

news from **FUEL CELLS 2000**

Fuel Cells 2000's Fuel Cell Technology Update – December 2009

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TRANSPORTATION APPLICATIONS

Coca-Cola Leasing Nissan X-TRAIL.

Nissan North America, Inc. (NNA) is leasing an X-TRAIL fuel cell vehicle (FCV) to Sacramento Coca-Cola Bottling Co., Inc., its first commercial FCV lease in North America. The X-TRAIL FCV is being used by the Coca-Cola for sales calls and public events in the Sacramento area in promotion of its Coca-Cola Zero® soft drink for one year, with an option for two additional years when the lease is up.

<http://www.nissan-global.com/EN/index.html>

PATH Issues Joint Statement, Parade of Fuel Cell Vehicles Kick off COP15.

The Partnership for Advancing the Transition to Hydrogen (PATH), a coalition of 16 associations from around the world, issued a joint statement to underscore how hydrogen technologies can help to curb global greenhouse gas emissions. The statement, addressed to the Executive Secretary of the United Nations Framework on Climate Change, Yvo de Boer, points out many significant benefits to the environment and other areas including the elimination of 80% of the emissions from light duty vehicles, according to studies by Japan, the European Union and United States. To coincide with the statement, and the COP15 UN Climate Change Convention, a parade of 14 hydrogen and fuel cell vehicles drove across the bridge between Malmö, Sweden and Copenhagen, Denmark. The parade started at the hydrogen refueling station in central Malmö, stopped at the recently-inaugurated Copenhagen refueling station, and finished at the Danish Parliament building. At the COP15, the vehicles will be used to shuttle delegates around Copenhagen. Copenhagen recently received eight new hydrogen-powered vehicles, comprising two working vehicles and six cars.

<http://hpath.org/resources/COP15PressRelease.htm>

<http://www.hydrogenlink.net/eng/news-copenhagen-hydrogen-parade-30-11-09.asp>

http://www.hydrogenlink.net/copenhagen/CPH_hydrogen_PR_121109.pdf

University of Delaware Receives Second Fuel Cell Bus, Shuttles Important Passengers.

The University of Delaware's newest bus, a 22-foot, 22-seat hydrogen fuel cell bus carried some very important riders around downtown Wilmington - U.S. Sen. Thomas R. Carper (D-Del.), U.S. Rep. Michael N. Castle (R-Del.) and Wilmington Mayor James Baker. The lawmakers rode the bus and discussed various options for transport in the region.

<http://www.udel.edu/udaily/2010/nov/bus111609.html>

SFC and Jayco to Study North American RV Potential.

SFC Smart Fuel Cell and Jayco Inc., the largest privately-held manufacturer of recreational vehicles in North America, have established a joint research and market development alliance to study the feasibility of the utilization of fuel cell technology in North American recreation vehicles. In the past months, Jayco has tested the EFOY product series for a new lightweight, low energy consumption series of recreational vehicles.

<http://www.sfc.com/en/sfc-press-release/11114-jayco-sfc-schliessen-buendnis-zur-marktforschung-fuer-brennstoffzellen-in-reisemobilen-auf-der-rvia.html>

First Marine Solid Oxide Fuel Cell Test to Take Place Later this Year.

Wallenius Lines of Sweden plans to test the first solid oxide fuel cell in a marine environment in late 2009. Wallenius will test a 20kW fuel cell on the Undine, a car carrier, with plans to follow with a 250 kW fuel

cell, which would be large enough to generate half of the vessel's electricity demand when in port. Hydrogen to power the fuel cell is generated onboard by reforming either methanol, liquefied natural gas or biogas. The fuel cell is being provided by Wartsila, also one of the world's largest marine engine suppliers. Wartsila is chairing a European Union project to develop a marine fuel cell which can run on biofuels.

<http://www.h2journal.com/displaynews.php?NewsID=324>

STATIONARY APPLICATIONS

Ceres Power Signs Agreement for Irish Residential Market.

Ceres Power has signed an agreement with Bord Gáis Éireann (BGE) for residential combined heat and power (CHP) products operating on natural gas for the Irish market (including the Republic of Ireland and Northern Ireland). Under the terms of the Agreement, BGE will pay Ceres £1.6 million (US\$2.6 million) in milestone payments during the development and trialing of the CHP including an up-front payment of £1 Million (US\$1.6 million). In addition, BGE has agreed to place a call-off order for 16,000 CHP products in aggregate over a four-year period for the Irish market, conditional upon successful completion of the Initial Phase and agreement of standard commercial terms, including the price, for the supply of CHP products. Subject to BGE meeting minimum order volumes, Ceres has agreed to sell the CHP product to BGE for the Irish market on an exclusive basis for a four year period anticipated to begin in early 2012.

<http://www.cerespower.com/store/files/119-BGE%20RNS%20FINAL.docx.pdf>

PORTABLE/BACKUP POWER

Protonex Receives \$1 Million to Build SOFCs for Army.

Protonex Technology Corporation has received a contract award of up to \$1.0 million, through the University of South Carolina (USC) Research Foundation and WinTec Arrowmaker, to build, test and deliver solid oxide fuel cell (SOFC) power systems to the U.S. Army. Under the terms of this 12-month contract, Protonex will continue to develop a fully integrated liquid fuel generator system and is expected to deliver multiple liquid-fuelled SOFC power systems to the Army for further testing and evaluation.

http://www.protonex.com/_assets/pressrelease/77b532ca-2d62-4340-9716-66c13d6940b8.pdf

IdaTech, Ballard Terminate Supply Agreement with ACME, Enter Distribution Agreement.

The supply agreement between IdaTech, ACME Group (ACME) and Ballard Power Systems Inc. signed in October 2008 has been terminated. To replace that agreement, IdaTech and ACME have entered into a Distribution Agreement for ElectraGen™ backup power products for the Indian telecom market. The agreement also calls for the large scale deployment of a natural gas fuel cell system that incorporates the Ballard liquid cooled FCgen™ 1300 stack.

<http://www.idatech.com/uploadDocs/ACME%20Contract%20Update%20111609.pdf>

MICRO FUEL CELLS

VIASPACE Receives Patent for Micro Fuel Cells.

VIASPACE Inc. has been awarded a patent for a new micro fuel cell technology under U.S. Patent Number 7,585,577 "Monopolar Fuel Cell Stack Coupled Together Without Use of Top or Bottom Cover Plates or Tie Rods." The patent was issued to Caltech, which licensed it exclusively to VIASPACE's subsidiary Direct Methanol Fuel Cell Corporation (DMFCC).

http://www.viaspace.com/press_article.php?id=1285

FUELS/REFORMERS/STORAGE

Denmark Opens Hydrogen Station in Copenhagen, Provides Full Financing for Hostebro Station.

The City of Copenhagen opened its first hydrogen filling station to fuel the city's eight new hydrogen-powered vehicles. Denmark is also providing the full financing on €5 million (US\$7.5 million) for R&D and demonstration of a 700 bar hydrogen refueling station and fuel cell vehicles in the city of Holstebro.

The new 700 bar station will be opened in late 2010 and will be owned and operated by the local energy company Vestforsyning and hydrogen will be supplied from an existing central electrolysis production plant.

http://www.hydrogenlink.net/copenhagen/CPH_hydrogen_PR_121109.pdf

http://www.hydrogenlink.net/holstebro/HSB_hydrogen_PR_261109.pdf

UND to Expand Hydrogen Laboratory.

The University of North Dakota's Energy and Environmental Research Center is set to embark on a \$7 million project to expand its hydrogen laboratory. The funding for the expansion comes from the U.S. Department of Energy.

<http://www.dtnprogressivefarmer.com/dtnag/view/blog/getBlog.do?blogHandle=inothermedia&blogEntryId=8a82c0bc25047911012509125a080047>

Proton Energy Launches New Scholarship Program.

Proton Energy Systems is launching a \$1 million scholarship program for high school seniors who demonstrate outstanding achievement, excellence and promise in the field of science or technology, and who plan to pursue higher education in this field. The Proton Energy Scholarship is supported and funded by Tom Sullivan, owner of Proton Energy and founder of the national chain Lumber Liquidators.

The scholarship will award four-year undergraduate scholarship prizes with a total value of up to \$100,000 each. Honorable Mentions, Proton Energy Achievers, will be awarded \$500 prizes.

http://www.protonenergy.com/backend/arc_contenido/archivo136.pdf

MATERIALS/COMPONENTS/TESTING

FuelCon Introduces New Testing Product.

FuelCon introduced a new testing product, the "TrueXessory-PCM Proton Conductivity Measurement," for the development of more efficient fuel cell membranes. The new product allows highly reproducible in-plane measurements of the proton conductivity of PEM and DMFC membranes under defined humidification and temperatures up to 200°C.

[http://www.fuelcon.com/cms/pressemitteilungen_details.html?&L=1&tx_ttnews\[tt_news\]=243&tx_ttnews\[backPid\]=8&cHash=f652fbfe25](http://www.fuelcon.com/cms/pressemitteilungen_details.html?&L=1&tx_ttnews[tt_news]=243&tx_ttnews[backPid]=8&cHash=f652fbfe25)

REPORTS/MARKET STUDIES

REQUESTS FOR PROPOSALS

Check out the [Fuel Cell RFPs](#) blog for more opportunities.

PEM Backup Power.

The Construction Engineering Research Laboratory (CERL) of the U.S. Army Corps of Engineers Engineer Research and Development Center (ERDC) has issued a Broad Agency Announcement (BAA) for the demonstration of domestically-produced PEM fuel cells for backup power at federal facilities. A complete listing of the twelve host sites is available in the solicitation. Maximum per-project funding is not specified, but the BAA states contracts will be awarded on a firm fixed-price basis, and that the awards are subject to the availability of funds. Initial pre-proposals are due by December 30, 2009.

https://www.fbo.gov/index?s=opportunity&mode=form&id=d3d6548f25ac7d4c604557c711ffd065&tab=core&_cview=1

RFI on Requirements for Fuel Storage Subsystems.

The U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) has issued a Request for Information (RFI) seeking input from prospective fuel cell system users, fuel cell component and system suppliers and other stakeholders on performance and cost requirements for fuel storage subsystems for near-term, early market fuel cell applications (e.g., for mobile applications such as forklifts, stationary back-up power, portable power, etc). This RFI is intended to be "fuel neutral" with the

focus on defining the fuel storage needs and requirements for early market fuel cell applications to facilitate successful market transformation in a competitive environment. This information will be used by DOE in a preliminary assessment and ultimate determination of the storage system performance requirements. The deadline for responses is December 15, 2009. The RFI can be found at http://www1.eere.energy.gov/hydrogenandfuelcells/news_detail.html?news_id=15569.

MISCELLANEOUS

BASF to Concentrate MEA Efforts in NJ.

BASF is realigning its fuel cell business and concentrating its production of high-temperature membrane electrode assemblies (MEAs) in Somerset, New Jersey. Operational activities at the BASF Fuel Cell GmbH site in Frankfurt, Germany, will be discontinued effective December 31, 2009. BASF plans to close the Frankfurt site in the course of 2010. At the Somerset site, BASF Fuel Cell produces both high-temperature MEAs and important pre-products such as electrodes.

<http://www.basf.com/group/corporate/en/news-and-media-relations/press-releases>

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.

CONFERENCES

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

Fuel Cells Durability & Performance.

The 5th Annual International Fuel Cells Durability & Performance 2009 Conference will be held December 8-9, 2009, at the Hilton Alexandria Mark Center in Alexandria, Virginia. For more details, please visit <http://www.knowledgefoundation.com/indexkf.php>.

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.

The 6th International Hydrogen & Fuel Cell Expo 2010 will be held March 3-5, 2010, at Tokyo Big Sight in Tokyo, Japan. For details, go to <http://www.fcexpo.jp/en/?em=090501fc2000>.

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.