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**FUEL CELL CONNECTION – September 2003 Issue**  
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News on U.S. Government Fuel Cell Programs

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### 1. Air Force Base to Test Fuel Cell

Robins Air Force Base, in Georgia, will test a fuel cell unit, which will provide not only electricity, but heat to produce hot water for showering, laundering and cooking needs.

[http://www.af.mil/stories/story\\_print.asp?storyID=123005525](http://www.af.mil/stories/story_print.asp?storyID=123005525)

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### 2. Delphi Demonstrates Fuel Cell Using Gasified Coal

Through its work with the DOE's Solid State Energy Conversion Alliance (SECA), Delphi Corporation has demonstrated a Generation-2 solid oxide fuel cell using coal-derived fuel gas.

[http://www.seca.doe.gov/seca-today/News/news\\_090403.pdf](http://www.seca.doe.gov/seca-today/News/news_090403.pdf)

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### 3. NIST to Rate the Performance of Residential Fuel Cells

The Department of Commerce's National Institute of Standards and Technology (NIST) is drafting fuel cell test procedures and rating methodology for residential fuel cells. The effort seeks to better understand how changing electrical and heating demands, outside temperatures, humidity and power systems affect the efficiency of fuel cells for residential applications. NIST will submit the draft procedures to a standards committee composed of industry, independent standard organizations, government and academic representatives.

[http://www.nist.gov/public\\_affairs/techbeat/current.htm](http://www.nist.gov/public_affairs/techbeat/current.htm)

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### 4. DARPA-Funded Project Uses Microbial Fuel Cell to Generate Electricity from Sugar

Research funded by the Office of Naval Research, the Department of Energy, and the Defense Advanced Research Projects Agency (DARPA) has developed a microbial fuel cell that converts sugar to electricity.

<http://www.umass.edu/newsoffice/archive/2003/090703lovely.html>

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### 5. NRC Report Touts Fuel Cells to Aid U.S. Aviation Industry

A new report from the National Research Council notes that major improvements are needed in the U.S. aviation industry, and that fuel cell technology could aid in reduction of emissions and noise pollution from airplanes. The report is called "Securing the Future of U.S. Air Transportation: A System in Peril."

<http://www4.nationalacademies.org/news.nsf/isbn/0309090709?OpenDocument>

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### 6. IPHE Ministerial Meeting Set for November

The International Partnership for the Hydrogen Economy will hold a Ministerial Meeting November 18-21, 2003, in Washington, DC. The meeting will bring together energy ministers from 15 countries to discuss common areas of interest in, and obstacles to, the hydrogen economy. <http://www.usea.org/iphe.htm>

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RFP/Solicitation News

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### 7. CEC Increases Amount Available for Low-Interest Loans for Energy Efficiency Projects

The California Energy Commission is offering low-interest loans for the installation of energy saving technologies, including fuel cells. The maximum loan amount per application has been increased to \$3 million. Up to \$35 million total is available under this solicitation. Loan applications are being accepted on a first-come, first-served basis until the funds are exhausted or a new notice is issued.

[http://www.energy.ca.gov/contracts/efficiency\\_pon.html](http://www.energy.ca.gov/contracts/efficiency_pon.html)

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### 8. ORNL Extends Deadline for FreedomCAR Solicitation

Oak Ridge National Laboratory has extended the deadline for responses to its Request for Proposals from suppliers to provide support in the R&D efforts of fuel cell and advanced vehicle power electronics and machinery applications. The new deadline is October 7, 2003.

<http://www.eps.gov/spg/DOE/ORNL/ORNL/6400002514S/Modification%2002.html>

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### 9. NETL University Coal Research Solicitation to Include Fuel Cell, Hydrogen Topics

Fuel cell and hydrogen technical topics will be included in a solicitation expected from DOE's National Energy Technology Laboratory, entitled "Support of Advanced Coal Research at U.S. Colleges and Universities." Topics include "Materials for Hydrogen Storage," "Solid Oxide Fuel Cells Sealing Systems," and "Novel CO<sub>2</sub> and/or Hydrogen Separation Technology." The anticipated deadline for the solicitation is November 6, 2003. <https://e-center.doe.gov/iips/busopor.nsf/1be0f2271893ba198525644b006bc0be/25b8ac33e0df52ac06256da6005369b0?OpenDocument>

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### 10. DOE Issues Hydrogen Education Development Solicitation

The Department of Energy has issued a solicitation for proposals for Hydrogen Education Development. Approximately \$3.5 million will be available for projects over a five-year period under this solicitation. The deadline for proposals is December 4, 2003.

[http://www.eere.energy.gov/hydrogenandfuelcells/financial.html#ed\\_solicit](http://www.eere.energy.gov/hydrogenandfuelcells/financial.html#ed_solicit)

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### 11. Hawaii RFP Seeks Renewable Energy Projects

Renewable Hawaii, Inc. has issued an RFP to solicit proposals for the supply of renewable energy on the islands of Maui, Molokai, and Lanai. Fuel cells utilizing renewably-derived fuels, and renewable hydrogen projects are included within the scope of the solicitation. Proposals are due December 4, 2003.

<http://www.renewablehawaii.com/RenewableHawaii/home/>

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### 12. DOE Announces SBIR/STTR Topic Titles

Hydrogen projects are included among the topic titles announced for the upcoming DOE Small Business Innovation Research and Small Business Technology Transfer solicitation. Topics include "Innovative Research for the Hydrogen Economy" and "Greenhouse and Hydrogen Gas Research." Full descriptions of the 47 topics will be available on or about October 7, 2003.

Deadline for proposals is January 6, 2004.

<http://www.science.doe.gov/sbir/>

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Contract / Funding Awards

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*13. SECA Awards Phase I Grants for Fuel Cell Research*

DOE's Solid-State Energy Conversion Alliance (SECA) has awarded \$4.2 million to 10 new projects to advance fuel cell technology. Project topics include development of methods to reduce production cost of powders used in SOFC cathode materials, and development of a low-cost converter for SOFCs.

[http://www.fossil.energy.gov/news/techlines/03/tl\\_fuelcells\\_seca03sel.html](http://www.fossil.energy.gov/news/techlines/03/tl_fuelcells_seca03sel.html)

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*14. Fuel Cell, Hydrogen Projects Selected for DOE Funding*

Fuel cell and hydrogen projects were awarded funding from a DOE solicitation for crosscutting proposals to advance energy efficiency and fossil energy technologies. The five fuel cell and hydrogen projects will receive nearly \$2.6 million of the total \$12.3 million awarded through the solicitation.

[http://www.energy.gov/engine/content.do?PUBLIC\\_ID=14125&BT\\_CODE=PR\\_PRESSRELEASE  
S&TT\\_CODE=PRESSRELEASE](http://www.energy.gov/engine/content.do?PUBLIC_ID=14125&BT_CODE=PR_PRESSRELEASE&S&TT_CODE=PRESSRELEASE)

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*15. NIST ATP Funding Awarded to Fuel Cell Projects*

Four individual companies and one joint venture partnership will receive funding for fuel cell projects from the NIST Advanced Technology Program (ATP). The projects will receive a combined total of approximately \$10.3 million, about 10% of the total ATP funding awarded.

[http://www.nist.gov/public\\_affairs/releases/atpaward09-03.htm](http://www.nist.gov/public_affairs/releases/atpaward09-03.htm)

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*16. USDA/DOE Fund Biomass Hydrogen Projects*

The U.S. Department of Agriculture and DOE have awarded over \$815,000 to two hydrogen projects through their joint Biomass Research and Development Initiative. The two projects were among 19 selected under the Initiative.

<http://www.usda.gov/news/releases/2003/09/0306.htm>

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*17. Hydrogen Project Selected for I&I Funding*

Oxford Performance Materials was awarded \$250,000 for development of a higher temperature membrane and electrode assembly for PEM fuel cells through the DOE Office of Industrial Technologies' Inventions and Innovation (I&I) Program.

<http://www.oit.doe.gov/cfm/fullarticle.cfm/id=775>

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Legislation / Regulation
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*18. Congress Releases Draft Energy Bill Conference Language*

Language from the Hydrogen section of the Energy Bill drafted by conferees authorizes a total of \$2.15 billion by 2008. Several provisions that were in S.14 have been removed, including mandates of specific demonstration projects and mandates of goals for utilization of hydrogen-powered vehicles by specific dates. The language "encourages a wide range of demonstration projects, but leaves it up to the technical leaders to select those projects for which the technology is sufficiently mature to benefit..." The conference language also creates an Interagency Task Force and an Advisory Committee, which were included in both S.14 and H.R.6.

<http://energy.senate.gov/legislation/energybill2003/energybill2003.cfm>

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State Activities
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*19. Illinois 2 H2 Partnership Kicks Off Regional Forums*

The Illinois 2 H2 partnership, established earlier in 2003, has kicked off a series of regional forums that will be held over the next two months to solicit input on the development of a state roadmap to a hydrogen economy. Six forums are planned and will be open to the public.

<http://media.prnewswire.com/en/jsp/latest.jsp?resourceid=2532517&access=EH>

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Industry Headlines
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*20. Mitsubishi Motors Develops Fuel Cell Vehicle*

Mitsubishi Motors Corporation announced it has developed a fuel cell vehicle that uses a Ballard fuel cell engine.

[http://www.ballard.com/pdfs/17%20Mitsubishi\\_Grandis.PDF](http://www.ballard.com/pdfs/17%20Mitsubishi_Grandis.PDF)

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*21. Green Power Market Development Group Pledges to Buy 35MW of Hydrogen Fuel Cells*

The World Resources Institute announced that the Green Power Market Development Group, comprised of 12 major corporations, has pledged to purchase 97 megawatts of green power, including 35 megawatts of hydrogen fuel cells. The Dow Chemical Company, a member of the Group, is purchasing 35MW of fuel cells from General Motors.

[http://newsroom.wri.org/newsrelease\\_text.cfm?NewsReleaseID=260](http://newsroom.wri.org/newsrelease_text.cfm?NewsReleaseID=260)

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*22. NEC Reduces Size of Notebook Fuel Cell*

NEC has improved its fuel cell for notebooks, reducing the size of the unit by 20 percent. NEC plans to begin selling a notebook PC with a built-in fuel cell by the end of 2004.

<http://www.nec.co.jp/press/en/0309/1701.html>

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*23. Honda and Toyota Expand FCV Leasing Programs*

Honda and Toyota have both announced they are expanding their fuel cell vehicle demonstrations by leasing additional vehicles in the United States. Honda will lease two FCX cars to the city of San Francisco, in addition to the contract for five cars it signed with the city of Los Angeles. Toyota announced it will lease two additional FCHVs to UC Irvine's National Fuel Cell Research Center and UC Davis' Institute of Transportation Studies.

<http://www.toyota.com/about/news/environment/2003/09/24-1-fchv.html>

<http://world.honda.com/news/2003/4030925.html>

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*24. Wayne State University to Offer Fuel Cell Degree*

Beginning in December 2003, graduate students at Wayne State University's College of Engineering will be able to take Fundamentals of Alternative Energy I as part of a series of courses that concentrate on hydrogen fuel cell technology. The master's degree program in Alternative Energy Technology is expected to become a fully accredited, degree-granting program in Fall 2005. Ballard Power Systems, Delphi Corporation and Energy Conversion

Devices intend to provide curriculum development advice and collaboration, lab equipment donations and summer internships.

<http://www.media.wayne.edu/news.releases/current/AlternateEnergyDegree.html>

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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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*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 eight active Working Groups focusing on: Codes & Standards; Transportation; Power Generation; Portable Power; Stack Materials and Components; Sustainability; Government Affairs; and Education & Marketing. 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>