

BOARD MEETING DATE: February 5, 2021

AGENDA NO. 6

**PROPOSAL:** Renew South Coast AQMD's Membership in CaFCP for Calendar Year 2021 and Receive and File California Fuel Cell Partnership Executive Board Meeting Agendas and Activity Updates

**SYNOPSIS:** The South Coast AQMD has been a member of the California Fuel Cell Partnership (CaFCP) since 2000. These actions are to renew South Coast AQMD's membership in the CaFCP for Calendar Year 2021 in an amount not to exceed \$70,000 from the Clean Fuels Program Fund (31). This action is to also receive and file the CaFCP Executive Board Meeting Agendas for October 7, 2020 and December 16, 2020, and Activity Updates for the second and third quarters of 2020.

**COMMITTEE:** Technology, January 22, 2021; Recommended for Approval

**RECOMMENDED ACTIONS:**

1. Authorize the Chairman to execute a contract from the Clean Fuels Program Fund (31) with Frontier Energy, Inc., acting on behalf of the CaFCP, to continue South Coast AQMD's membership for Calendar Year 2021 for a total amount not to exceed \$70,000 for common expenses of the CaFCP; and
2. Receive and file the attached CaFCP Executive Board Agendas for October 7, 2020 and December 16, 2020 and Activity Updates for the second and third quarters of 2020.

Wayne Natri  
Executive Officer

MMM:NB:JI:LHM

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**Background**

California Fuel Cell Partnership 2021 Membership

The California Fuel Cell Partnership (CaFCP) was initiated in 1999 to accelerate response to CARB's Zero Emission Vehicle (ZEV) regulations. The AQMP and the

Technology Advancement Office's Clean Fuels Program 2020 Plan Update have identified fuel cells for on- and off-road applications, especially medium- and heavy-duty vehicles, as well as hydrogen technologies and infrastructure as a core technology for attaining and maintaining cleaner air quality. Because of the alignment of South Coast AQMD and CaFCP goals for accelerated fuel cell vehicle commercialization, the Board accepted the CaFCP's formal invitation to join as a full member in March 2000.

Each CaFCP Executive Member has a representative on the Executive Board. 2020 Executive Members included:

- Seven automotive manufacturers (Daimler, General Motors, Honda, Hyundai, Nissan, Nikola Motor Co. and Toyota);
- Seven industry stakeholders (Air Liquide, Anglo American, Chevron, Cummins, Energy Independence Now, Iwatani and Shell);
- Three government agencies (South Coast AQMD, CARB and CEC); and
- The Governor's Office of Economic Development (GO-Biz).

By the end of 2020, there were 36 Full and Associate Members, with commensurate benefits and voting rights.

Major accomplishments during Calendar Year (CY) 2020 include:

- Continued retail production and deployment of fuel cell cars, trucks, buses and infrastructure in California. As of December 1, 2020, there have been 8,890 total fuel cell electric vehicle (FCEV) sales and leases by Honda, Hyundai and Toyota in California<sup>1</sup>, 42 retail hydrogen stations are open (19 in South Coast) with 20 more new/upgraded retail stations funded. There are 48 fuel cell buses in operation served by 4 stations and 3 truck stations are in development. As of November 30, 2020, 52 hydrogen stations were approved for CARB LCFS ZEV infrastructure crediting;
- Monthly teleconferences of the Heavy-Duty Fuel Cell Electric Truck Task Force, providing a forum for members to learn more about funding opportunities and proposed regulations, as well as multiple other sector-focused groups;
- Quarterly online briefings about hydrogen station status and vehicle rollout in California, the California Hydrogen Policy Series continues with participation and co-sponsorship from California Hydrogen Coalition, California Hydrogen Business Council and others, and periodic webinars on topics like the CEC GFO 19-602 Notice Of Proposed Awards for new and upgraded stations, AB 8 and GO-Biz Permitting Guidebook garnered more than 250 attendees per session; and
- Gathered input and support for the Phoenix Project to expand capabilities to support implementation of the *California Fuel Cell Revolution*, which resulted in development of a new Partnership organizational proposal.

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<sup>1</sup>Number of cumulative total FCEV sales data from HybridCars.com and Carsalesdatabase.com

## **Proposal**

The proposed CaFCP activities for 2021 include:

- Develop the necessary infrastructure and processes to support expanded vehicle rollout for the first 200 hydrogen stations and longer-term exponential growth to reach 1,000 stations for light-duty, sufficient hydrogen infrastructure to support heavy-duty fuel cell buses and trucks, and related customer interface tools;
- Provide forums and opportunities for members to advance group collaboration and progress within CaFCP and among an expanding stakeholder base, including national coordination and expansion; and
- Reach target markets, audiences and communities to educate, inform and promote hydrogen and fuel cell vehicles and accelerate greater commercial adoption across applications.

The CaFCP retains Frontier Energy, Inc., to provide the needed support for the common tasks agreed to by the CaFCP, and each member contracts directly with Frontier Energy acting on behalf of the CaFCP.

Staff proposes the following actions:

- Continue South Coast AQMD's membership for Calendar Year 2021 for a total amount not to exceed \$70,000 for common expenses of the CaFCP. South Coast AQMD will no longer provide additional co-funding for a portion of the CaFCP Regional Coordinator position and infrastructure development staff activities, although these activities and positions are expected to continue.
- Receive and file the CaFCP Executive Board Meeting Agenda for October and December 2020 and Activity Updates for the second (April-June) and third (July-September) quarters of 2020.

## **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 interests of South Coast AQMD. Specifically, these circumstances are B.2.d.(1): Projects involving cost-sharing by multiple sponsors. The major sponsors expected to contribute financially to the CaFCP include seven automakers, seven industry stakeholders and two government agencies (in addition to the South Coast AQMD). CaFCP membership is only available via sole source contract with Frontier Energy.

**Benefits to South Coast AQMD**

Membership in the CaFCP is consistent with the draft *Technology Advancement Office Clean Fuels Program 2021 Plan Update* under “Hydrogen and Mobile Fuel Cell Technologies & Infrastructure” and “Assessment and Technical Support of Advanced Technologies and Information Dissemination.” South Coast AQMD 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**

South Coast AQMD’s support of the CaFCP for CY 2021, provided through a contract(s) with Frontier Energy, Inc., will not exceed \$70,000 from the Clean Fuels Program Fund (31).

**Attachments**

1. California Fuel Cell Partnership October 7, 2020 and December 16, 2020, Executive Board Meeting Agendas
2. California Fuel Cell Partnership Activity Updates (Quarters 2 and 3 for 2020)

## CaFCP Fall CaFCP Executive Board Meeting – Webinar

7 October 2020

10:15am – 12:30pm PT

Please register at: <https://register.gotowebinar.com/register/6412103733562449676>

### AGENDA

- Antitrust Statement
- Phoenix Project
  - Proposal Presentation and Discussion
  - Board Direction and Adoption
  - Next Steps
- CaFCP Program Highlights
- CaFCP Chair Sandy Berg Year End Wrap Up
  - Adding the PLUS
  - Governor Newsom Executive Order N-79-20
- 2021 CaFCP Ramping Up to PLUS
  - 2021 Incoming Chair Jerome Gregeois Welcome and Focus
  - Expansion committee
  - 2021 Vice Chair proposal
  - 2021 Program plan and budget
  - 2021 Board meeting dates
- Public Comment
- Meeting Close

#### **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 the CaFCP meetings.

**CaFCP 2020 Winter Executive Board Meeting**  
**Teleconference (Public)**  
**16 December 2020**  
**11:15am – 12:00pm PT**

**Remote Access Only, Please Register:**

<https://register.gotowebinar.com/register/2967539413590644240>

- Antitrust statement
- Leadership Team Update: Phoenix Implementation Status
- Business Meeting
  - 2021 Vice Chair proposal
  - New member proposals
- Public Comment
- Meeting Close

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The California Fuel Cell Partnership and its members continue to advance the market for fuel cell electric vehicles and the hydrogen infrastructure network, collaborating in the ideas and actions that will create a sustainable future for zero-emission cars, trucks and buses. *The California Fuel Cell Revolution* continues to be a leading guide towards achieving the state objective of 200 stations by 2025 and laying the foundations to achieve 1,000 stations by 2030 to support the state's objective of 5 million ZEVs by 2030. Members can access the related slide deck and other materials on Member Resources or the CaFCP website<sup>1</sup>.

## SECTOR GROUP UPDATES

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

Supported CaFCP industry members on CEC GFO 19-602, "Hydrogen Refueling Infrastructure," preapplication workshops attendance and CaFCP comment.

Supported CaFCP industry members on CARB, "Public Meeting to Consider Policy Recommendations to Increase the Use of Zero-Emission Vehicles per Senate Bill 498."

Conducted outreach to city of Burbank on barriers and opportunities for reopening the Burbank hydrogen fueling station.

Coordinated development of SOSS functionality upgrades through cross OEM and SDO groups discussion, with a focus on introduction of a new term to SOSS, hydrogen station "Refresh."

Continued discussion of LCFS HRI credit topics between CaFCP OEM and SDO groups and CARB.

Coordinated a new protocol for reporting the number of open hydrogen stations, including introduction of a new term, "Hydrogen stations available in California," which decouples the CaFCP station count from the GoBiz smart sheet. This term is defined as, "Open for retail and available to light-duty hydrogen fuel cell vehicles following applicable standards." Included is outreach to CARB and GoBiz to advise them of the changes.

Discussed CaFCP station map topics including the continued dialogue on delisting hydrogen fueling stations from the CaFCP station map and the development of protocol to list LCFS funded stations on the station map. Included is coordination with CARB.

Initiated the process to evaluate FCEV end of life/recycling topic.

Coordinated responses to CEC Integrated Energy Policy Report workshops.

Coordinated responses to CEC 20-Finance-01, "Strategies to Attract Private Investment in Zero Emission Vehicle Charging Infrastructure and Other Clean Transportation Projects," RFI.

<sup>1</sup> [http://cafcpmembers.org/system/files/documents/CAFCR\\_Vision2030-Presentation-Final.zip](http://cafcpmembers.org/system/files/documents/CAFCR_Vision2030-Presentation-Final.zip)

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

Data gathering by CARB for their Hydrogen Station & Dispensing Regulatory efforts continue

The Station Confirmation Group discussed next stations to complete commissioning – Burbank, Berkeley, Woodside, Mission Hills, Sunnyvale, Campbell, Sherman Oaks. Please refer to the [Go-Biz SmartSheet](#) for details.

The group discussed and implemented steps to remove stations from the [CaFCP Station Map](#). The following stations have been removed: Burbank, Santa Clarita.

1 station was set to Open-retail: Fountain Valley

12 stations are expected to open in 2020; 3 stations are to open in 2021

3 stations are listed as Currently Unavailable: Ontario, Riverside, Newport Beach

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

Staff coordinated many cross CaFCP group (SDO and OEM) and non-member (Air Products) discussion of SOSS Station Status Criteria-updated terminology and definitions, specifically focused on the terms, “Inventory,” and, “Recharge/Refresh,” to better define the “Limited” mode customer experience.

Staff continued discussion of LCFS HRI credit topics between CaFCP OEM and SDO groups and CARB (Standardization of SOSS reporting).

Supported CaFCP industry members on [CEC GFO 19-602](#), “Hydrogen Refueling Infrastructure,” preapplication workshops attendance and CaFCP comment.

Coordinated responses to CEC Integrated Energy Policy Report workshops.

Coordinated responses to CEC [20-Finance-01](#), “Strategies to Attract Private Investment in Zero Emission Vehicle Charging Infrastructure and Other Clean Transportation Projects,” RFI.



**MHD GROUP (FCET & FCEB) | Member Lead: Shell | Staff Lead: N Bouwkamp**

Continuing to meet regularly to advance the “Holistic HD Truck Vision”, formerly the “Roadmap”, to provide stakeholders with a vision and guidance on developing sustainable markets for the HD sector. A small team is currently developing a Table of Contents and related framework. The team is also working to align messaging across participants as industry and government continue to meet and advance HD ZEV market applications. The group continues to engage and exchange information across the HD sectors, including the need for HD related infrastructure development, and continues to strive for a late 2020 vision publication.

Several HD related agency solicitations and related activities occurred recently, including [GFO-20-601](#) Blueprint for MD/HD ZEV Infrastructure, [GFO-20-602](#) Zero Emission Transit Fleet Infrastructure Deployment, [GFO-20-603](#) Block Grant for MD/HD ZEV Infrastructure, [GFO-20-604](#) H2-FC Demo in Rail & Maritime Applications at Ports, and a [Pre-Solicitation Workshop](#) for Zero Emission Drayage Truck & Infrastructure Pilot Project.



## PROJECT TEAMS

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

**CSA Group:** As of May, Jennifer is the acting Chair of the CSA Hydrogen Transportation Technical Committee, with a vacancy in the Vice-chair position. The term expires October 23, 2020 and CSA staff are taking submissions. Jennifer is also Bill Elrick's voting member for the Transportation Strategic Steering Committee; a member of the B51/NGV2/HGV2 Harmonization Combined Task Force, on the Transportation Executive Synchronization Committee, and is an active member on the Technical Sub Committees for a number of the documents listed below.

### CSA Group 2020 U.S. Committee Week

Original October 26-29 in Phoenix was cancelled due to Covid-19. The meetings will be held online.

- **Active Projects**

- **CSA HGV 4.4 TSC Breakaway Devices & Valves** – work continues on adoption of ISO 19880-3 (*Valves Standard*). Draft document out for industry & public review. Public Review closes. Access: <https://publicreview.csa.ca/Home/Details/3894>. Next TSC meeting scheduled for Aug 18
- **HGV 4.10 TSC Fittings** – Public Review period closed late June. All comments have been dispositioned by the TSC. Document is being prepared for Technical Committee Ballot.
- **HGV 2 Containers** – Draft document out for industry / public review. Public Review closed in July. Next meeting of the TSC is scheduled for August 13 to review comments.
- **HPRD 1 Thermally activated pressure relief devices** – Content development is completed. Expect draft document for Industry/Public Review posted soon.
- **HGV 4.3 Fueling parameter evaluation** – TSC continues to meet to discuss inclusion of Protocol Factory Acceptance and Periodic Maintenance Testing in the next edition. Next meeting of the TSC is scheduled for August 4, 2020.
- **HGV 4.2 Hoses for compressed hydrogen fueling dispensing** – A project kickoff meeting was held in late July. TSC meeting schedule will be reviewed at August 4 meeting.
- **FC 1 Stationary fuel cell power systems** – Content development for the adoption of IEC 62282-3-100 continues. As the administrator of both the US TAG and SCC MC to IEC TC 105 (fuel cells), CSA continues to host a binational meetings via teleconference, as needed, to discuss open IEC TC 105 action items. Anyone interested in participating, please contact [mark.duda@csagroup.org](mailto:mark.duda@csagroup.org).

- **Projects Launching Soon**

- **HGV 5.X – Hydrogen Refueling Appliances**
- **HGV 3.1 – Fuel system components for compressed hydrogen gas powered vehicles**

### NFPA 2: (Technical Committee Member)

- Over 200 Public Inputs submitted for this revision
- Chair Chris LaFleur is reviewing comments and NFPA staff will work to schedule first draft meetings this fall for the Technical Committee to discuss
  - Comments directly linked to Task Groups will likely be assigned to the TG for action

### IFC/CFC:

- 2019 California Intervening Code Cycle adopting 2020 NFPA 2 (as done for previous versions)
- The hearings for the 2024 IFC are underway

## ISO/TC 197:

- **WG 22:** ISO 19880-5 Gaseous hydrogen — Fueling stations — Dispenser hoses and hose assemblies – published. Revision began immediately to align better with other areas, as well as better represent other applications such as heavy-duty vehicles.
- **WG 28:** Hydrogen Quality Control- ISO 19880-8 Working on an amendment to align with the latest ISO 14687
- **New WG 29- ISO/TR 15916:2015-*Basic considerations for the safety of hydrogen systems*:** WG formed February; (Convener, Jay Keller) for document to be revised. The scope is very narrow to looking at the new information on state of the art materials compatibility.
- Compressors is not moving as quickly due to pandemic.
- New Work Item Proposal (NWIP) moving forward for high flow with three sub tasks: design, communications, and protocols (proposed documents 19885-1, -2, -3).
- Another NWIP is out for cylinders/tanks for stationary applications

## ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells: (Chair)

- ILS's on FTIR and Cavity Ring Down Spectroscopy are in process of adding more labs to run the protocols; updates to the corresponding documents will occur upon completion (ASTM D7653 and ASTM D7941/D7941M, respectively)
- In-person December D03 meeting canceled
- Held Hydrogen Sampling Workshop on June 29 (online); approximately 30 in attendance; presentations are available here:  
<https://www.astm.org/COMMIT/Workshop%20Presentations.zip>

## SAE International: (Fuel Cell Standards Council, Interface and Safety Task Force member)

- **SAE J2600 (Fueling Hardware):** open for revision to add in HD fueling hardware; harmonize with ISO 17268; plan to publish in 2020
- **SAE J2601 (Fueling Protocol):** Published
- **SAE J2579 (Fuel Systems):** updating for HD storage cylinders and harmonizing with ISO and GTR #13 Phase II for material compatibility, performance-based stress rupture, permeation/leak requirement; localized/engulfing fire test
- **SAE J2990/1 (1<sup>st</sup> and 2<sup>nd</sup> Responder Recommended Practice):** open for revision; harmonization with other FC safety documents, the parent document J2990, UN GTR, & new proposals.

## FCHEA

- **Regulatory Matrix** (as of June 30, 2020):  
<https://static1.squarespace.com/static/53ab1feee4b0bef0179a1563/t/5efc9f461398e5144b769a7e/1593614151623/FCHEA+Regulatory+Matrix+markup+June+30+2020.pdf>
- **Hydrogen Codes Task Force (chair):**
  - The TWG / HCTF reviewed a number of proposals for NFPA 2. We chose not to proceed with certain proposals to be more general on referencing ASME. Six proposals were approved for submission, including one that addresses a typo. The other five are clarifications.
  - The Compressed Gas Association agreed to work with us on proposals of mutual interest. They shared with us a proposal that would be submitted to NFPA 55 that had to do with broadening the applicability of separation distance to allow for alternative means in more cases. We will see where that goes, it was a narrow proposal. One member submitted a comment that asked why stop with gaseous hydrogen and not include liquid hydrogen\* as well.

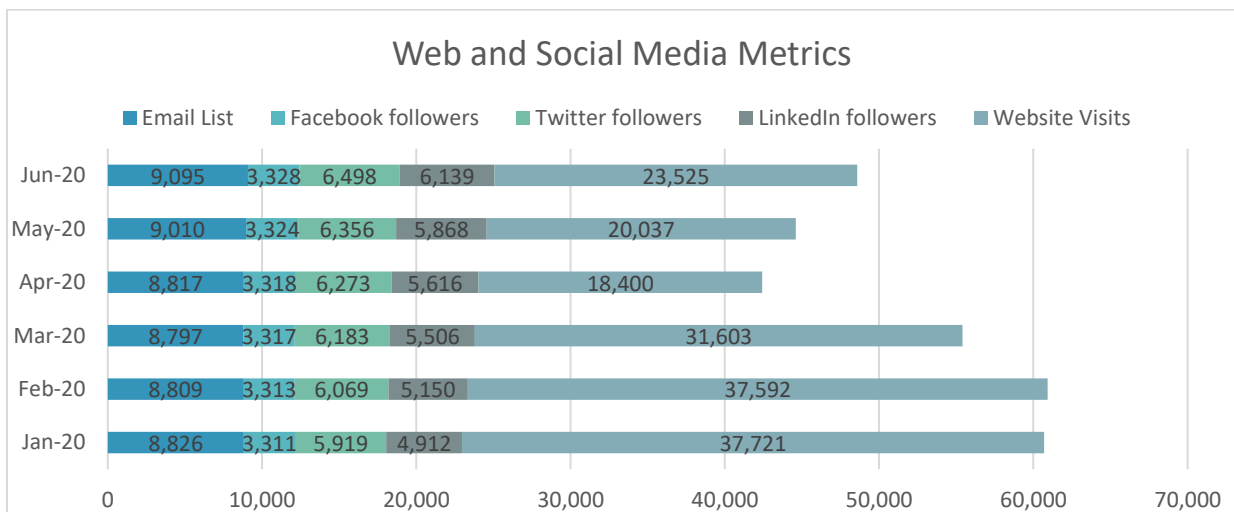
*\*Jennifer led industry input to the work that Sandia is/was doing for the NFPA 2 TF on LH2 setback distances. Sandia is also conducting experiments with CGA for the revision of the vent stack document, H-5.5. She continues to be in contact with Sandia and monitor that work, as it pertains to other projects, her role on the NFPA 2 TC, and working relationship with CGA.*

## ORGANIZATIONAL AND MEMBERSHIP ACTIVITIES | Staff Lead: B Elrick

- The Phoenix Project team has interviewed over 95% of the Executive and Full member organizations to gain additional feedback and insights into the needs and expectation of members for the new and improved organization. This information on Participation, Governance, Finance and Expansion, along with previously gathered inputs, will be used to develop the final proposal(s) for the board in October. A summer briefing is planned for September 10<sup>th</sup> to provide the board with a review and discussion on the major feedback elements; including where members are aligned and where there are differences or challenges in going forward.
- In July the Steering Team approved the [City of San Francisco's Department of Environment](#) as a new Associate member, the first city to seek and be approved for CaFCP membership. In August [Chart Industries](#) and [Liberty Utilities](#) were approved as new Associate members, providing additional value and insights into the organization.

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

- April 8<sup>th</sup> quarterly station and industry update webinar.
- News media conversations with Auto Futures, H2 View, Energy Intelligence's New Energy, Ballard Blog, Autoweek, Capitol Morning Report, California Energy Markets, S&P Global/Platts, San Diego Tribune, Green Auto Market, Clean Fleet Report, E&E News, Commercial Carrier Journal.
- Updated website section on the price of hydrogen fuel at the pump, and clarified that the price was only for light-duty vehicles, etc. Several news media had been previously mischaracterizing fuel costs for heavy duty using this section.
- Staff gave presentations or engaged in conversations with a variety of audiences and individuals from interested in California and the rollout of FCEVs and fueling infrastructure, including Tohoku University, Bayotech, Alchemr, San Diego Association of Governments, San Diego Gas & Electric, Silicon Valley Joint Venture Public Sector Climate Task Force, UBS Investments, among others.
- Staff initiated internal conversations regarding marketing campaign.
- A popup has been added on the SOSS homepage to allow and encourage visitors to sign up for the CaFCP newsletter. This new popup is being added to a new CRM we are now implementing called GreenRope. This is part of an effort to expand and better direct our marketing and outreach efforts.
- CaFCP has cancelled their subscription to Hootsuite. The features and analytics once relied on from Hootsuite are now available as standard features of Facebook, Twitter, and LinkedIn.



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

After feedback from Steering Team, the SOSS team submitted to Electrify America's Cycle 3 Investment Plan recommendation to expand SOSS to a nationally capable tool, expanding the physical and personnel capacity to support SOSS growth outside of California. The submission was presented as part of Electrify America's outreach and education efforts to accelerate greater ZEV adoption, not a financial investment that anticipates a specific ROI.

Staff coordinated many cross CaFCP group (SDO and OEM) and non-member (Air Products) discussion of SOSS Station Status Criteria-updated terminology and definitions, specifically focused on terms, "Inventory," and, "Recharge/Refresh," to better define the "limited" mode customer experience.

Staff continued discussion of LCFS HRI credit topics between CaFCP OEM and SDO groups and CARB (Standardization of SOSS reporting). Disclaimer language was also developed for reporting to the CARB LCFS team station uptime describing SOSS data as a secondary approximation to information submitted by Station Operators.

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

1 new HRS was added to SOSS (Fountain Valley)

Additional SOSS work identified in the SDO and OEM groups above

Total SOSS accounts to date: 5,331

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

Initiated conversation with Bloomberg New Energy Finance regarding their 2019 analysis regarding low-cost renewable hydrogen by 2030 for possible briefing targeted at policy makers. May serve as the first of several briefings for a California Hydrogen Policy series.

Staff began working with GO-Biz and California Hydrogen Coalition on possible data collection regarding public vs private investments re infrastructure and related activities.

Staff continue to consult with colleagues at California Hydrogen Coalition to ensure coordination of messaging and complementary activities in legislative education and outreach.

Staff is working with California Hydrogen Coalition on a two-day Hydrogen Village and Lobby Day in late 2020 at the State Capitol.

**EVENTS/ACTIVITIES | Staff Lead: J Contreras****Q2, 2020+**

4/8/20	CaFCP Hydrogen Stations Update Network Webinar (D. Park, K. Malone and B.Xiong)
4/10/20	CEC Staff Workshop on Zero-Emission Transit Fleet Infrastructure Deployment - (N. Bouwkamp)
4/14/20	Beyond Power: Re-imagining the Energy Ecosystem with Green H2 – Webinar (CaFCP staff)
4/14/20	ACT News: Part 1: The Facts on fuel Cell Electric Trucks Webinar (N. Bouwkamp)
4/16/20	Work Group for the FY 2020-21 Heavy-Duty Investment Strategy - (N. Bouwkamp)
4/21/20	ACT News: Part 2 of a two-part series: The Facts on Fuel Cell Electric Trucks (N. Bouwkamp)
4/23/20	California Air Resources Board – April Board Meeting via Zoom (B.Elrick comment)
4/28/20	H2IQ Hour: How IPHE is Fostering Global H2 and Fuel Cells Collaboration & Coordination Webinar
5/4/20	ACT Expo–Advanced Clean Transportation Expo, Long Beach–Postponed until May 3-6, 2021
5/7/20	Simplefuel H2 Refueler – building resiliency & flexibility into H2 refueling today (CaFCP staff)
5/12/20	Global Progress and Momentum for Green Hydrogen Webinar – Green Hydrogen Coalition
5/13/20	The Limits of Offshore Wind and Hydrogen Production Webinar – Mission Hydrogen

5/19/20	CaFCP Executive Board Meeting Remote Only – (B. Elrick and Executive Board)
5/20/20	Diesel vs Fuel Cell: Which Heavy-Duty Transport Solution Will Win Webinar – Mission Hydrogen
5/20/20	FUELS2020 Virtual Experience – “Perspective on Alternative Transportation – Energy Solutions Webinar (B. Elrick, Speaker)
5/26/20	Renewable Hydrogen Production and Infrastructure for Transit, Trucking, Cargo Handling Equipment Fleets Webinar – ACT Expo and CHBC
5/27/20	Large Capacity, Small Footprint. Efficient Hydrogen Fueling Technology Webinar – Mission H2
6/3/20	How to Optimize Hydrogen Refueling Stations – Part 1 Webinar – Mission H2
6/9/20	Hydrogen Energy of The Future Webinar – Air Liquide
6/11/20	CARB/CEC Pre-solicitation Workshop for Zero-Emission Drayage Truck and Infrastructure Pilot - Project Workshop (N. Bouwkamp and K. Malone)
6/12/20	CDEC IEPR Transportation Trends Session 1 – Light Duty Zero-Emission Vehicle Update and Trends in Larger Vehicles Webinar – (N. Bouwkamp and K. Malone)
6/17/20	Getting to Neutral: Importance of Renewable Gas in Decarbonizing Society Webinar–ACT News
6/18/20	Hydrogen at the Global Scale Webinar – Mission Hydrogen
6/19/20	2 <sup>nd</sup> Advisory Committee Meeting for Clean Transportation Program 2020-2030 Webinar - CEC
6/23/20	Scaling the Hydrogen Economy with PDC Compression Webinar
6/23/20	What’s New with the Center for Hydrogen Safety Webinar – Center for Hydrogen Safety
6/30/20	ALTCAR Virtual Statewide Webinar – CaFCP Sponsorship
<b>UPCOMING EVENTS</b>	<b><i>**due to the COVID-19 several of the events below have been UPDATED or POSTPONED**</i></b>
8/13/20	SOLICITATION: Energy Department Solicits Feedback on Hydrogen and Fuel Cells R&D Activities and Strategy – ( <a href="#">Link</a> )
8/19/20	Session 1 Clean Transportation Equity, Jobs, and Economic Recovery – Commissioner Workshop on Clean Transportation Funding Programs - CEC ( <a href="#">Link</a> )
8/19/20	Session 2: Approaches to Assessing Funding Programs Benefits – Commissioner Workshop on Clean Transportation Funding Programs – CEC ( <a href="#">Link</a> )
8/25/20	Hydrogen Stations Webinar – Update on Network Development Status in California – (K. Malone, D. Park and B. Xiong) ( <a href="#">Link</a> )
9/9/20	Exploring Renewable Hydrogen Production Pathways Webinar – GNA (CaFCP sponsor) ( <a href="#">Link</a> )
9/9/20	H2 View: North American Hydrogen Summit – Invest, Scale UP and Achieve – Virtual Summit-GasWorld (CaFCP – Tentative) ( <a href="#">Link</a> )
9/10/20	NREL’s Camp Cleantech Summer Webinar Series– Electrons & Molecules Webinar – NREL ( <a href="#">Link</a> )
9/10/20	Ballard Invites you to Discover the Future of Marine Propulsion Webinar – Ballard ( <a href="#">Link</a> )
9/10/20	f-cell HFC Conference Virtual Summit – FCHFC ( <a href="#">Link</a> )
9/16/20	ICEPAG 2020 – A Virtual Colloquium – UC Irvine ( <a href="#">Link</a> )
9/17/20	Center for Hydrogen Safety 2020 – Virtual U.S. Conference (N. Bouwkamp) ( <a href="#">Link</a> )
9/18/20	2020 Zero Emission Bus Conferences – Virtual Conference ( <a href="#">Link</a> )
9/22/20	Fueling the Future (FTF) Virtual Conference – German American Chambers of Commerce (K. Malone and B. Elrick) ( <a href="#">Link</a> )
9/23/20	World Hydrogen Conference ( <a href="#">Link</a> )
9/24/20	NREL’s Camp Cleantech Summer Webinar Series – Sustainable Mobility – NREL’s ( <a href="#">Link</a> )
9/30/20	f-cell STUTTGART 20 YEARS ( <a href="#">Link</a> )
10/2/20	Mission Hydrogen – Hydrogen Online Conference (HOC) (B. Elrick, Speaker) ( <a href="#">Link</a> )
10/15/20	H2: North American Hydrogen Industrial Summit 2020 – (CaFCP Tentative) ( <a href="#">Link</a> )
10/22/20	Center for Hydrogen Safety Europe Conference 2020 (N. Bouwkamp) ( <a href="#">Link</a> )
10/23/20	Hydrogen + Fuel Cells International at North America Smart Energy Week – (CaFCP staff) ( <a href="#">Link</a> )



The California Fuel Cell Partnership and its members continue to advance the market for fuel cell electric vehicles and the hydrogen infrastructure network, collaborating in the ideas and actions that will create a sustainable future for zero-emission cars, trucks and buses. *The California Fuel Cell Revolution* continues to be a leading guide towards achieving the state objective of 200 stations by 2025 and laying the foundations to achieve 1,000 stations by 2030 to support the state's objective of 5 million ZEVs by 2030. Members can access the related slide deck and other materials on Member Resources or the CaFCP website<sup>1</sup>.

## SECTOR GROUP UPDATES

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

Supported CaFCP industry members on CEC Integrated Energy Policy Report (IEPR) Commissioner Workshops including CaFCP industry members-only pre-workshops discussion, workshop attendance and CaFCP comment. Workshops included:

- H2 & FCEV: Hydrogen Supply, Infrastructure Status and FCEV Market Status,
- Energy Resilience and ZEVs - Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation Three Revolutions, Opportunities, Challenges, and Intelligent Transportation Systems - Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation
- Electrifying Transportation Network Companies - Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation
- Clean Transportation Equity, Jobs, and Economic Recovery

Supported CaFCP industry members on CARB Workshop, "Fuels & Infra for a Carbon Neutral Economy"

Facilitated for OEM Members, CARB presentation and discussion, "2020 Annual Evaluation of Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development, AB8 Report."

Coordinated CaFCP membership participation in Electrify America, National Outreach Process, Hydrogen Stakeholders, virtual forum; Developed and submitted CaFCP letter of recommendation/comment.

Solicited OEM member feedback on topics related to COVID-19 and economic stimulus.

Coordinated market activation discussions across a cross-functional membership team (OEMs, Station Developers & Operators, & government agencies)

Facilitated discussion and decision within the OEM membership to add the Station Operational Status System (SOSS) functionality, "Refresh," through presentation of pilot demonstration of this functionality at a First Element station.

<sup>1</sup> [http://cafcpmembers.org/system/files/documents/CAFCR\\_Vision2030-Presentation-Final.zip](http://cafcpmembers.org/system/files/documents/CAFCR_Vision2030-Presentation-Final.zip)



Conducted bi-monthly CaFCP Working Group meeting (2-hr virtual session)- Topics included UC Irvine research on deployment of renewable hydrogen production facilities in CA, UC Davis research efforts on the role of hydrogen in carbon neutrality & discussion on Stimulus – Global, US & CA perspectives.

Continued, support of the GoBiz Station Confirmation Group, with a focus on the OEM perspective.

Established recurring monthly CaFCP OEM group meeting to occur on the first Friday of each month

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

The Station Confirmation Group discussed next stations to complete commissioning – Berkeley, Sunnyvale, Mission Hills, Campbell, Sherman Oaks, Burbank, Woodside. Please refer to [Go-Biz SmartSheet](#).

The group continues to review and discuss stations that could potentially be removed the [CaFCP Station Map](#) dependent on if they meet the new process of station removal. None were removed this quarter.

0 station was set to Open-retail during this quarter.

5 stations are expected to open in 2020; 10 stations are to open in 2021

3 stations are listed as Currently Unavailable: Ontario, Riverside, Newport Beach

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

Staff coordinated SOSS Station Status Criteria-updated terminology & definitions, specifically adding the terms, “Inventory,” & “Recharge/Refresh,” to better define the “Limited” mode customer experience.

Coordinated market activation discussions across a cross-functional membership team (OEMs, Station Developers & Operators, & government agencies)

Staff continued discussion of LCFS HRI credit topics between CaFCP OEM and SDO groups and CARB (Standardization of SOSS reporting).

Supported CaFCP industry members on CEC Integrated Energy Policy Report (IEPR) Commissioner Workshops including CaFCP industry members-only pre-workshops discussion, workshop attendance and CaFCP comment. Workshops included:

- H2 & FCEV: Hydrogen Supply, Infrastructure Status and FCEV Market Status,
- Energy Resilience and ZEVs - Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation Three Revolutions, Opportunities, Challenges, and Intelligent Transportation Systems - Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation
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Conducted bi-monthly CaFCP Working Group meeting (2-hr virtual session)- Topics included UC Irvine research on deployment of renewable H2 production facilities in CA, UC Davis research efforts on the role of hydrogen in carbon neutrality and discussion on Stimulus – Global, US and CA perspectives.

Coordinated market activation discussions across a cross-functional membership team (OEMs, Station Developers & Operators, & government agencies)

Established recurring monthly CaFCP SDO group meeting to occur on second Wednesday of each month

Continuing to meet regularly to advance the “Holistic HD Truck Vision”, formerly the “Roadmap”, to provide stakeholders with a vision and guidance on developing sustainable markets for the HD sector. A small team is currently developing a Table of Contents and related framework. The team is also working to align messaging across participants as industry and government continue to meet and advance HD ZEV market applications. The group continues to engage and exchange information across the HD sectors, including the need for HD related infrastructure development, and continues to strive for a late 2020 vision publication.

Several HD related agency solicitations and related activities occurred recently, including [GFO-20-601](#) Blueprint for MD/HD ZEV Infrastructure, [GFO-20-602](#) Zero Emission Transit Fleet Infrastructure Deployment, [GFO-20-603](#) Block Grant for MD/HD ZEV Infrastructure, [GFO-20-604](#) H2-FC Demo in Rail & Maritime Applications at Ports, and a [Pre-Solicitation Workshop](#) for Zero Emission Drayage Truck & Infrastructure Pilot Project.

## PROJECT TEAMS

**CSA Group:** As of May, Jennifer is the acting Chair of the CSA Hydrogen Transportation Technical Committee, with a vacancy in the Vice-chair position. The term expires October 23, 2020 and CSA staff are taking submissions. Jennifer is also Bill Elrick’s voting member for the Transportation Strategic Steering Committee; recently joined the Fuel Cells TC, is a member of the B51/NGV2/HGV2 Harmonization Combined Task Force, on the Transportation Executive Synchronization Committee, and is an active member on the Technical Sub Committees for a number of the documents listed below.

### **CSA Group 2020 U.S. Committee Week**

Original October 26-29 in Phoenix was cancelled due to Covid-19. The meetings will be held online.

TSSC: Two, two-hour meetings are scheduled for October 22 and 29, 2020

HTTC: One, two-hour meeting proposed for November 2, 2020

- **Active Projects**

- CSA HGV 4.4 TSC Breakaway Devices and Valves – continues to work on an adoption of ISO 19880-3 (Valves Standard) with North American Deviations. Draft document is out for industry/public review. Public Review closes. Access by clicking here: <https://publicreview.csa.ca/Home/Details/3894>.
- HGV 4.10 TSC Fittings – Public Review period closed late June. All comments have been dispositioned by the TSC. Document is currently at Technical Committee Ballot.
- HGV 2 Containers – Draft document out for industry / public review. Public Review closed late July. Next meeting of TSC scheduled for Sept 10 to continue to review comments.
- HPRD 1 Thermally activated pressure relief devices – Content development is completed. Expect draft document for Industry/Public Review posted soon.
- HGV 4.3 Fueling parameter evaluation – TSC continues to meet to discuss inclusion of Protocol Factory Acceptance and Periodic Maintenance Testing in the next edition. Next meeting of the TSC is scheduled for September 29, 2020.



- o HGV 4.2 Hoses for compressed hydrogen fueling dispensing – A project kickoff meeting was held in late July. Next meeting of the TSC is scheduled for September 9, 2020.
- o FC 1 Stationary fuel cell power systems – Content development for the adoption of IEC 62282-3-100 continues. As the administrator of both the US TAG and SCC MC to IEC TC 105 (fuel cells), CSA continues to host a binational meetings via teleconference, as needed, to discuss open IEC TC 105 action items. Anyone interested in participating, please contact mark.duda@csagroup.org. CSA FC1 item to indicate it is out for Public Review. Review closes 9/22, and can be accessed by clicking the link:<https://publicreview.csa.ca/Home/Details/3911>
- **Projects Launching Soon**
  - **HGV 5.X** – *Hydrogen Refueling Appliances*
  - **HGV 3.1** – *Fuel system components for compressed hydrogen gas powered vehicles*

#### **NFPA 2: (Technical Committee Member)**

- NFPA 2 2020 adopted by Office of the State Fire Marshal during California Intervening Code Cycle, per August meetings; will be enforceable July 1, 2021
- 266 Public Inputs submitted for this revision
  - Chair LaFleur Assigned comments directly linked to Task Groups for draft motions & rationale
  - First draft meetings scheduled for October 19-22 and 26-29

#### **IFC/CFC:**

- 2019 California Intervening Code Cycle adopting 2020 NFPA 2 (as done for previous versions)
- The hearings for the 2024 IFC are underway

#### **ISO/TC 197:**

- **WG 22:** ISO 19880-5 Gaseous hydrogen — Fueling stations — Dispenser hoses and hose assemblies – published. Revision began immediately to align better with other areas, as well as better represent other applications such as heavy-duty vehicles.
- **WG 28:** Hydrogen Quality Control- ISO 19880-8 Working to align with the latest ISO 14687
- **New WG 29- ISO/TR 15916:2015-*Basic considerations for the safety of hydrogen systems*:** WG formed February; (Convener, Jay Keller) for document to be revised. The scope is very narrow to looking at the new information on state-of-the-art materials compatibility.
- Compressors is not moving as quickly due to pandemic.
- New Work Item Proposal (NWIP) moving forward for (heavy duty) high flow with three sub tasks: design, communications, and protocols (proposed documents 19885-1, -2, -3). NWIP signed off and proceeding forward.
- Another NWIP is out for cylinders/tanks for stationary applications
- Fittings document passed ballot, with 45 pages of comments; WG moving forward with Committee Draft-2.

#### **ASTM D03.14 Subcommittee on Hydrogen and Fuel Cells: (Chair)**

- ILS's on FTIR and Cavity Ring Down Spectroscopy are in process of adding more labs to run the protocols; updates to the corresponding documents will occur upon completion (ASTM D7653 and ASTM D7941/D7941M, respectively)
- In-person December D03 meeting canceled; committee week to be held via web
- Held Hydrogen Sampling Workshop on June 29 (online); approximately 30 in attendance; presentations are available here: <https://www.astm.org/COMMIT/Workshop%20Presentations.zip>

## SAE International: (Fuel Cell Standards Council, Interface and Safety Task Force member)

Task Force	Document	Title	Date	Status
Interface	J2600_201510	Compressed Hydrogen Surface Vehicle Fueling Connection Devices	21-Oct-15	Revised - Action required
Interface	TIR J2601/4	Ambient Temperature Refueling		Being developed
Interface	TIR J3219	Hydrogen Fuel Quality Screening Test of Chemicals for Fuel Cell Vehicle		Being developed
Interface	J2601/2_201409	Fueling Protocol for Gaseous Hydrogen Powered Heavy Duty Vehicles	24-Sep-14	Issued - Action Required
Interface	J2601/3_201306	Fueling Protocol for Gaseous Hydrogen Powered Industrial Trucks	12-Jun-13	Issued - Action Required
Fuel Economy	TIR J3202	Recommended Practice for Measuring and Simulating Fuel Consumption and Range of Heavy Duty Fuel Cell Hybrid Road Vehicles Fueled by Compressed Gaseous Hydrogen		Being developed
Fuel Economy	J2572_201410	Recommended Practice for Measuring Fuel Consumption and Range of Fuel Cell and Hybrid Fuel Cell Vehicles Fuelled by Compressed Gaseous Hydrogen	16-Oct-14	Revised - Action required

### FCHEA

- **Regulatory Matrix** (as of June 30, 2020):  
<https://static1.squarespace.com/static/53ab1feee4b0bef0179a1563/t/5efc9f461398e5144b769a7e/1593614151623/FCHEA+Regulatory+Matrix+markup+June+30+2020.pdf>
- Next matrix in October, 2020.
- **Hydrogen Codes Task Force (chair):**
  - The TWG / HCTF reviewed the 41 NFPA 2 PI's that were not assigned to the various TG's so as to allow for Karen Quackenbush to submit an industry position on those PI's. Four more were assigned to the Storage TG, and others pertaining to vent stacks be further discussed (potentially via a new TG). The remaining either have positions or need further work with the proponent, an FCHEA member.
  - The Compressed Gas Association agreed to work with us on proposals of mutual interest. They shared with us a proposal that would be submitted to NFPA 55 that had to do with broadening the applicability of separation distance to allow for alternative means in more cases. We will see where that goes, it was a narrow proposal. One member submitted a comment that asked why stop with gaseous hydrogen and not include liquid hydrogen\* as well.

*\*Jennifer led industry input to the work that Sandia is/was doing for the NFPA 2 TF on LH2 setback distances. Sandia is also conducting experiments with CGA for the revision of the vent stack document, H-5.5. She continues to be in contact with Sandia and monitor that work, as it pertains to other projects, her role on the NFPA 2 TC, and working relationship with CGA.*

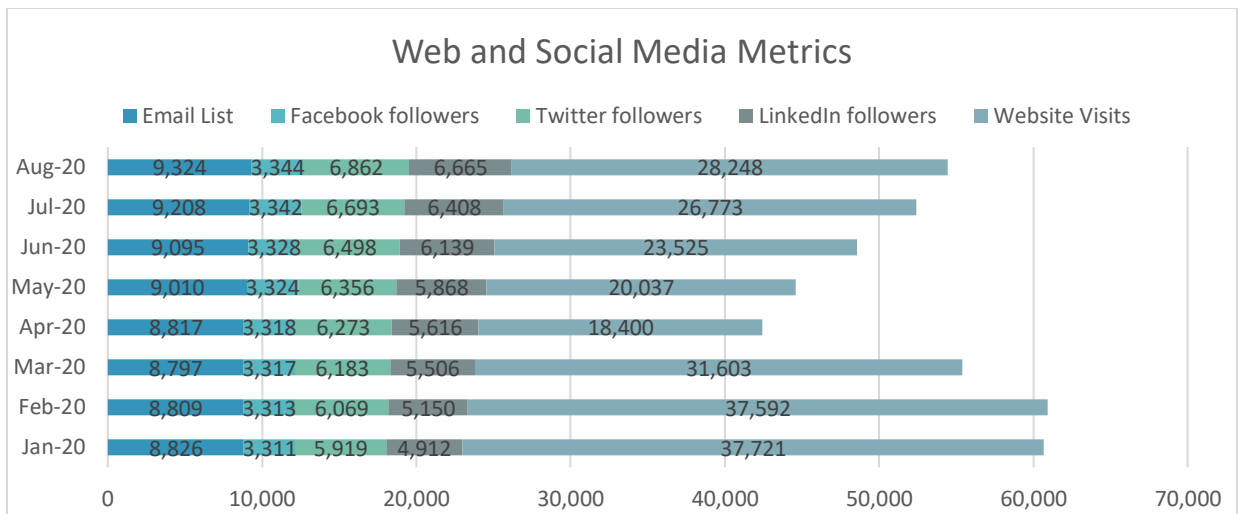
## ORGANIZATIONAL AND MEMBERSHIP ACTIVITIES | Staff Lead: B Elrick

- In July the Steering Team approved the [City of San Francisco's Department of Environment](#) as a new Associate member, the first city to seek and be approved for CaFCP membership. In August [Chart Industries](#) and [Liberty Utilities](#) were approved as new Associate members, while the [Compressed Gas Association](#) (CGA) was invited in September to join as an Associate member.

- The Phoenix Project team interviewed nearly two dozen Executive and Full member organizations to gain additional feedback and insights into the needs and expectation of members for the new and improved organization. This information on Participation, Governance, Finance and Expansion, along with previously gathered inputs, was used to develop a strawman for board consideration.
- The Phoenix Project team presented a strawman of the expanded organization to the board during a briefing on September 9<sup>th</sup>, giving substance to board direction and for further guidance. The strawman included details on a draft structure, board of directors, revenue model and stakeholder participation process. These built upon previous feedback and board discussions on draft Vision, Mission and Objectives. A timeline for presenting a proposal to the board for the Fall board meeting and 2021 implementation was included.
- Two meetings of the CaFCP Trust were held to align the CaFCP Trust and Board going forward.

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

- August 26 quarterly online briefing about station status and vehicle rollout in California. More than 350 attended. September 16 briefing on CEC NOPA, AB 8 and GO-Biz Permitting Guidebook garnered more than 250 attendees. Like all webinars, 65% of registrants attended the live presentation; all attendees receive links to the recorded sessions and presentations.
- News media conversations and interactions with H2 View (regular contact, including pitching stories), DowJones/Barrons, Forbes (Alan Ohnsman), San Diego Union-Tribune, IHS Markit, LA Times, Capitol Morning Report (Sacramento) and industry press (energy, etc.), like Utility Dive, Fuels Institute and Energi Media. This does not include all media targeted in pitches.
- Staff continue to remain in touch with Clean Cities Coalitions in California and Pacific Northwest through participation in meetings, 1:1 conversations or sharing specific announcements via email. E&E News,
- In-person and zoom meetings with variety of stakeholders, including in-person luncheon at Japanese consulate of Los Angeles, FuelCell Energy, Hitachi Zosen INNOVA, etc. In particular, staff are increasingly receiving inquiries from a cross-section of stakeholders, especially out-of-state and international, including trade-related agencies (Alberta, New Zealand, etc.), startup H2 producers, etc. – regarding opportunities in California.
- Participate in webinars and help organize panels with other organizations, including Mission Hydrogen, Southern California Association of Governments, German American Chamber of Commerce West, San Diego Association of Governments, California Fuels and Convenience Alliance and others.
- Staff cooperated with Tohoku University researcher Gregory Trencher on identifying interview subjects, etc. The published study, “Strategies to accelerate the production and diffusion of fuel cell electric vehicles: Experiences from California,” shortly can be found in the CaFCP Resources Database at [www.cafcp.org/resources](http://www.cafcp.org/resources).



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

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

SOSS Refresh has been implemented at two stations to date: Costa Mesa, Torrance

Berkeley and Sunnyvale completed their SOSS signal tests in preparation for the stations' opening once other commission steps are completed.

The SOSS implementation guide for SDOs has been updated to include Refresh, transmitting using XML, and the agreed upon public definitions. The draft document is in review by the SDO members.

Submitted SOSS national expansion concept to Electrify America for funding support consideration for their \$200M Cycle 3 Investment Plan.

Additional SOSS work identified in the SDO and OEM groups above

Total SOSS accounts to date: 5,394

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

- Work on the California Hydrogen Policy Series continues with participation and co-sponsorship from California Hydrogen Coalition, California Hydrogen Business Council and others. Contact has already been made by staff and members with BloombergNEF, The Hydrogen Council/McKinsey & Company, the European Union and others as presenters on topics related to overarching topic of hydrogen.
- Staff had formal and informal contact with legislative staff, including the offices of State Senator Anthony Portantino (Glendale), Assembly Member Freddy Rodriguez (Pomona), including those that show interest in CAFCP webinars.
- Staff continue to consult with colleagues at California Hydrogen Coalition and other associations to ensure coordination of messaging and complementary activities in legislative education and outreach.
- As a member of the CEC Clean Transportation Program's Advisory Committee, staff provided feedback to the program's 2020-2023 Investment Plan. This included positive support of the new multi-year HRS funding approach, request for more equitable treatment of ZEVs by conducting EVI-Pro modeling and BloombergNEF detailed market analysis for hydrogen and FCEVs, and concern with the Commissioner's question if CEC should stop funding hydrogen after reaching 100 stations (goal is 5M ZEVs). A [revised Investment Plan](#) was released late September that provided more equitable treatment of ZEVs

- The Hydrogen Village and Capitol Lobby Day are set for March 24 and 25, 2021. The Hydrogen Village on March 24 serves as a showcase of hydrogen and fuel cell-related technologies, related to mobility and stationary power generation. Capitol Lobby Day on March 25 will bring together hydrogen and fuel cell stakeholders and allies with common agenda to lobby and educate state legislators, and legislative staff.



*Help us build the Hydrogen Village!*  
BECOME A SPONSOR • SHOWCASE YOUR TECHNOLOGY

*Save the Date*

**HYDROGEN VILLAGE**  
STATE CAPITOL: SACRAMENTO | MARCH 24, 2021 | 9am-3pm

Join us for largest H2 & FCEV outreach & public display of hydrogen & fuel cell technologies ever at the State Capitol

Hydrogen Village and Capitol Day is an opportunity to showcase the value and performance of hydrogen and fuel cell technologies and tell the larger story of how they will help California achieve its climate goals.

More information on the next page.



**CAPITOL LOBBY DAY**  
STATE CAPITOL: SACRAMENTO | MARCH 25, 2021 | 9am-3pm

**Who should participate?**

- Fuel cell & hydrogen technology companies, including...
- Vehicle manufacturers
- Hydrogen station operators & developers
- Stationary fuel cell manufacturers
- And more...

**Who is invited?**

- Governor & appointees
- Legislators
- State agencies, including CARB & CEC
- Local government & planning agencies
- NGOs
- General public

**OBJECTIVES —**

- Win hearts and minds to support H2 & fuel cells
- Funding to reach 200 stations by 2025
- Partnership with state to plan for 1,000 stations by 2030
- Stronger government support for fuel cell electric vehicles & hydrogen
- Support policies that build more robust energy and transportation systems
- Support policies that enable California to achieve its environmental & economic objectives

*To learn more and participate, please contact*

HYDROGEN VILLAGE	3/24/21	CAPITOL LOBBY DAY	3/25/21
Juan Contreras, CaFCP, 916-371-2792 jcontreras@cafcp.org		Teresa Cooke, California Hydrogen Coalition 916-594-9700 tcooke@bhfs.com	
Keith Malone, CaFCP, 323-441-0000 kmalone@cafcp.org			

- Following input from CaFCP and other H2/FCEV stakeholders, staff engaged the Western Governors Association on their EV road map agenda (EV defined as BEV and FCEV). CaFCP and Forth participate in the kickoff call with state government representatives across the west.
- Met with Natural Resources Defense Council following its recently released [statement](#) on hydrogen in order to build long-term relationship and on-going conversation regarding hydrogen. NRDC brought to our attention their comments in public feedback for SB100 which noted that the current info CEC is using is outdated and that hydrogen will clearly play a significant role in achieving SB100 objectives.



## EVENTS/ACTIVITIES | Staff Lead: J Contreras

**Q3, 2020+**

EVENTS	<b><i>**due to the COVID-19 several of the events below have been UPDATED or POSTPONED**</i></b>
7/1/20	H2 Mobility, Korea (Presenter, B Elrick)
7/2/20	Session 1 – IEPR Commissioner Workshop on Hydrogen and Fuel Cell Electric Vehicle Market Status (D. Park and Technical Team)
7/2/20	Coolest in L.A. Climate Resolve Event (Virtual) (K. Malone & J. Contreras)
7/8/20	Mission Hydrogen GmbH Opportunities & Activities in H2 Ports & Maritime (N. Bouwkamp & K. Malone)
7/9/20	Hydrogen: The Next Building Block for the Net-Zero Economy Pathways to Resilience: Infrastructure 4.0 – A Guidehouse Webinar Series (K. Malone)
7/9/20	Best Practices in Hydrogen Safety (Presenter: J. Hamilton)
7/9/20	Energy After Hours: Hydrogen: Expanding the Field (Presenter: B. Elrick)
7/14/20	Germany National Hydrogen Strategy (N. Bouwkamp & K. Malone)
7/15/20	Public Workshop: Fuels and Infrastructure for a Carbon Neutral Economy (K. Malone & J. Contreras)
7/15/20	Session 1: Energy Resilience and ZEVs – Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation (B. Elrick and Technical Team)
7/16/20	Three Revolutions, Opportunities, Challenges, and Intelligent Transportation Systems Workshop (B. Elrick and Technical Team)
7/16/20	Session 3: Electrifying Transportation Network Companies – Workshop on Zero Emission Vehicle Resilience and Three Revolutions in Transportation – (B. Elrick and Technical Team)
7/17/20	CARB – Public Workshop on the Clean Miles Standard (N. Bouwkamp and Technical Team)
7/22/20	Cummins (Hydrogenics) ( K. Malone and CaFCP staff)
7/22/20	Envisioning Hydrogen at a Self-Sustain Scale – (K. Malone & J. Contreras)
7/28/20	Pre- Application Workshop – GFO-20-601 – Blueprints for MD/HD Zero-Emission Vehicle Infrastructure (N. Bouwkamp and Technical Team)
7/29/20	Mission Hydrogen GmbH Hydrogen in the Universe – and on Earth (N. Bouwkamp and CaFCP staff)
7/30/20	Japanese Consulate presentation of Japanese company activity in Southern California. In attendance, mayor of Lancaster and Hitachi Zosen INOVA representative.
	
7/30/20	Virtual Grid Evolution Summit – (Presenter – B. Elrick)
7/30/20	2020 Congressional Clean Energy EXPO and Policy Forum – (Presenter: B. Elrick)
8/4/20	GFO-20-602 - Pre-Application Workshop - Zero-Emission Transit Fleet Infrastructure Deployment (N. Bouwkamp and Technical Team)
8/7/20	Renewable Natural Gas & Green Hydrogen Opportunities (K. Malone and J. Contreras)
8/11/20	Green Hydrogen Technology 101 (K. Malone and CaFCP Staff)

8/11/20	GFO-20-603 - Block Grant for Medium-Duty and Heavy-Duty Zero-Emission Vehicle Refueling Infrastructure Incentive Projects (N. Bouwkamp and Technical Team)
8/12/20	Secure Funding for California Zero-Emission Class 8 Freight and Port Drayage Trucks (N. Bouwkamp & K. Malone)
8/13/20	SOLICITATION: DOE Solicits Feedback on Hydrogen and Fuel Cells R&D Activities and Strategy – ( <a href="#">Link</a> )
8/19/20	Session 1 Clean Transportation Equity, Jobs, and Economic Recovery – Commissioner Workshop on Clean Transportation Funding Programs - CEC ( <a href="#">Link</a> )
8/19/20	Session 2: Approaches to Assessing Funding Programs Benefits – Commissioner Workshop on Clean Transportation Funding Programs – CEC ( <a href="#">Link</a> )
8/25/20	HRS Webinar – Update on Network Development Status in CA – (K. Malone, D. Park and B. Xiong) ( <a href="#">Link</a> )
9/2/20	The Real Story of Hydrogen Compression – (CaFCP staff)
9/2/20	Chile – The Hidden Champion is Awakening (N. Bouwkamp and J. Contreras)
9/8/20	Clean Transportation For All: Renewable Hydrogen Infrastructure (K. Malone and CaFCP staff)
9/9/20	Exploring Renewable Hydrogen Production Pathways Webinar – GNA (CaFCP sponsor)
9/16/20	Briefing: California funds more hydrogen stations (B. Xiong, K. Malone, CEC, CARB and Members)
9/17/20	Center for Hydrogen Safety 2020 – Virtual U.S. Conference (J. Hamilton & N. Bouwkamp)
9/18/20	Public Workshop to Discuss the Proposed Advanced Clean Fleets Regulation (B. Elrick and CaFCP staff)
9/21/20	How can California’s Advanced Clean Truck Regulations mandate be met on time? The Role of Hydrogen Fuel Cell Technology ( <a href="#">Link</a> )
9/21/20	UP TO CODE: Hydrogen Station Permitting Guidebook, Market Trends & Zero Emission Fleets Workshop (Presenter: K. Malone) ( <a href="#">Link</a> )
9/22/20	Fueling the Future Conference–German American Chambers of Commerce (Presenter B. Elrick) ( <a href="#">Link</a> )
9/23/20	World Hydrogen Conference ( <a href="#">Link</a> )
9/23/20	Gov Newsome press conference regarding ZEV executive order (Honda Clarity delivered by J. Contreras)
	
9/24/20	Plug Power – Virtual Symposium 2020 Webinar (B. Elrick)
9/24/20	NREL’s Camp Cleantech Summer Webinar Series – Sustainable Mobility – NREL’s ( <a href="#">Link</a> )
9/25/20	Commissioner Workshop on Approaches to Assessing Funding Program Benefits – Rescheduled
9/30/20	f-cell STUTTGART 20 YEARS ( <a href="#">Link</a> )
10/2/20	<i>Mission Hydrogen – Hydrogen Online Conference (HOC) (B. Elrick, Speaker) (<a href="#">Link</a>)</i>
10/15/20	<i>H2: North American Hydrogen Industrial Summit 2020 – (CaFCP Tentative) (<a href="#">Link</a>)</i>
10/22/20	<i>Center for Hydrogen Safety Europe Conference 2020 (N. Bouwkamp) (<a href="#">Link</a>)</i>
10/23/20	<i>Hydrogen + Fuel Cells International at North America Smart Energy Week – (CaFCP staff) (<a href="#">Link</a>)</i>
11/26/20	<i>European Conference on Hydrogen &amp; P2X: Production, Storage and Usage/Implementation (<a href="#">Link</a>)</i>
11/26/20	<i>New Date: Fuel Cells and Hydrogen Joint Undertaking Forum (<a href="#">Link</a>)</i>