

BOARD MEETING DATE: February 3, 2017

AGENDA NO. 5

PROPOSAL: Renew SCAQMD's Membership in CaFCP for Calendar Year 2017, Provide Office Space for CaFCP, and Receive and File California Fuel Cell Partnership Executive Board Agenda and Quarterly Updates 

SYNOPSIS: The SCAQMD has been a member of the California Fuel Cell Partnership (CaFCP) since early 2000. This action is to renew SCAQMD's membership in the CaFCP in an amount not to exceed \$70,000 for Calendar Year 2017 and cofund 50 percent of the CaFCP Regional Coordinator position located at SCAQMD in an amount not to exceed \$50,000 from the Clean Fuels Fund (31). Further actions are to continue providing in-kind office space and utilities for CaFCP employees in 2017 in an effort to educate the public and increase CaFCP's presence in Southern California. Finally, this action is to receive and file the CaFCP Executive Board Meeting Agenda for October 18, 2016, and Quarterly Updates beginning April and July 2016.

COMMITTEE: Technology, January 20, 2017; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the Chairman to execute a contract in an amount not to exceed \$120,000 from the Clean Fuels Fund (31) with Bevilaqua-Knight, Inc., acting on behalf of the Partnership, to
 - a. Continue SCAQMD's membership for calendar year 2017 for a total amount not to exceed \$70,000 for common expenses of the CaFCP;
 - b. Continue support for a Regional Coordinator located at SCAQMD for a total amount not to exceed \$50,000; and
 - c. Continue to provide office space and utilities on a month-to-month basis for up to four cubicles for CaFCP staff and storage at SCAQMD headquarters.
2. Receive and file the attached Executive Board Agenda and Quarterly Updates.

Wayne Nastri
Executive Officer

Background

The California Fuel Cell Partnership (CaFCP) was initiated in 1999 as a means to accelerate response to CARB's ZEV regulations. Because of the alignment of the SCAQMD and CaFCP goals for accelerated fuel cell vehicle commercialization, the SCAQMD Board accepted the CaFCP's formal invitation to join as a full member in March 2000. In January 2012, CARB approved Advanced Clean Car regulations, which harmonize California requirements with federal requirements from 2017–2025 and incorporate GHG emission reductions. The AQMP and the Technology Advancement Office Clean Fuels Program 2016 Plan Update have identified fuel cells for on- and off-road applications as a core technology for attaining and maintaining cleaner air quality.

Initially, the CaFCP Program focused on development of vehicle, infrastructure and outreach plans for future projects. The CaFCP was involved in the demonstration of cars and buses using gaseous and liquid hydrogen and methanol through 2003. A limited number of fleet customer placements began in 2002. In addition, the bus transit partners operated several zero emission fuel cell buses. The CaFCP and members demonstrated several generations of fuel cell cars and buses using gaseous hydrogen fuel at 350 bar and 700 bar pressures. Several automakers started retail placement of fuel cell vehicles near hydrogen stations in early market communities. The CaFCP with member support developed a "Roadmap" for the introduction of fuel cell passenger vehicles with sufficient hydrogen fueling stations in California, a "Bus Roadmap", and most recently, a Medium- & Heavy-Duty Fuel Cell Electric Vehicle Action Plan.

With the commitment of funding under AB 8 (chaptered in 2013) to develop and operate approximately 100 hydrogen retail fueling stations in California through 2023, and the collaboration of California with other states to support ZEVs, automakers are continuing to announce market launches. Some automakers are combining efforts to share intellectual property, build component supply chains and leverage resources - Daimler with Ford and Nissan, Toyota with BMW, and General Motors with Honda. Germany, Japan and Korea have also committed funding to build more hydrogen stations.

At the request of SCAQMD, the CaFCP has expanded its presence in Southern California due to the increased deployment of vehicles, the largest number of fueling stations and the great air quality need in this region. A CaFCP Regional Coordinator based in our region supports member activities and outreach and an Infrastructure Specialist facilitates hydrogen station development.

Major accomplishments during Calendar Year 2016 include:

- The continued retail production and deployment of fuel cell cars and buses in California. The 2016 Toyota Mirai was the first fuel cell vehicle offered for sale in California. Both the Toyota Mirai and Hyundai Tucson fuel cell vehicles can

be leased through selected dealerships in California, and Honda is producing the 2017 Clarity FCV and delivering them through 12 dealerships in California;

- Development and release of the Medium- and Heavy-Duty Fuel Cell Electric Vehicle Action Plan, focusing on early markets for medium-duty delivery trucks and heavy-duty drayage trucks; and
- Increased presence of the CaFCP in Southern California through coordination of ombudsman activities in early market communities with Regional Coordinator & Infrastructure Specialist staff based at SCAQMD.

The CaFCP has introduced new membership levels to increase membership and reduce the cost of membership. Each CaFCP Executive Member has a representative on the Executive Board and pays \$70,000. Current Executive Members include:

- Seven auto manufacturers (General Motors, Toyota, Daimler, Honda, Hyundai, Nissan and Volkswagen);
- Two industry stakeholders (AFCC and EIN); and
- Six government agencies (SCAQMD, Bay Area AQMD, CARB, California Energy Commission, U.S. DOE and U.S. EPA).

There are an additional 25 Full and Associate Members contributing a combined total of \$103,000, with commensurate benefits and voting rights. Like SCAQMD, CARB and U.S. DOE also provide additional contributions for specified uses.

The CaFCP retains Bevilacqua-Knight, Inc., (BK_i) to provide the needed support for the common tasks agreed to by the CaFCP, and each member contracts directly with BK_i acting on behalf of the CaFCP.

Proposal

The CaFCP completed the fourth phase “Preparing for Market Launch” through 2016 and is transitioning to an ongoing commercial vision. The fee of \$70,000 per Executive Member supports the activities planned for 2017, with additional membership levels designed to encourage participation with commensurate benefits. The operating budget for 2017 is \$1,642,446, assuming that membership at the revised levels will continue to grow. The 2016 Vice-Chair, Dr. Clark E. Parker, Sr., (SCAQMD), is the Chair for 2017, with Christian Mohrdieck (Daimler), now serving as Vice-Chair. The majority of fuel cell vehicle deployment growth is anticipated to be within the South Coast Air Basin over the next couple of years, enhanced by the development of hydrogen stations in more early markets in California and beginning in several Northeast states.

The proposed CaFCP activities for 2017 are to:

1. Develop the necessary infrastructure and processes to support early commercial launch and expanded vehicle rollout.
 - a. Support quicker construction and commissioning of current California hydrogen stations by participating in code, standard and regulation processes,

- facilitating station commissioning processes, and documenting lessons learned.
 - b. Define necessary metrics of progress and identify network technology challenges and information gaps.
 - c. Support and collaborate on consensus plan for first 100 hydrogen stations.
 - d. Identify new concepts and approaches to activate exponential long-term market growth and encourage new investment opportunities; and
 - e. Expand CaFCP Station Operational Status System (SOSS) to include all new California hydrogen stations and implement improvements to expand customer value and use.
- 2. Share and synchronize experience by providing forums and opportunities for members to advance group collaboration and progress within CaFCP and among stakeholders, including national coordination.
 - a. Build and expand trust among members through open communication and forums; and
 - b. Communicate with stakeholders nationally and internationally to share lessons learned and amplify market launch efforts.
- 3. Reach target markets and communities to educate, inform and promote hydrogen and FCEVs and accelerate commercial adoption.
 - a. Communicate the benefits of FCEVs and hydrogen through outreach materials, events, social media and media relations.
 - b. Provide education and outreach to state and local governments, and non-governmental organizations.
 - c. Regularly develop new content to expand reach and CaFCP value.
 - d. Highlight and support new station openings; and
 - e. Continue development of CaFCP's station map and network progress reports.
- 4. Implement CaFCP restructuring to be more inclusive and capable of meeting the expanding commercial market needs and opportunities, broadening the member base, and being the voice of all stakeholder participants. Establish a new commercial vision for CaFCP.
 - a. Implement new structure, expand membership and develop new commercial vision.
 - b. Support deployment of fuel cell bus Centers of Excellence and the Bus Team.
 - c. Implement the Medium- and Heavy-Duty Fuel Cell Electric Vehicle Action Plan and establish new market sector workgroup(s) to increase awareness and participation around fuel cells.

This action is to execute a contract with BKi to renew SCAQMD's membership in the CaFCP for Calendar Year 2017 and continue to cofund the CaFCP Regional Coordinator position located at SCAQMD and reporting to the CaFCP Executive Director, as well as provide in-kind office space and utilities for up to four CaFCP employees in Calendar Year 2017. This action is also to receive and file the CaFCP

Executive Board Meeting Agenda and Quarterly Updates for April-June and July-September 2016.

Sole Source Justification

Section VIII.B.2. of the Procurement Policy and Procedure identifies provisions under which a sole source award may be justified. This request for a sole source award is made under provision B.2.d.: Other circumstances exist which in the determination of the Executive Officer require such waiver in the best interest of SCAQMD.

Specifically, these circumstances are B.2.d.(1): Projects involving cost-sharing by multiple sponsors. The major sponsors contributing financially to the CaFCP include seven automakers, two industry stakeholders and six government agencies.

Benefits to SCAQMD

Membership in the CaFCP is consistent with the *Technology Advancement Office Clean Fuels 2016 Plan Update* under “Hydrogen and Mobile Fuel Cell Technologies & Infrastructure” and “Assessment and Technical Support of Advanced Technologies and Information Dissemination.” SCAQMD supports the development, demonstration and commercialization of zero and near-zero emission vehicles and strives to educate public and private organizations regarding the benefits and characteristics of these vehicles.

Resource Impacts

SCAQMD’s support of the CaFCP for Calendar Year 2017, provided through a contract with BKi, shall not exceed \$120,000 from the Clean Fuels Fund (31), comprised of up to \$70,000 for common project costs to cover administrative, technical and program management costs and half the cost up to \$50,000 for the Regional Coordinator position located at SCAQMD Headquarters. SCAQMD is also providing additional in-kind cost-share of office space for CaFCP staff and utilities at SCAQMD headquarters, representing annual foregone rent of approximately \$10,440 for the four cubicles.

Sufficient funds are available from the Clean Fuels Fund, established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

Attachments

California Fuel Cell Partnership Executive Board Meeting Agenda
California Fuel Cell Partnership Quarterly Update (April - June 2016)
California Fuel Cell Partnership Quarterly Update (July - September 2016)

CaFCP Public Forum and Executive Board Meeting
“Influencing Factors and Changing Landscapes”
October 18, 2016

California Energy Commission
1516 9th St, Sacramento, CA 95814
Arthur Rosenfeld Room (formerly Hearing Room A)

30 minutes

9:00am–9:30am
CaFCP Chair, J Ward
CaFCP ED, B Elrick

1. Welcome and opening remarks

California has been the national leader in deploying alternative fuels and vehicles, with tangible commercial progress for hydrogen fuel cell vehicles now visible. An update on the status and future considerations for California deployment of stations, passenger vehicles, transit buses and trucks will set the stage for the day’s discussions.

60 minutes

9:30am–10:30am
Moderator: *GO-Biz, T Eckerele*
CARB, A Bevan
CEC, P Cazal
FirstElement, T Brown
Toyota, J Ward

2. Early Commercialization—Reaching the Goal Line

The 2012 CaFCP Road Map outlined the need for an early station network. Government and industry worked together to help get the network started. Are we on track to reach the goal line for early commercialization? What do our industry and government leaders see as the major factors that will shape the next few years, and what changes should we make to help accelerate progress?

30 minutes

10:30am–11:00am

3. Break

60 minutes

11:00am–12:00pm
Moderator: *CSE, B Williams*
FCEV driver, M Johannessen
FCEV dealer, J Cunningham

4. Influencing Factors—Market Acceptance

In April 2015, the first FCEV customers addressed the Executive Board. Since then, more vehicles have become available and more than 20 retail hydrogen stations have opened. What have we learned from this first wave of customers? What must we do to give the first thousand customers a positive experience? The next hundred thousand?

75 minutes

12:00pm–1:15pm

5. Lunch *(on own)*

60 minutes

1:15pm–2:15pm
Moderator: *UC Davis, J Ogden*
Honda/H2USA, S Ellis

6. Signals of Success—How to Achieve Market Growth

With initial success and a line of sight towards establishing the early network coverage objective, it’s time for CaFCP to address the transition to the next stage of the market. What market indicators and signals do government and industry need to enable greater investment and growth? Should CaFCP and its members consider new approaches, mechanisms and processes? Who else needs to be part of these discussions? What factors will help shape and lead to a common vision for hydrogen and FCEVs beyond 2020?

60 minutes

2:15pm–3:15pm

*Moderator: EPA, A Zimpfer
SCAQMD, N Berry
New Flyer, D Warren
BAE Systems, B Devine*

7. Establishing Medium- and Heavy-Duty Benchmarks

CaFCP has released the MHD Action Plan that contains priority actions needed to accelerate early FCET demonstrations. Recent funding rounds will appreciably expand California FCEB deployments. Where are these markets now, and what is needed to quicken commercialization? How are member and non-member companies responding, and what is still needed? What is the potential for leveraging progress across market applications, and why should the the passenger vehicle market care?

30 minutes

3:15pm–3:45 pm

8. Break**15 minutes**

3:45pm–4:00pm

*Energy Commission,
Commissioner Scott*

9. What Next?–Actions and Takeaways

Highlights and summary of the day’s discussions – identification of specific strategies, actions and responsibilities for increased collaboration, coordination and progress going forward. What will CaFCP and stakeholders commit to that expands commercialization progress?

60 minutes

4:00pm–5:00pm

CaFCP, B Elrick

10. Executive Board Business Meeting

- Consent agenda items
 - Decisions and assignments
 - Liquid hydrogen project
 - Operating protocols
 - 2017 Vice Chair
 - Proposed new members
 - 2017 program plan and budget
 - Public comment period*
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15 minutes

5:00–5:15pm

Chair, J Ward

11. Meeting wrap up

**No-host bar reception following meeting at
WAL Public Market located at 1104 R Street in Sacramento, CA 95811**

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.

This meeting is open to the public and will not be available by phone. This facility is accessible to persons with disabilities. Deadline for requesting ADA modification is October 7, 2014. Meeting materials will be posted at www.caftp.org.

Agenda items may be taken out of order and times may vary from those listed in the agenda. The board may choose to limit public comment at the chair’s discretion.

This facility is accessible by public transit. For transit information, call (909) 839-7000 for Sacramento Regional Transit (916) 321-BUSS (2877), website: <http://www.sactrt.com/schedulesfares.stm>. And California Transit link: <http://www.apta.com/resources/links/unitedstates/Pages/CaliforniaTransitLinks.aspx>.

CaFCP Quarterly Update

April - June 2016

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 January to March 2016.

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. 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 convening, collaborating and communicating.

1. Develop Infrastructure	
<i>Develop the necessary infrastructure and processes to support early commercial launch and expanded vehicle rollout.</i>	
Support the construction and commissioning of current California hydrogen stations by participating in codes, standards and regulation processes; facilitating station commissioning processes; and supporting station openings.	<ul style="list-style-type: none"> • Station OPEN Process guideline document being revised • CSA HGV 4.3 Test Methods for Hydrogen Fueling Parameter Evaluation at re- ballot with Auto Technical Committee (ended 6/24) • SAE J2719/1 Application Guideline for Use of Hydrogen Quality Specification went to ballot and passed, received comments that are being addressed, goes out for 14 day affirmation ballot • SAE J2601 Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles being finalized for affirmation ballot, to include the MC Formula method-adding ramp rates for H35 • California Office of the State Fire Marshal will review plans for CEC-funded hydrogen refueling truck • HyStEP completed device being requested for expanded scope • At 20 retail hydrogen fueling stations • ISO 19880-1 Technical Specification (TS) is published – working towards an International Standard (IS) • Peer reviewed 15 US DOE funded H2 and FCEV projects at US DOE’s Annual Merit Review • Organized and hosted a professionally facilitated industry workshop on H2 Dispensers • Hosted a H2 session at the Fuels Institute annual meeting in San Francisco April 27-29 • Supported and participated in Fuels Institute meeting in Washington DC
Prepare for future funding through outreach and education with fueling retailers and hydrogen industry.	<ul style="list-style-type: none"> • Engaged in discussions with fuel retailers interested in incorporating H2 stations into their operations and provided connections to station developers.
Work with stakeholders to identify potential future station locations.	<ul style="list-style-type: none"> • Identified two Bay Area venue options for the fall 2016 Financial Forum • Facilitated station developer discussions with Harbor City station owner in effort to site existing funded stations to the location.
Develop Road Map 2.0 with strategies for a sustainable network in California.	<ul style="list-style-type: none"> • Discussion at the Working Group about beyond 100 stations modeling

2. Share and Synchronize Experience	
<i>Provide forums and opportunities for members to advance group collaboration and progress within CaFCP and among stakeholders.</i>	
Build and expand trust among members through open communication and forums.	<ul style="list-style-type: none"> • CaFCP Public Forum & Executive Board Meeting on April 19 • CaFCP Working Group meeting held June 22-23 • Several OEM group meetings convened to finalize station open process guideline document, gain consensus on Harbor City strategy recommendations, station naming convention, SOSS reliability data, communication of station outages to customers and station soft opening process. • Station developer meeting held to gain consensus on soft opening process, SOSS reliability data, station naming convention and communication of station outages to customers.
Communicate with stakeholders nationally and internationally to share learnings and amplify market launch efforts.	<ul style="list-style-type: none"> • Panel speaker at NESCAUM meeting at New York Auto Show • Panel speaker at SAE Government/Industry Conference in Washington DC • Participant in the 4th International Workshop on H2 Infrastructure and Transportation May 24-25
3. Reach Target Audiences	
<i>Reach target markets and communities to educate, inform and promote hydrogen and FCEVs.</i>	
Communicate the benefits of FCEVs and hydrogen through outreach materials, events, social media and media relations.	<ul style="list-style-type: none"> • Participated in 16 outreach events • Presented quarterly hydrogen station update webinar • Recorded NACS podcast interview on H2/FCEVs with Bob Wimmer of Toyota • Coordinated SoCal SD meetings and station tour for JX Nippon • Exhibited at WPMA Convention
Provide education and outreach to state and local governments, and NGOs.	<ul style="list-style-type: none"> • At the request of State Senator Hertzberg's office, briefed Galpin Honda on the status of the hydrogen fueling network and the likelihood of future San Fernando Valley stations. • Among other information, emphasized to staff for Council Member Paul Koretz (West Los Angeles) hydrogen is on a renewable pathway like electricity.
Conduct community training for AHJs and emergency responders	<ul style="list-style-type: none"> • Conducted training for City of Riverside FD- 145 first responders; with HAMMER flame prop demonstration • Spoke with Yolo County on permitting of a

	stationary fuel cell installation
Continue development of CaFCP's station map and SOSS	<ul style="list-style-type: none"> • 15 retail stations on SOSS • Added a comment field to m.caftp.org • Continuing to support OEMs and SDs in implementation • Added reporting capabilities to calculate online/offline percentages
4. Expand Markets	
<i>Restructure CaFCP to be more inclusive and capable of meeting the expanding commercial market needs and opportunities, broadening the member base, and being the voice of all stakeholder participants</i>	
Establish new structure and expand membership.	<ul style="list-style-type: none"> • Drafted new legal documents • Last part of reorganization was presented to Executive Board in April
Support deployment of fuel cell bus Centers of Excellence and the Bus Team.	<ul style="list-style-type: none"> • Participated in CARB Advanced Clean Transit meetings to provide FCEB perspective • Met with US DOT FTA interim administrator and staff to provide an update on FCEB progress • Participating in ZEB Coalition initiative • Participating in background meetings with Sierra Club ZEB coalition
Publish and implement the Medium- and Heavy-Duty Road Map document.	<ul style="list-style-type: none"> • Action Plan presented to Executive Board in April • Participated in the West Coast Collaborative Partnership meeting at the Tacoma Convention Center to assess FCET interest
Support activities outside of California, as directed by members.	

Q2 Outreach Events

Conferences : 4

Forums: 4

Station tours: 2 (Santa Barbara Ribbon Cutting and Mary's Valley Rally)

Community Events: 14

Outreach #: 2,242

Webinars: n/a

3. COMMUNICATE

Communicate, educate, inform and promote H2 & FCEVs benefits and opportunities to key outside stakeholders and general public for increased and continued support. Become readily recognized as the face of the industry for trustworthy information and assist.

Activity	Description	Picture and comments
American Lung Association, Inland Empire, April 13	Speaker, Keith Malone	
Foothill High School, AP Science Fair, Sacramento, April 14	Static and presentation, Juan Contreras	
Santa Barbara Earth Day Event, Santa Barbara, April 15-16	Static and test drive, Keith Malone and Chris White	https://www.flickr.com/photos/cafcpr/albums/72157665139312494
Dept. of General Services Earth Fair, Sacramento, April 19	Static display, Juan Contreras	https://www.flickr.com/photos/cafcpr/albums/72157667294832712
Cal EPA/CARB Earth Day Event, Sacramento, April 20	Static display, Ben Xiong and Lun So	https://www.flickr.com/photos/cafcpr/albums/72157667295790552
Green California Summit, Sacramento, April 20	Speaker, Ben Xiong	
Santa Monica Station Opening, Santa Monica, April 20	Station Opening, Chris White and Keith Malone	https://www.flickr.com/photos/cafcpr/albums/72157665141515294
Mary's Valley Rally, Santa Monica – Sacramento, April 20	Road Trip, CaFCP, Go-Biz, SCAQMD, CEC, CARB, Toyota, Hyundai, MB, FirstElement, Chris, Juan, Keith	https://www.flickr.com/photos/cafcpr/albums/72157665141515294

CalTech Earth Day Event, Los Angeles, April 21	Static display, Keith Malone	
Pat Brown Institute dinner, Cal State LA, Los Angeles, April 21	Member support, Keith Malone	
CalSTRS Earth Fair, Sacramento, April 22	Static and test drive, Juan Contreras.	** Due to CaFCP's participation, CaFCP staff (Juan) introduced CalSTRS Fleet Manager to Toyota during the Sacramento Alt Car Expo . As a result CalSTRS purchased a Mirai**
West Sacramento Earth Day Event, West Sacramento, April 23	Static display, Chris White and Lun So	https://www.flickr.com/photos/cafcpr/albums/72157668486230895
Woodside/Portola Valley Earth Fair, Portola Valley, April 23	Static display, Juan Contreras	https://www.flickr.com/photos/cafcpr/albums/72157666024751143
Fuels Institute Annual Meeting, San Francisco, April 27	Station tour, Joe Gagliano, Juan Contreras and FirstElement	https://www.flickr.com/photos/cafcpr/albums/72157667776222120
HP Earth Day Fair, Roseville, April 28	Static display, Juan Contreras	
Earth at LA Dept of Public Works, Los Angeles, April 28	Static display, Keith Malone	
UCCONNECT Symposium - Achieving Zero-Emission Mobility, Berkeley, April 28	Speaker, Chris White	
STEAM Earth Day Festival, Irvine, April 30	Static display, Keith Malone	
Joi Scientific, Inc. Visiting Group, CaFCP HQ, May 2	Presentation, Bill Elrick and Nico Bouwkamp	
USC Business breakfast with LA Metro CEO Phillip Washington, Los Angeles, May 4	Network event, Keith Malone	
Briefing Cameron Schunk, office of Assembly Member Das Williams, Santa Barbara, May 5	One on One meeting, Keith Malone	
Sacramento Alt Car Expo, Sacramento, May 9	Test Drive, Juan Contreras	https://www.flickr.com/photos/cafcpr/albums/72157668580778265

Santa Barbara Ribbon Cutting Event, Santa Barbara, May 13	Ribbon Cutting, static display, Juan Contreras, Keith Malone, CEC, FirstElement, HO, HY, TO, MB, EIN, GO-Biz	https://www.flickr.com/photos/cafcpr/albums/72157666130163223
EcoFest, Encinitas May 15	Static display, Keith Malone	
International Partner for Hydrogen and Fuel Cells in the Economy (IPHE) Workshop, Sacramento, May 17-20	Station tour, Linde, Juan Contreras and Jennifer Hamilton	
City of Riverside ER Training, Riverside, May 17-20	Member support, DOE/PNNL, Jennifer Hamilton and Keith Malone	https://www.flickr.com/photos/cafcpr/albums/72157668200512403
US Tech Magazine, CaFCP HQ, May 18	Media Interview and test drive, Chris White and Juan Contreras	
Lecture at Cal State L.A. Los Angeles, May 19	Speaker, Keith Malone	
Bay Area Alt Car Expo, Oakland, May 20	Test Drive, Juan Contreras	https://www.flickr.com/photos/cafcpr/albums/72157670974966806
Sandia National Laboratories 60 th Anniversary, Livermore, May 21	Static display, Juan Contreras	
Carhay Science Fair and Environmental Expo, Los Angeles, May 21	Static display, Keith Malone	
Norwegian Delegates, CaFCP HQ, May 23	Presentation, test drive and station tour, Chris White and Juan Contreras	
OCTA Ribbon Cutting for new Eldorado fuel cell bus, Orange, May 23	Industry Champion, CaFCP, Keith Malone, Joe Gagliano	https://www.flickr.com/photos/cafcpr/albums/72157670975130006
San Diego Association of Governments (SANDAG), San Diego, May 26	Presentation, Keith Malone	

Vehicle Vendor Workshop, Riverside, June 2	Member support, Keith Malone and SCAQMD	
LA Trade Tech graduation in the Auto Tech program, Los Angeles, June 2	Speaker, Keith Malone	
Torrance Environmental Fair, Torrance, June 4	Static display, Keith Malone	
Annual Merit Review (AMR), Washington, D.C. June 6-10	Speakers, CaFCP Staff	
L.A. Transit Coalition, Los Angeles, June 9	Keith Malone	
Viva SGV! Open Streets (El Monte and South El Monte), June 12	Static display, Keith Malone	
World Hydrogen & Energy Conference, Spain, June 13-16	Speaker, Chris White	
CAFCP Hydrogen Dispenser Workshop, El Cerritos, June 14	Panel moderator, Joe Gagliano	
Sonoma-Marin Fair, Sonoma, June 25	Test Drive, Juan Contreras	
Advanced Automotive Battery Conference, Detroit, June 14-17	Speaker, Bill Elrick	
Senator Liu Event, Glendale, June 24	Keith Malone	
CleanTech OC – Driving Mobility 3, Irvine	Speaker, Joe Gagliano	
CAPCOA Public Affairs Officers meeting, SCAQMD HQ, June 29	Speaker, Keith Malone	
Suzuki delegates, CaFCP HQ, June 30	Presentation, Bill Elrick and Nico Bouwkamp	

Legislative, NGO & Policy

Conduct one-on-one meetings with California state and federal elected officials and their staff in district and capitol offices. Conduct one-on-one meetings with influential NGOs at the local, state and national levels. Emphasize California's commitment to hydrogen and provide information about progress and plans. Provide education and information to policy makers.

2016 Q2 Statistics – Meetings and encounter

Elected officials: 3 (2016 to date: 4)

Legislative staff: 8 (2016 to date: 42)

NGOs: 0 (2016 to date: 4)

Event name	Meeting Date	Meeting with (Names and titles of all persons)
Capitol meeting	4/6/2016	Michael Martinez, deputy legislative secretary, Office of the Governor
Capitol meeting	4/6/2016	Assembly Member Eduardo Garcia, chief of staff Suzanne Wierbinksi and other staff
Lunch meeting	4/7/2016	Evita Chavez, Senate fellow, Housing and Transportation Committee
Community meeting	4/8/2016	Ed Hartoonian (Galpin Honda) and assistant (at request of Senator Hertzberg's office)
Community event	5/13/2016	Supervisors Peter Adam and Salud Carbajal, and Cameron Schunk, field representative to Assembly Member Das Williams (D-Santa Barbara)
Capitol meeting	6/21/2016	Matt Cox, office of Senator Ted Gaines (R-El Dorado Hills)
Capitol meeting	6/21/2016	Naomi Padron, legislative director to Assembly Member Marc Levine (D-San Rafael)
Email exchange	6/21/2016	David Hersch, legislative director to LA City Council Member Paul Koretz (West LA)

Website and Social Media

We provide outreach and education through events, materials, video, web and social media that increase awareness in the general public, build support in early market communities and support other projects' specific goals. Our online strategy is to deliver real-world information about FCEVs and hydrogen stations to early adopter audiences. We use email, blogs, Twitter, YouTube and Facebook to share messages about FCEV commercialization and technology with different audience types.

www.caftp.org	Apr-16	May-16	Jun-16
Number of visits	5,333	5,036	4,608
Average time users spent on site	2:21	2:18	2:06
Most visited pages	Home page Station map Stations Cars CaFCP Spring Forum	Home page Station map Stations Cars About Us	Home page Station map Stations Cars About Us
Most searched keywords on Google to land on CaFCP website	www.social-buttons.xyz caftp i came up with a method and 1,5 years forcing all-seeing eye of google... caftp.org hydrogen fueling stations	california fuel cell partnership m.caftp.org hydrogen fuel stations in california http://caftp.org/stationmap caftp	m.caftp.org caftp www.get-free-social-traffic.com california fuel cell partnership hydrogen fueling stations west sacramento
Most referred websites	google.com automobiles.honda.com yahoo afdc.energy.gov driveclean.ca.gov	google.com automobiles.honda.com yahoo bing.com afdc.energy.gov	google.com automobiles.honda.com yahoo bing.com arb.ca.gov

FACEBOOK	Apr-16	May-16	Jun-16
New likes	25	20	23
Lifetime likes	2,747	2,763	2,775
Lifetime Post Total Reach	1,747	3,462	13,915
Lifetime Engaged Users	116	185	619

TWITTER	Apr-16	May-16	Jun-16
Tweets for the month	88	112	140
Tweet Impressions	47,300	69,200	69,700
Profile visits	1,035	960	1,860
Mentions	237	182	203
New Followers	324	7,243	81
Total Followers	2,729	2,817	2,868

E-blast – CaFCP Public Forum & Executive Board Meeting, April 19	
Sent April 7, 2016 – 37 Tweets	
Contacts:	12,703
Opened:	9% - 1,143 contacts
Bounced:	3.4% - 434 contacts
No Info:	87.6% - 11,126 contacts
Clicked:	1% - 119 contacts
Unsubscribed:	10

E-blast – Energy Commission Hydrogen Station Solicitation Released	
Sent April 7, 2016 – 167 Tweets	
Contacts:	12,626
Opened:	10.1% - 1,274 contacts
Bounced:	2.8% - 352 contacts
No Info:	87.1% - 11,000 contacts
Clicked:	1% - 120 contacts
Unsubscribed:	8

E-blast – Mary's Valley Rally: FCEVs drive from SoCal to NorCal	
Sent April 22, 2016 – 56 Tweets	
Contacts:	12,482
Opened:	10.4% - 1,295 contacts
Bounced:	3.4% - 421 contacts
No Info:	86.3% - 10,766 contacts
Clicked:	1% - 174 contacts
Unsubscribed:	10

E-blast – May 13: Santa Barbara H2 station ribbon cutting	
Sent April 27, 2016	
Contacts:	340
Opened:	42.1% - 143 contacts
Bounced:	2.4% - 8 contacts
No Info:	55.6% - 189 contacts
Clicked:	3% - 10 contacts
Unsubscribed:	1

E-blast – CaFCP Spring Forum & EB Meeting Presentations	
Sent April 28, 2016	
Contacts:	86
Opened:	50.0% - 43 contacts
Bounced:	0.0% - 0 contacts
No Info:	50.0% - 43 contacts
Clicked:	28% - 24 contacts
Unsubscribed:	0

E-blast – Energy Department Announces Climate Action Champion, City of San Francisco, Embracing Hydrogen & Fuel Cell Technologies	
Sent May 20, 2016	
Contacts:	12,326
Opened:	10.2% - 1,261 contacts
Bounced:	3.7% - 460 contacts
No Info:	86.0% -10,605 contacts
Clicked:	1% - 122 contacts
Unsubscribed:	6

E-blast – National Webinars on Designation of Alternative Fuel Corridors (May 12 & 16 at 1:00PM EDT)	
Sent May 4, 2016	
Contacts:	396
Opened:	21.5% - 85 contacts
Bounced:	0.3% - 1 contacts
No Info:	78.3% - 310 contacts
Clicked:	5% - 18 contacts
Unsubscribed:	1

CaFCP Quarterly Update
July-September 2016

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 2016.

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. 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 convening, collaborating and communicating.

1. Develop Infrastructure	
<i>Develop the necessary infrastructure and processes to support early commercial launch and expanded vehicle rollout.</i>	
Support the construction and commissioning of current California hydrogen stations by participating in codes, standards and regulation processes; facilitating station commissioning processes; and supporting station openings.	<ul style="list-style-type: none"> • SAE J2719/1 Application Guideline for Use of Hydrogen Quality Specification went out for 14 day affirmation ballot and passed • SAE J2601 Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles passed affirmation ballot. • Supported ribbon cuttings at Truckee/Lake Tahoe and Campbell stations.
Prepare for future funding through outreach and education with fueling retailers and hydrogen industry.	<ul style="list-style-type: none"> • GFO 15-605 closed in August, 2016 with \$17.3 million in available funding.
Work with stakeholders to identify potential future station locations.	<ul style="list-style-type: none"> • Completed for 2016
Develop Road Map 2.0 with strategies for a sustainable network in California.	<ul style="list-style-type: none"> • Moved to 2017
2. Share and Synchronize Experience	
<i>Provide forums and opportunities for members to advance group collaboration and progress within CaFCP and among stakeholders.</i>	
Build and expand trust among members through open communication and forums.	<ul style="list-style-type: none"> • CaFCP Working Group meeting held Sept 7-8 • Conducted sub-group meetings about SOSS, station implementation, and with the Station Developers Group started under a separate CEC contract
Communicate with stakeholders nationally and internationally to share learnings and amplify market launch efforts.	<ul style="list-style-type: none"> • Participated in a September 29-30 meeting with US DOE and representatives from Germany to discuss international data exchange. • Participated in the Sustainable Transportation Summit, Washington, D.C. July 11-14th
4. Expand Markets	
<i>Restructure CaFCP to be more inclusive and capable of meeting the expanding commercial market needs and opportunities, broadening the member base, and being the voice of all stakeholder participants</i>	
Establish new structure and expand membership.	<ul style="list-style-type: none"> • Completed
Support deployment of fuel cell bus Centers of Excellence and the Bus Team.	<ul style="list-style-type: none"> • Participated in CARB Advanced Clean Transit meetings to provide FCEB perspective. • Met with US DOT FTA Low-No program manager to provide an update on FCEB progress. • Participating in background meetings with Sierra

	<p>Club ZEB coalition.</p> <ul style="list-style-type: none"> Completed CaFCP Bus Team meeting on August 30 at SunLine Transit with ~30 participants. Developing “<i>CaFCP Fuel Cell Electric Bus Fact Sheet</i>” for outreach.
Publish and implement the Medium- and Heavy-Duty Road Map document.	<ul style="list-style-type: none"> Prepared CaFCP’s “<i>Fuel Cell Electric Truck Action Plan for California</i>” for mid-October publication Developed distribution and promotion for release of Medium and Heavy-Duty Fuel Cell Electric Truck Action Plan in October. Met with governmental affairs representatives in Washington DC to share information about Action Plan
Support activities outside of California, as directed by members.	<ul style="list-style-type: none"> None in Q3

3. COMMUNICATE

Communicate, educate, inform and promote H2 & FCEVs benefits and opportunities to key outside stakeholders and general public for increased and continued support. Become readily recognized as the face of the industry for trustworthy information and assist.

Summary of Q3 Outreach Events

Conferences : 3 (SEMICON West, Pacific Oil Conference and Society of Environmental Journalist)

- Community Events: 5
- People reached: 1,119
- Webinars: 2 (ARB 2016 Annual Evaluation of FCEV Deployment & H2 Fuel Station Network Development and 2016 International Hydrogen Infrastructure Update)

Activity	Description	Picture and comments
SEMICON West, San Francisco, CA. July 11-14 th	Exhibitor: Keith Malone, Juan Contreras, Air Liquide and Toyota	Click on the link below for photos https://www.flickr.com/photos/cafcpr/albums/72157673131305576 100 booth visitors
Glendale Cruise Night, Glendale, CA. July 16 th	Static display: Keith Malone and Hyundai	Click on the link below for photos https://www.flickr.com/photos/cafcpr/albums/72157673224955505 60 booth/car visitors
National of Association Counties Conference & Expo, Long Beach, July 22 nd	Sister organization support: Keith Malone and FCHEA	Supported FCHEA’s participation. 25 booth visitors
ARB 2016 Annual Evaluation of FCEV Deployment & H2	Webinar: CaFCP staff & CARB	Registered: 194 Final attendance: 161

Fuel Station Network Development Webinar, CaFCP, HQ, July 26 th		
Assembly member Holden Block Party, Pasadena, July 30 th	Static display: Keith Malone & Hyundai	~30 booth/car visitors
Academic Workshop on New Technology in Automotive Industry, Academy of Management Annual Meeting, Anaheim, CA	Panel discussion: Bill Elrick	~40 attendees
Truckee/Lake Tahoe Ribbon Cutting Event, Truckee, CA. Aug. 27 th	Ribbon Ceremony: CaFCP Staff, Toyota, MB, Hyundai, FE/TrueZero	25 attendees, including 14 commercial FCEVs Click on the link below for photos https://www.flickr.com/photos/cafcpr/albums/72157673226704215
2016 Update to California's Hydrogen Stations Webinar, CaFCP HQ, Aug. 31 st	Webinar: CaFCP staff	Registered: 357 Final attendance: 199
Pacific Oil Conference, Los Angeles, CA. Sept. 6-8 th	Exhibitor: Juan Contreras,, Keith Malone & Air Liquide	30 booth visitors Click on the link below for photos https://www.flickr.com/photos/cafcpr/albums/72157672566943231
South Pasadena Clean Air Car Show and Green Living Expo, South Pasadena, CA. Sept. 10 th	Static display: Keith Malone and Hyundai	30 booth visitors, including Supervisor Michael Antonovich
Sacramento City College/Environmental Delegation from Ukraine, CaFCP HQ, Sept. 12 th	Presentation, H2 station tour and test drive: Chris White, Juan Contreras and Toyota	
Senator Liu "Thank You Reception", Glendale, Sept. 16 th		

Society of Environmental Journalists Annual Conference, Sacramento, CA Sept. 22-24 th	Co-sp**onsors and test drive: Keith Malone, Juan Contreras, FCHEA, Hyundia and Toyota	30 booth visitors, including test drivers Supported FCHEA's participation. Click on the link below for photos https://www.flickr.com/photos/cafcpr/albums/72157673305546112
Advanced Clean Cars Symposium "The Road Ahead", SCAQMD HQ's, Sept 27 th	Member support: Bill Elrick, Joe Gagliano	

Legislative, NGO & Policy

Conduct one-on-one meetings with California state and federal elected officials and their staff in district and capitol offices. Conduct one-on-one meetings with influential NGOs at the local, state and national levels. Emphasize California's commitment to hydrogen and provide information about progress and plans. Provide education and information to policy makers.

2016 Q3 Statistics – Meetings and encounters

Elected officials: (2016 to date: 7)

Legislative staff: (2016 to date: 42)

NGOs: (2016 to date: 4)

Event name	Meeting Date	Meeting with (Names and titles of all persons)
Email exchange	7/12/2016	LuzMaria Sanchez with Galpin Honda (San Fernando Valley) and Eveline Bravo-Ayala, office of State Senator Bob Hertzberg (D-Van Nuys)
Capitol meeting	7/25/2016	Jay Dickensen, chief consultant and David Sforza, legislative aide to the Senator.
Community event	7/30/2016	Kayleen Aviles-Maya, office of Assembly Member Chris Holden (D-Pasadena)
Phone briefing	8/9/2016	Allegra Roth, district office of Assembly Member Das Williams (D-Santa Barbara)
Pacific Oil Conference	9/7/2016	Assembly Member Rocky Chavez (R-Oceanside)
South Pasadena Clean Air Car Show	9/10/2016	Supervisor Mike Antonovich and aide, Rita Hadjimanoukian
Reception	9/16/2016	Becky Chen, office of Congresswoman Judy Chu (D-Pasadena)
Email communication: FCHEA letter to DOE Sec'ty Moniz	9/12/2016	Various district office congressional staff throughout California

Website and Social Media

We provide outreach and education through events, materials, video, web and social media that increase awareness in the general public, build support in early market communities and support other projects' specific goals. Our online strategy is to deliver real-world information about FCEVs and hydrogen stations to early adopter audiences. We use email, blogs, Twitter, YouTube and Facebook to share messages about FCEV commercialization and technology with different audience types.

www.cafcp.org	Jul-16	Aug-16	Sep-16
Number of visits	6,696	9,336	10,289
Average time users spent on site	2:00	2:07	2:02
Most visited pages	Station map Home page Stations Cars About Us	Station map Home page Stations Cars About Us	Station map Home page Stations Cars About Us
Most searched keywords on Google to land on CaFCP website	eu cookie law eu-cookie-law.info sharebutton.org share buttons m.cafcp.org hydrogen fuel stations in california hydrogen fueling stations west sacramento	cafcp hydrogen fuel stations in california fuel cell stations hydrogen filling station south river road sacramento ca hydrogen fueling stations	california fuel cell partnership hydrogen fueling stations hydrogen fueling stations west sacramento cafcp hydrogen fuel stations
Most referred websites	google automobiles.honda.com yahoo bing arb.ca.gov	google automobiles.honda.com m.cafcp.org yahoo bing	california fuel cell partnership hydrogen fueling stations hydrogen fueling stations west sacramento cafcp hydrogen fuel stations

FACEBOOK	Jul-16	Aug-16	Sep-16
New likes	13	33	17
Lifetime likes	2,773	2,798	2,811
Lifetime Post Total Reach	4,571	4,070	7,226
Lifetime Engaged Users	292	207	392

TWITTER	Jul-16	Aug-16	Sep-16
Tweets for the month	69	69	46
Tweet Impressions	36,500	42,400	29,500
Profile visits	1,087	970	582
Mentions	186	212	173
New Followers	57	41	53
Total Followers	2,925	2,966	3,109

E-blast – Report & Webinar July 26: ARB 2016 Annual Evaluation of Fuel Cell Electric Vehicle Deployment & Hydrogen Fuel Station Network Development

Sent July 15, 2016 – 52 Tweets

Contacts:	11,271
Opened:	10.7% - 1,205 contacts
Bounced:	5.0% - 568 contacts
No Info:	84.3% - 9,498 contacts
Clicked:	1% - 158 contacts
Unsubscribed:	12

E-blast – ARB Low Carbon Fuel Standard Workshop, July 29

Sent July 27, 2016 – 9 Tweets

Contacts:	11,599
Opened:	8.6% - 992 contacts
Bounced:	3.6% - 420 contacts
No Info:	87.8% - 10,187 contacts
Clicked:	1% - 89 contacts
Unsubscribed:	17

E-blast – Hydrogen Stations Webinar, August 31: Update on Network Development Status in California

Sent August 10, 2016 – 141 Tweets

Contacts:	12,529
Opened:	11.6% - 1,452 contacts
Bounced:	3.5% - 434 contacts
No Info:	84.9% - 10,643 contacts
Clicked:	2% - 258 contacts
Unsubscribed:	17

E-blast – Lake Tahoe-Truckee Hydrogen Station Ribbon Cutting & Celebration, August 27

Sent Aug 19, 2016

Contacts:	361
Opened:	39.1% - 141 contacts
Bounced:	1.7% - 6 contacts
No Info:	59.3% - 214 contacts
Clicked:	7% - 25 contacts
Unsubscribed:	1

E-blast – Resources for California's Hydrogen Stations Webinar, August 31

Sent September 1, 2016

Contacts:	355
Opened:	49.9% - 177 contacts
Bounced:	2.3% - 8 contacts
No Info:	47.9% - 170 contacts
Clicked:	17% - 60 contacts
Unsubscribed:	0