

BOARD MEETING DATE: July 11, 2014

AGENDA NO. 36

PROPOSAL: California Fuel Cell Partnership Executive Board Meeting Notes and Quarterly Updates

SYNOPSIS: This report summarizes the California Fuel Cell Partnership Executive Board meeting held April 15, 2014, and provides updates for quarters beginning October 2013 and January 2014.

COMMITTEE: Technology, June 20, 2014; Recommended for Approval

**RECOMMENDED ACTION:**

Receive and file the attached Executive Board meeting notes and quarterly updates.

Clark E. Parker, Ph.D.  
SCAQMD Representative to CaFCP

MMM:LHM

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The next California Fuel Cell Partnership (CaFCP) Executive Board meeting is scheduled for October 21, 2014, in Sacramento.

Additional information about the CaFCP can be found at <http://www.fuelcellpartnership.org>.

**Attachments**

- 1) California Fuel Cell Partnership Executive Board April 15, 2014 Meeting Notes
- 2) California Fuel Cell Partnership Quarterly Update (October–December 2013)
- 3) California Fuel Cell Partnership Quarterly Update (January–March 2014)

# MEETING NOTES

## CaFCP Executive Board

April 15, 2014

8:00am – 5:30pm

LOCATION: SCAQMD Headquarters, 21865 East Copley Drive, Diamond Bar, CA 91765, GB Conference Room

### Executive Board Attendees

Robert Bienenfeld, **Honda (Chair)** Ronald Grassman, **Mercedes**  
Bob Babik, **GM** Reg Modlin, **Chrysler**  
Gil Castillo, **Hyundai** Kenzo Oshihara, **Nissan**  
Justin Ward, **Toyota** Joerg Launer, **Volkswagen**  
Mary Nichols, **CARB** Janea Scott, **CEC**  
Clark Parker, **SCAQMD** Francisco Donez, **US EPA**

Executive Board representatives from AFCC or US DOE were not present.

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### 8:30am – 8:40am

Robert Bienenfeld, Chair

### 1. Welcome

Welcome and remarks from the CaFCP Chair

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### 8:40am – 9:00am

Honda  
Hyundai  
Mercedes  
Toyota

### 2. Automaker briefing

Presentations from four automakers.

- Toyota discussed styling decisions for future vehicle
- Hyundai highlighted 10 vehicles deployed in Europe
- Honda highlighted that the FC stack in its new vehicles fits in engine compartment and will be an improvement of +35% in weight output density and +60% volume density since 2008 FCX Clarity.
- Mercedes said global activity is ~200 B Class and 30 Citaro bus. Have 69 B Class in CA now, over 1.2M miles and extending the lease program for two more years
- Infrastructure remains important for all OEMs

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### 9:00am – 9:45am

Tyson Eckerle, GO-Biz (lead)  
CEC  
CARB  
Air Liquide  
Air Products  
Linde

### 3. Hydrogen station briefing

- Current update on stations in construction and permitting; all 2010 funded stations must be operational by fall 2014.
  - 2012-funded stations must be operational by 2017
  - New fire code changes some setback distances that negatively impacts some station locations. Reviewing possible solutions.
  - Recap of GO-Biz event held the previous day; good attendance and interest. Following up with permitting workshops and Northern CA events
  - Current stations:  
In February 2014 Emeryville station conducted 51 fills 93 kg;  
Burbank 97 fills 157 kg; Harbor City 73 fills 153 kg; Fountain Valley 174 fills 507 kg.
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**9:45am – 10:15am**

Randall Winston, Governor's Office

**4. Briefing on Governor's Office ZEV Summit and next steps**

Participants in the March 7, 2014 ZEV Summit identified progress and new challenges in launching FCEVs and hydrogen into the early market.

Important next steps include:

- Issue a H2 permitting guidebook. Build upon 2013 ZEV guidebook, but more detailed.
  - Assuring network of stations in 2015-17.
  - Develop a FCV and H2 Roadmap. Including priority locations, raise awareness and metrics for success. Build off CaFCP RM and will be a state inter-agency plan.
  - As 8-state MOU moves forward, ensure that other state action plans include fuel cells and hydrogen.
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**10:15am – 11:45am**

Alex Keros, General Motors (lead)  
Gerhard Achteлик, CARB (co-lead)  
CaFCP staff

**5. CaFCP Roadmap progress report**

In 2012 CaFCP published *A California Roadmap*. The CaFCP Roadmap Progress Report will document significant actions taken to meet the Roadmap goals and identify priorities for further action. Team leads will provide an overview of the project, current status and timeline for publication in late May-Early June

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**1:00pm – 2:30pm**

Matt Miyasato, SCAQMD (lead)  
CARB  
CEC  
USEPA  
DOE

**6. Strategies to reduce air quality impacts of medium- and heavy-duty vehicles**

Californians suffer the worst air quality in the nation. Medium- and heavy-duty vehicles are some of the biggest contributors to poor air quality, especially in disadvantaged communities and near freight centers. Speakers highlighted the current situation as well as actions and incentives to address these challenges in the medium- and heavy-duty vehicle sectors.

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**3:00pm – 4:30pm**

Fred Silver, CALSTART (lead)  
CTE  
Hydrogenics  
Sandia National Labs  
US Hybrid

**7. Getting to zero: Fuel cells in medium- and heavy-duty vehicles and port applications**

Companies and developers have made significant advancements using fuel cells for medium- and heavy-duty applications. These advancements provide new opportunities in dual platform cutaway chassis, delivery and drayage trucks, refueling vehicles and portside auxiliary power. Speakers will present their latest advancements, product demonstrations and new offerings for these market sectors.

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**4:30pm – 5:00pm**

CaFCP staff

**8. Business items**

- Highlighted 2013 accomplishments included the fuel cell bus roadmap and legislative outreach activities.
  - Reviewed 2013 financials
  - Reported that FTA is no longer a CaFCP member
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**Antitrust Guidelines**

*It is the express intent of the CaFCP and its members that none of the organization's activities will violate or be in conflict with any federal, state or local antitrust law, rule or policy (collectively, the antitrust laws). Each member will conduct its affairs in conformity with this intent. Each member is aware that there are significant civil and criminal penalties for violating antitrust laws. To the extent possible, the CaFCP and the members will act in a manner substantially in compliance with the policy entitled "Antitrust Guidelines for Collaboration Among Competitors" issued by the Federal Trade Commission and the Department of Justice and dated April 2000. This document is available for reference on CaFCP's member resources website.*

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**CaFCP Quarterly Update**  
October-December 2013

**Background**

The California Fuel Cell Partnership is a unique collaborative of auto manufacturers, energy companies, fuel cell technology companies, and government agencies, including SCAQMD. This report summarizes CaFCP activity in or related to Southern California for July to September 2013.

In its fourth phase, 2013-2016, CaFCP members, individually or in groups, will focus on meeting these goals to achieve market launch:

- Prepare for larger-scale manufacturing, which encompasses cost reduction, supply chain and production.
- Work on the customer channel, including identifying and training dealers and service technicians.
- Reduce costs of station equipment, increase supply of renewable hydrogen at lower cost, and develop new retail station approaches.
- Support cost reduction through incentives and targeted RD&D projects
- Continue research, development and demonstration of advanced concepts in renewable and other low-carbon hydrogen.
- Provide education and outreach to the public and community stakeholders on the role of FCVs and hydrogen in the evolution to electric drive.

CaFCP and members' activities fall within three main strategic directions:

1. Proving that hydrogen and fuel cell vehicles are undeniable and necessary
2. Convincing the public
3. Adapting to new realities

To successfully implement the vision, CaFCP activities must focus on technical, communications and business operations/strategies that require collaboration and coordination. A detailed CaFCP implementation plan is available as a separate document.

**2013 CaFCP Program Plan**

| Goal  | Description   | Milestones  | Q4 Status   |
|---|---|---|---|
| <b>1. Facilitate member collaboration</b>   |   |   |   |
| The California Fuel Cell Partnership (CaFCP) facilitates members and stakeholder coordination on projects and activities of common interest in order to leverage resources, communicate progress, bring together new players, and overcome challenges more quickly than could be accomplished by individual action. |   |   |   |
| 1a. Operate and decommission WSS  | Operate the WSS to support Sacramento area FCEVs and decommission after nine months   | Q3: Develop decommissioning plan<br>Q4: Finalize contract for decommissioning<br>Q4: Station closed (Nov 30)<br>Q4: Facilities restored to original   | Decommissioning completed   |
| 1c. Gain support for California fuel cell bus roadmap   | Complete the California fuel cell bus roll out plan through 2017 and in 2013 will work to gain support for implementing the plan.   | Q1: Present draft "FCEB in CA" to ST for review & approval<br>Q1: Support execution of National FCEB workshop<br>Q2: Execute Spring Bus Team meeting<br>Q4: Support execution of International FCEB workshop<br>Q4: Execute Fall Bus Team meeting | Completed with Fuel Cell Bus Roadmap, two CA Bus Team meetings, one national (online) and one international (in-person) fuel cell bus workshop.<br><br>Conducted outreach to brief planning agencies, select transit agencies and local-level elected officials about road map. |
| 1d. Support Gov's ZEV Action plan   | Support implementation by providing a forum and pathway for coordinated action among H2 FCV stakeholders  | tbd (based on action plan)  | Completed by submitting hydrogen station section to the ZEV Guidebook and paying for printing. Working closely with Governor's office to implement.   |
| 1e. Develop innovative funding mechanisms for H2 infrastructure   | Raise \$65M in additional incentive support for stations, and develop and analyze innovative funding mechanisms that may be more effective and efficient than current grant process | Q1: Phase II analysis by EIN<br>Q2: Steering Team approves option(s)<br>2014: implement new mechanism(s)  | Completed. Hydrogen Network Investment Plan available at <a href="http://www.einow.org/images/stories/factsheets/h2nip_full_paper_final.pdf">www.einow.org/images/stories/factsheets/h2nip_full_paper_final.pdf</a>   |

**2. Support Station implementation**

*CaFCP will monitor, coordinate and execute the activities to deploy stations for commercialization as outlined in the roadmap document.*

|   |   |  |   |
|---|---|--|---|
| 2a. Transition ER training to a national program        | Begin implementation of the national program to extend the reach of CaFCP's approach. The new focus will include as much on stations as on vehicles.  | Q1: Execute/participate in Firehouse World<br>Q2: National ER program plan complete<br>Q2: Participate in DOE AMR<br>Q3: Implementation of plan begins   | Plan completed in Q4  |
| 2b. Improve station performance                         | To improve station performance, CaFCP conducts projects related to fill performance (e.g. to SAE J2601 and J2601/2), metering and dispenser certification, H2 quality, HVAS and station commissioning. In 2013, member teams will continue to work towards specific tasks in these areas. | Q1: Engage contractor to do fuel modeling<br>Q1: Present HVAS nozzle design to SAE project team<br>Q2: J2601 published as a standard<br>Q2: J2601/2 final draft guidelines available<br>Q4: J2601/2 publish draft guideline for FCEB<br>Q4: DMS finalizes their method for dispenser validation  | Presented HVAS antenna to project team, handed off the design to WEH J2601 to be balloted with J2579 as they reference each other<br>Draft v6 J2601-2 posted on SAE web site for review (to ballot in Feb '14)<br>J1766 Posted for review and comment<br>DMS Proposed changes to flow meter tolerance   |
| 2c. Integrate hydrogen into existing retail fuel market | Continue building relationships with fuel retailers and further reaching out into this supply chain and insurance companies to ensure that they are engaged and involved and hydrogen stations are deployed in early market communities.  | Q1: Participate in WMPA National conference<br>Q2: Complete and publish "Guide to Building Hydrogen Station"<br>Q2: Conduct 1st Fueling the Future workgroup meeting; Q2: Participate in SIGMA Spring Convention<br>Q3: Develop outreach materials & participate in POC Annual conference<br>Q4: Develop outreach materials & participate in SIGMA Annual conference<br>Q4: Conduct 2nd Fueling the Future workgroup meeting | Created fact sheets and station summaries.<br>Conducted initial meetings with retailers.<br>Participated at Pacific Oil Conference in September in Los Angeles<br>Created fact sheets and station profiles.<br>Conducted initial meetings with retailers.<br>Participated in three industry events<br>Obtained database of 8,000+ CA retail locations for future outreach<br>Joined CIOMA, WPMA and Fuels Institute |

|  |  |   |   |
|--|--|---|---|
| <p>2d. Accelerate station implementation</p> | <p>Identify and address key barriers and prepare recommendations to improve timeline to 68 stations.</p> | <p>Q1: Complete stakeholder meetings on SI Lessons Learned<br/>                 Q2: Develop draft Station Implementation Lessons Learned<br/>                 Q3: Develop draft Station Implementation improvements doc<br/>                 Q4: Implement identified actions</p> | <p>Regularly updating timelines with funder/builder info. Recommended implementation of station progress tracking tool for CEC funded stations. Developed high level station implementation status overview tool.</p> |
|--|--|---|---|

**3. Implement hydrogen readiness**  
*CaFCP will focus outreach in early market communities with a goal of easing station implementation, including community acceptance and accessibility of funding. The ultimate goal is to increase awareness and understanding of hydrogen and fuel cells, especially regarding progress and next steps in California, with government officials in Sacramento and Washington, D.C.*

|  |   |   |   |
|--|---|---|---|
| <p>3a. Conduct focused outreach in early market communities to prepare them for coming hydrogen stations</p> | <p>Build community readiness programs, deliver ER training and Permit workshops in early market communities, strengthen relationships with Clean Cities Coordinators, identify influencers and enroll them in Vehicle Loan Program (VLP).</p> | <p>Q2: Have 50 participants in the vehicle loan program<br/>                 Q2: First H2 readiness council in place<br/>                 Q1-Q4: Conduct 10 ER training and permitting workshops; begin transition to train the trainer<br/>                 Q1-Q4: Participate in 60 community events and meetings</p> | <p>Participated in predevelopment meetings for six station development projects<br/>                 Developed overall action plan and specific plans for communities with stations in development<br/>                 Participated in Firehouse World, Corona Auto-X, Continuing Challenge Haz Mat events</p> |
| <p>3b. Create Road Map follow-up on materials (parallel white papers)</p>                                    | <p>Working with project teams, write, publish and disseminate materials that support the messages of the road map.</p>  | <p>Create and publish one Road Map related document per quarter</p>   | <p>Drafting roadmap progress report for 2014</p>  |
| <p>3c. Expand and extend CaFCP applications</p>  | <p>In 2013 we will further expand the capabilities improving the functionality and usability of the station map, SOSS and CRM capabilities</p>  | <p>Q2: Expand functionality of CRM<br/>                 Q3: Improve interactive map applications on CaFCP website<br/>                 Q4: Extend capabilities of SOSS to support station performance and implementation projects</p>   | <p>CRM implemented and in use<br/>                 Updated online station map<br/>                 Updated SOSS to allow manual station online/offline settings</p>   |

|  |  |  |   |
|--|--|--|---|
| <p>3d. Build support in Sacramento and Washington DC</p> | <p>Continue working with a consultant, Political Solutions, at the state level and with FCHEA in Washington DC to provide education and information at state and federal level to elected officials represent early market areas.</p>                      | <p>Q1: Complete strategy for reaching all newly elected officials<br/>                 Q2: Provide education and information to targeted officials<br/>                 Q2: Host or participate in two briefing sessions<br/>                 Q3: Revise legislative outreach plan</p> | <p>Attended two briefings in Washington DC for federal government<br/>                 Participating on H2USA steering committee and two working groups</p> |
| <p>3e. Conduct high-value marketing and outreach</p>     | <p>Participate in and sponsor conferences and expos primarily in California that reach our target audiences and further the message of the roadmap. Conduct a marketing campaign using social media to continue to build interest in FCVs and hydrogen</p> | <p>Q1-Q3: Speaking opportunities at 3-4 transportation conferences in US and overseas<br/>                 Q1-Q4: Conduct one social media campaign per quarter; post weekly blogs<br/>                 Q1-Q4: Participate in 10 targeted outreach events</p>                          | <p>Participated in DOE Solar Decathlon<br/>                 Participated in a variety of events in Northern California</p>                                  |

# Outreach Activities

## Outreach Activities

| Activity            | Target Audience  | Picture  |
|---------------------|--|--|
| DOE Solar Decathlon | Early adopters, residents and stakeholders in early market communities, engineering students, local government |  |

## Government Outreach and Education

Because CaFCP includes government members, as a group we do not lobby or advocate for legislation or regulation. Throughout the year, we did provide outreach and education to members of the California Senate and Assembly, and their staff so that they had accurate and up-to-date information about hydrogen, fuel cell electric vehicles, including buses. We brought vehicles to their district offices and conducted outreach at the State Capitol, too. During the year, CaFCP directly contacted 44 legislators and 202 staff, as well as seven NOGs.

In October, Governor Brown signed Assembly Bill 8 into law. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024, and specifies that the Energy Commission allocate up to \$20 million per year (or up to 20 percent of each fiscal year's funds) in funding for hydrogen station development until at least 100 stations are operational.

The following is a list of all meetings with legislators, legislative staff and NGOs in Q4 2013.

| <b>Meeting type</b> | <b>Date</b> | <b>CaFCP</b>  | <b>Met with</b>   |
|---------------------|-------------|---|---|
| Community Meeting   | 10/16/13    | Jennifer Hamilton   | Invitation from Linde to meeting with CEC and Governor's office and the City of Cupertino re: proposed H2 fueling station. Provide support with fire/permitting information, Road Map, etc. |
| Community Meeting   | 10/17/13    | Jennifer Hamilton   | Invitation from Linde to meet with CEC and Governor's office with city of Mountain View re: proposed H2 fueling station. Provide support with fire/permitting information, Road Map, etc.   |
| District meeting    | 10/17/2013  | Keith Malone  | Senator Richard Roth and staff member Tyler Madary  |
| Capitol meeting     | 10/28/2013  | Catherine Dunwoody  | Chuck Dalldorf, office of Senator Richard Roth  |
| District meeting    | 11/21/2013  | Keith Malone  | Raquel Maden, senior field representative to State Senator Ben Hueso.   |
| District meeting    | 11/22/2013  | Keith Malone  | Jason Weisz, senior field representative to Assembly Member Toni Atkins   |
| District meeting    | 11/22/2013  | Keith Malone  | Assembly Member Lorena Gonzales and Paul Ochoa, field representative  |
| District meeting    | 12/2/2013   | Keith Malone and Arjun Sarkar, UCSB sustainable transportation specialist | Assembly Member Das Williams (D-Santa Barbara) and Josh Molina, Communications Director   |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Jesse Cuevas, legislator director for Assembly Member Henry Perea (D-Fresno), author of AB 8  |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Dave Titus, chief of staff to Assembly Member Beth Gaines (R-Rocklin)   |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Assembly Member Richard Pan (D-Sacramento) and legislative aide Bernardette Lawrence  |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Assembly Member Rudy Salas (D-Bakersfield) and Yolanda Sandoval, chief of staff   |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Sharon Gonsalves, legislative director to State Senator Anthony Cannella (R-Ceres)  |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Assembly Member Ken Cooley (D-Rancho Cordova) and Brendan Repicky, legislative aide   |
| Capitol meeting     | 12/4/2013   | Keith Malone and Teresa Cooke, Political Solutions                        | Todd Moffitt, legislative director for State Senator Jean Fuller (R-Bakersfield)  |
| Capitol             | 12/5/2013   | Keith Malone and Holly  | Taylor Woolfork, Legislative Aide to Senator  |

|                   |            |  |  |
|-------------------|------------|--|--|
| meeting           |            | Langbein, Political Solutions  | Cathleen (D-Stockton)  |
| Capitol meeting   | 12/5/2013  | Keith Malone, Chris White and Holly Langbein, Political Solutions      | Dawn Isbell, legislative aide, and, later, Assembly Member Roger Dickenson (D-Sacramento)  |
| Capitol meeting   | 12/5/2013  | Keith Malone and Holly Langbein, Political Solutions                   | Matt Theis, capitol director for Assembly Member Kristen Olsen (R-Modesto)   |
| Capitol meeting   | 12/5/2013  | Keith Malone and Holly Langbein, Political Solutions                   | Erika Bustamante, Senior Leg Assistant for Assembly Member Luis Alejo (D-Salinas)  |
| Capitol meeting   | 12/5/2013  | Keith Malone, and Holly Langbein and Teresa Cooke, Political Solutions | Kip Lipper, legislative aide to President Pro Tempore of the Senate Darrell Steinberg (D-Sacramento). Lipper is an advisor on energy, environmental, and natural resources matters.                  |
| District meeting  | 12/6/2013  | Keith Malone   | Assembly Member Anthony Rendon, Ronald Gonzales-Lawrence and other district staff for Assembly Member Rendon   |
| District meeting  | 12/11/2013 | Keith Malone   | State Senator Jerry Hill (D-San Mateo)   |
| District meeting  | 12/11/2013 | Keith Malone   | Marc Hershman, district director and Lisa Chung, senior district representative to State Senator Jerry Hill. Also in contact with Cory Wolbach, field representative and Marina Gonzalez, scheduler. |
| District meeting  | 12/12/2013 | Keith Malone   | Nadia Conrad-Huayta, field representative for Assembly Member Tom Ammiano  |
| Community meeting | 12/17/2013 | Keith Malone   | Ryan Wiggins, cap and trade campaign manager for TRANSFORM California  |
| Community meeting | 12/18/2013 | Keith Malone   | Patricia Ochoa, deputy policy director for the Coalition for Clean Air   |
| Community meeting | 12/22/2013 | Keith Malone   | State Senator Carol Liu, Vickere Murphy, aide to Senator Liu   |

## Website and social media metrics

| www.cafcp.org Q4, 2013   |   |
|--|---|
| <b>Number of visits</b>  | 17,723  |
| <b>Average time spent on site</b>                                | 1:53  |
| <b>Most visited pages</b>  | Station map<br>Home page<br>FAQ<br>10 Facts About H2<br>Blog  |
| <b>Most searched keywords on Google to land on CaFCP website</b> | where does hydrogen come from<br>california fuel cell partnership<br>facts about hydrogen<br>hydrogen facts<br>interesting facts about hydrogen |
| <b>Most searched keywords on cafcfp.org search engine</b>        | cost<br>hydrogen<br>careers<br>biodiesel<br>ethanol   |
| <b>Most referred websites</b>                                    | google.com<br>newsletter<br>t.co<br>yahoo<br>bing   |

| FACEBOOK Q4, 2013      |  |
|------------------------|--|
| <b>New likes</b>       | 76   |
| <b>Lifetime likes</b>  | 2,399  |
| <b>Post Views*</b>     | 28,673   |
| <b>Top Page Posts*</b> | Eight-state MOU... (16,056)<br>Did you make it out... (6460)<br>Sperling described... (357)<br>Excerpt: Like the... (319)<br>Don't want to read... (276) |
| TWITTER Q3, 2013       |  |
| <b>Followers</b>       | 1313   |
| <b>Tweets</b>          | 7553   |

# Station Implementation

CaFCP will monitor, coordinate and execute the activities to deploy stations for commercialization as outlined in the roadmap document.

## Infrastructure Status

At the end of Q4 2013, California had nine public hydrogen stations open and 19 in some stage of development. The open stations had technical challenges throughout the year and two are still closed at the writing of this report (Torrance and Newport Beach). Status of the 28 open and funded stations is:

| #  | Station Location      | Operational Date            | Current Status   | Notes  |
|----|-----------------------|-----------------------------|--|--|
| 1  | Burbank               | 2006                        | 350 bar – Open<br>700 bar – Closed for repair until week of Jan. 20. | 700 bar dispenser expected back online week of Jan. 20.  |
| 2  | Emeryville            | 2012                        | Open   |  |
| 3  | Fountain Valley       | 2011                        | Closed for repair  | Defective circuit breaker on OCSD fuel cell prohibiting H2 production being fixed<br>Expect refill of H2 storage tubes to begin Jan. 10.<br>Station expected back to full pressure by Jan. 13<br>3-year operational requirement ends mid-2014 – looking at options to extend |
| 4  | Harbor City           | 2013                        | Open   |  |
| 5  | Irvine - UCI          | 2007 (3 <sup>rd</sup> gen.) | Open   | Will be upgraded in 2014   |
| 6  | Newport Beach         | 2012                        | Closed for repair  | H2 compressor being repaired.<br>Expected back online in early January 2014  |
| 7  | Thousand Palms        | 2006                        | Open   |  |
| 8  | Torrance              | 2011                        | Open   |  |
| 9  | West LA               | 2008                        | Open   |  |
| 10 | Beverly Hills         | Q4 2014                     | Design/Permitting  | Beverly Blvd.<br>Pre-appl. mtg Jan. 2014   |
| 11 | Diamond Bar (upgrade) | Q3 2014                     | Design/Permitting  | Permits submitted Nov. 13<br>Construction est. done by July 1, 2014<br>Commissioning after July 2014   |

|    |                      |                |                   |   |
|----|----------------------|----------------|-------------------|---|
| 12 | Hawthorne            | Q4 2014        | Contracting       | Possible site change  |
| 13 | Hermosa Beach        | Q4 2014        | Contracting       | Possible site change  |
| 14 | Irvine (UCI upgrade) | Q3 2014        | Design/Permitting | Q2 2014: construction   |
| 15 | Irvine North         | Q4 2014        | Contracting       | New site chosen by APCI – not public yet<br>Construction: est. Sep. 2014          |
| 16 | San Juan Capistrano  | Sep. 2014      | Design/Permitting | Ready to submit permit application in Q1 2014<br>Public hearing Spring 2014       |
| 17 | Los Angeles          | May 2014       | Commissioning     | CSULA   |
| 18 | Santa Monica         | Q3 2014        | Design/Permitting | Cloverfield location.<br>Permit filing – Jan. 2014<br>Construction – est. Q2 2014 |
| 19 | West LA 2            | Sep. 2014      | Design/Permitting | Santa Monica Blvd.<br>Construction: Q2 2014.<br>Commissioning: Aug. 2014          |
| 20 | West Sacramento      | Sep. 2014      | Contracting       | Permit package est. complete Jan. 2014  |
| 21 | Westwood             | unknown        | Funding           | Project dormant   |
| 22 | Anaheim              | Oct. 2014      | Design/Permitting |   |
| 23 | Chino                | Oct. 2014      | Design/Permitting | Planning Commission approved project Jan. 2014. Permitted by May 2014 (est.)      |
| 24 | Cupertino            | Q1 2015        | Contracting       |   |
| 25 | Foster City          | Q1 2015        | Contracting       |   |
| 26 | Mission Viejo        | Oct. 2014      | Design/Permitting | Equipment ordered, MOU with station owner complete, permit appl in Jan. 2014      |
| 27 | Mountain View        | Q1 2015        | Contracting       |   |
| 28 | Woodland Hills (LA)  | Q4 2014 (est.) | Design/Permitting | Permit appl. to City of LA in Jan. 2014   |

## 2013 Funding

In November, South Coast AQMD issued an RFP for upgrading existing hydrogen fueling infrastructure and conducting site evaluations for hydrogen station certification. SCAQMD is making \$6.6 million available through this grant, with most of it designated for station upgrades to eligible stations. Proposals were due on December 4, 2013 with awards anticipated in January, 2014.

In December, CEC issued a Program Opportunity Notice (PON) for \$29.9 million in co-funding for hydrogen stations in California. The solicitation has five separate funding categories:

1. O&M Support Grants
2. 100% Renewable Hydrogen Refueling Station
3. Mobile Refueler
4. Station Location Area
5. Unassigned Station

Applications for funding are due on February 14 and anticipated Notice of Proposed Award posting date is March 28, 2014. The PON includes, for the first time, an incentive for opening stations on or before October 31, 2015 and a penalty for opening after October 31, 2016.

## **HVAS**

The Hydrogen Vehicle Authorization System (HVAS) project was initiated in 2009, and assigned by the SAE Fuel Cell Interface Working Group to CaFCP to explore as a concept. The concept uses HVAS to identify and allow a hydrogen vehicle as an OEM-qualified vehicle to fuel at a station, thereby improving fueling safety by using an identification system that is integrated in the vehicle. The 2013 HVAS project goal was to present an optimized and rugged HVAS antenna design to the project team.

In 2013, under CaFCP management, we achieved this goal when Thinkify (RFID company) completed their contracted work on the HVAS antenna design for the 70 MPa WEH nozzle and presented the results to project team. As a final step, Thinkify handed off the developed antenna to the nozzle manufacturer WEH for integration in their commercially available nozzle. Please find more details about the HVAS project at [www.cafcp.org/hvas](http://www.cafcp.org/hvas).

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**CaFCP Quarterly Update**  
January-March 2014

**Background**

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- Support cost reduction through incentives and targeted RD&D projects
- Continue research, development and demonstration of advanced concepts in renewable and other low-carbon hydrogen.
- Provide education and outreach to the public and community stakeholders on the role of FCVs and hydrogen in the evolution to electric drive.

CaFCP and members' activities fall within three main strategic directions:

1. Support hydrogen station and vehicle deployment to enable commercial market launch in 2015 timeframe
2. Show feasibility and a clear value proposition to consumers, businesses and communities
3. Focus existing resources, engage new groups and pursue innovative concepts to overcome early market challenges

To successfully implement the vision, CaFCP activities must focus on technical, communications and business operations/strategies that require collaboration and coordination. A detailed CaFCP implementation plan is available as a separate document.

**2014 Program Plan  
Q1 accomplishments**

|   |  |
|---|--|
| <p><b>1. Facilitate member collaboration</b></p> <p>The California Fuel Cell Partnership facilitates members and stakeholder coordination on projects and activities of common interest in order to leverage resources, communicate progress, bring together new players, and overcome challenges more quickly than could be accomplished by individual action.</p> |  |
| Heavy duty Fuel Cell Program  | <ul style="list-style-type: none"> <li>• CALSTART "FCEB US Transit Study" surveys sent to US transit agencies</li> <li>• Draft strategy for heavy duty vehicles presented at March WG</li> </ul> |
| Strategic Initiatives   | <ul style="list-style-type: none"> <li>• Participated in two H2USA meetings</li> </ul>   |
| <p><b>2. Support Station implementation</b></p> <p>CaFCP will monitor, coordinate and execute the activities to deploy stations for commercialization as outlined in the roadmap document.</p>  |  |
| National ER Program   | <ul style="list-style-type: none"> <li>• Working with NFPA and DOE on updates to online training program</li> </ul>  |
| Station Performance Codes & Standards   | <ul style="list-style-type: none"> <li>• J2601 went through re-ballot and is being prepared for final publication</li> </ul>   |
| Fuel retailers  | <ul style="list-style-type: none"> <li>• Attended WPMA meeting in Las Vegas, planning for SIGMA ride &amp; drive</li> </ul>  |
| Station implementation  | <ul style="list-style-type: none"> <li>• Participated in DOE/NREL Workshop on H2 Transmission and Generation</li> </ul>  |
| Workforce development   | <ul style="list-style-type: none"> <li>• Participated in Firehouse World</li> <li>• Conducted workshop in Sacramento on Permitting and H2 Fueling Practices</li> </ul>                           |

**3. Implement hydrogen readiness**

CaFCP will focus outreach in early market communities with a goal of easing station implementation, including community acceptance and accessibility of funding. The ultimate goal is to increase awareness and understanding of hydrogen and fuel cells, especially regarding progress and next steps in California, with government officials in Sacramento and Washington, D.C.

| Activity                                      | Description         | Picture  |
|---|---------------------|--|
| Firehouse World, Feb 18-20                    | Exhibitor           |    |
| National Fuel Cell Symposium, Feb 27          | Presenter           |  |
| South Bay Cities COG General Assembly, Feb 28 | Sponsor             |   |
| Chino Corn Feed Run, March 22                 | Exhibitor w. SCAQMD |  |

|   |           |  |
|---|-----------|--|
| Climatepalooza,<br>March 28                       | Exhibitor |  |
| Clean Air<br>Partnership<br>Luncheon, March<br>28 | Presenter |  |

### Legislative Outreach

| Title            | Meeting Date | Meeting With  |
|------------------|--------------|---|
| District Meeting | 1/7/2014     | Cine Ivery, chief of staff and Samahndi Cunningham, office of State Senator Rod Wright (D-Inglewood)  |
| District Meeting | 1/8/2014     | Briefing with Rachel Zaiden, casework manager and Lisa Pinto, district director, office of Congressman Henry Waxman (D-Los Angeles). Ride...        |
| District Meeting | 1/9/2014     | Carlos Urquiza, field representative, office of Congresswoman Loretta Sanchez (D-Garden Grove). Showed car to Gus Castellanos, district director    |
| District Meeting | 1/10/2014    | Assembly Member Richard Bloom (D-Santa Monica) and Andrea Kune, district director.  |
| District Meeting | 1/13/2014    | Ben Cardenas, district director, office of Congresswoman Grace Napolitano (D-El Monte)  |
| District Meeting | 1/14/2014    | Rafel Elizalde, senior field representative to Congressman Mark Takano (D-Riverside). Ride and drive included Marisela Magana.                      |
| District Meeting | 1/15/2014    | Elison Swanson, district director, and Eric Boyd, deputy district director to Congresswoman Janice Hahn (D-San Pedro). Ride and drive with Eric.... |
| District Meeting | 1/15/2014    | Hamilton Cloud, special projects director to Congresswoman Maxine Waters (D-South Los Angeles)  |
| District Meeting | 1/23/2014    | Jesus Diaz, field representative for State Senator Ricardo Lara (D-Long Beach)  |
| Capitol Meeting  | 1/27/2014    | Henry Stern, office of State Senator Fran Pavley (D-Woodland Hills)   |
| Capitol meeting  | 1/28/2014    | Ryan Hanretty, office of Assembly Member Travis Allen (R-Huntington Beach). Briefly met Emanuel Patrascu, district director.                        |
| Capitol meeting  | 1/28/2014    | Lawrence Cooper, legislative analyst for State Senator Ricardo Lara (D-Long Beach)  |

|                   |           |   |
|-------------------|-----------|---|
| Capitol meeting   | 1/28/2014 | Khaim Morton, legislative director for Assemblymember Sebastian Ridley-Thomas   |
| Capitol meeting   | 1/28/2014 | Juan Torres, chief of staff, and Roy Sianez, legislative director for State Senator Norma Torres (D-Chino)                                  |
| Capitol meeting   | 1/28/2014 | Matthew Powers, special assistant to Assembly Member Matt Dababneh (D-Van Nuys) and Assembly Member Dababneh                                |
| NGO meeting       | 1/31/2014 | Anup Bandivadekar and Ben Sharpe with the International Center for Clean Transportation (ICCT)  |
| NGO meeting       | 2/7/2014  | Bill Magavern, public policy director for the Coalition for Clean Air   |
| NGO meeting       | 2/13/2014 | Jonathan Parfrey, Climate Resolve (Los Angeles)   |
| Capitol meeting   | 2/24/2014 | Assembly Member Anthony Rendon (D-South Gate) and Alf Brandt, legislative director  |
| Capitol meeting   | 2/24/2014 | Nidia Bautista, legislative aide to State Senator Kevin De Leon (D-Echo Park)   |
| District Meeting  | 2/26/2014 | Mike Auilera, district representative to Congressman Adam Schiff (D-Burbank) and Connor L, intern   |
| NGO meeting       | 3/17/2014 | Ryan Young, legal counsel and Roman Partida, legal fellow, The Greenlining Institute, and Max Baumhefner, Natural Resources Defense Counsel |
| District meeting  | 3/19/2014 | Dan Bernal, chief of staff, Congresswoman Nancy Pelosi  |
| Capitol meeting   | 3/20/2014 | Shanna Ezzell, legislative aide to Assembly Member Freddie Rodriguez (D-Chino)  |
| Capitol meeting   | 3/20/2014 | Kelsy Castillo, legislative consultant to Assembly Ian Calderon (D-Industry)  |
| Capitol meeting   | 3/20/2014 | Katerina Robinson, senior legislative aide to Assembly Member Mike Gatto (D-Burbank)  |
| Community meeting | 3/21/2014 | Steve Shea, office of Senate President Pro Tem Darrell Steinberg  |
| District meeting  | 3/27/2014 | John Alford, aide to Congressman Brad Sherman (D-Sherman Oaks)  |
| District meeting  | 3/27/2014 | Becky Chang, district director, four other district staff and interns to Congresswoman Judy Chu (D-Pasadena)                                |

### Community Relations Outreach

|  | Title   | Meeting Date |
|--|---|--------------|
|  | LA Region, League of California Cities General Membership Meeting                   | 1/2/2014     |
|  | LAEDC E-Mobility Task Force   | 1/9/2014     |
|  | Meeting with district staff for LA City Councilmember Bob Blumenfield (CD 3)        | 1/22/2014    |
|  | Meeting with Rick Teebay, Office of Sustainability, LA County                       | 1/22/2014    |
|  | Conrado Terrazas, district director for Los Angeles City Council Member Gil Cedillo | 1/24/2014    |
|  | US-Vehicle Incentive Program Kick-off Meeting                                       | 1/28/2014    |
|  | LAEDC Economic Forecast   | 2/19/2014    |
|  | Meeting with Los Angeles City Council Member Felipe Fuentes                         | 2/22/2014    |
|  | Presentation to San Juan Capistrano City Council                                    | 3/4/2014     |

## Website and social media metrics

| <b>PUBLIC WEBSITE</b>  | <b>Jan-14</b>   | <b>Feb-14</b>   | <b>Mar-14</b>  |
|--|---|---|--|
| <b>Number of unique visits</b>                                   | 9,518   | 7,524   | 8,210  |
| <b>Visits (Cpanel)</b>   | 55,670  | 50,348  | 58,442   |
| <b>Average time spent on site</b>                                | 2:01  | 1:47  | 1:50   |
| <b>Most visited pages</b>  | Station map<br>Home page<br>FAQ<br>10 facts about hydrogen<br>2013 FC Progress Update<br>Infographic                          | Station map<br>Home page<br>FAQ<br>10 facts about hydrogen<br>A California Road Map   | Station map<br>Home page<br>FAQ<br>10 facts about hydrogen<br>Members  |
| <b>Most searched keywords on Google to land on CaFCP website</b> | where does hydrogen come from<br>california fuel cell partnership<br>facts about hydrogen<br>h2usa<br>where is hydrogen found | where does hydrogen come from<br>california fuel cell partnership<br>difference between fuel cell and battery<br>hydrogen facts<br>facts about hydrogen | where does hydrogen come from<br>california fuel cell partnership<br>cafcp.org<br>hydrogen facts<br>difference between fuel cell and battery |
| <b>Most searched keywords on cafcp.org search engine</b>         | Hydrogenics<br>biodiesel<br>cost<br>cost of hydrogen<br>electric  | Hydrogenics<br>1/3<br>ab 8<br>EIN<br>Ford   | ab 8<br>DOE<br>hydrogen highway<br>jobs<br>plug power  |
| <b>Most referred websites</b>                                    | google.com<br>stumbleupon.com<br>wired.com<br>teslamotors.com<br>t.co   | google.com<br>stumbleupon.com<br>arb.ca.gov<br>bing<br>facebook.com   | google.com<br>bing<br>arb.ca.gov<br>stocktwits.com<br>t.co   |
| <b>FACEBOOK</b>  |   |   |  |
| <b>New likes</b>   | 38  | 35  | 27   |
| <b>Lifetime likes</b>  | 2,428   | 2,448   | 2,469  |
| <b>Lifetime Post Total Reach</b>                                 | 19,855  | 3,565   | 21,917   |
| <b>Lifetime Engaged Users</b>                                    | 558   | 356   | 406  |
| <b>TWITTER</b>   |   |   |  |
| <b>Total Followers</b>   | 1390  | 1458  | 1512   |
| <b>Total Lifetime Tweets</b>                                     | 7786  | 7916  | 8213   |
| <b>Link Clicks</b>   | 305   | 257   | 298  |