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**FUEL CELL CONNECTION -- October 2001 Issue**  
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News on U.S. Government Fuel Cell Programs
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*1. EPA Launches CHP Partnership, Issues Draft Guidance for CHP Facilities*

The U.S. Environmental Protection Agency (EPA) has launched the CHP Partnership Program to provide public recognition of Combined Heat and Power projects and benefits as well as support for new projects through education and streamlined permitting. The announcement was made at the National CHP Roadmap Workshop held in mid-October. EPA also announced that it has issued, for public review and comment, a preliminary draft of its pending guidance on Source Determinations for CHP Facilities under the Clean Air Act's New Source Review and Title V programs. The purpose of the guidance is to simplify and streamline how CHP is treated under regulations.

<http://yosemite1.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/4c1f0a99bbd0ea1685256ae60065303a?OpenDocument>

<http://www.epa.gov/fedrgstr/EPA-AIR/2001/October/Day-15/a25864.htm>

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*2. New FEMP/ORNL Program Assisting Federal Sites in Acquiring CHP Technologies*

Oak Ridge National Laboratory's Federal Energy Management Program has launched ADD CHP, Accelerated Development and Deployment of Combined Cooling Heating and Power at Federal Sites. So far through this program, 55 sites are planning, studying or requesting assistance for CHP projects.

<http://www.ornl.gov/femp/pdfs/add-chp-17aug2.pdf>

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*3. Army Research Results in DMFC to be Used as Portable Battery Charger*

Research funded by the U.S. Army Research Laboratory has resulted in the successful fabrication and testing of a complete "liquid feed direct methanol fuel cell system" by Giner Electrochemical Systems, LLC. The 150-watt system – which can store enough methanol for 5000 watt-hours of operation – will be used by the U.S. Army as a portable battery charger. Contact Cecelia Cropley, [ccropley@ginerinc.com](mailto:ccropley@ginerinc.com), for more information.

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*4. DARPA and Navy Developing Fuel Cell to Run on Ocean Sediment*

The Office of Naval Research and the Defense Advanced Research Projects Agency (DARPA) are working on an oceanic fuel cell called OSCAR (Ocean Sediment Carbon Aerobic Reactor). Organic matter in the ocean sediment serves as the fuel which is reacted with oxygen in the sea water by electrodes, "allowing electrons to flow in the same manner as a conventional fuel cell."

<http://www.onr.navy.mil/onr/newsrel/to0108.htm>

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*5. ANL Posts Report on Advanced Fuel/Vehicle Well-to-Wheel Energy Use & Emissions*

Argonne National Laboratory has posted online a report on "The GAPC Report: Well-to-Wheel Energy Use and Greenhouse Gas Emissions of Advanced Fuel/Vehicle Systems." ANL has also given online access to its "GREET Model", which – for a given engine and fuel system – can

separately calculate total energy use and emissions of greenhouse gases and five criterion pollutants. The GREET Model was the basis for the GAPC report.

<http://www.transportation.anl.gov/ttrdc/whatsnew.html>

<http://www.transportation.anl.gov/ttrdc/greet/index.html>

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*6. EPA Publishes Report on State Incentives for Clean Transportation Technologies*

EPA has published and posted online a report on State Incentives for Cleaner Transportation Technologies, providing information on monetary and non-monetary incentive programs, R&D incentives, and emissions credit trading programs.

<http://www.epa.gov/otag/market/rpt914.htm>

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*7. DOE Research from 1948-Present Made Available Through New Online Database*

A new database of bibliographic records of DOE's scientific and technical information from 1948 to present has been made available online for use by the DOE community, contractors, and the public. The Energy Citations Database contains approximately 4 million records. A search on the term "fuel cell" resulted in over 3000 matches.

<http://www.osti.gov/energycitations>

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*8. 2002 FutureTruck Competition Underway, Virginia Tech Working on Fuel Cell Hybrid SUV*

The 2002 FutureTruck Competition sponsored by DOE and Ford is underway, with 15 university engineering departments participating. This year, the student teams will re-engineer a mid-size 2002 Ford Explorer SUV to improve fuel economy while retaining the vehicle's utility and customer appeal. The Virginia Tech team has announced they will be converting their vehicle into a fuel cell hybrid.

<http://www.futuretruck.org>

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*9. National Labs Receive R&D Awards for Hydrogen & Fuel Cell Research*

Argonne and Sandia National Laboratories both received R&D 100 Awards for work on hydrogen and fuel cell technologies. The R&D 100 Awards are given annually by *R&D Magazine* to honor outstanding new technologies, processes, materials, and software with commercial potential. ANL received an award for its autothermal reforming catalyst, a key component of a fuel processor for fuel cells. SNL received an award for its polymer "hydrogen getters," which can permanently and irreversibly remove unwanted hydrogen and can prevent explosions caused by hydrogen mixing with the atmosphere in sealed consumer products.

[http://www.science.doe.gov/feature\\_articles\\_2001/september/RD100\\_Awards/2001%20R&D100%20Awards%20Announced.htm](http://www.science.doe.gov/feature_articles_2001/september/RD100_Awards/2001%20R&D100%20Awards%20Announced.htm)

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*10. SECA Sets Date for Third Annual Workshop*

The Solid State Energy Conversion Alliance (SECA) has set the dates for the third annual SECA Workshop. The meeting will be held March 21-22, 2002, at the Hyatt Regency Washington on Capitol Hill in Washington, DC.

<http://www.seca.doe.gov/Events/events.htm>

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*11. Presentations from DOE Distributed Power Workshop Available Online*

The presentations from the DOE Distributed Power Program DER System Interconnection Technologies Workshop have been posted online. Presentation topics include "Evaluation of the Field Performance of Fuel Cells" and "Development of a UL Standard for Distributed Generation."

<http://www.eren.doe.gov/distributedpower/2Qreview.asp>

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12. *Presentations Available from EPA Cradle-to-Grave Fuel Cell Analysis Workshop*  
Presentations from the US EPA Environmental "Cradle-to-Grave" Analysis of Fuel Cell Applications Workshop are now available online. Presentation topics include "Fuel-Cycle Energy and Emissions Impacts of Fuels for Fuel Cells" and "Fuel Cell Life Cycle."  
<http://www.epa.gov/ORD/NRMRL/std/fuelcell/fuelagenda.htm>

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13. *Proceedings of DOE Hydrogen Program Review Posted Online*  
Proceedings and presentations from the 2001 U.S. DOE Hydrogen Program Review have been posted online. Topics of presentations include Biological Hydrogen Production, Technology Validation, and Hydrogen Utilization Research Analysis.  
<http://www.eren.doe.gov/hydrogen/docs/30535toc.html>

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RFP/Solicitation News
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14. *NYSERDA to Fund Alternative Fuel Power Generation and Energy Storage Projects*  
The New York State Energy Research and Development Authority invites proposals to demonstrate alternative fuels for power generation and energy storage for commercial applications. Maximum NYSERDA funding available for alternative fuel technologies is \$500,000 per project. Maximum NYSERDA funding available for energy storage technologies is \$1 million per project. Feasibility studies for both topics will also be accepted, with funding limited to \$100,000 per project. Deadline for proposals is November 5, 2001.  
<http://www.nyserda.org/616pon.html>

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15. *Navy Seeks Proposals for Bioelectrocatalytic Fuel Cells*  
The Naval Surface Warfare Center is soliciting white papers for basic research, applied research, and advanced research projects in bioelectrocatalytic fuel cell power technologies and their applications in electric power and/or propulsion systems. It is anticipated that awards from this BAA will provide for a feasibility study with an option for a prototype. Deadline for proposals is November 16, 2001.  
<http://www.nswc.navy.mil/supply/solicita/02q3004/3004syn.htm>

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16. *Solicitation Open for California Energy Innovations Small Grant Program*  
The California Energy Commission has opened the tenth solicitation for proposals for the Energy Innovations Small Grant Program. The program is funded at \$2 million per year and awards grants of up to \$75,000 on topics including Environmentally Preferred Advanced Generation and Renewable Generation. Optional pre-proposal abstracts are due October 31, 2001. Grant applications will be accepted through November 16, 2001.  
<http://www.energy.ca.gov/contracts/smallgrant/index.html>

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17. *NYSERDA to Fund Alternative Energy/Energy Conservation Technologies*  
NYSERDA is seeking applications for its Technology Acceleration Program, which is designed to develop, demonstrate and commercialize innovative products and processes that will result in the conservation of energy or the manufacturing of alternative energy systems. The maximum award per project is \$25,000. Proposals for this round are due December 14, 2001.  
<http://www.nyserda.org/587pon.html>

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18. *DOD SBIR Issued, Fuel Cell Topics Included*

The Department of Defense has issued its FY2002 Small Business Innovation Research solicitation and will begin accepting proposals on December 3, 2001. Solicitation topics for the participating DOD components – including Air Force, BMDO, and DARPA – can be found on the DOD SBIR/STTR web site. Topics for the Air Force include Compact Hydrogen Storage Using Metal Hydride, Micro JP8 Fuel Reformer, Advanced Electric Vehicle Research, and 72-kilowatt Hydrogen Fuel Genset. Other topics include Rechargeable Fuel Cells for BMDO, and Fuel Cells for Arms Control Applications for the Defense Threat Reduction Agency. The deadline for proposals is January 16, 2002.

<http://www.sbirstr.com/current/current.htm>

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*19. Air Force Accepting Proposals on New Power Generation Technologies*

The Air Force Research Laboratory is interested in receiving proposals for advanced technologies that facilitate the conduct of contingency base operations, and operations other than war. Topics include developing new energy and utility systems technologies that increase mobility, reliability and efficiency, with specific interest in power generation, power conditioning and distribution systems. Deadline for proposals is September 30, 2002.

<http://www.eps.gov/spg/USAF/AETC/TynAFBCS/Reference-Number-BAATYN02001/SynopsisR.html>

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*20. BAA Soliciting Pollution Prevention Technologies for Navy Installations*

The Naval Facilities Engineering Service Center has issued a Broad Agency Announcement seeking technologies and methodologies to reduce environmental impacts from current and past Navy operations, and to apply to Navy installations worldwide. Topics covered by the BAA include Pollution Prevention and Environmental Compliance. Proposals are being accepted through September 30, 2002.

<http://www.eps.gov/spg/USN/NAVFAC/N47408/N47408-02-R-2301/SynopsisP.html>

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Contract Awards
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*21. Fuel Cell Projects Receive Awards from 2001 ATP Competition*

Three fuel cell projects are among the 43 awards announced by the Advanced Technology Program of the National Institute of Standards and Technology for the ATP's 2001 competition. Plug Power will receive \$800,000 for its project, Development of a Highly Reliable and Low Cost Fuel Processing System for Stationary PEM Fuel Cell Applications. Microcell Corporation will receive \$1,998,000 for its project, Fabrication of Fuel Cells from Microcell Fibers. T/J Technologies will receive \$1,986,000 for its project, Hybrid Ultracapacitor/Methanol Fuel Cell Power Paks for Portable Electronics. More than \$122 million total was distributed through the 2001 competition.

<http://www.atp.nist.gov/awards/2001latest.htm>

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*22. SOFC Project Receives Funding from California EISG Program*

The California Energy Commission's Energy Innovations Small Grant (EISG) Program has awarded \$74,997 to the University of California, Berkeley, for its project entitled Materials for Fast-Response Solid Oxide Fuel Cells. The project is in the category of Environmentally Preferred Advanced Generation. Nine grants total are expected from the EISG solicitation.

[http://www.energy.ca.gov/contracts/smallgrant/2001-20-05\\_awards\\_01-01.html](http://www.energy.ca.gov/contracts/smallgrant/2001-20-05_awards_01-01.html)

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*23. Coast Guard to Get Fuel Cell Power Plant from FuelCell Energy*

FuelCell Energy and PPL Spectrum have been selected to supply and install a 250-kilowatt Direct FuelCell power plant for the U.S. Coast Guard Air Station Cape Cod in Bourne, Massachusetts. Project sponsors include the National Energy Technology Laboratory, the Massachusetts Renewable Energy Trust, and Keyspan, Inc.

[http://www.fuelcellenergy.com/site/investor/press/releases/2001/10\\_18\\_01.html](http://www.fuelcellenergy.com/site/investor/press/releases/2001/10_18_01.html)

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*24. Navy Awards \$6.2 Million Contract to Proton Energy Systems' Team*

The Naval Research Laboratory has awarded a \$6.2 million contract to Proton Energy Systems as part of a DARPA "Water Rocket" program that will apply Proton's PEM fuel cell technology to advanced space propulsion and energy systems. Proton's team on this contract includes General Dynamics, ATK Thiokol, Schafer Corporation, and Myers Manufacturing Company.

<http://www.energyinfosource.com/dg/news.cfm?id=13565>

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*25. CERL Awards Contract for Fuel Cell Systems to Plug Power*

Plug Power received a \$1.2 million award from the U.S. Army Corps of Engineers, Construction Engineering Research Laboratory (CERL) to supply ten fuel cell systems to the Watervliet Arsenal in New York State. Installation of the systems is scheduled to be completed in December.

[http://www.dodfuelcell.com/pr\\_101001.html](http://www.dodfuelcell.com/pr_101001.html)

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Legislation
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*26. Interior Appropriations Bill Cleared for President's Signature*

House and Senate Members have agreed on the final shape of the Interior Appropriations bill, which contains money for fuel cell research. The final bill contains \$41.9 million for transportation fuel cell programs, in line with the Bush Administration's request. For stationary power fuel cells, the final bill includes \$58.1 million, \$5.45 million above the FY2001 level and \$13 million above the Administration's request. The bill also includes full funding for the Fuel Cells in Buildings program. The bill has been forwarded to President Bush for signing.

[http://thomas.loc.gov/cgi-bin/cpquery/R?cp107:FLD010:@1\(hr234\):](http://thomas.loc.gov/cgi-bin/cpquery/R?cp107:FLD010:@1(hr234):)

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*27. Vermont Energy Plan Includes CHP, Renewable Energy Project Support*

The governor of Vermont has unveiled a long-term energy plan for the state that blends highly efficient, small-scale power generation, the increased use of renewable energy sources and stronger conservation efforts. Among the proposals are: increasing CHP projects, developing "green pricing" for renewable energy, and focusing on renewable generation sources such as landfill methane and municipal gas.

<http://www.state.vt.us/psd/PRGOVENERGYPLAN.PDF>

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*28. FERC to Issue Advanced NOPR on Interconnection of Generators to Transmission Grid*

The Federal Energy Regulatory Commission is taking steps to address the national interconnection of new generators to the transmission grid. To address its concerns on the subject, the Commission will issue an advanced notice of proposed rulemaking to develop and adopt a national standard electric interconnection agreement between transmission providers and generators.

<http://www.eren.doe.gov/distributedpower/news.asp?Item=92>

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Industry Headlines

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### 29. *GM Announces Fuel Cell Partnerships at Tokyo Auto Show*

General Motors has announced major partnerships with ChevronTexaco on petrol fuel cells, and with Suzuki on development of fuel cell vehicles. The announcements were made as GM showed a variety of fuel cell vehicles at the Tokyo Auto Show in mid-October.

<http://www.japantoday.com/e/tools/print.asp?content=news&id=120399>

[http://just-auto.com/news\\_detail.asp?art=35599&dm=yes](http://just-auto.com/news_detail.asp?art=35599&dm=yes)

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### 30. *Ballard Unveils 4<sup>th</sup> Generation Fuel Cell Platform, Other Major Announcements*

Ballard Power Systems has made several big announcements, most recently unveiling its most advanced fuel cell platform to date, the Mark 902, which will be scalable for both transportation and stationary applications. Also this month, Ballard acquired XCELLSIS Fuel Cell Engines and Ecostar Electric Drive Systems from DaimlerChrysler and Ford, while the two automakers increased their investment in Ballard. On the stationary power front, Ballard joined with Osaka Gas to develop fuel cell systems for the Japanese residential market.

[http://www.ballard.com/news\\_archive.asp](http://www.ballard.com/news_archive.asp)

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### 31. *SiemensWestinghouse Breaks Ground on Fuel Cell Manufacturing Facility*

SiemensWestinghouse has broken ground for a fuel cell manufacturing facility in Munhall, Pennsylvania, near Pittsburgh. The company plans to launch its solid oxide fuel cell product line in the commercial market by Fall 2003.

<http://www.siemenswestinghouse.com/en/press/pg20012609/index.cfm>

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### 32. *BP to Build Hydrogen Fueling Stations in Singapore*

BP has announced it intends to build hydrogen refueling stations for future Singapore motorists driving hydrogen-powered vehicles. Gary Oliver, hydrogen market development manager of BP says facilities will probably be installed in 2003, in anticipation of hydrogen vehicles that are expected to be introduced in 2004.

[http://just-auto.com/news\\_detail.asp?art=35408&dm=yes](http://just-auto.com/news_detail.asp?art=35408&dm=yes)

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### 33. *Texas Fuel Cell Trade Association Officially Formed*

Fuel Cells Texas, a new trade association for promoting fuel cell commercialization in Texas, was officially formed in September 2001 and has announced its first quarterly meeting will be held on November 12. Meetings will be held in conjunction with the hearings of the Fuel Cell Advisory Committee, which is soon to be appointed by the Texas State Energy Conservation Office. For more information on Fuel Cells Texas, contact Dana Showalter at 512-480-2218.

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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](mailto:bernie@usfcc.com).

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About *Fuel Cell Connection*

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.

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