

BOARD MEETING DATE: July 12, 2019

AGENDA NO. 26

REPORT: Receive and File California Fuel Cell Partnership Executive Board Meeting Agenda and Activity Update

SYNOPSIS: This report provides the California Fuel Cell Partnership Executive Board Agenda for the meeting held April 4, 2019, and provides the Activity Update for the first quarter of 2019.

COMMITTEE: Technology, June 21, 2019, Reviewed

RECOMMENDED ACTION:  
Receive and file.

Wayne Nastri  
Executive Officer

MMM:NB:JE:LHM

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The next California Fuel Cell Partnership (CaFCP) Executive Board meeting is scheduled for October 16, 2019 in Sacramento.

*The California Fuel Cell Revolution* can be found at <https://cafcp.org/content/home-top-story>, and additional information about the CaFCP can be found at <http://www.fuelcellpartnership.org>.

**Attachments**

- 1) CaFCP April 4, 2019 Executive Board Meeting Agenda
- 2) CaFCP First Quarter Activity Update (January-March 2019)

**April 4 CaFCP Public Forum Agenda**  
**California Fuel Cell Revolution—Advancing the California Market**

American Honda Motor Co, Inc.  
1919 Torrance Blvd., Torrance, CA 90501  
Building 100-1E13

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**15 minutes**

9:00am–9:15am  
CaFCP Chair,  
O Hoefelmann

**1. Welcome and opening remarks**

Welcome comments by chair and overview of the spring board agenda

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**60 minutes**

9:15am–10:15am  
CaFCP, B Elrick

**2. Progress and Visibility for the Fuel Cell Revolution**

2019 should be a transformative year for hydrogen and fuel cells, and the board will hear about progress from the three priority areas for achieving the 2030 vision identified during the October board meeting, changes related to the new governor's administration, and an opportunity to dramatically increase awareness for hydrogen and fuel cells in California. The board will consider a proposal to showcase CaFCP's 20<sup>th</sup> anniversary and increase awareness for the organization's activities and the commercial rollout.

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**30 minutes**

10:15am–10:45am

**Break**

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**90 minutes**

10:45am–12:15pm  
CaFCP, B Elrick

**3. Enabling the Market through Expanded Communications and Outreach**

Through the development of the 2030 vision and priority team discussions it has become clear significantly greater awareness, and support, is needed for successful scaled deployment of hydrogen infrastructure and fuel cell vehicles. The board will consider a proposal for an expanded 2019 CaFCP outreach strategy to highlight the market readiness of FCEVs and develop the self-sustaining market envisioned in the 2030 Fuel Cell Revolution. The board will discuss and determine action on activities that are currently outside the 2019 scope and budget.

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**75 minutes**

12:15pm–1:30pm

**Lunch**

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**60 minutes**

1:30pm–2:30pm  
CaFCP, B Elrick

**4. Impact Beyond California**

CaFCP members have discussed the need to spread California's experience and success beyond the borders to achieve full market potential. CaFCP and members have been working on expanded collaboration activities and will present updates and recommendations for additional activities with H2USA, other western states and global organizations.

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**90 minutes**

2:30pm–4:00pm

CaFCP,  
N Bouwkamp**5. Market Introduction and Expansion for Heavy Duty Applications**

Heavy-duty FC buses are nearing market competitiveness and FC trucks are entering pilot projects and showing great promise. Market opportunity awareness among stakeholders and hydrogen infrastructure development could make or break the successful deployment of this important technology application. The board will hear a proposal on the opportunities, needs and potential strategies for trucks and buses, and provide direction for CaFCP's role in these applications. The board will discuss and determine action on activities that are currently outside the 2019 scope and budget.

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**30 minutes**

4:00pm–4:30pm

**Break****20 minutes**

4:30pm–4:50pm

CaFCP, B Elrick

**6. CaFCP Executive Board Business Meeting**

- Oct 2018 meeting decisions and assignments
  - Member updates
  - Public comment period
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**10 minutes**

4:50pm–5:00pm

CaFCP Chair,  
O Hoefelmann**8. Closing remarks**

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**\* Public comment period:** The public comment period provides an opportunity for members of the public to address the CaFCP Executive Board on subjects related to the mission and activities 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. This facility is accessible to persons with disabilities. Deadline for requesting ADA modification is **April 3, 2019**. Meeting materials posted at [www.caftp.org](http://www.caftp.org).

## EVENTS/ACTIVITIES | Staff Lead: J Contreras

## UPCOMING

JAN 4	Hydrogen: Energy & Supply Western Regional Summit SLC, UT (B. Elrick; panel session)
JAN 9	Grant Funding Opportunity (GFO-18-605) Zero-Emission Vehicle and Zero-Emission Vehicle Infrastructure Manufacturing (Webex) Sacramento, CA CaFCP staff
JAN 15	JX Research and HySUT Meeting, CaFCP, HQ (B.Elrick)
JAN 17	Clean Fuels Advisory Group 2019 Plan Update, SCAQMD, Diamond Bar, CA (K Malone)
JAN 23	NJ Fuel Cell Coalition meeting, GO Biz, Sacramento (J Milliken, J Baronas, G Achtelik, A Martinez, T Eckerle, G Vacine, B Elrick)
JAN 30	City of SF H2 and FC Neighborhood Workshop, SF, CA (J. Contreras and J. Hamilton)
FEB 4-7	SPI Northeast, Boston MA (K. Malone)
FEB 7	Mass DOE Hydrogen Briefing, Boston, MA (K. Malone and Air Liquide)
FEB 6-7	Zero-Emission Bus Technology Showcase, (ARB Buidling, Sacramento, CA (CaFCP staff)
FEB 6	ARFVTP Webinar, CEC Building, Sacramento, CA (CaFCP staff)
FEB 5-6	SAE Meetings, Torrance, CA (N. Bouwkamp and J. Hamilton)
FEB 11	CEC - LD H2 Infrastructure Workshop, CEC Building, Sacramento, CA (CaFCP staff)
FEB 13	CaFCP Working Group, CaFCP HQ, West Sacramento, CA (CaFCP staff)
FEB 14	CaFCP ST Conference Call Meeting, (B. Elrick)
FEB 14	CaFCP 2019 Q1 Station Webinar, CaFCP HQ, West Sacramento, CA (CaFCP staff)
FEB 19-21	SAE Hybrid and Electric Vehicle Symposium, Anaheim, CA (B. Elrick)
FEB 21	CARB ZEV Airport Shuttle Hearing, ARB Building, Sacramento, CA (CaFCP staff)
FEB 25-26	EUEC (Energy Utility & Environment Conf, San Diego, CA (J. Contreras and K. Malone)
FEB 28- MAR 2	FC Expo Japan, Tokyo, Japan (Keynote Speaker B. Elrick)
FEB 28	Woodside High School Environment/Business Symposium, Woodside, CA (J. Contreras)
MAR. 6 - 7	West Coast Center of Excellence in Zero Emission Technology Workshop, Thousand Palms, CA (K. Malone and D. Park)
MAR. 7	Center for Hydrogen Safety Webinar, CaFCP HQ, West Sacramento, CA (J. Hamilton and members)
MAR. 7-8	CARB EB Meeting – Toyota Mirai Display, Sacramento, CA (J. Contreras)
MAR. 11-13	CERAWeek 2019, Houston, TX (B. Elrick)
MAR. 18-19	3 Revolutions Summit, UC Davis (B. Elrick)

MAR 19-20	CARB HD Showcase/2030 Summit, Sacramento CA (N Bouwkamp, B Elrick)
MAR. 21	California Foundation on the Environment and the Economy, CaFCP HQ, West Sacramento, CA (B. Elrick and J. Contreras)
MAR. 25-26	Stanford – Hydrogen Stakeholder Meeting, Stanford University, Palo Alto, CA (D. Park)
<b>RECENT</b>	
NOV 29- DEC 9	LA Auto Show, Los Angeles
DEC 3 – 6	ISO/TC 197 Plenary and WG Meeting, (J Hamilton) Vancouver, B.C. CANADA
DEC 4 –5	Workshop on the Update to the Three-Year Plan for Light Duty Vehicle and Transportation Equity Investment, CARB, El Monte, CA (D. Park)
DEC 5	Scandria2Act Road Show (K. Malone), Norway
DEC 10	CARB HD Advanced Technology Incentives Public Work Group, CARB, Sacramento, CA
DEC 11	STEPS Fall Symposium, UC Davis, CA (B. Elrick)
DEC 12	CaFCP WG Meeting, CaFCP HQ, West Sacramento, CA
DEC 19	Korean Electric Power Company Delegation, CaFCP HQ (B. Elrick)

## SECTOR GROUPS

### **AUTOMOTIVE GROUP** | Member Lead: M McClory | Staff Lead: D Park

- The Group developed, approved and published OEM 2019 recommendations “H2 Station Priority List”. The updated recommendation letter is published on the CaFCP website.
- The Group participated in the development and submission of two response letters to the CEC’s Draft GFO 18-HYD-04.

### **GOVERNMENT GROUP** | Member Lead: G Vacin | Staff Lead: B Xiong

- The Station Confirmation Group discussed next steps to complete commissioning of the Cal State LA, Woodside, and Burbank. Please refer to the Go-Biz SmartSheet for details.
- Go-Biz and CEC met to review and update projected open dates; GO-Biz reviewed and finalized the dates with the Station Confirmation Group during the December meeting.
- HyStEP was offline for calibration in December 2018.
- 3 stations were set to Open-retail: Citrus Heights, Palo Alto, LAX
- About 14 stations are expected to open in 2019.

### **STATION DEVELOPER/OPERATOR GROUP** | Member Lead: A Harris | Staff Lead: D Park

- Staff coordinated responses to the CEC Draft GFO 2018-HYD-04.

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

- Staff attended the CARB Board hearing on Friday December 14 regarding the topic of the Innovative Clean Transit regulation (adopted 12-0). Provided public comments indicating need to:

- Equally treat/consider fuel cells and battery vehicle technology
- Dedicate funding to implement HD ZEV fueling infrastructure (both for H2 and DCFC)
- Consider a dedicated GO-Biz person that can support HD ZEV infrastructure implementation.
- Staff continued the drafting of an HD H2 infrastructure fact sheet for outreach purposes to decision makers based on industry input submitted for this purpose.

## PROJECT TEAMS

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

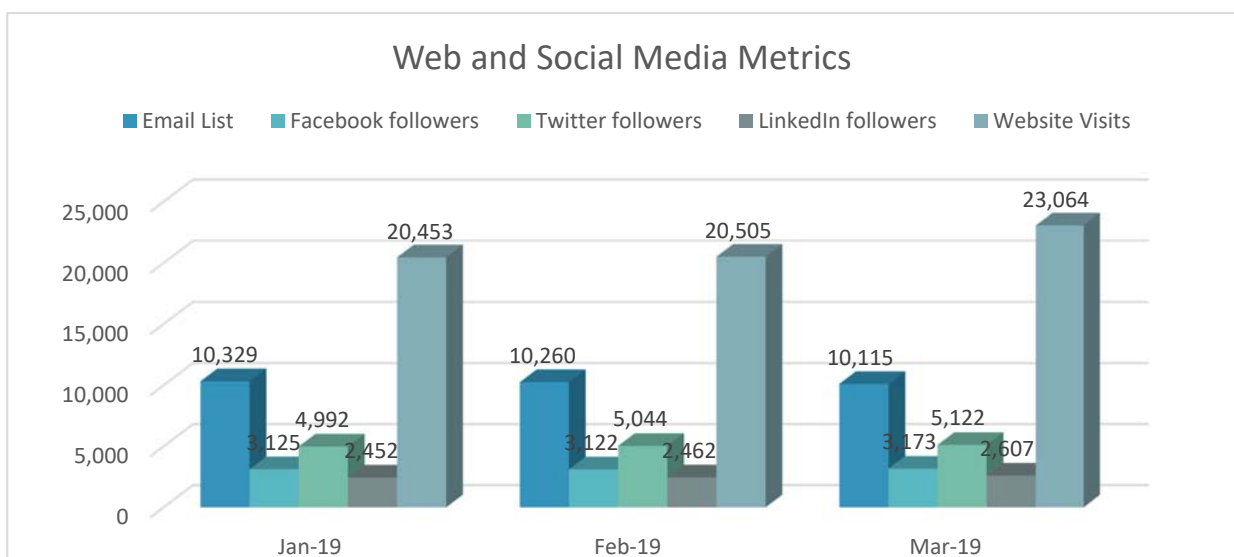
- **CSA Group:**
  - CSA HGV 4.1 (dispensers) will meet again Apr. 10 to discuss the Process Control proposal before going out for TSC review.
  - CSA/ANSI HGV 4.3-2019, *Test methods for hydrogen fueling parameter evaluation* to go to TSC review and then to TC ballot in Q2. Once complete, and the 2019 SAE J2601 is published, HGV 4.3 will be re-opened for harmonization.
  - CSA HGV 4.9 (stations) no further meetings; will go out for Industry Review in Q2
  - The Hydrogen Transportation Technical Committee and the HGV 4.1, 4.3 and 4.9 TSCs will meet at the CSA Group Annual Conference in Ottawa, Ontario, Canada in June, 2019.
- **NFPA 2:**
  - The Second Draft report available as of March 13
  - Expected date of availability for reference June, 2019 (“issued” by NFPA)
- **IFC/CFC:**
  - Ca Fire Code has adopted language for “Mobile Fueling”
  - A small group to discuss next steps for proposals to the next fire code on this topic, and address an interim solution with CA Office of the State Fire Marshal
  - Importance: the adopted language could potentially be restrictive to the mobile fuelers (i.e. HF 150’s and the like) that are currently used.
- **ISO/TC 197:**
  - **WG 24:** ISO/DIS 19880-1, *Gaseous hydrogen — Fueling stations — Part 1: General requirements*-. The Final Draft International Standard (FDIS) expected to go to ballot in Q1, 2019 upon which the working group will be disbanded.
  - **WG 27:** Hydrogen Fuel Quality- ISO 14687 – In FDIS; publication is expected in early 2019.
  - **WG 28:** Hydrogen Quality Control- ISO 19880-8 is ready to go to FDIS; the WG will continue with H. Tomioka as the convener.
  - **JWG 7:** *Analytical methods for hydrogen fuel — Proton exchange membrane (PEM) fuel cell applications for road vehicles*-ISO 21087 Works in coordination with WGs 27 & 28; FDIS expected in July 2019
- **ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells:**
  - ILS’s on FTIR and Cavity Ring Down Spectroscopy are in process; updates to the corresponding documents will occur upon completion (ASTM D7653 and ASTM D7941/D7941M, respectively)
  - Planning for the June in person meeting to take place in May, 2019

- **SAE International:** In person Fuel Cell Interface and Safety Task Force meetings, February 2019
  - **SAE J2600 (Fueling Hardware):** open for revision to add in HD fueling hardware; harmonize with ISO 17268; plan to publish in August; discussion over freezing the test requirements in the doc so that manufacturers can/will test to them; proposal for test to address galling of the receptacle (causing the nozzle to become stuck onto the vehicle)
  - **SAE J2601 (Fueling Protocol):** As of February 2019, in person meeting, proposed schedule puts publication in August of 2019; addition of “LD-Plus” fuel protocol option for filling fuel storage systems over 10kg and up to 50kg
  - **SAE J2719 (Fuel Quality):** opened for review; harmonize with ISO 14687; plan to have a draft by the June meeting, with publication between August and end of year 2019
  - **SAE J2579 (Fuel Systems):** updating for HD storage cylinders and harmonizing with ISO and GTR #13 for material compatibility, performance-based stress rupture, permeation/leak requirement; localized/engulfing fire test
- **FCHEA Regulatory Matrix** (as of December 31, 2018):  
<http://www.hydrogenandfuelcellsafety.info/s/FCHEA-Regulatory-Matrix-Markup-Dec-31-2018.pdf>

## 2030 VISION | Member Lead: M Forrest | Staff Lead: B Elrick

- California Fuel Cell Revolution continues to be referenced and insinuated in all CaFCP public activities. Members can access *The California Fuel Cell Revolution* slide deck on Member resources ([http://cafcpmembers.org/system/files/documents/CAFCR\\_Vision2030-Presentation-Final.zip](http://cafcpmembers.org/system/files/documents/CAFCR_Vision2030-Presentation-Final.zip))
- The three priority teams (Market Activation, Production and Network) have completed initial prioritization assessments and draft outputs, met twice as team leads to synthesize outputs across teams, and presented status to ST and WG in February.

## OUTREACH/EDUCATION | Member Lead: TBD | Staff Lead: K Malone/ Juan Contreras

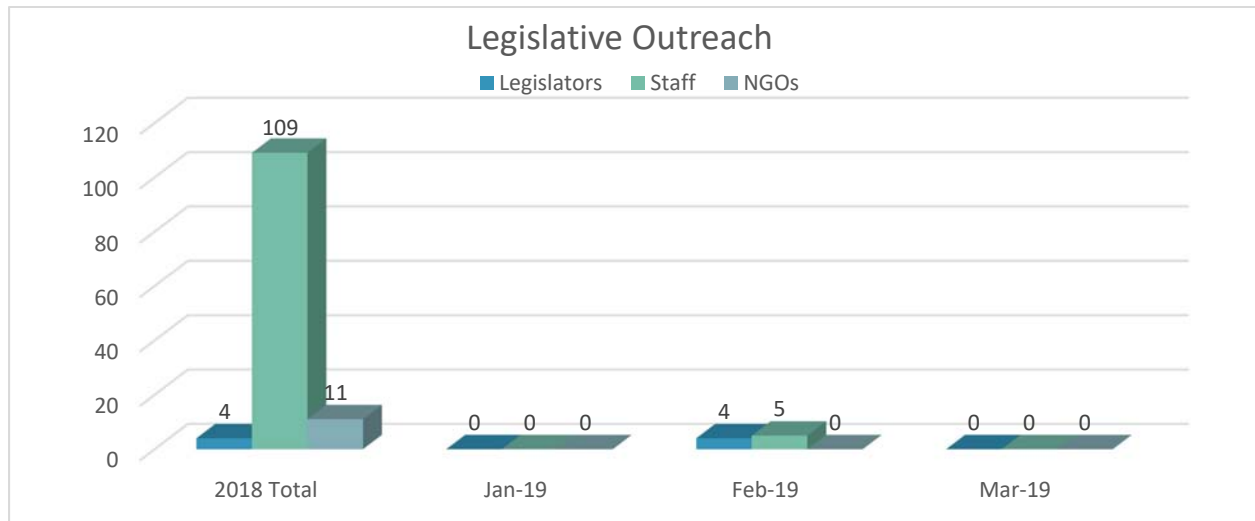


## SOSS | MEMBER LEAD: J BIRDSALL | STAFF LEAD: B XIONG

- Working with CARB and station developers and operators on integrating SOSS and LCFS activities, ongoing. Investigating long term needs and direction for SOSS.

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

- Note: this section does not include activity conducted by CaFCP legislative consultant Teresa Cooke.



- Email conversation district aide of State Senator Anthony Portantino (D-Glendale/Pasadena) regarding state bidding process for hydrogen stations and incentives for in-state companies.
- Email conversation with district director of Congresswoman Jackie Speier (D-San Mateo) regarding CaFCP email blast re the “2018 Annual Assessment of Time & Cost Needed to Attain 100 Hydrogen Refueling Stations in California” and CO2 emission reductions of hydrogen.
- Worked with California Foundation on the Environment and the Economy to host a briefing for legislators and other key opinion leaders that included hydrogen and FCEVs as a topic.
- Assisted Renewable Hydrogen Alliance with messaging for their lobbying efforts in Washington State.