Just got back from the 10th International Hydrogen and Fuel Cell Expo in Tokyo, Japan. The companies participating in the U.S.A. Pavilion had another successful show, this time with special guest star Ambassador Caroline Kennedy making an appearance and spending time with each company to learn what they do. We have some pictures of the trip up at https://www.facebook.com/FuelCellInsider.

TRANSPORTATION APPLICATIONS

Hyundai Previews New Fuel Cell Concept Car. Hot off the heels of the start of its leasing program for the ix35/Tucson fuel cell vehicle, Hyundai is previewing its latest fuel cell concept car, the Intrado, in advance of the Geneva Auto Show. Intrado boasts a super-lightweight structure made from a mixture of advanced materials and features a next-generation hydrogen fuel cell drivetrain that is both smaller and lighter than the ones currently being manufactured.

Fuel Cells Power UITM Malaysia to Shell Eco Marathon Asia Win. UITM Malaysia won both the Urban Concept and Prototype categories at this year’s Shell Eco Marathon Asia which took place in the Philippines using fuel cells from Horizon Fuel Cell Technologies. The second place participant also used Horizon hybrid technology in the contest that drew more than 100 teams from top universities and Engineering institutes all over Asia.
http://www.horizonfuelcell.com

Walmart Purchases Huge Multi-State GenKey Order from Plug Power. Plug Power Inc has received a multi-site GenKey purchase order from Walmart Stores, Inc. for six of its North America distribution centers. The order includes 1,738 GenDrive fuel cell units, to be deployed over two years; GenFuel infrastructure construction and hydrogen fuel supply; and six-year GenCare service contract for each site.

MARAD Funding Fuel Cell Demonstration at Port of Honolulu. The Maritime Administration (MARAD) is partnering with the U.S. Department of Energy (DOE) and Sandia National Laboratories to explore the potential cost savings and emissions reductions through the use of hydrogen fuel cells to provide electrical power to ships at berths. MARAD is providing $700,000 to support the construction of a 100 kW portable fuel cell power system at the Port of Honolulu to help power vessel on-board systems pier side for ships, tugs, and barges operating between the Hawaiian Islands.
http://www.dot.gov/fastlane/maritime-administration-helping-green-port-honolulu
Horizon Fuel Cell Powering Israeli UAV.
The first-ever civilian operational UAV to be powered by a fuel cell is the WanderB made by Israeli company BlueBird, using a fuel cell system from Horizon Energy Systems. The fuel cell was integrated into the UAV by Bluebird in Israel with support from the Singapore Israel Industrial R&D Foundation – SIIRD. [http://www.unmannedsystemstechnology.com/2014/02/singapore-israel-cooperation-leads-to-worlds-first-civilian-fuel-cell-uav/]

STATIONARY APPLICATIONS

The Gyeonggi Green Energy fuel cell park, located in Hwasung City, South Korea, and the largest fuel cell park in the world with 59 megawatt (MW), is fully operational. The POSCO Energy facility consists of 21 FuelCell Energy DFC3000® power plants and provides continuous baseload electricity to the South Korean electric grid and usable high quality heat for a district heating system. FuelCell Energy also sold two 1.4 MW and three 300 kilowatt (kW) fuel cell modules to POSCO Energy during the first quarter of 2014. There was also a groundbreaking for the 19.6 megawatt Godeok Rolling Stock Management Office fuel cell park in Seoul City, which will consist of seven DFC3000® fuel cell power plants and planned to be operational by the end of 2014. [http://fcel.client.shareholder.com/releasedetail.cfm?ReleaseID=826618]

AFC Energy Enters Partnership to Focus on Thailand.
AFC Energy has entered into a new cooperation agreement with Waste2Tricity International Ltd., and Alter NRG Corporation to focus on fuel cell systems in proposed energy-from-waste (EfW) projects in Thailand. [http://www.proactiveinvestors.co.uk/companies/news/66365/afc-energy-advances-presence-in-thailand-with-new-agreement-66365.html]

Article Sheds Light on ClearEdge Plans.
An article in the Hartford Business Journal examines recent and past activity by ClearEdge Power. ClearEdge plans to expand its South Windsor, Connecticut campus to manufacture the company's two fuel cell products. The company is also investing $22 million in research and development and hiring more engineers, mostly in Connecticut, to work on reducing the cost of both systems. [http://www.hartfordbusiness.com/article/20140224/PRINTEDITION/302209931]

PORTABLE/BACKUP POWER

Acumentrics Fuel Cells Power Equipment at NASCAR Race.
As part of a DOE-supported project, at the Daytona 500, the first race in the NASCAR Sprint Cup series, fuel cell manufacturer Acumentrics tested two of its 250 watt solid oxide fuel cells (SOFC) to power some of the remote broadcast cameras and two 1 kilowatt (kW) SOFCs to power lights in pit row. NASCAR could save more than $2,000 per race weekend by replacing gasoline-powered generators with fuel cells - a savings of $77,000 over the course of the season. [http://energy.gov/articles/nascar-green-gets-first-place-daytona-500]

ReliOn and Acta S.p.A. have signed a wide-ranging cooperation agreement for the product launch and marketing/promotion of a new Acta Power back-up power system incorporating ReliOn's fuel cell system. The product has been designed with a 23” rack and will be marketed in North America. [http://www.relion-inc.com/news.asp#52]

VP Energy and Electro Power Systems Now Manufacturing in U.S.
VP Energy, LLC and Electro Power Systems have completed moving the manufacturing arm, VPE-M, of its product, “the ElectroSelf” fuel cell, to its new U.S. facility in Brighton, Michigan.
Five Hydrogen Stations on Track for Isle of Wight.
ITM Power has been granted planning permission for five hydrogen refueling sites on the Isle of Wight, including four 80kg/day hydrogen refueling stations at four locations and one 15kg/day marine refueling station.

H2 Logic to Supply Hydrogen Station for Hamburg.
H2 Logic has won a competitive tender exercise on the supply of a Hydrogen Refueling Station for Hamburg from a major infrastructure provider in Germany. The station will be based on the company’s H2Station® CAR-100 product and will include onsite electrolysis production. The customer will use the station to gain experiences on the use of hydrogen production for balancing and storage of renewable electricity in Germany.

AREVA and Schneider Electric Enter Agreement.
AREVA and Schneider Electric have signed a strategic partnership agreement to develop energy management and storage solutions based on hydrogen fuel cell technology. AREVA will provide the Greenergy Box™, energy storage solution that includes an electrolyzer and fuel cell. Connected to a 560 kW photovoltaic solar power plant on the MYRTE demonstration platform, in Corsica, the Greenergy Box™ will also be soon connected to 35 kW peak power photovoltaic panels installed in La Croix Valmer in the south of France.

Hydrogenics Joins BioCat Power-to-Gas Project.
Hydrogenics Corporation will be a participating partner of the Power-to-Gas Biological Catalysis (BioCat) Project in Denmark. The project will use hydrogen made from excess wind power to convert biogas from sewage sludge into cleaner methane gas. "BioCat" has received 27.6 million DKK (US$5 million) in funding from the Danish research pool ForskEL. For this project, Hydrogenics will install a 1 MW water electrolysis plant in Spildevandscenter Avedøre, one of the largest wastewater treatment facilities in Denmark. The site will use surplus electricity from the grid to produce hydrogen using Hydrogenics’ electrolyzer, and the hydrogen will then be combined with carbon dioxide from raw biogas and fed into a separate bioreactor – in which microorganisms will perform a catalytic reaction to produce pipeline-grade renewable methane. The product gas will be injected into a nearby gas distribution system, and the by-products will be recycled onsite in the wastewater treatment process.

SBIR/STTR Phase 1 Winners Announced.
DOE announced the FY 2014 Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) Phase I Release 1 award winners, including four hydrogen and fuel cell projects. They include Amsen Technologies LLC of Tucson, Arizona, developing high-performance proton
exchange membranes for electrolysis cells; Giner, Inc. of Newton, Massachusetts, developing a water electrolysis process that can provide high-pressure hydrogen straight to storage tanks or vehicles; GVD Corp. of Cambridge, Massachusetts, developing improved plastic and elastomer seal coatings to enable reliable performance of hydrogen systems; and Tetramer Technologies, LLC of Pendleton, South Carolina, leveraging membrane technology developed through a previous EERE membrane humidifier project to design improved PEM electrolyzer ion exchange membranes.

http://science.energy.gov/sbir/awards/

3M Company recently launched a Global Fuel Cell Initiative through its Advanced Materials Division. The focus of this program is to bring a portfolio of polymer material solutions to fuel cell component manufacturers.

http://www.3M.com/FuelCells

REPORTS/MARKET STUDIES

NREL Releases Two New Fuel Cell Bus Reports.

http://www.nrel.gov/docs/fy14osti/60490.pdf

ClearEdge Power released a new white paper, “Critical and Clean Power,” contrasting the benefits of diesel generators versus the company’s own PureCell® fuel cell systems as a source of critical power generation for business.


Microsoft Blog Post on Fuel Cells for Data Centers.
Microsoft has completed a successful demonstration of a rack of servers powered directly off the direct current (DC) output of a fuel cell stack at the National Fuel Cell Research Center at the University of California Irvine, and has posted a good overview of the demonstration with answers to questions that might arise.


Danish Energy Storage Report.
A new report from Denmark, “Status and Recommendations for RD&D on Energy Storage Technologies in a Danish Context,” identifies three areas within energy storage in Denmark that should be focused on: chemical energy storage, batteries and thermal energy storage. The report also covers hydrogen for energy storage.

http://www.dtu.dk/english/~/media/Institutter/Energikonvertering/Artikler%20og%20rapporter/Status%20and%20recommendations%20for%20energy%20storage%20technologies%20in%20Denmark.ashx

Battery & Fuel Cell Materials.
The Freedonia Group has released "Battery & Fuel Cell Materials" that claims U.S. demand for battery and fuel cell materials is expected to grow 4.3 percent annually through 2017 to $6.1 billion. $$$

http://pr-bg.com/content/view/328081/79/

REQUESTS FOR PROPOSALS/FUNDING OPPORTUNITES

Carbon Fiber from Renewable Feedstock RFP.
DOE announced up to $12 million in funding to advance the production of cost-competitive, high-performance carbon fiber material from renewable non-food-based feedstocks such as agricultural residues and woody biomass.
NYPA RFI.
The Energy Efficiency Innovation Collaborative (EE-INC), spearheaded by the New York Power Authority (NYPA), is looking to incorporate emerging energy-saving technologies into the projects that it is undertaking at schools, colleges and universities, offices, health-care facilities and other public buildings throughout the state. NYPA has plans to finance more than $800 million in energy efficiency projects over the next several years and has issued a Request for Information (RFI), seeking commercial, but not yet widely deployed, energy efficiency technologies that can be considered for use in these projects.

http://www.eeinc-ny.com

MISCELLANEOUS

Georgia Tech Develops Hybrid Fuel Cell That Can Run on Biomass.
Researchers at the Georgia Institute of Technology have developed a new type of low-temperature fuel cell that directly converts biomass to electricity with assistance from a catalyst activated by solar or thermal energy. The hybrid fuel cell can use a wide variety of biomass sources, including starch, cellulose, lignin, switchgrass, powdered wood, algae and waste from poultry processing.


CONFERENCES

For a complete list of conferences, please go to http://www.fuelcells.org/newsroom/conferences/.

EHEC 2014.
The European Hydrogen Energy Conference 2014 will be held March 12-14, 2014, in Seville, Spain. The deadline for submitting an abstract has been extended to October 20, 2013. For more information, please go to http://www.ehec.info/.

ACT Expo.
The Alternative Clean Transportation (ACT) Expo will be held May 5-8, 2014, in at the Long Beach Convention Center in Long Beach, California. For details on the Expo, please go to http://www.actexpo.com/ and to receive a discount on registration, use the code FC50.

ASME 12th Fuel Cell Science, Engineering & Technology Conference.
The American Society of Mechanical Engineers (ASME) 12th Fuel Cell Science, Engineering & Technology Conference will be held June 30-July 2, 2014, at the Seaport Hotel in Boston, Massachusetts. For conference details, please go to http://www.asmeconferences.org/ESFUELCELL2014.

California Hydrogen and Fuel Cell Summit.

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*Fuel cells generate electricity without combustion by harnessing the energy released when hydrogen and oxygen are chemically combined. Fuel Cells 2000 is an independent, nonprofit activity dedicated to the commercialization of fuel cell technologies.*