To: Reporters, editors and investors following business, energy, automotive and technology news.
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TRANSPORTATION APPLICATIONS

CARB to Hold Public Workshop on ZEVs. The California Air Resources Board is holding a public workshop on September 7th and 8th to review the Zero Emission Vehicle (ZEV) regulation and progress towards its implementation. The meeting will be at the Lincoln Plaza Auditorium in Sacramento, California and the public is welcome to testify orally or provide written comments. Written submissions must be received by CARB no later than noon on September 6th. http://www.arb.ca.gov/msprog/zevprog/2000review/workshops.htm


MHTDG to Integrate Hydrogen-Powered Water Taxi and Fueling Station. The Maritime Hydrogen Technology Development Group (MHTDG), a subset of DCH Technology, is working with several private and public organizations to integrate and operate a hydrogen-powered water transportation system. The MHTDG has completed a comprehensive study for the U.S. Department of Energy Hydrogen Program on the technical and economic considerations necessary for implementation of hydrogen fuel and fuel cell power technology in a maritime environment. http://www.dcht.com/press_releases/press_release.asp?release=182&caller=news

STATIONARY POWER

Enable Fuel Cell Systems Purchased by EPRI PEAC and TNRCC; Featured in TACOM Presentation. The Electric Power Research Institute (EPRI) PEAC Corporation has purchased a power quality system from Enable Fuel Cells Corporation and is coupling the fuel cell power with their own electric power management technologies to offer reliable power to global utilities. The Enable fuel cell was featured in an internal presentation on alternative powertrains to military and civilian management of the U.S. Army Tank-Automotive and Armaments Command (TACOM). The Texas Natural Resource Conservation Commission (TNRCC) has also purchased portable EnableT fuel cells for evaluation in powering their remote air quality data collection systems.

Slope Village Seeks Funding For Fuel Cell. Nuiqsut, a North Slope village, wants to use a fuel cell to transform natural gas taken from the Alaska pipeline into electricity. The village is looking to the
Altair and MIT to Study Hydrocarbon Fuel Cells. Altair Technologies has entered into an agreement with the Massachusetts Institute of Technology (MIT) to develop a fuel cell system for direct hydrocarbon conversion. The project will address major challenges facing hydrocarbon-fueled fuel cells, focusing on the synthesis and fabrication of new anode and cathode materials. [http://www.altairtechnologies.com](http://www.altairtechnologies.com)

Largest Fuel Cell System Dedicated in Alaska. The largest commercial fuel cell system in the nation, at the Anchorage Mail Processing Center in Alaska, is now the primary source of power for the facility. Five fuel cells, connected in parallel to produce one megawatt of electricity, were developed by International Fuel Cells and have digital power modules by MagneTek.

FUELS/REFORMERS/STORAGE

CARB Awards Grant to HBT. Hydrogen Burner Technology has been awarded a grant from the California Air Resources Board for a hydrogen refueling station for fuel cell powered vehicles. The refueling station is being installed at the SunLine Transit Agency and will help support the introduction of new fuel cell buses by XCELLSIS. [http://www.sunline.com](http://www.sunline.com)

Stuart and CKI Plan Hydrogen Infrastructure, Ford to Evaluate Stuart Fuel Appliance. Stuart Energy Systems and Cheung Kong Infrastructure (CKI) have formed a joint venture for sales and distribution of hydrogen fuel equipment in Austria/Asia. The venture, Stuart CKI Corporation, will handle all hydrogen-related commercial activities and will allow CKI to set up a hydrogen fuel cell infrastructure in Austria/Asia. Ford Motor Company has issued a purchase order to test and evaluate a series of Stuart Personal™ Fuel Appliances over the next two years. The appliances will convert electricity and water into pressurized hydrogen fuel for fuel cell vehicles. [http://www.stuartenergy.com](http://www.stuartenergy.com)

GM and ExxonMobil Develop Gasoline Processor. The General Motors and ExxonMobil collaboration has resulted in the development of a gasoline processor for fuel cell vehicles (FCVs). The processor uses gasoline as a fuel to create hydrogen for a fuel cell, allowing fuel cells to operate on the existing fueling infrastructure. GM plans a vehicle demonstration using the technology within 18 months. [http://media.gm.com/corpcom/00news/g000810a.htm](http://media.gm.com/corpcom/00news/g000810a.htm)


ITN Energy Systems Awarded DOE Funds. ITN Energy Systems has been selected for a proposed $2.3 million U.S. Department of Energy (DOE) Award for the development of a ceramic membrane to separate hydrogen from fossil fuel streams, under the DOE Vision 21 program. The membranes will consist of composites of a proton conducting ceramic and a second metallic phase to promote electrical conductivity. [http://www.ren-techinc.com](http://www.ren-techinc.com)

HRAC Receives Funds for Hydrogen Analysis. The Hydrogen Research and Applications Center

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federal government to supplement the $2 million given by BP Exploration. [http://www.adn.com/metro/story/0,2633,185455,00.html](http://www.adn.com/metro/story/0,2633,185455,00.html)
(HRAC) at the Florida Solar Energy Center (FSEC) has received funding from the U.S. Department of Energy (DOE) to perform a research study titled “Technoeconomical Analysis of Area 2 Hydrogen Production”. The study will assess the technical feasibility and economics of hydrogen production from renewable and conventional energy sources.

**DCH Technology Installs Hydrogen Monitoring Safety System for UNLV Hybrid Bus.** DCH Technology has completed installation of a hydrogen monitoring safety system for the first hydrogen/electric bus to be demonstrated in Las Vegas, Nevada. The University of Nevada at Las Vegas (UNLV) is under a contract with the Nevada Operations Office of the U.S. Department of Energy to develop a modified bus into a test-bed for advanced hybrid concepts.

**PORTABLE POWER**


**Manhattan Scientifics Supplies Army With Fuel Cell System.** Manhattan Scientifics has successfully tested and delivered a fuel cell power supply to the U.S. Army. The power system will be tested by the Army as part of its program to evaluate the feasibility of supplementing batteries in portable communication equipment. The system is capable of delivering 60 to 70 watts of continuous power, and has four times the power performance and half the weight required in the Army specification. [http://www.mhtx.com](http://www.mhtx.com)

**FUEL CELL COMPONENTS**

**SatCon To Build Power Converters for Nuvera.** SatCon Technology Corporation has received an order for fuel cell power converters to be used by Nuvera Fuel Cells in the development of their fuel cell power generation systems. Using SatCon’s power conversion system and utility grid interface allows companies like Nuvera to offer a fuel cell power system that can operate both connected to and independent from the grid. [http://www.businesswire.com/cgi-bin/f_headline.cgi?bw.081500/202282106&ticker=SATC](http://www.businesswire.com/cgi-bin/f_headline.cgi?bw.081500/202282106&ticker=SATC)

**Avista Labs Announces New Fuel Cell Patent.** Avista Labs announced the issuance of a patent covering its 73 claims for the electronic control system that significantly enhances the performance of its modular, cartridge-based, PEM fuel cell. The patent covers the control schemes that maximize the output of each modular cartridge. Avista Labs is working with UOP LLC to produce its first modular, integrated fuel cell power plant.

**REPORTS/MARKET STUDIES**

**Portable Fuel Cell Markets.** “Portable Fuel Cell Markets – Global Portable Fuel Cell Opportunities in Portable Applications With an Intense Focus on Wireless Applications,” predicts that portable fuel cells will enter the market with 50,000 units shipped in 2002. That number will surge to 200 million units annually only five years later in 2007. The report, prepared by Allied Business Intelligence
Claims that wireless handsets are the initial market for the first wave of portable fuel cells. 
http://biz.yahoo.com/bw/000816/ny_allied_.html

**Solid-Oxide Fuel Cells.** A new Futuretech briefing by Technical Insights, “Solid-Oxide Fuel Cells,” shows that the solid-oxide fuel cell is poised to compete strongly for a piece of the fuel cell market. The report says that within a few years, as many as 30 million vehicles per year would benefit from a fuel cell auxiliary power unit (APU) that powers a vehicle’s electrical systems. 

**Stationary Fuel Cells Study.** “Stationary Fuel Cells/-Systems for Applications in Domestic/Building and Industrial Sector, Germany and Worldwide 2000-2010,” a study done by Helmut Kaiser Consultancy, examines the opportunities developing in the stationary fuel cell market and how these areas can be developed and expanded.

**MISCELLANEOUS**

**Georgia Tech Opens New Research Center.** The Georgia Institute of Technology has set up a new center that will be devoted to advanced fuel cell and battery research. The facility, known as the Center for Innovative Fuel Cell and Battery Technologies, will focus on fuel cells and batteries for low-emission vehicles, distributed stationary power supplies and wireless communications.

**Enable Corporation to Build New Facility.** Enable Fuel Cell Corporation will begin construction of a 23,000 square-foot facility, specifically designed for rapid expansion to 80,000 square-feet for their fuel cell product family. The facility will be located in Middleton, Wisconsin, and is scheduled to be on line by first quarter 2001. 
http://www.dcht.com

**Texaco Establishes Texaco Technology Ventures.** Texaco has established Texaco Technology Ventures (TTV), a new business unit that will manage the company’s 20 percent equity interest in Energy Conversion Devices (ECD). TTV will lead Texaco’s efforts in the commercialization of ECD’s energy-related technologies, including fuel cells and hydrogen storage. 
http://www.businesswire.com/cgi-bin/f_headline.cgi?bw.081000/202232629&ticker=TX

**Woodside Boosts Ceramic Fuel Cells Investment.** Woodside Petroleum has invested another $15 million in Ceramic Fuel Cells Ltd. (CFCL). This follows Woodside’s initial $5 million last year to assist CFCL develop solid oxide fuel cell products.

**National Research Council to Contribute to Sustainable Energy Technologies.** Sustainable Energy Technologies has announced that Canada’s National Research Council –Industrial Research Assistance Program (IRAP) will contribute approximately $200,000 for continued enhancement of the company’s Fuel Cell Power Management System. 
http://www.businesswire.com/cgi-bin/f_headline.cgi?bw.081700/202300410&ticker=STG

**ECD Heads Honored by American Chemical Society.** Stan and Iris Ovshinsky, president and vice president of Energy Conversion Devices (ECD), respectively, were honored by the American Chemical Society for their 40-year contribution to energy innovations, including development and research in hydrogen-fuel technology.

**CONFERENCES/CALL FOR PAPERS**
**LANL Call for Papers.** Los Alamos National Laboratory has issued a “Call for Papers” for the Spring 2001 Electrochemical Society meeting in Washington, DC. The two symposia are Direct Methanol Fuel Cells and Polymer Electrolytes for Batteries and Fuel Cells. For details on specific topics of interest, email S. Gottesfeld at gottesfeld@lanl.gov.


**The Workshop on Electrochemical Measurements.** The Ernest B. Yeager Center for Electrochemical Sciences at Case Western Reserve University presents a weeklong “Workshop on Electrochemical Measurements”. This workshop is October 16-20, 2000, at Case Western Reserve University.  [http://www.electrochem.cwru.edu](http://www.electrochem.cwru.edu)


**F-Cells Infrastructure.** “F-Cells Infrastructure” will be held November 29-30, 2000, at the Hilton in San Diego, California. For more information, go to: [http://www.iqpc.com](http://www.iqpc.com).


**enertec 2001.** enertec 2001, an international expert fair for energy, will take place from March 13-16, 2001, in Leipzig, Germany. For further information, email Erasmus Wolff at ewolff@bridges.de.

**Hannover Fair 2001.** The Hannover Fair, the world fair for Energy Management and Technology, takes place April 23-28, 2001, in Germany. For more information, go to the web site at [http://www.h2fair.de/e/hm01/index.html](http://www.h2fair.de/e/hm01/index.html).

**Global Powertrain Congress 2001.** The Global Powertrain Congress will be June 5-7, 2001, at the COBO Conference/Exhibition Center in Detroit. For details, email Jeannette Porter at jporter@prassociates.com.

**IEMDC 2001.** The International Electric Machines and Drives Conference will be held June 17-20, 2001, at the Massachusetts Institute of Technology in Cambridge, Massachusetts. For more information, go to [http://www.iemdc.org](http://www.iemdc.org).

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*Fuel cells generate electricity without combustion by harnessing the energy created when hydrogen and oxygen are chemically combined. Fuel Cells 2000 is an independent, nonprofit activity dedicated to the commercialization of fuel cell technologies.*

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