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1. Welcome New Members

CHBC welcomes our newest member, Donna Rennemo. And special thanks to Platinum member, South Coast Air Quality Management District, and Gold member, Bay Area Air Quality Management District, for your continued support. We appreciate it!

2. House Votes to Expand U.S. Govt Research on Advanced Technology Vehicles

Targeting more federal money to support the auto industry, the House recently approved an expansion of U.S. government-led research into making cars and trucks more fuel-efficient. The House plan would allow the Dept. of Energy to spend up to \$200 million more each year on research and development for advanced-technology vehicles and auto parts. Lawmakers' aides said the additional funds would boost government-supported research in this area to around \$550 million if Congress funds the request later this year. Rep. Gary Peters, a Democrat from Michigan who sponsored the green vehicle technology bill, said "There is no doubt that in the years ahead more Americans will be driving hybrids, plug-in hybrids, battery electric vehicles, and cars and trucks powered by hydrogen fuel cells."

[House Votes](http://www.startribune.com/politics/59457097.html): <http://www.startribune.com/politics/59457097.html>

3. USD \$12 Million for UK Hydrogen and Fuel Cell Demonstration Program

A competition for up to \$12 million of funding for companies to develop Hydrogen and Fuel

Cell technology recently opened. The competition is being funded by the Dept. of Energy and Climate Change and is part of the measures for stimulating low carbon technologies announced in this year's budget. Companies will be able to bid to the Technology Strategy Board, which will manage the program, for a share of the cash to develop and test the technology. Energy and Climate Change Minister David Kidney said, "The UK has the right combination of expertise, ingenuity and determination to bring hydrogen and fuel cell technology to the global market. We're providing real help now to help advance this technology in the UK, keeping us at the forefront of advanced green manufacturing."

[Competition](http://thegovmonitor.com/world_news/britain/72-million-for-hydrogen-and-fuel-cell-demonstration-programme-4375.html): http://thegovmonitor.com/world_news/britain/72-million-for-hydrogen-and-fuel-cell-demonstration-programme-4375.html

4. Automakers Issue Joint Statement on Commercial Introduction of FCVs

Leading vehicle manufacturers in fuel cell technology -- Daimler AG, Ford Motor Co., General Motors Corp./Opel, Honda Motor Co., Ltd., Hyundai Motor Co., Kia Motors Corp., the alliance Renault SA and Nissan Motor Corp., and Toyota Motor Corp. recently issued a joint Letter of Understanding regarding the development and market introduction of fuel cell electric vehicles. The signing automobile manufacturers strongly anticipate that from 2015 onwards, a "quite significant" number -- a "few hundred thousand units" over the initial products' lifecycles -- of fuel cell electric vehicles could be commercialized. These companies have built up extensive expertise in fuel cell technology; the signing marks a major industry step towards the serial production of such locally emission-free vehicles.

[OEMs](http://www.californiahydrogen.org/page.cfm?content=20&display=115): <http://www.californiahydrogen.org/page.cfm?content=20&display=115>

5. Majors Sign Hydrogen Infrastructure Build-up Plan in Germany

On September 10, leading industrial companies signed a Memorandum of Understanding (MoU) in Berlin with the participation of German Minister of Transport Wolfgang Tiefensee. The agreement intends the evaluation of the setup of a hydrogen infrastructure in Germany to promote serial production of electric vehicles with fuel cells. This marks a major step towards the commercialization of such locally emission-free vehicles. The partners of the initiative "H2 Mobility" are Linde, Daimler, EnBW, OMV, Shell, Total, Vattenfall and the NOW GmbH National Organization Hydrogen and Fuel Cell Technology. The co-operation is also open for additional partners interested in the project.

[Germany](http://www.pr-inside.com/joint-press-release-of-linde-daimler-r1474350.htm): <http://www.pr-inside.com/joint-press-release-of-linde-daimler-r1474350.htm>

6. Hydrogen, Fuel Cell Sector Lobbies Canada

Canadian hydrogen and fuel cell company executives warned that the sector needs a fresh infusion of government cash to prevent falling behind other countries and foreign firms spending billions to promote the alternative energy technology. "Canada has been the cradle of the hydrogen technology industry," said Daryl Wilson, chief executive of Hydrogenics Corp., referring to decades of research, mostly by Ballard Power Systems Inc., into developing fuel cells. As of March next year there will be no specific government funding for hydrogen and fuel cell development in Canada when the current C\$150 million (\$140 million) five-year program runs out. The lobbying effort came a week after Germany announced it is planning to launch a countrywide hydrogen fueling network by 2015 (see #5 above).

[Canada](http://www.reuters.com/article/rbssConsumerGoodsAndRetailNews/idUSN151994920090915):

<http://www.reuters.com/article/rbssConsumerGoodsAndRetailNews/idUSN151994920090915>

7. Project Driveway Update: 1 Million Miles on Hydrogen FC-Powered Equinoxes

It's been about two years since General Motors rolled out its Project Driveway program, which puts ordinary citizens behind the wheel of a hydrogen fuel-cell-powered Chevrolet

Equinox for a couple of months. Recently, the 116 cars in the program rolled past a combined total of over 1 million miles. Intended to raise public awareness, dispel fears about hydrogen as a motor fuel, and provide some real-world testing, the program has about 80,000 people signed up so far. Of those, 65 have gotten a chance to be the first on their block with a hydrogen-powered Equinox; some vehicles have racked up 25,000 miles. So what has Chevy learned? According to Chris Colquitt, GM's Driver Relationship Manager for Fuel Cell Activities, response to the program has been overwhelmingly positive.
[Project Driveway](http://blogs.consumerreports.org/cars/2009/09/hydrogen-equinox-update.html): <http://blogs.consumerreports.org/cars/2009/09/hydrogen-equinox-update.html>

8. GM Develops Generation Two Fuel Cell

The second generation hydrogen fuel cell system in development by General Motors Co. is half the size, 220 pounds lighter and uses less than half the precious metal of the current generation in the Chevrolet Equinox Fuel Cell electric vehicle. And the production intent fuel cell powertrain can be packaged under the hood in about the same space as a four-cylinder engine. It contains GM's fifth-generation fuel cell stack, which could be commercialized in the 2015 time frame. "The improvements the team has been able to achieve are remarkable," said Charles Freese, executive director of GM Fuel Cell Activities. "Hardware mechanization has been dramatically simplified, which will help reduce cost, simplify manufacturing and improve durability."

[Gen Two](http://evworld.com/news.cfm?newsid=21863): <http://evworld.com/news.cfm?newsid=21863>

9. Honda Motor Co Awarded Prestigious Grove Medal

At the recent Grove Fuel Cell Symposium, the prestigious Grove Medal was awarded to the Honda Motor Co. in recognition of its achievements in producing the FCX Clarity hydrogen powered passenger vehicle. The Grove Committee made the following comments regarding Honda's achievement: "Honda's commitment to fuel cells has been evident for a long time. The FCX Clarity shows not only scientific breakthrough but also styling that has captured the public imagination, and Honda's move to small-scale automated production marks a watershed in the introduction of fuel cell vehicles. The Grove Committee was unanimous in its choice and is delighted to present this year's medal to Honda."

[FCX Clarity](http://world.honda.com/news/2009/c090922FCX-Clarity/): <http://world.honda.com/news/2009/c090922FCX-Clarity/>

10. Honda Sticks to Fuel Cell

Honda Motor Co. will maintain the target for lease sales of its newest fuel-cell car despite the challenge of boosting productivity, the model's chief engineer said. Honda has said it is targeting lease sales of about 200 cars in the first three years. It aims to have the cars ready for sale in showrooms by 2015. Honda is on the last and toughest part of the road toward commercialization, Sachito Fujimoto, FCX Clarity's chief project manager, said recently. "Everyday there's progress," Fujimoto said at the Reuters Global Climate and Alternative Energy Summit. "We would like to maintain the target (for 200 cars). It's my own dream to make fuel cell vehicles for the ordinary motorist. I would like to make the age of the fuel cell cars begin in earnest as early as possible," he said in an interview.

[Honda](http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE58720D20090908): <http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE58720D20090908>

11. Mercedes Looking for Customers to Test Hydrogen FC Cars in California

Mercedes-Benz is launching its first production fuel cell car: the new B-Class F-CELL, and several are headed to California to be driven by consumers here in the Golden State. Production of the Mercedes-Benz B Class F-CELL will begin in late 2009 with the first of around 200 vehicles being delivered to customers in Europe and California at the beginning of next year. The company says that the B-Class F-Cell hydrogen fuel cell electric car offers performance similar to that of a 2.0 liter gasoline engine car and is capable of being driven

on an everyday basis. The vehicle's technological heart is a new generation of a compact, high-performance fuel cell system, in which gaseous hydrogen reacts with atmospheric oxygen at 10,000 psi to generate a current for the electric motor.

[Mercedes](http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE58720D20090908): <http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE58720D20090908>

12. Daimler: Hydrogen-powered Cars a Reality by 2015

Daimler's chief executive Dieter Zetsche said recently that hydrogen-powered cars will be ready for the mass market by 2015. The key will be making them cost-competitive with other automotive technology on the road, followed closely by building the necessary infrastructure, he said. Daimler's goal is to commercialize the hydrogen fuel cell version of its compact Mercedes Benz B class by 2015. To make this possible, Daimler is seeking partnerships with other major car makers -- particularly Toyota, which hasn't been hit as hard by the economic slump. It is also looking for help to produce the next iteration of its Smart car.

[Daimler](http://green.venturebeat.com/2009/09/10/daimler-hydrogen-powered-cars-a-reality-by-2015/): <http://green.venturebeat.com/2009/09/10/daimler-hydrogen-powered-cars-a-reality-by-2015/>

13. Aston Martin CEO Calls For Greater Focus On Hydrogen-Powered EVs

British Supercar Manufacturer Aston Martin reckons hydrogen fuel cells are the better bet for powering electric vehicles. Speaking at the Frankfurt Motor Show, Aston Martin boss Dr. Ulrich Bez said that lithium-ion powered electric cars for real world driving are too far off to be investing so much time into the technology right now. "The technology for [electric cars] will not become truly useable until at least 2020. Real world driving will highlight their weaknesses," Dr. Bez said. "It is not something Aston Martin is working on, and it will not represent a true alternative to the combustion engine for a long time." Dr. Bez called for the automotive industry to put a greater focus on hydrogen and the development of better hydrogen fuel cells, and said that governments need to refocus funding in this direction.

[Aston Martin](http://www.themotorreport.com.au/43298/aston-martin-ceo-calls-for-greater-focus-on-hydrogen-powered-evs/): <http://www.themotorreport.com.au/43298/aston-martin-ceo-calls-for-greater-focus-on-hydrogen-powered-evs/>

14. Shanghai Brand Fuel Cell Cars to Serve Expo 2010 Shanghai

China's largest automaker SAIC Motor Corp is planning to provide an unnamed amount of "Shanghai" brand fuel cell cars for the 2010 Shanghai World Expo. A company executive taking charge of SAIC's new energy vehicle division said the move marks the renaissance of an old Chinese brand and showcases SAIC's progress in developing alternative fuel vehicles. The "Shanghai" brand fuel-cell cars were able to run at a maximum speed of nearly 150 kilometers per hour and could drive for more than 319 kilometers on one charge. They will be used to provide zero-emission transportation services for some VIPs, officials and media people. Another 150 hybrid buses and 350 hybrid sedans will also be used to provide zero-emission services at key venues of the Exposition.

[Shanghai](http://autonews.gasgoo.com/auto-news/1012348/Shanghai-brand-fuel-cell-cars-to-serve-Expo-2010-Shanghai.html): <http://autonews.gasgoo.com/auto-news/1012348/Shanghai-brand-fuel-cell-cars-to-serve-Expo-2010-Shanghai.html>

15. Formula Zero: Hydrogen Cell Racing Takes Off

Belgium recently took the lead among a set of top university teams vying for "zereth place" in the Formula Zero European Championship of hydrogen fuel cell cars. This carbon-free Grand Prix injects ingenuity and sustainability back into the races, starring get-up-and-go "karts" with a little H₂O in their tailpipes. Hydrogen fuel cells power the racers' electric engines, which can go 0 to 60 mph in 5 seconds and up to 75 mph. Of course, winning isn't everything and the Dutch team Greenchoice Forze claims 70% renewable materials in their car's bodywork (such as natural flax fibers and bio-based resin) and offsets its carbon footprint with a green energy provider. The Dutch founders of Formula Zero -- a play on the

more famous Formula One -- hope their super clean (and quiet) standards eventually become the racing norm.

[Formula Zero](http://www.inhabitat.com/2009/09/02/formula-zero-hydrogen-cell-racing-takes-off/): <http://www.inhabitat.com/2009/09/02/formula-zero-hydrogen-cell-racing-takes-off/>

16. Hydrogenics Announces Contract with Vision Industries

Hydrogenics Corp. has announced that it has received a contract to provide 16 HyPM fuel modules for use in zero emission class 8 short haul trucks being developed by Vision Industries Corp. of California. Vision's Tyrano(TM) truck is thought to be the world's first plug-in electric/hydrogen fuel cell powered heavy duty class 8 vehicle. The contract calls for Hydrogenics' HyPM fuel modules to be delivered in two stages. The initial units will be used to complete testing and demonstrate the vehicles in and around the Port of Los Angeles and Port of Long Beach. Second stage deliveries will be dependent on purchase orders for the trucks being received by Vision. Vision Industries also recently announced it has entered into a distribution agreement with Los Angeles Freightliner for the Southern California area.

[Hydrogenics](http://www.hydrogenics.com/invest/News_Details.asp?RELEASEID=406842): http://www.hydrogenics.com/invest/News_Details.asp?RELEASEID=406842

[Vision- Freightliner](http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20090928005187&newsLang=en):

http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20090928005187&newsLang=en

17. Clean Energy Group Gets \$28M in Stimulus Funds, Matching Grants

The Greater New Haven, CT Clean Cities Coalition was awarded one of 25 grants from the U.S. Dept. of Energy that were announced by the White House recently. The bulk of the money will be used to add to Connecticut's limited alternative energy refueling infrastructure. The infrastructure improvements include one facility for refueling hydrogen powered vehicles, to be located at a Connecticut Transit bus depot in Hartford, said Clean Cities Coordinator Lee Grannis. Connecticut Transit already has one hydrogen-powered bus, but is getting five more. "Right now, the only hydrogen refueling station is seven miles away in South Windsor," Grannis noted. "A second one has been approved for Hamden. In essence, what you're creating here is a hydrogen super highway along I-91."

[CT Transit](http://www.istockanalyst.com/article/viewiStockNews/articleid/3448084): <http://www.istockanalyst.com/article/viewiStockNews/articleid/3448084>

18. Scottish Hydrogen Highway Plans Backed

A coastal strip north of Aberdeen is being zoned as a hydrogen highway, trying out the new fuel technology for transport and a new power grid. The Energetica plan has been backed by planners in Aberdeenshire and the city. It will create a 30-mile corridor along the North Sea coast to serve as a magnet for the next generation of energy businesses and workers. One part of the plan is to create a hydrogen highway, including fuel points at Bridge of Don, Ellon and Peterhead. Hydrogen power, which is touted as the greenest of all energy sources, could be used to support transport, home and business energy needs. It could also be produced on farms and used to power tractors, supplying refrigeration plants in food processing businesses and stand-by generators on fishing boats.

[Scotland](http://news.bbc.co.uk/2/hi/uk_news/scotland/north_east/8245093.stm): http://news.bbc.co.uk/2/hi/uk_news/scotland/north_east/8245093.stm

19. UTC Power Says Supermarkets Good Fit for Fuel Cells

UTC Power and Whole Foods Market recently presented a fuel cell case study during the 2009 Food Marketing Institute's Energy & Technical Services Conference in Indian Wells, CA. UTC Power provides fuel cells for Whole Foods Market, Price Chopper and Shaw's Star Market stores. Whole Foods Market has chosen to power two of its New England stores with UTC Power fuel cells. A 200-kilowatt UTC Power fuel cell has powered a Whole Foods Market store in Glastonbury, CT, since March 2008. A 400-kilowatt fuel cell will supply 90 percent of the power and all of the hot water needs for a new store in Dedham, MA, the largest Whole

Foods Market in the Northeast region. A fuel cell turns potential waste heat into usable energy, capturing it to cool supermarket refrigeration cases year-round and to heat the store in winter months.

[UTC](http://www.reuters.com/article/pressRelease/idUS122215+14-Sep-2009+PRN20090914): <http://www.reuters.com/article/pressRelease/idUS122215+14-Sep-2009+PRN20090914>

20. Protonex Receives \$598,813 for UAV Propulsion System

Protonex Technology Corp. recently announced that it has received a \$598,813 contract with the U.S. Naval Research Laboratory (NRL) for advanced development of high power fuel cell systems for small unmanned air vehicles (UAVs). This new program builds upon Protonex's portfolio of UAV power system initiatives. Development work under this program will focus on increasing the power density of the company's Proton Exchange Membrane UAV fuel cell system while simultaneously scaling up the power output of the system. Ultimately, the advanced system will be integrated into a small NRL plane. The resulting hydrogen fuel cell system is anticipated to provide up to 1.5 kW of power output (approximately equivalent to a 2hp engine) and double the existing system's gravimetric power density.

[Protonex](http://www.reuters.com/article/pressRelease/idUS113945+17-Sep-2009+BW20090917): <http://www.reuters.com/article/pressRelease/idUS113945+17-Sep-2009+BW20090917>

21. Air Products & Chemicals Buys Texas Hydrogen Plant

Air Products recently announced it has purchased a new steam methane reformer (SMR) hydrogen facility under construction in Corpus Christi, TX, from MarkWest Energy Partners, L.P. The facility, which will produce over 30 million standard cubic feet per day, will be owned and operated by Air Products and is expected to be on-stream in March 2010. The companies also signed a separate long-term supply agreement whereby Air Products will provide hydrogen and steam to MarkWest. MarkWest will utilize the products produced by the SMR facility combined with its existing production capabilities to deliver high-purity hydrogen to local refinery customers.

[Air Products](http://news.prnewswire.com/DisplayReleaseContent.aspx?ACCT=104&STORY=/www/story/09-01-2009/0005086598&EDATE=):

<http://news.prnewswire.com/DisplayReleaseContent.aspx?ACCT=104&STORY=/www/story/09-01-2009/0005086598&EDATE=>

22. RoseStreet Labs Scientists Discover Carbon-Free Hydrogen Fuel Source

RoseStreet Labs Energy (RSLE) scientists announced a leap forward in generating hydrogen gas directly from sunlight by a photoelectrochemical cell (PEC). This hydrogen fuel is generated spontaneously in a single device without external power and without petroleum products such as natural gas. Hydrogen gas is a key resource for next generation hydrogen fueled cars, and also a key component in the renewable process of harvesting biofuels and biodiesel for replacement of oil based gasolines and jet fuels. RSLE's discovery is coupled with its Full Spectrum photovoltaic development, expected to start field trials in late 2010 with +25% efficiencies. Full Spectrum technology is primarily based on Nitride Thin Film semiconductors which have excellent robustness to extreme environments.

[RoseStreet Labs](http://www.reuters.com/article/pressRelease/idUS98495+14-Sep-2009+PRN20090914): <http://www.reuters.com/article/pressRelease/idUS98495+14-Sep-2009+PRN20090914>

23. Submit Abstracts for NHA 2010 Conference & Expo by October 19

Abstracts are being accepted through Monday, October 19, for the 2010 NHA Conference & Expo, to be held in Long Beach, CA. Abstracts should be no more than 500 words in length. A short biography (250 words or less) must be included with the submission. The NHA Hydrogen Conference & Expo is the industry's largest and longest-running conference of its kind, drawing audiences from around the world for three days of presentations,

demonstrations, exhibits, awards, and networking opportunities. Exhibit space is still available.

[NHA 2010](http://www.hydrogenconference.org/papers.asp): <http://www.hydrogenconference.org/papers.asp>

24. 2009 Fuel Cell Seminar & Exposition November 16-18

The 2009 Fuel Cell Seminar & Exposition, to be held in Palm Springs, CA November 16-19, offers one of the most extensive programs dedicated to the research, development, and commercialization of fuel cells and fuel cell related products. This year's conference will provide talks within the following five tracks: High Temperature Research and Development, and Fuel Processing; Low Temperature Research and Development; Global Overviews, Hydrogen Research and Development, and Fuel Cell Testing and Modeling; Demonstrations and End-User Perspectives; and Pathways to Commercialization (Factors Which Facilitate Near-Term Commercialization Efforts). Also featured are two plenary sessions, and the annual CEO Roundtable.

[FC Seminar](http://www.fuelcellseminar.com): <http://www.fuelcellseminar.com>

25. Farewell from Your Editor; Board of Directors

(Editor's Note: A new managing director will soon take the helm of CHBC and send you new contact info. As such, this is my last issue of our newsletter. Thank for all your support and friendship! Hope to see you all in the near future. - Catherine) 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; Membership Chair, Richard Cromwell III; Program Chair, Fred Silver; Directors at Large, Terry Tamminen, Debbi 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.

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Catherine Rips, Editor/Publisher

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