

## CHBC News: January 2007

1. [Welcome New Members](#)
2. [Pre-Reg Pricing Still in Effect for Jan 18 CHBC Meeting](#)
3. [Altergy Fuel Cell Lights State Christmas Tree](#)
4. [EPA OKs Fuel-Cell Car Production](#)
5. [The Edison of our Age?](#)
6. [Sign Up for Info on Honda FCX](#)
7. [Nissan Commits to Fuel Cell Car, Other Green Measures](#)
8. [Ford of Canada Delivers HICE Buses](#)
9. [Proton Energy Unveils StableFlow H2 System](#)
10. [Air Products' New Texas Hydrogen Plant On-Stream](#)
11. [Hickam AFB Leads Way to Lessen Fossil Fuel Use](#)
12. [NREL's Wind-Hydrogen Plan](#)
13. [Rolls Royce Fuel Cell Subsidiary to Open in Ohio](#)
14. [Look Ahead to the Hydrogen Economy](#)
15. [HEC to Supply Marine Engines](#)
16. [QuestAir Wins Order for H-3100 Hydrogen Purifier](#)
17. [OMV To Invest in Hydrogen Technologies](#)
18. [Bio-hydrogen: H2 Production from Cattle Manure](#)
19. [Chair Warns of Ethanol Wars](#)
20. [Greening the Fleet: The Status of Hydrogen-Powered Vehicles for Fleet Applications](#)
21. [CalStart Clean Heavy Duty Vehicle Conference Feb 13-15](#)
22. [New Membership Levels, Benefits](#)
23. [Save the Dates!](#)
24. [Board of Directors](#)
25. [Send Us Your News!](#)

### 1. Welcome New Members

CHBC would like to extend a warm welcome to new Silver members: Camp, Dresser & McKee and the Los Angeles Community College District. We appreciate your support!

[CMD](http://www.cdm.com/): <http://www.cdm.com/>

[LACCD](http://www.laccd.edu/): <http://www.laccd.edu/>

### 2. Pre-Reg Pricing Still in Effect for Jan 18 CHBC Meeting

Act quickly and you can still benefit from early registration pricing for CHBC's first General Meeting in 2007. Hosted by South Coast Air Quality Management District, Diamond Bar, featured speakers include Dr. Sig Gronich, Technology Validation Manager, U.S. Department of Energy; David M. Mazaika, President and CEO, ISE Corp.; Mickey Oros, Vice President, Government Relations, Altergy Systems Corp.; Stephen Ellis, Manager, Alternative Fuel Vehicles, American Honda Motor Co.; Dr. Matt Miyasato, Technology Demonstration Manager, South Coast Air Quality Management District; Fred Silver, Vice President, CalStart; Keith Wipke, Senior Engineer, National Renewable Energy Laboratory and others.

[Register](http://www.californiahydrogen.org/page.cfm?content=48): <http://www.californiahydrogen.org/page.cfm?content=48>

### 3. Altergy Fuel Cell Lights State Christmas Tree

This Christmas season the state of California established yet another 'first' by becoming the first state in the U.S. to power its official state Christmas tree with a fuel cell system. The 6,500 lights on the 55-foot white fir tree are illuminated with electricity generated by a Freedom Power(TM) fuel cell system designed and manufactured by Altergy Systems of

Folsom, CA. The Alteryg fuel cell system allows the tree's lights to operate independent of the power grid, demonstrating the state of California's commitment to clean energy sources and energy efficient technology. The fuel cell system is nonpolluting; its byproduct is water.

[Alteryg:](#)

[http://www.altergysystems.com/announcements/tree\\_powered\\_by\\_fuel\\_cell\\_article.asp](http://www.altergysystems.com/announcements/tree_powered_by_fuel_cell_article.asp)

[Photos:](http://gov.ca.gov/index.php?/fact-sheet/4858/) <http://gov.ca.gov/index.php?/fact-sheet/4858/>

#### **4. EPA OKs Fuel-Cell Car Production**

The U.S. Environmental Protection Agency has cleared the way for automakers to produce hydrogen-powered fuel-cell cars to meet zero-emission vehicle requirements in California and 10 other states. In a waiver signed last week, EPA officials approved amendments adopted in 2003 by the California Air Resources Board that allow manufacturers to produce fuel cells as an alternative to battery-powered cars and light trucks previously required by the state. California officials who fought for the measures noted that the waiver also covers hybrid and super-low-polluting, gasoline-powered vehicles known as partial zero-emission vehicles.

[EPA FCVs:](http://www.latimes.com/news/local/la-me-epa24dec24,0,3438776.story?coll=la-home-headlines) <http://www.latimes.com/news/local/la-me-epa24dec24,0,3438776.story?coll=la-home-headlines>

#### **5. The Edison of our Age?**

The ages of mankind have been classified by the materials they use -- the Bronze Age, the Iron Age, the Age of Silicon. We are at the dawn of the Hydrogen Age, proclaims Stanford Ovshinsky, co-founder of Energy Conversion Devices (ECD). Three things set Ovshinsky apart from hydrogen hypesters. First, he is no newcomer. He first outlined his vision for what he calls a "hydrogen loop" some five decades ago as an alternative to fossil fuels. Second, his green credentials are impeccable. He is also the inventor of the nickel-metal hydride (NiMH) battery, which is used to power everything from portable electronics to hybrid cars; around 1 billion such batteries are sold every year.

[Stan Ovshinsky:](http://www.financialexpress.com/fe_full_story.php?content_id=148126) [http://www.financialexpress.com/fe\\_full\\_story.php?content\\_id=148126](http://www.financialexpress.com/fe_full_story.php?content_id=148126)

#### **6. Sign Up for Info on Honda FCX**

American Honda has a new e-sign up list for information about its new FCX. To get the latest details emailed to you as they unfold, click the link below.

[Sign Up:](http://automobiles.honda.com/future-cars/index.asp?ModelStart=fcx) <http://automobiles.honda.com/future-cars/index.asp?ModelStart=fcx>

#### **7. Nissan Commits to Fuel Cell Car, Other Green Measures**

Nissan Motor Co. on December 11 unveiled an environmental action plan that calls for development of a fuel-cell vehicle by early next decade. The Tokyo-based auto maker, whose North American operations are headquartered in Nashville, said its Nissan Green Program 2010 focuses on reducing carbon dioxide emissions and exhaust emissions while accelerating recycling efforts.

[Nissan:](#)

<http://news.moneycentral.msn.com/provider/providerarticle.aspx?Feed=ACBJ&Date=20061211&ID=6264897>

#### **8. Ford of Canada Delivers HICE Buses**

The first of three Ottawa-bound Ford shuttle buses with hydrogen internal combustion engines (HICE) engines have arrived. The HICE buses, which will replace gasoline-powered buses used by the Senate of Canada in Ottawa, are part of the Senate's environmental initiative and will be in every-day use. Industry Canada has invested \$4.2 million toward the HICE Shuttle Bus Demonstration Project, marking the first time hydrogen will fuel ICE shuttle buses in Canada in actual driving conditions. The government's contribution under Industry Canada's Hydrogen Early Adopters (h2EA)

program is part of an \$8.5-million project being undertaken by Ford of Canada.

[Ford](http://www.technologynewsdaily.com/node/5460): <http://www.technologynewsdaily.com/node/5460>

#### **9. Proton Energy Unveils StableFlow H2 System**

Proton Energy Systems recently launched the StableFlow(TM) Hydrogen Control System, a new product that enables electric power generating plants to produce more electricity more efficiently. The product is expected to provide substantial production and economic benefits to utilities and other power plant operators by modernizing how they control the flow of hydrogen needed to cool their generating equipment. A typical North American power plant operating two or three power generators produces about 300 MW of power. Proton's StableFlow system -- which regulates the quality of hydrogen "cooling" gas within a generator's casing -- enables efficiencies that have been proven to save fuel costs up to \$1,000 per megawatt of generating capacity per year.

[Proton](http://www.renewableenergyaccess.com/rea/partner/story?id=46686): <http://www.renewableenergyaccess.com/rea/partner/story?id=46686>

#### **10. Air Products' New Texas Hydrogen Plant On-Stream**

Air Products' newest hydrogen production facility in Port Arthur, TX is on-stream and supplying Valero Energy Corp.'s Port Arthur refinery and additional customers on its industry-leading Gulf Coast hydrogen pipeline system. This plant is the sixth North American hydrogen facility brought on-stream in 2006 by Air Products, the leading global hydrogen supplier, and the fourth in the U.S. These hydrogen facilities assist in the production of cleaner transportation fuels. In addition to Port Arthur in 2006, Air Products brought on-stream hydrogen production facilities at Baytown, TX; Convent, LA; and Joliet, IL.

[APCI](http://www.airproducts.com/PressRoom/CompanyNews/Archived/2006/21Dec06.htm):

<http://www.airproducts.com/PressRoom/CompanyNews/Archived/2006/21Dec06.htm>

#### **11. Hickam AFB Leads Way to Lessen Fossil Fuel Use**

The Air Force is the largest consumer of petroleum products in the Dept. of Defense and Secretary of the Air Force Michael Wynne has made it a priority to find alternative fuels to replace fossil fuels. In a partnership with the State of Hawaii, Hickam AFB is implementing Secretary Wynne's directive and is leading the way with its hydrogen production and fuel station. The hydrogen fueling station, which opened in November, is a joint green energy initiative between the Hawaiian Center for Advanced Transportation Technology and the Air Force's Advanced Power Technology office. Hickam has become the center of excellence for all hydrogen research in the DoD and the State of Hawaii.

[Hickam AFB](http://www.af.mil/news/story.asp?storyID=123036011): <http://www.af.mil/news/story.asp?storyID=123036011>

#### **12. NREL's Wind-Hydrogen Plan**

The National Renewable Energy Laboratory and Xcel Energy next week have announced an ambitious \$2 million research partnership to use hydrogen for storing wind electricity. Developing the technology is important for Xcel, which is committed to buying power from many new wind projects in order to comply with the renewable energy standards passed by voters. The system will be at NREL's National Wind Technology Center, where hydrogen will be produced, compressed and stored. The research is expected to be completed by 2008. At that time, Xcel will move the equipment to another location in Colorado. Xcel plans to invest more than \$1.25 million in the project. NREL and the Department of Energy will invest approximately \$750,000.

[NREL](http://www.rockymountainnews.com/drmn/energy/article/0,2777,DRMN_23914_5198276,00.html):

[http://www.rockymountainnews.com/drmn/energy/article/0,2777,DRMN\\_23914\\_5198276,00.html](http://www.rockymountainnews.com/drmn/energy/article/0,2777,DRMN_23914_5198276,00.html)

#### **13. Rolls Royce Fuel Cell Subsidiary to Open in Ohio**

Rolls-Royce plc, a global supplier of power systems based in England, is opening the U.S.

headquarters of its fuel-cell subsidiary in Jackson Township. The company hopes to market a micro turbine fuel cell by the end of the decade. Rolls-Royce Fuel Cell Systems Inc. will operate on the campus of Stark State College of Technology, in the \$4 million state-funded Fuel Cell Prototyping Center completed last summer. The company will share the building with SOFCo-EFS Holdings, a subsidiary of McDermott International that produces a critical component of the fuel cell that Rolls-Royce is developing. SOFCo is moving its 30 employees into the new center from Alliance.

[Rolls Royce](http://www.ohio.com/mld/ohio/news/): <http://www.ohio.com/mld/ohio/news/>

#### **14. Look Ahead to the Hydrogen Economy**

A recent story in the Des Moines Register, Des Moines, IA, looks ahead at a future that might be powered by hydrogen. If that happens, the nation's largest corn-producing state, striving to become "the renewable energy capital of the world," acknowledges Iowa must look beyond ethanol. At least two possible major breakthroughs, the article says, involve Iowans. Bill Leighty, a Waterloo native and Stanford-educated engineer who now lives in Alaska, has conceived a pilot project in Iowa that would demonstrate the feasibility of transporting hydrogen long distances by pipeline. Norm Olson of the Iowa Energy Center at Iowa State University is promoting research on a surprising solution to hydrogen storage problems: ammonia.

[Iowa](http://www.ohio.com/mld/ohio/news/):

<http://desmoinesregister.com/apps/pbcs.dll/article?AID=/20061210/OPINION03/612100305/1110>

#### **15. HEC to Supply Marine Engines**

A Turkish boat builder and a U.N. group have hired Iowa-based Hydrogen Engine Center Inc. for as many as 200 alternative-fueled marine engines. The engines must be capable of running on compressed natural gas or hydrogen for use in water taxis, HEC said in a recent news release. Brightwell Holdings BV, which represents Turkey's Labranda, in cooperation with the U.N. Industrial Development Organization and International Center for Hydrogen Energy Technologies, hired HEC for the engines. HEC will design and test the engines in the United States.

[HEC](http://www.hydrogenenginecenter.com/Labranda.htm): <http://www.hydrogenenginecenter.com/Labranda.htm>

#### **16. QuestAir Wins Order for H-3100 Hydrogen Purifier**

QuestAir Technologies Inc has received an order worth approx \$0.6 million CAD for a QuestAir H-3100 hydrogen purifier. The system will recover hydrogen from offgas produced by an ethylene cracker being installed in a new linear low density polyethylene plant located near Sao Paulo, Brazil. The high-purity hydrogen product from QuestAir's H-3100 will be used in the production of polyethylene.

[QuestAir](http://www.hemscott.com/news/latest-news/item.do?newsId=38287486249000): <http://www.hemscott.com/news/latest-news/item.do?newsId=38287486249000>

#### **17. OMV To Invest in Hydrogen Technologies**

The OMV Future Energy Fund GmbH, a company owned by OMV Aktiengesellschaft, established in June 2006 to bundle and support projects in the area of future energy, now has the go-ahead for the first OMV project plans. The total amount invested is to EUR 20.43 mn: This sum is being used to support technologies in the area of renewable energies and for the reduction of greenhouse gases. These are "2nd generation biodiesel," "Biogas," "Hydrogen filling station in Stuttgart," "Hydrogen filling station and research facility in the Hydrogen Center Austria/Graz," "Injection of CO2 (carbon dioxide) during natural gas production," and "Injection of CO2 during oil production."

[OMV](http://www.fuelcellsworks.com/Supppage6575.html): <http://www.fuelcellsworks.com/Supppage6575.html>

### **18. Bio-hydrogen: H2 Production from Cattle Manure**

Researchers at New Mexico State University are attempting to use cow manure and other organic solid wastes to produce hydrogen cost-effectively. In the first stage, hydrogen will be produced through anaerobic hydrolysis and fermentation. In the second stage, additional hydrogen will be produced through photo-fermentation of the products of the first stage. The National Science Foundation (NSF) awarded a three-year, \$359,975 grant to support the research. This project is one of nine proposals out of 70 that the Bioengineering Division of NSF selected this year for funding.

[Bio H2](http://www.greencarcongress.com/biohydrogen/index.html): <http://www.greencarcongress.com/biohydrogen/index.html>

### **19. Chair Warns of Ethanol Wars**

Rick Tolman, chairman of the National Corn Growers Association (NCGA), said the ethanol industry is operating "without a net," having blown past the four-billion gallon 2006 renewable fuels standard (RFS) established just last year. His warning foreshadows what one observer calls the coming ethanol wars, when an energized ethanol industry and its corn grower ally frantically seek policies from Congress and the administration to prevent the train wreck. Tolman predicts ethanol production capacity in the U.S. could reach as much as 12 billion gallons annually between 2009 and 2010. Current production is about five billion gallons annually. Tolman also explained that 12 billion gallons is just about the limit to the 10 percent gasoline additive market, because regions of the country that may lack the blending and storage infrastructure will not blend 10 percent ethanol into conventional gasoline.

[Ethanol](http://www.energywashington.com): <http://www.energywashington.com>

### **20. Greening the Fleet: The Status of Hydrogen-Powered Vehicles for Fleet Applications**

Speakers from BC Transit, AC Transit, Ballard Power, Hydrogenics, General Motors, the Hydrogen Engine Center and Westport Innovations will be on hand for the Canadian Hydrogen Association's January 31 workshop at the Delta Victoria Ocean Pointe Resort in Victoria, BC. The workshop will provide an overview of the technical and economic status of the application of hydrogen to fleet vehicle transportation. It will discuss the drivers for making a transition to the hydrogen age, the technologies for producing hydrogen, the status of refueling technology, vehicle and engine choices, and case studies of hydrogen-powered fleet programs.

[CHA](http://www.h2.ca): <http://www.h2.ca>

### **21. CalStart Clean Heavy Duty Vehicle Conference Feb 13-15**

The Clean Heavy-Duty Vehicle Conference, to be held at the Hilton Los Angeles/Universal City, CA, is the only national conference that focuses on clean advanced technologies and fuels for these vehicles. It provides participants with an opportunity to discuss and define what the road map should be for advanced technologies and fuels for the 21st century heavy-duty vehicle industry. Leading executives from truck and engine manufacturing companies and suppliers, advanced technology companies, oil industry, as well as high-ranking officials from federal, state, and local government regulatory agencies, and users of clean heavy-duty vehicles are featured speakers. CHBC is a Support Sponsor of the event, as well as of the affiliated Hydrogen Internal Combustion Symposium.

[Conference](http://www.calstart.org/programs/chdvc/index.php?p=programs): <http://www.calstart.org/programs/chdvc/index.php?p=programs>

### **22. New Membership Levels, Benefits**

To give members the benefits of membership and sponsorship, CHBC announces new organizational membership levels and perks, effective January 1. Platinum membership has been reduced to \$5000 per year and includes your logo on each page of the CHBC website for one year, your firm credited as sponsor of two General Meetings during the

year, and two free registrations at each CHBC meeting for 12 months. Gold membership has been reduced to \$2,500 and includes your firm credited as a sponsor of one General Meeting during the year and one free registration to each CHBC General meeting for one year. Silver membership remains the buy of the century at \$1,000. Please see <http://www.californiahydrogen.org/page.cfm?content=12> for full details. To inquire about membership, contact Managing Director Catherine Rips, [info@californiahydrogen.org](mailto:info@californiahydrogen.org).

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

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

### **23. Save the Dates!**

Mark your calendars now for CHBC's 2007 General Meetings: Friday, April 27, CalEPA, Sacramento; Friday, July 27, location to be announced; and Thursday, October 25, location to be announced. More details will be released soon.

[CHBC Meetings](http://www.californiahydrogen.org/page.cfm?content=17): <http://www.californiahydrogen.org/page.cfm?content=17>

### **24. 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; Fleets Chair - John Addison; Program Chairman - Henry Wedaa; Director at Large - Gary Dixon; Director at Large - John Williams, PE. To contact the board, please email: [info@californiahydrogen.org](mailto:info@californiahydrogen.org).

### **25. Send Us Your News!**

We welcome important news from our members for inclusion on our website and in next month's report. In addition to being distributed to CHBC's list of over 2200 industry members, our newsletters are forwarded to thousands more through the Canadian Hydrogen Association and FuelCellMarkets.com. Please send to: [info@californiahydrogen.org](mailto:info@californiahydrogen.org). Thank you for helping build a great organization.

[CHA](http://www.h2.ca/): <http://www.h2.ca/>

[Fuel Cell Markets](http://www.fuelcellmarkets.com): <http://www.fuelcellmarkets.com>

---

[Click Here](#) to unsubscribe.

John Addison, Contributing Editor  
Catherine Rips, Editor/Publisher

**California Hydrogen Business Council**  
760-341-2924  
[www.CaliforniaHydrogen.org](http://www.CaliforniaHydrogen.org)