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### **1. AQMD Hosts CHBC General Meeting October 25 - SAVE THE DATE!**

South Coast Air Quality Management District, Diamond Bar, CA, will host California Hydrogen Business Council's fall 2007 General Meeting. Held from 8 a.m. - 5 p.m. on October 25, this day-long conference will feature a dozen speakers from diverse sectors of the hydrogen community and potentially, a keynote by General Motors. GM's fuel cell vehicle program will debut in Southern California in Fall 2007. Details will be posted soon. [Oct 25 Meeting](http://www.californiahydrogen.org/page.cfm?content=45&event_ID=69): [http://www.californiahydrogen.org/page.cfm?content=45&event\\_ID=69](http://www.californiahydrogen.org/page.cfm?content=45&event_ID=69)

### **2. CHBC Earns First Annual Thomas Alva Edison Award**

The American Jewish Congress will present the first annual Thomas Alva Edison Awards on November 11, 2007. This event will honor corporations and individuals who are making a significant difference toward achieving energy independence for the United States. California Hydrogen Business Council will receive the 2007 Alternative Energy Organization of the Year award for "tireless efforts to promote and jump start the rapid implementation of hydrogen and bridge technologies to fuel our vehicles, our industries and economy." The American Jewish Congress is a leader in the field of alternative energy. One recent initiative is its US-Israel Energy Cooperation Act which will fund research in alternative energy in Israel through grants from the US Department of Energy.

### **3. ANSI Awarded Contract to Expand Hydrogen Codes and Standards Portal**

The American National Standards Institute (ANSI) was recently awarded a new contract to enhance and expand its Hydrogen Codes and Standards Portal ([hcsp.ansi.org](http://hcsp.ansi.org)), a web-based hydrogen data center developed under an initial contract from the U.S. Department of Energy's National Renewable Energy Laboratory (NREL). The portal provides a single source for information about the various codes, standards, and regulations that apply to the use of hydrogen as fuel. The portal supports NREL's Hydrogen, Fuel Cells, and Infrastructure Technologies Program, through which the laboratory works to accelerate the development and adoption of advanced hydrogen and fuel cell technologies.

[ANSI](http://news.thomasnet.com/companystory/524203): <http://news.thomasnet.com/companystory/524203>

### **4. BMW Hydrogen Series 7 Latest in BMW's Art Car Program**

From September 8, 2007 through January 13, 2008, the San Francisco Museum of Modern Art (SFMOMA) will present the exhibition "Your tempo: Olafur Eliasson." This special exhibition marks the first public presentation and only U.S. engagement of "Your mobile expectations: BMW H2R project, 2007," a new work Eliasson created in conjunction with BMW's Art Car program. His work transforms BMW's H2R hydrogen-powered race car, shrouding the alternative fuel vehicle in a new skin of steel mesh, mirror-coated stainless steel, and many layers of ice to focus our attention on the relation between car design and global warming. Established in 1975, the BMW Art Car Collection now includes 16 works by prominent artists including David Hockney, Jenny Holzer, Roy Lichtenstein, Frank Stella, Robert Rauschenberg, and Andy Warhol, each making a unique artistic statement about the appearance and meaning of cars in our time.

[BMW at SFMOMA](http://www.sfmoma.org/exhibitions/exhib_detail.asp?id=316): [http://www.sfmoma.org/exhibitions/exhib\\_detail.asp?id=316](http://www.sfmoma.org/exhibitions/exhib_detail.asp?id=316)

### **5. Honda FCX Qualifies for \$12K Tax Credit**

In late July, the Internal Revenue Service said that Honda's FCX qualifies for a \$12,000 federal tax credit. Honda applied for the credit even though it will probably be next year before it has a next-generation fuel-cell vehicle ready for the public. The FCX is certified in California as a zero-emission vehicle and gets the equivalent of 68 miles per gallon. Tax breaks aside, the car is a hit with Q'Orianka Kilcher, the 17-year-old actress who drives one of the two privately leased FCXes. "I love it," she says. "All my friends wish they could have one too."

[Honda FCX](http://www.latimes.com/business/la-fi-nutsandbolts28jul28,1,1671993.story?coll=la-headlines-business&ctrack=1&cset=true): <http://www.latimes.com/business/la-fi-nutsandbolts28jul28,1,1671993.story?coll=la-headlines-business&ctrack=1&cset=true>

### **6. Quantum to Supply Hydrogen Vehicles to Iceland's SMART-H2 Project**

Quantum Fuel Systems Technologies Worldwide, Inc. has announced that it has been awarded a contract to supply 10 hydrogen hybrid Priuses to VistOrka for use in Iceland's SMART-H2 project. The SMART-H2 (Sustainable Marine and Road Transport -- Hydrogen in Iceland) project is a supported market introduction where participants impose various demands on hydrogen technology in a variety of market applications. VistOrka's role in SMART-H2 includes leading the steering committee for the project, financing its management, subsidizing hydrogen vehicles, and providing support to follow up all parts of the project. The SMART-H2 will be one of the largest hydrogen demonstrations in the world.

[Iceland](http://money.cnn.com/news/newsfeeds/articles/prnewswire/LATH02819072007-1.htm): <http://money.cnn.com/news/newsfeeds/articles/prnewswire/LATH02819072007-1.htm>

### **7. Denmark Hydrogen Powered Car Set for Production**

Not since the days of the ill-fated Ellert has Denmark been a car producing country. But now dwindling oil supplies and the threat of global warming have sped up plans for the production of a hydrogen-powered car, financial daily Borsen recently reported. The first prototype of the Hywet car will roll out of the garage in August, powered by fuel cells running on hydrogen. Although the car's technology is still being fine-tuned, Hywet's

developers expect it will soon provide an affordable, green alternative to internal combustion engines. The project is the result of a co-operative effort between private companies Heat and Serenergy and Aalborg University, Mariagerfjord Municipality and the Centre for Material and Energy Technology (Cemtec), based in northern Jutland.

[Denmark](http://www.fuelcellsworks.com/Supppage7603.html): <http://www.fuelcellsworks.com/Supppage7603.html>

### **8. World Energy Solutions to Retrofit Hydrogen/Oxygen System in Diesel Truck Engine**

World Energy Solutions (WES) reported that it has begun retrofitting a new 2007 Ford F-650 with the company's proprietary hydrogen/oxygen system to reduce the truck's fuel consumption and harmful emissions. WES has entered the diesel engine market to capture the commercial demand for the company's proven hydrogen/oxygen (HHO) powered internal combustion engine technology. In a recent test, the company's initial test vehicle captured national headlines when it recorded a 24% reduction in gasoline usage. It is this HHO technology that will be incorporated into the Ford's 300 horsepower Caterpillar diesel engine. By systematically introducing hydrogen and oxygen into the fuel system of the F-650, the WES HHO system will reduce the amount of diesel required to power the truck.

[World Energy](http://www.primenewswire.com/newsroom/news.html?d=123247): <http://www.primenewswire.com/newsroom/news.html?d=123247>

### **9. The Home Hydrogen Generator**

A British company has converted a conventional petrol car to run on pure hydrogen. The bi-fuel Ford Focus, with minimal modifications, has successfully completed initial trials in a program conducted on behalf of ITM Power Plc by the University of Hertfordshire. During the test, the vehicle was able to travel over 25 miles on a single charge of hydrogen - more than the average commuting journey - before being switched back to run on petrol. Of equal significance is how the hydrogen was generated and the car fuelled. ITM Power, Europe's largest electrolyser and fuel cell company, used its own prototype 'home refuelling system' to fuel the car. Both the refuelling system, which will be able to generate and store hydrogen at home or at work, and the bi-fuel car are to be publicly demonstrated later this year.

[Home H2](http://www.newcarnet.co.uk/Auto_news.html?id=6977): [http://www.newcarnet.co.uk/Auto\\_news.html?id=6977](http://www.newcarnet.co.uk/Auto_news.html?id=6977)

### **10. Chena Hot Springs, Alaska Eyes Hydrogen as Energy Source**

Now that its ground-breaking geothermal project is up and running, the Chena Hot Springs Resort is looking to the next big thing. By next month, the resort will begin using hydrogen to replace propane for cooking and in clothes dryers and gas fireplaces, says the resort's energy expert, Gwen Holdmann. It also plans to rely on hydrogen for the vehicles it uses to bring passengers and supplies the 60 miles from Fairbanks, though maybe not by August. The hydrogen projects would make Chena Hot Springs the first in the state to use hydrogen energy, according to David Lockard of the Alaska Energy Authority. The resort is planning to break ground on a hydrogen fueling station at its second annual Renewable Energy Fair on August 18. This year's theme is "from hot water to hydrogen."

[Chena Springs](http://newsminer.com/2007/07/08/7829): <http://newsminer.com/2007/07/08/7829>

### **11. Hydrogen Fuel Stations?**

Norway's first hydrogen fueling station opened last August and will be joined by four on the main road that hugs the country's southern coast. Eventually these stations will form a 360-mile long "hydrogen highway" stretching from Stavanger to Oslo. "The goal is that by 2009 it will be possible to drive a hydrogen-powered car along the entire route," says Anders Hermansen from Statoil, Norway's biggest oil company and one of 40 partner organizations involved in the project, called HyNor. "This is very much a 'learning by doing project', as we want to increase our knowledge of hydrogen as well as stimulating wider interest in more environmentally friendly fuels."

[Norway](http://www.independent.ie/lifestyle/hydrogen-fuel-stations-is-this-really-the-fuel-of-the-future-972951.html): <http://www.independent.ie/lifestyle/hydrogen-fuel-stations-is-this-really-the-fuel-of-the-future-972951.html>

## **12. Wind-To-Hydrogen Project Dedicated**

Sen. Byron Dorgan (ND-D) was a featured dignitary at the dedication of a \$2 million wind-to-hydrogen plant near Minot, ND that he worked to fund over the past three years. Dorgan said the plant, which is about the size of a garage, uses intermittent power from wind turbines to produce and store hydrogen fuel without creating pollution. The project is a collaboration of Bismarck-based Basin Electric Power Cooperative, the University of North Dakota's Energy and Environmental Research Center, North Dakota State University's North Central Research Center and other partners. Basin spokesman Daryl Hill said the project is a first for North Dakota. Kevin Harrison, a senior engineer at the National Renewable Energy Laboratory in Golden, Colo., said there are fewer than 10 similar demonstration projects in the United States.

[Wind Project](http://www.bismarcktribune.com/articles/2007/07/19/news/state/136437.txt): <http://www.bismarcktribune.com/articles/2007/07/19/news/state/136437.txt>

## **13. IdaTech Secures Two Contracts for Large-Scale Hydrogen Purification**

IdaTech, LLC, a fuel cell solutions developer and manufacturer, announced that the company has secured two contracts based on its hydrogen purification expertise. Focused on the patented hydrogen purification technology, the HyPurium(TM) membrane, the contracts enable future development of hydrogen purification on a large scale. In partnership with a Japanese company, one contract will focus on the testing and evaluation of IdaTech's purification technologies for use in distributed hydrogen production. The second award, in collaboration with a European military contractor, is focused on the operation of the HyPurium(TM) membrane for high-power military applications.

[IdaTech](http://www.idatech.com/media/news.html?article=92): <http://www.idatech.com/media/news.html?article=92>

## **14. Co-Marketing Alliance on Gas Sorption Equipment and Materials for Hydrogen Storage**

Sigma-Aldrich has announced it has signed a global agreement with Hy-Energy LLC, a privately-owned company based in California, to market Hy-Energy's gas sorption analytical measurement equipment. Uses of Hy-Energy's gas sorption instruments include hydrogen storage, petrochemical and other research where precise gas sorption measurements are required. Sigma-Aldrich will market the PCTPro-2000 gas sorption analyzer and supply related materials to be used with the system for demonstration and research purposes through the Sigma-Aldrich Materials Science initiative of its Research Specialties business. Hy-Energy will market Sigma-Aldrich hydrogen storage materials used in conjunction with the PCTPro-2000 equipment and contribute to continuing development of innovative materials in such areas as hydrogen.

[Alliance](http://money.cnn.com/news/newsfeeds/articles/prnewswire/AQTH00419072007-1.htm): <http://money.cnn.com/news/newsfeeds/articles/prnewswire/AQTH00419072007-1.htm>

## **15. Michelin Plant Begins Testing Hydrogenics' Hydrogen-Powered Lift Trucks**

Michelin will be testing hydrogen-powered lift trucks at its South Carolina production facility this summer. The trial is the first of several planned for South Carolina companies during the next few months. The set of trials is a joint project of hydrogen fuel cell maker Hydrogenics, materials handling equipment distributor LiftOne and lift truck maker Linde. Funding for the project came from the Greater Columbia Fuel Cell Challenge. The Challenge is a collaborative effort of the City of Columbia, the University of South Carolina, EngenuitySC and the South Carolina Research Authority.

[Michelin](http://www.mmh.com/article/CA6459511.html): <http://www.mmh.com/article/CA6459511.html>

## **16. HydroGen Corp Announces Mechanical Completion of Commercial Demonstration Fuel Cell Power Plant**

HydroGen Corp., a designer and manufacturer of multi-megawatt air-cooled phosphoric acid fuel cell (PAFC) systems, has announced the mechanical completion and initiation of pre-commissioning activities of the company's full-scale 400 kW commercial demonstration PAFC power plant at Ashta Chemicals Inc.'s chlor-alkali plant in Ashtabula, Ohio. This commercial demonstration PAFC power plant will utilize by-product hydrogen gas produced by the chlor-alkali plant to generate electric power, heat, and water for the chlor-alkali plant's use. HydroGen Corp. also announced the completion and successful testing of a newly-manufactured 2.5 kW stack. The stack started up and is performing exactly to its start-of-life specifications, achieving a major milestone in the validation of the company's manufacturing capabilities.

[HydroGen](http://www.hydrogenllc.net/hydrov2/index.php?id=18,50,0,0,1,0): <http://www.hydrogenllc.net/hydrov2/index.php?id=18,50,0,0,1,0>

### **17. Air Products Fuels New Hydrogen Submarine for Hellenic Navy**

Air Products, in partnership with Hellas Air Pro Ltd., recently supplied a new state of the art submarine of the Hellenic Navy with hydrogen. This is the first fueling of this kind in Greece and took place in Skaramanga, near Athens. Prior to this event, Air Products had supplied the integral components of the hydrogen fueling station to Howaldtswerke - Deutsche Werft GmbH (HDW), which owns the design of the submarine and who supplied the fueling station to Greece. The HDW Class 214 submarine has a fuel cell power supply, allowing it to operate entirely on hydrogen. The fuel cell allows the new submarine to cruise under water for weeks without resurfacing. Conventional diesel-electric submarines typically deplete their battery power after a few days cruising under water.

[APCI](#):

<http://www.airproducts.com/PressRoom/CompanyNews/Archived/2007/12Jul2007.htm>

### **18. Hydrogen Aircraft Concept for Continued Development**

Testing and research is being carried out on a Boeing hydrogen aircraft engine at a facility in Manassas, Va., where the Aurora Flight Sciences Corporation has its headquarters. Aurora, which designs, manufactures and operates unmanned aerial vehicles (UAV) for a diverse group of federal agencies and prime aerospace contractors, has just been awarded a \$6.1M Army contract for continued work on an advanced unmanned aircraft. The aircraft in question, named Orion HALL, is serving as a test bed for a hydrogen propulsion system that would enable the machine to fly at altitudes of up to 65,000 feet for more than 100 hours. A conventionally powered version is also being studied, with an endurance level of around two weeks at altitudes of around 20,000 feet. The Orion Hall has been in development since 2006 and is scheduled for its first flight in 2009, with surveillance and tracking targets as possible functions when in Army use.

[Aircraft](#): <http://www.gasworld.com/news.php?a=1778>

### **19. New NASA System Will Help Space Station Crews Breathe Easier**

A new oxygen generation system tested in July aboard the International Space Station will allow the orbiting laboratory's crew size to increase in 2009. The hardware is part of the station's environmental control and life support system and will be used to augment the Russian Elektron oxygen generator. The new system produces oxygen by tapping into the station's water supply. Through the process of electrolysis, it splits the water into hydrogen and oxygen molecules. The oxygen is delivered into the crew cabin, while the hydrogen is vented overboard through the hydrogen vent valve. In the future, NASA engineers will recycle the hydrogen for water production from carbon dioxide.

[NASA](#): [http://www.earthtimes.org/articles/show/news\\_press\\_release,140866.shtml](http://www.earthtimes.org/articles/show/news_press_release,140866.shtml)

### **20. Blue Sky Awards to be Held September 6**

CalStart's Blue Sky Award ceremony will be held September 6, 2007. The Blue Sky Award is an international designation presented each year to companies, organizations or individuals selected for making outstanding contributions to clean air, energy efficiency and to the

advanced transportation industry. The awards formally recognize - and reward - outstanding contributions not only to develop clean vehicles and technologies, but also to actively bring them to the marketplace.

[Blue Sky](http://www.calstart.org/info/bluesky/index.php?p=news): <http://www.calstart.org/info/bluesky/index.php?p=news>

### **21. Tenth Grove Fuel Cell Symposium Sept 25-27**

Grove Fuel Cell Symposium is celebrating its 20th year with its 10th bi-annual conference and exhibition. Hundreds of exhibitors and thousands of visitors from across the globe review technological developments, with leading fuel cell manufacturers, users and fuel suppliers exploring the impact of government legislation and various policy initiatives. This year's exhibition and conference provides an opportunity to find out how progress in stationary and automotive fuel cell technologies can work for consumers and in industry. The Grove Fuel Cell Symposium takes place September 25-27 at Westminster's Queen Elizabeth II Conference Centre, London.

[Grove](http://www.ukenergydigital.co.uk/NewsArticle.aspx?articleid=804): <http://www.ukenergydigital.co.uk/NewsArticle.aspx?articleid=804>

### **22. Hydrogen Uses in the Military Forum Oct 2-4**

The National Hydrogen Association's Fall 2007 Topical Forum, "Hydrogen Uses in the Military," will be held October 2-4 in Columbia, SC, and will feature participants from the U.S. Department of Defense and the hydrogen industry. The forum seeks to address the gap between Technical Readiness Levels and Manufacturing Readiness Levels. This forum provides a unique opportunity to help shape manufacturing readiness protocols for hydrogen and fuel cell technologies.

[NHA Forum](http://www.hydrogenforums.org/07Military/program.asp): <http://www.hydrogenforums.org/07Military/program.asp>

### **23. 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. Thank you for helping build a great organization.

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

[Clean Fleet Report](http://www.cleanfleetreport.com): <http://www.cleanfleetreport.com>

### **24. Membership Pays**

Platinum membership is \$5,000 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 is \$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 is the buy of the century at \$1,000; Individual membership is \$200. 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>

### **25. Board of Directors**

President - Henry Wedaa; Vice President - Paul Scott, ScD; Managing Director - Catherine Rips; Secretary - Josh Mauzey; Treasurer - Jerald Cole; Membership Chairman - Mark Abramowitz; Fleets Chair - John Addison; Program Chairman - Henry Wedaa; Director at Large - Larry Watkins; Director at Large - John Williams, PE; Director at Large - Allan Bedwell; Director at Large - Fred Silver; Ex-officio Government Liaison - Analisa Bevan. To contact the board, please email: [info@californiahydrogen.org](mailto:info@californiahydrogen.org).

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