

BOARD MEETING DATE: August 7, 2020 AGENDA NO. 17

PROPOSAL: 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 May 19, 2020
and provides the Activity Update for the fourth quarter of
2019 and first quarter of 2020.

COMMITTEE: Technology, June 19, 2020, Reviewed

RECOMMENDED ACTION:
Receive and file.

Wayne Natri
Executive Officer

MMM:NB:JI:LHM

Background

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 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. Current Executive Members include:

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

There are also currently 35 Full and Associate Members, with commensurate benefits and voting rights. These members can be viewed on the CaFCP website (<https://cafcf.org/members>).

The CaFCP activities planned for 2020 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 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
- Reach target markets, audiences and communities to educate, inform and promote hydrogen and fuel cell vehicles and accelerate greater commercial adoption.

The recent activities for 2020 include:

- Publication of the Hydrogen Council report, with data collection and analysis by McKinsey & Company, entitled “Path to Hydrogen Competitiveness—A Cost Perspective,”¹ and “Roadmap to a US Hydrogen Economy,”² which described the anticipated cost reductions that enhance the accelerated deployment of fuel cell electric trucks; and
- Conducting the monthly teleconference of the HD FCET Task Force, providing a forum for members to learn more about funding opportunities and proposed regulations.

The next CaFCP Executive Board meeting is scheduled for October 7, 2020 in Sacramento. Additional information about the CaFCP can be found at <https://cafcf.org>.

Attachments

- 1) CaFCP May 19, 2020 Executive Board Meeting Agenda
- 2) CaFCP Activity Updates for 4th Quarter 2019 and 1st Quarter 2020

¹<https://hydrogencouncil.com/en/path-to-hydrogen-competitiveness-a-cost-perspective/>

²<https://cafcf.org/sites/default/files/Road%2BMap%2Bto%2Ba%2BUS%2BHydrogen%2BEconomy%2BFull%2BReport.pdf>

Attachment 1

- Letter from CaFCP Chair Sandra Berg regarding May 19, 2020 Executive Board Meeting
- CaFCP May 19, 2020 Executive Board Meeting Agenda
- Decision Item – New Member Proposals for Consideration at May 19, 2020 Meeting
- Decision Item – Phoenix Project for Consideration at May 19, 2020 Meeting

May 13, 2020

Dear California Fuel Cell Partnership Board Members!

I am looking forward to welcoming you to our virtual 2020 Spring Board Meeting, Tuesday, May 19th. I confess, I am disappointed we will not see each other in person. The value of spending our traditional day sharing ideas, acknowledging our accomplishments and debating the issues that challenge the success of hydrogen and fuel cells to accomplish our common goal of electrification will not be the same with a 3 hour virtual meeting. Nevertheless, as the saying goes....*the show must go on*.

I know this Board is up for the added challenge and I can assure you Bill along with his dynamic CaFCP team plus our dedicated member committees have been working tirelessly on the organization's priorities as laid out by the Board last October. It has been inspiring to join this amazing group of people who are single minded in the quest of making a difference with hydrogen & fuel cells in our battle to end climate change. Our Board meeting reflects their efforts. It will be fast paced, full of content and at the end of the day we need your guidance and aligned direction to meet the vision of electrification with hydrogen and fuel cells.

Two short months ago we would have all agreed electrification of energy and transportation is a huge transformation and monumental task. Now we will tackle this task while recovering from a pandemic and in real time figuring out the social and economic consequences. Thinking about this added layer of complexity and frankly how it exponentially compounds our challenge, I was reminded of the iconic dance team of Fred Astaire and Ginger Rogers and the famous saying..... *'Sure Fred Astaire was great, but don't forget that Ginger Rogers did everything he did...backwards and in high heels.'*¹

I'll leave you with the thought CaFCP is the Fred Astaire of electrification with hydrogen and fuel cells and now we have to add to our many talents mastering the art of dancing backwards and in high heels. A challenge.... I know *WE* are up for!

Stay safe and be well! See you on the 19th at our new virtual meeting.

Sandy

Sandra Berg, CaFCP Chair
CARB Board Member

¹ A bit of trivia....Ginger Roger did not author this saying, nor did she believe her role was more difficult. She credited cartoonist Bob Thaves' who in his 'Frank and Ernest' series Frank and Ernest are gazing at a billboard announcing a Fred Astaire Film Festival with that caption. The cartoon appeared in a LA newspaper.

**California Fuel Cell Partnership
Spring Board of Director Meeting**

May 19, 2020 via GoToWebinar
9:30am – 12:30pm PT

Agenda

Welcome - Bill Elrick and Sandy Berg

- Welcome – Bill Elrick
- Self-Introductions: Name & Company Affiliation
 - Share one observation, gratitude or something new as the result of sheltering-in.
 - Rules of Engagement via GoToWebinar for Board Members and the Public
- Meeting Framework – Sandy Berg
 - Making Lemonade....Who has the Sugar?
 - Review meeting Agenda, share Board meeting expectations & outcomes

CaFCP Formal Business Meeting Session – Bill Elrick and CaFCP Team

- CaFCP Project/Technical Update/New Members
 - Board Discussion & Decisions
- Public Comments
- Close Formal Session

Board Presentation, Discussion and Path Forward....All Eyes on Fuel Cell Partnership's Next 20 Years

- **Inspired Past & Passionate Present.....**
 ...building on a solid foundation for Hydrogen & Fuel Cell Success – Sandy Berg
- **Connecting with FCP Strong Roots - Matt Forest & Gia Vacin**
 - Member Presentation: Phoenix Project process & findings; Member and Staff Feedback; Organization Vision, Mission & Principles; Strategic Objectives and Activities.
 - Board Q&A and Feedback
- **Blue Print to Develop FCP Expansion Plan – Sandy Berg & Phoenix Project Team**
 - Board Q&A and Feedback

Board Direction & Action Items – Bill Elrick, Sandy Berg and Board of Directors

Open Public Comments

Closing Thoughts & Thank YOU!

Decision Item
New Member Proposals
May 19th, 2020 Executive Board Meeting

BACKGROUND:

To increase CaFCP's capacity to successfully support hydrogen fuel cell vehicle and hydrogen infrastructure commercialization, the CaFCP Steering Team propose the following stakeholders as new members of CaFCP. Each proposed entity has experience in hydrogen infrastructure development, adds unique value to CaFCP, and provides new insights and perspectives to advance progress in commercialization activities in California and beyond.

With each member proposal, a recommended membership sector, tier and brief description is presented.

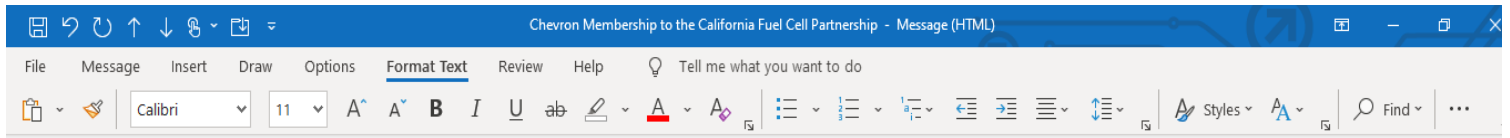
Entity	Sector	Tier
Chevron <i>- California-based multinational energy corporation, former CaFCP member and HRS operator, with traditional fueling experience from production to downstream retail operations.</i>	Infrastructure	Executive
Toyota Tsusho America <i>- A member of the Toyota group that supplies raw material, logistics & procurement, in addition to development of HRS in Japan, with plans for California and U.S. deployments.</i>	Infrastructure	Full

IMPACT:

As members, each organization would have a valuable voice within CaFCP and help shape the commercial rollout and scaled deployment planning activities, especially in regard to hydrogen fueling infrastructure. Adding these two companies will increase CaFCP membership contributions revenue by \$100,000 per year.

RECOMMENDATION:

Invite Chevron to join the CaFCP board as an Executive member, and Toyota Tsusho America to join CaFCP as a Full member.



Chevron Membership to the California Fuel Cell Partnership

**Vomund, Mike (MEVO)** <MEVO@chevron.com>
To Bill Elrick CAFCP.ORG
Cc Means, Karen (kbax); Ruddock, Michael (MRuddock); Perea, Henry

[Reply](#) [Reply All](#) [Forward](#) [...](#)

Follow up. Start by Monday, March 30, 2020. Due by Monday, March 30, 2020.
You replied to this message on 4/2/2020 10:22 AM.

Fri 3/27/2020 3:01 PM

Bill,

Thanks very much for the opportunity to join the California Fuel Cell Partnership. As you know Chevron has a strong history with hydrogen as one of the original members of the California Fuel Cell Partnership. Chevron believes that hydrogen has a potential role in a lower carbon future in many facets: as a transportation fuel, an industrial feedstock, and as an energy storage medium for use in heat and power. Further the company has extensive experience with hydrogen, as it is used to refine crude and in other chemical processes. In fact, Chevron operates two California refineries which produce nearly 1MM kg of hydrogen daily. As for myself, I've been driving a hydrogen vehicle for coming up on a year.

Recently, Chevron has joined the Hydrogen Council, the preeminent global advisory body providing long-term vision on the role of hydrogen in the energy transition. Joining the Council reinforces the company's view that hydrogen offers great potential for success in the alternative energy pathway for the future and gives Chevron access to geographically diverse network of companies involved in all parts of the hydrogen value chain. To further engage with various industry experts, the company also recently contributed to a report developed by the Fuel Cell and Hydrogen Energy Association – executed by McKinsey & Company - entitled "Road map to a US Hydrogen Economy". The study stresses the versatility of hydrogen and outlines a pathway to success.

Going forward, Chevron plans to participate in hydrogen fueling stations at retail locations in California. Learnings will be applied to understanding the infrastructure requirements and potential for Chevron hydrogen supply capabilities. Chevron's knowledge and experience with hydrogen complements the collaborative strengths of the CaFCP, and membership in the organization supports Chevron's approach to the energy transition. The company is committed to innovation and to pursuing ever-cleaner energy sources, and relishes the opportunity to collaborate with other hydrogen industry players and thought leaders in the CaFCP.

We are certainly in the midst of challenging times as we respond to the COVID-19 crisis (and ultimately recover) – I hope all is well with you, your family and colleagues. Please let me know if you require any additional information. I look forward to your response and future opportunities to collaborate with the Partnership.

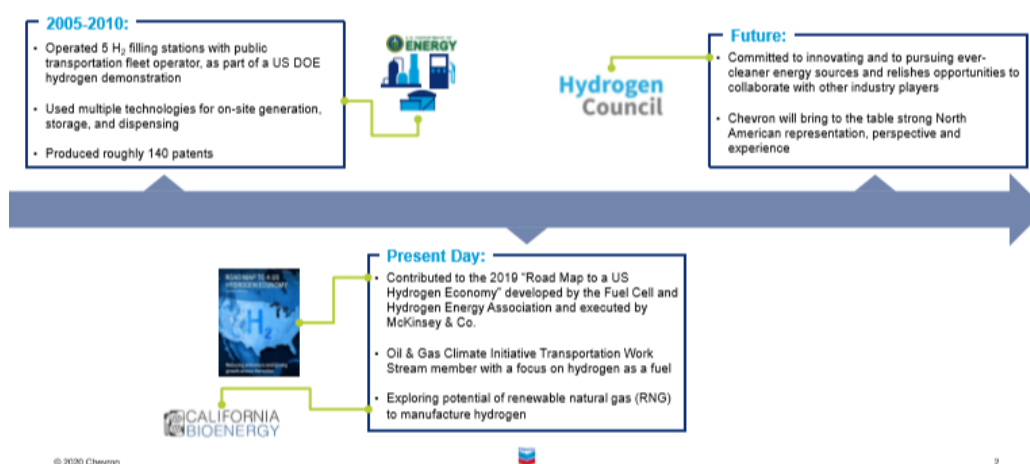
Best regards,

Mike V

Mike Vomund
Vice President
Chevron Products, Americas West
6001 Bollinger Canyon Rd
San Ramon, CA 94583



Chevron's Contributions to the Advancement of Hydrogen Past, Present and Future



Current Hydrogen Efforts Leveraging a partnership approach to enable H₂ market



Retail Test-and-Learns:

Partners to open 4-5 H₂ retail fueling stations at Chevron-owned locations in CA.

Hydrogen Production Experience:

Extensive experience as a national hydrogen manufacturer, partner, and consumer.

Economic Viability:

Evaluating economics to identify business opportunities along the value chain.

Oil & Gas Climate Initiative Member:

Transportation subcommittee inviting CaFCP to participate in a global H₂ Roundtable.

Cleaner H₂ Production:

Exploring the potential to integrate RNG with refinery assets to supply low-carbon H₂.

Chevron believes that hydrogen has a potential role in a lower carbon future in many facets: as a transportation fuel, an industrial feedstock, and as an energy storage medium for use in heat and power.



1977 W 190th Street, suite 200
Torrance, CA 90504

March 19, 2020

Bill Elrick, Executive Director
California Fuel Cell Partnership
3300 Industrial Blvd, Suite 1000
West Sacramento, California 95691

Dear Mr. Elrick:

Toyota Tsusho America, Inc. (TAI) as well as our head office in Japan have been actively working towards contributing the development of hydrogen society in global scale. As family company of Toyota Motor Corporation (Japan) and Toyota Motor North America (TMNA), we not only support their automobile manufacture activities with various services such as logistic, raw material supply, sub-assembly and other procurement assistance, but develop infrastructure implementations for fuel cell electric vehicle (FCEV). We operate 8 hydrogen stations and several related demonstrations in Japan and would like to extend the experience to the U.S market to support its market expansion.

TAI is interested in becoming a full-level membership with the California Fuel Cell Partnership (CaFCP) to further advance our hydrogen infrastructure and FCEV rollout goals and support CaFCP's effort more extensively. With our membership participation, we believe that there will be a mutually beneficial synergy created between CaFCP, participating member companies and us which we hope accelerate hydrogen society expansion throughout the state.

Our hydrogen value chain business concept with unique company division strength should lead us establish the foundation of economically viable and sustainable model. Our goal is to create hydrogen demand and supply at the same time with continuous cost reduction effort. We believe that it is imperative to achieve such goal with collaboration with CaFCP and its member companies particularly in this initial market expansion phase.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Toru Sugiura', with a long horizontal line extending to the right.

Toru Sugiura MBA, CPM
Toyota Tsusho America, Inc.
Senior Manager
Corporate strategy & New Business Development



Toyota Tsusho America, Inc. Hydrogen Value Chain Project Update

Toyota Tsusho America, Inc.
3/19/2020

TOYOTA TSUSHO AMERICA, INC.



Toyota Tsusho America, Inc. (TAI)

Corporate Profile (As of March, 2020)

- 1) Headquarters 805 Third Avenue, 17th Floor
New York, NY 10022
- 2) Capital US\$ 90,000,000.-
- 3) Share holder Toyota Tsusho Corporation (100%)
- 4) Employees <Standalone> 1,000 (incl. 100 expatriate employees)
<Consolidated> 3,800 (incl. 140 expatriate employees)
- 5) Business Description Domestic wholesale, exporting and importing
products, processing vehicle parts and accessories,
insurance agencies, etc.
- 6) Locations
 - (Domestic) 25 locations including New York (Headquarters) and Kentucky.
27 subsidiaries and 11 equity companies
 - (Outside U.S.) 1 Costa Rica branch, 10 subsidiaries (3 in Canada; 7 in Mexico) ,
7 equity companies (6 in Mexico; 1 in Venezuela)



By the way...

Our headquarter (Japan)

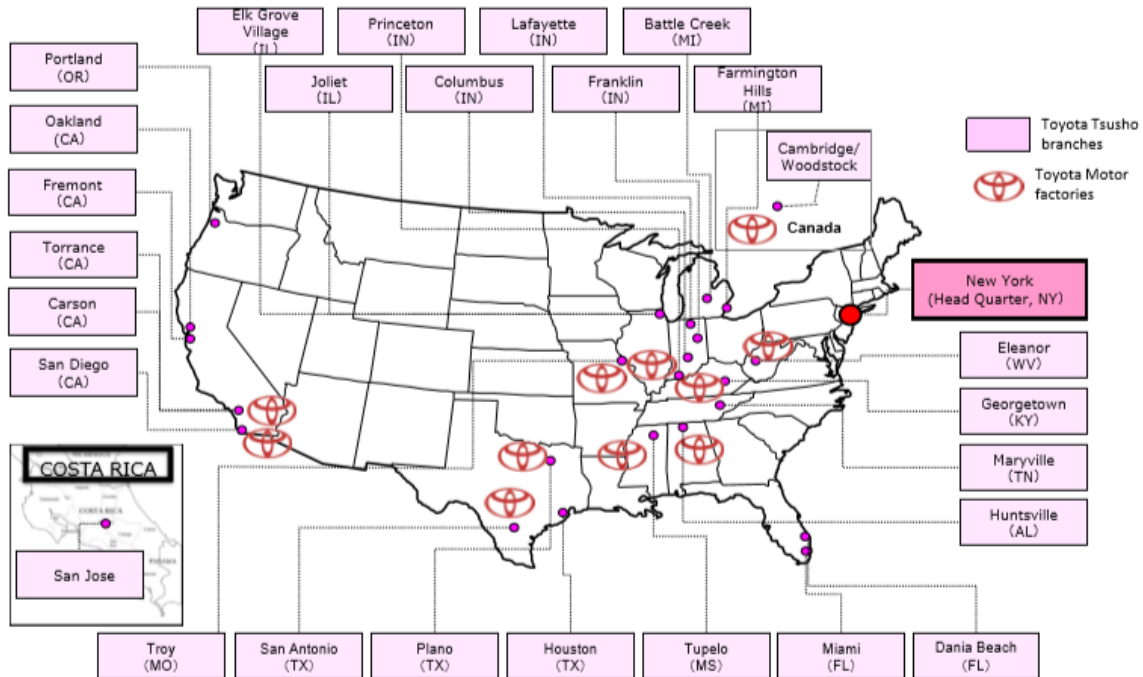
"Toyota Tsusho Corporation "

- Established in 1948
- Employee: 58,565 (as of 11/2019)
(all affiliated combined)
- Sales (2018): \$61 billion (USD)
- One of 16 Toyota group companies
- 7 divisions
(Metal, Machine & Energy, Global
Logistic, Chemical & Electronics,
Automobile, Food & Life Style, Africa)
- Toyota Motor owns 22% of stock.

TOYOTA TSUSHO AMERICA, INC.

1

Our branches in North America (As of March, 2020)



As family company of Toyota, we are located and work closely with Toyota Motor North America

TOYOTA TSUSHO AMERICA, INC.

2

Hydrogen Experience in Japan

Toyota Motor Kyushu

DEMO H2 Production from Solar Power + FC Forklift



- A Biz. Model validation
- C High-cost facilities, Operation

Fukuoka City

DEMO H2 production from Biogas



- A Establish Technology - World first
- C Demand creation

A : Aim

C : Challenge



@Tomamae, Hokkaido

DEMO H2 Production from Wind power + Transportation



- A Biz. Model validation
- C High-cost Transportation

Commercialized: H2 Refueling Station (70MPa)

@Aichi & Tokyo



2 stationary stations + 6 mobile stations

Validating various path ways of CO2 free Hydrogen Value chain (Produce ~ Utilization)

➔ We plan to use our Japan experience for the U.S. market

TOYOTA TSUSHO AMERICA, INC.

3

Key Word

Electrification

IT &
Digital Transformation

Environment

Who:

Cross Function & Synergy



What:

Value Chain



Where (area):

Specific Market (Commercial & Industrial)



Enhance TAI's core competence and corporate value

TOYOTA TSUSHO AMERICA, INC.

4

Toyota Tsusho: Hydrogen Value Chain Concept and Progress

Value Chain Synergy Concept



Progress (Specific Activity)



Renewable Natural Gas (RNG)
Development in
Central California

Decentralized Hydrogen Production
with Onsite Station for Trucks:
Under Technical Feasibility Study

Mobile Refueler /
Distribution Truck
Development

• Conventional Stations
(w/CEC Grant)
• No-Compressor Station
(Newly Developing)

Port Equipment
Electrification
Demonstration
(Diesel to Fuel Cell)

• Clean Air Action Plan (POLA/POLB)
• Toyota Environmental
Challenge 2050

Toyota Tsusho Goals

Create Value Chain Synergy

Creating supply and demand
together in the value chain
(Ex. More applications (hardware)
More infrastructure=>More Hydrogen
=> More RNG)

Establish Self-Sustainable Supply Chain

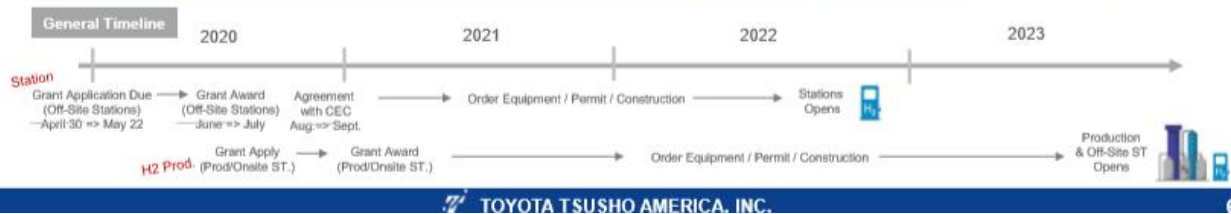
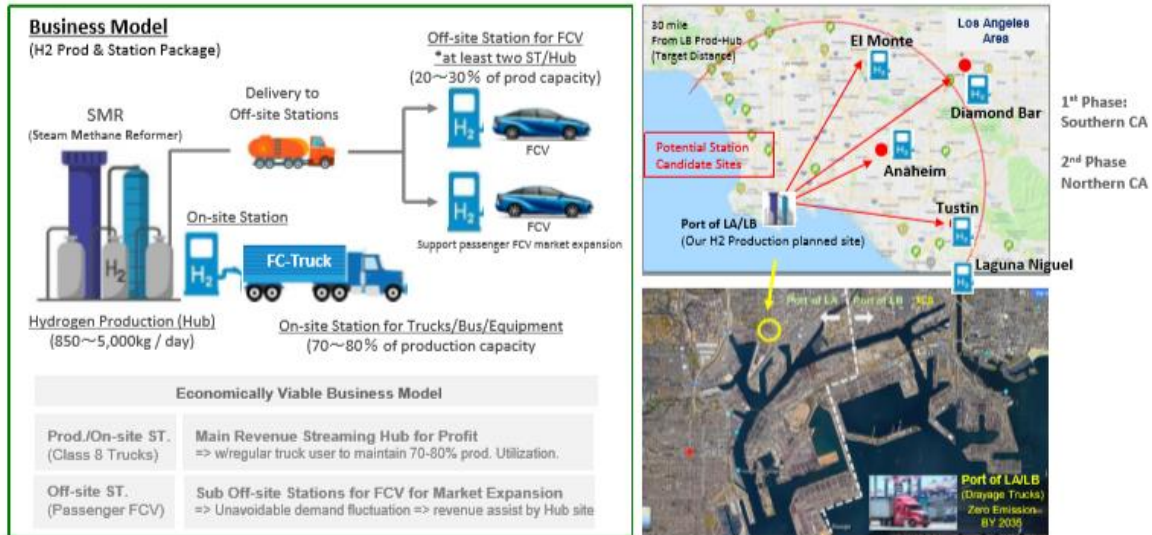
No more relying on centralized supply
source and distribution method.

Accelerate Market Expansion

Demand Creation
Total Chained Cost Down
More Users
Market Expansion

TOYOTA TSUSHO AMERICA, INC.

5



New Toyota "Mirai" (Fuel Cell Vehicle)



New 2020 Model

Current Model (2015)



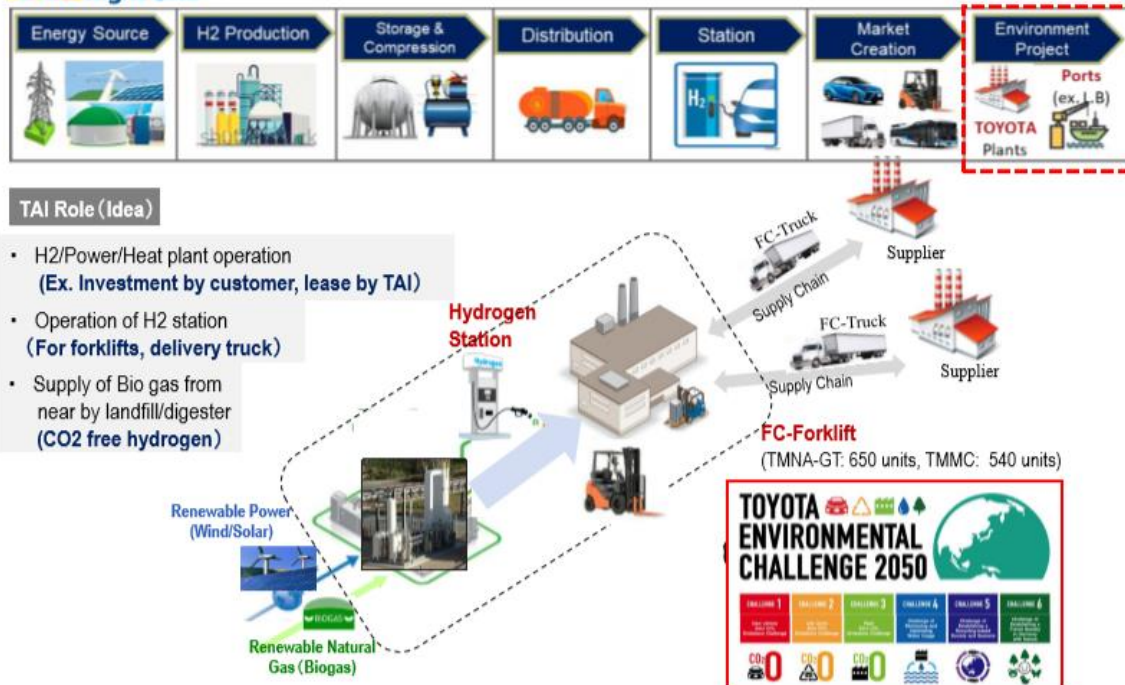
Today, many stations are regularly closed for operation due to technical problems and supply capacity by centralized production by industrial gas company

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California Fuel Cell Partner Ship (CaFCP) station app

Our “decentralized production & station model” is self-sustainable”

Value Chain Synergy and Progress: Toyota Environmental Challenge



Decision Item
Phoenix Project – New FCP Organization
May 19th, 2020 Executive Board Meeting

BACKGROUND:

CaFCP is a voluntary public-private partnership established in 1999 to support commercialization of hydrogen and fuel cell electric vehicles in California. The organization has successfully led the development of the California market, from early research, development and demonstrations to the initial retail market launch in 2015.

As the technology and industry have evolved, so have the needs and activities of the public-private organization tasked with facilitating progress. While members developed the [*California Fuel Cell Revolution*](#), the common vision of a sustainable market in California, they recognized that the envisioned scaled deployment needs would require new approaches and tools to achieve that 2030 vision. Likewise, the urgency to accelerate actions to increase overall ZEV deployments to meet near- and long-term environmental goals increased.

While incremental changes to the organization were helpful, the CaFCP executive board in 2019 formally directed the development of a proposal for a new and improved public-private partnership. This new organization should position existing, and additional, stakeholders to successfully achieve the goals of California and the nation in transforming the transportation system to zero emissions by leveraging fuel cell vehicle and hydrogen fueling technologies.

The CaFCP board and members have provided significant input and guidance for the development of a new public-private partnership, outlining a common needs and desires around the vision, mission and objectives. This input has been collected and vetted through workshops, surveys, and regular meetings of the CaFCP board and steering team and is ready for board review and confirmation. Next, additional guidance is needed from the board on structural and governance to develop a complete organizational proposal for the board's consideration during the Fall 2020 meeting.

IMPACT:

An improved public-private partnership capable of driving stakeholders and the industry to a sustainable market success, in California and nationally, will accelerate the common goals and objectives of all CaFCP members and society as it undergoes a transformation of its transportation energy system. Confirming the foundational Vision, Mission, and Objectives in this proposal, and providing feedback on the necessary structural elements to complete a full organizational proposal in October, will facilitate the transition of this organization into a more effective and capable one capable of achieving our objectives faster.

RECOMMENDATIONS:

- Confirm Core Principles, Vision, Mission, Objectives & Activities developed by members
- Review, discuss & provide guidance on the structural elements required to finish the new organization proposal, including Organizational Design, Financial Model & Governance.
- Authorize the solicitation and securement of any additional resources required to complete the process, with oversight by the steering team as needed.

True Today and Foundational for Phoenix Project...

Core Principles

Leadership:

We passionately lead our organization for stakeholders to navigate the electrification of transportation, unify implementation efforts, and help everyone fall in love with fuel cell electric vehicles.

Credibility:

We are a team of thought leaders and experts, dedicated to be a reliable source of hydrogen and fuel cell data and information, that promotes discussion and informs decision makers to win hearts and minds and fulfill the drive to electric.

Collaboration:

The Partnership is a crucial platform, facilitating transformational change among the thought leaders of Industry, Government, NGOs, and Academia across Society.

Inclusion:

Transitioning to a robust, zero emission electrified transportation system has a duty to benefit everyone while minimizing disruptions.

True Today and Foundational for Phoenix Project...

Vision

Hydrogen and fuel cells answers the rally cry for zero emission electrification of transportation and energy systems.

Mission

To establish a thriving hydrogen and fuel cell vehicle market, fulfilling the drive to electric!

Principles, Vision, Mission, and Objectives

Core Principles: Leadership, Credibility, Collaboration, and Inclusion

Vision: Hydrogen and fuel cells answers the rally cry for electrification of transportation and energy systems

Mission: To establish a thriving hydrogen and fuel cell vehicle market, fulfilling the drive to electric!

Objectives

Drive Market Success

Establish the market conditions to build an expanding and robust hydrogen fuel cell transportation market.

Win Hearts and Minds

Demonstrate, build support and win over **Customers'** and **Decision Makers'** to the value and benefit of hydrogen and fuel cells

Be a Trusted Expert Resource

Bring together thought leaders and experts to share all aspects of transforming our transportation systems.

Produce and distribute high-quality data and tools to help inform policy and stakeholder investment decisions.

Develop and Operate a Sustainable Organization

Create and maintain a mission lead organization that lives by its core principles and is sustainable and robust and financially secure.

Today and Expanding to Phoenix: Objectives and Activities *(External)*

External Objectives

Drive Market Success

Establish the market conditions to build an expanding and robust hydrogen fuel cell transportation market

Win Hearts & Minds

Demonstrate, build support and win over **Customers'** and **Influencers'** to the value and benefit of hydrogen and fuel cells

Be a Trusted Expert Resource

Bring together thought leaders and experts to share all aspects of transforming transportation systems
Produce & distribute high-quality data & tools to help inform policy & stakeholder investment decisions

Strategic Activities

Shaping Market Conditions

- Identify and promote winning strategies for market growth and happy customers
- Strong members with aligned message
- Facilitate market-based policy development and expanded private investment towards rally cry tipping point
- Continue technical expertise from codes and standards to customer interface & infrastructure

Problem Solving

- Discover and identify challenges and barriers that inhibit market growth & deploy initiatives to confront and overcome them
- Cascade solutions to other stakeholder groups

Collaborate Nationally and Internationally

- Supporting our mission and market expansion
- Facilitating stakeholder communication, collaboration, and engagement

Facilitate Communication, Collaboration and Engagement for Decision Makers and Market Builders

- Provide forums that facilitate engagement, open communication, encourage varied points of view, and steps to move forward building EV customer/user acceptance.

Build Coalition of the Willing and Open-Minded Stakeholders thru Education & Outreach Campaigns

- Target #1: Policy Makers, Decision Makers, NGOs, Investment Groups, Media
- Target #2: Businesses, Public & Private end-users of vehicles with fuel cell vehicle & meet regulation.

Harness and Leverage Customer Enthusiasm

- Create FCV Club: to gather enthusiasts, provide social events, keep them informed, and rally them for grassroots-type efforts

Stakeholder-Expert Created Materials

- Develop vision, roadmap and strategy plans to achieve 2030 vision and show success

Continue to Improve & Share our Knowledge

- SOSS
- Education and outreach campaigns: policy makers, decision makers, non-government organizations, trade associations. Influencers, media, standards development organizations, investment groups, general public
- Social Media Campaign
- Publish documents created by our stakeholder experts:
 - Studies
 - Reports
 - Objective materials
 - Common definitions

High Level Draft -- For Discussion Only

Today and Expanding to Phoenix: Objectives & Activities *(Internal)*

Internal Objectives

Develop and Operate a Sustainable Organization

Create and maintain a mission led organization that lives by its core principles
and is sustainable and robust and financially secure

Strategic Activities

Building on the Strengths of the CaFCP

Member Composition

- Member Levels
- Sector Representation

Collaboration Forum

- Meetings
- Project/Breakout Teams

Operational Activities

- Public Education and Outreach
- Internal Stakeholder Alignment
- Strategic Planning
- Project Initiatives

Financial Inputs

- Dues levels
- Project and Activity Sponsorships
- Additional Member Contributions

Develop and Launch Expanded Organization

Phase 1: Aligning a Strong Foundation

- ✓ Investigation and Discovery
- ✓ Steering Team Socialization and Review
- ✓ Recommended Organizational Foundations

Confirm Org Foundation & Board Direction

- Board presentation, and feedback

Phase 2: Presented at October Board Mrg

- Develop Participation Structure: Framework, Structure, and Governance
- Develop Strategic and Operational Plans
- Develop a Financial Model
- Develop the Transition Plan

Phase 3: Launch the New Organization

Operate a Sustainable Organization

Active Planning and Management

- Living Strategic Business Plan
- Attract Strategic Members/Partners
- Match Resources and Staffing to Business Needs

Business Development

- Grow Influence
- Expand Geographic Presence
- Improve Effectiveness/ Continuous Improvement

Financial Health

- Identify and Attract New Members
- Identify and Implement New and Non-traditional Opportunities for Sustainable Revenue Streams

Structural Concepts -- *for discussion*

Organizational Design

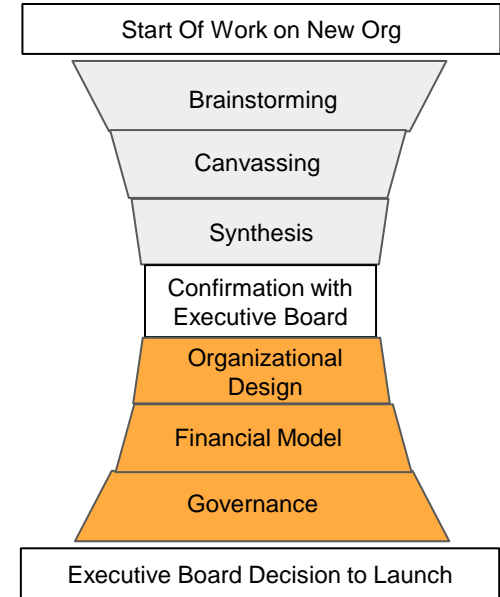
- *Formal structure options*
- *Multiple levels of participation*
- *Public and private leaders engage across organization*
- *Transition towards traditional stakeholder roles*
- *Staffing models*

Financial Model

- *“Skin in” commitment for all participants*
- *Multiple and expanding revenue and support options*

Governance

- *Create governance structure that supports organizational design and financial model that effectively achieves the mission statement*





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 website¹.

SECTOR GROUP UPDATES

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

- Submitted CaFCP industry member comment letter to CEC [18-HYD-04 docket](#), Draft Solicitation Concepts for Light-Duty Hydrogen Refueling Infrastructure, "California Fuel Cell Partnership Comments - CaFCP Stakeholder Response to 18-HYD-04 HySCapE Workshop."
- Organized a CaFCP hosted webinar for CARB to present their AB8 report findings. Staff coordinated and presented the OEM perspective to counterbalance CARB report findings. (<https://cafcpc.org/content/ab-8-webinar-2019-annual-evaluation-fcev-deployment-hydrogen-station-network-development>)
- Coordinated joint OEM and SDO member review of CEC [19-TRAN-02](#) MD/HD ZEV and Infrastructure solicitation concepts; Staff consolidated comments and submitted to the docket.
- Staff presented SOSS Topics:
 - Station Status Criteria-updated terminology and definitions for OEM discussion and consensus
 - SOSS Icons, including "refresh"
- Initiated decoupling of retail hydrogen station count and CaFCP Station count from the station map.
- The 2019 hydrogen supply disruption topic was discussed and a methodology for developing messaging around Station Network Health was initiated and communication developed
- Burbank outreach efforts initiated including meeting with Burbank Public Works Fleet & Facility manager

¹ http://cafcpcmembers.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 steps to complete commissioning of the Woodside, and Burbank stations. Please refer to the Go-Biz SmartSheet for details.
- The group discussed processes and methods to remove stations from the [CaFCP Station Map](#). Staff developing a strawman to be proposed to OEM, SDO and Station Confirmation Groups for review.
- 3 stations were set to Open-retail: San Francisco – 3rd Street; San Francisco – Harrison Street; San Francisco – Mission Street
- The Cal State LA station was moved from commissioning to Legacy Retail
- 15 stations are expected to open in 2020; 2 stations are to open in 2021; the Burbank station is currently Under Review

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

- Submitted CaFCP industry member comment letter to CEC [18-HYD-04 docket](#), Draft Solicitation Concepts for Light-Duty Hydrogen Refueling Infrastructure, “California Fuel Cell Partnership Comments - CaFCP Stakeholder Response to 18-HYD-04 HyScapE Workshop.”
- Staff coordinated joint SDO and OEM member review of CEC [19-TRAN-02](#) MD/HD ZEV and Infrastructure solicitation concepts; Staff consolidated comments and submitted to the docket.
- Staff coordinated SDO discussion of SOSS Topics, including Station Status Criteria-updated terminology and definitions, and LCFS topics (Standardization of SOSS reporting)
- Staff coordinated methodology for developing messaging around Station Network Health and communication developed, in response to 2019 hydrogen supply disruptions



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

- Actively emphasized need for dedicated funding to implement HD H2 ZEV fueling infrastructure at CARB & CEC HD funding meetings, both for buses and trucks.
- Conveyed balanced message that efforts should include HD FCEVs while continuing to support LD FCEVs and infrastructure.
- 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.
- FCET group continues to meet regularly to advance activities overall and towards FCET strategy document for 2020.
- FCEB tour on pause for now, for future consideration

PROJECT TEAMS

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

- **CSA Group:** Aaron and Jennifer are Chair and Vice-Chair (respectively) of the CSA Hydrogen Transportation Technical Committee; Jennifer is Bill Elrick's voting member for the Transportation Strategic Steering Committee; a member of the B51/NGV2/HGV2 Harmonization Combined TF, on the Transportation Executive Synchronization Committee, and is in the Technical Sub Committees for a number of the documents listed below.

Active Projects

- HGV 4.9 – *Hydrogen fueling stations* – The Technical Committee ballot closed. The standard is being finalized and will be published in February/ March 2020.
- HGV 4.1 – *Hydrogen dispensing systems* – All TSC / Public Review comments have been dispositioned and the draft has been finalized for the Technical Committee ballot. It is posted and closes February 21, 2020.
- SPE 2.1.3 – *Best practices for defueling, decommissioning, and disposal of compressed hydrogen gas vehicle fuel containers* – Work is completed and expected publication in February 2020.
- HGV 2 – *Containers* – The TSC continues to meet for content development.
- HPRD 1 – *Thermally activated pressure relief devices* – TSC continues to meet for content development.
- HGV 4.4 – *Breakaway Devices, HGV 4.6 Manual Valves, and HGV 4.7 Automatic Valves* – The TSC continues to meet for content development.
- HGV 4.10 – *Fittings* – The TSC continues to meet for content development
- FC 1 – *Stationary fuel cell power systems* – The TSC continues to meet for content development

Projects Launching Soon

- HGV 5.1 – *Hydrogen Refueling Appliances*
- HGV 4.2 – *Hoses for compressed hydrogen fuel stations*
- HGV 3.1 – *Fuel system components for compressed hydrogen gas powered vehicles*

Recently Published

- HGV 4.3 – *Fueling parameter evaluation* published in July 2019. Work on the next edition of HGV 4.3 will be to align with definitions in the upcoming edition of SAE J2601.
- CHMC 2 – *Chemical compatibility (Non-Metals)* published in August 2019.
- **NFPA 2:**
 - Public comments for the 2023 version open until June 30, 2020 Task Groups active and reporting to the Technical Committee ahead of the Pre-First Draft meeting
 - Meeting originally scheduled for April 22-23 being rescheduled TBD
- **IFC/CFC:**
 - 2019 Intervening Code Cycle adopting 2020 NFPA 2 (as was done for previous versions)
- **ISO/TC 197:**
 - **WG 24:** ISO/DIS 19880-1, *Gaseous hydrogen — Fueling stations — Part 1: General requirements*-. published; WG 24 disbanded
 - **WG 27:** Hydrogen Fuel Quality- ISO 14687 – published
 - **WG 28:** Hydrogen Quality Control- ISO 19880-8 is in FDIS stage; 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 published; WG disbanded
- **New WG 29- Basic considerations for the safety of hydrogen systems**: WG formed February; kickoff meeting TBD (Convener, Jay Keller)
- **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 and Hydrogen Sampling Workshop underway.
- **SAE International**:
 - **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)**: Publication of the 2020 version in April.
 - **SAE J2719 (Fuel Quality)**: published
 - **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
 - **SAE J2990/1 (First and Second Responder Recommended Practice)**: open for revision; harmonization with other FC safety documents, the parent document J2990, UN GTR, and new proposals. Target ballot timeframe- fall, 2020.
- **FCHEA Regulatory Matrix** (as of December 31, 2019):
<https://static1.squarespace.com/static/53ab1feee4b0bef0179a1563/t/5e3afea43ac8e451d6e713d2/1580924580760/FCHEA+Regulatory+Matrix+markup+Dec+31+2019.pdf>

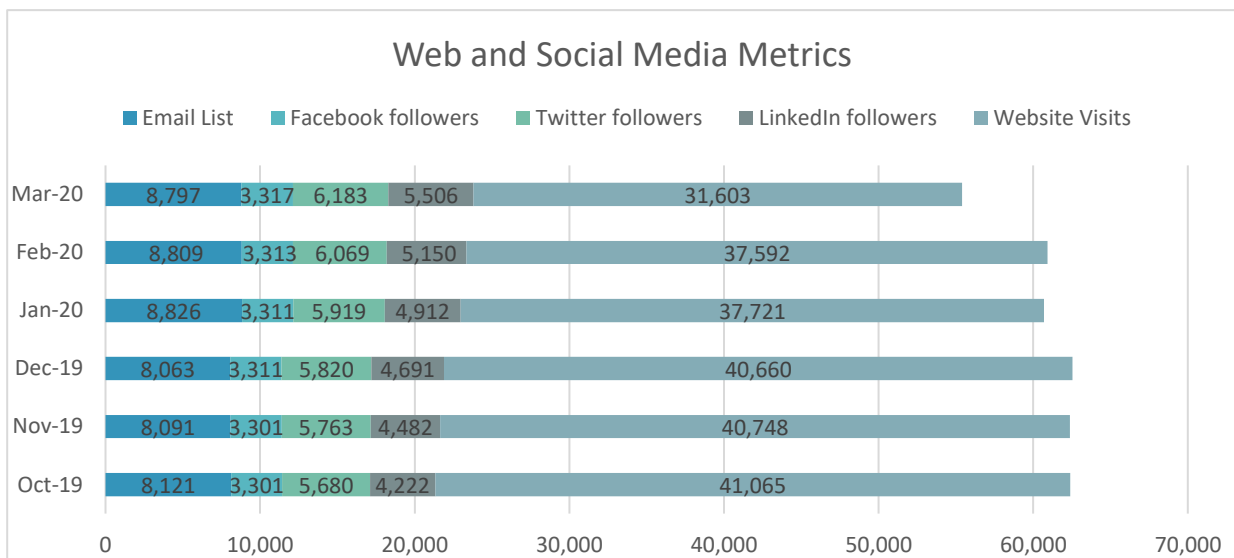
ORGANIZATIONAL AND MEMBERSHIP ACTIVITIES | Staff Lead: B Elrick

- Work continues on the board directive of CaFCP reorganization to meet the next 20 years of market development, with a board-level workshop held FEB 26 at CaFCP. The workshop focused on identifying the vision, core principles and objectives for an improved organization and is being reviewed and discussed across Steering Team meetings. These consensus foundations will be presented to the board during their next meeting for review and feedback.
- In March 2020 the Steering Team approved SETS as a new Associate member and recommended Toyota Tsusho to be proposed to the Executive Board as a new potential Full member. Chevron and City of San Francisco have submitted membership request letters and are currently in process.
- The April 29th CaFCP Board meeting is being rescheduled as a remote-only meeting, tentatively scheduled for May 20th.
- As a member of the Clean Transportation Program's new Advisory Committee, CaFCP submitted feedback comments on the [2020-2023 Investment Plan](#) for AB8 funding.

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

- Staff periodically receive calls and emails from news media. Recent inquiries and engagement via email and Twitter have included Calmatters, Washington Post, etc.
- Staff frequently interact with drivers and others (CARB board member Dean Florez, for example) with questions via email, social media (Facebook) and in-person moments (lunch, H2 station, etc.).
- Staff regularly participating in DOE's monthly meetup with organizations across the U.S.

- Met with SANDAG staff, along Tim Sasseen of Ballard, to talk about FCEVs and station development. SANDAG and stakeholders may pursue a sales tax in support of transportation projects, including transit and ZEV infrastructure (charging and H2).
- Met with Jacques Chirazi, business development director of the City of San Diego, to discuss station development and the state of FCEVs in California.
- Class presentation to Santa Monica College.
- OCTA ribbon cutting for new station and 10 buses.
- SCAQMD Clean Fuels Advisory Committee participation (alternates between Keith and Dave)
- Initial conversations with Colorado Hydrogen Network, newly formed group.
- Presenter at SCAG (So Cal Assn of Govts) and GO-Biz seminar/webinar on permitting.



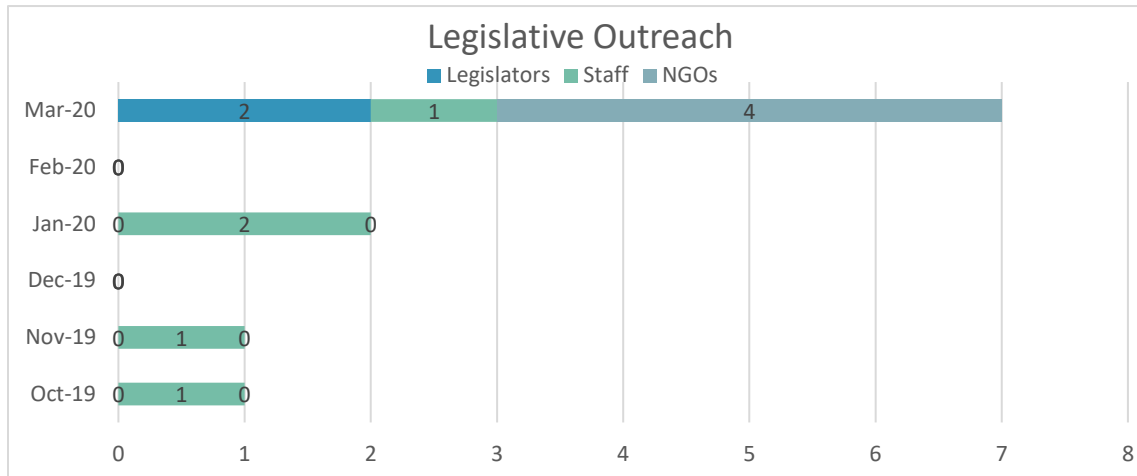
SOSS | MEMBER LEAD: J BIRDSALL | STAFF LEAD: B XIONG

- Working with OEM and SDO groups to define SOSS station status definitions
- Worked with SDO members to review their data log for any anomalies and identify solutions
- Working with CARB and station developers and operators on integrating SOSS and LCFS activities, ongoing. Investigating long term needs and direction for SOSS.
- 4 new HRS were added to SOSS (SF 3rd St, SF Harrison St, SF Mission St, Cal State LA)
- *Cal State LA was added to SOSS as a Legacy Retail station.
- Additional SOSS work identified in the SDO and OEM groups above
- Total SOSS accounts to date: 5,230

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

- Request from office of Congressman Jim Costa (D-Fresno) for a FCEV display on National Hydrogen Day. Request came too late to make arrangements. Alerted FCHEA to inform their outreach efforts.
- Coincidental interaction with Tyler Madary, district director of State Senator Richard Roth (D-Riverside), at the L.A. Auto Show. Mr. Madary recognized Keith Malone from previous interactions.

- Informal meeting with Southern California Edison public affairs staff.
- Informal meeting with staff of State Treasurer Fiona Ma.
- Staff consult with colleagues at California Hydrogen Coalition to ensure coordination of messaging and complementary activities in legislative education and outreach.
- Developing project to organize 100-electeds (city council, county supervisor) in letter of support of hydrogen fueling infrastructure. For discussion at next Government Relations/Comms meeting.



EVENTS/ACTIVITIES | Staff Lead: J Contreras

Quarter 4, 2019

10/15/19	Center for H2 Safety Conf – Ride & Drive (J. Contreras, K. Malone & J. Hamilton), Sacramento
10/15/19	CaFCP HD Strategy Meeting (N. Bouwkamp), CaFCP HQ
10/16/19	CaFCP Executive Board Meeting – Static Display (J. Contreras & K. Malone), Sacramento
10/16/19	California Fuel Cell Partnership 20th Anniversary – Static Display (CaFCP staff), Sacramento
10/17/19	GO-Biz Renewable H2 Roundtable–Static Display (J. Contreras, K. Malone & B. Elrick), Sacramento
10/22/19	Regional Meeting on Implementing the Innovative Clean Transit & Zero-Emission Airport Shuttle Regulations - (J. Hamilton), Sacramento
10/25/19	CEC Staff Workshop for Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure solicitation concepts (D. Park), Sacramento
10/28-29/19	2019 Philomathia Forum: Zero Emission Ports & Freight (N. Bouwkamp), Berkeley
10/30-31/19	UC Davis ITS STEPS+ workshop: Oct 30: ZEV Truck Uptake, Markets and Policies; Oct 31: Transitioning to a Large Scale H2/FCEV System – Presenter/participant (N. Bouwkamp), Davis
10/30/19	AB8 Webinar 2019 – Annual Evaluation of FCEV Deployment & Hydrogen Station Network Development - co-host (B. Elrick and D. Park), CaFCP, HQ
11/4/19	HTAC Meeting (B. Elrick), Long Beach
11/5/19	H2@Scale Workshop (B. Elrick), Long Beach
11/6/19	UCLA Summit on State and Local Progress Toward 100% Clean Energy (B. Elrick & N. Bouwkamp), Los Angeles
11/13-15/19	California Transit Association - 54th Annual Fall Conference & Expo (N. Bouwkamp), Monterey
12/4/19	Californian Hydrogen Developments – Webinar (B. Elrick)
12/10/19	STEPS + Fall 2019 Research Symposium (B. Elrick), Davis
12/12/19	CARB Board hearing (N. Bouwkamp), Sacramento

12/13/19	Japanese Gas Assoc Delegation Visit – Presenter (B. Elrick & J. Hamilton), CaFCP HQ
12/17/19	H2B2 USA Visitor - Meeting (B. Elrick), CaFCP HQ
1/6/20	Korean Auto Manufacturing Group (B. Elrick), CaFCP HQ
1/9/20	Shell future dispenser demo at Torrance H2 Station (K. Malone), Torrance
1/9/20	USDRIIVE Hydrogen Delivery Tech Team Meeting (N. Bouwkamp), ANL, Lemont, IL
1/20/20	MLK 365 Season of Change – The Diversity Expo (J. Contreras), Sacramento
1/21/20	Stanford - San Francisco Energy Dialogues (B. Elrick), Palo Alto
1/22/20	CARB Work Group Meeting for Heavy-Duty Demonstrations, Pilots, and Clean Truck and Bus Vouchers from FY (N. Bouwkamp), Sacramento
1/23/20	Renewable Gas 360 (J. Contreras and N. Bouwkamp), Sacramento
1/23/20	CARB Board meeting - Policy Recommendations Increase Use ZEVs SB 498 (N. Bouwkamp)
1/23/20	SANDAG Regional Energy Working Group: H2 & FCEV 101 Presentation (K. Malone) San Diego
1/24/20	CEC Pre-Application Workshop #3 - GFO-19-602 H2 Refueling Infra (B. Elrick) Sacramento
1/29/20	Tokyo Metropolitan Government meeting with CaFCP staff (J. Contreras & B. Elrick) CaFCP HQ
1/30/20	MSU Center for Railway Research and Education - Railway Motive Power and Alternative Propulsion workshop – presenter (N. Bouwkamp & J. Hamilton), Long Beach
1/31/20	OCTA Grand Opening Station (K. Malone & N. Bouwkamp), Orange
2/4/20	Fuel cell & H2 presentation at Woodbury University (K. Malone), Santa Monica
2/6/20	Clean Fuels Advisory Group, SCAQMD (K. Malone), Diamond Bar
2/12/20	CARB Workshop to Discuss A Potential M/HD Zero-Emission Fleet Regulation (D. Park & N. Bouwkamp), Diamond Bar
2/18-19/20	Drive to Zero: Decarbonizing Transportation (B. Elrick), San Francisco
2/20/20	CARB Workshop on changes to Advanced Clean Truck regulation (N. Bouwkamp), Sacramento
2/25/20	7th International Hydrogen Infrastructure Workshop (N. Bouwkamp), WebEx
2/26/20	Coalition for Clean Air Toast to Clearing the Air (J. Contreras & B. Elrick & Hyundai), Sacramento
3/3/20	Clean Transportation Program Advisory Committee Meeting (B. Elrick), Sacramento
3/4/20	VELOZ - Electric Transportation 2030 – Policy, Power & Plugs (J. Hamilton), Sacramento
3/6-7/20	7 th California Hydrogen and Fuel Cell Summit (J. Contreras & B. Elrick), Sacramento
3/10/20	Zero Emission Vehicle Permit Streamlining Workshop (K. Malone), Los Angeles
3/12/20	CARB Workshop on Development FY2020-21 Funding Plan for Clean Transportation Incentives (N. Bouwkamp), Sacramento
UPCOMING EVENTS	<i>**due to the COVID-19 the events below have been postponed or cancelled**</i>
3/25/20	CALSTART 2030 Policy Summit, Sacramento
3/25/20	World Hydrogen Congress 2020
4/13-15/20	Green Transportation Summit 2020, Tacoma, WA
5/4/20	ACT Expo 2020 – Advanced Clean Transportation Expo – Long Beach
5/15/20	Solar, Storage and Smart Energy Expo – San Diego
6/9/20	f-cell HFC Vancouver, Vancouver, B.C.