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Columbia's Hydrogen and Fuel Cell Industry Gains Momentum

University of South Carolina Columbia Fuel Cell Collaborative Announces Greater Columbia Fuel Cell Challenge 2009 Awards at National Hydrogen Association Conference

COLUMBIA, S.C., April 1 /PRNewswire/ -- The University of South Carolina - City of Columbia Fuel Cell Collaborative announced the Greater Columbia Fuel Cell Challenge 2009 Awards today at the National Hydrogen Association's 20th Anniversary Conference, hosted in Columbia, S.C. The Challenge, organized by the University of South Carolina, the City of Columbia, the South Carolina Research Authority (SCRA) and EngenuitySC, was created in 2006 as an initiative to collaborate with private sector leaders from all areas of the fuel cell industry for the unprecedented deployment of fuel cell and alternative energy technologies into multiple city, university and public applications in Columbia.

In its first two years of activity, the Challenge has gained national recognition by accelerating the commercialization of ideas and discoveries and providing a real world environment in which these technologies can be deployed. Project investments have been made across portable, stationary power, and mobility applications, as well as for expanding programs focused on education, outreach, and the discovery process.

In 2009, the Challenge selected and awarded five projects from over 15 project submissions covering all elements of the innovation pipeline, from discovery, to development to deployment.

"The partnerships assembled under the banner of the Greater Columbia Fuel Cell Challenge are turning innovative ideas from researchers and companies across the nation into significant economic opportunities, both in the Midlands of South Carolina as well as across the state," said Bill Mahoney, SCRA CEO.

The University of South Carolina College of Engineering & Computing received a grant to install a 5 kW proton exchange membrane (PEM) fuel cell as part of the power source for the scoreboard of the University's new, riverfront baseball stadium. The project will provide real life application for demonstration purposes as well as for building out additional technology applications in Columbia's growing fuel cell district.

Industry leaders, Logan Energy and Plug Power have jointly been awarded a Challenge investment to test and evaluate a new PEM micro-Combined Heat and Power (CHP) fuel cell under real world conditions. An Early Customer Acceptance Test (ECAT) unit, it produces 4.5kW electrical with a variable thermal capacity of 7kW - 25kW thermal. The unit operates on natural gas and employs a unique high-temperature membrane, which should allow it to integrate effectively with traditional residential and light commercial heating systems. "Columbia's urban environment and support for emerging clean technologies made it a natural fit for the deployment and testing this commercially viable pre-market product. We could not be more thrilled," said Sam Logan, CEO of Logan Energy.

LiftOne, Hydrogenics and Air Products & Chemicals have jointly been awarded a Challenge grant to conduct one of the team's six planned, month-long deployments with target end-users to validate the value proposition and the market requirements for fuel cell powered lift trucks. These trials would deploy two Class One, sit-down electric forklifts with fuel cell power packs, and one mobile hydrogen fueler at selected distribution centers and manufacturing facilities within LiftOne's three-state area of operations (VA, NC, SC).

"These deployments are intended to provide a broad group of stakeholders including facility management lift truck operators, codes and standards officials and the general public with the opportunity to experience and witness a real world fuel cell application operating in real world environments," said Tom Dever, LiftOne project manager. The Challenge grant provides funding for the specific trial planned for a Columbia-based manufacturing facility. Primary funding for this project is being provided by the U.S. Department of Energy's Hydrogen Education Program.

Dantherm Power, Inc. is being awarded a grant to deploy fuel cell backup power units at up to three radio communications sites owned and operated by the City of Columbia. In the first phase of the project the incumbent backup power technology would be replaced by fuel cell generators supplied by Dantherm; in follow-on phases the project team would add the capability to refill the hydrogen supply bottles for these units from solar power. As the end user of the project's hardware, City of Columbia employees will be active participants in site selection, equipment performance specification, safety certification, and operating and testing procedures associated with the project.

NextGenEn, Inc., a recent start-up company at the University of South Carolina, has been awarded a fuel cell challenge grant to develop a comprehensive system design and early demonstration prototype solid oxide fuel cell (SOFC) device for portable power applications (from 100W up to 500W) that can operate in a highly controlled environment. The fuel cell device will be designed specifically for medical device applications. "The fuel flexibility associated with SOFC will be essential to customer adoption of this disruptive technology as it seeks to replace traditional storage batteries," said Chad Sands, NextGenEn, Inc. CEO. The company intends to adopt a biofuel as the primary feedstock.

"The University-based companies involved in the Challenge are evidence to the talent we have built within our research community," said University of South Carolina President Dr. Harris Pastides. "Our University's top minds are working shoulder to shoulder with industry every day to tackle the global energy issue."

"The City of Columbia is proud once again for our fuel cell district to be a test bed for innovative technology deployment," said City of Columbia Mayor Bob Coble. "We remain committed to being at the leading edge of sustainability and alternative energy applications."

About the USC Columbia Fuel Cell Collaborative

The University of South Carolina - City of Columbia Fuel Cell Collaborative was formed by the University of South Carolina, the City of Columbia, EngenuitySC and the South Carolina Research Authority to position Columbia, SC as a leader in hydrogen fuel cell innovation and technology. Its mission is to attract private sector partners, top fuel cell scientists, entrepreneurs and innovators to the Columbia region. For more information, visit: www.fuelcellchallenge.com

About the University of South Carolina

The University of South Carolina is dedicated to building the knowledge economy in South Carolina by attracting the world's top professors, scientists, students and entrepreneurs to Columbia, SC. Through its new Innovation district called Innovista, the University is supporting research initiatives in nanotechnology, health sciences, Future Fuels(TM), the environment, and information and knowledge technologies. For more information, visit: www.sc.edu

About the City of Columbia

The City of Columbia is as rich in cultural heritage and history as it is with talent and opportunity. The City of Columbia is dedicated to the advancement of the knowledge economy in the midlands region through its partnership in the USC Columbia Fuel Cell Collaborative, its award winning technology incubator, and its commitment to entrepreneurship and innovation. The city fully supports the creation of the first integrated fuel cell district in the country and is committed to making Columbia a business friendly environment for innovative companies. For more information, visit: www.columbiasc.net

About EngenuitySC

EngenuitySC is an active public/private sector partnership focused on nurturing the growth of a knowledge-based economy in the Columbia, SC region. Comprised of business and industry leaders, along with representatives from local government and academia, EngenuitySC strives to create a fertile business climate that: encourages entrepreneurship and the commercialization of ideas and technology, harnesses the research breakthroughs of higher education institutions, establishes public policy that is sensitive to the unique needs of knowledge-based companies, and promotes access to start-up investment capital. For more information, visit: www.engenuitysc.com

About SCRA

SCRA is a global leader in applied research and commercialization services with offices in South Carolina, Ohio and in the Washington, D.C. area. SCRA collaborates to advance technology, providing technology-based solutions with assured outcomes to industry and government, with the help of research universities in SC, the US and around the world. www.scra.org

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