

The logo features the words "FUEL CELL TECHNOLOGY" in large, bold, black capital letters. A blue arc curves over the text, ending in a yellow and orange gradient circle. To the right of this circle, the word "UPDATE" is written in smaller, black capital letters.

FUEL CELL TECHNOLOGY UPDATE

Fuel Cells 2000's Fuel Cell Technology Update – April 2011

Follow us on [Facebook](#) and [Twitter](#)! And if you like this newsletter, recommend it to a friend! ☺

The Department of Energy has begun a Quadrennial Technology Review, an examination of the Department's goals and policies, in response to a recommendation of the PCAST report. DOE is inviting public input via publication of a Framing Document. This document is available here: <http://energy.gov/qtr/> and does not mention hydrogen and fuel cells – even though the PCAST report itself speaks very positively of hydrogen as a potential breakthrough motor fuel. The comment period is open until April 15th and provides the fuel cell industry and supporters with an opportunity to educate senior DOE officials on the status and benefits of fuel cells and hydrogen. All of us ought to take advantage of this opportunity. Email comments may be submitted to: DOE-QTRmailbox@hq.doe.gov. Please include "DOE-QTR RFI" in the subject line.

http://www.energy.gov/qtr/documents/DOE-QTR_Framing.pdf

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

TRANSPORTATION APPLICATIONS

Two Toyota Fuel Cell Vehicles Delivered to Long Island.

The Town of Hempstead in New York received two Toyota FCHV-adv fuel cell vehicles and one Ford E450 hydrogen-powered ICE bus as part of its Clean Energy Project. The cars will be used by the Department of Conservation and Waterways fueled at a hydrogen fueling station in Point Lookout. <http://www.newsday.com/classifieds/cars/hempstead-adds-three-hydrogen-powered-cars-1.2788817>

Hyundai Unveils Blue².

Hyundai unveiled its latest concept fuel cell vehicle, the Blue², at the Seoul Motor Show. The Blue² is powered by a 90 kW fuel cell electric system.

<http://worldwide.hyundai.com/company-overview/news-view.aspx?idx=353&&nCurPage=1&strSearchColumn=&strSearchWord=&ListNum=268>

Hydrogenics Receives Contract for Fuel Cells for Ferry.

Hydrogenics Corporation has received a contract from Statue Cruises, LLC, a subsidiary of Hornblower Cruises & Events, for the delivery of two HyPM HD 16 fuel cell power modules (33 kW) for a hybrid ferry in New York City. The 600 passenger Hornblower Hybrid will be propelled by hydrogen fuel cells in a compound hybrid arrangement along with wind turbines, solar panels and a tier 2 diesel engine for additional energy needs.

http://www.hydrogenics.com/invest/News_Details.asp?RELEASEID=559973

Daimler Constructing New Facility, Leasing Space from Ballard.

Daimler's Mercedes-Benz will construct a production facility in Vancouver, British Columbia, Canada, to manufacture fuel cell stacks for fuel cell vehicles. Completion is scheduled for early 2012, with small-series production of its next-generation fuel cell stacks commencing in 2013. This next generation fuel cell stack will also be suitable for use in sedans such as the Mercedes-Benz C-Class or E-Class. Daimler will also be sub-leasing 21,000 square feet of surplus production space from Ballard Power Systems at its specialized fuel cell manufacturing facility located in Burnaby, British Columbia. This sub-lease will be effective from August 1, 2011 until July 31, 2019. Daimler will use the space, representing approximately 38% of the facility, to manufacture fuel cells for its fuel cell car programs.

<http://www.daimler.com/dccom/0-5-658451-1-1375858-1-0-0-0-0-16694-0-0-0-0-0-0-0.html>
<http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1540690&highlight=>

Intelligent Energy Cabs Hit the London Streets, Scooter Receives WVTA Approval.

Intelligent Energy's fuel cell Black Cabs were awarded Road Legal status by the UK Vehicle Certification Authority (VCA) and hit the road around London. The cabs are part of the fleet to be used at the 2012 Olympics. The Suzuki Burgman Fuel Cell Scooter that Intelligent Energy developed in partnership with Suzuki Motor Corporation, has become the world's first fuel cell vehicle to achieve Whole Vehicle Type Approval (WVTA), qualifying the design as safe to use on public roads without having to be inspected and tested individually. The vehicle and its components are now approved for production and sale within Europe.

http://www.intelligent-energy.com/news_events_and_press/news/86/
http://www.intelligent-energy.com/news_events_and_press/news/85/

Honda FCX Clarity Paces IndyCar Weekend.

The Honda FCX Clarity fuel cell-electric vehicle served as the pace car for the 2011 Honda Grand Prix of St. Petersburg, Florida, marking the first-time a fuel cell vehicle paced an IZOD IndyCar Series race in the United States. As the pace car for the opening race of the 2011 IZOD IndyCar season, the FCX Clarity led a competitive field through the challenging 1.8-mile waterfront circuit. The Clarity also performed other pace car duties at several races throughout the weekend including the IZOD IndyCar Series, Firestone Indy Lights events and Acura Sports Car Challenge, as well as leading the IZOD IndyCar series cars at the annual Festival of States Parade.

<http://www.iewy.com/19075-hydrogen-powered-honda-fcx-clarity-will-serve-as-pace-car-for-the-2011-honda-grand-prix-of-st-petersburg.html>

STATIONARY APPLICATIONS

ClearEdge Sells Units to Cambrian Center, IUSD; Reports on Installation at Wind Farm.

Cambrian Center, a senior and disabled adult HUD housing facility, broke ground on a \$1.2 million dollar clean energy and building efficiency retrofit that will include four ClearEdge Power 5kW fuel cells, a re-engineered "cool roof," energy efficient windows and sliding glass doors, and energy efficient refrigerators in twenty-four of the units. ClearEdge also entered into a twelve unit deal with the Irvine Unified School District (IUSD) and the Woodbridge and University High Schools in Irvine, California, will be the first high schools in the country to use ClearEdge Power combined heat and power stationary fuel cells. Each school will install six ClearEdge5 fuel cell units to power and heat their swimming pools, as well as to supplement the school's standard power needs. In other ClearEdge news, the company reported that one of its ClearEdge5™ fuel cell that was installed last year in Livermore, California, at a NextEra Energy Resources wind farm has been running consistently, with 98.6 percent availability since its installation.

<http://www.businesswire.com/news/home/20110301005802/en/Woodbridge-University-High-Schools-Powered-Fuel-Cells>

<http://www.businesswire.com/news/home/20110325005699/en/Senior-Disabled-Adult-HUD-Facility-%E2%80%9CGreen%E2%80%9D-1.2>

<http://research.tdameritrade.com/public/markets/news/story.asp?docKey=100-088b6607-1&clauses=>

ClearEdge Awarded KGS Certification.

ClearEdge Power has become the first fuel cell manufacturer to be awarded the Korean Gas Safety Corporation's (KGS) internationally recognized safety certification for its 5-kW high temperature proton exchange membrane fuel cell. Achieving this certification is mandatory to market fuel cells in Korea, and

is recognized throughout Asia, including China, Japan, Thailand, Hong Kong, Singapore, Australia and Russia, and parts of Europe.

<http://www.businesswire.com/news/home/20110330005455/en/American-Fuel-Cell-Manufacturer-ClearEdge-Power-Kind>

Bloom Energy to Install System at Ice Skating Facility.

Bloom Energy has sold a Bloom Energy Server to Sharks Ice skating facility in San Jose, California.

<http://www.bizjournals.com/sanjose/print-edition/2011/03/25/sharks-ice-inks-deal-on-bloom-energy.html>

Ballard Partnering with GS Platech to Demonstrate Waste-to-Energy System.

Ballard Power Systems has partnered with GS Platech to demonstrate waste-to-energy power generation using fuel cells and hydrogen produced from processing of municipal solid waste. Ballard will supply a fuel cell, based on its Dantherm Power DBX5000 technology, that will run off of hydrogen produced from organic solid waste treated via plasma gasification technology at a GS Platech pilot plant in Cheongsong, South Korea.

<http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1539625&highlight=>

PORTABLE/BACKUP POWER

ReliOn Wins Third Place at E-Tech Awards, Partners with HOPPECKE.

ReliOn's E-2500 fuel cell system was awarded third place in the Green Telecom & Smart Energy Solutions, Applications and Hardware category of CTIA's annual Emerging Technology (E-Tech) Awards competition. The CTIA E-Tech Awards honor the most innovative new products in 14 categories spanning the areas of mobile apps, consumer electronics, enterprise and infrastructure. ReliOn also entered into a partnership with HOPPECKE, to will market ReliOn's fuel cell products under the HOPPECKE brand for backup power solutions throughout Europe, the Middle East and Africa. The companies have agreed on a multi-phased strategy expanding their collaboration to include localization of product integration and manufacturing, technology transfer, and territory expansion.

<http://www.relion-inc.com/news.asp#34>

<http://www.relion-inc.com/news.asp#32>

Multiquip Wins Most Innovated Product for Light Tower.

Multiquip has won a World of Concrete Most Innovative Product award for its model H2LT hydrogen fuel cell powered light tower. The H2LT light tower was named the Editor's Choice in the General Tools and Equipment category. The Multiquip H2LT light tower can be operated indoors and for up to 68 hours with a low noise level of only 43 decibels at 23 feet.

http://www.multiquip.com/multiquip/mq-news_5964_ENU_HTML.htm

MILITARY APPLICATIONS

Nineteen Fuel Cells to be Deployed at Nine Federal Sites.

The US Army Corps of Engineers ERDC/CERL has contracted LOGANEnergy Corporation, to deploy 19 fuel cell back-up power systems at 9 different federal sites across the country to be configured as uninterruptable power supplies to critical electric loads. LOGAN has contracted with several fuel cells manufacturers including Altery Systems, Hydrogenics Corporation, IdaTech LLC and ReliOn Inc. to supply products for the demonstration program. The host sites include Army, Air Force, Marine Corps and NASA facilities. Funding for the project was provided by DOE.

<http://www.cecer.army.mil/td/tips/docs/josefik-CERL-DOEFuelCellProject2-11-final.pdf>

Dewey Electronics Receives Subcontract for Fuel Cell APU.

The Dewey Electronics Corporation has received a three-year \$1.1 million subcontract to integrate a JP-8 fueled, 10-kW fuel cell auxiliary power unit (APU) for military ground combat vehicles. The prime contract was awarded by the U.S. Army's Tank Automotive Research, Development and Engineering Center (TARDEC) to the Altex Technologies Corporation, with partners SerEnergy, and Pennsylvania State University. Under this subcontract, Dewey will design, develop, and package the control system

electronics, the power electronics, and will integrate the SerEnergy fuel cell technology with Altex Technologies' JP-8/diesel fuel reformer technology into the APU by September 2013.
<http://finance.yahoo.com/news/Dewey-Electronics-Awarded-11-prnews-2362631869.html?x=0&.v=1>

FUELS/REFORMERS/STORAGE

Artificial Leaf Produces Hydrogen.

Scientists from the Massachusetts Institute of Technology showcased the first practical artificial leaf, an advanced solar cell that mimics photosynthesis, at the 241st National Meeting of the American Chemical Society. About the shape of a playing card but thinner, the device is fashioned from silicon, electronics and catalysts and can produce enough electricity to supply a house in a developing country with electricity for a day, by splitting water into its two components, hydrogen and oxygen, for use in a fuel cell.
http://www.eurekalert.org/pub_releases/2011-03/acs-dot031811.php

ITM Power Awarded Contract from NextEnergy, Receives CE Certification for Products.

ITM Power has been awarded a US\$30,000 contract by the NextEnergy Center to complete an economic and market analysis of the potential impact of a 70 MPa (700 bar) small scale hydrogen fuelling appliance (SHFA) geared towards European and Asian markets. ITM Power also has achieved CE certification for both its HFlame and HBox electrolyzer products.

<http://www.itm-power.com/news/62/NextEnergy+Contract+.html>

<http://www.itm-power.com/news/63/HFlame+CE+Certification.html>

<http://www.itm-power.com/news/64/HBox+CE+Certification.html>

LBNL Announces Hydrogen Storage Breakthrough.

Researchers at the Lawrence Berkeley National Laboratory (LBNL) have designed a new composite material for hydrogen storage consisting of nanoparticles of magnesium metal sprinkled through a matrix of polymethyl methacrylate, a polymer related to Plexiglas. This pliable nanocomposite rapidly absorbs and releases hydrogen at modest temperatures without oxidizing the metal after cycling—a major breakthrough in materials design for hydrogen storage, batteries and fuel cells.

<http://newscenter.lbl.gov/news-releases/2011/03/14/breakthrough-in-hydrogen-storage/>

MATERIALS/COMPONENTS/TESTING

FuelCon Introduces More Efficient SOFC Testing System.

FuelCon has introduced its latest test station Evaluator C50-HT for SOFCs.

[http://www.fuelcon.com/cms/index.php?id=pressemitteilungen_details&L=1&tx_ttnews\[tt_news\]=486&cHash=de118e434b7127dfa7d414c793a7ee47](http://www.fuelcon.com/cms/index.php?id=pressemitteilungen_details&L=1&tx_ttnews[tt_news]=486&cHash=de118e434b7127dfa7d414c793a7ee47)

InnoVentures Increases Capacity.

InnoVentures LLC recently invested to increase its compression molding capacity to 800 tons. The company now offers carbon graphite plates designed for low and high-temperature applications in sizes up to 260 sq. in. (length x width).

<http://www.innoventuresfcc.com/>

REPORTS/MARKET STUDIES

Fuel Cells 2000 Releases Two New Resource Documents.

Fuel Cells 2000 has release two new resource documents. The first, *A Compendium of Job Estimates in the Fuel Cell Industry*, provides our researched estimate of the current number of fuel cell jobs (stack and system developers) as well as provide links and information on other job estimates and projections out there. The second, the *2010 Policy Activity Wrap Up*, compiles all the 2010 legislation and policy in the United States pertaining to fuel cells and hydrogen.

http://www.fuelcells.org/Fuel_Cell_Industry_Job_Estimates.pdf

<http://www.fuelcells.org/2010StatesH2FCWrapUp.pdf>

REQUESTS FOR PROPOSALS

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

NYSERDA Offers Incentives for NY Fuel Cell Installations.

The New York State Energy Research and Development Authority (NYSERDA) is offering financial incentives to support the installation and operation of fuel cell systems in New York State through Program Opportunity Notice (PON) 2157, "Renewable Portfolio Standard Customer-Sited Tier Fuel Cell Program." Up to \$1 million is available for systems rated larger than 25 kW, and up to \$50,000 for systems rated at 25 kW or less. Approximately \$21 million total is available for this PON. Funding is on a first-come, first-served basis until December 31, 2015, or until all funding has been fully committed, whichever comes first.

<http://www.nyserda.org/funding/2157pon.asp>

CCEF On-Site Distributed Generation Funding Opportunity.

The Connecticut Clean Energy Fund's On-Site Distributed Generation (OSDG) Program is allocating \$12.86 million to help finance the installation of systems that generate electricity from the sun, wind, fuel cells, biomass, landfill gas and river flows. The program also supports the installation of waste heat recovery/power generation equipment. The RFP will be issued July 1, 2011 with proposals due by November 18, 2011.

<http://www.ctcleanenergy.com/Portals/0/Tentative%20Schedule%20for%20Round%202%20of%20the%200On.pdf>

CCEF Launches Alpha Program.

The Connecticut Clean Energy Fund (CCEF) has launched its newest initiative, the Alpha Program, which funds development and testing of emerging clean energy technologies to establish their technical viability and commercial potential. Connecticut companies undertaking early-stage clean energy technology development are encouraged to apply to the Alpha Program for funding of up to \$200,000 per project. The funding is provided in two phases: Phase 1, which offers grants of up to \$50,000 for Engineering Design and Development, and Phase 2, which offers loans of up to \$150,000 for Prototype Construction and Testing. Applications will be reviewed and funded twice a year through a competitive judging and selection process. Applications for the first round of funding under the Alpha Program are due June 15, 2011.

<http://www.ctcleanenergy.com/YourBusinessorInstitution/NewTechnologyPrograms/AlphaProgram/tabid/573/Default.aspx>

Hydrogen Storage FOA.

The U.S. Department of Energy's (DOE) Fuel Cell Technologies Program announced the availability of up to \$12 million to advance hydrogen storage technologies for use in fuel cell powered vehicles and other applications. The funding will be made available for applied research and development projects in two topic areas: Development of low-cost, novel hydrogen storage vessels and/or low-cost fibers for composite tanks to reduce the overall costs of hydrogen storage; and Development of novel, practical hydrogen storage materials for diverse applications.

http://www1.eere.energy.gov/hydrogenandfuelcells/news_detail.html?news_id=16806

NSF SBIR.

The National Science Foundation (NSF) has issued its Small Business Innovation Research (SBIR) Program Phase I Solicitation FY-2011 (Release 2), which includes hydrogen storage/production and fuel cell technologies as potential project topics. Approximately \$22.5 million will be made available for 150 awards of up to \$150,000 each.

<http://www.nsf.gov/pubs/2011/nsf11691/nsf11691.htm>

DOE Fellowship Program.

Under the Office of Energy Efficiency and Renewable Energy (EERE) Postdoctoral Fellowships Program, DOE is seeking up to 20 postdoctoral fellows whose academic careers have focused on the following technology areas: building efficiency, industrial efficiency, advanced vehicles, fuel cells, wind or water power, or biomass, geothermal, or solar energy. The new program will support research and development

of breakthrough technologies over a two-year period.

http://www1.eere.energy.gov/education/postdoctoral_fellowships/

MISCELLANEOUS

Kontakt-Elektro to Open Manufacturing Plant in Hungary.

Kontakt-Elektro will open a fuel cell manufacturing plant in Pécs, Hungary.

http://www.bbj.hu/business/kontakt-elektro-inaugurates-huf-250-mln-fuel-sale-plant_56672

Ultra Electronics/AMI Receives ISO Certification.

Ultra Electronics, Adaptive Materials, Inc. (AMI) was recently certified to the ISO 9001:2008 (w/design), International Quality System Standard, making it the first solid oxide fuel cell manufacturer to earn ISO 9001:2008 (w/ design) certification.

<http://www.adaptivematerials.com/ultra-electronics-adaptive-materials-certified-iso-90012008>

UK HFCA Relaunches Website.

The UK Hydrogen and Fuel Cell Association (UK HFCA) has launched its new website.

<http://www.ukhfca.co.uk/>

CONFERENCES

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

HANNOVER MESSE.

The 17th Group Exhibit Hydrogen + Fuel Cells at HANNOVER MESSE 2011 will take place April 4-8, 2011, in Hannover, Germany. For details, please visit <http://www.h2fc-fair.com/>.

CHBC General Meeting.

A general meeting of the California Hydrogen Business Council entitled "Funding Clean Energy" will be held Wednesday, April 13, 2011, at Riverside City Hall in Riverside, California. For meeting information, please go to <https://californiahydrogen.org/index.php?q=civicrm/event/info&reset=1&id=15>.

Stationary Fuel Cell Power Project Finance and Investment Summit

The Stationary Fuel Cell Power Project Finance and Investment Summit is scheduled for May 3-5, 2011, at the Hilton Del Mar in San Diego, California. For more information, please go to

<http://www.infocastinc.com/index.php/conference/fuelcellpower11>.

ACT Expo.

The ACT Expo "The Alternative Clean Transportation Expo," will take place at the Long Beach Convention Center in Long Beach, California, on May 4-6, 2011. For more information, please visit

<http://www.actexpo.com/>.

Codes and Standards Workshop.

FuelCellEurope is holding a 1-day workshop on "Regulations, Codes and Standards for the Market Deployment of Fuel Cells and Hydrogen" on May 11, 2011, in Brussels, Belgium. For details, go to

http://fuelcelleurope.eurokeys.eu/index.php?option=com_wrapper&view=wrapper&Itemid=53.

IC-MAST 2011.

The International Conference on Materials and Applications for Sensors and Transducers (IC-MAST) will take place May 13-17, 2011, at the Kos International Conference Center, Kos Island, Greece. For details, go to <http://www.icmast.net/>.

Hydrogen + Fuel Cells 2011.

The Hydrogen + Fuel Cells 2011: International Conference and Exhibition (HFC2011): *Partnerships for Global Energy Solutions* will be held May 15-18, 2011, at the Vancouver Convention and Exhibition

Center in Vancouver, British Columbia, Canada. For conference information, please go to <http://www.hfc2011.com/>.

H2Expo.

The 8th H2Expo: International Conference and Exhibition on Hydrogen, Fuel Cells and Electric Drives will be held June 8-9, 2011, in Hamburg, Germany. For information, please visit http://www.hamburg-messe.de/h2expo/h2_en/start_main.php.

Small Fuel Cells 2011.

Small Fuel Cells 2011: Fuel Cells & Hybrid Devices for Commercial & Military Applications will be held June 9-10, 2011, in Boston, Massachusetts. For details, please go to <http://www.knowledgefoundation.com>.

ASME Fuel Cell Conference.

The American Society of Mechanical Engineers 2011 Energy Sustainability Conference and Fuel Cell Conference will be held August 7-11, 2011, at the Grand Hyatt Washington in Washington, DC. For more information, please visit <http://www.asmeconferences.org/ESFuelCell2011/index.cfm>.

XI International Hydrogen Congress.

The Mexican Hydrogen Society's 11th Hydrogen Congress will be held September 20-23, 2011, in Cuernavaca, Mexico. To find out more, please visit <http://www.iie.org.mx:8080/SitioGENC/hydrogen2011/>.

f-cell 2011.

The f-cell 2011 conference and trade fair will take place September 26-27, 2011, in Stuttgart, Germany. The conference focus is "Mobile applications – fuel cells and batteries moving the future." For conference details, please go to <http://www.f-cell.de/englisch/Home/>.

Fuel Cell Seminar & Exposition 2011.

The Fuel Cell Seminar & Exposition 2011 will be held October 31 - November 3, 2011, at the Walt Disney World Swan and Dolphin Resort in Orlando, Florida. For information on exhibiting or registration, please go to <http://www.fuelcellseminar.com/>.

Piero Lunghi Conference and Exhibition.

The 4th Edition of the European Fuel Cell Technology & Applications Piero Lunghi Conference and Exhibition takes place at the Fontana di Trevi Conference Center in Rome, Italy, December 14-16, 2011. For conference details, please visit <http://www.europeanfuelcell.it/>.

###

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.