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FUEL CELL CONNECTION -- May 2001 Issue

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News on U.S. Government Fuel Cell Programs

1. *White House Unveils Energy Plan, Incentives for Hydrogen & Fuel Cells*

President Bush's National Energy Policy Development Group issued its long-awaited report calling for a series of 105 recommendations, many of which could impact the use of fuel cells and hydrogen. Recommendations of interest to the fuel cell industry include: tax credits for the production of electricity from landfill methanol gas that could employ fuel cells; development of a hydrogen education campaign; tax credits for the purchase of new hybrid or fuel cell vehicles between 2002 and 2007; support of the DOT's fuel cell-powered transit bus program; and encouraging the development of combined heat and power units.

<http://www.whitehouse.gov/energy>

2. *HTAP Honors LLNL for Hydrogen Storage Breakthrough*

Lawrence Livermore National Laboratories has been awarded the Technology Innovation Award by the Hydrogen Technical Advisory Panel for its work on achieving a breakthrough in hydrogen storage, which allows a record 11.3% hydrogen storage by weight at 5,000 psig (350 Bar).

<http://www.qtw.com/Press/5-14-01.htm>

3. *DARPA Donates Fuel Cells to Marine Corps Communications and Electronics School*

The Defense Advanced Research Projects Agency (DARPA) recently donated two hydrogen-powered fuel cells for use by students at the Marine Corps Communications and Electronics School (MCCES). DARPA's partnership with the Marine Corps allows DARPA to field test new ideas while providing the Corps with a glimpse of emerging technologies.

<http://www.usmc.mil/marinelink/mcn2000.nsf/main5/DEC4B7BB40CA968985256A3400690559?opendocument>

4. *NETL Releases New CD-Rom on Hybrid Fuel Cell Technology*

DOE's National Energy Technology Laboratory has released a new CD-Rom entitled "Hybrid Fuel Cell Technology Overview," which is available free-of-charge through NETL's web site.

<http://www.netl.doe.gov/publications/descriptions.html>

5. *Sandia Labs Touts New "Hydrogen Getter" Technology*

The Winter 2000-2001 issue of the "Sandia Technology" newsletter of Sandia National Laboratory touts the Lab's new patented "hydrogen getters," which use polymers with double bonds to catch hydrogen atoms. The hydrogen getters remove hydrogen build-up inside sealed chambers of heat exchangers, but a patented spin-off technology can remove hydrogen build-up in sealed consumer products that use batteries.

http://www.sandia.gov/media/periodic/STech/ST2000_01v2No4.pdf

6. *EPA to Host "Cradle-to-Grave" Analysis of Fuel Cell Applications Workshop*

The U.S. Environmental Protection Agency's National Risk Management Research Laboratory is hosting an "Environmental Cradle-to-Grave Analysis of Fuel Cell Applications Workshop" June 26-27, 2001, at the Kingsgate Marriott in Cincinnati, Ohio. Registration information is available from Lisa E. Mahoney, at Email: lisa.e.mahoney@saic.com.

7. Presidential Directive Encourages Use of Fuel Cells for Federal Facilities

President Bush has issued a directive to the heads of federal agencies to take actions to conserve energy at their facilities, including considering adding on-site generation using fuel cells, renewable, or other "appropriate technology" for long term solutions.

http://www.eren.doe.gov/femp/resources/dir_plan.html

8. PNNL Establishes Online List of Technologies Available for Licensing or Commercialization

Pacific Northwest National Laboratory has established an online, searchable list of technologies available for licensing or commercialization, including technologies in areas such as advanced materials, energy, transportation, and environment.

<http://www.pnl.gov/hightechcomm/index.htm>

9. DOE Building Envelope Technology Roadmap Now Available

DOE has partnered with the building industry to define a roadmap for more efficient, occupant-friendly buildings. The "Building Envelope Technology Roadmap" calls for energy positive homes by 2020, which minimize heating, cooling, and lighting loads, and "meet remaining loads with non-polluting energy sources." The Roadmap also calls for the allowance of net metering.

<http://www.energy.gov/HQPress/releases01/maypr/pr01071.htm>

10. DOE/EU Sign Co-Operation Agreements on Energy Research

EU Research Commissioner Philippe Busquin and US Secretary of Energy Spencer Abraham signed an Implementing Arrangement covering scientific co-operation in the field of non-nuclear energy. The main fields of collaboration are for fuel cell technology, hydrogen production technologies, solar energy and biomass.

http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/01/684|0|RAPID&lq=EN

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**RFP/Solicitation News**  
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11. Fuel Cells for Auxiliary and Portable Power Topic of CARAT Program Solicitation

DOE's Cooperative Automotive Research for Advanced Technologies (CARAT) Program has issued a solicitation for proposals on seven topics, including Fuel Cells for Auxiliary and Portable Power. The value of individual awards is expected to equal up to \$150,000, for a project of up to 12 months. Pre-applications are encouraged, and the deadline for pre-applications is May 30, 2001. Completed proposals are due by July 16, 2001.

<http://www.ch.doe.gov/business/acq/carat3/carat3.htm>

12. Solicitation Expected on DER for Data Processing and Telecommunications Industries

Oak Ridge National Laboratory (ORNL) will issue in early-June 2001, an RFP to encourage widespread adoption and implementation of Distributed Energy Resources (DER) in the data processing and telecommunications industries. Cooperative/collaborative projects involving end-users, equipment manufacturers and suppliers, utilities and other energy providers are encouraged. DER technologies include fuel cells, microturbines, renewable technologies, and hybrid combinations. The deadline for proposals is expected to be June 15, 2001. Those interested in receiving the RFP should submit an expression of interest (EOI) by email to Cecilia Jones (jonescf@ornl.gov).

13. Air Force Seeks Logistic Fueled Fuel Cell for AEF Applications

Through the DOD Dual Use Science and Technology (DUS&T) program's BAA, the Air Force is seeking proposals for a "Logistic Fueled Fuel Cell for Aerospace Expeditionary Force Applications." Approximately \$1.4 million is available for a 36-month program. Successful proposals in this topic area will develop fuel cell power plants in the 5-10 kW range. White papers are due by June 15 and the deadline for full proposals is August 21, 2001.

<http://www.dtic.mil/dust/fy02baa.htm>

14. NASA Seeks University Partners for Space Propulsion Technologies

NASA plans to implement a number of University-based research centers to research and exploit innovative, cutting-edge, emerging opportunities for technology that can have a revolutionary impact on the missions that NASA pursues in the future. Specific areas of interest within the propulsion topics include Innovative Fuel Cell Stack Anode/Electrolyte/Cathode optimization and integrated miniaturized power distribution systems. NASA is expected to provide initial funding of up to \$3.0 million per year per research center for up to five years. White papers are due by June 15 and the deadline for full proposals is December 14, 2001.

<http://nais.msfc.nasa.gov/cgi-bin/EPs/synopsis.cgi?acqid=96977>

15. California Grant Program Gives Funding for Purchase of Fuel Cell Generation Systems

The California Energy Commission is now accepting applications on a first-come, first-served basis for funding under its Solar Energy and Distributed Generation Grant Program, which provides up to \$2,000 or 10 percent of the total system cost (whichever is less) for eligible distributed generation systems, including fuel cells. At this time, a minimum of \$750,000 is available. Applications are due by June 29, 2001, but since the funding is given first-come, first-served, applicants are encouraged to apply as soon as possible.

<http://www.consumerenergycenter.org/solaranddg/about.html>

16. DOD SBIR Solicitation Issued, Army Seeks Fuel Cell/Hydrogen Proposals

Army Topics within the new DOD Small Business Innovation Research Program Solicitation include "Hydrogen Source for Small PEM Fuel Cell Systems," "New Electrode Materials for Batteries and Fuel Cells," and "Innovative Conformal Power Sources for Advanced Smart Munitions." Phase I awards are typically \$60,000 to \$100,000 in size over a period not to exceed six months. DOD will begin accepting proposals on July 2, 2001, and the deadline for submitting proposals is August 15, 2001.

http://www.acq.osd.mil/sadbu/sbir/solicitations/sbir012/dod_sbir012.htm

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**Contract Awards**  
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17. Solid Oxide Project Receives \$1.7 Million from ATP

Blasch Precision Ceramics has been awarded \$1.7 million in funding from the National Institute of Standards & Technology's Advanced Technology Program (ATP) for a three-year project to develop an innovative continuous manufacturing process to inexpensively produce cathode materials for SOFCs.

<http://jazz.nist.gov/atpcf/prjbriefs/prjbrief.cfm?ProjectNumber=00-00-3962>

18. DARPA Funding Goes to Develop Materials for Miniature Fuel Cells

Superior MicroPowders has been awarded a \$1 million follow-on contract to develop materials, processes and fabricated components for small fuel cells and metal-air batteries. The contract is with CMS Techtronics, and is part of DARPA's Mesoscopic Integrated Conformal Electronics (MICE) Program. The materials and structures developed in this program are also being incorporated into alkaline, PEM and direct methanol fuel cells.

[http://www.smp1.com/news/releases.asp?RECORD_KEY=\\$queryString&ID=29&Month=5&Date=4&Year=2001](http://www.smp1.com/news/releases.asp?RECORD_KEY=$queryString&ID=29&Month=5&Date=4&Year=2001)

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**Legislation**  
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19. TNRCC to Vote on Revised Standard Permit for Distributed Generation

The Texas Natural Resource Conservation Commission is considering a revised Standard Permit applicable to distributed generation units. One of the significant changes in the revision is a revised fee structure for small units and very clean small units. The revision also creates separate standards for "waste gases" such as landfill, digester and oil field. The result of the vote, scheduled for May 23, was not available at the time of publication.

<http://www.eren.doe.gov/distributedpower/news.asp?Item=66>

http://www.tnrcc.state.tx.us/permitting/airperm/nsr_permits/announce.htm

20. California Increases Cash Rebates on Emerging Renewables and Fuel Cells

The California Energy Commission has approved an increase in rebates for emerging renewables and fuel cell power generators from \$3,000 per kilowatt to \$4,500 per kilowatt, or 50 percent off the system purchase price (whichever is less). Power produced by the systems purchased should not exceed 200 percent of the site's historical or current electricity needs.

<http://www.energy.ca.gov/greengrid/index.html>

21. Washington State Legislature Extends Tax Exemptions for Fuel Cell Projects

The Washington State Legislature has passed legislation to extend tax exemptions for small solar, wind and fuel cell projects. The legislation was signed into law on May 8 by Washington Governor Gary Locke, along with two other energy related bills.

<http://www.governor.wa.gov/press/2001/01050801.htm>

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**Industry Headlines**  
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22. H Power to Market Residential Fuel Cells in California

H Power has announced that it is working with Energy Co-Opportunity to market a residential fuel cell system for California. H Power expects to start manufacturing and shipping these units on a limited basis within the next several months. Altair Energy has been appointed as a non-exclusive distributor for the Southern California market.

<http://www.hpower.com/NEWSCalifornia.html>

23. GM's HydroGen1 Sets New Records

General Motors' HydroGen1 fuel cell vehicle has set 15 international records during four weeks of endurance testing at the GM Desert Proving Ground, including: 625 miles (1000 km) covered in around 11 hours 30 minutes at an average speed of 54.9 mph.

http://www.just-auto.com/news_detail.asp?art=28211&app=1&c=1

24. DCH Products to be Distributed by SunLine and IPS MeteoStar

DCH Technology has announced that SunLine Transit Authority will begin selling DCH's new family of H2SCAN hydrogen sensors. Also, IPS MeteoStar, a global supplier of remote data-logging systems, will begin distributing products with DCH portable fuel cells serving as the internal electric power supply. IPS MeteoStar's customers include the U.S. Air Force and Navy.

http://www.dcht.com/press_releases/press_release.asp?release=205

http://www.dcht.com/press_releases/press_release.asp?release=204

25. Ballard Expects Fuel Cell Car Availability in Two Years

At a recent shareholders meeting, Ballard's president, Kip Smith, said the company's automotive clients are calling for the launch of fuel cell powered cars from 2003-2006. Ballard also expects Coleman Powermate to launch its portable generators – featuring Ballard fuel cells – later in 2001.

<http://evworld.com/databases/shownews.cfm?pageid=news180501-06>

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**Administration**

Press releases and story ideas may be forwarded to Bernadette Geyer, editor, for consideration at [bernie@usfcc.com](mailto:bernie@usfcc.com).

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About Fuel Cell Connection

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***The Sponsors***

*U.S. Fuel Cell Council* -- The U.S. Fuel Cell Council is the business association for anyone seeking to foster the commercialization of fuel cells in the United States. Our membership includes producers of all types of fuel cells, as well as major suppliers and customers. The Council is member driven, with five active Working Groups focusing on: Codes & Standards; Transportation; Power Generation; Portable Power; and Education & Outreach. The Council provides its members with an opportunity to develop policies and directions for the fuel cell industry, and also gives every member the chance to benefit from one-on-one interaction with colleagues and opinion leaders important to the industry. Members also have access to exclusive data, studies, reports and analyses prepared by the Council, and access to the "Members Only" section of its web site.

[\(http://www.usfcc.com/\)](http://www.usfcc.com/)

*National Fuel Cell Research Center* -- The mission of the NFCRC is to promote and support the genesis of a fuel cell industry by providing technological leadership within a vigorous program of research, development and demonstration. By serving as a locus for academic talent of the highest caliber and a non-profit site for the objective evaluation and improvement of industrial products, NFCRC's goal is to become a focal point for advancing fuel cell technology. By supporting industrial research and development, creating partnerships with State and Federal agencies, including the U.S. Department of Energy (DOE) and California Energy Commission (CEC), and overcoming key technical obstacles to fuel cell utilization, the NFCRC can become an invaluable technological incubator for the fuel cell industry.

[\(http://www.nfcrc.uci.edu/\)](http://www.nfcrc.uci.edu/)

*National Energy Technology Laboratory* -- The National Energy Technology Laboratory is federally owned and operated. Its mission is "*We Solve National Energy and Environmental Problems.*" NETL performs, procures, and partners in technical research, development, and demonstration to advance technology into the commercial marketplace, thereby benefiting the environment, contributing to U.S. employment, and advancing the position of U.S. industries in the global market.

<http://www.netl.doe.gov>