustion by harnessing the energy released when hydrogen and oxygen are chemically combined. Fuel Cells 2000 is an independent, nonprofit activity dedicated to the commercialization of fuel cell technologies.