

CHBC News: March 2009

1. [Welcome New Members](#)
2. [Economic Stimulus Act Provides \\$16.8B for EERE Programs](#)
3. [DOE to Award up to \\$300M for Alt Fuels Projects](#)
4. [AQMD Issues Program Opportunity Notice](#)
5. [DOE Issues RFI: Hydrogen and Fuel Cell Market Transformation](#)
6. [DOE Reports to Congress on FC School Buses, H2FC Activities, Progress, Plans](#)
7. [Honda's Hydrogen Powered Sports Car](#)
8. [Volkswagen Announces U.S. Arrival of 16 Passat Lingyu FCVs](#)
9. [Fuel Cell Vehicles Arrive on Rosemont Campus](#)
10. [Russian Caravan to Promote Natural Gas, Hydrogen Vehicles](#)
11. [World's First Hydrogen Powered Breakdown Service](#)
12. [Hydrogen Station to be Built on Camp Pendleton](#)
13. [Wintec Energy Donates Land for Hydrogen Station in Palm Springs](#)
14. [Alternate Fueling Station Locator Now Available to Drivers](#)
15. [SCE Wants to Join Hydrogen Energy International](#)
16. [Technip and Air Products Extend Global Alliance](#)
17. [Nuvera Announces Successful Conclusion of Forklift Project](#)
18. [World's First Fuel Cell Tractor Debuts in Italy](#)
19. ['Hydrogen Town' is Largest Demonstration Project in the World](#)
20. [Fuel Cell Shipments to Exceed 5 Million Units by 2013](#)
21. [UD Researchers Discover Important Advance in Fuel Cell Technology](#)
22. [Hydrogen Fuel From Woodchips and Other Non-food Sources](#)
23. [The Role of Hydrogen Research in America's Energy Future](#)
24. [NHA Conference & H2 Expo Mar 30 - Apr 3](#)
25. [Board of Directors; Send Us Your News](#)

1. Welcome New Members

CHBC extends a warm welcome to six new Individual Members: Jerome Law, Dr. Kenneth Schultz (General Atomics), Lorin Humphries and Dr. Tim Brown (National Fuel Cell Research Center), Kwontae Cho (Hyundai-Kia Motors) and John E Cosgrove, PE (Cosgrove Computer Systems, Inc.). We appreciate your support!

2. Economic Stimulus Act Provides \$16.8B for EERE Programs

The American Recovery and Reinvestment Act (ARRA) of 2009 includes \$16.8 billion for the U.S. Dept. of Energy Office of Energy Efficiency and Renewable Energy (EERE). The funding is a nearly tenfold increase for EERE, which received \$1.7 billion in fiscal year 2008. While the bulk of the new EERE funding supports direct grants and rebates, \$2.5 billion will support EERE's applied research, development, and deployment activities. An additional \$400 million will support efforts to add electric technologies to vehicles. And separate from the EERE budget, \$400 million will support the establishment of the Advanced Research Projects Agency-Energy (ARPA-E), an agency to support innovative energy research, modeled after the Defense Advanced Research Projects Agency (DARPA).

[ARRA and EERE](http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=12243): http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=12243

3. DOE to Award up to \$300M for Alt Fuels Projects

The U.S. Dept. of Energy has issued a \$300-million Funding Opportunity Announcement (DE-PS26-09NT01236-04) for applications for cost-shared projects that expand the use of alternative fueled vehicles and advanced technology vehicles. The installation or acquisition of infrastructure necessary to directly support an alternative fueled vehicle or advanced technology vehicle is also eligible. The FOA modifies a much smaller and earlier-issued FOA by incorporating a supplemental \$300 million appropriated by the American Recovery and Reinvestment Act (ARRA) of 2009 (the stimulus bill) for the Energy Policy Act (EPACT) of 2005 Section 721 to fund a competitive grant pilot program to be administered through the Clean Cities Program.

[Funding](http://www.greencarcongress.com/2009/02/doe-to-award-up.html#more): <http://www.greencarcongress.com/2009/02/doe-to-award-up.html#more>

[FOA](http://e-center.doe.gov/iips/faopor.nsf/UNID/B18FA5AA78629A2E86257563006F4BA6): <http://e-center.doe.gov/iips/faopor.nsf/UNID/B18FA5AA78629A2E86257563006F4BA6>

4. AQMD Issues Program Opportunity Notice

South Coast Air Quality Management District has issued Program Opportunity Notice P2009-01 to solicit pre-proposals for co-funding consideration of advanced clean technology research, development, demonstration and deployment projects in mobile source applications in the South Coast Air Basin. To qualify for funding consideration under this RFP, proposals must be received at the AQMD no later than 5 p.m. on May 1, 2009. The PON can be downloaded from AQMD's site by clicking the link below.

[AQMD PON](http://www.aqmd.gov/rfp/): <http://www.aqmd.gov/rfp/>

5. DOE Issues RFI: Hydrogen and Fuel Cell Market Transformation

The U.S. Dept. of Energy issued a request for information (RFI) seeking stakeholder and public input on potential early markets and deployment opportunities for hydrogen and fuel cells. The information collected will help guide DOE Hydrogen Program efforts to identify key early markets and related green domestic jobs, validate hydrogen and fuel cell system performance through data collection and communicate results, cultivate demand and accelerate market development, and reduce non-technical barriers that hinder market penetration. The full RFI with information about providing comments is available on the DOE e-Center, and it closes on March 31, 2009. (Note: This page may take a minute to load.)

[DOE RFI](http://www.hydrogen.energy.gov/news_rfi_mt.html): http://www.hydrogen.energy.gov/news_rfi_mt.html

6. DOE Reports to Congress on FC School Buses, H2FC Activities, Progress, Plans

The U.S. Dept. of Energy (DOE) issued the Hydrogen and Fuel Cell Activities, Progress, and Plans Report to Congress which describes the DOE Hydrogen Program's research, development, and demonstration activities, as well as progress toward achieving program goals, external review and evaluation processes, and future activities. In addition, DOE issued the Fuel Cell School Buses Report to Congress which examines the potential for a fuel cell school bus development and demonstration program and assesses the process for converting natural gas infrastructure to support the use of fuel cell school buses. Both of these reports fulfill requirements of the Energy Policy Act of 2005.

[DOE Report](http://www.hydrogen.energy.gov/news_school_buses.html): http://www.hydrogen.energy.gov/news_school_buses.html

7. Honda's Hydrogen Powered Sports Car

The top Autos & Vehicles video on YouTube is of the Honda FC Sport, a hydrogen-powered sports car. Rpmfreaks reports the car was unveiled at the LA Auto Show last November. Honda's official site says the FC Sport (FC for fuel cell) offers "speed, handling and sleek looks of today's fastest sports cars, yet without the noise, heat, vibration, and emissions of the internal-combustion engine." While hydrogen compact cars and minivans are a reality, the three-seat coupe concept car is not immediately headed to the production line. The Honda FC Sport was also recently featured in Canadian Driver.

[FC Sport](http://reviews.cnet.com/8301-13746_7-10155417-48.html): http://reviews.cnet.com/8301-13746_7-10155417-48.html

[More of FC Sport](http://www.canadiandriver.com/2009/02/12/honda-fc-sport-concept-is-hydrogen-powered.htm): <http://www.canadiandriver.com/2009/02/12/honda-fc-sport-concept-is-hydrogen-powered.htm>

8. Volkswagen Announces U.S. Arrival of 16 Passat Lingyu FCVs

Volkswagen Group of America announced that 16 Passat Lingyu fuel cell vehicles (FCVs) will participate in fleet demonstrations at the California Fuel Cell Partnership in Sacramento. These prototype vehicles were developed in China and debuted at the 2008 Olympic Games in Beijing. The Passat Lingyu FCVs are being added to the existing fleet of eight Volkswagen fuel cell vehicles also at the California Fuel Cell Partnership. Volkswagen Group worked with scientists at Tongji University to create these FCVs that are based on one of China's best-selling Volkswagen platforms. The Passat Lingyu is capable of traveling at highway speeds up to 90 mph and as far as 146 miles on a single tank of fuel. The only byproducts released from the tailpipe are water and oxygen.

[VW](http://www.story/02-20-2009/0004976030&EDATE=): [www/story/02-20-2009/0004976030&EDATE=](http://www.story/02-20-2009/0004976030&EDATE=)

9. Fuel Cell Vehicles Arrive on Rosemont Campus

Going green was part of the curriculum at Rosemont Middle School recently as students had the chance to check out two Chevy Equinox fuel cells cars. Scott Brierley with GM Field Service and Support was on hand to answer questions regarding the company's hydrogen powered vehicles. Rosemont eighth-grader Kelii Jimenez, like many of the students, was surprised how conventional the car's styling was. "It looked like a normal car," she said. One hundred of the limited production vehicles are currently being placed in the hands -- and driveways -- of ordinary people as part of a market test called Project Driveway. Rosemont parent Robina Kerr has been driving an Equinox since mid January. "GM is amazingly supportive and interested," Kerr said. "They are just really interested in a real user experience."

[GM](http://www.crescentavalleynonline.com/articles/2009/02/20/youth/cschools-fuelcell0220.txt): <http://www.crescentavalleynonline.com/articles/2009/02/20/youth/cschools-fuelcell0220.txt>

10. Russian Caravan to Promote Natural Gas, Hydrogen Vehicles

Following the success of the NGV Caravan event in September 2008 Gazprom, VNIIGAZ and NGVRUS have decided to drive another NGV Caravan from Rostov-on-Don via Krasnodar and Novorossiysk to Sochi -- the capital city of the 2014 Winter Olympics. OEM vehicles powered by natural gas, biomethane and hydrogen will be eligible for participation. The strategic objective of the Caravan will be to promote the unique environmental, economic and safety features of these fuel alternatives and promote vehicle manufacturers during the presentations along the route. The Caravan will leave Rostov-on-Don on Monday April 20, 2009 and arrive in Sochi, home of the 2014 Winter Olympics, on April 22nd. It will cover only 650 kilometers but is expected to stimulate considerable national, regional and local media coverage.

[Caravan](http://www.ngvglobal.com/en/events-conferences/russian-caravan-to-promote-natural-gas-hydrogen-vehicles-02316.html): <http://www.ngvglobal.com/en/events-conferences/russian-caravan-to-promote-natural-gas-hydrogen-vehicles-02316.html>

11. World's First Hydrogen Powered Breakdown Service

German breakdown service ADAC has purchased its first hydrogen powered vehicle for roadside assistance agents in the Berlin region. The HydroGen4, manufactured by Opel (General Motors in the U.S.) will be the world's first hydrogen fuel-cell powered vehicle used by a breakdown service. The only emission of hydrogen fuel-cell powered vehicles is water. Eight other Opel partners in Germany (Allianz, Axel Springer, Coca Cola, Hilton, Linde, Schindler, Total und Veolia) have signed up for a HyrdoGen4 vehicle, and all of them will gather daily information to help Opel engineers further optimise the vehicle's technology.

Hundreds of similar tests will be conducted across Europe, with fuel-cell powered vehicles expected to be available for public purchase by 2015.

[Breakdown](http://www.fairhome.co.uk/2009/02/11/worlds-first-hydrogen-powered-breakdown-service/): <http://www.fairhome.co.uk/2009/02/11/worlds-first-hydrogen-powered-breakdown-service/>

12. Hydrogen Station to be Built on Camp Pendleton

To comply with a presidential directive for federal installations to reduce petroleum-fuel consumption and an increase in the use of alternative-fueled vehicles, a new, environmentally friendly hydrogen station is being developed at Camp Pendleton. Located in the Del Mar area of the base, this station will be on the California Hydrogen Highway. Camp Pendleton currently has three hydrogen-fueled vehicles, two General Motors Equinoxes and one Ford Escape hybrid. Camp Pendleton is also in the process of getting three more fleet vehicles that run off hydrogen within the next three months. The hydrogen station is scheduled to start dispensing fuel next week and is estimated to be fully operational by August or September of this year.

[Camp Pendleton Station](#):

http://scoutnewspaper.com/index.php?option=com_content&task=view&id=828&Itemid=285

13. Wintec Energy Donates Land for Hydrogen Station in Palm Springs

Wintec Energy announced recently it would donate land and electricity in North Palm Springs for a hydrogen fueling station -- a move that could make driving alternative fuel-powered vehicles easier and less expensive. Fred Noble, president of Wintec Energy, which operates windmill farms, said it's just a matter of finding the right grants and companies to come build the hydrogen fueling station. He would offer land he owns at Interstate 10 and Indian Canyon Dr. One of the interested firms could be BMW. BMW representatives were at the press conference to showcase the company's Hydrogen 7, the world's first hydrogen-powered sedan. (Editor's Note: Several years ago, Wintec provided power for a wind-to-hydrogen demonstration project conducted by SunLine Transit Agency, funded by the U.S. Dept. of Energy.)

[Wintec](http://www.mydesert.com/article/20090130/NEWS01/901300315/1006/news01): <http://www.mydesert.com/article/20090130/NEWS01/901300315/1006/news01>

[BMW Hydrogen 7](#):

<http://www.bmwusa.com/Standard/Content/Uniquely/BMWEfficientDynamics/Hydrogen7.aspx>

14. Alternate Fueling Station Locator Now Available to Drivers

Driving cross-country or even around town in an alternative fuel vehicle used to require drivers to do a little homework to find the nearest fueling station -- but not anymore. Consumers on-the-go can now access the U.S. Dept. of Energy's Alternative Fueling Station Locator using their cell phone, BlackBerry, or other PDA. The Mobile Alternative Fueling Station Locator allows drivers to find the five closest biodiesel, electricity, E85, hydrogen, natural gas, and propane fueling sites. This convenient tool uses well-known, easy-to-navigate Google Maps to automatically generate maps to fueling sites and lists each station's contact information and business hours. Detailed driving directions and an instant phone connection to the station can all be accessed at www.afdc.energy.gov/stations/m/.

[Station Locator](http://www.afdc.energy.gov/afdc/locator/m/station/): <http://www.afdc.energy.gov/afdc/locator/m/station/>

[AFDC](http://www.afdc.energy.gov/afdc/): <http://www.afdc.energy.gov/afdc/>

15. SCE Wants to Join Hydrogen Energy International

Southern California Edison wants to join a study by a joint venture of BP Plc and Rio Tinto. The goal is to build the first utility-scale U.S. power plant to turn pet coke into hydrogen and store carbon emissions underground. If the utility joins the BP/Rio Tinto project, called

Hydrogen Energy International, the CPUC said SCE can keep track of its costs of a feasibility study, up to \$30 million, with a chance to be compensated later. CPUC President Michael Peevey encouraged PG&E and Sempra Energy to participate in the project. "If California's utilities work together, the costs and risks of this and other carbon capture projects can be shared broadly so that the benefits can be realized by all Californians," Peevey said.
[SCE](http://www.reuters.com/article/environmentNews/idUSTRE51K0MT20090221): <http://www.reuters.com/article/environmentNews/idUSTRE51K0MT20090221>

16. Technip and Air Products Extend Global Alliance

Technip and Air Products have signed an agreement for a long-term extension of their global business alliance for hydrogen and synthesis gas facilities. This alliance extension ensures: reliable and safe supply of hydrogen and synthesis gas to an ever-growing number of customers in the fields of refining, chemicals and petrochemicals, continuous product development to improve efficiencies and cost effective solutions for the industry. Both companies bring a long history of hydrogen experience to the alliance. Technip provides licensing for its proprietary technologies, design and engineering services while Air Products provides the gas separation technology.

[Technip](http://www.technip.com/english/press/articles/2009/2009-02-09.htm): <http://www.technip.com/english/press/articles/2009/2009-02-09.htm>

17. Nuvera Announces Successful Conclusion of Forklift Project

Nuvera Fuel Cells recently announced the successful conclusion of its Joint Development Agreement with East Penn Manufacturing, started in November of 2004, to develop hybrid fuel cell/battery systems for Class I and II forklift trucks as an alternative to standard lead acid batteries. The agreement sought to produce a single product consisting of hydrogen PEM fuel cells and advanced batteries, to provide a high productivity solution for forklift operators needing higher performance at lower operating costs. Nuvera has also developed an onsite hydrogen generator and dispensing system called PowerTap(TM), to support fuel cell hybrid fleet deployments.

[Nuvera](http://www.nuvera.com/news/press_release-41.php): http://www.nuvera.com/news/press_release-41.php

18. World's First Fuel Cell Tractor Debuts in Italy

New Holland recently introduced the world's first fuel cell tractor in Turin, Italy, and it looks like a fun ride. The tractor's fuel cell generates 106hp, and its hydrogen tank can hold enough to power the tractor for 1.5 to 2 hours. New Holland's tractor lacks a gearbox or clutch. Instead, drivers increase or decrease the motor's power to speed up or slow down. While hydrogen obviously requires electricity (often derived from fossil fuels), New Holland believes that farms are an ideal place for a hydrogen-powered vehicle since many of them make their own fuel or produce electricity from wind and solar sources. The company says that the tractor will be out for testing in 2011, with a full roll-out expected in 2013.

[Tractor](http://cleantechnica.com/2009/02/11/worlds-first-fuel-cell-tractor-debuts-in-italy/): <http://cleantechnica.com/2009/02/11/worlds-first-fuel-cell-tractor-debuts-in-italy/>

19. 'Hydrogen Town' is Largest Demonstration Project in the World

Two housing communities in southern Japan are participating in a four-year demonstration project to test the viability of hydrogen power, primarily for residential fuel cells. The New Energy and Industrial Technology Development Organization, "Fukuoka Hydrogen Town," is said to be the largest demonstration project of this type in the world. Nippon Oil Corp. and Seibu Gas Energy Co. will jointly start installing 1 kW co-generation fuel cell systems in 150 houses later this year. This system reportedly can supply about 60% of the power consumption and about 80% of the hot water supply of typical households. In addition, energy consumption is said to be reduced by about 30% over conventional systems, and carbon dioxide emissions cut by up to 30%.

[Hydrogen Town](http://www.sustainablebusiness.com/index.cfm/go/news.display/id/17597): <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/17597>

20. Fuel Cell Shipments to Exceed 5 Million Units by 2013

Fuel cell shipments will exceed 5 million units per year by 2013 according to Fuel Cell Today's latest Industry Review, Fuel Cells: Emerging Markets. The Review reports that 2008 saw shipments of 18,000 units mainly in the portable and stationary sectors. In a series of exclusive five year forecasts, the Fuel Cell Today analysts anticipate that fuel cell shipments will substantially increase in key markets such as uninterruptible power supplies; combined cooling, heating and power; and fuel cells for portable devices. Drawing on recent developments in the portable fuel cell sector and in fuel cells for backup power, Fuel Cell Today anticipates that there will increasingly be a move from a supply-driven to a demand-driven model, with associated cost reduction and mass production driving further uptake. [FC Shipments](http://www.fuelcelltoday.com/online/news/articles/2009-01/Fuel-Cell-shipments-to--exceed-5): <http://www.fuelcelltoday.com/online/news/articles/2009-01/Fuel-Cell-shipments-to--exceed-5>

21. UD Researchers Discover Important Advance in Fuel Cell Technology

A cheap, pollution-free fuel cell that can power everything from cell phones to automobiles may be a major step closer to reality, thanks to a team of researchers led by Liming Dai of the University of Dayton, OH. The expense of using platinum as the catalyst for helping oxygen react inside the fuel cell has always been a challenge to commercialization of fuel cells. The UD team discovered that carbon nanotubes infused with nitrogen do a better job than platinum of reducing the oxygen build-up in a fuel cell so that it can produce four times as much electrical current. Carbon nanotubes are not only cheaper than platinum, they're also more resistant to the chemical reactions that wear down platinum and eventually make it ineffective, the team found. Their findings were published Friday, Feb. 6, in the journal "Science."

[UD Advance](http://www.daytondailynews.com/n/content/oh/story/news/local/2009/02/07/ddn020709fuelcells.html):

<http://www.daytondailynews.com/n/content/oh/story/news/local/2009/02/07/ddn020709fuelcells.html>

22. Hydrogen Fuel From Woodchips and Other Non-food Sources

Tomorrow's fuel-cell vehicles may be powered by enzymes that consume cellulose from woodchips or grass and exhale hydrogen. Researchers at Virginia Tech, Oak Ridge National Laboratory (ORNL), and the University of Georgia have produced hydrogen gas pure enough to power a fuel cell by mixing 14 enzymes, one coenzyme, cellulosic materials from nonfood sources, and water heated to about 90 degrees (32 degrees Celsius). The group announced three advances from their "one pot" process: 1) a novel combination of enzymes, 2) an increased hydrogen generation rate -- to as fast as natural hydrogen fermentation, and 3) a chemical energy output greater than the chemical energy stored in sugars -- the highest hydrogen yield reported from cellulosic materials.

[Enzymes](http://www.sciencedaily.com/releases/2009/02/090211162026.htm): <http://www.sciencedaily.com/releases/2009/02/090211162026.htm>

23. The Role of Hydrogen Research in America's Energy Future

Scientists from Pennsylvania State University and Virginia Commonwealth University have discovered a new way to produce hydrogen from water using minimal energy. Although the method has only been demonstrated on a small scale, the finding illustrates the importance of innovative scientific research in the evolution of America's energy future. Discovery of an efficient, cost-effective technique to split water could enhance the likelihood of a successful transition to hydrogen fuel. The National Academies' America's Energy Future project, a long-term initiative designed to stimulate discussion about U.S. energy options, will release a series of reports in 2009 detailing the potential costs and benefits of energy efficiency technology, renewable energy, and alternative fuels.

[Research](http://www.nationalacademies.org/headlines/20090211.html): <http://www.nationalacademies.org/headlines/20090211.html>

24. NHA Conference & H2 Expo Mar 30 - Apr 3

The NHA Conference and Hydrogen Expo turns 20 this year in Columbia, SC. The longest-running hydrogen conference in the world, this event will highlight breakthroughs, progress on commercialization challenges, a Ride and Drive, tours and more. Special events include a Safety, Codes & Standards Workshop, a public day, Town Hall Meeting on the Good and Bad About Hydrogen, and a Workshop for Finance and Hydrogen Professionals. This workshop is the second in a series of three meetings produced in early 2009 by NHA and CHBC to help industry members access funding.

[NHA](http://www.hydrogenconference.org/): <http://www.hydrogenconference.org/>

25. Board of Directors; Send Us Your News

We welcome important news from our members for inclusion on our website and in next month's report. Thank you for helping build a great organization. The board of directors of the California Hydrogen Business Council is as follows: President, Paul Scott, ScD; Vice President, Mark Abramowitz; Treasurer, Josh Mauzey; Secretary, JJ Weston; President Emeritus, Hank Wedaa; Managing Director, Catherine Rips; Membership Chair, Richard Cromwell III; Program Chair, Fred Silver; Directors at Large, Terry Tamminen, Debbie Smith and Larry Watkins. Ex-officio Government Liaisons - Analisa Bevan and Gerhard Atchelik. To send news or contact the board, please email: info@californiahydrogen.org.

[Click Here](#) to unsubscribe.

Catherine Rips, Editor/Publisher

California Hydrogen Business Council
760-341-2924
www.CaliforniaHydrogen.org