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.

**TRANSPORTATION**

**Nissan Unveils New FCV.**
Nissan unveiled its X-TRAIL FCV fuel cell vehicle powered by a 75kW UTC Fuel Cells (UTCFC) hydrogen power plant in Tokyo, Japan. The vehicle is the first produced under agreements signed between Nissan and UTC Fuel Cells to develop fuel cells and fuel cell components for vehicles. Nissan intends to start public road testing of the vehicle, which is fueled by compressed hydrogen, in Japan.

**DaimlerChrysler to Test FCVs in Japan Next Year.**
DaimlerChrysler plans to field-test eight hydrogen-powered fuel cell vehicles (FCVs) on public roads in Japan next year. The F-Cell prototype FCVs to be tested are based on its Mercedes-Benz A-class subcompact car and have a top speed of approximately 140 kilometers per hour (about 87 miles per hour). The FCV is able to travel 150 kilometers (about 93 miles) without needing to refill its 1.8-kilogram compressed hydrogen fuel storage tank.

**GM, FedEx to Conduct FCV Project in Tokyo.**
General Motors Corporation and FedEx Corporation plan to launch a joint project next year in Tokyo, Japan that will examine the use of fuel cell vehicles (FCVs) for package delivery service. The FCVs to be used in the yearlong project will be based on the Opel Zafira minivan.

**Hydrogenics Selected by John Deere to Provide Power Module Demonstrator Vehicle.**
Hydrogenics Corporation has shipped its new fuel cell power module – the HyPM-LP2 – to Deere & Company (John Deere). This third-generation HyPM power module will be used as part of a technology demonstrator fuel cell-powered Commercial Work Vehicle (CWV).

**MARAD Reports on Shipboard Fuel Cell Projects.**
U.S. Department of Transportation Maritime Administration (MARAD) has entered into a Cooperative Research Agreement with SurePower Corporation to test and observe a fuel cell system's response to simulated marine power loads. The tests demonstrated that the system met all regulations as they apply to rotating, alternating and direct current generators, with the exception of the 300% overload test. MARAD also reports that San Francisco's Bay Area Water Transit Authority is actively developing a fuel cell powered ferry that will serve Treasure Island. The ferry design project is scheduled for completion in early to mid-2003, at which time funding for construction will be sought.

http://marad.dot.gov/nmrec/energy%20&%20emissions/images/Newsletter%20Fall%202002.pdf

**Astris Signs MOU With CareAction.**
Astris Energi Inc. has signed a Memorandum of Agreement (MOU) with CareAction, Inc., under which Astris will license its technology and CareAction will provide financing and management for a $15,000,000 technology and consumer product development program, centered on the transportation sector. A new company, to be called Astris Transportation Systems, Inc. (ATSI), will form an integral part of a strategic alliance between Astris, CareAction and Feel Good Cars Inc., which is also setting up operations at the same location in Montreal. The objective of this alliance is to develop a range of converted vans, passenger cars, as well as electric and hydrogen fuel cell low-speed vehicles, primarily for the burgeoning, under-served markets represented by seniors and disabled persons.

http://biz.yahoo.com/bw/021212/120086_1.html

**Ztek Joins California Fuel Cell Partnership.**
Ztek Corporation has joined the California Fuel Cell Partnership (CaFCP) to demonstrate and promote fuel cell vehicles and fuel alternatives. Ztek specializes in the manufacturing of fossil fuel-to-electricity and hydrogen conversion technology and will team up with another CaFCP associate partner, Pacific Gas and Electric Company (PG&E), to supply a hydrogen reformer system. That system, which will use natural gas to produce hydrogen, will provide fuel for the partnership's fuel cell vehicles. It will be located at PG&E’s Service Center in Auburn, Calif. Ztek will also be responsible for system installation, commissioning and service. The Auburn hydrogen station, located approximately 40 miles from the CaFCP headquarters facility in West Sacramento, will be the partnership's third hydrogen fueling station in northern California. It is expected to be operational in 2003.

http://biz.yahoo.com/bw/021218/180279_1.html

**STATIONARY POWER**

**Marubeni to Install Direct FuelCell at Nippon Metal Plant.**
The Marubeni Corporation, the Asian partner of FuelCell Energy, Inc. plans to install a 250-kilowatt (kW) Direct FuelCell (DFC) at Nippon Metal Industry
Company, Ltd.’s Sagamihara Works specialty steel production facility in Kanagawa, Japan. The DFC cogeneration unit will supply the plant with electricity and steam.
http://biz.yahoo.com/prnews/021216/nym085_1.html

**FDEP and FPL Join for Yearlong Fuel Cell Test.**
The Florida Department of Environmental Protection (FDEP) has joined with Florida Power and Light Company (FPL) to launch a yearlong demonstration project to study fuel cell technology. Under the research program, the agency has installed a five-kilowatt, natural gas-powered fuel cell at Hugh Taylor Birch State Park that will provide electricity for FPL’s distribution network.
http://www.dep.state.fl.us/secretary/comm/2002/02_1212fpl.htm

**PORTABLE/BACKUP POWER**

**Coleman Unveils AirGen Fuel Cell Generator.**
Coleman Powermate introduced a new fuel cell powered generator unit designed to operate as a portable power source or as an emergency backup power system. The new AirGen Fuel Cell generator, which features a Nexa power module manufactured by Ballard Power Systems, Inc., is able to provide up to 1,000 watts.
http://www.airgen.com/

**FUELS/REFORMERS/STORAGE**

**Stuart Energy Unveils First Jointly Developed PEM-based Hydrogen Fueling Prototype.**
Stuart Energy Systems Corporation and Hamilton Sundstrand Space Systems International, Inc., unveiled a jointly developed prototype hydrogen fueling system at the Electric Transportation Industry conference in Florida. The system uses water and electricity to produce pure hydrogen for vehicle fueling and power applications and will be utilized by NASA for oxygen generation on the International Space Station.

**Dynetek to Provide Storage for Bus Project.**
Dynetek Industries Ltd. is participating in a new $8 million hybrid fuel cell bus project. Hydrogenics Corporation is leading the project along with other industrial partners and Natural Resources Canada (NRCan) is committing $3 million of the total project over a three-year period. Dynetek is developing the complete fuel storage solution using its certified hydrogen fuel storage system.
http://micro.newswire.ca/releases/December2002/12/c3065.html/47875-0

**Airgas Signs Hydrogen Marketing Agreement with Aperion.**
Aperion Energy Systems LLC, and Airgas, Inc., announced an agreement for
Airgas to offer hydrogen fuel and related services to Aperion’s fuel cell customers. Airgas will provide Aperion customers with services related to fuel supply, including site preparation, installation, monitoring and fuel replenishment, as well as safety consultation regarding storage and use of hydrogen and hydrogen-rich fuels. The companies will also work together on the commercialization and distribution of hydrogen-rich fuel alternatives to compressed gas cylinder hydrogen, including Aperion's low-pressure hydrogen generation systems.


**Methanex Enters Supply Agreement With Lyondell.**

Methanex Corporation has entered into an exclusive agreement with Lyondell Chemical Company under which Methanex will supply methanol feedstock to Lyondell in both North America and Europe. The supply agreement is scheduled to begin in January and will be phased in over time. Methanex will acquire, for $10 million, Lyondell's methanol customer contracts in North America beginning in 2004 and will retain certain production rights to Lyondell's 750,000-ton-per-year methanol facility in Channelview, Texas.


**FUEL CELL COMPONENTS**

**AMI to Build Fifteen SOFC Test Stands.**

Advanced Measurements (AMI) has been awarded a contract to build fifteen solid oxide fuel cell (SOFC) test stands for a fuel cell development company based in the Western U.S. The SOFC test stands will be delivered in two shipments to the customer later this year and first quarter 2003.

http://64.69.77.104/generic_frames.asp?content_page=news.htm

**Honeywell Receives $1.5 Million from DOE.**

The U.S. Department of Energy (DOE) awarded Honeywell Sensing and Control a $1.5 million appropriation to create physical sensors suitable for monitoring and controlling a polymer electrolyte membrane (PEM) fuel cell-based power plant. Honeywell Sensing and Control is a unit of the company’s Automation and Control Solutions division. Honeywell will spend the next three months working with industry leaders in fuel-cell development in the U.S. and Europe to define the technical requirements for each physical sensor. The company will then use its extensive knowledge of sensors and sensor packaging to develop solutions that minimize size and cost. Prototype sensors will be designed, fabricated and tested in third-party fuel-cell systems and fuel-processor companies.

**REPORTS/MARKET STUDIES**

**Automakers on Fuel Cells.**

Fuel Cells 2000 has released a new free report, *Automakers on Fuel Cells*. The report focuses on statements made by the CEOs and Project Managers of GM,
Ford, DaimlerChrysler, Honda, Toyota, Nissan and others. It concludes that fully commercial fuel cell vehicles will be available in the marketplace by 2010.

**New DG Study.**
Jackson Associates released "Applying Distributed Generation Strategies to Ease the Long Island Power Crises," which examines the ability of such distributed generation (DG) technologies as fuel cells, microturbines and engines to help meet power needs in Long Island, New York. According to the study, as much as 63 percent of the 1,000-megawatt capacity shortfall expected by the Long Island Power Authority (LIPA) during the next nine years could potentially be offset through the use of DG technologies located at or near customer sites.
http://www.maisy.com/wpdglipa.htm

**MISCELLANEOUS**

**Fuel Cells 2000 Releases New Fuel Cell Directory.**
Fuel Cells 2000 has just published the Seventh Edition of its Fuel Cell Directory. The 206-page directory lists more than 985 organizations, and covers the entire industry - fuel cell developers, researchers, distributors and consultants, suppliers, component manufacturers, utilities, universities, publications, associations or government agencies and laboratories. Entries include address, phone number, email, company URLs, stock symbols, investor, media and human resource contacts, and the name of the President or CEO, as well as a description of the company and current research projects. The Seventh Edition of the Fuel Cell Directory costs $125.00. Non-profit organizations, college and university libraries, and news outlets may request a free PDF copy of the Fuel Cell Directory. Electronic versions of the Directory are available on diskette or CD-ROM in MSExcel format for $500.00. The Directory is also available in Microsoft Access upon request.
http://www.fuelcells.org/pubs.doc

**Stuart Energy to Acquire Vandenborre.**
Stuart Energy Systems Corporation has entered into an agreement to acquire Vandenborre Technologies NV, which also operates under the name Vandenborre Hydrogen Systems. Subject to shareholder and regulatory approvals, Stuart Energy will pay approximately CDN $9.9 million in cash and 7.3 million common shares of Stuart Energy. The total value of the transaction, currently estimated at CDN $28 million, will be determined by Stuart Energy’s share price on the transaction closing date. The two companies believe that their combined leading-edge hydrogen generation technologies and global market position will make the consolidated company the undisputed world leader in the provision of onsite, electrolysis-based hydrogen infrastructure solutions for power generation, vehicle fueling and industrial markets.
Anuvu Signs Manufacturing Agreement with Celerity.
Anuvu Fuel Cell Products, Inc. has entered into a memorandum of understanding (MOU) with Celerity, Inc. under which Celerity will provide manufacturing and associated management services to Anuvu. Additionally, Celerity will manufacture fuel cells according to strict protocols established by Anuvu.

REQUESTS FOR PROPOSALS

Minority Institutions Solicitation.
DOE has issued the solicitation "Support of Advanced Fossil Resource Utilization Research by Historically Black Colleges and Universities and other Minority Institutions," which includes two program areas of interest related to fuel cells. "Clean Fuels Technology" seeks proposals for research related to the production of hydrogen and other premium fuels and products from coal. "Fuel Cells" seeks proposals focused on SOFC systems as relates to the Solid State Energy Conversion Alliance (SECA) Program goals.
https://e-center.doe.gov/iips/busopor.nsf/1be0f2271893ba198525644b006bc0be/f0e65f12f0d9028785256c7e00701f8c?OpenDocument

CECOM Program to Test & Compare Fuel Cells.
The U.S. Army Communications-Electronics Command (CECOM) has received approval to initiate the Foreign Comparative Test Program for High Power Density Fuel in FY2003. Five candidate fuel cell power systems have been identified by CECOM. Additional fuel cells are sought in several categories, in both the 25-watt and >500-watt sizes: hydrogen-based systems, hydrogen-based hybrid systems (with battery), methanol systems, and alternative fuel systems. Only technology suitable for testing by July 2003 will receive consideration. Responses to this solicitation are due by January 23, 2003.
http://www.eps.gov/spg/USA/USAMC/DAAB15/DAAB15-03-R-0004/SynopsisP.html

CCEF Solicitation.
The Connecticut Clean Energy Fund (CCEF) has recently issued an RFP to promote clean reliable distributed generation in Connecticut and to promote the commercialization of fuel cells. Two categories of projects that are being solicited in the RFP: Commercial Operation Projects, which consist of the installation of commercially-ready fuel cells in high value applications; and Demonstration Projects, which consist of the installation of near-commercial fuel cell units to track performance and gather data to accelerate their commercialization. A pre-bid conference will be held on January 9, 2003, from 9 a.m. to 12 p.m., at the Hartford Marriott/Rocky Hill. The deadline to submit round one proposals is 3:00 PM on January 30, 2003 at the CCEF offices. RFPs can
CONFERENCES/CALL FOR PAPERS

Clean Heavy-Duty Vehicles.
The 3rd Annual “Clean Heavy-Duty Vehicles: Setting the Direction for Advanced Technologies and Fuels” Conference will be held at the Mission Palms Hotel in Tempe, Arizona on February 19-21, 2003. For more information, please go to www.weststart.org.

Fuel Cell Investment Summit.

Primary and Secondary Batteries.
The 20th International Seminar and Exhibit on Primary and Secondary Batteries takes place March 17-20, 2003, at the Broward County Convention Center in Ft. Lauderdale, Florida. For details, go to www.POWERSOURCES.net.

ICEPAG 2003.
The 5th Annual International Colloquium on Environmentally Preferred Advanced Generation will be held on March 18-19, 2003, at the Radisson Hotel in Newport Beach, California. For more information, visit http://www.parcon.uci.edu/icepag2003/index.htm.


AAB Conference.
The 3rd International Advanced Automotive Battery Conference will be held at the Acropolis Convention Center in Nice, France, June 10-13, 2003. For more information, go to http://www.advancedautobat.com/aabc_current.html.

Grove Fuel Cell Symposium.

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.