

CHBC News: July 2007

1. [Members Brief CA Governor's Office](#)
2. [Gov. Schwarzenegger Tells U.S. EPA of Inevitable Lawsuit on GHG Waiver](#)
3. [BMW Hydrogen 7 Takes to the Streets](#)
4. [Celebs Ride Fuel Cell Vehicles](#)
5. [Hydrogen Powers Two BC Buses](#)
6. [Air Liquide to Supply Portable Hydrogen Fueling to GM](#)
7. [BOC Begins Supplying Hydrogen to Chevron and Holly Oil Refineries](#)
8. [Completion of Florida H2 Station and New African Contract Announced](#)
9. [Roll Up for Better Hydrogen Storage](#)
10. [Practical On-board Hydrogen Storage Goal of New Argonne Project](#)
11. [Hydrogenics Receives \\$3.0 Million of Orders for HySTAT Electrolyzer Products](#)
12. [Teledyne Awarded \\$11 Million in Hydrogen Generator Orders](#)
13. [From Waste to Watts: City of Rialto Teams With Chevron, FuelCell Energy to Turn Restaurant Grease Into Renewable Power](#)
14. [EU Project Developing Fuel-Cell Powered Inter-City Aircraft](#)
15. [SMART-H2 Iceland on Way to Commercial H2 Systems](#)
16. [India Launches Fuel Cell and Hydrogen Roadmap](#)
17. [Australia's Wind Hydrogen Ltd Launches \\$12M IPO](#)
18. [Solar-Hydrogen Fuel Cell Residential Power System to be Built on Grand Cayman](#)
19. [John Morris Scientific Releases New Hydrogen Leak Detector](#)
20. [Two New Publications Released by Canadian Hydrogen Association](#)
21. [Wedaa Wins Yorba Linda Special Election](#)
22. [Blue Sky Awards to be Held September 6](#)
23. [Save the Date: Send Us Your News!](#)
24. [Membership Pays](#)
25. [Board of Directors](#)

1. Members Brief CA Governor's Office

A contingent from CHBC and Energy Independence Now participated recently in a hydrogen and fuel cell stakeholder briefing at Governor Schwarzenegger's Office. The group did an excellent job communicating key messages concerning progress, activities, investment, job potential, and challenges surrounding the advancement of hydrogen. Thanks to Air Products and Chemicals, Alteryg Systems, BMW, California Fuel Cell Partnership, DaimlerChrysler, GM, Honda and others who also participated in our legislative briefings in May. Thanks as well to Daniel Emmett for his leadership in this important effort.

2. Gov. Schwarzenegger Tells U.S. EPA of Inevitable Lawsuit on GHG Waiver

Governor Arnold Schwarzenegger has notified the U.S. Environmental Protection Agency (EPA) that California will file a lawsuit against the federal government six months and one day after the required notice was originally sent on April 26, 2007. In June, U.S. EPA Administrator Stephen L. Johnson indicated to the U.S. House of Representatives Special Committee on Global Warming that he will wait until late next year to decide on whether to issue regulations controlling emissions from vehicles. By announcing the EPA's intention to not act on California's waiver until late next year, the U.S. EPA is preventing California and other states from taking action to reduce greenhouse gases. Eleven other states have adopted the California standards as their own and six more are now in the process. The group of states makes up about one-third of all US auto sales.

[EPA](http://www.californiahydrogen.org/page.cfm?content=20&display=74): <http://www.californiahydrogen.org/page.cfm?content=20&display=74>

3. BMW Hydrogen 7 Takes to the Streets

Following its launch at the BMW PGA Championship at Wentworth, England, in June, a fleet of three BMW Hydrogen 7s took part in the Revolve Brighton to London rally for low and zero-emission cars. During the course of the event, HRH The Prince of Wales, a Government Minister, the Deputy Mayor of London, Nicky Gavron and a number of other dignitaries were introduced to the world's first hydrogen-powered emissions-free luxury saloon car. The BMW Hydrogen 7 heralds a milestone in the history of the car. It is a full production ready vehicle, which has met all the stringent processes and final sign-off criteria that every current BMW model undergoes.

[BMW](http://www.easier.com/view/News/Motoring/BMW/article-120153.html): <http://www.easier.com/view/News/Motoring/BMW/article-120153.html>

4. Celebs Ride Fuel Cell Vehicles

A Ford Focus hydrogen-powered Fuel Cell Vehicle (FCV) was driven by HRH the Prince of Wales at Hampton Court Palace, ahead of the first Brighton to London eco rally on World Environment Day. And at the recent premiere of Ocean's 13, at Grauman's Chinese Theatre in LA, Brad Pitt wowed the red carpet crowds by appearing in a BMW Hydrogen 7.

[Prince Charles](http://www.paddocktalk.com/news/html/modules.php?op=modload&name=News&file=article&sid=57209):

<http://www.paddocktalk.com/news/html/modules.php?op=modload&name=News&file=article&sid=57209>

[Brad Pitt](http://www.ecorazzi.com/?p=2757): <http://www.ecorazzi.com/?p=2757>

5. Hydrogen Powers Two BC Buses

Translink's first buses that run partly on hydrogen are now carrying passengers on regular routes in Coquitlam and Port Coquitlam. Two buses that were part of an alternative fuel test project over the past two years are now on the road, powered by a blend of 20% hydrogen and 80% compressed natural gas (CNG). As a result of the switch, TransLink says the engine produces 40% less oxide of nitrogen than straight CNG, 20% fewer hydrocarbons and 11% less greenhouse gas. The hydrogen gas is recovered from an industrial plant in North Vancouver.

[Translink](http://www.tricitynews.com/portals-code/list.cgi?paper=74&cat=23&id=1011529&more=0): <http://www.tricitynews.com/portals-code/list.cgi?paper=74&cat=23&id=1011529&more=0>

6. Air Liquide to Supply Portable Hydrogen Fueling to GM

Air Liquide Advanced Technologies U.S. LLC has been selected to supply five, 700-bar, portable fast-fill hydrogen fueling systems to General Motors in the U.S. General Motors (GM) will also have an option to acquire two additional systems. The systems will be built in North America, with proprietary engineering designs from Air Liquide's Advanced Technologies teams, and should be operational by the end of 2007. This is Air Liquide's second collaboration with GM related to hydrogen as energy. Air Liquide is also working with GM in Canada, having installed a fueling system at GM's Cold Weather Testing site for hydrogen vehicles, in Kapuskasing, Ontario.

[Air Liquide](http://www.boursonews.com/to_supply_69389_news-bourse.html): http://www.boursonews.com/to_supply_69389_news-bourse.html

7. BOC Begins Supplying Hydrogen to Chevron and Holly Oil Refineries

BOC, a U.S. affiliate of The Linde Group, has begun supplying hydrogen for cleaner fuel production from its newest hydrogen plant in Salt Lake City, Utah. BOC is a division of The BOC Group, Inc., which Linde AG acquired in 2006 to form The Linde Group, one of the leading engineering and industrial gases companies. The plant, which is capable of producing some 26 million standard cubic feet a day of hydrogen, began supplying Chevron and Holly Corporation's Utah subsidiary earlier this year with hydrogen for use in new oil refining production units. The refiners added the new processing units to meet or exceed the U.S. Environmental Protection Agency's lower-sulfur requirements for gasoline and diesel fuels.

[BOC-Linde](http://www.boc-linde.com):

<http://www.chemicalonline.com/content/news/article.asp?DocID=%7BF36BECFC-34CF-446F-9210-57DEC1FC03C%7D&Bucket=Current+Headlines>

8. Completion of Florida H2 Station and New African Contract Announced

Distributed Energy Systems (DES) has confirmed it has received an order for a hydrogen generation and storage system for a new electric power plant in Africa. DES also announced it had finished work on the installation and commissioning of an advanced hydrogen vehicle fuelling station in Florida. The African project will involve the delivery in the fourth quarter of 2007 of an entire hydrogen supply and storage system to a north African site, which will be used at the power plant to cool the electricity generators currently under construction. Two Hogen H-Series hydrogen generating units and gas compression and storage systems are to be utilized. In Florida, proton exchange membrane electrolysis (PEM) technology has been deployed at the service station. It is the 14th hydrogen vehicle fuelling system to be installed by DES since 2002.

[DES:](#)

<http://www.fuelcelltoday.com/FuelCellToday/IndustryInformation/IndustryInformationExternal/NewsDisplayArticle/0,1602,9359,00.html>

9. Roll Up for Better Hydrogen Storage

The thorny problem of how to store hydrogen fuel safely for future vehicles and portable gadgets could be solved by simply storing it in nanoscopic scrolls of carbon. Scientists in Greece say they have found a way to make so-called "carbon nanoscrolls" store more hydrogen than any other material. By adding impurities to rolled sheets of carbon in detailed computer simulations, they found they could control how tightly the scrolls wind up and, hence, how much hydrogen they adsorb. This result is very promising because it provides a potential solution to one of the major problems of hydrogen storage for mobile applications, says George Froudakis at the University of Crete, who led the work.

[Storage:](#) <http://www.newscientisttech.com/channel/tech/dn12128-roll-up-for-better-hydrogen-fuel-storage.html>

10. Practical On-board Hydrogen Storage Goal of New Argonne Project

Solving one of the biggest problems in commercialization of fuel-cell-powered automobiles is the goal of a new \$1.88 million research project on on-board hydrogen storage at the U.S. Department of Energy's Argonne National Laboratory. To be practical, researchers say, the hydrogen storage system must be able to hold enough of the fuel for a driving range of 300 miles before refilling; no current technology meets this goal within the constraints of allowable weight and volume for passenger cars. The Argonne research will investigate nanostructured polymeric materials as hydrogen storage adsorbents. Developed through an earlier collaboration between Argonne and the University of Chicago, the new polymer adsorbent material has shown great promise in preliminary tests. The new project funded by DOE will seek further improvements in storage capacity and an in-depth understanding of hydrogen-polymer interactions.

[Argonne:](#) http://www.anl.gov/Media_Center/News/2007/news070619.html

11. Hydrogenics Receives \$3.0 Million of Orders for HySTAT Electrolyzer Products

Hydrogenics Corp., a leading designer and manufacturer of hydrogen and fuel cell systems, announced that its OnSite Generation group has been awarded orders for \$3.0 million to date in the second quarter of 2007. These orders are for four HySTAT hydrogen generation systems to be delivered to industrial hydrogen customers worldwide for applications that Hydrogenics has successfully serviced in the past including metallurgy, glass manufacturing and power plant generator cooling. Hydrogenics is a Gold member of CHBC. Hydrogenics has also announced it is making significant advances in developing material handling markets for its HyPX Fuel Cell Power Pack product with current visibility to deliver 60-80

units.

[Hydrogenics](http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=247449): http://www.hydrogenics.com/ir_newsdetail.asp?RELEASEID=247449

12. Teledyne Awarded \$11 Million in Hydrogen Generator Orders

Teledyne Technologies Incorporated (NYSE: TDY) today announced that its subsidiary Teledyne Energy Systems, Inc. recently secured \$11 million in orders for commercial hydrogen generator systems. The hydrogen generators, which will be used to support several electric power plant construction projects and steel processing plant expansions, are scheduled for delivery in 2007 and 2008. Teledyne Titan Hydrogen generators provide on-site production of hydrogen gas from water using electrolysis to split the water into hydrogen and oxygen gases. Titan Hydrogen generators are used in many industrial applications including semiconductor production, float glass production and steel production and processing. When coupled with renewable electricity, electrolysis is a completely renewable means to producing hydrogen with no greenhouse gas emissions.

[Teledyne](http://www.teledyne.com/news/hgo.asp): <http://www.teledyne.com/news/hgo.asp>

13. From Waste to Watts: City of Rialto Teams With Chevron, FuelCell Energy to Turn Restaurant Grease Into Renewable Power

Chevron Energy Solutions announced it has begun engineering and construction of an innovative system at the City of Rialto's wastewater treatment facility that will transform wastewater sludge and kitchen grease from local restaurants into clean, renewable power. The environmentally friendly system will increase municipal revenues, reduce landfill wastes and lower greenhouse emissions by nearly 5.5 million tons annually, while decreasing the city's energy costs by about \$800,000 a year. The system includes a 900-kilowatt fuel cell power plant, manufactured by FuelCell Energy that will generate electricity without combustion using methane, a biogas produced naturally on site by the organic materials contained in wastewater.

[Rialto](http://www.chevron.com/news/press/2007/2007-05-08.asp): <http://www.chevron.com/news/press/2007/2007-05-08.asp>

14. EU Project Developing Fuel-Cell Powered Inter-City Aircraft

A European research project, led by Turin Polytechnic University, is designing a fuel-cell powered, manned inter-city aircraft. The Environmentally Friendly Inter-City Aircraft powered by Fuel Cells (ENFICA-FC) project will receive US\$3.9 million in funding from the European Union as part of the aeronautics and space priority of the Sixth Framework Programme (FP6). The fuel cell system will be installed in selected aircraft, which will be flight and performance tested as a proof-of-concept for future applicability in other inter-city aircraft. The results of the project will be presented at both on-ground and in-flight public events at the end of the three-year research project. Boeing and industry partners in Europe are also developing a light aircraft powered only by a 20 kW fuel cell and a lithium-ion battery pack. The Boeing team expects to begin its flight testing this year. Boeing is a Gold member of CHBC.

[ENFICA-FC](http://www.greencarcongress.com/2007/06/eu_project_deve.html#more): http://www.greencarcongress.com/2007/06/eu_project_deve.html#more

15. SMART-H2 Iceland on Way to Commercial H2 Systems

Previous successful hydrogen demonstration projects in Iceland have inspired VistOrka (the largest shareholder of Icelandic New Energy) to allocate at least 3.5 million \$US to take the next steps into a hydrogen future based entirely on renewable energy. The SMART-H2 (Sustainable Marine and Road Transport,- Hydrogen in Iceland), is a supported market introduction where different companies impose various demands on the hydrogen technology in mixed customer niches. SMART-H2 involves hydrogen cars, operation of a fitted fuel cell system on board a boat, further development of hydrogen distribution, as well as research. The first steps are to introduce in July two A-Class fuel cell vehicles (from DaimlerChrysler) and ten retrofitted (by Quantum) Toyota Prius hydrogen vehicles in September. Customers select the type of car that fit their service fleets and buy or lease

them, and technical support is included. The first customers are energy companies, investment funds and the Hertz car rental service. Then up to 30 cars will be provided according to demand and availability in 2008 and 2009. The type will depend on availability and the customer's selection, preferably fuel cell cars.

[Iceland](http://www.fuelcellmarkets.com/3,1,12828,1,14424.html): <http://www.fuelcellmarkets.com/3,1,12828,1,14424.html>

16. India Launches Fuel Cell and Hydrogen Roadmap

The Indian Ministry for renewable energy has unveiled an Indian roadmap to promote use of hydrogen, with an estimated one million vehicles using it as fuel by 2020 and the gas being used to fire electricity generation units for an aggregate 1,000 MW of electricity. As part of the new initiative, a demonstration project for setting up a hydrogen dispensing set-up at a petrol pump in Delhi has been sanctioned as a joint venture with IndianOil Corporation. The project would enable dispensing of neat hydrogen and CNG blended with hydrogen as fuel for vehicles. The project is expected to be commissioned by March 2009.

[India](#):

<http://www.fuelcelltoday.com/FuelCellToday/IndustryInformation/IndustryInformationExternal/NewsDisplayArticle/0,1602,9256,00.html>

17. Australia's Wind Hydrogen Ltd Launches \$12M IPO

Renewable energy company Wind Hydrogen Ltd launched its \$12 million public offer on Wednesday, saying the funds raised would help develop wind farms in Australia and the UK. Wind Hydrogen - chaired by a former NSW premier, Neville Wran - is offering 60 million shares at 20 cents a piece, to raise \$12 million. The company has a provision to issue a further 15 million, should it want to raise another \$3 million. Wind Hydrogen has plans for 19 wind farms in the UK and one in Australia, with a capacity of 350 megawatts.

[Wind H2](#): <http://www.smh.com.au/news/Business/Wind-Hydrogen-Ltd-launches-12m-IPO/2007/06/20/1182019190727.html>

18. Solar-Hydrogen Fuel Cell Residential Power System to be Built on Grand Cayman

Renewable Energy International, Inc. (REI), a leading integrator of renewable energy technologies, announced today that it will design and install a groundbreaking renewable solar-hydrogen fuel cell energy system in a residential environment in the Cayman Islands, only the second such system in North America. The U.S. based company holds the distinction of developing the first prototype solar-hydrogen system near Princeton, New Jersey, USA, which was dedicated in October 2006 before international press coverage. This second installation in the Caymans will demonstrate the system's significant cost and environmental benefits in an island environment.

[Solar H2](#):

<http://www.renewableenergyaccess.com/rea/partner/story;jsessionid=0803671FD7D1925EFC8F5DF31218AEC6?id=48996&src=rss>

19. John Morris Scientific Releases New Hydrogen Leak Detector

John Morris Scientific, Australia, has released new intrinsically safe Sensistor Extrima hydrogen leak detector designed for use in potentially explosive environments. The new portable Extrima conforms to EEx ia, IIC T4 according to European ATEX and Class 1, Div 1, Groups A, B, C, D according to US standards. The hydrogen leak detector is sensitive and can be used to find leaks as small as 2×10^{-6} mbar xl/s -comparable to leaks 1,000 times smaller than detectable with traditional soapy water or bubble tests. Industrial applications include valve, joint, tank and pipe leak detection in petrochemistry, fuel tanks, hydrogen fuel cells, hydrogen plants and oil rigs.

[John Morris](#): <http://www.ferret.com.au/articles/z1/view.asp?id=53244>

20. Two New Publications Released by Canadian Hydrogen Association

The Canadian Hydrogen Association (CHA) is announces the release of its "Hydrogen Systems" document. This paper identifies the Canadian opportunity for greenhouse gas reduction and economic growth through the deployment of hydrogen technologies and infrastructure. The 30-page document is the product of two workshops involving over 60 experts from government, academia and the hydrogen and energy industries. The CHA has also been involved in the publication of David Sanborn Scott's book "Smelling Land: the Hydrogen Defense Against Climate Catastrophe." "Smelling Land" is about hydrogen systems and technologies, the essential components of any strategy that can give us a chance to escape climate catastrophe.

[CHA](http://www.newswire.ca/en/releases/archive/May2007/29/c6182.html): <http://www.newswire.ca/en/releases/archive/May2007/29/c6182.html>

21. Wedaa Wins Yorba Linda Special Election

CHBC President Hank Wedaa was the recent victor in a special election held to fill the fifth seat on the Yorba Linda, CA City Council. Wedaa, who chaired the South Coast Air Quality Management District Governing Board for three years and who last year received the National Hydrogen Association Meritorious Service Award, has served seven terms on the council and been mayor five times.

[Wedaa](http://www.ocregister.com/ocregister/news/local/article_1720061.php): http://www.ocregister.com/ocregister/news/local/article_1720061.php

22. 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>

23. Save the Date; Send Us Your News!

Mark your calendars now for CHBC's fall General Meetings, Thursday, October 25 (location to be announced). More details will be released soon. And, 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.

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

[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.

[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.

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John Addison, Contributing Editor
Catherine Rips, Editor/Publisher

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