

California Hydrogen Business Council October 2004 Report

Summarized in this issue (with links to complete articles):

1. California Hydrogen Business Council meeting on November 12
2. California Stationary Fuel Cell Collaborative/CaFCP Meeting October 26
3. IEA-HIA 25 year report downloadable at www.CaliforniaHydrogen.org
4. CHBC a support sponsor for CalStart Transportation Conference December 2
5. Vehicle fuel cells forecasted for \$98 billion by 2013
6. 3,000 portable fuel cells manufactured
7. Ford tests a hydrogen F-350 truck
8. Honda develops fuel cell scooter
9. Government of Canada invests over \$4.2 million in Hydrogenics' fuel cell initiatives
10. Medis receives order from General Dynamics, signs distribution agreement with Superior Communications
11. Stuart Energy in exclusive agreement for large-scale electrolysis
12. Stuart receives multiple awards from Canadian government
13. Proton Energy's hydrogen generator at Mirant's power plant
14. CHBC 2005 meeting dates
15. CHBC Silver Members
16. CHBC Board of Directors
17. CHBC membership

1. California Hydrogen Business Council meeting on November 12

Register now to benefit from discounted pre-registration fees for the next General meeting of the California Hydrogen Business Council, to be held Friday, November 12, 2004, 8 a.m. - 5 p.m. at the South Coast AQMD facilities in Diamond Bar, Calif. This day-long meeting brings together corporate and academic hydrogen research and development leaders along with many state and local government officials--all working to build a strong hydrogen industry in California. The keynote Speaker will be Executive Director Dr. Barry Wallerstein, who will present an overview of the extensive hydrogen activities underway at SCAQMD. Eileen Tutt from CARB will discuss the impact of a hydrogen economy on CARB's role. Dr. Shannon Baxter will provide an update about the Hydrogen Highway. Dr. Paul Scott with ISE will present the HICE bus program. Jack Broadbent, the Executive Director of BAAQMD will speak on his agency's hydrogen plans and activities. There will be a panel with speakers discussing various aspects of hydrogen generation from steam methane reforming, electrolysis, and PEM systems and a tour of AQMD's new hydrogen generation and refueling station. To see the full agenda and register: http://www.californiahydrogen.org/page.cfm?content=45&event_ID=7

2. California Stationary Fuel Cell Collaborative/CaFCP Meeting October 26

The California Stationary Fuel Cell Collaborative will meet October 26 at the California Fuel Cell Partnership in West Sacramento. Topics include consideration of the CaSFCC Implementation Plan, an update on the Hydrogen Highway Blueprint Plan and DOE

activities. For more info, contact Ron Friesen, rfriesen@casfcc.org or Marlena Elliott, melliott@arb.ca.gov, (916) 322-3893.

3. IEA-HIA 25 year report downloadable at www.CaliforniaHydrogen.org

The 25th anniversary report of the International Energy Agency Hydrogen Implementing Agreement may now be downloaded off the California Hydrogen Business Council website. This report reviews 25 years of international collaborative hydrogen research, development and demonstration.

4. CHBC a support sponsor for CalStart Transportation Conference December 2

CHBC is a support sponsor for CALSTART's upcoming California's Transportation Energy Future conference, December 2, 2004, at the Wilshire Grand hotel in downtown Los Angeles, Ca. The one-day gathering will focus on the California Air Resources Board and California Energy Commission 2003 reports that call for a major reduction in petroleum consumption as a way to provide for a more stable economic climate and protect the environment. Invited and confirmed speakers include California Governor Arnold Schwarzenegger, Senator Diane Feinstein, Assemblymember Christine Kehoe, Commissioner of the California Energy Commission James D. Boyd, and California State Treasurer Phil Angelides. CALSTART will also use the occasion to present its prestigious "Blue Sky" Awards during a luncheon. <http://www.california2020.com/>

5. Vehicle fuel cells forecasted for \$98 billion by 2013

Total vehicle fuel cell markets for autos at \$772.7 million in 2007 will grow to \$98 billion by 2013. Commercial introduction means that auto, bus, and truck segments will grow. Cars that use fuel cell systems are evolving sophisticated capability. By the end of the forecast period, trucks are expected to account for the largest portion of spending. <http://www.researchandmarkets.com/reports/c4139/>

6. 3,000 portable fuel cells manufactured

Fuel Cell Today published this comprehensive 26-page report detailing all major fuel cell firms. *Fuel Cell Today's* editor and author of the report, David Jollie commented, "We have seen a very healthy seventy-five per cent increase in production levels this year, deriving from a greater range of companies involved in this area and from some early commercial sales." Military applications are early adopters. It may be portable consumer electronics that drives the industry. The flexible proton exchange membrane and the direct methanol fuel cell are leading. Solid oxide cells and silicon-based systems designed to be built using semiconductor processing techniques are also promising. http://www.fuelcelltoday.com/FuelCellToday/FCTFiles/FCTArticleFiles/Article_857_Portable0904.pdf

7. Ford tests a hydrogen F-350 truck

Ford has been testing an F-350 4x4 truck with a HICE 6.8-liter V-10 pickup on the streets of Dearborn, Ford's home town. "You service it the same, change the oil every 5,000 miles," said Bob Natkin, technical leader of Ford's V-10 hydrogen engine program.

The truck's hydrogen fuel tanks are reinforced with carbon and can withstand a rifle round or a five-story fall, Natkin said.

http://www.fuelcelltoday.com/FuelCellToday/FCTFiles/FCTArticleFiles/Article_857_Portable0904.pdf

8. Honda develops fuel cell scooter

Honda has developed a scooter using its own high-efficiency Honda fuel cell stack that is capable of starting at sub-freezing temperatures. Honda plans to continue refining the new 125cc scooter's design to make it even more light and compact.

http://www.fuelcelltoday.com/FuelCellToday/FCTFiles/FCTArticleFiles/Article_857_Portable0904.pdf

9. Government of Canada invests over \$4.2 million in Hydrogenics' fuel cell initiatives

Hydrogenics Corporation, a designer and manufacturer of hydrogen and fuel cell systems, unveiled the first of four Hydrogenics' projects to be part of Toronto's Hydrogen Village. The unveiling of the Company's HyLYZER™ hydrogen refueler took place at the Canadian National Exhibition (CNE). Hydrogenics also announced it has received a CDN \$4.25 million strategic investment from the Government of Canada's Hydrogen Early Adopters (h2EA) program that will help in establishing the four unique projects in which Hydrogenics will lead a consortium of partners.

http://www.fuelcelltoday.com/FuelCellToday/FCTFiles/FCTArticleFiles/Article_857_Portable0904.pdf

10. Medis receives order from General Dynamics, signs distribution agreement with Superior Communications

Medis Technologies Ltd. has received an order from General Dynamics C4 Systems, a business unit of General Dynamics, to deliver five prototype fuel cell Power Packs and associated cartridges as power sources for 10 prototype tablet computers in support of the United States Air Force (USAF) Wearable Computer Power Program. Medis has also entered into a distribution agreement with Superior Communications, which provides wireless accessories to major mobile operators, retailers and distributors across the United States, for the distribution of Medis' fuel cell Power Pack products.

[mhttp://www.medistechnologies.com/show-news.asp?ID=145](http://www.medistechnologies.com/show-news.asp?ID=145)

11. Stuart Energy in exclusive agreement for large-scale electrolysis

Stuart Energy Systems Corporation, a hydrogen infrastructure company, and Purification Equipment Research Institute of CSIC (PERIC), a Chinese-based developer of water electrolyzers, have entered into a master supply and distribution agreement. Under the agreement, Stuart Energy is the exclusive global distributor for large-scale hydrogen generation plants based on water electrolysis technologies jointly developed by PERIC and Stuart Energy. In addition, Stuart Energy is the exclusive distributor in certain territories for PERIC's existing, commercial large-scale hydrogen generation plants.

[mhttp://www.stuartenergy.com/main_media_center.html](http://www.stuartenergy.com/main_media_center.html)

12. Stuart receives multiple awards from Canadian government

Stuart Energy Systems Corporation has been awarded approximately \$300,000 from the Canadian International Development Agency (CIDA) to pursue marketing and business collaboration opportunities in China and India. Stuart Energy is currently active in both markets with subsidiaries, Stuart Energy China and Stuart Energy India, already operational. This CIDA funding will support feasibility studies relating to additional market development and partnership opportunities. Separately, Stuart was awarded another \$300,000 in funding from Natural Resources Canada, through the Canadian Transportation Fuel Cell Alliance (CTFCA) program, for the preliminary engineering of three electrolysis-based hydrogen-fueling stations. These stations, when built, are intended to support demonstration projects involving hydrogen-powered shuttle buses. The targeted locations for these projects are in Ottawa and Toronto, Ontario, and in Charlottetown, Prince Edward Island.

http://www.stuartenergy.com/main_media_center.html

13. Proton Energy's hydrogen generator at Mirant's power plant

Proton Energy's HOGEN® H Series hydrogen generator is used in the cooling of three of their electric generators at Mirant Corp's Zeeland, Mich. power plant. Mirant-Zeeland's generators require about 70 scf/hour of pure hydrogen gas, about 4-6 cylinders per day. Before installing Proton's H Series hydrogen generator, the plant paid \$30,000-\$36,000 per year for hydrogen cylinder deliveries.

<http://www.protonenergy.com/index.php/html/gasproducts/home/index.html>

14. CHBC 2005 meeting dates

February 25, May 20, September 16, November 18

15. CHBC Silver Members

California Hydrogen Business Council gives a big thanks to our growing list Silver Members who are major contributors to our growth and success. To learn about our [Silver Members](#):

16. CHBC board of directors

To contact the board members, please click info@californiahydrogen.org

17. Be a member of the California Hydrogen Business Council

Be involved with the leaders in making the hydrogen economy a reality. The California Hydrogen Business Council (CHBC) provides the link between hydrogen-technology developers, businesses, energy leaders, government, and infrastructure providers. CHBC is a non-profit organization. You are invited to join the California Hydrogen Business Council (CHBC). CHBC is a non-profit organization, which offers a common meeting ground for discussing the technologies, methodologies, and opportunities in the hydrogen economy. Individual membership is \$200 per year. Organizations can send five people per meeting at lower rates, plus benefit from added marketing visibility by being Silver

Members for \$1,000 per year. To join, visit our web site or call 760-341-2924 with your credit card.

We welcome important news from our members for inclusion on our website and in next month's report. Please send to: info@californiahydrogen.org
Thank you for helping build a great organization.

CHBC Report Publisher and Membership Chairman, John Addison
Editor, Catherine Rips