

California Hydrogen Business Council May 2006 Report

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1. Register Now for May 19 CHBC Meeting

CHBC is excited to present several speakers we've not heard from before at the May 19 General Meeting at AQMD. Included are Nancy Sutley, Deputy Mayor for Energy and the Environment, City of Los Angeles; Professor Andy Frank, a leading innovator of plug-in hybrids, UC Davis; Steve Kukucha, Director of External Affairs and Government Business Development, Ballard Power Systems; Dr. Barry Wallerstein, Executive Director of South Coast Air Quality Management District and Dr. Matt Miyasato, AQMD; Ry Smith, Hydrogen Village; Analisa Bevans, CARB; John Addison, California Hydrogen Market Reports and 100,000 H2 Rider Scenario; Seth Jacobs, Green Coast Blog; Dale Hil, Mobile Energy Solutions; Dr. Sandeep Munshi, Westport Innovations; Daniel Sioui, HyRadix; and Barbara Heydorn, SRI. Please see the CHBC website for a complete agenda. Pre-registration pricing is in effect. Register now and save!

CHBC Meeting: <http://www.californiahydrogen.org/page.cfm?content=48>

2. State of California Issues RFP to Establish 3 Stations and Lease 14 Hydrogen Vehicles

The California Air Resources Board has announced that the Senate Bill 76 Development of Hydrogen Refueling Stations request for proposal RFP 05-609 has been issued. The State of California is seeking to establish three hydrogen fueling stations and lease a diverse fleet of 14 hydrogen powered vehicles. The fleet will include light duty passenger vehicles, cargo vehicles, and vans or buses to demonstrate the viability of hydrogen fuel and hydrogen vehicles for transportation. Vehicles will be leased for up to 24 months ending December 31, 2008. The state-funded stations will be highly visible and garner

significant public attention. They will be used to demonstrate and gain experience in testing the viability of using hydrogen as a transportation fuel. Successful station bidders must be able to enter into a final contract and begin construction of the hydrogen fueling stations by December 31, 2006.

RFP 05-609:

https://www.cscr.dgs.ca.gov/cscr/contract_ads/display/contract_ad_search.asp

3. Linde Offers to Buy The BOC Group and Form a \$12 Billion Giant

Linde AG made a pre-conditional cash offer to acquire the entire share capital of The BOC Group plc. The board of directors of BOC intends to recommend BOC shareholders to accept the offer. The transaction will create a leading worldwide industrial gases and engineering group with combined gas and engineering sales of approximately Euro 11.9 billion. Both companies have complementary geographic positions and products. With the acquisition of BOC, Linde will in particular enhance its position in the fast growing Asian Pacific region and in key future growth sectors such as hydrogen.

Linde AG – BOC: <http://www.linde-gas.com/international/web/lg/com/likelgcom30.nsf/0/7C88523992CEE73BC125712D004CD8A7>

4. Ztek and Navy to Collaborate on Camp Pendleton Fueling Station

Ztek Corp. has reached agreement with U.S. Department of Navy (DoN) to collaborate on a hydrogen fueling station project at the U.S. Marine Corps Base Camp Pendleton in California. Ztek will supply a high performance steam reformer (HPSR) with a capacity sufficient to service the military needs on the base and civilian hydrogen vehicles from the area. Funding for the project will be provided jointly by Ztek and the DoN, with the potential participation of the State of California through its "Hydrogen Highways" initiative.

Ztek – Navy: http://www.ztekc corp.com/press_releases/PressRelease0227.htm

5. DaimlerChrysler Offers Plug-in Hybrid Vehicles

Up to 40 Dodge Sprinter Plug-in Hybrid Electric Vehicles (PHEV) will be placed in operation with customers in California, Kansas City and New York among other locations within the United States. The Dodge Sprinter PHEV has the ability to drive up to 20 miles on electric only power. It accomplishes this with a switch on the dashboard giving the operator the ability to manually switch between modes as needed or automatically by the vehicle control system. Two different combustion engines are being mated to the PHEV system, a five cylinder diesel and a V6 gasoline.

Plug-in Hybrid: <http://www.cleandedge.com/news-listing.php?end=40>

6. Plug Power to Receive \$217 Million Cash Investment

Plug Power Inc. announced that Interros, a major Russian investment firm, and Norilsk Nickel, the world's largest producer of nickel and palladium, agreed to make a \$217 million cash investment in Plug Power. Said Dr. Roger Saillant, president and chief executive officer of Plug Power. "After this investment closes, Plug Power will have approximately \$285 million in cash and marketable securities and be well positioned to accelerate and broaden our business strategy.

Plug Power: <http://www.plugpower.com/news/press.cfm>

7. CUTE/ECTOS Bus Program Extended, Ballard Secures \$8.3 Million

The European Union has agreed to partially fund the CUTE (Clean Urban Transport for Europe) / ECTOS (Ecological City Transport System) Project for another 12 months. Seven cities will take part in the extension - Amsterdam, Barcelona, London, Luxemburg, Madrid and Reykjavik, all of which will continue to run three buses each. The city of Hamburg will also participate, increasing its fleet size from three to nine. Ballard Power Systems, Inc. has secured an \$8.3-million contract to service the Ballard-powered Mercedes-Benz Citaro fuel cell buses in the program.

CUTE / ECTOS:

http://www.ballard.com/be_informed/about_ballard/news/2006/03/01/Contract%20Extension

8. Angstrom Power Launches Fuel Cell Flashlight and Fuel Cell Bike Light

Angstrom Power has introduced its A2 micro hydrogen(tm) fuel cell flashlight, which runs on hydrogen fuel stored in the handle. The 1-Watt LED flashlight has a continuous run-time of more than 24 hours on a single charge of hydrogen. Angstrom Power participants in its micro hydrogen(tm) bike light program have logged over 5,000km. Each bike light runs on hydrogen that is stored in a 21cc cartridge, which provides the equivalent energy of about 10 AA disposable alkaline batteries. The light provides about 20 hours of continuous run-time between refueling and takes only minutes to refuel.

Fuel Cell Flashlights: http://www.angstrompower.com/press_details.jsp?iid=1137

Fuel Cell Bike Lights: http://www.angstrompower.com/press_details.jsp?iid=1143

9. President Bush Tours California Fuel Cell Partnership on Earth Day

President Bush stated, "Today I saw cars and buses that run on hydrogen instead of gasoline, and that emit pure water instead of exhaust fumes. This nation does not have to choose between a strong economy and a clean environment; we can have both at the same time. And investing in new technologies like hydrogen will enable this economy to be strong, people to be able to afford fuel, this country's national security not dependent on parts of the world that are unstable. And technology will once again make this country the leader in the world, and that's what we're here to celebrate. And I want to thank Catherine Dunwoody, the executive director of the California Fuel Cell Partnership. I appreciate your commitment. You know, you can tell when somebody is pretty enthusiastic about what she's doing, a true believer. And she's a believer because she's

not only a person with vision, but she is a practical person. And she has seen firsthand the progress being made." Visit the White House site to see a photo of Jaimie Levin escorting the President on the new AC Transit hydrogen bus.

Bush: <http://www.whitehouse.gov/news/releases/2006/04/20060422-3.html>

10. CHBC Members Earn Awards

Congratulations to two CHBC Silver members: General Atomics and Intelligent Energy. Frost & Sullivan named General Atomics Aeronautical Systems, Inc. (an affiliate of General Atomics) as the recipient of the 2006 Business Development Strategy Leadership of the Year Award in the U.S. unmanned aerial systems (UAS) market. The company has made significant gains in two major market segments and has continued its operational and developmental successes in intelligence, surveillance, and reconnaissance (ISR) and weapons delivery capabilities. Intelligent Energy's ENV, the world's first purpose-built hydrogen fuel-cell motorcycle, earned its latest honor this month in the Industry Innovation Design category of EAST Journal's 2005 Environmental and Sustainable Technology Awards. The new commendation joins the growing list of awards and validations given to the ground-breaking ENV project all over the world, including a US Popular Science 'Best of What's New Award,' a listing in the TIME Magazine's 'Greatest Innovations of 2005,' a UK Design Week Award, a finalist place in Italy's Well-Tech Awards for Innovation Technology and Sustainability and The Carmen Company's Award of Merit 2005.

General Atomics:

http://www.ga.com/news.php?subaction=showfull&id=1146168439&archive=&start_from=&ucat=1&

Intelligent Energy: [http://www.intelligent-](http://www.intelligent-energy.com/index_article.asp?SecID=15&secondlevel=798&artid=3776)

[energy.com/index_article.asp?SecID=15&secondlevel=798&artid=3776](http://www.intelligent-energy.com/index_article.asp?SecID=15&secondlevel=798&artid=3776)

11. California Clean Alternative Energy Initiative

Slated for the November 2006 ballot, the California Clean Alternative Energy Initiative, if passed, will fund a \$4 billion dollar effort to reduce the state's dependence on gasoline and diesel fuel by 25% over 10 years. The initiative calls for incentives to make alternative fuel vehicles and alternative fuels more widely available and affordable to consumers, and research to bring clean, renewable energy and energy efficiency technologies to the marketplace more quickly. "The goal of the initiative is simple," the web site states, "Cleaner, cheaper, and more reliable energy and fuels." If passed, it will be financed by an assessment on oil company profits that cannot be passed onto consumers.

Initiative: <http://www.yesoncleanenergy.com/initiative>

12. Database of Over 400 Hydrogen Vehicles

An online database of over 400 hydrogen vehicles is now available. It is organized by vehicle type and development timeline. Images and details are included.

400 H2 Vehicles: <http://www.h2mobility.org/>

13. Database of Over 200 Hydrogen Fueling Stations

An online database of over 200 hydrogen stations is now available. A global map is included for searching. Station details, including those in California, are included.

200 H2 Stations: <http://www.h2stations.org/>

14. Hydrogen and Fuel Cell Job Board Now Online

The Job Board, located at www.hydrogenandfuelcelljobs.com is a new tool developed by NHA to bring job seekers and prospective employers in the hydrogen industry together. Employers and recruiters can access the most qualified talent pool with relevant work experience to fulfill their staffing needs. Active job seekers can showcase their skills at no cost. For a fee, employers can post jobs, search through resumes, or create a 'resume agent' that will search for qualified candidates. Employers posting jobs prior to May 31, 2006 are discounted by 25%.

Jobs: <http://www.hydrogenandfuelcelljobs.com>

15. OnLine Directory of Fuel Cell and Renewable Energy Stocks

InvestorIdeas.Com regularly updates an online directory of renewable energy/alternative energy/GreenTech stocks at RenewableEnergyStocks.com. Among those listed are many CHBC members and other industry leaders.

Directory:

http://www.renewableenergystocks.com/Companies/RenewableEnergy/Stock_List.asp

16. Green H2 Hits UK

CHBC was contacted recently by Green Hydrogen Ltd, the UK's only supplier of renewable hydrogen and oxygen for industry and transportation. Green H2 Ltd. is currently "converting a haulage vehicle to run on Green H2 - the first in the UK." The firm is interested in establishing links in the US.

Green H2: <http://www.green-h2.com/>

17. Future CHBC Meeting Dates - Save These Dates

Please mark your calendars now for these upcoming CHBC meetings: May 19, 2006 General Meeting at South Coast AQMD; September 15, 2006 General Meeting, location to be announced; December 7, 2006 Special Dinner Meeting and Holiday Party, location to be announced.

18. Silver and Gold Member Benefits

CHBC gives a big thanks to Gold Member Hydrogenics and to our growing list of Silver Members, all major contributors to our growth and success. Gold Membership includes two free registrants to all CHBC meetings for one year as well as five reduced-price registrations and other marketing benefits. To inquire about membership, contact Managing Director Catherine Rips, info@californiahydrogen.org.

Gold Members: <http://www.californiahydrogen.org/page.cfm?content=61>

Silver Members: <http://www.californiahydrogen.org/page.cfm?content=33>

19. 2006 CHBC Board of Directors

President - Henry Wedaa; Vice President - Paul Scott, ScD; Managing Director - Catherine Rips; Secretary - Josh Mauzey; Treasurer/Communications Chair: Jerald Cole; Membership Chairman - Mark Abramowitz; Northern California Membership Chair & Newsletter - John Addison; Central California Membership Chair - Gene Johnson; Program Chairman - Henry Wedaa; Director at Large - Gary Dixon; Director at Large - Jon Slangerup; Director at Large - John Williams, PE; Ex-Officio Government Liaison - Shannon Baxter-Clemmons, PhD. To contact the board, please email: info@californiahydrogen.org.

20. Send Us Your News

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.

John Addison, CHBC Report Publisher
Catherine Rips, Editor