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**FUEL CELL CONNECTION -- November 2001 Issue**  
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**News on U.S. Government Fuel Cell Programs**  
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*1. EPA Technology Center Seeks CHP/DG Technologies for Independent Verification*

As part of its Combined Heat and Power Initiative (CHPI), the U.S. Environmental Protection Agency's Greenhouse Gas Technology Center seeks to conduct independent field performance verification of CHP and other distributed generation technologies. The GHG Center has completed verifications of Honeywell, Capstone, and other DG technologies. Participating organizations are required to share in the cost of testing (50%). Interested vendors should contact the GHG Center and submit an Application for Testing.

<http://www.sri-rtp.com/Center%20Info/0001.CHP%20announcement.jpg>

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*2. U.S. Army Contracts with Hydrogenics for Regenerative Fuel Cell System*

The U.S. Army has contracted with Hydrogenics Corporation to design, manufacture, and commission a self-contained regenerative fuel cell generator system for auxiliary power deployment on army vehicle platforms. The system will be designed to operate for up to ten hours at a field destination with an average load of 3 kW, and peak power demand of 5 kW. The initiative is through the Army's TACOM (Tank-automotive and Armaments Command).

[http://www.corporate-ir.net/ireye/ir\\_site.zhtml?ticker=hyg.to&script=411&layout=6&item\\_id=227060](http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=hyg.to&script=411&layout=6&item_id=227060)

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*3. MTI, ATK to Explore Fuel Cells for Army's Objective Individual Combat Weapon Program*

MTI MicroFuel Cells and ATK Integrated Defense Company have signed a teaming agreement to explore military applications for direct methanol micro fuel cells in the U.S. Army's Objective Individual Combat Weapon program.

[http://www.mtimicrofuelcells.com/article.cfm?a\\_id=2821](http://www.mtimicrofuelcells.com/article.cfm?a_id=2821)

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*4. LANL Licenses Bipolar Plates Patent to Bulk Molding Compounds, Inc.*

Bulk Molding Compounds, Inc., has become an exclusive licensee of Los Alamos National Laboratory's patent on a bipolar plate compound technology for use in proton exchange membrane fuel cells.

[http://www.bulkmolding.com/whatsnew/pressreleases/pr\\_09262001.html](http://www.bulkmolding.com/whatsnew/pressreleases/pr_09262001.html)

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*5. Army Displays Fuel Cell APUs at SAE Truck & Bus Exhibition*

The U.S. Army's National Automotive Center (NAC) displayed three fuel cell auxiliary power units as part of its exhibit at the 2001 SAE Truck & Bus Exhibition. Cooperative programs are currently underway between NAC and industry partners to develop the technology for Future Tactical Truck Systems. NAC has posted a presentation on the 21<sup>st</sup> Century Truck initiative, and fact sheets on its current projects, including a fuel cell bus and fuel cell APU development.

<http://www.tacom.army.mil/tardec/nac/index.htm>

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*6. DOE OTT Report Cites Potential Impact of FCV R&D on Emissions, Jobs*

A new report from the Department of Energy's Office of Transportation Technology projects that the OTT Program's fuel cell and related materials R&D will result in carbon reductions of 4.3 million metric tons in the year 2020, escalating to reductions of 16.9 million metric tons in 2030. The "2002 Quality Metrics Report" also expects employment impacts of OTT fuel cell R&D to result in 15,244 new jobs in 2020 and 59,244 new jobs in 2030.

[http://www.ott.doe.gov/whats\\_new.shtml](http://www.ott.doe.gov/whats_new.shtml)  
[http://www.afdc.doe.gov/pdfs/quality\\_metrics\\_02.pdf](http://www.afdc.doe.gov/pdfs/quality_metrics_02.pdf)

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*7. NETL Launches New Online Journal of Energy and Environmental Research*

The National Energy Technology Laboratory has just launched the first issue of a new quarterly online "Journal of Energy and Environmental Research." Article topics in the 150-page launch issue include "Recovery of CO<sub>2</sub> in Advanced Fossil Energy Conversion Processes Using a Membrane Reactor." The issue has a heavy focus on carbon sequestration issues.

[http://www.netl.doe.gov/publications/journals/jeer\\_toc.html](http://www.netl.doe.gov/publications/journals/jeer_toc.html)

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*8. OTT Transportation Fuel Cell Program Contractor Meeting Presentations Online*

Presentations from the October 2001 Contractor Coordination Meeting of the DOE OTT Fuel Cells for Transportation Program have been posted online.

<http://www.cartech.doe.gov/publications/FuelCellWorkshop.html>

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*9. DOE OPT to Hold Collaborative Workshop on Distributed Energy Resources*

DOE's Office of Power Technologies will host a collaborative workshop in Philadelphia, Pennsylvania, on February 21-22, 2002. The purpose of the day-and-a-half workshop is to gather recommendations on the implementation needs for Distributed Energy Resources and how DOE can collaborate with industry and government agencies to meet these needs. Areas of interest include permitting, siting, construction, and funding of DER projects. For more information, contact Energetics Conference Services at (410) 953-6277, or contact Joseph Barrett, DOE Philadelphia Regional Office, at (215) 656-6957.

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*10. 2002 DOE Distributed Power Program Review Meeting Scheduled*

The DOE Annual Review Meeting for the Distributed Power Program and Industrial Distributed Generation Program has been scheduled for January 29 - February 1, 2002, in Arlington, Virginia.

<http://www.eren.doe.gov/distributedpower/news.asp?Item=98>

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*11. Annual Energy Outlook 2002 Conference Scheduled*

DOE's Energy Information Administration will hold its Annual Energy Outlook 2002 Conference on March 12, 2002, at the Crystal Gateway Marriott in Arlington, Virginia.

<http://www.eia.doe.gov/oiaf/aeo/conf/index.html>

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**RFP/Solicitation News**  
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*12. Fuel Cells a Technical Topic Area of DOE Fossil Fuel Technology Solicitation*

DOE's National Energy Technology Laboratory is seeking proposals for cost-shared R&D activities that promote the efficient and sound production and use of fossil fuels (coal, natural gas and oil). "Fuel Cells" is one of the primary technical topic areas listed. The deadline for submitting proposals is December 6, 2001.

<http://doe->

[iips.pr.doe.gov/iips/busopor.nsf/e6458ce53c05cf038525645200788ab8/c7077de9cb0389d185256b0500625168?OpenDocument&Highlight=0,DE-PS26-02NT41422](http://iips.pr.doe.gov/iips/busopor.nsf/e6458ce53c05cf038525645200788ab8/c7077de9cb0389d185256b0500625168?OpenDocument&Highlight=0,DE-PS26-02NT41422)

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*13. Bidders Conference Set for California Stationary Fuel Cell Request for Bids*

Final Request for Bid documents have been posted for the California Power Authorities Stationary Fuel Cells Solicitation. The Authority hopes to entertain orders of as much as 20 MW of fuel cell capacity by the fall of 2002, 50 MW by 2003, and 300 MW by 2004/2005. A Bidders Conference has been set for December 3, 2001, at the Board of Equalization Building in Sacramento, California.

<http://www.cpowerauthority.ca.gov/Requestforbids/main.asp>

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*14. Fuel Cell BAA Issued by Department of Defense*

The U.S. Army Communications-Electronics Command (CECOM) Research, Development and Engineering Center (RDEC) has issued a Broad Agency Announcement on the topic of fuel cell technology, intended for the development of research efforts in support of the RDEC Army Power Division. The deadline for proposals is January 7, 2002.

<https://abop.monmouth.army.mil/busopor27.nsf/f5b1dbd88aad5413852569bb006c9b9b/ffa612883841d2ec85256b040076bb53?OpenDocument>

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*15. Space Vehicles Technology BAA Issued by Air Force*

The Air Force Research Laboratory Space Vehicles Directorate is interested in receiving proposals to advance the state-of-the-art and scientific knowledge in space technology. Technical areas include Space-Based Remote Sensing Technologies and Advanced Space System Concepts and Technologies. Deadline for proposals is October 30, 2002.

<http://www.eps.gov/spg/USAF/AFMC/AFRLPLSVD/Reference-Number-BAA-VS02-01/listing.html>

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*16. Air Force Office of Scientific Research Issues BAA*

The Air Force Office of Scientific Research invites proposals for basic research in support of the Air Force Defense Research Sciences Program. General areas of interest include space power and propulsion, polymer chemistry, and sensory systems. Proposals are due October 31, 2002.

<http://www.eps.gov/spg/USAF/AFMC/AFOSR/AFOSR-BAA-2002-1/listing.html>

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**Contract Awards**  
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*17. NASA SBIR Awards Include Fuel Cell Project*

NASA has announced its selection of 126 research proposals for negotiation of Phase 2 contract awards for its Small Business Innovation Research Program. Lynntech, Inc., received an award for its project, titled "Hydrogen-Air Fuel Cell for High Altitude Aircraft Use." Phase 2 continues development of the most promising Phase 1 projects. The amount of the award was not released.

<http://sbir.gsfc.nasa.gov/SBIR/sbir2000/phase2/awards/press.html>

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*18. LOGANEnergy Selected to Install Residential Fuel Cells at Military Posts*

The U.S. Army Corps of Engineers Construction Engineering Research Laboratory (CERL) has awarded LOGANEnergy a \$750,000 contract to install pre-commercial fuel cell power plants at base housing on several military posts. The 3 to 5-kilowatt systems will use either natural gas or propane as the fuel. Test sites will include base housing at Ft. Bragg in Fayetteville, North Carolina, and Ft. Jackson in Columbia, South Carolina.

[http://biz.yahoo.com/prnews/011114/law033\\_1.html](http://biz.yahoo.com/prnews/011114/law033_1.html)

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## Legislation / Regulations

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### 19. CARB Proposes New Revisions to PZEV Standard

California Air Resources Board released Tuesday (Nov. 20) its latest proposed revision to California's "Advanced Technology" Partial Zero Emission Vehicle standard (AT PZEV). The most notable points in the latest revision were expanding the AT PZEV standard to allow some credits for vehicles with high-pressure gas storage systems, for vehicles storing hydrogen in a non-gaseous form, or for vehicles that achieve significant reductions in carbon dioxide emissions. Also, the requirement for AT PZEVs to automatically stop the engine while idling was removed. The new rules are open for public comment until December 4, 2001. More details can be found at the CARB ZEV web site.

<http://www.arb.ca.gov/regact/zev2001/zev2001.htm>

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### 20. FY2002 Energy & Water Appropriations Bill Signed Into Law

The Energy and Water spending bill for the 2002 fiscal year has been signed by the president. Several earmarks were approved. The language (Conference Report HR107-258): "Hydrogen – The conference agreement includes \$31,000,000 for hydrogen activities. The conference agreement includes \$1,000,000 for the Fuel Cell Technology Assessment and Demonstration at the University of Alabama at Birmingham; \$350,000 for the Big Sky Economic Development Authority demonstration fuel cell technologies; \$500,000 for the gasification of Iowa switchgrass and its use in fuel cells; \$1,500,000 for the ITM Syngas project; \$1,500,000 for the fuel cell installation project at Gallatin County, Montana; and \$1,000,000 for continued demonstration of the hydrogen locomotive and front-end loader projects."

[http://thomas.loc.gov/cgi-bin/cpquery/R?cp107:FLD010:@1\(hr258\):](http://thomas.loc.gov/cgi-bin/cpquery/R?cp107:FLD010:@1(hr258):)

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### 21. Underwriters Laboratories Announces New Fuel Cell-Related Categories

Underwriters Laboratories has introduced two new fuel cell-related categories for standards. Subject 2264, Gaseous Hydrogen Generation Appliances, is intended to cover portable, stationary and fixed gaseous hydrogen generating appliances, rated 120 V and greater. Subject 2265, Replacement Fuel Cell Power Units for Appliances, is intended to cover stand-alone fuel cell power units that may be connected within the enclosure of appliances by a flexible cord and plug arrangement or other connection means. These fuel cell power units may be used as replacement for existing batteries. It is anticipated that requirements developed under these new subject categories will become UL Standards by August 2003. For more information, contact Paul Orr at UL's Melville, New York, office, at (631) 271-6200.

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### 22. Insights Newsletter Provides Weekly Updates on Energy-Related Legislation

BOOKMARK THIS WEB SITE-- The Federal Energy Management Program is publishing "Insights," a newsletter providing information on the legislative activities of the 107<sup>th</sup> Congress. Each issue features an updated listing of new legislation, committee activities for both the House and Senate, and FY2002 Appropriations chart, as well as a hearings schedule. Insights is published the first three weeks of each month.

<http://www.eren.doe.gov/femp/resources/insights.html>

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## Industry Headlines

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### 23. Boeing to Explore Fuel Cells for Commercial Airplanes

Boeing Commercial Airplanes will develop and test a fuel cell-powered single-engine airplane that would use an electric motor to turn a conventional propeller, in order to evaluate fuel cells for future Boeing products. Boeing is ultimately interested in exploring the use of fuel cells to replace the gas turbine auxiliary power units in commercial transports.

[http://dailynews.yahoo.com/h/ap/20011127/bs/boeing\\_electric\\_plane\\_1.html](http://dailynews.yahoo.com/h/ap/20011127/bs/boeing_electric_plane_1.html)

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**24. Caterpillar and FuelCell Energy Announce Fuel Cell Agreement**

Caterpillar Inc. and FuelCell Energy have signed an agreement to distribute fuel cell products for industrial and commercial use, and to jointly develop fuel cell systems, including highly efficient hybrid products integrating Caterpillar's turbine engine technology.

[http://www.fuelcellenergy.com/site/investor/press/releases/2001/11\\_15\\_01.html](http://www.fuelcellenergy.com/site/investor/press/releases/2001/11_15_01.html)

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**25. Regenerative Fuel Cell System to Provide Backup Power to Cell Tower**

Hydrogenics and Nextel Communications will demonstrate a 25-kW HyUPS regenerative fuel cell power generator at a cell tower site in California. The generator features a General Motors fuel cell stack.

[http://www.corporate-ir.net/ireye/ir\\_site.zhtml?ticker=hyg.to&script=411&layout=6&item\\_id=222131](http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=hyg.to&script=411&layout=6&item_id=222131)

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**26. Suzuki Unveils Fuel Cell-Powered Two-Seater at Tokyo Motor Show**

Suzuki unveiled a fuel cell-powered Covie two-seater at the 2001 Tokyo Motor Show. The vehicle features a General Motors fuel cell stack, and uses natural gas as the fuel.

<http://www.theautochannel.com/content/cybercast/2002autoshow/tokyo/suzuki.html#02>

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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 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>