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FUEL CELLS 2000

Fuel Cells 2000's Fuel Cell Technology Update – September 2012

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TRANSPORTATION APPLICATIONS

New Fuel Economy Standard Finalized.
New fuel economy standards for cars and light-duty trucks were finalized, increasing to 54.5 mpg for cars and light-duty trucks by Model Year 2025. Fuel cell electric vehicles (FCEVs) are mentioned in the standard, including a FCEV credit multiplier of 2.0 in Model Year 2017, which will phase down to a value of 1.5 in Model Year 2021.
http://www.nhtsa.gov/About+NHTSA/Press+Releases/2012/Obama+Administration+Finalizes+Historic+54.5+mpg+Fuel+Efficiency+Standards

Scotland Makes Major Fuel Cell Bus Commitment.
The Scottish Government and Scottish Enterprise is providing a combined £3.3 million (US$5.2 million) to the Aberdeen City Council, supported by Aberdeen Renewable Energy Group, to start the project's first phase with an order for 10 hydrogen fuel cell buses and a hydrogen fueling station in the city. The buses will use Ballard fuel cells and the hydrogen station will be a joint effort between BOC and Scottish & Southern Energy Power Distribution (SSEPD).
http://www.scotland.gov.uk/News/Releases/2012/08/scottish-hydrogen-hub14082012

Toyota Develops Innovative Fuel Cell Bus System, Reaffirms 2015 Timeframe.
Toyota Motor Corporation (TMC) has developed a power supply system that uses the electricity generated from the fuel cell on a bus to power devices such as home electrical appliances. Toyota has equipped one of its fuel cell buses, the FCHV-BUS, with the new power supply system that has two electrical outlets (AC 100 V, 1.5 kW) inside the cabin that can supply a maximum output of 3 kW and potentially power home appliances continuously for more than 100 hours. Fuel cell buses could potentially be used as mobile power-supply vehicles for evacuation centers and emergency power following disasters. TMC is also developing a vehicle-to-home system for supplying electricity from an fuel cell bus to a building's existing electrical wiring and plans to test this system in 2013-2014 as part of the Toyota City Low-Carbon Verification Project, which has been adopted as one of the Next-Generation Energy and Social System Demonstration Projects being promoted by Japan's Ministry of Economy, Trade and Industry. Toyota also reaffirmed 2015 as the target date for the launch of its fuel cell sedan.
http://www.japancorp.net/press_release/25593/toyota_develops_fuelcellbus_power_supply_system
http://www.insideline.com/toyota/toyota-confirms-hydrogen-fuel-cell-sedan-due-out-in-2015.html

STATIONARY APPLICATIONS

FuelCell Energy Solutions Sells First System in Germany.
FuelCell Energy Solutions, GmbH has sold its first DFC250-EU® fuel cell system to BAM Deutschland AG for installation at the new Federal Ministry of Education and Research government complex in Berlin, Germany. FuelCell Energy Solutions will manufacture and install the power plant, which is expected to be operational in 2014.
http://fcel.client.shareholder.com/releasedetail.cfm?ReleaseID=698534

Güssing Installs First ClearEdge Unit.
Güssing Renewable Energy GmbH has installed a 5 kW ClearEdge fuel cell system operating off of Güssing's CARE FUEL biomethane supply generated from regional residual biomass. The two companies have an agreement to install 8.5 MW of fuel cell systems in Austria over the next three years, increasing to 50 MW by 2020.
http://gussingrenewable.com/htcms/en/latest-news.html

Victoria's Feed-In Tariff to Include Fuel Cells.
In Australia, the Victorian Government announced that beginning in January 2013, the State's solar feed-in tariff will be broadened to include all low-emissions and renewable technologies less than 100 kW, including fuel cells. The new tariff will initially provide a minimum of eight cents per kilowatt hour of electricity exported to the grid, which is based on the adjusted wholesale price of electricity, and will be adjusted each year accordingly.
http://www.cfcl.com.au/Assets/Files/20120903_Vic_Gov-feed-in_tariff.pdf

PORTABLE/BACKUP POWER

Ballard and Cascadiant to Deploy 102 Fuel Cells in Indonesia.
Ballard Power Systems has received purchase orders for 102 fuel cell power generation systems to be delivered to its new Southeast Asian distributor, Cascadiant Inc. The systems will be deployed in the networks of two wireless telecom customers in Indonesia.
http://www.ballard.com/about-ballard/newsroom/news-releases/news08161201.aspx

Alpha Energy to Install ReliOn Fuel Cell at Test Facility.
Alpha Energy is integrating a 5 kW ReliOn E-2500™ fuel cell system into its state-of-the-art Hybrid Power System (HPS) Test Facility in Bellingham, Washington. The HPS Test Facility simulates demanding off-grid environments and provides test engineers an accurate, real-time representation of how certain products will perform in the field. If the fuel cell system meets Alpha's rigorous performance standards, it will then be evaluated for implementation into future Alpha Energy projects.
http://www.relion-inc.com/news.asp#47

MICRO FUEL CELLS

MILITARY APPLICATIONS

Lockheed Awarded $3 Million for Solar Panel/Fuel Cell Integration.
Lockheed Martin secured a $3 million contract with the Office of Naval Research for the design and development of solid oxide fuel cell generator sets integrated with solar panels to power battlefield equipment. At the end of the 32-month development program, Lockheed Martin will demonstrate and deliver a multi-kilowatt JP-8 compatible Fuel Cell Efficient Power Node for evaluation by the U.S. Marines. Lockheed is working with Technology Management Inc. (TMI) on the contract.
http://www.lockheedmartin.com/us/news/press-releases/2012/august/ms2-0808-lockheed-martin-to-integrate-fuel-cells-solar-power-for-military.html

FUELS/REFORMERS/STORAGE

Japan Requesting Funding for 100 Hydrogen Stations.

Japan's Ministry of Economy, Trade and Industry (METI) is requesting 30 billion yen (US$400 million) in the FY2013 budget to support deployment of 100 Tokyo-area hydrogen fueling stations, and for the creation of several regional power grids that expand wind power generation. METI will also support R&D efforts to develop a low cost hydrogen supply system. If approved, the hydrogen stations will be deployed by 2015, the date many auto manufacturers intend to begin commercial sales of fuel cell vehicles.
http://mainichi.jp/english/english/newsselect/news/20120825p2a00m0na003000c.html

Hydrogenics Signs MOU With Iwatani.
Hydrogenics Corporation has signed a Memorandum of Understanding (MOU) with Iwatani Corporation of Japan to develop opportunities in Japan for utility scale hydrogen energy storage, hydrogen generation fueling, fuel cell integration and industrial hydrogen generation.
http://www.hydrogenics.com/invest/news_Details.asp?RELEASEID=698611

ITM and GMI Renewable Enter Agreement, Gets New Partners on Feasibility Study.
ITM Power has signed an agreement with GMI Renewable Energy Group Ltd to offer an integrated renewable power generation and hydrogen production for back-up power, industrial processes and refueling solutions for materials handling equipment in commercial buildings. Under the agreement, GMI will offer its existing and potential new customers the option of renewably generated hydrogen on-site. ITM Power will provide the hydrogen generation and refueling equipment and, if required, the fuel cell systems. In other ITM news, Shell Research Limited and National Grid plc have joined the Hydrogen Gas Inject feasibility study, lead by ITM Power, funded by the Technology Strategy Board under its Smart Power Distribution and Demand competition. The project aims to investigate the technical, financial and operational feasibility of injecting hydrogen gas, generated from electrolysis fed from excess renewables, into the UK gas networks. The project includes preliminary logistical research, system research, creation of a generation model and the simulation of hydrogen production at a single wind farm.
http://www.itm-power.com/news-item/agreement-with-gmi-renewable-energy-group/
http://www.itm-power.com/news-item/shell-and-national-grid-join-gas-inject-project/

PDC Machines Receives ISO Certification.
PDC Machines has completed the ISO 9001:2008 quality management process certification (Dekra ISO Certification number 1112232.01).
http://www.pdcmachines.com/pdc-machines-iso-certification/

MATERIALS/COMPONENTS/TESTING

REPORTS/MARKET STUDIES

State of the States: Fuel Cells in America 2012. Fuel Cells 2000 has released its new report, *State of the States: Fuel Cells in America 2012*. The report finds that in a little more than a year, more than 74 MW of fuel cells for stationary power and 1,700 fuel cell-powered forklifts were installed or purchased. The free report features individual state profiles cataloging all of the policies, installations and activity in the past year since our last report. The report also includes supportive quotes from five Representatives from the U.S. Congress (2 Republicans and 3 Democrats), an introduction including sections on Federal Programs, Business Attraction and Exporting Opportunities, nine separate Top 5 lists, offering readers numbers and reasoning for the state's inclusion. These Top 5 lists include: Fuel Cell Vehicles, Fuel Cell Buses, Hydrogen Fueling Stations, Telecom Backup Systems, Stationary Fuel Cell Systems (Deployed), Stationary Fuel Cell Systems (Planned), Fuel Cell Patents, and Successful Fuel Cell Policies. There is also an Appendix with several charts, the 2011 H2/FC Policy Wrap-up, our recent compilation list of fuel cell customers in U.S., and links to additional resources.
http://www.fuelcells.org/wp-content/uploads/2012/08/StateoftheStates2012.pdf

Fuel Cell Electric Vehicles.
Fuel Cell Electric Vehicles: The Road Ahead, a new, free report from Fuel Cell Today, examines the past, present and future of fuel cell electric vehicles and the hydrogen infrastructure supporting them.
http://www.fuelcelltoday.com/analysis/surveys/2012/fuel-cell-electric-vehicles-the-road-ahead

National Fuel Cell Electric Vehicle Learning Demonstration Final Report.
The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) recently released the *National Fuel Cell Electric Vehicle Learning Demonstration Final Report*, which presents the key analysis findings from data gathered from vehicles demonstrated under the National Fuel Cell Electric Vehicle (FCEV) Learning Demonstration. Project participants include automotive original equipment manufacturers (OEMs) Daimler, GM, Hyundai-Kia, and Ford; and energy partners, Shell, Chevron, BP, UTC Power, and Air Products. During the demonstration, 183 fuel cell electric vehicles were deployed, 25 project fueling stations were placed in use, and no fundamental safety issues were identified. The analyzed data set included more than 500,000 individual vehicle trips, with 3.6 million miles traveled. More than 152,000 kilograms of hydrogen was produced or dispensed.
http://www.nrel.gov/hydrogen/pdfs/54860.pdf

REQUESTS FOR PROPOSALS

DOE SBIR/STTR.
DOE has issued its FY 2013 Phase I Funding Opportunity Announcement (DE-FOA-0000760) for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs. The topic of interest to the fuel cell industry is "Innovative Approaches to Discovery and/or Development of Ultra-Low- and Non-PGM Catalysts for PEMFCs and Non-PGM Catalysts for AFCs." The deadline for receipt of Phase I Letters of Intent is today, September 4, 2012, 5:00 p.m. EDT, so hurry, hurry, hurry!
http://science.energy.gov/~/media/sbir/pdf/docs/DOEFY13PhaseIRelease1TopicsAmend1081512.pdf (page 27)

Fuel Cell APUs for Refrigerated Trucks.
DOE's Pacific Northwest National Laboratory (PNNL) has issued an RFP for the analysis and demonstration of fuel cell-based auxiliary power units, or APUs, for refrigerated trucks. This project targets the analysis and demonstration of fuel cell-based auxiliary power units (APUs) to provide power for Truck Refrigeration Units (TRU) for on Class 4-6 medium duty trucks.
https://ebs.pnnl.gov/ViewSolicitation.aspx?SolID=336

MISCELLANEOUS

New Masters Program in Hydrogen Safety Engineering.
The University of Ulster is now offering a Masters (MSc) Program in Hydrogen Safety Engineering. This six module program is offered online as individual modules or as a complete program.
http://prospectus.ulster.ac.uk/course/?id=10139

CONFERENCES

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

f-cell 2012.
f-cell 2012 and Battery+Storage 2012 will be held October 8-10, 2012, at the Stuttgart Trade Fair Centre in Stuttgart, Germany. To see the conference program and registration information, please go to http://www.f-cell.de/englisch/home/.

Fuel Cell Seminar.
The Fuel Cell Seminar & Exposition 2012 will be held on November 5-8, 2012, at the Mohegan Sun in Uncasville, Connecticut. For details, please visit http://www.fuelcellseminar.com.

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.