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BPA Fuel Cell Program Update

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BPA Fuel Cell Program:

BPA's Fuel Cell Program quarterly steering committee conference calls will have a broader perspective in the future. Based on suggestions from participants, future calls will cover other distributed generation technologies. Working with other fuel cell programs, BPA helped US DOE with a Hydrogen Learning Workshop for legislators in August. It was very well attended and follow-up activities will be coordinated through an email list of interested parties. Speaker presentations are at <http://www.sentech.org/hydrogenlearningworkshop-portland.htm>

BPA is field-testing a Relion unit in a battery charging application at a BPA radio site. Two more field tests at BPA sites will be analyzed in a final report, which will include recommendations for battery charging fuel cell applications. At least one of these new installations will be in Oregon and we're investigating applying for the Oregon Business Energy Tax Credit pass-thru for this installation.

Climate Change Fuel Cell Awards:

In September BPA awarded 13 grants under the DoD Climate Change Fuel Cell Rebate Program, totaling \$6,000,000 for 6 MW of fuel cell capacity. There were 18 proposals for this year's solicitation, which closed 6/1/04. All of the fuel cells will be either 200 kW UTC or 250 kW Fuel Cell Energy units. These units will be installed in office buildings, hotels, a jail, a brewery, a post office, a wastewater treatment plant and two universities. Next year's solicitation should be posted on BPA's web page by 4/1/05.

Fuel Cell Education:

BPA has received funding for Fuel Cell Education Pilot Programs in Oregon and California. The Oregon program will be similar to last year's Washington program, where science teachers receive training and a fuel cell curriculum and car kit. The kit includes a photovoltaic module and a reversible PEM fuel cell to generate hydrogen; the curriculum includes eight hands-on experiments designed for 8th - 10th grade science classes. For more information on the kit, see the BPA web-site: [<http://www.bpa.gov/Energy/N/projects/fuel_cell/education/>](http://www.bpa.gov/Energy/N/projects/fuel_cell/education/)

The Oregon teacher training is scheduled for February 25th and 26th, at Pacific University. The California Pilot Program will develop a 4th - 6th grade fuel cell curriculum, tied to national standards, which will be available at no charge in

2006. Two other education related items are: BPA's booth at the National Science Teacher Association meeting in Seattle to tell teachers more about these programs, and the Washington Fuel Cell Education Program has been nominated for the Governor's Award for Excellence in Energy.

Combined Heat and Power Consortium Update:

BPA is part of the Combined Heat and Power Consortium, spearheaded by Northwest Natural. While the Consortium helped install a 5 kW Plug Power GenSys PEM fuel cell (http://www.bpa.gov/Energy/N/tech/dg_chp/HarkinHouse/) at the Harkins House Juvenile Detention Center in Hillsboro, Oregon, there aren't any more fuel cells planned in the near future. They have four projects planned this year, including the new OHSU Macadam project, 3 hospitals and a large university. They're funding several studies, including one on methane use at Portland's Columbia Waste Water Treatment Plant, and one on CHP emissions characteristics and green tag potential.

The Consortium is very interested in other projects. Chris Galati will talk with interested parties about the CHP Consortium and new opportunities on Thursday, October 21, 2004 at 1 pm (PDT); if you're interested in participating call (503) 230-5506 at the indicated time.

NWHA:

Jack Robertson of the Northwest Hydrogen Alliance (NWA) spoke at the August US DOE with a Hydrogen Learning Workshop for legislators. His presentation on "Building a Northwest Hydrogen Economy" generated a lot of discussion on how to get there.

Interested in the hydrogen economy? Get your own Hydrogen Economy "road map" by contacting Becky Clark at BPA (503) 230-3158, or rlclark@bpa.gov [<mailto:rlclark@bpa.gov>](mailto:rlclark@bpa.gov). Packed with information, the road map shows the infrastructure and technologies required to move towards a Hydrogen Economy and includes Internet links and a wide range of applications. The Power Quality Service Center developed the Hydrogen Economy Road Map with help from BPA.

PNNL:

PNNL is compiling a report on PEM fuel cells for DOE; the report will include interviews and surveys of fuel cell users to document decision factors and commercialization factors. The report will also document the results of a focus group of fuel cell users.

Quantum Leap Technology

BPA is negotiating a lease with Quantum Leap Technology (QLT) to demonstrate their high efficiency PEM fuel cell at a Street of Dreams house during the summer of 2005. QLT is a development stage, fuel cell company, located in

Beaverton, Oregon. They've developed a 2 kW PEM prototype using low-cost materials, and their initial testing indicate electrical efficiencies over 50%. QLT is initially focused on stationary power generation applications in the 2-50 kW range. For more information contact Bill Sproull, VP Business Development at (503) 641-6002 x425, or bills@quantumleaptech.com

ReliOn (formerly Avista Labs):

ReliOn selected Celestica to manufacture their products, which will enable ReliOn to quickly ramp up production and lower their costs. In July, ReliOn commissioned 4 fuel cell installations at Fort Lewis. The installations are part of an Army CERL fuel cell program grant, which involves starting each fuel cell daily for a period of one year in order to gather data on performance and reliability as well as to demonstrate the effectiveness of the fuel cell systems. In September a ReliOn fuel cell successfully provided backup power to a telecommunication site in the Bahamas during the category 4 Hurricane Frances.

USFCC:

BPA is a member of the US Fuel Cell Council (USFCC), which is an industry association dedicated to fostering the commercialization of fuel cells in the United States. According to the USFCC, the federal tax bill does not include stationary or transportation fuel cell tax credits. Despite the efforts of Senators like Gordon Smith (R-OR), Olympia Snowe (R-ME) and Jeff Bingaman (D-NM), the vast majority of energy-related tax incentives were not passed. Tax credits for the fuel cell industry is a USFCC priority and they will continue to support them in the future.

The following link <http://fuelcellstandards.com/> has information on fuel cell and hydrogen related codes and standards.

Upcoming Fuel Cell Events:

A brief summary of these events will be included in the next Update.

- Public Fuel Cell Alliance and Clean Energy States Alliance meetings in Portland October 17 – 20. Email maria@cleanegroup.org for more information.
- CHP Consortium Conference Call on October 21, 2004 at 1 pm (PDT); if you're interested in participating call (503) 230-5506 at the indicated time.
- The Fuel Cell Seminar is being held in San Antonio, Texas from November 1st through the 5th.