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**FUEL CELL CONNECTION – April 2003 Issue**  
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**Administration**

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**News on U.S. Government Fuel Cell Programs**  
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*1. PNNL Unveils Micro Fuel Processor for Fuel Cells*

The Pacific Northwest National Laboratory has unveiled a new micro-fuel cell power system about the size of a cigarette lighter. The system features a microscale fuel processor that can convert methanol, butane and jet fuel (JP-8) into hydrogen for use in a fuel cell. The system can produce 20 mW at one-third of the weight of batteries with equivalent output.

<http://www.pnl.gov/news/2003/03-09.htm>

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*2. Secretary Abraham Calls for International Hydrogen Partnership*

During a presentation to the International Energy Agency Ministerial meeting, U.S. Department of Energy Secretary Spencer Abraham called for the development of international collaboration in advanced research and development to support the deployment of hydrogen and fuel cell technologies. [http://www.energy.gov/HQPress/releases03/aprpr/pr03089\\_v.htm](http://www.energy.gov/HQPress/releases03/aprpr/pr03089_v.htm)

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*3. Teledyne Delivers 5-kW PEMFC Breadboard to NASA*

Teledyne Energy Systems delivered a 5-kW breadboard PEM fuel cell power system to NASA for its Next Generation Launch Technology Program. The unit will be tested at NASA's Johnson Space Center Facility. <http://www.teledyne.com/news/5kpem.asp>

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*4. QUANTUM Delivers Hydrogen Refueling System for NASA Helios Program*

QUANTUM Technologies has delivered a hydrogen refueling station to AeroVironment for use in refueling QUANTUM's hydrogen storage tanks aboard NASA's Helios unmanned flying wing.

[http://www.qttw.com/press\\_releases/pr\\_apr\\_07\\_2003.shtml](http://www.qttw.com/press_releases/pr_apr_07_2003.shtml)

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*5. Donaldson to Team with LANL on Fuel Cell Contaminant Research*

The Fuel cell Contamination Control™ division of Donaldson Company has established a formal research partnership with Los Alamos National Lab to study the effect of ambient contaminants on the performance, life and durability of PEM fuel cells.

<http://www.donaldson.com/en/fuelcell/news/002681.html>

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*6. Avista Labs Completes Demo with Army Corps of Engineers*

Avista Labs has completed a year-long demonstration of one of its SR-72 three-kilowatt fuel cell power plants installed at the Washington Air National Guard facility at Geiger Field in Spokane, Washington. The system achieved an availability of 93.24 percent, exceeding its 90 percent goal.

[http://www.avistalabs.com/news\\_over.asp#828](http://www.avistalabs.com/news_over.asp#828)  
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7. *National Academy of Sciences Publishes Hydrogen Production Letter Report*

The National Academy of Sciences has presented "Future Hydrogen Production and Use: Letter Report" to Steve Chalk, Director of the DOE Office of Hydrogen, Fuel Cells, and Infrastructure Technologies. The report recommends DOE make a significant effort to address safety issues and proposes the establishment within the hydrogen program of an independent systems engineering and analysis group to identify the impacts of various technology pathways.

[http://www.nap.edu/catalog/10680.html?onpi\\_listserv041103](http://www.nap.edu/catalog/10680.html?onpi_listserv041103)

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**RFP/Solicitation News**  
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8. *CECOM Seeks Man-Portable 1-kW Fuel Cell Systems*

The U.S. Army Communications-Electronics Command is searching for sources of liquid-fueled fuel cell power systems that produce a full continuous power output of 1-kW. The program specifically seeks fully integrated, non-proof of concept systems that contain a fuel cell, fuel delivery/storage, process control systems, power electronics, BOP, data collection hardware/software, and weighs less than 300-lbs. wet. Deadline for responses is May 7, 2003.

<http://www.eps.gov/spg/USA/USAMC/DAAB15/DAAB15-03-Q-3000/listing.html>

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9. *California Energy Commission Announces International Energy Fund Solicitation*

The California Energy Commission has announced its annual International Energy Fund Solicitation to assist California firms in performing project development activities leading to export of technology and services for power generation and energy-related projects in foreign nations. Final proposals are due May 7, 2003.

[http://www.energy.ca.gov/contracts/2003-03-26\\_notice.html](http://www.energy.ca.gov/contracts/2003-03-26_notice.html)

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10. *NNSA Solicitation for R&D to Improve Efficiency of Class 3-8 Trucks*

The National Nuclear Security Administration Service Center has issued a solicitation that includes a call for R&D in five topic areas to improve the efficiency and emissions performance of class 3-8 trucks. Topic 5 is "Innovative Technologies" which includes any non-engine innovative technologies that doesn't fit into topics 1-4, but will save a significant amount of fuel and/or reduce emissions in class 3-8 trucks. Deadline for proposals is May 15, 2003.

<http://e-center.doe.gov/iips/busopor.nsf/a62beb2f6e6159ac852566c60075270a/9e2ee5ea4b3be0cf85256ce40077b52f?OpenDocument>

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11. *DOE and USDA Biomass Solicitation Includes Fuel Cell Technologies*

The Department of Energy and the U.S. Department of Agriculture have issued a joint solicitation under the Biomass Research and Development Initiative. Topics covered by the solicitation include the use of fuel cells for production of electricity from biomass. USDA intends to make up to \$16 million available under this solicitation. Deadline for proposals is May 16, 2003.

<http://www.bioproducts-bioenergy.gov/pdfs/BiomassRFP2003.pdf>

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12. *Fuel Cell APU Solicitation Issued*

The Department of Energy has issued a solicitation titled "Research, Development, and Integration of Energy-Efficient Technologies in Portable Power, Auxiliary Power Units, and Off-Road Fuel Cell Applications." The three topics covered by the solicitation are: Fuel Cells for Consumer Electronics Devices; Fuel Cells for Auxiliary Power Generation; and Research and Development for Off-Road Fuel Cell Applications. Approximately \$21 million is available for this solicitation. Questions about the solicitation must be submitted by May 22, 2003. Deadline for

proposals is June 5, 2003. <http://e-center.doe.gov/iips/busopor.nsf/a62beb2f6e6159ac852566c60075270a/390c3f6609c993e585256d0300678369?OpenDocument>

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*13. USDA Grants for Renewable and Energy Efficiency Technology Purchases*

Section 9006 of the Farm Bill authorized creation of the Renewable Energy Systems and Energy Efficiency Improvements Program. Grants are now available under the program for purchase of commercial or pre-commercial technologies, including fuel cells that use hydrogen derived from biomass or water using wind, solar, or geothermal energy sources. A total of \$23 million in grants is available for FY2003. Proposals are due by June 6, 2003  
<http://www.rurdev.usda.gov/rd/farmbill/9006resources.html>

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*14. DUS&T BAA Features Fuel Cell Topic*

"Fuel cell Power Generators Based On Primary Chemical Hydride Fuels" is a topic in the FY04 Dual Use Science and Technology (DUS&T) Program solicitation. Approximately \$1.5 million is available for this topic. Proposals are due June 17, 2003.  
<http://www.eps.gov/spg/USAF/AFMC/AFRLWRS/BAA-AFRL-03-10/SynopsisP.html>

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**Contract / Funding Awards**  
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*15. SECA Announces Two New Fuel Cell Projects*

DOE's Solid-State Energy Conversion Alliance (SECA) has announced plans to add two new projects its program. Two new teams, headed by FuelCell Energy and Acumentrics, will join four other industry development teams already in SECA.  
[http://www.fossil.energy.gov/techline/tl\\_fuelcell\\_seca2sel\\_print.html](http://www.fossil.energy.gov/techline/tl_fuelcell_seca2sel_print.html)

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*16. California Energy Commission Funds Fuel Cell, Hydrogen Projects Through EISG Program*

The California Energy Commission has awarded 12 grants through its Energy Innovations Small Grant Program. Two of the solicitations are for fuel cell and hydrogen projects: \$75,000 to H2Systems, Inc., for "Feasibility of a Hydrogen Blower design for Fuel Cell Recirculation Applications; and \$75,000 to Benemann Associates for Hydrogen-Methane Waste Fermentations for Clean Electricity Generation.  
[http://www.energy.ca.gov/contracts/smallgrant/2003-02-21\\_awards\\_02-02.html](http://www.energy.ca.gov/contracts/smallgrant/2003-02-21_awards_02-02.html)

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*17. \$3 Million Awarded to University of Alabama-Birmingham for Fuel Cell, Hydrogen Projects*

The University of Alabama at Birmingham School of Engineering has received \$3 million from two federal agencies – DOE and Federal Transit Administration – to study the use of hydrogen as an alternative energy source and to set up a consortium in the Southeast that will help create a hydrogen delivery infrastructure. <http://main.uab.edu/show.asp?durki=57437>

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*18. US Navy Intends to Purchase IdaTech Fuel Cell*

The U.S. Navy has issued a presolicitation notice that it intends to purchase a Model FCS1200 fuel cell system from IdaTech for testing purposes.  
<http://www.eps.gov/spg/DON/NAVSEA/N00164/N0016403Q0187/SynopsisP.html>

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## Legislation / Regulations

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### 19. CARB Approves ZEV Regulation Revision

The California Air Resources Board has approved a revision to its ZEV regulations that would require automakers to meet original program goals or continue their research programs in fuel cell vehicles. As evidence of good faith in the research, manufacturers would be required to produce a total of 250 vehicles by 2008, 2,500 vehicles between 2009-2011, 25,000 vehicles between 2012-2014 and 50,000 vehicles between 2014-2017. More details, and the staff presentation to the Board, are available at the link below.

<http://www.arb.ca.gov/msprog/zevprog/2003rule/2003rule.htm>

### 20. California PUC Exempts Small Renewable/Clean Power from Surcharges

The California Public Utilities Commission has exempted many types of small, renewable, and clean self-generation – including fuel cells smaller than 1 MW that are net metered – from utility surcharges. The exemptions are available to customers of Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric Company.

[http://www.cpuc.ca.gov/PUBLISHED/NEWS\\_RELEASE/24968.htm](http://www.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/24968.htm)

## State Activities

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### 21. New Mexico Launches Hydrogen Plan

In an effort to position itself as a national leader in technological advances, the state of New Mexico has launched a hydrogen plan. The state, in conjunction with Hydrogen Technology Partnership (HyTeP) sponsored a one-day workshop to better define how to establish a hydrogen-based industry in New Mexico.

<http://www.abqjournal.com/biz/outlook/861522biz04-24-03.htm>

### 22. Montana Hydrogen Energy Plan Passed by State Legislators

The state of Montana has passed a resolution authorizing the establishment of the Montana Hydrogen Energy Plan which will include the establishment of the Montana Hydrogen Futures Project as the key economic development focus of the state.

<http://data.opi.state.mt.us/bills/2003/billhtml/HJ0026.htm#About>

### 23. Illinois Looks to Build Fuel Cell Industry

The state of Illinois' Department of Commerce and Economic Opportunity (DCEO) and the Illinois Coalition held its first "Building an Illinois Fuel Cell Industry" meeting. DCEO and the Coalition are facilitating the collaboration of industry, government and academic leaders to develop a plan that will lead to the development of a productive fuel cell industry in Illinois over the next five years.

<http://media.prnewswire.com/en/jsp/latest.jsp?resourceid=2437347@access=EH>

## Industry Headlines

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### 24. BMW, GM Join to Develop Liquid Hydrogen Refueling Technology

BMW and General Motors announced the companies will jointly develop refueling devices for liquid hydrogen vehicles, and invite other carmakers and suppliers to join the initiative. The collaborative work will center on setting global standards, establishing specifications for suppliers and finding the best technical and cost-effective solution.

<http://media.prnewswire.com/en/jsp/latest.jsp?resourceid=2432013&access=EH>

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*25. EU High Level Group on Fuel Cells and Hydrogen Issues Preliminary Draft Report*

The European Union's High Level Group on Hydrogen and Fuel Cells has released a preliminary draft of a "vision" of the possible role that hydrogen and fuel cells could play in achieving a sustainable energy system. The final vision report will be presented at a conference on hydrogen and fuel cells to be held in Brussels June 16-17, 2003.

[http://europa.eu.int/comm/research/energy/nn/nn\\_rt\\_hlg3\\_en.html](http://europa.eu.int/comm/research/energy/nn/nn_rt_hlg3_en.html)

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*26. Review of Small Stationary Reformers for Hydrogen Production Posted*

The Alternative Fuels Data Center has posted the "Review of Small Stationary Reformers for Hydrogen Production" published by Princeton University's Center for Energy and Environmental Studies. The report was completed for the International Energy Agency Agreement on the Production and Utilization of Hydrogen Task 16, Hydrogen from Carbon-Containing Materials.

<http://www.afdc.doe.gov/pdfs/31948.pdf>

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*27. Canadian Fuel Cell Commercialization Roadmap Available*

The Canadian Fuel Cell Commercialization Roadmap is an industry-led planning process supported by the Government of Canada and facilitated by Industry Canada. It contains a profile of the Canadian fuel cell industry, as well as a comprehensive set of commercialization strategies and actions.

<http://strategis.ic.gc.ca/epic/internet/inmse-epe.nsf/vwGeneratedInterE/ep00027e.html>

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*28. Eighth Grove Fuel Cell Symposium*

Eighth Grove Fuel Cell Symposium – "Building Fuel Cell Industries" – ExCeL, London, UK. 24-26 September 2003 – <http://www.grovefuelcell.com>. Conference: sm.wilkinson@elsevier.com. Exhibition: pamchattin@aol.com.

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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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**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 six active Working Groups focusing on: Codes & Standards; Transportation; Power Generation; Portable Power; Stack Materials and Components; 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/)

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[\(http://www.netl.doe.gov/\)](http://www.netl.doe.gov/)