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## **FUEL CELL CONNECTION -- June 2001 Issue**

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## Administration

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## News on U.S. Government Fuel Cell Programs

### 1. *Advances Supported by DOE Hydrogen Program Announced by Proton Energy*

Proton Energy Systems has announced four key accomplishments – in the field of hydrogen energy storage – that were achieved with the support of the DOE Hydrogen Program. PES has verified a new control board that “eliminates significant amounts of point-to-point wiring” and has developed an advanced power conditioner that has the potential to lower the overall cost of power conditioning.

[http://www.corporate-ir.net/ireye/ir\\_site.zhtml?ticker=prtn&script=410&layout=6&item\\_id=180693](http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=prtn&script=410&layout=6&item_id=180693)

### 2. *Army Intends to Create Center of Research in Nanoscience for the Soldier*

The Army Research Office has announced that it intends to create a University Affiliated Research Center (UARC) for research on nanometer-scale science and technology solutions for the soldier. One of the primary areas of interest is “Power and Cooling,” which includes the sub-topic of small-scale fuel cell and fuel processor research. The Army will invest \$10 million annually in a single university host, which will be selected through a limited competition to be held later this year. Pre-competition informational meetings will be held in mid-August or early September.

<http://www.aro.army.mil/soldiernano/index.htm>

### 3. *ORNL Licenses Bi-Polar Plate Technology to Porvair*

Oak Ridge National Laboratory has agreed to license its fuel cell bi-polar plate technology to Porvair plc. The license relates to a porous carbon composite moldable bi-polar plate, which will undergo trials for use in PEM fuel cell stacks.

<http://www.porvair.com/news.htm#bplate>

### 4. *DOE, DARPA Appointees Sworn In*

Daivd Garman, former Chief of Staff to Sen. Frank Murkowski, has been appointed as Assistant Secretary of Energy for Energy Efficiency and Renewable Energy for the Department of Energy. Anthony J. Tether, former CEO and president of The Sequoia Group, has been appointed as the director of the Defense Advanced Research Projects Agency (DARPA).

[http://www.energy.gov/HQPress/releases01/junpr/pr01090\\_v.htm](http://www.energy.gov/HQPress/releases01/junpr/pr01090_v.htm)

[http://www.defenselink.mil/news/Jun2001/b06182001\\_bt273-01.html](http://www.defenselink.mil/news/Jun2001/b06182001_bt273-01.html)

### 5. *DOE Office of Transportation Technologies Posts Fuel Cell Fact Sheets*

DOE's Office of Transportation Technologies has posted on its website a PDF document containing fact sheets that describe various technologies being developed by the Office, including fuel cells.

[http://www.ott.doe.gov/just\\_basics.shtml](http://www.ott.doe.gov/just_basics.shtml)

## RFP/Solicitation News

6. *Deadline Extended for NICE3 Program*

The deadline for the DOE Office of Industrial Technologies' NICE3 (National Industrial Competitiveness Through Energy, Environment, and Economics) Program – originally reported in the February 2001 issue of the Fuel Cell Connection – has been extended from June 29 to July 13, 2001. The NICE3 Program focuses on projects that will have significant energy savings on a national level within OIT's focus industries.

<http://www.golden.doe.gov/business%20opportunities/SolFiles/go90007-002.pdf>

7. *Deadline Extended for DARPA BAA*

DARPA's Defense Sciences Research and Technology BAA – originally issued in May 2000 – deadline has been extended from June 29, 2001, to August 16, 2001. The DARPA Defense Sciences Office's Technical Topic Areas of Interest include materials and concepts for power generation and storage at all scales.

<http://www.darpa.mil/baa/BAA0036mod1.htm>

8. *NASA Issues RFO for PEM Fuel Cells for Reusable Launch Vehicles*

NASA's Glenn Research Center has issued a Request for Offer (RFO) for the development of PEM fuel cell power plants for application in future 2<sup>nd</sup> Generation Reusable Launch Vehicles. The power level for the PEMFC is anticipated to be nominally 20kW, running on pure hydrogen and oxygen. NASA/GRC anticipates issuing multiple awards for the basic contract, expecting to fund no more than \$2 million in basic contracts. Due date for proposals is July 15, 2001.

<http://nais.msfc.nasa.gov/cgi-bin/EPs/sol.cgi?acqid=97306>

9. *Defense University Research Instrumentation Program Seeks Proposals*

The Defense University Research Instrumentation Program (DURIP) intends to award \$45 million to improve the capabilities of U.S. institutions of higher education to conduct research and to educate scientists and engineers in areas important to national defense. Funds will be awarded via grants for the purchase of research equipment costing more than \$50,000. Proposals are due no later than 4:00pm on August 23, 2001.

<http://afosr.sciencewise.com/pdfs/DURIPFY02BAAFinal1b.pdf>

10. *2002 DEPSCoR Solicitation Issued*

Universities in 19 states and Puerto Rico are eligible to submit proposals for the DOD Experimental Program to Stimulate Competitive Research (DEPSCoR). DEPSCoR research projects may address any of the technical areas listed in the Broad Agency Announcements of the Army, Navy, Air Force, and Ballistic Missile Defense Organization. Deadline for DEPSCoR proposals is September 27, 2001.

<http://www.aro.army.mil/research/depacor02.pdf>

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**Contract Awards**  
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11. *DOE Announces \$123 Million in Awards for Fuel Cell and Hydrogen Projects*

The U.S. Department of Energy announced over \$123 million in cost-shared contracts with companies and research institutes for projects focusing on fuel cell and hydrogen technologies. Projects include development of such items as: advanced quick-start fuel processors for fuel cell vehicles, analysis of fuel cells as auxiliary power units, projections of platinum group metal supplies, improved MEAs (membrane electrode assemblies), high temperature membranes, fuel cell air compressors, and fuel cell vehicle codes & standards.

<http://www.energy.gov/HQPress/releases01/junpr/pr01105.htm>  
<http://www.energy.gov/HQPress/releases01/junpr/pr01101.htm>

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*12. Coast Guard Contracts with PPL-Spectrum to Install MCFC Power Plant*

The U.S. Coast Guard has awarded a contract to PPL-Spectrum - the North American distributor for FuelCell Energy - for the installation of a prototype molten carbonate fuel cell power plant at the USCG Air Station Cape Cod, Massachusetts. The fuel cell will support critical air operations, which are likely to include flight command and control facilities, maintenance hangers, and various testing equipment.

<http://www.eps.gov/spg/DOT/USCG/USCGRDC/DTCG32-01-R-R00006/listing.html>

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*13. DARPA Palm Power Program Awards Funding to ITN Energy for Small SOFC*

DARPA has awarded a contract to ITN Energy Systems under the Palm Power Program, for the development of a hand held solid oxide fuel cell for U.S. military applications. The SOFC system will be developed to operate directly on JP-8 fuel and deliver 20 watts of 12 volt DC power continuously for three days.

[http://www.itnes.com/data/news\\_txt.html#palm\\_power](http://www.itnes.com/data/news_txt.html#palm_power)

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*14. Army CECOM to Purchase H Power Fuel Cell Stacks*

The U.S. Army Communications-Electronics Command Acquisition Center intends to award a sole source purchase order to H Power Corporation for five Personal Power System 15-watt fuel cell stacks.

<http://frwebgate1.access.gpo.gov/cgi-bin/waisgate.cgi?WAISdocID=43293402+1+0+0&WALSaction=retrieve>

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*15. NASA Issues Award for Hydrogen Leak Detection System*

NASA's Stennis Space Center has awarded a \$600,000 contract to Intelligent Optical Systems Inc., for development of a fiber optic hydrogen leak detection system for space launch vehicles.

<http://ens.lycos.com/e-wire/June01/15June0103.html>

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**Legislation**

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*16. New York State Governor's Executive Order Mandates Renewables for State Agencies*

New York Governor George Pataki issued an Executive Order that encourages alternative energy production by mandating that State agencies purchase no less than 10 percent of the overall State facility energy requirements from renewable "green" power sources such as fuel cells, wind, and solar. The mandate will increase to 20 percent by 2010. Additionally, the Governor formed a New York State Greenhouse Gas Task force to develop policy recommendations for greenhouse gas emissions and global warming.

[http://www.state.ny.us/governor/press/year01/june10\\_01.htm](http://www.state.ny.us/governor/press/year01/june10_01.htm)

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*17. Texas Emissions Reduction Plan Supports Fuel Cell R&D*

The Texas State Legislature has passed the Texas Emissions Reduction Plan, an act that: establishes a Diesel Emissions Reduction Incentive Program that allows fuel cell retrofits of diesel engines, creates an Advisory Board that will include a representative of the fuel cell industry, and sets up a New Technology R&D Program that will provide grants for supporting development of

emissions-reducing technologies, including fuel cells. The Plan is set to go into effect September 1, 2001.

<http://www.capitol.state.tx.us/tlo/77r/billtext/SB00005F.htm>

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*18. National Database of State Incentives for Renewable Energy*

The Interstate Renewable Energy Council, funded by DOE and managed by the North Carolina Solar Center, has established an online Database of State Incentives for Renewable Energy (DSIRE). Interested parties can access information on financial incentives, beneficial regulations and policies, investment and awareness programs, and local government and community programs and incentives.

<http://www.dcs.ncsu.edu/solar/dsire/dsire.cfm>

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**Industry Headlines**  
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*19. Long Island Power Authority to Install 75 Plug Power Fuel Cells*

Long Island Power Authority (LIPA) announced that it will connect 75 fuel cells, built by Plug Power, to its electric grid at its West Babylon substation this summer. Site planning is underway and construction is expected to start in July. The \$7 million program is being funded through LIPA's Clean Energy Initiative.

[http://www.lipower.org/news99/june26\\_01.htm](http://www.lipower.org/news99/june26_01.htm)

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*20. Toyota Unveils Two Fuel Cell Hybrid Vehicles*

Toyota announced that it has developed two fuel cell hybrid vehicles – FCHV-BUS1, a 63-seater bus, and FCHV-4, a five-seater passenger car. The FCHV-BUS1 was a joint effort between Toyota and Hino Motors. The FCHV-4 passenger car, which runs on compressed hydrogen, has a maximum speed of 90 mph and a cruising range of 150 miles.

<http://investor.cnet.com/investor/news/newsitem/0-9900-1028-6304424-0.html>

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*21. Marubeni to Order 45 MW of FuelCell Energy DFC Power Plants*

Marubeni Corporation has entered into an agreement with FuelCell Energy for the initial purchase of 3 MW of fuel cell power plants, and a total of up to 45 MW in orders over the next two years. The two companies expect to form a joint venture for the purpose of assembling Direct Fuel Cell (DFC) power plants in Asia from components produced by FuelCell Energy at its Connecticut manufacturing facility.

[http://www.fce.com/site/investor/press/releases/2001/06\\_18\\_01.html](http://www.fce.com/site/investor/press/releases/2001/06_18_01.html)

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*22. GM Joins Forces With Hydrogen Supplier, Storage Developer*

General Motors announced two strategic partnerships in the areas of hydrogen supply and storage. GM has joined with General Hydrogen in a 25-year collaboration to accelerate the spread of a hydrogen infrastructure for fuel cell vehicles. The automaker also announced a partnership with QUANTUM Technologies for the development of hydrogen storage devices for fuel cell vehicles.

<http://media.gm.com/news/releases/g010612a.html>

<http://media.gm.com/news/releases/g010613a.html>

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*23. IFC, Shell Hydrogen Launch Joint Venture*

Shell Hydrogen and International Fuel Cells have established a joint venture, HydrogenSource LLC, to develop, manufacture and sell fuel processors and hydrogen generation systems for commercial, residential and transportation fuel cell power plants. HydrogenSource will be headquartered in South Windsor, Connecticut.

<http://www.internationalfuelcells.com/news/archive/062701.shtml>

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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***  
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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.

[\(http://www.usfcc.com/\)](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>