
Fuel Cells 2000 is gearing up to launch its website redesign and database upgrades and needs some help from fuel cell manufacturers. For the website, we’re looking for estimated kilowatt hours generated per year (for U.S.) for a cool new counter as well as new images to incorporate throughout the site. For our database, please take a look at our State Fuel Cell and Hydrogen Database (http://www.fuelcells.org/dbs/) and/or the Worldwide Fuel Cell Installation Database (http://www.fuelcells.org/db/index.php) to make sure we have all of your companies’ installations and send us any missing information, images or updates as to whether they are active, decommissioned or still planned. Please send any updates to Jennifer Gangi at jennifer@fuelcells.org. Stay tuned for launch, hopefully by the end of the month! Here’s a sneak peak!

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TRANSPORTATION APPLICATIONS

Swatch Knows it’s Fuel Cell Time.
Swatch Group Ltd., the Swiss watch company (of which I wore many in high school), is testing a hydrogen fuel-cell powered car in Switzerland with hopes to bring it to market within the next three to four years. The car, known as the ELV2, has a 40kW electric motor and a 12kWh lithium-ion battery powered by a 25kW hydrogen fuel cell and is being built in a joint venture between Swatch's subsidiary Belenos Clean Power AG and the Paul Scherrer Institute.

Proton Power Integrates Fuel Cell Range Extender into Commercial Truck.
Proton Power Systems plc announced the successful first full integration of its fuel cell power and range extender system (REX) into a Smith Electric Vehicle’s commercial Newton Truck. After road testing, Smith and Proton will commercially launch the REX system in the Newton truck, and aims to sell the first 20 vehicles to customers in the German market around 2012-2013.

DESTA Project Aims for SOFC APU.
The Demonstration of first European SOFC Truck APU (DESTA) consortium research project has been launched with the goal of developing a European solid oxide fuel cell (SOFC) auxiliary power unit (APU) for heavy duty trucks. The intention is to establish a 100% European value chain for the APU with a demonstration of the unit slated for 2014, with production runs to follow shortly after that. Consortium members include J. Eberspächer GmbH, AVL List GmbH, Volvo, Topsoe Fuel Cell and Forschungszentrum Jülich.

UK Ferry Christened the Hydrogenesis.
Adam Sidnell, a student at the Redland Green School in Bristol, UK, won a recent contest to name the UK’s first hydrogen fuel cell-powered ferry. The newly-named 12-passenger Hydrogenesis is being built by Bristol Hydrogen Boats, a consortium formed between No 7 Boat Trips, the Bristol Packet, and Auriga Energy Ltd. Air Products will provide the hydrogen and refueling infrastructure for the demonstration project.
**STATIONARY APPLICATIONS**

**FuelCell Energy Signs MOUs with POSCO and Air Products.**
FuelCell Energy, Inc. has signed a Memorandum of Understanding (MOU) with its South Korean partner, POSCO Energy (formally POSCO Power) that includes a 120 megawatt (MW) multi-year order commitment, acceleration of deliveries under the existing 70 MW order, and a license commitment which provides for the manufacturing of Direct FuelCell® (DFC®) components in South Korea by October 2014. FuelCell Energy also is joining forces with Air Products to work toward the market development of stationary DFC® power plants that simultaneously produce hydrogen, ultra-clean electricity and usable high quality heat. Target markets for these tri-generation stationary fuel cell power plants include industrial hydrogen users as well as vehicle fueling applications.


**PCC to Install UTC Power Fuel Cell.**
Pasadena City College (PCC) in California, has entered into an agreement to acquire a UTC Power fuel cell to install around the Boiler Room to provide power as well heat the swimming pool. The fuel cell is expected to be installed by the end of the year.

http://www.pcccourier.com/news/fuel-cell-to-make-campus-greener-1.2832003#.T3nJQmEgexI

**PORTABLE/BACKUP POWER**

**MICRO FUEL CELLS**

**MILITARY APPLICATIONS**

**SFC Energy Delivers 50 Units to U.S. Army, Launches New Defense Site.**
SFC Energy AG has delivered 50 FC 100 lightweight alternative power sources (LAPS) to the U.S. Army Operational Test Command (OTC) at Fort Hood, Texas. Designed as an alternative to current use of deep-cycle marine batteries, the FC 100 fuel cell generator is self-contained and operates autonomously to provide sustained power on a continuous basis in support of operational test instrumentation. Initially, they will be the power source used by the U.S. Army Operational Test Command when testing new equipment during the Network Integration Evaluation at White Sands Missile Range, New Mexico. SFC also launched a new military-focused website to showcase its products - http://www.sfc-defense.com/


**Look Out Jaws, Here Comes Robojelly!**
Researchers at the University of Texas at Dallas and Virginia Tech, thanks to a grant from the U.S. Office of Naval Research, have developed a hydrogen-powered robotic jellyfish nicknamed the Robojelly. The robot is powered by heat-producing chemical reactions between the oxygen and hydrogen in water and the platinum on its surface. The heat from the reactions is transferred to the artificial muscles of the robot, and reshapes them. This means Robojelly can regenerate fuel from its surroundings rather than running off an external power source or batteries.


**FUELS/REFORMERS/STORAGE**

**Honda Sites Solar Hydrogen Station at Saitama Prefectural Office, Equips FCX with Outlet.**
Honda Motor Co., Ltd. unveiled a Solar Hydrogen Station on the grounds of the Saitama Prefectural Office as part of the Electric Vehicle Testing Program for Honda’s next-generation personal mobility products with Saitama Prefecture, Honda, and Iwatani. Honda also equipped the FCX Clarity fuel cell electric vehicle with an outlet to function as a 9kW power source to serve as a zero-emission mobile
electric generator. It is reported that with this outlet, the FCX Clarity can supply enough power to sustain a typical household for six days.


**Danish Government Unveils Energy Plan 2020.**
The Danish Government has announced a new Energy Plan 2020 that includes establishment of a range of initiatives for hydrogen infrastructure and FCEVs, including the continuation of existing tax exemptions for FCEVs through 2015.


**Horizon Joins With ITM Power.**
Horizon Fuel Cell Technologies has entered in a commercial alliance with ITM Power, to incorporate ITM Power's small electrolyzer with its fuel cell products. The agreement gives Horizon exclusive rights to sell ITM products in the ASEAN nations plus India and Pakistan as well in the U.S.


**AC Transit Station Dedication.**
Next Tuesday, April 10, AC Transit will dedicate its Emeryville, California hydrogen station, fleet of new fuel cell buses, and on-site power generation, the latest stop in the HyRoad. Mary Nichols, Air Resources Board Chairman and Jack Broadbent, Chief Executive Officer/Air Pollution Control Officer for the Bay Area Air Quality Management District are slated to speak at the event.

http://rsvphyroad.eventbrite.com/

**MATERIALS/COMPONENTS/TESTING**

**DOE Awards $5 Million to Two Cost Reduction Projects.**
The Department of Energy (DOE) has awarded more than $5 million for two projects to lower the cost of advanced fuel cell systems by developing and engineering cost-effective, durable, and highly efficient fuel cell components. The 3M Company, in collaboration with General Motors, Lawrence Berkeley National Laboratory, and Michigan Technological University, received up to $3.1 million to develop a durable, low-cost, and high-performance membrane electrode assembly for use in mass-produced fuel cell electric vehicles. The Eaton Corporation, Kettering University, Ballard Power Systems, and Electricore, Inc., was awarded up to $2.1 million to leverage advanced blower technology to develop and demonstrate an efficient and low-cost fuel cell air management system.

http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=704

**Canadian Consortium Aims to Reduce Platinum.**
Six Canadian companies and 20 top fuel cell scientists and engineers from academia and government are working together to reduce the platinum used in proton exchange membrane (PEM) fuel cells for automotive applications. The six companies involved are the Automotive Fuel Cell Corporation (AFCC), Ballard Power Systems, Hyteon Inc., BIC Inc., GM Canada, and Hydrogenics. This CAD$8.1 million (US$8.15 million) project is primarily being funded by the Automotive Partnership Canada (APC), a partnership between five federal agencies - the Natural Sciences and Engineering Research Council of Canada (NSERC); National Research Council (NRC); Canada Foundation for Innovation (CFI); Social Sciences and Humanities Research Council of Canada (SSHRC); Canada Excellence Research Chairs (CERC).

http://www.apc-pac.ca/About-Renseignements/projects-projets/Cells-Combustible_eng.asp

**REPORTS/MARKET STUDIES**

**Port of the Future.**
Fuel Cells 2000 has published "Port of the Future", a new case study that examines the potential for fuel cells for various applications at a port, including highlights of current projects at the Ports of Long Beach, Los Angeles and Helsinki.

http://www.fuelcells.org/PortoftheFuture.pdf
REQUESTS FOR PROPOSALS

Zero Emission Cargo Transport.
DOE has made $10 million available this year to demonstrate and deploy cost-effective zero emission electric cargo transport systems and collect detailed performance and cost data to analyze the benefits and viability of this approach to freight transportation. This funding opportunity is open to local governments and private companies, with federal funds matched in a 50% cost share.

Hydrogen Fueling and Components.
DOE announced $2 million to collect and analyze performance data for hydrogen fueling stations and advanced refueling components that could substantially reduce the cost of hydrogen. These include, but are not limited to, advanced compressor designs; hydrogen delivery tanks; and advanced electrolyzers.
http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=695

DOE SBIR/STTR.
DOE announced the Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) Phase I Release 3 technical topics which include transportation fuel cell systems and hydrogen storage research projects. Key objectives are to reduce fuel cell system cost to $30/kW (equivalent to the cost of a gasoline internal combustion engine) and improve durability to 5,000 hours (equivalent to 150,000 miles of driving) for automotive fuel cell systems by 2017. Additionally, the program aims to meet the hydrogen fuel threshold cost of $2–$4/gallon gasoline equivalent (gge) by 2020.

Army Going Green.
The Army issued a draft request for proposals to purchase $7 billion worth of power over a 30-year period generated from alternative energy sources, including solar, wind, geothermal and biomass.
http://www.army.mil/article/75960/Army_to_partner_with_industry_for_up_to__7_billion_in_renewable_energy_projects/
https://www.fbo.gov/index?s=opportunity&mode=form&id=6af3d8417865b78eff12c717e293ea0f&tab=core&cview=1

H-Prize Feedback.
DOE seeks feedback from interested parties on H-Prize Competition topics that will incentivize innovative advances in the field of hydrogen energy. Areas of interest for topics include hydrogen production, distribution, and utilization.
https://www.fedconnect.net/FedConnect/?doc=DE-FOA-0000680&agency=DOE

MISCELLANEOUS

Patents for Sale!
Phil-Lu Incorporated has two patents for sale – one for an on-demand sodium borohydride hydrogen generator and the other for a low-cost fuel cell. You can see the patents by searching http://patft.uspto.gov/netahtml/PTO/srchnum.htm. The fuel cell patent is No. 6,998,188 and the hydrogen generator patent is No. 7,691,527. If interested, contact Phil-Lu Incorporated at Philluinc@aol.com.

CONFERENCES

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

Hannover Messe 2012.
The 18th Group Exhibit Hydrogen + Fuel Cells - HANNOVER MESSE 2012 will take place April 23-27, 2012, in Hanover, Germany. For information and a free visitor ticket, please go to http://www.hannovermesse.de/home?open=registerTicket&code=Rf3h8d47p2wnw.
ACT Expo.
The 2012 ACT “Alternative Clean Transportation” Expo will take place May 15-17, 2012, at the Long Beach Convention Center in Long Beach, California. For conference details, please go to http://www.actexpo.com/.

WHEC 2012.

Hybrid Small Fuel Cells 2012.

Washington Fuel Cell Summit.

EmHyTeC2012.
The Euro-Mediterranean Hydrogen Technologies Conference 2012 (EmHyTEC2012) will be held September 11-14, 2012, in Hammamet, Tunisia. For details, please go to http://www.etrera.eu/etrera/.

Total Energy USA.
Total Energy USA will be held November 27-29, 2012, at the George R. Brown Convention Center in Houston, Texas. For more information, please go to http://totalenergyusa.com/.

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*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.*