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

1. *President Launches Hydrogen Fuel Initiative, Boosts Hydrogen, Fuel Cell FY2004 Funding*

In his State of the Union address, President Bush announced a \$1.2 billion hydrogen fuel initiative to reverse America's growing dependence on foreign oil by developing the technology for commercially viable hydrogen-powered fuel cells to power cars, trucks, homes and businesses with no pollution or greenhouse gases. The hydrogen fuel initiative will include \$720 million in new funding over the next five years to develop the technologies and infrastructure to produce, store, and distribute hydrogen for use in fuel cell vehicles and electricity generation. Combined with the FreedomCAR (Cooperative Automotive Research) initiative, President Bush is proposing a total of \$1.7 billion over the next five years to develop hydrogen-powered fuel cells, hydrogen infrastructure and advanced automotive technologies. Details of funding are laid out in the FY2004 budget documents available online.

http://www.eere.energy.gov/office_eere/budget.html

<http://www.eere.energy.gov/hydrogenfuel/>

<http://www.whitehouse.gov/news/releases/2003/02/20030206-12.html>

2. *EPA Issues First Certification of a Fuel Cell Vehicle*

The U.S. Environmental Protection Agency has issued the first certification for fuel economy and emissions of a hydrogen fuel cell zero-emission vehicle to the 2003 Honda FCX. EPA's Ann Arbor (Michigan) laboratory is the first federal facility capable of testing and certifying a fuel cell vehicle for emissions and fuel economy.

http://www.epa.gov/newsroom/headline_021103.htm

3. *Generating Hydrogen from Water Without Electrolysis*

Researchers at the National Energy Technology Laboratory have patented a new method of generating hydrogen from water, without using electrolysis. The method involves "catalytic decomposition of water" using mixed proton-electron conducting membranes.

<http://www.netl.doe.gov/newsroom/briefs/rb-0012.html>

4. *Multi-fuel Reformer Developed for Fuel Cells*

The Fuel Processing Team at the National Energy Technology Laboratory has developed a concept for a reciprocating compression reformer capable of converting a variety of fuels into forms suitable for operation of a fuel cell.

<http://www.netl.doe.gov/newsroom/briefs/rb-0011.html>

5. *MEMS for PEMs*

Research partners at the University of Pittsburgh and the National Energy Technology Laboratory have designed a piezoelectric microvalve for integration in PEM fuel cells. Using micro electrical mechanical systems (MEMS) technology, the fully-integrated valve will optimize air and hydrogen flow to help eliminate problems including poor fuel conversion efficiency, hot spots, decreased cell life, and reduced cell voltage.

<http://www.netl.doe.gov/newsroom/briefs/rb-0007.html>

6. *EPA to Verify Fuel Cell Power Plants*

The EPA's Environmental Technology Validation (ETV), which develops testing protocols and verifies the performance of innovative technologies, will test two fuel cell power plants in 2003. A Plug Power residential 7-kW PEMFC combined heat and power (CHP) system will be tested beginning in April 2003 in Lewiston, New York. A UTC Fuel Cells 200-kW PAFC power plant will be tested beginning in March 2003 in Brooklyn, New York.

<http://www.epa.gov/etv/verifications/event03.html>

7. *Army to Showcase Fuel Cell Projects at 2003 SAE World Congress*

The U.S. Army Tank-automotive and Armaments Command's (TACOM) National Automotive Center (NAC) will exhibit the Army's fuel cell and other cutting-edge ground vehicle technologies at the 2003 SAE World Congress, which is being held March 3-6 in Detroit, Michigan.

<http://media.prnewswire.com/en/jsp/latest.jsp;jsessionid=BD89A0BD407ACA37CE02511C72304922.tomcat1?resourceid=2403504&access=EH>

8. *DOC Office of Technology Policy Publishes Fuel Cell Vehicle Report*

The U.S. Department of Commerce Technology Administration's Office of Technology Policy recently published "Fuel Cell Vehicles: Race to a New Automotive Future," which features market projections, technology barriers, and detailed summaries of foreign investments in fuel cell vehicle research and development programs.

<http://www.ta.doc.gov/reports/TechPolicy/CD117a-030129.pdf>

9. *DOE Renames Distributed Power Program*

The Department of Energy has renamed the Distributed Power Program to "Distribution & Interconnection R&D."

<http://www.eere.energy.gov/distributedpower/>

10. *Presentations Available for Recent DG Conferences*

Presentations and meeting proceedings are available online for the DOE Distribution and Interconnection R&D Annual Program Review Meeting and the Institute of Electrical and Electronics Engineers (IEEE) P1547 Series of Interconnection Standards Working Group Meeting.

<http://www.eere.energy.gov/distributedpower/02annualreview.html>

<http://www.eere.energy.gov/distributedpower/news/137.html>

11. *DOE EERE Web Site Renamed, Moved*

The web site for DOE's Office of Energy Efficiency and Renewable Energy (EERE), formerly known as EREN, has moved to a new address. The site's new address places greater emphasis on the reorganized office's 11 technology programs – including the Hydrogen, Fuel Cell and Infrastructure Technologies Program – and reflects DOE's move from doe.gov to energy.gov. The new EERE web site is <http://www.eere.energy.gov>.

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**RFP/Solicitation News**  
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12. CaFCP Seeks Fleet Vehicle Demonstration Interest

The California Fuel Cell Partnership has started a new website-based questionnaire to gather information from those interested in helping to test and operate fuel cell electric vehicles and related infrastructure in real-world conditions.

http://www.cafcp.org/releases/2003_2-03_2003_fleets.html

13. World Bank/IFC Issues Proposal Guidance for Fuel Cell Buy-down Program

The International Finance Corporation (IFC) of the World Bank Group has issued its Proposal Guidance Document for its \$2000/kW capital buy-down program in developing countries.

<http://www.ifc.org/enviro/EFG/EmergingTech/fuelcells/fuelcells.htm>

14. DOE Issues Hydrogen Production and Delivery Research Request for Interest

DOE's Hydrogen, Fuel Cell & Infrastructure Technologies Program has issued a request for Expression of Program Interest (EOPI) for Hydrogen Production and Delivery Research as part of the President's FreedomCAR and Fuel Initiative. The EOPI is open until March 14, 2003. It is anticipated that a solicitation will be issued later in FY2003.

<http://www.eps.gov/spg/DOE/PAM/HQ/DE-PS36-03GO93007/SynopsisP.html>

15. RFI for Gravity Independent Water Separator for PEMFC

NASA has issued a request for information on the topic of a Gravity Independent Water Separator for PEM Fuel Cell Systems. The water separator may or may not incorporate a heat exchanger as part of the water separation device. NASA is seeking to understand the current state-of-the-art of various water separator technologies, both passive and active, and their applicability to NASA's needs. Deadline for responses is March 17, 2003.

<http://prod.nais.nasa.gov/cgi-bin/eps/synopsis.cgi?acqid=104315>

16. Inventions and Innovation Program Solicitation Features Hydrogen, Fuel Cell Topic

DOE's Inventions and Innovation (I&I) Program solicitation has been issued and lists "Hydrogen, Fuel Cells & Infrastructure Technologies Program" as a particular area of interest. Up to \$1.2 million in funding is available for award. I&I grants range up to \$75,000 for projects in the "conceptual" stage, and up to \$250,000 for projects in the "developmental" stage. Proposals must be submitted by April 11, 2003.

<http://www.eps.gov/spg/DOE/PAM/HQ/DE-PS36-03GO93004/SynopsisP.html>

17. NYSERDA Funding Available for DG/CHP Projects

\$10 million in funding is available from the New York State Energy Research and Development Authority (NYSERDA) for distributed generation (DG) and combined heat and power (CHP) projects, including fuel cell feasibility studies, technology transfer studies, and demonstration projects. Proposals are due by April 16, 2003.

<http://www.nyserda.org/750pon.html>

18. Arctic Energy Technology Development Lab Seeks Remote Power Proposals

The Arctic Energy Technology Development Laboratory (AETDL) is interested in receiving proposals to conduct projects to develop and deploy power generation technologies (including

fuel cells) for satisfying Alaska's unique energy needs. The dollar size of individual projects is not fixed, but the goal is to fund multiple projects in each research area. As a general rule, individual proposals are suggested not to exceed \$350,000 per year from AETDL. May 30, 2003 is the deadline for pre-proposals for consideration in the FY2004 funding cycle.

<http://www.uaf.edu/aetdl/03proposals.html>

19. Climate Change Fuel Cell Buy-down Program Announced

The Department of Defense, through the Department of Energy's National Energy Technology Laboratory, has issued its 2003 Climate Change Fuel Cell Buy-Down Solicitation, to provide grants of up to \$1,000/kW for the purchase & installation of fuel cell power plants with a combined capacity rated between 3 and 3,000 kW. \$2.8 million is available under this solicitation. It is anticipated that there will be between 10 and 14 awards resulting from the solicitation. Applications are due on June 1, 2003.

<http://www.eps.gov/spg/DOE/PAM/HQ/DE-PS26-03NT41463/listing.html>

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**Contract / Funding Awards**  
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20. CCEF Selects 24 Fuel Cell Proposals to Submit for Round 2

The Connecticut Clean Energy Fund has selected 24 of the 60 proposals it received in response to the first phase of its 2002 Fuel Cell Request for Proposals. The participants chosen have to submit a round two proposal by April 1, 2003, to have their project considered for funding. The actual funding allocated for the 2002 Fuel Cell RFP could potentially reach almost \$9 million.

<http://www.ctcleanenergy.com/news/48.php>

21. Proton Energy Systems Awarded Navy Fuel Cell Demo Project

Proton Energy Systems received a \$375,000 contract to develop a 1-kW regenerative solar/PEM fuel cell demonstration system. The contract, with U.S. Navy sub-contractor Jacobs Sverdrup Technology, is to support testing at the Naval Air Weapons Station at China Lake, California.

http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=prtn&script=410&layout=6&item_id=374133

22. Central Park Fuel Cell Received Technology Solutions Award

The Central Park Police Precinct fuel cell in New York City has received one of the 2002 Technology Solutions Awards from Public Technology, Inc., a national non-profit technology research and development organization for local governments.

http://www.pti.org/elib/publish/article_372.asp

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**Legislation / Regulations**  
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23. H2GROW Act Proposed by U.S. Legislators

U.S. Senator Ron Wyden (D-OR) and U.S. Representative Christopher Cox (R-CA) have introduced a bipartisan bill called the H2GROW Act – Hydrogen Transportation Wins Over Growing Reliance on Oil. The bill includes tax credits: for the purchase of fuel cell vehicles; for hydrogen fuel; and for building a hydrogen fueling infrastructure. The goal of the H2GROW Act is to reduce reliance on 30 million barrels of foreign oil a year. The bill also mandates that hydrogen-powered vehicles must comprise a minimum percentage of federal fleets, from five

percent for fleets of 100 vehicles or more in 2006 to 50 percent for fleets of 50 vehicles or more in 2012. <http://wyden.senate.gov/media/2002/2003211557.html>

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**State Activities**  
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24. California Certifies Fuel Cell for Grid Interconnection

FuelCell Energy has received notice from the California Energy Commission that its DFC300A Direct FuelCell® power plant is certified for grid interconnection under California's "Rule 21" standard, which specifies standard interconnection, operating, and metering requirements for distributed electric power generators.

http://biz.yahoo.com/bw/030219/192307_1.html

25. New York Orders Special Rates for Natural Gas DG Technologies

The New York State Public Service Commission has ordered the state's major natural gas utilities to file special delivery rates for nonresidential customers that operate their own distributed generation (DG) units – including fuel cells and microturbines – using natural gas. The utilities will file their DG rates within 90 days from the date when the Commission issues its written order. The Commission also intends to have special rates in place for residential DG units by January 1, 2004. <http://www.dps.state.ny.us/fileroom/doc12877.pdf>

26. Pennsylvania Fuel Cell Workshop Scheduled for March 2003

The Clean Air Council will host a fuel cell workshop – "The Path to a Fuel Cell Economy in Pennsylvania and the Mid-Atlantic Region" – March 18, 2003, at the Sheraton Rittenhouse Square in Philadelphia. <http://www.cleanair.org/fuelcell>

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**Industry Headlines**  
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27. GM Increases HydroGen3 FCV Range

General Motors has increased the range of its HydroGen3 compressed hydrogen fuel cell vehicles by 80 percent with a successful test of a 10,000-psi (700 bar) hydrogen storage system. The HydroGen3 Zafira minivan has a range of 170 miles, up from 95 miles achieved in Summer 2002.

http://media.gm.com/news/releases/030210_hydrogen.html

28. Ballard Power to Acquire Fuel Cell Generator Assets from Coleman Powermate

Ballard Power Systems has entered into a Memorandum of Understanding whereby it will purchase Coleman Powermate's AirGen™ fuel cell generator assets, acquiring all related inventory, tools and molds, software and intellectual property, including the AirGen™ brand, and will develop its own sales marketing and distribution strategy for the fuel cell generator.

http://www.ballard.com/pdfs/4%20Coleman_F.PDF

29. Nippon Oil Test Residential Fuel Cell System

Nippon Oil began testing fuel cells for residential use in a model house in Yokohama's Nishi Ward. The Tokyo-based oil company also plans to begin testing fuel cells in the official residence

of Yokohama Mayor Hiroshi Nakada. The experiment, which uses propane as fuel, will last for about a year. Nippon Oil plans to begin sales of the system in 2005, at a cost of about 500,000 yen (approx. US\$4,254).

<http://www.japantoday.com/e?content=news&cat=4&id=248316>

30. Transportation Fuel Cell Projects, Alliances Launched

The European Commission is funding a three-year initiative – the Hydrofueler project – to develop the technology to deliver hydrogen fuel pumps to petrol stations by connecting them to a country's existing natural gas supply. The initiative is being led by the University of Warwick, which will receive 1.62 million euro (US\$1.74 million) The Tokyo metropolitan government picked Toyota Motor Corporation and its subsidiary Hino Motors to participate in its experiment to use public buses powered by fuel cells on city routes. Hyundai, Ford, Toyota, DaimlerChrysler, Nissan and PSA Peugeot-Citroen have teamed up on a project to develop high-pressure hydrogen fuel systems, capable of storing more compressed gas.

[http://dbs.cordis.lu/cgi-](http://dbs.cordis.lu/cgi-bin/srchidadb?CALLER=NHP_EN_NEWS&ACTION=D&SESSION=&RCN=EN_RCN_ID:19723)

[bin/srchidadb?CALLER=NHP_EN_NEWS&ACTION=D&SESSION=&RCN=EN_RCN_ID:19723](http://www.japantoday.com/e/?content=news&cat=4&id=247593)

<http://www.japantoday.com/e/?content=news&cat=4&id=247593>

http://biz.yahoo.com/rc/030205/autos_korea_hyundai_3.html

31. 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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**Administration**  
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Press releases and story ideas may be forwarded to Bernadette Geyer, editor, for consideration at 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 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/)

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>