



California Hydrogen Business Council 2019 Program Plan & Budget



Draft

December 10, 2018

CHBC 2019 Program Plan & Budget

2019 Vision

In 2019, the CHBC seeks to build market confidence by enabling financial and regulatory mechanisms in support of accelerated transportation electrification with FCEVs, FCEBs and FCETs, sector coupling with renewable hydrogen, hydrogen energy storage utilizing existing assets, and government support for scale up of the industry to achieve cost reduction through economies of scale.

California Hydrogen Business Council

The CHBC is comprised of over 100 companies, agencies and individuals involved in the business of hydrogen. Our mission is to advance the commercialization of hydrogen in the energy sector, including transportation, goods movement, stationary power systems and energy storage to reduce emissions, provide clean air and create a sustainable, carbon free energy economy. More information at www.californiahydrogen.org.

Contact:

Jeff Serfass | Executive Director
Emanuel Wagner | Deputy Director
California Hydrogen Business Council
310-455-6094

Main Office:

18847 Via Sereno
Yorba Linda, CA 92886

DC Office:

1211 Connecticut Ave NW, Suite 650
Washington, DC 20036

Phone: (310) 455-6095

Fax: (202) 223-5537

info@californiahydrogen.org

www.californiahydrogen.org



**CALIFORNIA HYDROGEN
BUSINESS COUNCIL**

Hydrogen Means Business in California!



“Meeting our ambitious climate goals will require an overhaul of the transportation sector, which accounts for 39% of California’s carbon emissions, representing the state’s single largest source of air pollution. As Governor, Gavin will design a visionary goods movement strategy that modernizes our ports, improves efficiency, electrifies our transit system, bolsters economic productivity, and cleans our air. He will also set a goal of zero diesel pollution by 2030. California has already set a goal of 5 million zero-emission vehicles by 2030, a far cry from the 315,000 currently on the road. Gavin believes that instead of driving jobs out of the state, we need to replace diesel with zero pollution clean technology like hydrogen fuel cells and electric vehicles.”

Governor-elect Gavin Newsom Campaign Website, Issue: “Set California on the Fast Track to Zero Diesel Pollution by 2030”



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Changes to the CHBC – Inform, Influence, Impact

With the new administration taking form, CHBC's advocacy work will be more important than ever, with all market sector action groups providing their member-led leadership for their respective markets, addressing their goals to maximize our industry's success.

Areas of interest will continue to be hydrogen energy storage and power to gas; renewable hydrogen; public transport; and clean ports, heavy duty transportation and goods movement. The CHBC will host a dedicated workshop for each SAG and host one Summit.

Responsibilities of SAGs and Committees

The CHBC will continue to expand the management and advocacy of market sector interests through its committees and sector action groups (SAGs). They will be:

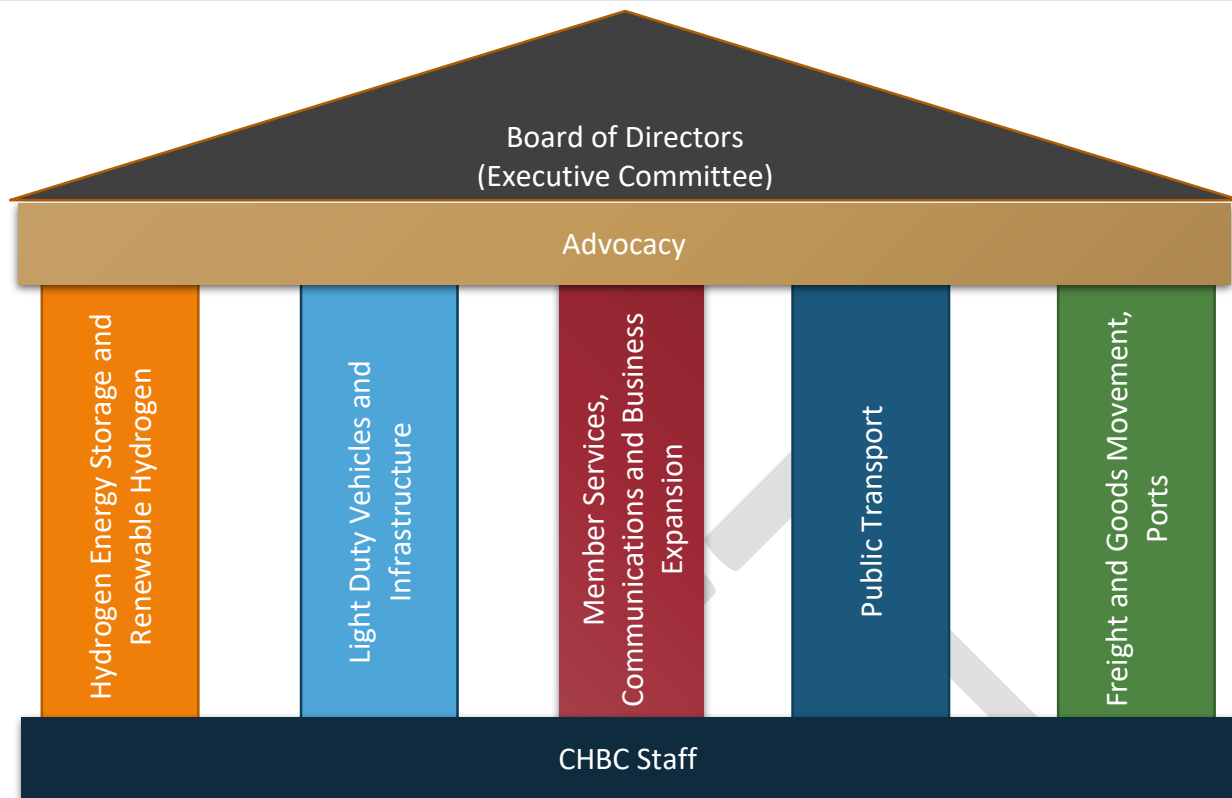
- **Advocacy Committee** – oversee implementation of, and coordination of, CHBC-wide and SAG-generated policy and regulatory activities and direct CHBC's government affairs representation of Board- and Executive Committee-approved policies
- **Hydrogen Energy Storage and Renewable Hydrogen SAG** – the focal point for energy storage, renewable pathways to hydrogen and work that relates to utilities and stationary power, the Public Utility Commission and Cal ISO, including large scale renewable hydrogen production facilities
- **Public Transport SAG** – Fuel Cell Electric Buses and fueling stations in transit operations
- **Goods Movement, Heavy Duty Transportation and Clean Ports SAG** – principally fuel cell electric medium and heavy duty vehicles and mobile and stationary hydrogen and fuel cell products for freight systems, including hydrogen and fuel cell infrastructure solutions in the ports
- **Infrastructure and Vehicle Deployment SAG** - Efforts to expand fueling infrastructure funding and support in California to support increasing vehicle deployment, a home for hydrogen fueling developers and infrastructure providers to address issues common to fueling station providers and operators
- **Communications and Business Expansion Committee** – Expansion of membership activities, and membership messaging and agenda setting

The SAGs and committees are the primary leaders of all program functions of the CHBC. In 2019, the responsibilities of the SAGs and Committees will be the following:

- Lead the key market and policy activities for their respective market areas
- Provide leadership by a chair and vice chair(s) with whom staff can coordinate
- Conduct regular conference calls to be proactive in collecting information and recommending CHBC program and advocacy positions in their market sector
- Guide staff and leadership on CHBC advocacy positions and other written statements for their respective sector
- Plan and conduct face-to-face SAG meetings at key events
- Review State agency and legislative calendars for procurement planning, regulatory and legislative opportunities for CHBC action
- Provide guidance for the implementation of 2019 program activities and budget, recommending funding strategies where activities may require additional resources

CHBC staff and board will actively discuss strategies with key stakeholders and associations in California and beyond to maximize impact and coordinate efforts.

The SAGs and Committees work under the direction of the Board of Directors and by extension, the Executive Committee, both with staff support. The SAGs lead their own market activities and provide input to the Advocacy and Executive Committees.



Program Areas

Advocacy

Executive/Agency/Regulatory

1. Launch CEC & CPUC & ARB joint hydrogen working group in new administration.
 - a. Create one page vision of hydrogen for new Governor and legislature.
2. Develop individual Fact Sheets on pending legislation.
3. Meet with new governor and Speaker of Assembly to present hydrogen vision, follow-up meetings with key legislators
4. Leverage Hydrogen Council Announcement 2030 – 100% of renewable hydrogen by 2030 – Could work with state government to achieve this goal.
 - a. Group supportive of endorsement
 - b. Recommendation from the AC for endorsement
5. Engage EJ groups and educate them on benefits of hydrogen applications with materials developed in Communications committee
 - a. Hydrogen Council commitment to carbon neutral will be important

Programmatic

1. Better utilize member resources/lobbyists to create more traction/provide more firepower
 - a. Establish a process to engage members' lobbyists with database of lobbyists
2. Facilitate development of small working groups to address specific issues, maybe parallel efforts with OEMs, infrastructure developers, hydrogen producers.
 - a. Develop policy on working group development for specific issues
3. Follow process of SAGs to coordinate policy priorities, leadership to manage outreach and execution, staff to coordinate
4. Develop a robust process for review of comments to develop general consensus, avoiding last minute approvals, but having a process that can accommodate short deadlines when necessary

Light Duty Vehicles and Infrastructure

Legislative

1. Restore/Expand Hydrogen Station Funding ~\$92M or more if inclusive of MD and HD infrastructure development
2. Remove cap on CEC's annual station funding if increase in CEC funding is pursued

Executive/Agency/Regulatory

1. Governor's budget rollout to be finalized in December, would need to engage now to be considered

Hydrogen Energy Storage and Renewable Hydrogen

Executive/Agency/Regulatory

1. Increase production incentives
 - a. Develop hydrogen injection protocols with CPUC, Gas Quality Standard proceeding to include hydrogen; provide information and data to Commissioner Rechtschaffen (production & storage)
 - a. Create preferred rates or new non-retail tariff for hydrogen from electrolysis (CPUC proceeding)
 - b. Encourage PUC to include hydrogen in next storage mandates
2. Definition of renewable hydrogen via industry consensus, may be within PUC (Rechtschaffen)
3. Assess impact of renewable hydrogen percentage requirement for all hydrogen dispensed in CA for all transportation sectors (SB 1505 requirement at 3,500 tons/day)
4. Hydrogen storage in IRP (Randolph, PUC) for electric utilities, push for long term storage consideration
 - a. E3 and Resolve Model as the main tool from staff
5. Increase CEC's NG R&D funding
6. Help CEC learn from renewable hydrogen projects, working with CEC to expand on this

Legislative

1. Pursue legislation that creates funding for in-state renewable hydrogen projects (at scale) (similar to original SB 1369)

Programmatic

1. CHBC to develop an industry-approved definition of "renewable hydrogen" inclusive of energy storage and other applications
2. CHBC Endorsement of Hydrogen Council's commitment to 100% carbon free hydrogen for transportation (SAG or Advocacy Committee leads)
3. Update H2-P2G White Paper or develop new paper addressing current CPUC education needs
 - a. Create a one-page summary fact sheet and presentation materials for webinars and meetings on examples of HES/P2G with size/technologies/volume specifics.
4. Produce materials/roadmaps to showcase the role of hydrogen energy to achieve
 - a. Governor's Order - Carbon Neutrality by 2045 requires going carbon negative after 2045.
 - b. SB 100 goals
5. Develop framework for policy and regulatory steps to enable large scale RH2 supply/production in California
6. Develop tracker for renewable hydrogen production projects and capacities

Freight and Goods Movement, Ports

Executive/Agency/Regulatory

1. Develop additional funding for CARB and AQMD's to deploy commercial fleets of FCETs and related infrastructure.
2. Pursue zero emission powertrain certification (ARB)

Legislative

1. Develop additional funding with legislature to deploy commercial fleets of FCETs and related infrastructure.

Programmatic

1. Develop analysis of infrastructure cost for fleets

2. Develop fact sheets outlining benefits of hydrogen for different applications to educate and engage ports personnel, environmental justice groups, agencies and the legislature
3. Develop comprehensive documents outlining available products in coordination with Jesse Marquez (Coalition For a Safe Environment - CSAFE) who maintains a list of zero emission, commercially available equipment
4. Pursue funding for cost analysis at scale study and technology comparison of duty cycles, in collaboration with SCAQMD, CARB and CEC

Public Transport

Executive/Agency/Regulatory

1. Pursue implementation of Innovative Clean Transit regulation
2. Increase funding for FCEB and infrastructure under existing programs
 - a. Creation of HD H2 infrastructure program (via CEC and ARB), adding HVIP funding for infrastructure
 - b. Develop strategy to co-locate HD and LD stations, involving transit agencies (SunLine, AC Transit)
3. Develop a multi-application (HD/Bus, LD) infrastructure build-out strategy
 - a. Form working group to address this issue
4. Permitting process – explore how to make process more efficient and less time consuming – lessons learned / guidelines (work with CAFCP)

Legislative

1. Support initiatives, policies and regulations for the adoption of ZEB fleets in California

Programmatic

1. Continue to create awareness about the FCEB (“the other electric bus”) for public transit
 - a. Direct engagement with transit agencies and CTA
 - b. Support of ZEBRA activities
 - c. Organize a FCEB workshop in 2019
 - d. Participate in industry events (CTA, APTA) to reach beyond CHBC choir
 - e. Update key stakeholders (CARB, CEC) on industry progress
2. Develop a vision for 100% fleet deployment at transit depot (H2 infrastructure @ scale)
3. Renewable hydrogen for transit fleet; “the faster path to true zero emission buses” – develop messaging towards NGOs and key stakeholders - work with Renewable H2 SAG
4. Look at other application for FC and H2 technology in public transportation: coaches, ferry, rail (commuter/light rail) and aviation

Member Services, Communications and Business Expansion

1. Seek opportunities to fund a public education program through grants. CHBC could play a facilitator role.
2. White Papers on Hydrogen and Fuel Cell Technology for Environmental Justice Group Outreach

Management

CHBC’s technical and management services contractor, Technology Transition Corporation, will continue to expand staffing in California with part time consultants in different regions and with special advocacy, policy, market and technical expertise, to support the SAGs and provide participation in agency and legislative activities and strategies, and industry activities and events. Staff will continue to seek member help where members can represent the broad CHBC interests. Staff will allocate additional resources to represent the CHBC in frequent in face-to-face meetings and calls to affect policy positions, identify policy issues, and act upon strategic information gathered through regular and informal meetings and calls with SCAQMD, BAAQMD, ARB, CaFCP, FCHEA, CEC, CASIO, and CPUC.

The staffing and contractors supporting CHBC Advocacy work will evolve to fit the actual funding allocated to this work. The Policy Retreat recommended that CHBC not try to do the entire lobbying job itself and, instead, change the labor/contractor mix to include more coordination among member lobbying activities.

The 2019 **funding strategy** and will rely on additional membership growth. In addition, funding for dedicated advocacy projects can be provided via the Platinum (Executive) membership level or other special project funding by interested members. Staff will also provide all members with sponsorship flyers for events and advocacy work in December to allow for early budget decisions. CHBC staffing is proposed as follows:

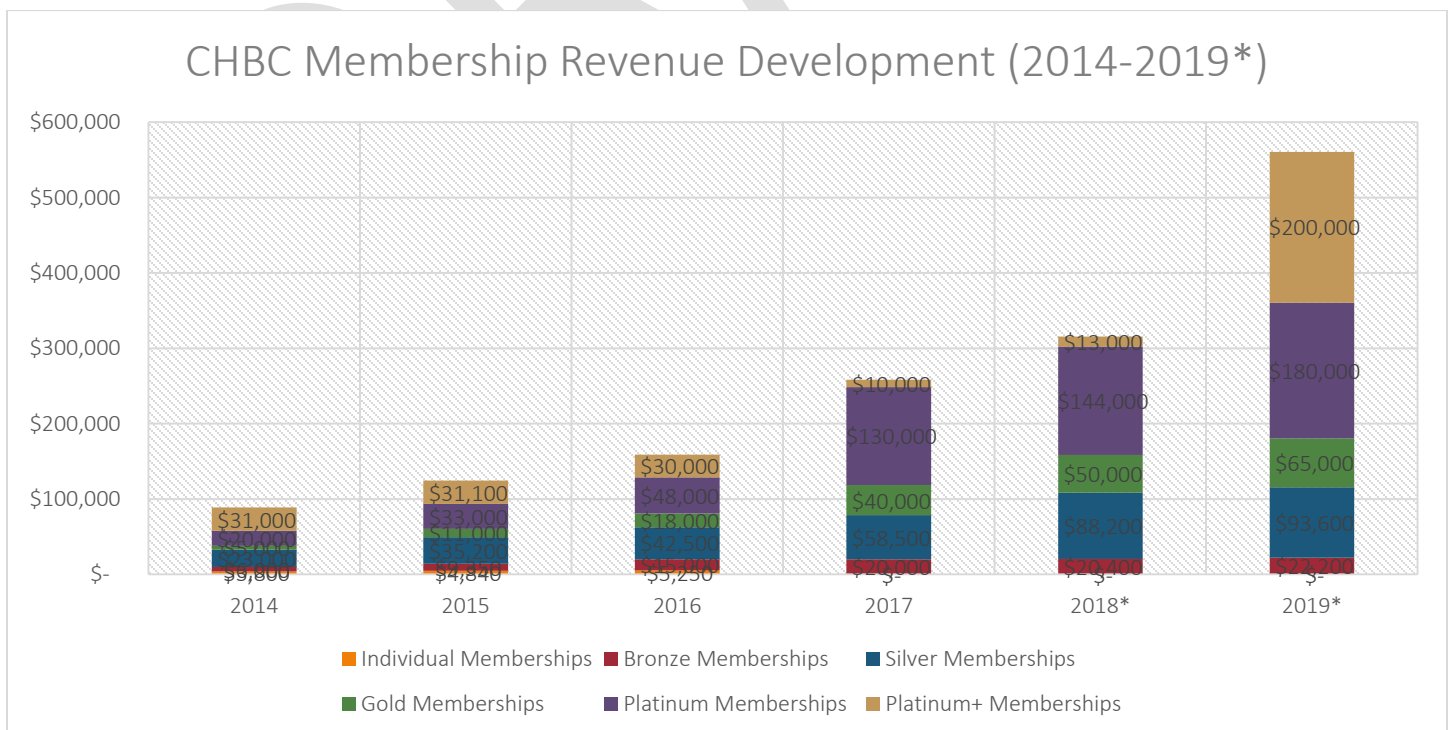
Position	Individual
Executive Director	Jeff Serfass
Deputy Director	Emanuel Wagner
Government Affairs	TBD (in Sacramento, Lobbyist/Advocacy Coordinator)
Senior Advisor	Diane Moss (in Los Angeles, advocacy)
Development Specialist	Cory Shumaker (Clean freight, ports and transit)
Project Coordinator	Peter Thompson
Finance Coordinator	Cordelia Pearson

Budget

Registration fees for Summits and workshops are derived from a set of variables, including venue cost, location, time of year, associated events, etc. Policy-focused events will continue to offer free registrations for government employees and a limited amount of free registrations may be offered to critical target audiences for other events. The following table outlines proposed registration rates for 2019 events, assuming a 2-day Summit and 1 day workshops.

Fees	Early Bird Rate		Regular Rate		Late Rate	
	Member	Non-member	Member	Non-member	Member	Non-member
Summit:	\$279	\$379	\$379	\$479	\$479	\$579
Workshops:	\$149	\$199	\$229	\$279	\$279	\$329

The **total revenue**, including events, is \$718,800, of which dues revenue is \$390,800 plus \$200,000 in special project dues funding from Platinum (Executive) members. The anticipated sponsorship and registration revenue for events is \$158,000. The **total expenses** amount to \$708,332, of which expenses for events add up to \$154,859. The **net revenue** for 2018 is projected to yield a small surplus. Similar to the last two years, the Board's objective of planning for a surplus over a period of several years to yield 6 to 12 months of operating reserves is not addressed in this budget. The desire by CHBC members to effect policy and expand the market takes priority in this budget over developing a healthy cash cushion.



CHBC Membership Revenue Development (2014-2019*)

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