
STOP!!! Before you get all cozy and settle down with this month’s Fuel Cell Technology Update, please take two seconds to help restore the proposed Department of Energy funding cuts, which would basically eliminate the hydrogen program and reduce funding for fuel cells.

http://capwiz.com/fuelcells/home/ all you need to do is click on the Action Alert, enter your zip code and send. So easy! If you are involved in the fuel cell industry, working at a company or doing research at a university, you can edit the ext to include that in your letter. We’ve also pulled together a few resources that can help you craft a more comprehensive and targeted letter, but even sending our suggested text as it is written will help. This is a great way to mobilize friends and family, as well as others in the industry, so please forward to everyone you know. There are more than 12,000 subscribers to this newsletter so if everyone who lives in U.S. sends one, then gets a few more people to send one, and so on and so on – we could really make an impact. If you live outside the U.S., please forward to contacts here. This grass roots support will help make the case to Congress that hydrogen and fuel cells are critical for America to meet its energy independence, environmental protection and economic development goals. WE NEED YOUR HELP!!!!

Ok, on with the show…

To unsubscribe to this newsletter, please see the end of this message.

TRANSPORTATION APPLICATIONS

Hydrogen Road Tour Showcasing Vehicles Along West Coast.
A caravan of 12 fuel cell vehicles are traveling nearly 1,700 miles through three states and two countries, visiting 28 communities in California, Oregon, Washington and British Columbia. Take a look at the tour’s blog at http://www.hydrogenroadtour.com to track the trip and post a comment of support!

Hydrogenics Putting Buses on the Road in Europe.
Two Hydrogenics’ fuel cell powered hybrid MidiBuses have now been put into operation in Germany, bringing the total number to ten. The buses were purchased by Vestische Strassenbahnen GmbH, a regional urban transit authority located in Herten, Germany. In addition, a larger Hydrogenics fuel cell bus, double the size of the MidiBus with a 40 passenger capacity, will be commissioned this month in Gladbeck, Germany as part of the Rampini Fuel Cell bus project. Additional models are expected to be ready for procurement after testing is complete.

Proton and Skoda Electric Present Triple Hybrid Bus.
Proton Motor Fuel Cell GmbH and Skoda Electric presented the world’s first triple-hybrid fuel cell passenger bus. The new vehicle is the product of a cooperation agreement between Skoda Electric, UJV Nuclear Research Institute Rez plc and Proton Motor. The hybrid system incorporates a 50-kW fuel cell system, batteries and ultracapacitors.

Empa and PSI Develop Hydrogen Street Cleaner.
Empa and the Paul Scherrer Institute (PSI) have, with Bucher Schoerling, Proton Motor, BRUSA Elektronik AG und Messer Schweiz, developed a hydrogen powered municipal street cleaning vehicle, the
"Bucher CityCat H2". For the next 18 months it will be tested as part of the “hy.muve” (hydrogen-driven municipal vehicle) project.
http://www.sciencedaily.com/releases/2009/05/090518103335.htm

**NedStack to Deliver Fuel Cell for Prawn Trawler.**
NedStack will deliver a hydrogen fuel cell system for an Australian prawn trawler that will be operational in 2010. The propulsion of the prawn trawler will consist of a hybrid drive, consisting of a 30-kW fuel cell system combined with batteries. The trawler is owned by Nalok Enterprises P/L.
http://www.nedstack.com/company.html

**Adaptive Materials Completes 12-hour Test Drive of UGV.**
Adaptive Materials recently completed a 64-kilometer (40 mile), 12-hour test drive of an unmanned ground vehicle (UGV) at Camp Grayling in Grayling, Michigan. The iRobot Scout, which combines a 150-watt Adaptive Materials fuel cell and battery power system, held a consistent speed of 5 kilometers an hour throughout the demonstration. In addition to powering the UGV for a record distance, the fuel cell also powered an on-board camera and computer that reported speed, GPS and other critical data. The Adaptive Materials fuel cell consumed three 8-ounce canisters of store-bought propane during the 12-hour demonstration. A typical UGV battery pack offers about 40 minutes of continuous power in similar conditions.

**Protonex Receives Air Force Contract for UAV.**
Protonex Technology Corporation has received a $265,000 contract from the U.S. Air Force Research Laboratory (AFRL) for advanced development of high performance fuel cell systems for small unmanned aerial vehicles (UAVs). Under the terms of the contract, Protonex will integrate a miniaturized high performance fuel cell system into development partner AeroVironment's "Raven" UAV.
http://www.protonex.com/_assets/pressrelease/69e58a7c-369d-41f0-bc4f-37cf40c47d98.pdf

**EnerDel to Provide Batteries for AC Transit Fuel Cell Buses.**
The Alameda-Contra Costa Transit District (AC Transit) has signed a contract with EnerDel to produce batteries for the new, next-generation, hybrid-electric fuel cell buses it ordered. The battery system is an integral part of the zero-emission fuel cell bus, capturing energy from regenerative braking and improving fuel economy and efficiency. Twelve of the buses, which are currently in production, will be the backbone of AC Transit's fuel cell fleet and are to be used by a consortium of Bay Area transit operators in the California Air Resources Board's only Advanced Zero-Emission Bus Demonstration program. The other four buses are being purchased by UTC Power and will be operated by various transit agencies under the Federal Transit Administration's National Fuel Cell Bus Program.
http://phx.corporate-ir.net/phoenix.zhtml?c=215152&p=irol-newsArticle&ID=1292646&highlight=

**STATIONARY APPLICATIONS**

**Ballard to Deliver 1 MW System to FirstEnergy.**
Ballard Power Systems has signed a supply agreement with FirstEnergy Corp. to deliver a 1-megawatt (MW) distributed power generation solution for use in a utility load management demonstration project. The project is designed to test the FCvelocity™ fuel cell system to provide peaking capacity and load management over a three-year period. Initial plans call for the trailer-mounted unit to be delivered to Ohio in December 2009.
http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1285370&highlight=

**Ballard Discontinuing EBARA Ballard.**
In other Ballard news, the company announced intentions to discontinue operations of EBARA Ballard Corporation. EBARA Ballard Corporation is a joint venture with EBARA Corporation and is focused on the development, manufacture, sale, and servicing of stationary power systems for the residential cogeneration market in Japan.
http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1291866&highlight=
**PORTABLE/BACKUP POWER**

**MICRO FUEL CELLS**

**FUELS/REFORMERS/STORAGE**

**SFO Set to Open Hydrogen Station in 2010.**
San Francisco International Airport will open a hydrogen fueling station in 2010, designed and installed by Linde North America. The station will be one of the stops along California’s growing Hydrogen Highway and will also be used to fuel a fleet of SFO’s shuttle buses as well as the demonstration of San Francisco Municipal Transportation Authority’s hybrid transit bus which uses hydrogen fuel cell battery and low sulfur biodiesel technology.


**Linde Develops Sustainable Hydrogen Production Process.**
Hydromotive GmbH, a subsidiary of The Linde Group has developed a process for sustainable production of hydrogen from biogenic raw materials and will build a demonstration plant in mid-2009 at its chemical site in Leuna, Germany. The plant, which will reprocess, pyrolyze and reform raw glycerine, will open in mid-2010, and will produce a hydrogen-rich gas, which will be fed into the existing Leuna II hydrogen plant for the purification and liquefaction of the hydrogen.


**P+E Ships Hydrogen Purifiers to Middle East.**
Power+Energy Inc. (P+E) has shipped two high capacity micro-channel hydrogen purifiers to a customer located in the Middle East. The PE91370S units have the capacity to purify 2,900 cubic feet per hour (82 cubic meters per hour) of hydrogen at standard operating conditions.


**MATERIALS/COMPONENTS/TESTING**

**Virginia Tech Researcher Develops Glass-based Seal for SOFCs.**
Peizhen (Kathy) Lu, assistant professor of materials science and engineering at Virginia Tech, has invented a new glass that can be used to seal solid oxide fuel cell (SOFC) modules and the stack. The self-healing seal glass will provide strength and long-term stability to the stack.


**Conitech Develops Hose System for Fuel Cell Vehicles.**
Conitec developed a new cooling-circuit hose system specially designed for fuel cell vehicles.


**REPORTS/MARKET STUDIES**

**2008 CA2Net Year End Report**
California Hydrogen Highway Network (CaH2Net) program’s Year End Report to the California Legislature highlights the activities that took place in 2008 that support hydrogen fueling infrastructure and hydrogen vehicle deployment.


**REQUESTS FOR PROPOSALS**

**NRL BAA.**
The Naval Research Laboratory (NRL) has issued an NRL-Wide Broad Agency Announcement (BAA) which covers a wide variety of topics, including Power Source Materials and Systems. Within that topic, NRL seeks proposals for the improvement of power sources for small military systems, “particularly fuel cells and batteries.”
https://www.fbo.gov/index?s=opportunity&mode=form&id=a82d6da282bb58f87a0acd25f1344e55&tab=core&cview=1

MISCELLANEOUS

Proton Signs Agreement with Deutsche Mechatronics.
Proton Motor Fuel Cell GmbH and Deutsche Mechatronics GmbH signed a collaboration framework agreement to enable volume production of fuel cell systems in the next five years, gradually increasing production to up to 5000 units per year.

FuelCellEurope and VDMA Enter MoU.
FuelCellEurope and VDMA Fuel Cells signed a Memorandum of Understanding (MoU) to foster cooperation between the organizations and contribute to the acceleration of the commercialization of fuel cell technologies in Germany and Europe as a whole through joint actions such as networking and lobbying for fuel cells.
http://www.fuelcelleurope.org/index.php?m=6&sm=27&newsId=67

CONFERENCES

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

Fifth International Hydrail Conference.
The Fifth International Hydrail Conference will be held June 11-12, 2009, at the Charlotte Research Institute in Charlotte, North Carolina. For more information, please go to http://www.hydrail.org/.

Eleventh Grove Fuel Cell Symposium.

Remote 2009.

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.

Ok, now back to sending the Action Alert link (http://capwiz.com/fuelcells/home/) to everyone you know!

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.