



CaH2Net Update

SPRING 2006

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WELCOME TO THE CALIFORNIA HYDROGEN HIGHWAY NETWORK

The California Hydrogen Highway Network (CaH2Net) is an initiative to establish a hydrogen infrastructure to support commercialization of sustainable, zero and near-zero emission hydrogen vehicles. The mission of the CaH2Net is to assure that infrastructure is in place to enable fuel cells and other hydrogen technologies to be used by consumers as those technologies reach commercial readiness. The Ca-

H2Net is a key part California's strategy to achieve the State's vision of a secure energy future that simultaneously addresses our environmental, public health and economic challenges working in partnership with other components of the State's programs to advance energy efficiency and renewable energy.

In 2006 California will fund three hydrogen fueling stations and acquire a diverse fleet of twelve

hydrogen vehicles to be operated in state fleets as well as two hydrogen shuttle buses to be used in university or airport shuttle services. Additionally, the program is committed to community outreach and education, facilitation of permitting, codes and standards establishment and ensuring environmental benefits of a hydrogen transportation system.

BURBANK HYDROGEN STATION SET TO OPEN

On March 17, the City of Burbank dedicates the latest hydrogen fueling station in the southland. The station is part of the South Coast Air Quality Management District (SCAQMD) Five Cities Program, where the AQMD is partnering with local cities to demonstrate hydrogen fueling and internal combustion engine vehicle fleets. The other cities participating in the program are Ontario, Riverside, Santa Monica and Santa Ana.

Like the other cities, Burbank is using five Toyota Priuses converted to run on gaseous hydrogen. The converted cars drive and perform like regular gasoline/electric hybrids except that they emit almost zero criteria pollutants and greenhouse gases. The city plans on using the cars in high mileage fleet operations to provide a testing ground for the promising clean air technology.

The Five Cities Program is aimed at stimulating de-

mand for hydrogen fueling, accelerating the expansion of the region's hydrogen fueling network, and educating the public about hydrogen-fueled vehicles. Although currently fueling hydrogen ICE vehicles, all of the SCAQMD stations are able to fill fuel cell vehicles as well. The SCAQMD is the local air pollution agency for Orange County, and major portions of Los Angeles, San Bernardino, and Riverside counties.



Meeting with the Office of the State Fire Marshal

To begin a dialogue between safety officials and those agencies working to move California towards a hydrogen economy on February 15, 2006 the Air Resources Board (ARB), the California Fuel Cell Partnership (CaFCP), the California Environmental Protection Agency (Cal/EPA) and the Office of the State Fire Marshal (OSFM) met to identify areas of coordination between the different agencies. Chief Grijalva was very positive about hydrogen as a transportation fuel and presented an overview of the

OSFM's historical and existing work on hydrogen-related issues. He also identified areas of future work for the OSFM, such as training programs and involvement in the process for developing codes and standards for hydrogen fuel stations and vehicles. The ARB provided a brief history of the CaH2Net, including recent legislation authorizing the state to co-fund the development of three hydrogen fueling stations and leasing of vehicles. The CaFCP provided an historical perspective of their

work to-date, including the creation of workshops and training programs for permitting officials and emergency first responders.

The OSFM is in the process of convening a Hydrogen Advisory Committee to work on codes and standards for hydrogen. The committee may also work on other safety related areas such as incidence reporting, the development of permitting templates to help streamline the permitting process and emergency responder training.



Hydrogen internal combustion engine Prius by Quantum, refueling at one of South Coast Air Quality Management District's Five Cities Stations

Keep in touch with the latest news on the CaH2Net by signing up for our list serve at <http://www.hydrogenhighway.ca.gov/sub2hwy.html>

CAH2NET STATION MEMBERSHIP

Many hydrogen station owner/operators have expressed interest in having their station recognized as part of the California Hydrogen Highway Network. But what does that mean? In the interest of bringing fuel providers to the table and growing of the network, ARB and key stakeholders have drafted CaH2Net station acceptance criteria.

CaH2Net stations will have a current permit to operate and will display CaH2Net flags and signage. CaH2Net stations will provide access and fuel to OEM and approved hydrogen vehicles, and will

share fuel quality information with automakers upon request. A willingness to work with vehicle manufacturers is critical during the early stages of fuel production and fuel cell technology development.

Information sharing among stations and with station developers will also be critical for the early growth and development of the network. CaH2Net stations will agree to participate in questionnaires and workgroups, and to assist ARB in assessing progress toward meeting the emission reduction and renewable resource goals of the Ca-

H2Net's Blueprint Plan.

Member stations will benefit by having access to products developed through the Air Resources Board including CaH2Net signage, brochures on hydrogen vehicles and the CaH2Net, and, eventually, highway signage. CaH2Net member stations will be listed in on-line directories to enable hydrogen vehicle drivers to easily locate stations. In addition, member CaH2Net stations will benefit and help the development of the network by sharing their on-going experiences on public outreach, accessibility, and technical challenges.



Road signage directing drivers to Riverside's hydrogen refueling station.

UPCOMING EVENTS

One very important goal of the CaH2Net is to get the word out about Hydrogen fuel and vehicles. To accomplish this, CaH2Net staff will be participating in a number of events this March and April 2006.

O'Reilly Emerging Technology Conference

March 7-9, 2006

San Diego

Staff will participate with the California Fuel Cell Partnership at the O'Reilly Emerging Technology Conference to be held at the Manchester Grand Hyatt in San Diego from March 7-9, 2006. The CaFCP will be hosting a Ride&Drive in front of the hotel on March 9 from 3-6PM. The Ride&Drive will allow attendees to ride in a number of fuel cell vehicles and talk to the people who work with this technology on a daily basis. To learn more about this conference, go to <http://conferences.oreillynet.com/etech/>

Los Angeles Environmental Education Faire

March 11, 2006

Los Angeles Arboretum

On March 11 the CaH2Net and the California Fuel Cell Partnership along with over 60 other organizations will be at the annual Los Angeles Environmental Education

Faire at the Los Angeles Arboretum in Arcadia. There will be vehicles and educational materials as well as staff on hand to answer your questions about the transportation of the future. To learn more about this event, go to <http://www.laeef.org/>

National Hydrogen Association Conference

March 12-17, 2006

Long Beach

The CaH2Net will have a strong presence at the National Hydrogen Association (NHA) Conference in Long Beach. Analisa Bevan will be presenting an overview of the CaH2Net in an Exhibit Hall Forum on Monday at 10:30, as well as the Idea Forum in the Grand Ballroom talking about "Vehicles: The Path Forward." Also, visit CaH2Net staff at our display in the Hydrogen US Expo. For more information about this conference, go to <http://www.hydrogenconference.org/>

Picnic Day

April 22, 2006

University of California, Davis

The University of California, Davis, will host the 92nd Picnic Day, their annual open house and oldest honored tradition, on Saturday, April 22nd, 2006. Picnic Day has an expected attendance of

50,000 visitors and is believed to be the largest student-run event in the nation. Current and prospective students, alumni, staff, faculty, and people from everywhere are invited to attend this festive day that showcases the talents, achievements and history of the university. With more than 150 free events throughout campus, Picnic Day provides fun and education for all ages. Come see fuel cell vehicles in the morning parade and then on display with CaH2Net staff on campus later that day. For more information, go to http://www.daviswiki.org/Picnic_Day

Earth Day

April 22, 2006

California State University, Sacramento

This one-day, free family event brings together community and campus organizations, government agencies, artisans and entertainers who share a common commitment toward a sustainable society. Attendance is anticipated to be over 8,000 people with exhibits from over 130 organizations. Come see fuel cell vehicles and visit CaH2Net staff at this year's event. For more information, go to <http://www.earthdaysac.org/sacramentoearth-day2006.htm>



Hydrogen refueling dispenser at Riverside's station



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Caption describing picture or graphic.

ALAMEDA-CONTRA COSTA TRANSIT GRAND OPENING

Alameda-Contra Costa Transit District's (AC Transit) Oakland Seminary Division energy station is set to open on March 13, 2006. AC Transit and ChevronTexaco entered into an innovative cooperative agreement to build a state-of-the-art hydrogen energy station in Oakland, California, that will produce hydrogen fuel for fuel cell fleets. The hydrogen will fuel AC Transit's fleet of

40 foot Van Hool/UTC/ISE fuel cell buses and future fleets of light duty vehicles.

Unique to the station's design is the use of small scale, onsite steam reforming of natural gas, to produce hydrogen in the most cost efficient manner for commercial applications. The station will dispense up to 150 kilograms of hydrogen daily enough to fuel three fuel

cell buses, along with a fleet of light-duty fuel cell cars. The station will have the additional capability of utilizing excess hydrogen production to generate high quality electrical power from a stationary fuel cell.

