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1. Welcome New Members

CHBC extends a warm welcome to our newest member, Mark Johnson, HGasStations. We appreciate your support!

[HGas](http://www.hgasstations.com/): <http://www.hgasstations.com/>

2. Future of Hydrogen Discussed at Sept 12 CHBC General Meeting

September 12, from 8 a.m. - 5 p.m., as speakers from various organizations will give their views on the future of hydrogen and fuel cells, and updates on their hydrogen programs, two presentations in particular will be of great interest: Catherine Dunwoody, executive director, California Fuel Cell Partnership, will present the Partnership's new Vision for the Rollout of Fuel Cell Vehicles and Hydrogen Fuel Stations. Bob Rose, executive director of the U.S. Fuel Cell Council and Fuel Cells 2000, will discuss challenges and opportunities for hydrogen in 2009. Other confirmed topics include an update on AC Transit's fuel cell

program and recent fuel cell bus procurement, QuantumSphere's nanotechnology, and the application of fuel cells to university energy problems, presented by Cal State Northridge. Register now!

[Sept 12](http://www.californiahydrogen.org/page.cfm?content=45&event_ID=76): http://www.californiahydrogen.org/page.cfm?content=45&event_ID=76

3. The Future is Green Held Sept 14-16

Following the CHBC General Meeting in Diamond Bar, CHBC will be a support sponsor of The Future is Green Conference and Expo in Long Beach, presented by the California Air Pollution Control Officers Assn. Conference topics will include clean fuel technologies, green fleet vehicles and equipment, green building design and energy efficiency, renewable power generation and more. CHBC members AQMD and Bay Area Air Quality District are co-hosts of this event. The two meetings are one-day and 38 miles apart -- easy to participate in both!

[Future is Green](http://www.capcoagreen.com/): <http://www.capcoagreen.com/>

4. CaFCP Hydrogen Day at the California Science Center

Passenger vehicles and transit buses powered by hydrogen will help promote America's energy independence, reduce greenhouse gas emissions, and improve air quality while preserving safety and U.S. jobs. To help introduce the vehicles to the public, on Saturday, August 23 from 10 a.m. - 5 p.m., the California Fuel Cell Partnership is offering test drives in hydrogen vehicles from BMW, Daimler, Ford, GM, Honda, Hyundai, Kia, Nissan, Toyota and Volkswagen. SunLine Transit Agency's fuel cell bus will also be available for rides. The event takes place at the California Science Center, Exposition Park, 700 State Drive, Los Angeles, CA 90037. The Partnership encourages people to carpool, ride bikes or take transit to the Hydrogen Day event.

[Hydrogen Day](http://www.ca fcp.org/): <http://www.ca fcp.org/>

5. Hydrogen Economy Sustainable in 15 Years

With substantial investments, hydrogen could become a competitive fuel within 15 years, but the fastest way to reduce carbon emissions from vehicles will be to pursue a wider portfolio of new technologies, a panel of experts asserts. Once hydrogen becomes competitive, it could virtually displace gasoline by mid-century, and related carbon dioxide emissions in the United States would be down to 20 percent of current levels, says the National Research Council study, released on July 17. "You could potentially, in the best case, eliminate all oil from U.S. transportation, and most of the carbon dioxide emissions," said Michael P. Ramage, who was the executive vice president of ExxonMobil Research and Engineering Co. and chaired the National Academy of Sciences National Research Council panel.

[NRC Study](#):

http://www.sciencenews.org/view/generic/id/34210/title/Hydrogen_economy_sustainable_in_15_years_

6. G8 Summiteers Get Glimpse of Green Car Fleet

A fleet of electric plug-ins, hybrids and hydrogen fuel cell cars awaited G8 leaders attending the recent summit for use or test drives. Toyota showcased its FCHV-adv, and provided more than 70 hybrid cars and hydrogen-fueled buses for the use of summit participants. Mazda Motor's hydrogen gas-fuel hybrid RX8 is already being leased, mainly to local Japan governments or corporate clients. Honda FCX Clarity sedans transported summit delegates after the hydrogen fuel cell sedan's recent debut ahead of a program to lease a fleet of the cars in the United States (which started in July - see story 7), mainly in California. Suzuki showed the SX4-FCV in the Environmental Showcase exhibition and demonstration area at

the summit's International Media Centre.

[G8](http://www.reuters.com/article/environmentNews/idUST32832720080706): <http://www.reuters.com/article/environmentNews/idUST32832720080706>

7. Honda FCX Clarity Fuel Cell Vehicle Lease Program Begins with First Customer Delivery

American Honda Motor Co., Inc., recently announced that Ron Yerxa and Annette Ballester took delivery of their hydrogen fuel cell-powered FCX Clarity on Friday, July 25, 2008 at Honda of Santa Monica, one of three dealerships in Southern California that are part of the first fuel cell vehicle dealership network. Yerxa and Ballester are the world's first FCX Clarity customers and the first of approximately 200 customers who will lease the vehicle in the United States and Japan over the next three years, with the vast majority of vehicles being leased in Southern California. Significant advances over Honda's previous generation FCX include a 25 per cent increase in combined fuel economy to 72 miles/kg-H₂ (74 miles per gas gallon equivalent) and a greater than 30 per cent increase in driving range up to 280 miles.

[Honda](http://www.hondanews.com/categories/1097/releases/4642): <http://www.hondanews.com/categories/1097/releases/4642>

8. Daimler Increasing the Pressure: Extended Operating Range for Fuel Cell Vehicles

Daimler AG has converted the first vehicles of its existing fuel cell fleet from 350 to 700-bar technology. With this more highly compressed hydrogen, the operating range of these vehicles can now be extended by up to 70 per cent. The first practical test for an A-Class F-CELL 'plus' featuring this technology was a journey from Berlin to the Magdeburg environmental forum; the vehicle thus demonstrated its suitability for everyday operation. With around 270 kilometers - as compared with the original 160 - per tank filling, the new 700-bar technology is already extending the operating range in the current vehicle generation by up to 70 percent. The B-Class F-CELL, to be produced in a small series as of 2010, will even boast a range of about 400 kilometers.

[Daimler](http://mercedes-benz-blog.blogspot.com/2008/07/daimler-is-increasing-pressure-extended.html): <http://mercedes-benz-blog.blogspot.com/2008/07/daimler-is-increasing-pressure-extended.html>

9. Suzuki Receives Approval to Test SX4-FCV Fuel Cell Vehicle

Suzuki Motor Corp. has developed a compact fuel cell vehicle based on the SX4 model and has received approval from Japan's Minister of Land, Infrastructure, Transport and Tourism to test it on public roads. Suzuki has been developing fuel cell vehicles in partnership with General Motors (GM) since 2001. So far, it has tested three fuel cell mini vehicles on public roads with ministerial approval: the MR Wagon-FCV and Wagon R-FCV in October 2003 and the MR Wagon-FCV again in December 2004. The SX4-FCV delivers superior running performance by means of a GM-made high-performance fuel cell, a Suzuki-developed 70MPa hydrogen tank, and a light, compact capacitor that recovers energy during brake application and uses it to reduce fuel cell loading during acceleration.

[Suzuki](http://www.easier.com/view/News/Motoring/Suzuki/article-188947.html): <http://www.easier.com/view/News/Motoring/Suzuki/article-188947.html>

10. Quantum Ships Carbon Composite Hydrogen Storage to Japan for Suzuki Fuel Cell Vehicle Program

Quantum Fuel Systems Technologies Worldwide, Inc. announced that it has designed, developed and shipped a new generation of ultra light weight advanced composite hydrogen storage units for Suzuki Motor Corp's Fuel Cell Vehicle Program. These unique systems for Suzuki were developed, analyzed, and tested to meet the Japanese Government requirements. The higher fuel density capability of Quantum's hydrogen tank systems allows efficient on-board packaging without intrusion into passenger and cargo areas, while providing uncompromising range. Quantum's new generation of Type IV (polymer lined, all

composite) ultra-light weight tank has been successfully tested and validated to operating conditions beyond current industry and government standards.

[Quantum](#):

http://money.cnn.com/news/newsfeeds/articles/prnewswire/200807230930PR_NEWS_USPR____LAW033.htm

11. Hydrogen-Fueled Prius Arrives at HSU

Humboldt State University has taken delivery of a hydrogen-powered Toyota Prius that will use clean hydrogen fuel produced and dispensed at a new fueling station built by the campus' internationally recognized Schatz Energy Research Center. The station will be California's first rural facility on the Hydrogen Highway. Provided by the California Air Resources Board to encourage alternative transportation fuels, the Prius will be shared by HSU and other public agencies that have jointly supported the station project. The car was converted by Quantum Technologies, Irvine, CA., to run on hydrogen gas. The station is nearly complete and is undergoing final testing. It will produce enough hydrogen fuel to maintain a fleet of three or four hydrogen-powered cars.

[HSU](http://now.humboldt.edu/news/a-hydrogen-fueled-toyota-prius-arrives-at-hsu/): <http://now.humboldt.edu/news/a-hydrogen-fueled-toyota-prius-arrives-at-hsu/>

12. Tecnalia Presents Prototype for Innovative Hydrogen Car

Tecnalia has unveiled the prototype of an innovative ecological hydrogen car driven by a fuel cell fed from a hydrogen store and designed by the ENERGY Unit at this Basque Technological Corp. With the H2CAR, Tecnalia wishes to demonstrate the viability of the hydrogen-propelled electric vehicle as a real alternative as a means of transport and to develop the technologies necessary for its practical use. H2CAR is driven by an electric motor which is silent and high-performing. The required electricity is generated from hydrogen stored in standard 200 bar-pressurized bottles, by means of a 5kW PEM fuel cell. The vehicle is also quipped with state-of-the-art backup battery systems which enable the supply of the energy peaks necessary during acceleration and enhances the autonomy of the vehicle.

[Tecnalia](http://www.basqueresearch.com/berria_irakurri.asp?Berri_Kod=1812&hizk=I): http://www.basqueresearch.com/berria_irakurri.asp?Berri_Kod=1812&hizk=I

13. Indian Panel Okays Mixing Hydrogen with CNG

The Indian Standing Committee on Emission Regulation -- under the Ministry of Shipping, Road Transport & Highways -- has approved addition of 20% hydrogen to CNG (compressed natural gas) for use in vehicles. Once notified, India will become the first country to use this mix on a commercial basis and take a definitive step towards enhancing the use of renewable energy in automobiles. Industry sources say a few tests remain on the modification needed in engines. The project, involving Ashok Leyland, Bajaj Auto, Eicher Motors, Mahindra & Mahindra and Tata Motors, began as an attempt to control the emission of NOx from poorly-maintained CNG vehicles. The new fuel will now have to be made part of the Central Motor Vehicle Rules, which govern the automotive industry in the country.

[India](http://www.business-standard.com/common/news_article.php?autono=328820&leftnm=3&subLeft=0&chkFlg=): [http://www.business-](http://www.business-standard.com/common/news_article.php?autono=328820&leftnm=3&subLeft=0&chkFlg=)

[standard.com/common/news_article.php?autono=328820&leftnm=3&subLeft=0&chkFlg=](http://www.business-standard.com/common/news_article.php?autono=328820&leftnm=3&subLeft=0&chkFlg=)

14. Eden Hydrogen Inc. to Spur U.S. Hydrogen Economy

Eden Energy Ltd has announced the formation of Eden Hydrogen Inc. The company is an integration of two Eden Energy U.S. subsidiaries: Hythane Co. of Denver, CO and HyRadix of Des Plaines, IL. The new company will be headquartered in Des Plaines, IL, just outside of Chicago. "Eden Hydrogen is a milestone in our growing capacity to deliver integrated hydrogen solutions to customers in the U.S. and globally," said Greg Solomon, executive Chairman, Eden Energy Ltd. based in Perth, Australia. Robert Gray has been named CEO of Eden Hydrogen Inc. He was formerly CEO of Eden Innovations Ltd. and a past president of

HyRadix. Roger Mamaro, president of Hythane Company, will lead global operations and Dave Cepla, president of HyRadix, will lead global sales and marketing for the new company.

[Eden Energy](#):

http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20080724005154&newsLang=en

15. Daimler and UNEP Call for Infrastructure for Battery and Fuel-Cell Vehicles

At the fifth Magdeburg environmental forum staged by Daimler and the United Nations Environment Programme (UNEP), the two host partners called for the establishment of an infrastructure for electric and fuel-cell vehicles. The call is linked to extending Daimler's Memorandum of Understanding with UNEP, in existence since 2005, with the aim of reinforcing dialogue and the joint commitment for emission-free mobility among all parties. Achim Steiner, UN Under-Secretary General and Executive Director, United Nations Environment Programme said: "Climate change, congestion and the rising cost of fossil fuels demand transformative solutions to national and global mobility challenges."

[Daimler](http://www.theautochannel.com/news/2008/07/03/091801.html): <http://www.theautochannel.com/news/2008/07/03/091801.html>

16. Hydrogenics to Supply Electrolyzer and Fuel Cell for Renewable Hydrogen Research and Demonstration Centre

Hydrogenics Corp. announced that it has been selected to provide a hydrogen electrolyzer and fuel cell for the new Renewable Hydrogen Research and Demonstration Centre at the Baglan Energy Park. Air Liquide Advanced Technologies, a division of the Air Liquide Group, was selected to integrate the whole hydrogen solution. The Centre, which is being developed by the University of Glamorgan is the first of its kind in Wales, and will explore the potential use of hydrogen as one of the key fuels of the future and show how hydrogen can be produced from local sources. The project will bring together academic and industry expertise and research, providing a hub for hydrogen business development throughout Wales.

[Hydrogenics](http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=320985): http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=320985

17. QuantumSphere Announces Breakthrough in Clean Efficient Hydrogen Production by Electrolysis

QuantumSphere, Inc. has announced the availability in production quantities of electrodes coated with the company's Nano NiFe(TM) catalysts to accelerate the production of clean hydrogen for industrial applications. Leveraging a proprietary advanced catalyst formulation, the Nano NiFe coated electrodes effectively increased the surface area of electrodes used in commercial electrolysis by approximately 1,000 times. This increase is due to the high surface area of the nickel and iron nano catalysts used to coat the electrodes. These proprietary electrodes have demonstrated up to a threefold improvement in hydrogen output while maintaining energy efficiency, making it a commercially viable replacement for fossil fuel-based production methods.

[QuantumSphere](http://www.qsinano.com/news/newsletters/2008_07/f1.php): http://www.qsinano.com/news/newsletters/2008_07/f1.php

18. St. Helena Hospital Orders New Model 400kW Fuel Cell From UTC Power

UTC Power will supply St. Helena Hospital in California's Napa Valley with its new, next-generation fuel cell, the PureCell(R) Model 400 system, to be in full production in summer 2009. The fuel cell will provide St. Helena with 400 kilowatts of continuous, clean power. Waste heat will be used to supply hot water and space heating for three of the hospital's buildings. This will allow the hospital to reduce its burden on the power grid, minimize operations of existing mechanical systems and reduce its environmental impact. The hospital's fuel cell was partially funded by a grant from the California Self Generation

Incentive Program (SGIP). The program provides financial incentives for the installation of new, clean, and energy-efficient on-site distributed generation.

[UTC](http://www.utcpower.com/fs/com/bin/fs_com_Page/0,5672,0281,00.html): http://www.utcpower.com/fs/com/bin/fs_com_Page/0,5672,0281,00.html

19. Florida Developer Selects HydraStax(R) to Power First Hydrogen Village

Hydra Fuel Cell Corp. a wholly owned subsidiary of American Security Resources Corp., recently announced that its distributor, Conexa Products of Miami, FL has signed a Letter of Intent with Distribution Management Services, Inc. (DMGS) to provide HydraStax hydrogen fuel cells for a development of 174 deluxe, affordable homes that DMGS is developing near Orlando, FL. DMGS plans to begin construction on the first 25 homes within 60 days. ARSC is a holding company developing clean energy technologies. Its Hydra Fuel Cell Corp. subsidiary is developing high volume, mass producible hydrogen fuel cells.

[HydraStax](#):

http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20080702005074&newsLang=en

20. Ballard and IdaTech Sign Supply Agreement for Extended Runtime Solution in Backup Power Market

Ballard Power Systems and IdaTech LLC announced they have signed a three-year supply agreement under which Ballard will provide a fuel cell product for integration into IdaTech's next generation of ElectraGen(TM) system. This will create 3kW and 5kW methanol-fuelled backup power solutions offering days (rather than hours) of extended runtime capability, suitable for a broad range of sites within the wireless telecom industry. Following validation of product performance, Ballard's fuel cell product will be integrated into the next generation 3kW and 5kW ElectraGen(TM) units, with commercial release scheduled for 2009. Ballard and IdaTech believe there is potential for up to 5,000 product shipments over the full term of the agreement.

[Ballard](#): <http://phx.corporate-ir.net/phoenix.zhtml?c=76046&p=irol-newsArticle&ID=1176505&highlight=>

21. HRL Receives Award to Continue Investigations into Hydrogen Storage Materials

HRL Laboratories, LLC, has been awarded a two-year, Phase 2 contract from the U.S. Dept. of Energy (DOE) to develop solid-state hydrogen storage materials that meet or exceed the goals for on-board, reversible hydrogen storage established by the DOE's Office of Energy Efficiency and Renewable Energy and the U.S. FreedomCAR Program. The current award follows an initial Phase 1 award to begin investigations into metal hydride materials, one of the most promising materials under investigation for hydrogen storage in fuel cell-powered vehicles. HRL is a member of a broad consortium of research-and-development centers called the Metal Hydride Center of Excellence, or MHCoE, comprising 15 universities, government labs, and research centers coordinated by Sandia National Laboratories.

[HRL](#): <http://www.hrl.com/>

22. Scotland Could Get UK's First Wind-Hydrogen Balancing Facility

Scotland could become the home of the UK's first commercial-scale hydrogen balancing facility, which provides a means of managing the intermittency of wind power, if a planning application is granted. WHL Energy, formerly Wind Hydrogen, plans to construct the hydrogen balancing facility at Kilbirnie as part of the Ladymoor Renewable Energy Project. A hydrogen balancing facility uses excess electricity produced when wind levels are high and/or demand is low to convert water, through a hydrolysis reaction, to hydrogen and oxygen. The hydrogen can then be liquefied or stored until it is needed when wind speeds are low. When this happens, the stored hydrogen is combusted to drive electricity

generators. Alternatively, the hydrogen generated in this way could be used as a vehicular fuel.

[Scotland](http://www.energyefficiencynews.com/power-generation/i/643/): <http://www.energyefficiencynews.com/power-generation/i/643/>

23. Hydrogen Electric Generating Facility with Carbon Capture and Sequestration Filed Before the California Energy Commission

Hydrogen Energy International LLC, a joint venture of BP Alternative Energy and Rio Tinto, announced its intention to file an Application for Certification before the California Energy Commission on Thursday, July 31, 2008, for a proposed hydrogen fuel production facility and power plant in Kern County, CA. The filing initiates a comprehensive regulatory review process and, upon approval, grants permission for the construction of the nation's first industrial-scale low-carbon power plant with carbon capture and sequestration. The proposed facility will use Integrated Gasification Combined Cycle (IGCC) technology to manufacture hydrogen from petroleum coke or blends of petroleum coke and coal, as needed. The hydrogen will be used to generate nearly 400 gross megawatts of base-load low-carbon electricity.

[Hydrogen Energy Intl](http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20080730005321&newsLang=en):

http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20080730005321&newsLang=en

24. NHA Fall Forum Sept. 22-24, Golden, Colo.

Renewable energy and hydrogen industry experts from around the world will gather from September 22-24 in Golden, CO for the nation's only event focused on hydrogen production using renewable resources. Main session topics include: Renewable Resources for Hydrogen Production, Renewable Hydrogen Policy, Infrastructure Development and Planning, and Commercialization Projects. Registration is open. The keynotes, panels and workshops can be combined with an in-depth tour of hydrogen R&D at the National Renewable Energy Lab.

[Program](http://www.fuelcellmarkets.com/national_hydrogen_association/national_hydrogen_association/conferences/3,1,27253,8,27256.html?subsite=27253&language=1):

http://www.fuelcellmarkets.com/national_hydrogen_association/national_hydrogen_association/conferences/3,1,27253,8,27256.html?subsite=27253&language=1

[Register](http://www.hydrogenforums.org/): <http://www.hydrogenforums.org/>

25. Send Us Your News; Board of Directors

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. Our board: President - Henry Wedaa; Vice President - Paul Scott, ScD; Secretary - Josh Mauzey; Treasurer - John Williams; Managing Director - Catherine Rips; Membership Chairman - Mark Abramowitz; Program Chairman - Henry Wedaa; Director at Large - Allan Bedwell; Director at Large - Fred Silver; Director at Large - Larry Watkins; Ex-officio Government Liaison - Analisa Bevan. To send news or contact the board, please email: info@californiahydrogen.org.

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Catherine Rips, Editor/Publisher

California Hydrogen Business Council

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