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FUEL CELL CONNECTION -- January 2001 Issue

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1. CERL Involved in New Residential Fuel Cell Demonstration Project
The U.S. Army's Construction Engineering Research Laboratory has agreed to conduct pre-installation validation testing of residential fuel cells prior to their use in a newly launched research program being conducted by the Cooperative Research Network, a service of the National Rural Electric Cooperative Association. Through the DOE-funded program, between five and ten models of residential fuel cells from various manufacturers will be placed at consumer sites of participating cooperatives to assess the feasibility of the technology and potential business opportunities for co-ops.
http://www.crnweb.org/news/1crn623.html

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2. February Workshops to Discuss "Ultra-Clean Transportation Fuels Program" Plan
DOE has posted a 20-page "Ultra-Clean Transportation Fuels Program Plan" on its fossil energy and National Energy Technology Laboratory (NETL) web sites. NETL will hold three public workshops in February to begin identifying the key fundamental science and technology needs of the fuels industry and how federal programs can best address them.
http://www.fe.doe.gov/techline/tl_ultraclean_plan.html

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3. SOFC Test In Netherlands Concludes
A 100 kW solid oxide fuel cell power plant has successfully completed a two-year test program as part of the DOE advanced power technology program. The Siemens Westinghouse Power Corporation SOFC unit accumulated 16,612 hours of operation at a Netherlands power station. According to researchers, when the unit was finally shut down, it was providing 110 kW of electric power into the local grid with an electrical efficiency of more than 46% and showed no signs of diminishing performance.
http://www.fe.doe.gov/techline/tl_fuelcell_netherlands.html

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4. EIA Releases Analysis of Fuel Cells, Other Pollution Reduction Technologies
DOE's Energy Information Administration has released its "Analysis of Strategies for Reducing Multiple Emissions from Power Plants: Sulfur Dioxide, Nitrogen Oxides, and Carbon Dioxide," which contains projections of the energy generating capability of fuel cells and other electric generators. The report examines the potential costs, to the energy sector and to consumers, of meeting the specified emission caps for the three above-mentioned pollutants.
http://www.eia.doe.gov/oiaf/servicerpt/powerplants/pdf/sroiaf(2000)05.pdf

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5. HTAP Meeting Scheduled for March in Washington, DC
DOE's Hydrogen Technical Advisory Panel will meet March 5-6, 2001, at the Marriott Wardman Park Hotel in Washington, DC.
http://www.eren.doe.gov/hydrogen/htap.html

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6. 2nd SECA Workshop Scheduled for March
The 2nd Solid State Energy Conversion Alliance Workshop is scheduled for March 29-30, 2001, in Arlington, Virginia. The workshop will report on the status of the SECA program, provide a forum for stakeholder input, and discuss upcoming opportunities.
http://www.netl.doe.gov/events/01conferences/seca/seca01.html

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7. 21st Century Truck Technology Roadmap Released
The 21st Century Truck Program had released a "technology roadmap: for developing commercially viable technologies," including fuel cells, to increase energy efficiency, reduce pollution and improve safety in the nation's trucking industry.
http://www.energy.gov/HQPress/releases01/janpr/pr01012_v.htm

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8. OTT Releases Annual Progress Reports on Fuel Cells and Fuels
DOE's Office of Transportation Technologies has released its 2000 Annual Progress Reports for "Transportation Fuel Cell Power Systems," "Automotive Propulsion Materials," and "Fuels for Advanced CIDI Engines and Fuel Cells." The "Fuels" report is currently available on the OTT web site.
http://www.ott.doe.gov/pdfs/Fuelcell_CIDI.pdf
http://www.ott.doe.gov/presentations.html

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9. NREL Establishes Center for Distributed Power
National Renewable Energy Laboratory (NREL) has established a new "Distributed Energy Resources Center" to conduct research and provide information needed to efficiently develop additional power supplies from small, decentralized generating units. Research on fuel cells and microturbines will fall under the "Hydrogen and Natural Gas Systems" section of the center.
http://www.nrel.gov/hot-stuff/press/0201_dist.html

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10. Guide to Doing Business with DOE's National Laboratories Now Available
The Laboratory Coordinating Council of the DOE has prepared a guide to "Doing Business with the Laboratories of the Laboratory Coordinating Council." The guide is available online through the DOE Office of Industrial Technologies.
http://www.oit.doe.gov/LCC/doing_business.shtml

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RFP/Solicitation News

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11. NYSERDA Issues Advanced Transportation Technologies PON
The New York State Energy Research and Development Authority (NYSERDA) is seeking proposals to support the development, demonstration, and commercialization of innovative transportation products and systems. NYSERDA plans to awards $1 million to multiple cost-shared contracts. Proposals are due by February 9, 2001.
http://www.nyserda.org/533pon.html

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12. DOE SBIR Deadline Approaches
DOE has announced the topics of its Small Business Innovation Research Program solicitation. Sub-topics under the Fossil Energy Program Area include Power Electronics for Solid Oxide Fuel Cells, Fuel Processing & Conversion (for use in fuel cells), and Materials for Intermediate Temperature Solid Oxide Fuel Cells. Sub-topics under the Energy Efficiency and Basic Energy

Sciences Program Areas include energy generation technologies for "Zero Net Energy Buildings," and Membrane Materials for hydrogen purification. Phase I grant awards will be worth up to $100,000, for a project period of about six months. The proposal deadline is February 20, 2001.
http://sbir.er.doe.gov/sbir/Solicitations/FY%202001/2001.htm

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13. Pre-Application Conference Scheduled for Power Plant Improvement Initiative
DOE has scheduled a pre-application conference for its Power Plant Improvement Initiative, which will launch on January 31, 2001. The pre-application conference is set for February 15 at the National Energy Technology Laboratory's Morgantown, West Virginia, conference center.
http://www.fe.doe.gov/techline/tl_ppii_2.html

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14. Hydrogen Projects Sought Through EERE Solicitation Supplemental Announcements
DOE has issued two more Supplemental Announcements for its Office of Energy Efficiency and Renewable Energy's solicitation involving "Research, Development and Demonstration." Supplemental Announcement #2 is for "Hydrogen Research and Development," and has a deadline of March 7, 2001. Total FY2001 funding for the solicitation is expected to be approximately $550,000. Supplemental Announcement #3 is for a "Hydrogen Power Park," and has a deadline of March 21, 2001.
http://www.golden.doe.gov/Business%20Opportunities/SolFiles/go90000Sup2.pdf
http://www.golden.doe.gov/Business%20Opportunities/SolFiles/go90000Sup3.pdf

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15. PIER Renewable Energy Program Issues RFP
California Energy Commission's Public Interest Energy Research Program has issued a Request for Proposals for "Making Renewables Part of an Affordable and Diverse Electricity System in California." Three contracts may each receive up to $2.0 million per year for a total of up to $6 million for three years. Notices of Intent to Bid are due by March 30, 2001. Proposals are due to the contract office April 30, 2001.
http://www.energy.ca.gov/contracts/2001-01-22_rfp_500-00-506.html

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16. Oxygen for Fuel Cells Topic in Navy STTR Solicitation
The U.S. Department of Defense has issued its FY 2001 Small Business Technology Transfer Research (STTR) program solicitation, and will begin accepting proposals on March 1, 2001. "Oxygen Source for Underwater Vehicle Fuel Cells" is one of the Navy's STTR topics. The Navy will not accept proposals for "Phase 1 Base efforts" in excess of $70,000. Proposal deadline is April 11, 2001.
http://www.acq.osd.mil/sadbu/sbir/sttr01/dod_sttr01.htm

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17. Housing Program Seeks to Cut Home Energy Use & Environmental Impact
The Partnership for Advancing Technology in Housing (PATH) is seeking proposals for technologies to help cut the environmental impact and energy use of new housing by 50 percent and reduce energy use in at least 15 million existing homes by 30 percent or more. Contract awards are expected to be a maximum $150,000 per project. The deadline for proposals is April 17, 2001.
http://www.pathnet.org/news/nsf0145.pdf

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18. ATP Now Accepting Proposals for 2001 Competition
The Department of Commerce's Technology Administration is now accepting proposals for the 2001 Competition of the National Institute of Science and Technology's Advanced Technology Program. ATP has funded fuel cell R&D in past competitions. Approximately $60.7 million in first

year funding for FY 2001 is available for new awards. Full proposals are due by September 30, 2001. Two conferences for potential proposers are scheduled for February.
http://www.atp.nist.gov/www/press/2001comp.htm

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19. Comments Sought on Clean Fuels Draft Solicitation
The National Energy Technology Laboratory is soliciting public comments and questions for a draft program solicitation for "Supporting Science and Enabling Technologies for Clean Fuels." Areas of interest include "Future Fuels" for fuel cell powered vehicles. It is estimated that $100 million will be available for multi-year awards under this solicitation. Comments must be received by February 15, 2001.
http://doe-iips.pr.doe.gov/iips/busopor.nsf/8df825feb86675de852564650046faea/060234c905767235852569e0004fc3e6?OpenDocument

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Contracts / Awards
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20. Fuel Cell Projects Receive $1.5 Million for Energy Efficiency Research
The California Institute of Technology and the Colorado School of Mines are among the 13 firms selected to receive funding for Energy Efficient Science Research from DOE. The California Institute of Technology received a grant for $406,559, to develop new proton conducting materials for fuel cells with higher chemical stability that improve energy efficiency. Colorado School of Mines received a grant for $1,082,377, to demonstrate how additional classes of proton conductivity will potentially result in greater power generation by fuel cells.
http://www.energy.gov/HQPress/releases01/janpr/pr01006_v.htm

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21. DOD Award to Help College Study Fuel Cell Materials
DOD is awarding $45 million to academic institutions through its Defense University Research Instrumentation Program (DURIP) to support the purchase of research instrumentation. Among the 99 academic institutions receiving awards, City University of New York – Hunter College will receive funding from the Navy for Solid State Nuclear Magnetic Resonance Studies of Battery and Fuel Cell Materials.
http://www.defenselink.mil/news/Jan2001/b01192001_bt028-01.html

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22. DCH Hydrogen Sensors Selected for Spacecraft
The U.S. National Aeronautics & Space Administration (NASA) has selected DCH Technology to develop a new hydrogen sensor for critical fuel containment systems on the U.S. Space Shuttle fleet, as well as on NASA's next generation of space vehicles.
http://www.dcht.com/press_releases/press_release.asp?release=197

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Regulations
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23. ARB Relaxes ZEV Mandate
California Air Resources Board recently held a hearing on the state's ZEV Mandate, loosening requirements for the vehicles, and giving automakers more flexibility in meeting the requirements. The original rule would have required that ZEVs make up at least 4% of cars sold in model year 2003; ARB dropped the requirement to 2%, with hybrid vehicles and other clean cars partially

counted as ZEVs. The number of pure ZEVs required in 2003 was dropped dramatically from 22,000 vehicles to 4,650.
http://www.arb.ca.gov/newsrel/nr012601.htm

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24. California Energy Commission Streamlines Permitting for Distributed Generation
California Energy Commission released a report in December recommending the streamlining of permitting processes for only the cleanest distributed generation (DG) technologies, such as fuel cells and solar PV. The report also recommends that fuel cells be added in the next update of the California Building Standards Code, and that an expedited air permit process be created for pre-certified DG equipment. As an Energy Commission-adopted report, it has now been forwarded to the California Public Utilities Commission.
http://www.energy.ca.gov/reports/2000-12-21_700-00-019.PDF

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Industry Headlines
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25. GM, Toyota Agree on Fuels for FCVs, Will Collaborate with ExxonMobil
General Motors and Toyota have reached an agreement regarding fuels for fuel cell vehicles, with hydrogen in the long-term, and a clean hydrocarbon fuel in the short-to medium-term as the primary candidates for study. The two companies, who have each had separate technology agreements with ExxonMobil, will merge their fuel cell fuels-related research.
http://www.generalmotors.com/cgi-bin/pr_display.pl?1918

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26. H Power Residential Fuel Cells to be Demonstrated on Long Island
Long Island Power Authority has signed an agreement to become the first U.S. state utility to test a residential fuel cell system using H Power fuel cell stacks. The residential systems, integrated by NBG Technologies, will provide 4.5 kW of power and will demonstrate grid connectability.
http://www.hpower.com/NEWSnbgannounce.html

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27. Electrolux to Develop Fuel Cell Powered Vacuum Cleaner
Electrolux is working with Manhattan Scientifics and Lunar Design to develop a fuel cell powered vaccum cleaner. The fuel cell system will provide 1 kW of power and will use hydrogen as its fuel. The fuel cell system is expected to be integrated into a prototype vacuum in early 2001.
http://www.mhtx.com/media_center/pressrelease30.htm

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28. FuelCell Energy to Demonstrate 1 MW Fuel Cell in Washington State
FuelCell Energy and King County, Washington, have signed an agreement to install a Direct FuelCell® power plant using municipal wastewater digester gas as the fuel. The 1 MW power plant will be installed and operated at the County's South Wastewater Treatment Facility in Renton, Washington. Operations are expected to commence during the third quarter of 2002.
http://www.fuelcellenergy.com/site/investor/press/releases/2001/01_25_01.html

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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@fuelcells.org.

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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 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/)

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/)

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)