To: Reporters, editors and investors following business, energy, automotive and technology news. Let us know if you would prefer to receive the full updates via email, or if you wish to be removed from our list. For more information on stories, call (202) 785-4222.

LEGISLATION

Hatch, Camp Introduce CLEAR Act.
Senator Orrin Hatch (R-UT) and Representative Dave Camp (R-MI) have introduced the CLEAR Act in the 108th Congress. The CLEAR Act (Clean Efficient Automobiles Resulting from Advanced Car Technologies Act) will provide tax incentives to encourage consumers to purchase fuel cell-powered and other advanced technology vehicles and establish the necessary fueling infrastructure.
http://www.ngvc.org/ngv/ngvc.nsf/bytitle/clearact.htm

TRANSPORTATION APPLICATIONS

DaimlerChrysler Launches FCV Test Program in Japan.
DaimlerChrysler has joined with energy-supply companies and other manufacturers in the opening of a new Japanese fuel cell testing facility under the Japan Hydrogen and Fuel Cell Demonstration Project. The facility will provide a location for companies to conduct fuel cell vehicle testing as well as infrastructure development.

UAB Awarded $3 Million to Study Hydrogen and Fuel Cells.
The University of Alabama at Birmingham (UAB) Department of Civil and Environmental Engineering has received a $2-million grant from the Federal Transit Authority (FTA) to study fuel cell technology for mass-transit buses, as well as a $1-million grant from the Department of Energy (DOE) to study the use of hydrogen in automobiles and in fuel cells for power generation and portable equipment. Part of the DOE grant includes establishing the Southeastern Hydrogen Technology Consortium (SHTC). It will be made up of energy experts, automobile manufacturers, transit authorities, fuel cell manufacturers, national laboratories and academic researchers who will exchange ideas on how to create a hydrogen infrastructure in the Southeast and improve understanding about hydrogen technology.
http://main.uab.edu/show.asp?durki=57437

Palcan Signs Joint Venture With Four Chinese Companies.
Palcan Fuel Cells, Ltd. has signed a joint venture agreement with Shanghai Ow Bowl Company; Shanghai Giant, Ltd.; Shanghai Shin-Fu Wheelchair Company; and the
China Shipbuilding Industry Corporation’s Number 711 research institute (Shanghai 711 CSIC Institute) to provide fuel cell stacks for electric bicycles, scooters, wheelchairs and ships. Under the agreement, Palcan will initially supply two 300-watt fuel cell stacks for use in bicycles, as well as three 1.5-kilowatt stacks for use in fuel cell scooters and wheelchairs.


Siemens to Supply Fuel Cells to Greek Navy.
Siemens AG will supply the Greek Navy with proton exchange membrane (PEM) fuel cell modules for integration into the existing propulsion systems of three class 209 submarines, with the intention of helping increase the vessels’ submersed range to that of new ships. Under the agreement, Siemens will supply the fuel cell modules, control and monitoring systems, control cubicles of the fuel cell system, control gear to integrate the system into the submarines’ existing propulsion system, and material packages to modernize the existing electrical equipment. Supply delivery is scheduled to be between mid-2004 and 2010, and an option has been agreed upon for a fourth installation.

NAC Unveils Truck with Fuel Cell APU at SAE.
The U.S. Army Tank-automotive and Armaments Command (TACOM) National Automotive Center (NAC) recently introduced a class-eight Freightliner truck fitted with a methanol-fueled fuel cell auxiliary power unit (APU) at the Society of Automotive Engineers (SAE) 2003 World Congress in Detroit, MI. The 5-kW APU, which includes a fuel cell stack manufactured by Ballard Power Systems, will provide electricity for onboard demands and external devices, including computers, satellite dishes and three-dimensional mapping systems, in military trucks.

HaveBlue Testing Hydrogen-Powered Sailboats.
HaveBlue is currently developing hydrogen-based technology systems for the recreational sailboat and powerboat markets. The company has already begun testing of systems components aboard the X/V-1, the first test-vessel of its kind. The X/V-1 is a specially-built 42-ft Catalina model 42 Mk. II sailboat, provided by sponsor Catalina Yachts, that is being outfitted with a fully self-contained, on-board, zero or ultra-low emission power system that may utilize fresh or salt-water and electricity from renewable technologies (i.e., wind & solar) to produce, store, and consume hydrogen as fuel.


STATIONARY POWER

Fuel Cell Arrives for Installation at Cape Cod Coast Guard Air Station.
FuelCell Energy has delivered and begun installation of a DFC300 fuel cell power plant at the U.S. Coast Guard Air Station Cape Cod. Operation is expected to commence this year.

HEW Installs Fuel Cell in Private Household.
Hamburg utilities company HEW introduced its first fuel cell for heat and power supply in a private household. The co-generation system includes a 4.6-kW PEM fuel cell designed by Vaillant and its US partner Plug Power. By 2005, 50 of these power plants are planned to go into operation at the utilities company's customers' sites. The first 15 of these units will be beta-units; after that, the fuel cells will have the same size and features as the ones that go into series production.

PORTABLE/BACKUP POWER

Protium, a band of Ponaganset High School (Glocester, Rhode Island) students, performed at Connecticut Clean Energy Fund’s first annual Fuel Cell Investment Summit on March 17th. The band powers all its electric guitars, amplifiers, and PA entirely with hydrogen fuel cell electricity. As part of Ponaganset High School’s Fuel Cell Education Initiative, the school received a 1000-watt Coleman Airgen Fuel Cell through a Perkins Grant. For more information about Protium, contact Ross McCurdy at rkmccurdy@yahoo.com.

Toshiba Develops New DMFC for Portable PCs.
Toshiba has developed a direct methanol fuel cell for use with portable computers. The new fuel cell currently realizes average output of 12-W and maximum output of 20W, and can achieve approximately five hours of operation with a single cartridge of fuel. It provides instant power supply, and achieves significant advances in operating times with replaceable methanol cartridges. Toshiba plans to commercialize the technology in 2004.
http://www.toshiba.co.jp/about/press/2003_03/pr0501.htm

Participate in Fuel Cell Study.
The Fraunhofer ISE, VDI/VDE-IT and Freesen & Partner are conducting extensive interviews to provide the data for the European Portable Fuel Cell Study. Organizations interested can download the questionnaire on www.freesen.de/h2report/study.htm. The interviewed parties will be listed in the appendix; their organizations will be included in the supplier’s directory with full contact details. The order form for the study can also be downloaded from the website.

FUELS/REFORMERS/STORAGE

Billion-Dollar FutureGen Project to Yield Hydrogen from Coal.
The United States will lead a $1 billion, public-private effort to construct FutureGen – the world’s first fossil fuel, pollution-free power plant, which will serve as a “living prototype” of new carbon sequestration technologies while producing both electricity and hydrogen. The hydrogen would be extracted for multiple uses, including as fuel for a fuel cell.
http://www.energy.gov/HQPress/releases03/febpr/pr03041_v.htm
Stuart Energy Sells Hydrogen Energy Station to Sydkraft.
Stuart Energy Systems Corporation has sold a Hydrogen Energy Station to Malmo, Sweden-based utility Sydkraft, which will generate, compress and dispense hydrogen fuel, as well as a blend of hydrogen and natural gas fuel, for the city of Malmo's entire bus fleet. The station, which will be installed later this year, is able to generate, compress and dispense approximately 80 kilograms of high-purity hydrogen each day. It is also to blend hydrogen and natural gas at ratios ranging from 100 percent hydrogen to 100 percent natural gas.

GM and Shell to Install Hydrogen Pump in Washington, DC.
General Motors Corp. and Shell Hydrogen are partnering on a demonstration of hydrogen fuel cell vehicles and fueling infrastructure technology in the Washington, D.C. area. The demonstration will feature the nation’s first hydrogen pump at a Shell retail gas station to support a General Motors Corp. fleet of fuel cell vehicles.

Shell to Fund Hydrogen Refueling Station in Luxemburg.
Shell Hydrogen is providing funding and technological know-how for the construction of a hydrogen refueling station in Luxemburg. The project is part of a European Union initiative to demonstrate how fuel cell buses could provide clean urban transport across the continent. The hydrogen refueling station will be built at Luxemburg’s main bus station, and will supply fuel to three fuel cell buses that will run on the city’s streets. The refuelling station is planned to be operational in the third quarter of 2003.
http://www.shell.com/home/Framework?siteId=hydrogen-en

Hydrogenics Receives Funding from Canadian Government.
Hydrogenics Corporation has received a $620,000 Canadian (US$419,000) grant from the Canadian government to proceed with two projects to develop, demonstrate and commercialize fuel cell refueling technology. Hydrogenics will also contribute $540,000 Canadian (US$365,000) for the projects. The first project will develop a hydrogen refueling apparatus for a natural gas reformer that will generate hydrogen for both vehicles and stationary generators. Funds for the second project will be used to integrate the company’s electrolysis technology in a mobile hydrogen fueling station.

MTSU Purchases HOGEN® RE Hydrogen Generator.
Middle Tennessee State University’s (MTSU) School of Agribusiness and Agriscience has purchased a HOGEN® RE (Renewable Energy) hydrogen generator for use in agricultural research and as a fuel input to the school's experimental internal hydrogen-combustion and electric-hydrogen hybrid vehicles. The ultimate goal is to run a car with an electric-H2 hybrid engine over 500 miles before refueling, from Mountain City, Tenn., to Memphis in May 2004.

MesoFuel and Jadoo Join Forces.
MesoFuel, Inc. and Jadoo Power Systems, LLC, announced a strategic partnership arrangement to integrate MesoFuel’s hydrogen generator products with Jadoo’s fuel cell products. MesoFuel, a company that develops on-site, on-demand hydrogen generators, will jointly develop fuel cell products with Jadoo, a company currently marketing Proton Exchange Membrane (PEM) fuel cells.


Praxair Offers High-Purity Hydrogen.
Praxair now offers a new high-purity grade of hydrogen for fuel cell applications. The new product comes in high-pressure cylinders for industrial customers that use fuel cells to produce electricity for a variety of uses. The fuel cell grade hydrogen contains extremely low levels of impurities (e.g. ammonia (NH₃), carbon monoxide (CO) and sulfur compounds) that can harm the membranes inside the fuel cell, helping maintain their performance and reliability.


FUEL CELL COMPONENTS

Ube, Toagosei Develop Membrane Material.
Ube Industries, Ltd. and Toagosei Company announced the joint development of a new polymer electrolyte fuel cell membrane material that does not expand when methanol fuel is circulated in the cell. The joint development team, which included University of Tokyo associate professor Takeo Yamaguchi, created the new material by filling small holes in a chemical-resistant resin film with a polymer that extracts hydrogen from methanol.

Inline Hydrogen Regulator Handles 10,000 psi.
Tescom Corporation has just released two highly specialized pressure regulators designed specifically for use with fuel cell powered vehicles. The innovative design of these regulators greatly reduces the number of moving parts found in alternative designs, obviously minimizing the potential of maintenance problems.

http://www.tescom.com

REPORTS/MARKET STUDIES

DOE Submits Fuel Cell Report to Congress.
The U.S. Department of Energy has submitted a report on the status of fuel cells in response to a request by Congress. The report covers the technical and economic barriers to the use of fuel cells in transportation, portable power, stationary and distributed power generation applications.


Business Communications Company, Inc. will release an updated report next month on the U.S. hybrid electric, all-electric and fuel cell vehicle markets titled "Fuel Cells and Batteries for Transportation: The Next Generation.” The report predicts that the next
generation transportation is expected to grow at an average annual growth rate (AAGR) of 11.7 percent to nearly $6 billion by 2007.
http://www.bccresearch.com

The International Platinum Association has reported that “enough platinum resource is available worldwide to meet any foreseeable future demand spurred by the commercialization of fuel cells.”
http://www.energyinfosource.com/dg/news.cfm?id=18241

REQUESTS FOR PROPOSALS

Fuel Cell Category Added to State Energy Program Special Topics Solicitation.
“Fuel Cell Demonstration and Coordinated Public Education Activities” has been added as a sub-solicitation topic for the DOE 2003 State Energy Program Special Projects Solicitation. Approximately $300,000 is available for an estimated 1-3 projects under this topic. Funding is available to support the purchase of a PEMFC to be used at a college or university, as well as to support public education activities to showcase the technology to the community. The deadline for proposals is May 9, 2003.

MISCELLANEOUS

Ford Rethinks TH!NK’s Name.
Ford Motor Company’s TH!NK Technologies has changed its name to Sustainable Mobility Technologies. This division of Ford’s Research and Advanced Engineering organization is responsible for Battery, Hybrid and Fuel Cell electric vehicle systems engineering.
http://media.ford.com/article_display.cfm?article_id=14689

CONFERENCES


Rally Thru The Valley.
“Rally Thru The Valley,” the 2003 California Fuel Cell Partnership Road Rally, will take place May 14-16. Zero-emission fuel cell cars from the Partnership’s eight automakers will depart West Sacramento and conduct public events in Fresno and Bakersfield before arriving in Los Angeles. Details can be found at www.cafcp.org.

Join over 700 delegates to discuss the latest developments in hydrogen, fuel cell research and product developments in Vancouver, British Columbia, Canada on June 8-11, 2003. Also available will be an exciting array of industrial and product demonstrations. For more information, please visit www.hydrogenfuelcells2003.com.

**Grove Fuel Cell Symposium VIII.**
Join international delegates to discuss developments in fuel cell technology and commercialization at the **Eighth Grove Fuel Cell Symposium** in London, England, on September 24-26, 2003. New for 2003 is a large exhibition area featuring over 100 exhibitors, vendor presentations and live demonstrations. Find out more at www.grovefuelcell.com or contact sm.wilkinson@elsevier.com.

**Sustainable Energy Expo.**
The Sustainable Energy Expo and Conference will be held October 1-3, 2003, at the Los Angeles Convention Center in Los Angeles, California. For more information, please visit www.sustainableexpo.com.

**H2 Expo.**
H2 Expo, the International Trade Fair for Hydrogen and Fuel Cell Technologies, will be held October 9-11, 2003, in Hamburg, Germany. For information, go to www.h2expo.de.

**2004 Future Car Congress.**
The Society of Automotive Engineer’s Future Car Congress will be held June 27-30, 2004, at the Marriott Wardman Park Hotel in Washington DC. For details, go to http://www.futurecarcongress.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.*