

BOARD MEETING DATE: June 1, 2018

AGENDA NO. 4

PROPOSAL: Execute Contract for Heavy-Duty Hydrogen Vehicle Fueling Station and Receive and File California Fuel Cell Partnership Board Meeting Agenda and Activity Updates

SYNOPSIS: On April 6, 2018, the CEC awarded \$8 million to Equilon Enterprises LLC for construction and operation of a renewable hydrogen vehicle refueling station at the Port of Long Beach. Equilon will own and operate the 1,000 kilogram per day truck refueling station on land sub-leased from Toyota, which (under a separate contract with FuelCell Energy) will generate hydrogen using a trigeneration system using biogas to produce up to 1.27 tons per day of renewable hydrogen. In addition to refueling Toyota vehicles at 700 bar, SCAQMD cofunding will be used to refuel heavy-duty vehicles at 350 bar, supporting various fuel cell demonstration vehicles by multiple operators in the local ports. These actions are to execute a contract with Equilon Enterprises LLC, dba Shell Oil Products US, in an amount not to exceed \$1.2 million from the Clean Fuels Program Fund (31) as well as receive and file the April 2018 California Fuel Cell Partnership Executive Board Meeting Agenda and recent activity updates.

COMMITTEE: Technology, May 18, 2018; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the Chairman to execute a contract with Equilon Enterprises LLC, dba Shell Oil Products US, to cost-share construction and operation of a renewable hydrogen vehicle refueling station to support various fuel cell demonstration vehicles by multiple operators in the local ports in an amount not to exceed \$1,200,000 from the Clean Fuels Program Fund (31); and
2. Receive and file the April 2018 California Fuel Cell Partnership (CaFCP) Executive Board Meeting Agenda and recent activity updates.

Wayne Nastri
Executive Officer

Background

In April 2017, Toyota unveiled plans to develop a heavy-duty prototype fuel cell truck built on an existing Class 8 Kenworth body described as Project Portal, leveraging the fuel cell power plant from its commercial fuel cell light-duty vehicle with refueling at 700 bar. In late 2017, Toyota subsequently announced plans to build the world's first megawatt-scale carbonate fuel cell power generation plant with a hydrogen refueling station to support its operations at the Port of Long Beach (POLB).

Leveraging previous experience in demonstrating and operating a trigeneration (Tri-Gen) fuel cell technology for three years at the Orange County Sanitation District in Fountain Valley, FuelCell Energy will, under a separate project, construct and operate a new Tri-Gen system using bio-waste gas sourced from California agricultural waste to generate water, electricity and hydrogen. The renewable biogas produced from the in-state resource will be injected into the natural gas infrastructure. The same amount of gas injected into the pipeline will then be extracted from the pipeline onsite at the Toyota facility at the POLB. The Tri-Gen system is proposed to start operation by early 2020, generating approximately 2.35 megawatts of electricity and 1.27 tons of hydrogen per day. The power generation facility will be 100% renewable.

SCAQMD has long been active in developing and demonstrating zero emission vehicles for goods movement. On December 5, 2014, the Board recognized revenue from the DOE for the ZECT 2 project to develop and demonstrate zero emission drayage trucks at the Ports of Los Angeles and Long Beach, including funding for temporary hydrogen refueling for six fuel cell trucks at 350 bar. However, hydrogen refueling infrastructure development for longer-term and larger-scale demonstration requires a longer lead-time, and on-site renewable hydrogen production and dispensing is expected to lower the cost of hydrogen dispensed.

On April 6, 2018, the CEC released a Notice of Proposed Award (NOPA) for GFO-17-603, Advanced Freight Vehicles and Infrastructure Deployment, including an \$8 million award to Equilon Enterprises LLC, dba Shell Oil Products US, for a renewable hydrogen refueling station at scale for freight (H2Freight) project to dispense hydrogen provided to the station from the new Tri-Gen system.

Proposal

This action is to execute a contract with Equilon Enterprises LLC, dba Shell Oil Products US. Equilon will own and operate a 1,000 kilogram per day truck refueling vehicle station on land sub-leased from Toyota, but owned by the POLB. At startup, 400 kilograms of hydrogen will be dispensed by the Shell refueling station each day to fuel hydrogen fuel cell-powered Class 8 trucks.

In addition to refueling Toyota vehicles at 700 bar, SCAQMD's cofunding will be used to refuel heavy-duty vehicles at 350 bar, supporting various fuel cell demonstration vehicles by multiple operators in the local ports. The large scale of the system also

shows the greatest promise for cost reduction, while providing a blueprint for further cost reductions in future stations. By following a modular approach to design, component suppliers will begin to produce more units and thus make faster improvements to their product, all while continuing to reduce costs.

Fueling protocols, dispenser design and station throughput and reliability are just some examples that can be evaluated through this H2Freight Project. Light-duty fueling protocols have taken years to develop, and heavy-duty truck fueling will require similar parallel development. This station will provide lessons learned for fueling requirements of heavy-duty trucks, which will help inform and develop the appropriate protocols for safe and fast fueling for the heavy-duty market as a whole. Considering the longer refueling times and the need for higher flow nozzles, dispenser design can also be integrated and tested as innovative technologies are developed. The H2Freight Project will build a station capable of refueling up to four trucks every hour at peak capacity from two fueling positions working simultaneously and 10-15 trucks in a 12-hour shift per weekday. Each fill is expected to be 30+ kilograms initially, with the potential for 50+ kilogram fills expected to take between 20 to 30 minutes. This corresponds to an initial average daily demand of ~400 kilogram per day which will increase as the project matures. The station design will ensure better than 95% full fueling availability and better than 99% reduced throughput availability. At reduced throughput, the station will not allow for simultaneous refueling of two trucks, but will still be capable of meeting daily fueling needs.

Shell intends to operate and maintain the refueling station, and Toyota and the committed fleet operators intend to operate the fuel cell vehicles, beyond the term of the funding agreement and through the end of the economic lifetimes of the trucks and station equipment. The station may support further demand growth with successful deployment of fuel cell vehicles with capability to refuel 350 and 700 bar.

This action is to also receive and file the CaFCP Executive Board Meeting Agenda for April 2018 and the activity reports for October 2017 through March 2018. The next CaFCP Executive Board meeting is scheduled for October 16, 2018, in Sacramento. Additional information about the CaFCP can be found at <http://www.cafcp.org>.

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 H2Freight Project include CEC, Toyota and Equilon.

Benefits to SCAQMD

SCAQMD supports hydrogen and fuel cell technologies and recognizes that light-, medium- and heavy-duty vehicles must achieve zero or near-zero emissions for the region to meet state and federal air quality attainment standards. Projects to support implementation of various clean fuel vehicle and infrastructure programs are included in the *Technology Advancement Office Clean Fuels Program 2018 Plan Update* under the category of “Hydrogen and Fuel Cell Technologies and Infrastructure.” This project will help ensure that sufficient hydrogen infrastructure is available to support the demonstration and early-market introduction of zero emission fuel cell vehicles, including drayage trucks for goods movement operations. Use of zero emission heavy-duty trucks further support the state’s goals in reducing emissions from goods movement programs, including the Sustainable Freight Action Plan.

Successful demonstration and greater deployment of fuel cell vehicles are expected to provide reduction of criteria pollutants from heavy-duty trucking activities, especially in disadvantaged communities that are disproportionately exposed to harmful diesel emissions, such as the POLB area.

Resource Impacts

SCAQMD’s support of the H2Freight Project will not exceed \$1,200,000 from the Clean Fuels Program Fund (31). Project partners and proposed funding are as follows:

Project Partner	Funding	Percent
CEC*	\$8,000,000	66
Equilon Enterprises LLC, dba Shell Oil Products US	\$1,400,000	12
Toyota	\$1,400,000	12
SCAQMD (<i>requested</i>)	\$1,200,000	10
Project Total	\$12,000,000	100

*NOPA for GFO-17-603

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 April 10, 2018 Executive Board Meeting Agenda
California Fuel Cell Partnership Activity Updates (October 2017 through March 2018)

CaFCP Public Forum Agenda
Scaling the Market for Success
April 10th 2018

South Coast Air Quality Management District – GB Room
 21865 Copley Drive, Diamond Bar, CA 91765

10 minutes

10:30am-10:40am

*CaFCP Chair, Dr Mohrdieck***1. Welcome and Introductions****30 minutes**

10:40am-11:10am

*Roadmap Team***2. 2030 Roadmap – Accelerating the Market**

CaFCP members are developing a consensus document to describe the actions needed to accelerate the market for FCEVs and hydrogen infrastructure. The small team writing the document will present their main messages, introduce mechanisms and levers the roadmap identifies as those that will encourage a self-sustaining market, and discuss how the Governor’s new executive order feeds into the roadmap.

50 minutes

11:10am-12:00pm

*Market Activation Team***3. Achieving Scale**

The market activation group identified several tactics to encourage market growth, reduce station and fuel costs, and support 2030 and 2050 California objectives. How would these be implemented and what other considerations do we need to make about existing or novel market-based mechanisms that could spur private investment?

60 minutes

12:00pm-1:00pm

Lunch *(on own)***45 minutes**

1:00pm-1:45pm

*Calstart**Loves/Trillium***4. Medium- and Heavy-Duty Vehicles**

The transition to natural gas was incented with mechanisms that included sales and use tax exemptions, infrastructure grants, and point-of-sale rebates that offset the cost of replacing conventional vehicles. What can those policies and actions teach us about jump-starting the transition to hydrogen in trucks and buses? What do early-market actors need now to be interested in fuel cells and heavy-duty stations?

60 minutes

1:45pm-2:45pm

*SoCal Gas**Noyes Law Corporation***5. Hydrogen Production and Utilities**

New hydrogen production dedicated to light- and heavy-duty applications is vital as early market expansion increases fuel demand. How do we stimulate renewables while keeping costs down for the consumer in early market conditions? Hydrogen also has the opportunity to enhance grid services and renewable penetration via storage, quick-response rates, and resiliency. Do California’s utilities see hydrogen as an opportunity or a potential threat? Where might hydrogen and electricity work complimentary toward long-term needs and goals, and what mechanisms might expedite cost-competitive renewable hydrogen?

30 minutes

2:45pm-3:15pm

Break

60 minutes

3:15pm–4:15pm

Roadmap Team

6. Mechanisms and Levers

Facilitated discussion about the points brought up today. Which are realistic, feasible, and helpful in the roadmap timeline? What are the next steps to completing the roadmap?

30 minutes

4:15pm–4:45pm

7. Executive Board Business Meeting

- a) 2017 program plan review, 2018 progress and priorities
- b) Global Climate Summit/Hydrogen Council meeting
- c) H2USA collaboration
- d) Public comment period*

15 minutes

4:45pm–5:00pm

CaFCP Chair, Dr Mohrdieck

8. Meeting Wrap Up and Next Steps

Evening Reception Hosted by Toyota
Diamond Bar Golf Course and Restaurant
22751 Golden Springs Drive, Diamond Bar, CA 91765

- * **Public comment period:** The public comment period provides an opportunity for members of the public to address the executive board on subject matters within the interest of CaFCP. Each person will be allowed a maximum of three minutes to ensure that everyone has a chance to speak.
- 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 meeting is open to the public and will not be available by phone. The facility is accessible to persons with disabilities. Deadline for requesting ADA modification is **April 3, 2018**. Meeting materials will be available at www.caftp.org.
- **ANTITRUST GUIDELINES:** It is the express intent of the CaFCP and its Members that none of the CaFCP's activities 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 the antitrust laws. To the extent possible, the Members of the CaFCP 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 in April 2000 ("**Antitrust Guidelines**"). The Antitrust Guidelines are available for reference on the CaFCP's Member resources website. The Antitrust Guidelines will be referenced in advance of CaFCP meetings.



CaFCP Monthly Report: Oct/Nov 2017

Events/Activities Staff Lead: J Contreras

Upcoming

- Feb 20th-22nd – WPMA, Las Vegas
- Mar 14th – CaFCP working group meeting, SoCal (TBD)
- Apr 10th-11th – CaFCP executive board/working group meeting, Diamond Bar

Recent

- Oct. 24th – [Hydrogen Station Webinar](#). Joe Gagliano and Ben Xiong, Participants: 116
- Nov. 1st – [EDTA Leader Series: Beyond the Beltway](#). Speaker: Bill Elrick, Attendees: 80
- Nov. 2nd – [North American Fuel Cell Bus Conference](#). Speaker: Nico Bouwkamp, Attendees: 110
- Nov. 7th – [H2@Scale workshop](#). Speaker: Bill Elrick, Attendees: 150+
- Nov. 7th-9th – [Fuel Cell Seminar](#). CaFCP sponsored ride-n-drive
- Nov. 9th-10th – [International Fuel Cell Vehicle Congress](#). Speaker: Bill Elrick, Attendees 250+
- Nov. 14th – [California Hydrogen Infrastructure Tool \(CHIT\)](#) 2017 release update webinar. ARB
- Nov. 30th – [Hydrogen Refueling Infrastructure Alternative Funding Mechanisms](#) workshop. CEC

SECTOR GROUPS

Automotive Group Staff Lead: J Gagliano, Member Lead: M McClory

- OEM Group (in coordination with SDO Group members) developed, reviewed and discussed a Proposed Standard Performance Requirements document to update the requirements listed in the CEC GFO-15-605 solicitation
- Goal is to have both Groups create a consensus document to submit to CEC to guide the next GFO solicitation prior to the 12/4/17 workshop
- CEC has an HRS Technical Requirements Workshop scheduled for Monday, December 4, 2017

Government Group Staff Lead: J Gagliano, Member Lead: G Vacin

- GO-Biz has led on-going Station Confirmation Group calls to coordinate efforts to bring the next group of funded hydrogen stations to Open Retail.
- ARB follow-up HySTeP testing was conducted at Woodside and revised report issued October 11.
- ARB HySTeP team conducted Honda MC Formula Protocol Validation testing and issued a report on October 26
- CEC released its second revised GFO-15-605 NOPA on November 8 announcing proposed funding awards for 5 new hydrogen station locations (http://www.energy.ca.gov/contracts/GFO-15-605_NOPA_Rev_11-17.pdf)
- CEC also announced 3 new workshops to obtain industry stakeholder feedback regarding the next hydrogen station grant funding solicitation: Nov. 30 (HRS Alternative Funding Mechanisms Workshop), Dec. 4 (HRS Technical Requirements Workshop), Dec. 14 (Evaluation Criteria of HRS Applications Workshop)

Station Developer/Operator Group Staff Lead: J Gagliano, Member Lead: A Harris

- SDO Group (in coordination with OEM Group members) developed, reviewed and discussed a Proposed Standard Performance Requirements document to update the requirements listed in the CEC GFO-15-605
- Goal is to have both Groups create a consensus document to submit to CEC to guide the next GFO solicitation prior to the 12/4/17 workshop
- CEC has an HRS Technical Requirements Workshop scheduled for Monday, December 4, 2017

CaFCP Monthly Member Report – Oct/Nov 2017

FCET & FCEB Group Staff Lead: K Malone, Member Lead: *TBD*

- Low level of activities due to budget reductions – publication of June FCET workshop revised recommendations on hold.
- CaFCP participated in the November North American FCB Conference in Canton, OH – as panelist on “Proven Reliability & Future Support” and “Sharing Risk & Growing the Hydrogen Network” panels. Presentations available at: <http://www.cte.tv/?p=2951>
- Working towards alignment of CHBC 2018 Transit SAG activities with CaFCP activities
- Provided input to New Flyer, ElDorado National (ENC) and CTE about creation of APTA (sub)committee with focus on fuel cell buses

PROJECT TEAMS

Safety Codes & Standards Staff Lead: J Hamilton, Member Lead: A Harris

- **SAE International:** Kicked off SAE 2600 revisions at the Fuel Cell Interface Task Force face to face meeting November 8-9 in Torrance, CA. SAE J2600 Compressed Hydrogen Surface Vehicle Fueling Connection Devices to re-open for addressing high flow nozzles for heavy duty fueling. Highest priority is to align this with ISO 17268 due to issues with drawings for H35HF in ISO document; SAE J2601-1 Light Duty Vehicle Fueling (in revision) and SAE J2601-4 Ambient Temperature, Fixed Orifice fueling (new documents), to continue discussions. The FC Safety Task Force meeting was held in Troy, MI November 7-8.
- **CSA Group:** A. Harris and J. Hamilton are chair and vice-chair (respectively) of the newly formed Hydrogen Transportation Technical Committee. This TC was approved by the Transportation Strategic Steering Committee during the 2017 Committee Week in Cleveland, OH. The TC mapped out a work plan for and prioritized the CSA hydrogen documents in the coming few years.
 - Potential for a **North American H2 Forum #2** (1st meeting Mar 2017 in Ottawa, Ontario, Canada).
- **ISO/TC 197 Hydrogen Technologies:** Plenary meeting to be held in Foshan, China December 7-8. Thirteen main Working Groups within the TC 197 working on documents ranging from station components to fuel quality. The largest WG, in terms of members, is the:
 - **WG 24; ISO 19880-1** (Hydrogen Fueling Stations) document is being developed for Draft International Standard (DIS) ballot to be presented at the Plenary meeting; expected to be completed in May 2018.
- **ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells:** Jennifer is the Chair, Christina Daniels of CA Dept. of Food and Ag, Division of Measurement Standards is the vice-chair. The committee is preparing for the second of two in-person meetings. This one to take place in Houston December 5-6 (the first was in Boston in June). Members of the subcommittee are working to get Inter Laboratory Studies started for two ASTM methods: FTIR method, (ILS #851 for ASTM D7653-2010) and Continuous Wave Cavity Ring-Down method (ILS #1121 for ASTM D7941). The D03.14 has also been requested to give input to the ISO/TC 158/Joint WG 7 on the Committee Draft (CD) 21087 document: Hydrogen Fuel- Analytical methods- Proton exchange membrane (PEM) fuel cell applications for road vehicles. This is a Joint Working Group with the ISO/TC 197; the convener is Martine Carré of Air Liquide.

Government Affairs Staff Lead: K Malone, Member Lead: *TBD*

- Legislative outreach has ramped down due, in part, to the end of the state legislative session. Contact with legislators, staff and NGOs continues on a case-by-case basis.
- Keith and Teresa Cooke will be engaging members at Working Group and via the Legislative Outreach Committee on plans for 2018 outreach.
- October legislative interactions with Senator Bradford and Assembly Member Muratsuchi at Torrance ribbon cutting; Senator Glazer and Assembly Member Bake at San Ramon ribbon cutting; Keith had personal interaction with Assembly Member Ridley-Thomas at private party.

CaFCP Monthly Member Report – Oct/Nov 2017

Legislative Metrics

Legislative Outreach	Legislators	Staff	NGOs
October	6	2	0
Q3 2017	14	31	3
Year to date	27	57	4

Outreach/Education Staff Lead: K Malone, Member Lead: TBD

- Preliminary discussions among staff are under way regarding a revamp of the CaFCP website. Discussions will extend to members.
- Two hydrogen station grand opening ceremonies: Oct 9th Torrance (#30) and Oct 10th San Ramone (#31)

Web and Social Media Metrics (October & November)

	Email List	Facebook followers	Twitter followers	LinkedIn followers	Website Visits
October	10,900	2,831	4,031	923	12,059
November	12,843	2,849	4,089	945	11,722

HyPPO Report Staff Lead: J Gagliano, Member Lead: A Harris

- Task Force members developed industry’s response to the August 2017 AB 8 report in presentation format to address key questions:
 - How many vehicles are there?
 - How many vehicles can the existing network support (31 stations)?
 - Where should the next stations be located?
- Initial goal was to present this presentation to CAFCP Steering Team on October 18 (but did not occur due to scheduling conflicts)
- Presentation will now be made instead at the December 6 Working Group meeting
- Plan is for this to be the foundation for an annual updated HyPPO report, the first of which is to be published in Spring 2018
- The goal is to have this be an annual report published by CAFCP

Vision/Roadmap 2.0 Staff Lead: C White, Member Lead: M Forrest

- Series of member input workshops cumulated with Oct 17-18 EB and ST discussions. Feedback from both meetings worked into updated draft released for Nov 16th ST
- Agenda for October 17th executive board developed to solicit discussions and feedback for document development. October 18th steering team meeting reviewed board inputs and reviewed latest draft document and are to submit any additional feedback by Dec 4th.
- http://cafcpmembers.org/sites/default/files/documents/Roadmap_Draft_1_%20for_Review_0.pdf

SOSS Staff Lead: B Xiong, Member Lead: J Birdsall

- Completed developing new feature to allow SDOs the ability to add a station message to their own station.
- Completed initial setup to transmit SOSS data to the AFDC Alternative Fuel Station Locator
- Ordered and received SOSS station stickers to be posted at stations to promote SOSS

CaFCP Monthly Member Report – Oct/Nov 2017

H2 Market Acceleration Staff Lead: J Gagliano, Member Lead: W Leighty

- Task Force members developed state government policy proposal recommendations to accelerate the commercialization and deployment of hydrogen fueling stations. The policy recommendation package includes:
 - Expansion of the ARB LCFS program to allow generation of credits based on installed capacity of hydrogen stations
 - Future Funding Source/Block Grant award approach for multi-year station development with special emphasis on destination and connector locations
 - Fuel Rebate Program to incentivize the development of low-cost hydrogen sources while providing hydrogen fuel at gasoline cost parity
- Six members of the Task Force submitted a letter to the ARB LCFS docket on November 29, 2017, officially proposing the LCFS Hydrogen Infrastructure Pathway be adopted by ARB
- Draft LCFS regulatory language accompanied the submittal letter

Events/Activities – Staff Lead: J Contreras

Upcoming

- Jan 23 & 26 - Regional Briefings (San Jose & San Francisco) on FCEVs and hydrogen infrastructure for local officials (*CaFCP supporting City of SF*)
- Feb 20–22 - WPMA, Las Vegas
- Apr 10–11 - CaFCP executive board/working group meeting, SoCal

Recent

- Dec 4 - CEC HRS Technical Requirements workshop, Sacramento
- Dec 5 - Cal State LA Hydrogen Station Industrial Advisory Board. Member: Keith
- Dec 5 - ASTM D03.14 Hydrogen and Fuel Cells Meeting (Hydrogen quality). Chair: Jennifer
- Dec 6 - CaFCP [Working Group](#) meeting, West Sacramento
- Dec 6 - CaFCP [Executive Board](#) meeting and conference call, West Sacramento
- Dec 14 - CEC Evaluation Criteria of HRS Applications workshop, Sacramento

SECTOR GROUPS

Automotive Group – Member Lead: M McClory, Staff Lead: J Gagliano

- Automotive Group members participated in CEC’s HRS Technical Requirements workshop on December 4 to help guide development of the next GFO HRS solicitation
- Automotive & SDO group members submitted consensus comments on HRS Technical Requirements to CEC docket number 17-HYD-02 to update the requirements listed in the previous CEC GFO-15- 605 solicitation
- Automotive Group members participated in CEC’s Evaluation Criteria of HRS Applications workshop on December 14 to help guide development of the next GFO HRS solicitation
- Automotive & SDO group members submitted consensus comments in response to the Alternative Funding Mechanisms and Evaluation Criteria of HRS Applications workshops to CEC docket number 17-HYD-02 to help guide development of the next GFO HRS solicitation

Government Group – Member Lead: G Vacin, Staff Lead: J Gagliano

- GO-Biz led on-going Station Confirmation Group calls to coordinate efforts to bring the next group of funded hydrogen stations to Open-Retail
- CEC held workshops in December and November to obtain stakeholder feedback regarding the next hydrogen station grant funding solicitation (anticipated Q2 2018, per AB8 report):
 - Nov 30 - HRS Alternative Funding Mechanisms workshop
 - Dec 4 - HRS Technical Requirements workshop
 - Dec 14 - Evaluation Criteria of HRS Applications workshop
- On December 28, the CEC and ARB publicly released the third annual *Joint Agency Staff Report on Assembly Bill 8: Assessment of Time and Cost Needed to Attain 100 Hydrogen Refueling Stations in California*. The report is available on the Energy Commission website at:
<http://www.energy.ca.gov/2017publications/CEC-600-2017-011/CEC-600-2017-011.pdf>

Station Developer/Operator Group – Member Lead: A Harris, Staff Lead: J Gagliano

- SDO Group members participated in CEC’s HRS Technical Requirements workshop on December 4 and Evaluation Criteria of HRS Applications workshop on December 14. See Automotive Group comments above for more details.

MHD Group (FCET & FCEB) – Member Lead: N Berry, Staff Lead: K Malone

- Low level of activities due to CaFCP’s budget reductions—publication of June FCET workshop revised recommendations on hold
- Staff participated in and provided input at the December 15 CARB public workshop to discuss the proposed innovative Clean Transit rulemaking

PROJECT TEAMS

Safety Codes & Standards – Member Lead: A Harris, Staff Lead: J Hamilton

- ISO/TC 197 Hydrogen Technologies: Plenary meeting held in Foshan, China December 7–8. Thirteen main Working Groups within the TC 197 working on documents ranging from station components to fuel quality. The largest WG, in terms of members, is the:
 - WG 24; ISO 19880-1 (Hydrogen Fueling Stations) document was developed for Draft International Standard (DIS) ballot to be presented at the Plenary meeting; expected to be completed in May 2018.
- ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells: Jennifer is the Chair, Christina Daniels of CA Dept. of Food and Ag, Division of Measurement Standards is the vice-chair. The committee held its second in-person meeting in Houston December 5-6. Inter Laboratory Studies for two ASTM methods: FTIR method, (ILS #851 for ASTM D7653-2010) and Continuous Wave Cavity Ring- Down method (ILS #1121 for ASTM D7941) were discussed and a subsequent call was held with a target start date of February, 2018. Air Gas is preparing the samples and the technical leads are developing the protocols for the participating labs. The D03.14 has also been requested to give input to the ISO/TC 158/Joint WG 7 on the Committee Draft (CD) 21087 document: Hydrogen Fuel- Analytical methods- Proton exchange membrane (PEM) fuel cell applications for road vehicles. This is a Joint Working Group with the ISO/TC 197; the convener is Martine Carré of Air Liquide. There is no US TAG on this topic and as such, the D03.14 has been asked to give input.

Vision 2030/Roadmap 2.0 – Member Lead: M Forrest, Staff Lead: C White/B Elrick

- After receiving feedback that the November draft document’s messages were not sufficiently focused, a small team of sector reps began reworking the draft. The team has held several meetings and is developing a more concise and targeted outline for moving forward. An updated draft is anticipated in February, with broader CaFCP review in March, in time for the April executive board meeting.

Government Affairs – Member Lead: S Baker, Staff Lead: K Malone

- Legislative outreach ramped down due, in part, to the end of the state legislative session. Contact with legislators, staff and NGOs continues on a case-by-case basis.
- December interactions with legislators included an inquiry from Congressman Mike Thompson’s (D-Napa) staff inquiry on behalf of a constituent about stations in the district.
- Planning outreach to select legislative offices in Sacramento on January 22, 24 and 25.

Legislative Outreach Metrics

Legislative Outreach	Legislators	Staff	NGOs
Q4 2017	10	18	0
Year to date	27	58	4

Outreach/Education – Member Lead: L Renz, Staff Lead: K Malone

- Preliminary discussions among staff are under way regarding a revamp of the CaFCP website. Discussions will extend to members.
- In partnership with the City of San Francisco and the Governor’s Office of Business and Economic Development staff is supporting two regional briefings (Jan 23 and 26) for local officials.
- Keith was interviewed by KPCC (NPR) car guru Sue Carpenter and John Rabe at South Pasadena station about fuel cell cars and hydrogen infrastructure.
- Assisting SunLine Transit with a tour of the facility on February 3 by fuel cell car drivers.

Web and Social Media Metrics

	Email List	Facebook followers	Twitter followers	LinkedIn followers	Website Visits
October 2017	10,900	2,831	4,031	923	12,059
November 2017	12,843	2,849	4,089	945	11,722
December 2017	11,244	3,013	4,089	1,000	11,114

HyPPO Report – Member Lead: A Harris, Staff Lead: J Gagliano

- Task Force Lead gave HyPPO presentation at the December 6 Working Group meeting
- Presentation addressed the following key questions:
 - How many FCEVs are deployed in California?
 - How many FCEVs can the existing network (31 stations) support?
 - Where should the next stations be located?
- Going forward this will be an annual report that CaFCP publishes to support and expand upon AB8 government reports; the first of which is to be completed in spring 2018 prior to midyear AB8 document release.

SOSS – Staff Lead: B Xiong, Member Lead: J Birdsall

- Completed station developer capability to directly add SOSS messages

H2 Market Activation – Member Lead: W Leighty, Staff Lead: J Gagliano

- Task force members led the efforts to develop the OEM/SDO consensus docket submittals CEC Docket No. 17-HYD-02 regarding the three recent CEC workshop focused on the next HRS funding solicitation (the Alternative Funding Mechanisms, HRS Technical Requirements, and Evaluation Criteria of HRS Applications workshops). See Automaker Group notes.



EVENTS/ACTIVITES | Staff Lead: J Contreras

UPCOMING	
Feb 14	CaFCP Government Affairs Committee
Feb 15	Q1 2018 UPDATE Webinar on hydrogen station network development in California, CaFCP HQ
Feb 20–22	Western Petroleum Marketers Association (WPMA), Las Vegas, NV
Feb 26–March 8	CARB workshops on Beneficiary Mitigation Plan
March 1	Electrify America submissions for California ZEV Investment Plans
Mar 7	ARFVTP 10-Year Anniversary Event - HOLD THE DATE! Potential test drive and static display, CEC building, Sacramento, CA
March 14	Working Group meeting, SoCal & NorCal (video and teleconference)
Apr 10–11	CaFCP executive board/working group meeting, SoCal
RECENT	
January 23 & 26	Regional Briefings (San Jose & San Francisco) on FCEVs and hydrogen infrastructure for local officials (<i>CaFCP supporting City of SF</i>)

SECTOR GROUPS

AUTOMOTIVE GROUP | Member Lead: M McClory | Staff Lead: J Gagliano

- Participated in the January 8 CEC Pre-Application Workshop regarding GFO-17-602 - Renewable Hydrogen Transportation Fuel Production Facilities and Systems.
- Participated in the January 17 CEC Business Meeting where Commissioners approved funding for the Hydrogen Safety Panel and GO-BIZ contracts as well as the four FirstElement hydrogen stations proposed in the November 2017 amended GFO-15-605 NOPA.
- Participated with Station Developer Group in a conference call on January 24 with CEC staff to provide clarification on industry’s HRS Technical Requirements docket submission for 17-HYD-02.

GOVERNMENT GROUP | Member Lead: G Vacin | Staff Lead: J Gagliano

- GO-Biz led on-going Station Confirmation Group calls to coordinate efforts to bring the next group of funded hydrogen stations to Open-Retail.
- CEC on January 8 held a Pre-Application Workshop regarding GFO-17-602 - Renewable Hydrogen Transportation Fuel Production Facilities and Systems.

- CEC held a Business Meeting on January 17 where Commissioners approved funding for the Hydrogen Safety Panel and GO-BIZ contracts as well as the four FirstElement hydrogen stations proposed in the November 2017 amended GFO-15-605 NOPA.
- CEC held a conference call on January 24 with Automotive and Station Developer Group members to obtain clarification on industry’s HRS Technical Requirements docket submission for 17-HYD-02.
- CEC and ARB staff initiated a series of informational interviews with automakers to better understand the process and thinking behind the OEM Group priority HRS location recommendations developed and published to help inform the CEC GFO process for awarding hydrogen station development grants.
- Governor Brown issued [Executive Order B-48-18](#) on January 26 setting new ZEV targets of 5 million ZEVs (BEVs and FCEVs) on California roadways by 2030 and 200 hydrogen refueling stations built by 2025. The proposed ZEV infrastructure program (for BEVs and FCEVs) allocates \$900 million for the 8-year program. The Governor also proposes \$200 million annually through 2025 for the purchase/lease of light-duty ZEVs through the Clean Vehicle Rebate Program.

STATION DEVELOPER/OPERATOR GROUP | Member Lead: A Harris | Staff Lead: J Gagliano

- Participated in the January 8 CEC Pre-Application Workshop regarding GFO-17-602 - Renewable Hydrogen Transportation Fuel Production Facilities and Systems.
- Participated in the January 17 CEC Business Meeting where Commissioners approved funding for the Hydrogen Safety Panel and GO-BIZ contracts as well as the four FirstElement hydrogen stations proposed in the November 2017 amended GFO-15-605 NOPA.
- Participated with Automotive Group members in a conference call on January 24 with CEC staff to provide clarification on industry’s HRS Technical Requirements docket submission for 17-HYD-02.

MHD GROUP (FCET & FCEB) | Member Lead: N Berry | Staff Lead: K Malone

- SunLine Transit hosted a West Coast Center of Excellence Workshop for CA transit agencies and stakeholders on the topic of zero-emission bus technology on January 11 and 12.
- Low level of activities due to CaFCP’s budget reductions—publication of June FCET workshop revised recommendations on hold.

PROJECT TEAMS

SAFETY CODES & STANDARDS | Member Lead: A Harris | Staff Lead: J Hamilton

- **NFPA 2:** First draft ballot opened; due on the 31st of January
- **ICC:** comments to the IFC due on the 8th of January
- **ISO/TC 197 WG 24:** ISO DIS 19880-1 *Gaseous hydrogen — Fueling stations — Part 1: General requirements* ballot opened (due March 5th)
- **SAE J2600:** Document open for revision, N Bouwkamp sponsor. Accepting technical proposals for revision of document

- **ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells:**

Inter Laboratory Studies for two ASTM methods: FTIR method, (ILS #851 for ASTM D7653-2010) and Continuous Wave Cavity Ring- Down method (ILS #1121 for ASTM D7941) progressing with a target start date of February 2018. Air Gas is preparing the samples and the technical leads are developing the protocols for the participating labs.

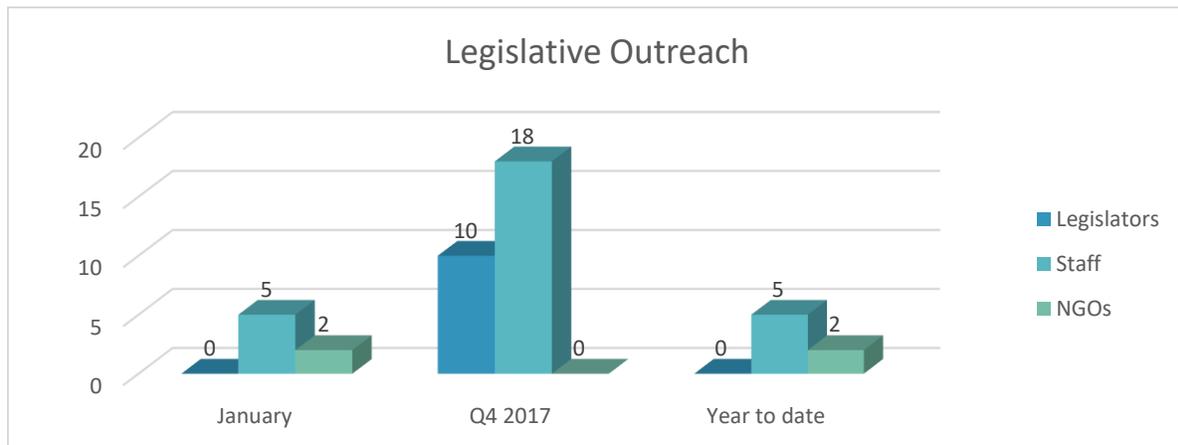
The D03.14 was not able to give input to the ISO/TC 158/Joint WG 7 on the Committee Draft (CD) 21087 document: Hydrogen Fuel- Analytical methods- Proton exchange membrane (PEM) fuel cell applications for road vehicles as no draft was provided

ROADMAP 2.0 | Member Lead: M Forrest | Staff Lead: C White/B Elrick

- Team has developed updated working outline and begun populating sections with primary themes and messages. Focus has been on ensuring previous workshop input is honored, priority messages are clear and succinct, includes portfolio of actionable ideas without advocacy, and a focus on enabling a self-sustaining market in California. Update is planned for February steering team call.

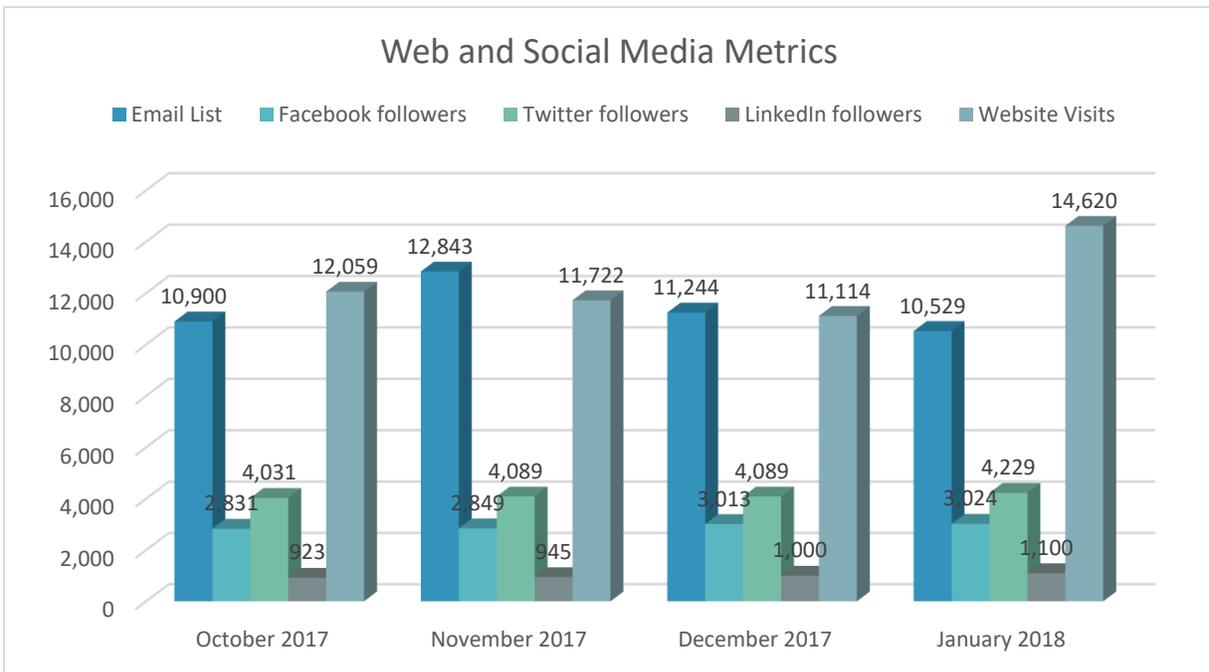
GOVERNMENT AFFAIRS | Member Lead: S Baker | Staff Lead: K Malone

- Capitol outreach on January 24 to various legislative offices and committees as well as NGOs: Republican policy consultants, Assembly Transportation Committee, Senate Transportation and Housing Committee, Coalition for Clean Air and Environmental Defense Fund.



OUTREACH/EDUCATION | Member Lead: L Renz | Staff Lead: K Malone

- Staff have prepared review of 2018 participation in key events, identifying which are likely, unnecessary or unlikely, and possible only with member participation or co-funding.
- Staff began interviews to determine stakeholder needs regarding CaFCP website revamp. Discussions will extend to members.
- Staff attended Western Riverside Clean Cities Coalition Transportation Summit, SunLine unveiling of new fuel cell bus and tour of SunLine by Mirai drivers.



HYPPO REPORT | Member Lead: A Harris | Staff Lead: J Gagliano

- Task Force Lead and CaFCP staff reviewed the December 2018 *Joint Agency Staff Report on AB 8: 2017 Annual Assessment of Time and Cost Needed to Attain 100 Hydrogen Refueling Stations in California* in preparation for developing the 2018 HyPPO Report update to be published this Spring.
- Going forward CaFCP expects to publish a HyPPO update annually to support and expand upon government AB 8 reports; the first of which is to be completed in spring 2018 prior to the mid-year AB 8 document release.

SOSS | Member Lead: J Birdsall | Staff Lead: B Xiong

- Continued ongoing SOSS upkeep; no new developments.

H2 MARKET ACTIVATION | Member Lead: W Leighty | Staff Lead: J Gagliano

- Task force members held several meetings in January to further develop the portfolio of market mechanism policy proposals that will be needed in addition to the existing CEC GFO hydrogen station funding process to meet the ambitious station network targets of both the Governor’s January 2018 Executive Order and the upcoming CaFCP Roadmap 2.0.
- The Market Activation Team has a planned meeting in February with staff of the Governor’s Office of Business and Economic Development to further refine these policy proposals and to help develop an outreach strategy to develop support for them among appropriate stakeholders.



EVENTS/ACTIVITIES | Staff Lead: J Contreras

UPCOMING

Mar 7	ARFVTP 10-Year Anniversary Event – Technology showcase & celebration event, California State Capital, Sacramento, CA
Mar 14	Working Group meeting, SoCal – Honda, Torrance
Apr 10–11	CaFCP Executive Board/Working Group meeting, SoCal – SCAQMD
April 19-21	Shell’s Make the Future Festival, Sonoma Raceway

RECENT

Feb 14	CaFCP Government Affairs Committee
Feb 15	Q1 2018 Hydrogen station network development in California webinar, CaFCP HQ, CA – total of 101 webinar attendees
Feb 20–22	Western Petroleum Marketers Association (WPMA), Las Vegas, NV – CaFCP co-exhibited with Comdata
Feb 27	Association of Women in Water, Energy and the Environment (AWWEE) lunch and presentation at CaFCP HQ – CaFCP staff presentation (20 attendees)
Feb 26–Mar 8	CARB workshops on Beneficiary Mitigation Plan
Mar 1	Electrify America submissions for California ZEV Investment Plans
Mar 1	Woodside High Environmental Club/Outreach Event, Woodside, CA
Mar 1	United Hydrogen – Investment Group tour at First Element Station, South San Francisco, CA

SECTOR GROUPS

AUTOMOTIVE GROUP | Member Lead: M McClory | Staff Lead: J Gagliano

- Group members met on February 20 to discuss a potential update to SOSS to incorporate display of Shell NPB & other future low-performance stations under a new proposed category “Open Limited Performance Retail Stations.”
- Group members participated in the February 21 CEC Business Meeting during which the commissioners approved funding for GFO-17-601, providing O&M funding support to hydrogen refueling stations.

GOVERNMENT GROUP | Member Lead: G Vacin | Staff Lead: J Gagliano

- GO-Biz led ongoing Station Confirmation Group calls to coordinate efforts to bring the next group of funded hydrogen stations to Open-Retail. OEMs completed confirmation testing and Linde's Mountain View station came online as the 32nd Open-Retail station in the network. Group members also discussed a potential pathway to bring the Newport Beach and Cal State LA stations onto SOSS.
- CEC held a business meeting on February 21 during which the commissioners approved funding for GFO-17-601 that provides O&M funding support to hydrogen refueling stations that did not receive O&M support or received partial support of the maximum of \$300,000 available under PON-13-607. Awardees include Air Liquide, FirstElement Fuel, and Ontario CNG.
- CEC and ARB staff continued a series of informational interviews with automakers to better understand the process and thinking behind the OEM Group's priority HRS location recommendations developed and published to help inform the CEC GFO process for awarding hydrogen station development grants.
- On February 26, ARB kicked off a series of six public workshops across the state to obtain comments about implementation of the Volkswagen Environmental Mitigation Trust for California.

STATION DEVELOPER/OPERATOR GROUP | Member Lead: A Harris | Staff Lead: J Gagliano

- Group members participated in the February 21 during which the commissioners approved funding for GFO-17-601 that provides O&M funding support to hydrogen refueling stations that did not receive O&M support or received partial support of the maximum of \$300,000 available under PON-13-607. Awardees include Air Liquide, FirstElement Fuel, and Ontario CNG.
- Group members participated in the February 26 ARB public workshop in Sacramento about implementation of the Volkswagen Environmental Mitigation Trust for California.

MHD GROUP (FCET & FCEB) | Member Lead: N Berry | Staff Lead: K Malone

- **SAE** – CaFCP staff presented an update on a revision of SAE J2600 at SAE in-person meeting in Torrance. (N Bouwkamp)
- **CHBC Transit Sector Action Group** – CaFCP staff participated. (N Bouwkamp)
- Group initiatives reactivated due to SCAQMD and Toyota 2018 CaFCP Plus contributions – work in progress for 2018 publication of FCET Action Plan (per May 2017 industry workshop recommendations).

PROJECT TEAMS

SAFETY CODES & STANDARDS | Member Lead: A Harris | Staff Lead: J Hamilton

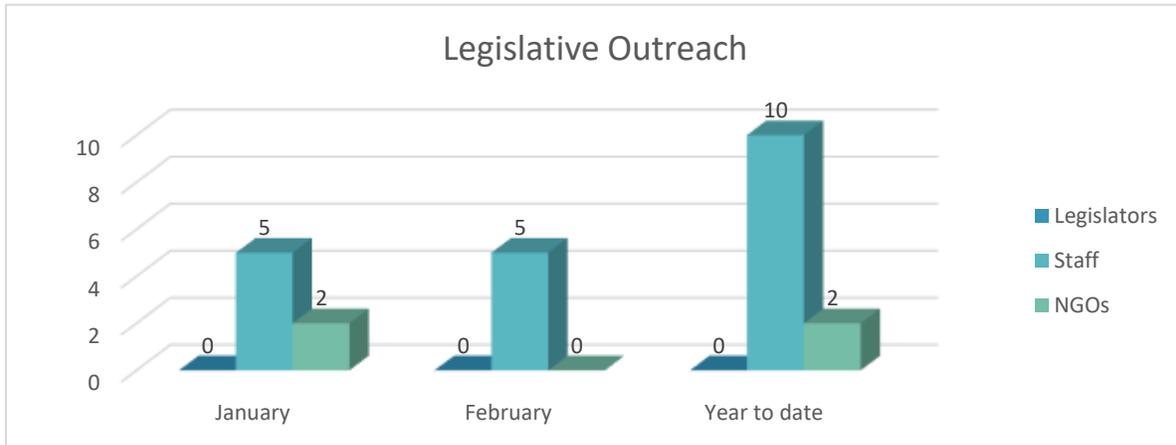
- **CSA HGV 4.3:** meetings to commence for the completion of a document to harmonize with the 2016 SAE J2601.
- **NFPA 2 and 55:** The first draft of both NFPA 2 and NFPA 55 are posted and are open for public comment. Public comment is open until May 9. Two separate second draft meetings are to be held, one for NFPA 55 and the other for NFPA 2. The NFPA 55 meeting is tentatively scheduled for July 24 and 25, and the NFPA 2 meeting is scheduled for August 6-10. (<https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=2&tab=nextedition>)
- **IFC:** 2018 version is currently in effect; hearings for 2021 version to be held in April.
- **ISO/TC 197 WG 24:** ISO DIS 19880-1 *Gaseous hydrogen — Fueling stations — Part 1: General requirements* – March 28 meeting to determine the U.S. position and comments
- **ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells:** Inter Laboratory Studies for two ASTM methods: FTIR method, (ILS #851 for ASTM D7653-2010) and Continuous Wave Cavity Ring- Down method (ILS #1121 for ASTM D7941) needs Air Gas to prepare the samples and send out to labs.
- **SAE J2600 Compressed Hydrogen Surface Vehicle Fueling Connection Devices:** Document open for revision, N Bouwkamp sponsor. Accepting technical proposals for revision of document
- **SAE J2601 Fueling Protocols for Light Duty and Medium Duty Gaseous Hydrogen Surface Vehicles:** under revision; February in-person meeting in Torrance; goal is for a draft document by end of March.
- **SAE J2601-4 Ambient Temperature Fixed Orifice Fueling:** document under development; all comments due October 2018.
- **SAE J2579 Standard for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles:** Open for another round of voting (to reflect the numbers of comments and changes from the initial ballot). Closes March 20th.

VISION 2030/ROADMAP 2.0 | Member Lead: M Forrest | Staff Lead: C White/B Elrick

- The team held several meetings and is developing an outline for the document. Each group member received writing assignments and M Forrest updated the Steering Team by phone. Target for publication is June 2018.

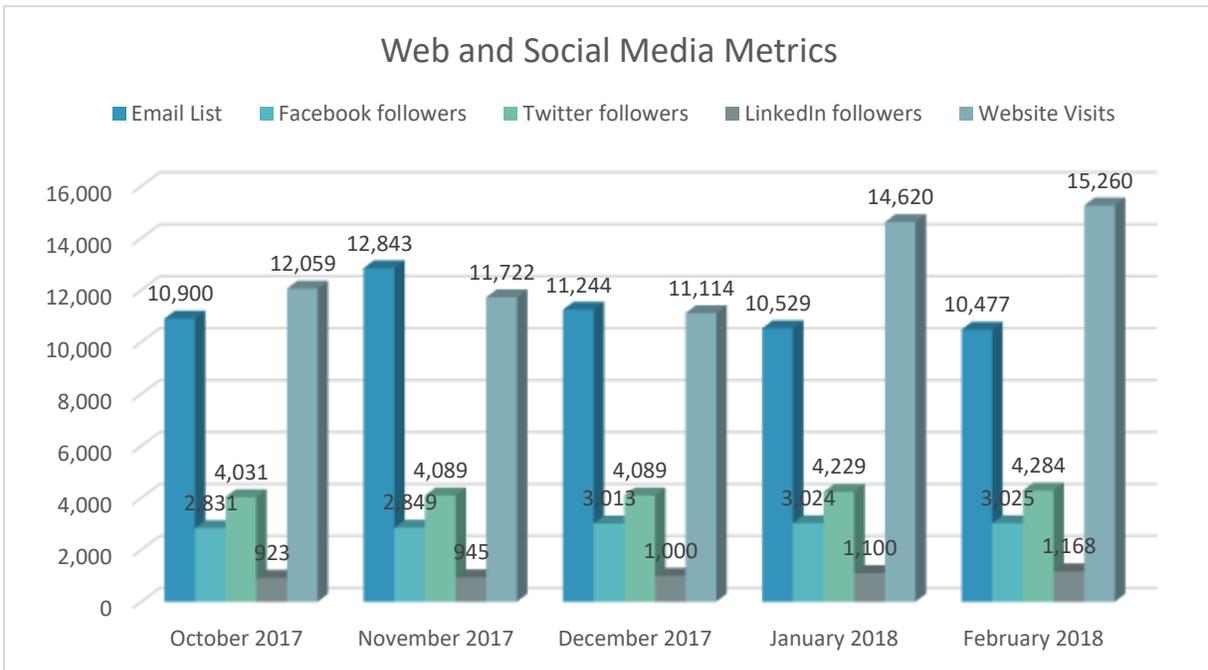
GOVERNMENT AFFAIRS | Member Lead: S Baker | Staff Lead: K Malone

- No legislative meetings in February. District staff of legislators (Assembly Member Berman, State Senator Hill, Representative Eshoo) that represent Mountain View were alerted to the opening of the hydrogen station and briefings were offered.



OUTREACH/EDUCATION | Member Lead: L Renz | Staff Lead: K Malone

- Informal meetings with stakeholders, including staff from Santa Barbara Air Pollution Control District.
- Initial interviews with staff and stakeholders regarding CaFCP website revamp completed.
- Staff is exploring possibility of ribbon cutting for Mountain View station.



HYPPO REPORT | Member Lead: A Harris | Staff Lead: J Gagliano

- Going forward this will be an annual report that CaFCP publishes to support and expand upon government AB 8 reports; the first of which is to be completed in Spring 2018 prior to the mid-year AB 8 document release.
- Team Lead and CaFCP staff reviewed the December 2018 *Joint Agency Staff Report on AB 8: 2017 Annual Assessment of Time and Cost Needed to Attain 100 Hydrogen Refueling Stations in California* in preparation for presentation at the upcoming March 14 CaFCP Working Group meeting and for developing the 2018 HyPPO Report update to be published this Spring.

SOSS | Member Lead: J Birdsall | Staff Lead: B Xiong

- Per February 20 OEM Group meeting, CaFCP staff is developing mock ups and definitions for incorporating a new SOSS category “Open Limited Performance Stations” to incorporate anticipated low-performance hydrogen stations like Newport Beach and Cal State LA.
- Station developers and operators are actively adding their own station messages to SOSS.
- Staff polled participants on the February hydrogen station update webinar about display options for stations with limited hours. Participants chose the design that shows an empty gray box during closed hours and always show the open hours on the home page.

H2 MARKET ACTIVATION | Member Lead: W Leighty | Staff Lead: J Gagliano

- Team members held several meetings in February to further develop the portfolio of market mechanism policy proposals that will be needed in addition to the existing CEC GFO hydrogen station funding process to meet the station network targets in the Governor’s January 2018 Executive Order and upcoming CaFCP Vision 2030/Roadmap 2.0.
- The team met on February 12 with GO-Biz staff to gain further insight about the hydrogen and fuel cell goals in the January 2018 Governor Brown ZEV Executive Order.



EVENTS/ACTIVITIES | Staff Lead: J Contreras

UPCOMING	
Apr 10–11	CaFCP Executive Board/Steering Team meeting, SoCal – SCAQMD
Apr 19-21	Shell’s Make the Future California, Sonoma Raceway
Apr 14	FCEV driver educational event at Caltech, Pasadena, CA
Apr 28	Woodside/Portola Valley Earth Day Event
Apr 30	ACT Expo, Long Beach, CA
May 22	Mountain View hydrogen station ribbon cutting
RECENT	
Mar 20	Air Liquide Anaheim Station 10,000 Fills Celebration
Mar 15	CEC ARFVTP 2018-19 Investment Plan Advisory Committee Meeting - SCAQMD
Mar 14	Working Group meeting, Honda, Torrance
Feb 26–Mar 8	CARB workshops on Beneficiary Mitigation Plan
Mar 7	ARFVTP 10-Year Anniversary Event – Technology showcase & celebration event, California State Capital, Sacramento, CA
Mar 1	Electrify America submissions for California ZEV Investment Plans
Mar 1	Woodside High Environmental Club/Outreach Event, Woodside, CA
Mar 1	United Hydrogen – Investment Group tour at First Element Station, South San Francisco, CA

SECTOR GROUPS

AUTOMOTIVE GROUP | Member Lead: M McClory | Staff Lead: J Gagliano

- Group members participated in the March 15 CEC ARFVTP 2018-19 Investment Plan Advisory Committee meeting at SCAQMD; \$92 million proposed for hydrogen refueling infrastructure.
- Group members participated in the ARB Public Workshops for the Volkswagen Environmental Mitigation Trust for California.

GOVERNMENT GROUP | Member Lead: G Vacin | Staff Lead: J Gagliano

- GO-Biz led ongoing Station Confirmation Group calls to coordinate efforts to bring the next group of funded hydrogen stations to Open-Retail. OEMs completed confirmation testing and FirstElement's Thousand Oaks station came online as the 33rd Open-Retail station in the network. Group members also discussed a potential pathway to bring the Newport Beach and Cal State LA stations onto SOSS under a proposed "Open Limited Performance Retail Station" category.
- CEC held a ARFVTP Advisory Committee meeting on the 2018-19 Investment Plan at SCAQMD in Diamond Bar. CEC is proposing \$92 million for the next round of funding for hydrogen refueling stations.
- Through March 8, ARB held a series of six public workshops across the state to obtain comments about implementation of the Volkswagen Environmental Mitigation Trust for California.

STATION DEVELOPER/OPERATOR GROUP | Member Lead: A Harris | Staff Lead: J Gagliano

- Group members participated in the March 15 CEC ARFVTP 2018-19 Investment Plan Advisory Committee meeting at SCAQMD; \$92 million proposed for hydrogen refueling infrastructure.
- Group members participated in the ARB Public Workshops for the Volkswagen Environmental Mitigation Trust for California.

MHD GROUP (FCET & FCEB) | Member Lead: N Berry | Staff Lead: K Malone

- ACT Expo –N Bouwkamp and K Malone to attend ACT Expo in Long Beach April 30-May 3.
- Group initiatives reactivated due to SCAQMD 2018 "CaFCP Plus" contribution. Work in progress for 2018 publication of *FCET Action Plan* (per May 2017 industry workshop recommendations).

PROJECT TEAMS

SAFETY CODES & STANDARDS | Member Lead: A Harris | Staff Lead: J Hamilton

- **CSA HGV 4.3:** meetings to commence for the completion of a document to harmonize with the 2016 SAE J2601.
- **NFPA 2 and 55:** The first draft of both NFPA 2 and NFPA 55 are posted and are open for public comment. Public comment is open until May 9. Two separate second draft meetings are to be held, one for NFPA 55 and the other for NFPA 2. The NFPA 55 meeting is tentatively scheduled for July 24 and 25, and the NFPA 2 meeting is scheduled for August 6-10. (<https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=2&tab=nextedition>)
- **IFC:** 2018 version is currently in effect; hearings for 2021 version to be held in April.
- **ISO/TC 197 WG 24:** ISO DIS 19880-1 *Gaseous hydrogen — Fueling stations — Part 1: General requirements* – March 28 meeting to determine the U.S. position and comments resulted in "Approve with Comment"

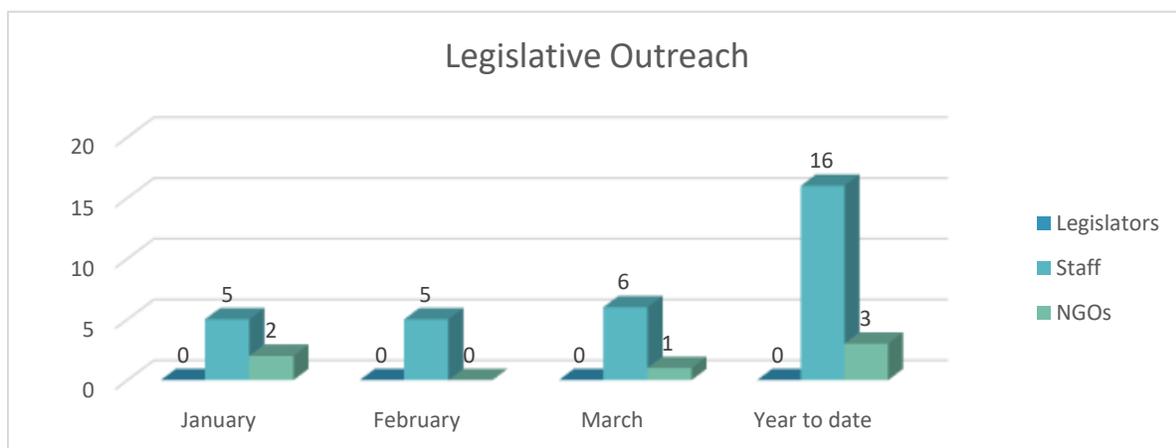
- **In person meeting: July 10th-12th, 2018 at Shell Deutschland Oil GmbH Hamburg, Germany** to address comments from the recent ballot.
- **ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells:** Inter Laboratory Studies for two ASTM methods: FTIR method, (ILS #851 for ASTM D7653-2010) and Continuous Wave Cavity Ring- Down method (ILS #1121 for ASTM D7941) needs Air Gas to prepare the samples and send out to labs.
- **SAE J2600 Compressed Hydrogen Surface Vehicle Fueling Connection Devices:** Document open for revision, N Bouwkamp sponsor. Accepting technical proposals for revision of document
- **SAE J2601 Fueling Protocols for Light Duty and Medium Duty Gaseous Hydrogen Surface Vehicles:** under revision; February in-person meeting in Torrance; goal is for a draft document by end of March.
- **SAE J2601-4 Ambient Temperature Fixed Orifice Fueling:** document under development; all comments due October 2018.
- **SAE J2579 Standard for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles:** goal is to publish the 2018 version prior to the next GTR 13 meeting in June.

ROADMAP 2.0 | Member Lead: M Forrest | Staff Lead: C White/B Elrick

- The team developed an outline and main ideas. M Forrest to provide updates at steering team calls and executive board meeting. Target for publication is June 2018.

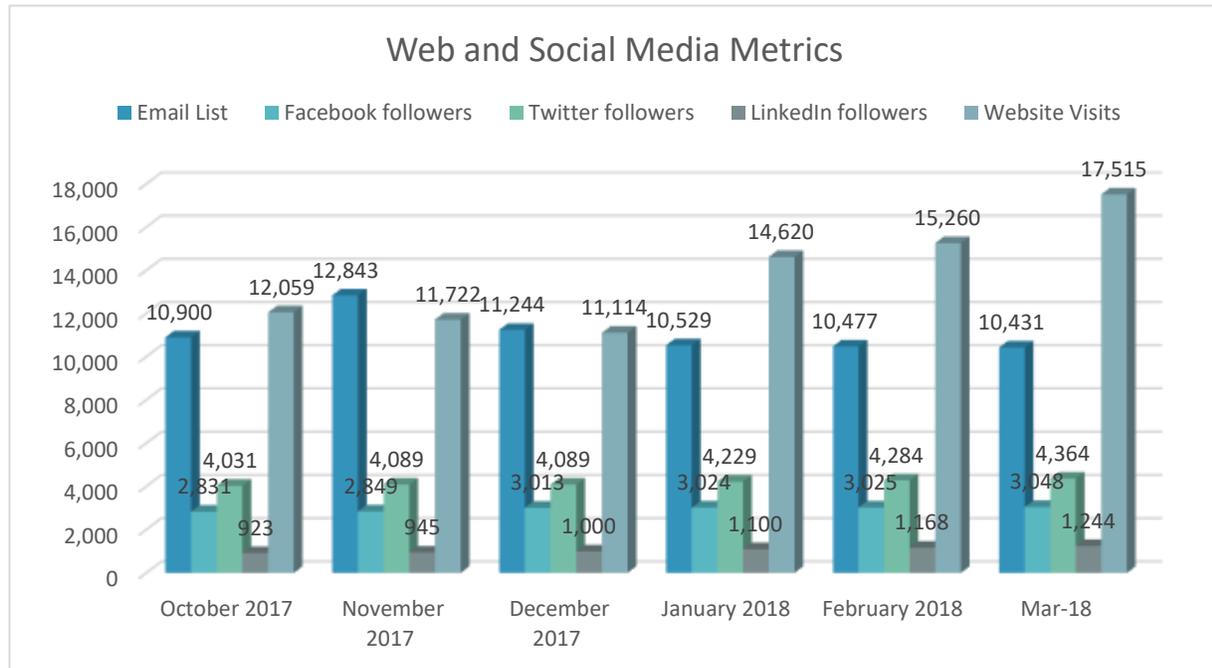
GOVERNMENT AFFAIRS | Member Lead: S Baker | Staff Lead: K Malone

- Meetings with district offices of Assembly Member Wendy Carillo (D-Echo Park) and Assembly Member Al Muratsuchi (D-Torrance).
- District staff of legislators who represent Caltech (Assembly Member Chris Holden and State Senator Anthony Portantino) were alerted to the FCEV driver educational event at the university. Briefing was set up with Assembly Member's office as a result of this contact.



OUTREACH/EDUCATION | Member Lead: L Renz | Staff Lead: K Malone

- Mountain View ribbon cutting committee established; CaFCP staff designated as event managers; date set for May 22.
- Staff presented to San Mateo City and County Association of Government’s Resource Management and Climate Protection Committee.



HYPPO REPORT | Member Lead: A Harris | Staff Lead: J Gagliano

- First annual report to be completed in spring 2018 prior to the mid-year AB 8 document release. First draft is expected by the end of April, with publication expected in early May.
- Team Lead Aaron Harris presented an update on the report at the March 14 CaFCP Working Group meeting

SOSS | Member Lead: J Birdsall | Staff Lead: B Xiong

- A draft matrix has been developed for describing stations under a proposed new SOSS category “Open Limited Performance Stations” to incorporate anticipated low-performance hydrogen stations like Newport Beach and Cal State LA.
- Station developers and operators are actively adding their own station messages to SOSS.
- Staff polled participants on the February hydrogen station update webinar about display options for stations with limited hours. Participants chose the design that shows an empty gray box during closed hours and always show the open hours on the home page. Development has been completed and is pending final Q&A before pushing to the SOSS production site.

H2 MARKET ACTIVATION | Member Lead: W Leighty | Staff Lead: J Gagliano

- Team members held several meetings in March to further develop the portfolio of market mechanism policy proposals that will be needed in addition to the existing CEC GFO hydrogen station funding process to meet the station network targets in the Governor's January 2018 Executive Order and Roadmap 2.0.
- Based on industry/government stakeholder meetings, team members revised its joint LCFS docket submittal letter to ARB regarding the proposed infrastructure pathway addition to the program to help accelerate private investment in larger hydrogen stations for submission to ARB prior to the upcoming April 27 ARB Board Meeting.