

# CHBC 2020 Program Plan

April 2020

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## Summary

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Since 2012, Technology Transition Corporation has helped the California Hydrogen Business Council develop from a \$40,000 operation to a \$300,000 dues paying trade association in support of hydrogen energy in California markets. It has defined the markets of interest to include renewable hydrogen production, hydrogen infrastructure for light duty, heavy duty and transit vehicles, and is beginning to engage in stationary and microgrid applications, and hydrogen for decarbonizing industry, like refining, cement and steel.

The organization in 2012 is not the organization it was in 2019. The deep policy activities in the broad regulatory and legislative advocacy program are unprecedented for the CHBC. The relationship building and convening work in the Sector Action Groups (SAGs), the more focused, separately funded advocacy initiatives, and the workshops and summits create opportunities for all members to engage with each other and to advance the dialogue about hydrogen. They provide the reason that new companies step up to become members, to network among the membership. However, it is the policy and advocacy work that has begun to dominate the work of the CHBC and address the goals of mainstreaming the long-term benefits of hydrogen in specific energy market sectors. The CHBC Strategic Policy Plan, the result of the CHBC 2019 Policy Retreat and the work of its Policy Director, articulates these goals and some of its details are included in this Plan.

This Program Plan presents the direction of the CHBC for 2020 and beyond, based on the CHBC Member survey, feedback and meetings with members and stakeholders like agency personnel.

CHBC has focused the bulk of its resources on advocacy in 2019, and an active tracer of CHBC public advocacy work is available here: <https://www.californiahydrogen.org/2019-policy/>. Since the advocacy activities engage a fairly small subset of the membership, Summits, webinars and other events, newsletters, are other activities that allow all members to enjoy the benefits of the organization. In 2020, CHBC will continue its hosting of an annual Summit and topical events to keep members engaged, increase membership interest, and generate additional revenue for the organization. These events, except for webinars, will be scheduled at least 6 months in advance to ease planning and budgeting by members and to increase attendance and secure the best speakers.

Conversations with members, including Directors, and government leaders and stakeholders, have strongly suggested that the CHBC move from an organization led and managed from Washington DC to one with leadership in Sacramento. This is important to increase CHBC advocacy success for hydrogen as a necessary commodity in all aspects of decarbonizing California's energy utilization, and to achieve the goals of the CHBC's Strategic Policy Plan.

## The Program Plan

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The CHBC's most important function, advocacy for impactful hydrogen policies, will continue to be managed by the Advocacy Committee, overseeing all efforts to provide consistent, coordinated messages and positions to government officials, whether the efforts be from within focused advocacy initiatives, letters emanating from SAGs and other member activities, or performed by staff on behalf of the Council.

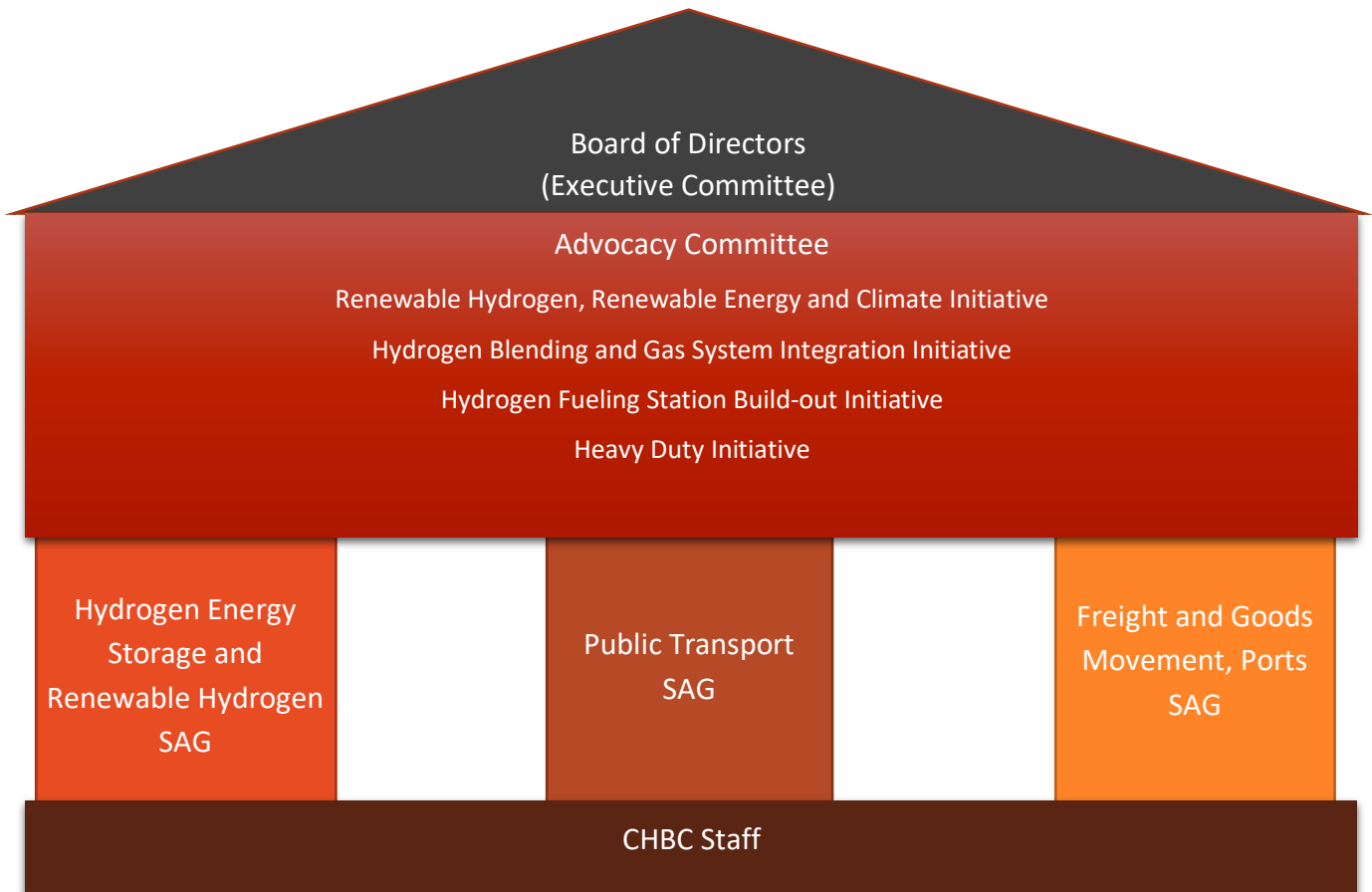
Specific activities for each Sector Action Group are covered later in this plan. Comments on the overall SAG process follow:

- 1) The Strategic Policy Plan provides the goals of the Advocacy Committee and the Advocacy Initiatives.
- 2) The Advocacy Initiative structure seems to have worked well for the Pipeline and Renewable Hydrogen Initiatives, with good discussions and progress made in the Station Initiative. The Stakeholder Outreach Campaign has not been successful in its creation, and activities have been absorbed by the Communications and Business Expansion Committee, as well as some SAGs. This may need to be reevaluated in 2020, especially in the context of the need for stronger stakeholder engagement and education.
- 3) The goals of the SAGs have been determined by each SAG and are presented in this plan as proposed.

- 4) The SAG structure seems to be working well, though stronger focus could be obtained in smaller informal task groups to help achieve timely and efficient outcomes in the SAGs, some of which have become rather large, some with potential for increasing scope. Within any SAG, in 2020, task groups could form around important program areas using the SAG meetings to report back and make decisions. No policy or procedure changes are necessary to accommodate this informal adjustment.
- 5) The SAG activities require expansion to cover several market sectors currently not incorporated in the organization. This would include stationary fuel cells, microgrids, grid resiliency, and hydrogen for decarbonizing industrial energy use. This could result in the realignment, renaming of the SAGs and/or a new SAG in 2020.
- 6) The Communications and Business Expansion Committee has suffered from a lack of participation, in spite of the increasing need to communicate the value of hydrogen in California, which often leads to strong discussions about what the CHBC should do about this communications void. Since education is important to advocacy efforts, this function should be overseen by the Advocacy Committee, with most activities addressed by the SAGs as they are now. The Communications and Business Expansion Committee will be disbanded in 2020.

## Responsibilities of SAGs, Committees, Initiatives

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. The Initiatives are focused policy groups working on specific issues, and work under guidance from the Advocacy Committee.



In 2020, the SAGs are as follows:

- **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, and trains
- **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

In 2020, the Committees are as follows:

- **Advocacy Committee** – oversees implementation of the Strategic Policy Plan, and coordination of CHBC-wide and SAG-generated policy and regulatory activities and direct CHBC government affairs staffing of Board-approved policies
- **Membership Committee** – supports membership development and retention efforts.

The list of 2020 Policy Initiatives includes:

- **Renewable Hydrogen, Renewable Energy and Climate Initiative** – purpose is to advance policies, programs and regulations that support the role of renewable hydrogen in the California transportation and energy sectors.
- **Hydrogen Blending and Gas System Integration Initiative** - ensures that supportive regulations are established to allow hydrogen blending in the natural gas system, optimal use of the gas grid for long-term/seasonal energy storage, and integration of pipeline and electric grids to maximize both thermal and electric renewable and decarbonized energy options
- **Hydrogen Fueling Station Build-out Initiative** – Secure adequate state funding for the build-out of the hydrogen fueling station network to 200 stations and beyond
- **Heavy-Duty Advocacy Initiative** – Initiative designed to focus on regulatory and legislative issues in the medium and heavy duty freight sector as well as the public transit sector.

## Program Areas

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### Advocacy

The Advocacy portion of this Program Plan was created in writing the CHBC Policy Strategy Plan. Below is a summary of the Plan.

Overarching Policy Strategy: Advancing California’s climate, clean energy, clean air, and resiliency goals through hydrogen as a key enabler.

The CHBC’s overarching policy strategy is to deploy hydrogen across sectors to enable California to achieve its greenhouse gas, renewable and zero carbon energy, and criteria air pollution targets, as well as its energy-related equity, disaster mitigation and resiliency goals.

### Three Big Picture Goals

The organization’s three broad goals driving this policy strategy are:

1. **Scaling hydrogen mobility and infrastructure toward meeting CA’s air quality, renewable/zero carbon energy, and climate goals.**

CHBC supports increasing the number of hydrogen vehicles across classes, along with reliable and abundant hydrogen fueling infrastructure, to ensure success of several state policies, such as:

- *AB 8*, which raises funds for vehicle-related air quality and greenhouse gas reduction programs and provides funding to the CEC to support installation of California’s first 100 hydrogen stations.
- *Executive Order B-48-18*, which among other goals, raises the state hydrogen fueling station target to 200 by 2025 and calls for 3 million zero emission vehicles (ZEVs) to be on state roads by 2030.
- *SB 350*, which will require the unique capabilities of hydrogen technology – such as providing ZEV opportunities for those who cannot easily charge at home, need to fuel quickly, or require long range or low weight - to fulfill its requirement of increasing access for all to zero emissions transportation as a way of lowering greenhouse gas emissions, air pollution, and petroleum use.
- *ARB’s Mobile Source Strategy*, which explicitly aims to attain clean air standards through penetration of hydrogen fuel cell passenger vehicles and ZEV technology in the heavy duty sector, where hydrogen fuel cell vehicles are the viable zero emissions option for replacing heavy duty diesel vehicles on a one to one basis.
- *Innovative Clean Transit Regulation*, which requires transit agencies to gradually transition to 100% purchase of zero emission buses by 2029, and which will need hydrogen fuel cell buses (FCEBs) to succeed because FCEBs are the only zero emission buses that can provide the same range, power, refueling time, and duty cycle as the diesel buses that currently dominate the market.

## 2. Achieving hydrogen production at scale and reliable supply at low cost on a renewable/zero carbon pathway

A goal that will unlock the potential of all others is attaining cost competitive hydrogen by achieving mass scale production. As a key part of this effort, CHBC supports fully decarbonizing hydrogen supply for transportation by 2030, in line with Hydrogen Council targets, and for other applications by 2045, in line with SB 100 (renewable/zero carbon retail electricity) and Executive Order B-55-18 (carbon neutrality economy wide) targets. We support the continued use of a broad range of renewable and zero carbon production pathways in California, as well as that produced out of state.

## 3. Fully leverage the integrative value of hydrogen in energy infrastructure, for example by:

- Expanding hydrogen access to multiple markets – e.g. transportation and goods movement, electricity generation, energy storage, ancillary grid services, microgrids, building heating and power, industry
- Accessing gas infrastructure
- Securing incentives and policy frameworks that even the playing field with competing technologies that have benefitted from greater public funding and other favorable policies.
- Securing policy and regulatory mechanisms that support hydrogen and fuel cell technology for their ability to increase resiliency of the grid and secure energy supply during emergencies and public safety power shutoffs.

A snapshot of this policy action plan is in a chart starting on the next page. Each Initiative is also developing its own action and strategy plans, which are regularly evolving and refined on their respective calls. Each activity is given an “engagement level” ranging from 1-5 (1 is lowest, 5 is highest), intended to reflect the extent of member engagement and dedicated lobbying support by either CHBC contracted or member lobbyists. This informal estimate number is meant to clarify whether activities the CHBC is undertaking are receiving organizational commitment proportional to member priorities - and where adjustments may be needed.

The action plan builds on efforts made by the Initiatives and at the 2018 Policy Retreat, a progress snapshot of which is provided in Section II of the Policy Plan. Since that time, the CHBC has made significant progress on a general organizational level, as well as at certain policy venues, particularly the CPUC. Despite hard won advances, however, major challenges remain, and much work remains to be done at all venues. A brief description of our status at each policy venue is provided for context in Section II. Also included in Section V of the Policy Plan is a description of the CHBC’s growing focus on equity, reflective of what has become a core policy principle in California. Finally, there is a brief preliminary outline in Section VI of a communications strategy to support CHBC policy priorities. Because the landscape in which these activities are happening is fluid and fast moving, this plan should be considered a living document and will be updated as priorities and plans evolve.

**ACTION PLAN SNAPSHOT: PRIORITIES BY SECTOR**

<b>LIGHT DUTY VEHICLES (Lead: Station Initiative)</b>				
<b>Priority</b>	<b>Goals &amp; Tactics</b>	<b>VENUE</b>		
<b>1. Increase station capacity, # of stations to 200 by 2025 aligned w/ ZEV Executive Order</b> <i>Engagement Level: 5</i>	<b>Help pass legislation to increase funding for 200 stations by working with relevant members and lobbyists to</b> 1) identify and cultivate legislative champion, 2) overcome resistance generated by Speaker and Committee staff by targeting members of relevant Committees, e.g. w/ white papers, fact sheets, etc., 3) engage customers to target key Committee members, 4) develop coalition with other influencers 5) make sure stations in place are fueling reliably 6) showcase station(s) in Sacramento and vehicles via programs like EIN’s Ride and Drive	<b>Legislature</b>		
	<b>Resolve legislative challenge of \$20 million cap on station funding embedded in AB 8 language</b> by working with relevant members on developing a strategy to overcome this.			
<b>2. Build enthusiasm at legislature and agencies for FCEV passenger vehicles</b> <i>Engagement Level: TBD</i>	<b>CHBC to facilitate coordination between relevant industry and environmental non-profit members</b> to strategize on this priority, with a view toward developing and leveraging diverse coalition of influencers  Support relevant members and work with partnering organizations like CAFCP to <b>research and document additional data on who potential FCEV customers are</b> , e.g. their lifestyles. <b>Consider hiring lobbyist</b> through CHBC specifically targeting this sector area priorities. <b>Generate and circulate positive media stories</b> about FCEVs to key legislators and staff. Work with members and organizational allies like California Fuel Cell Partnership to plan and disseminate among influencers a constructive narrative to <b>mitigate the negative perception impacts of recent supply constraints</b> . <b>Leverage alliances at GO-Biz and OPR</b> for support at critical junctures. Find ways to <b>give key legislators, staff, and their influencers positive hands-on experiences</b> with FCEVs and FCEV fueling. <b>Consider making this part of a broader, funded hydrogen specific PR campaign.</b>	<b>Legislature</b>		
	<b>3. LDVs as cornerstone of 2019 IEPR Transportation Docket</b> <i>Engagement Level: 4</i>		<b>Keep Monahan and staff updated</b> with relevant data.  <b>Track IEPR draft</b> to increase chances of our input being represented. <b>Leverage any positive outcomes</b> in the final IEPR in future comments and outreach. <i><b>*Note: These tactics are also a priority for the LDV Sector (see item # 5 below).</b></i>	<b>CEC</b>
	<b>4. Fair, supportive LDV fueling rates/ charges, strong FCEV status in OIR to Continue the Development of Rates and Infrastructure for Vehicle Electrification (R.18-12-006)</b> <i>Engagement Level: 3</i>		<b>Comment on Transportation Electrification Framework</b> (approx. October) <b>Educate staff and work closely with lead Commissioner.</b> <b>Encourage relevant members to participate, try to leverage support of allies in Go Biz, possibly hire additional lobbying support.</b> Work with members and other allies to <b>build the case for inclusion of passenger vehicles.</b>  <i><b>*Note that the HDV Sector (see item # 6 below) and the RH2/Climate – Energy Infrastructure/Pipeline Blending Sector (see item #3 below) also have interest in this proceeding.</b></i>	
	<b>5. Continuation of Clean Vehicle Rebate Program (CVRP) for FCEVs</b> <i>Engagement level: 3</i>		Work with relevant members and their lobbyists to <b>track and respond to threats</b> (e.g. with letters, etc.) <b>Engage in Clean Transportation Funding Plan</b> (Draft release date 9/18/19, Final release date 10/24-25/19). <i><b>*Note: Also an MDV/HDV Working Group tactic for HVIP (see section below #2).</b></i>	<b>CARB</b>

**ACTION PLAN SNAPSHOT: PRIORITIES BY SECTOR**

<b>MED/HEAVY DUTY VEHICLES (Lead: HDV Working Group, with support from Public Transport and HD/Goods Movement/Clean Ports Sector Action Group) Engagement levels: TBD (new group)</b>		
<b>PRIORITY</b>	<b>GOALS/TACTICS</b>	<b>VENUE</b>
<b>1. Ensure Innovative Clean Transit (ICT) Plan implemented to increase transit agency FCEB uptake</b>	Work with relevant members/ lobbyists to <b>track and comment at ARB as needed on transit agency Rollout Plans</b> due in 2020 (large transit agencies) and 2023 (small transit agencies) to ensure FCEBs are included.	<b>CARB</b>
	Work with relevant members / lobbyists to <b>track exemption requests and push back on any unreasonable ones.</b>	<b>AND/OR</b>
	Work with EJ members and allies to <b>support FCEB inclusion in Rollout plans and adoption of FCEBs.</b>	<b>Transit Authorities</b> (possibly other venues for funding)
	Work with ARB on a <b>requirement of transit agencies to consider both types of electric bus technology</b> – battery and hydrogen fuel cell.	
	<b>Identify and advocate funding sources for ZEB workforce training</b> that is required in ZEB rollout plans, but for which there is no funding mechanism in the ICT.	
<b>2. Stabilize or increase HVIP</b>	<b>Engage in Clean Transportation Funding Plan</b> (Draft release date 9/18/19, Final release date 10/24-25/19 + other tactics TBD by HDV Working Group. <i>*Not: Also priority tactic for the LDV Sector to secure the CVRP (see item # 5 above.)</i> )	<b>CARB</b>
<b>3. Clean Truck Rule technology neutrality + emphasis on criteria relevant to hydrogen fuel cell trucks</b>	<b>Meet with relevant staff</b> to educate them.	<b>CARB</b>
	<b>Support members in participating and commenting</b> on this process.	
<b>4. Low Carbon Fuel Standard (LCFS) Revisions: Update Energy Efficiency Ratios (EERs) to reflect latest vehicle technology + revisit Carbon Intensity (CI) for hydrogen produced using zero carbon sources to be sure it is fair and correct.</b>	<b>Develop the technical case for revised performance efficiency on which to base EER.</b>	<b>CARB</b>
	Engage ARB staff or informed members/lobbyists to <b>better understand how ARB calculates CI for H2 made from zero carbon sources to be 10.51 instead of 0, and if the basis is incorrect, develop data-driven case for a revision</b> that is brought to key staff, decision makers, and allies.	
<b>5. Aim for MDV/HDVs to be cornerstone of Integrated Energy Policy Report (IEPR) Transp. Docket</b>	<b>Keep Monahan and staff updated</b> with relevant data.	<b>CEC</b>
	<b>Track and comment on IEPR draft</b> to better chances of our input being represented.	
	<b>Leverage any positive outcomes</b> in the final IEPR in future comments and outreach. <i>*Note LDV Sector/Station Initiative also prioritizes this Transportation docket (see item #3 above)</i>	
<b>6. Secure fair and supportive rate/ charges related to H2 fueling for MDV/HDVs in OIR to Continue the Development of Rates and Infrastructure for Vehicle</b>	<b>Comment on Transportation Electrification Framework</b> (approx. October 2019)	<b>CPUC</b>
	<b>Educate Staff &amp; engage lead Commissioner</b> , esp. when comments are being considered.	
	Encourage relevant members to participate, try to leverage support of allies in Go Biz, encourage interested members to hire additional lobbying support.	
	Work with members and other allies to build the case for inclusion of HDVs.  <i>*Note that the LDV Sector (see item #4 above) and the Hydrogen Production/Supply-Energy Infrastructure Sectors (see item #3 below) also have interest in this proceeding.</i>	

**ACTION PLAN SNAPSHOT: PRIORITIES BY SECTOR**

Electrification (R.18-12-006)		
<b>7. Pass <a href="#">SB 662</a> (Green Electrolytic H2)</b>	After stalling in committee in 2019 session, develop strategy and coalition for successful passage in 2020, w/ CHBC support. <b><i>*Note that the Renewable Hydrogen, Pipeline Infrastructure, and Light Duty Initiatives have also expressed interest in collaborating on this bill.</i></b>	<b>Legislature</b>
<b>8. Secure dedicated funding for HD H2 stations supportive of transit fleets, trucks, and rail refueling</b>	Goal to be refined.  1. Key Tactic 1: identify and cultivate legislative champion. 2. Key Tactic 2: Identify appropriate vehicles to implement the goal. 3. Key Tactic 3: Build coalition among supporters, including AQMDs, EJ, Labor, etc.	<b>Legislature (possibly CPUC or CARB)</b>
<b>HYDROGEN PRODUCTION/SUPPLY &amp; ENERGY INFRASTRUCTURE (JOINT SECTOR STRATEGY)</b>		
<b>Lead Initiatives: Renewable Hydrogen Production/Climate, Energy Infrastructure/Pipeline Blending</b>		
<b>1. OIR to Adopt Biomethane Standards &amp; Requirements, Pipeline Open Access Rules, &amp; Related Enforce. Provisions (R.13-02-008)</b> <i>Engagement Level: 5</i>	<b>Get CPUC to establish injection protocols/standards at highest safe percentage, w/ technical study as basis, if feasible, by participating in rulemaking ~ Fall 2019</b>	<b>CPUC</b>
	<b>Get CPUC to adopt CHBC definition of RH2 as part of H2 injection rulemaking through comments/coalition building.</b>	
	<b>Get CPUC to adopt CHBC definition of Renewable Methane as part of interconnection tariffs rulemaking. Draft proposal for comment Nov. 1, workshops ~ Nov. 13, Joint Utility filings Feb. 1, final tariff decision date TBD.</b>	
	<b>Educate and coalition build (e.g. w/ EJ groups, Governor’s office allies) to overcome Cmmr. Guzman’s resistance to RH2 applications beyond transportation.</b>	
	<b>Cultivate understanding and support of Shiroma and Batjer via outreach.</b>	
<b>2. OIR to Develop Electricity IRP Framework &amp; to Coordinate/ Refine LTP. Planning Requirements (R.16-02-007)</b> <i>Engagement Level: 4</i>	<b>Ensure that H2 solutions are integrated as key enablers of CA’s cross-sectoral goals in 2019-2020 Integrated Resource Plan (IRP) by preparing comments on draft model (approx. October), meeting with staff after to discuss, participating in relevant workshops/rulemakings in approx. Q1 2020/ meeting w/ staff to discuss after ea. round</b>	<b>CPUC</b>
	<b>Make sure Resolve model develops inputs and assumptions that fully capture the H2 value proposition by building technical arguments and including them in participation.</b>	
	<b>Address CPUC staff inexperience w/ H2 and cross sectoral regulating with development and dissemination of relevant data/analysis to lead staff.</b>	
<b>3. OIR to Continue Dev. of Rates and Infrastructure for Vehicle Electrification (R.18-12-006)</b> <i>Engagement Level: 3</i>	<b>Secure reasonable rates, including electricity, T&amp;D and demand charges, for hydrogen production, with a view toward this being a stepping stone for favorable rates for other applications.</b>  Tactics include: Commenting on the Transportation Electrification Framework when it is released (~ October 2019), engaging lead staff and Commissioner at that time to discuss our key points, developing arguments for and comments on rulemaking(s) as they are released, and coalition building.  <b><i>*Note this proceeding is also a priority for LDV sector (see item #4 in that section above) and MDV/HDV sector (see item #6 in that section above).</i></b>	<b>CPUC</b>
<b>4. OIR Regarding Building Decarbonization (R.19-01-011)</b> <i>*Overlaps in goals with CEC IEPR Docket on Building Decarb. Below. Engagement Level: 4</i>	<b>See H2 solutions recognized as eligible, supported pathways to decarbonize buildings.</b>  Tactics include: - Engaging in workshops - Tracking and educating new Commission lead and key staff - Commenting on Proposed Decision on issues related to <a href="#">SB 1477</a> (publicly funded low/zero emissions new building – “BUILD” – and decarbonized heating – “TECH” – pilot programs) (Q4 2019) - Comment on other issues outside SB 1477 in 2020. - Collaborate with engaged members like NFCRC, utilities, and H2 producers working on building heat on strategy and arguments. - Coalition build with aim to overcome strong resistance.	<b>CPUC</b>
<b>5. Microgrid OIR (R.19-09-009)</b>	<b>See H2 solutions incorporated into state microgrid regulatory frameworks incentives.</b>  Tactics include:	<b>CPUC</b>



## ACTION PLAN SNAPSHOT: PRIORITIES BY SECTOR

<i>Engagement Level: 4</i>	<ul style="list-style-type: none"> <li>- Filing comments, e.g. Opening Comments on OIR (10/21/19) and Reply Comments on OIR (11/5/19), plus others as they arise in rulemakings</li> <li>- Attending prehearing conference</li> <li>- Reaching out to staff to advocate</li> </ul>	
<b>6. <a href="#">SB 1440</a> (biomethane procurement) proceeding.</b> <i>Engagement Level: TBD</i>	<b>When docket opens (expected Q4 2019), make sure H2 is in scope and treated with parity to biomethane, as feasible.</b> In addition to working closely with staff allies, tactics will be developed when the scoping memo is released.	CPUC
<b>7. 2019 IEPR Building Efficiency &amp; Decarbonization Docket</b> <i>Engagement Level: 4</i>	Similar to parallel effort at the CPUC above, the main goal is to <b>have the plan recognize H2 based solutions as essential options to enable decarbonization of CA buildings, while also enabling other critical state priorities</b> , e.g. resilience reliability, clean air, and cost-effectiveness. In addition to comments on workshops and draft IEPR, tactics to begin overcoming major resistance, include educating staff, coalition building.	CEC
<b>8. 2019 IEPR Climate Adaptation Docket</b> <i>Engagement Level: 2</i>	<b>Aim to build record on how H2 solutions can play a significant, positive role in this section</b> of the IEPR through comments and staff education.	CEC
<b>9. 2019 IEPR Docket on Electricity &amp; Gas Demand Forecasting</b> <i>Engagement Level: 2</i>	<b>Possible workshop participation and comments in Fall 2019 TBD</b> , with more specifics planned when agenda is released.	CEC
<b>10. E3 Future of Natural Gas System Study</b> <i>Engagement Level: 5</i>	Mitigate negative impacts by commenting on weak points in the analysis and opinions for which there is not adequate support that may disadvantage hydrogen, disseminating this information to decision makers and influencers where relevant, and build more accurate set of data and analysis that can be used to spread a more constructive narrative	CEC
<b>11. Joint Agency Report on <a href="#">SB 100</a></b> <i>Engagement Level: 5</i>	Through evidence-based workshop participation and comments, along with key staff and decision maker education, and coalition building, ensure that hydrogen figures fairly and prominently in the implementation of SB 100.	CEC
<b>12. CARB Scoping Plan/Carbon Neutrality Proceeding</b> <i>Engagement Level: 4</i>	To strengthen the public record and influence decision makers to recognize and support hydrogen as a critical enabler of California’s carbon neutrality goal by continuing to participate, provide comment, and engage staff and decision makers.	CPUC
<b>13. Develop Opportunities for H2 w/ CA Independent System Operator</b> <i>Engagement Level: 2</i>	Create and present a business case for hydrogen at the CAISO and further develop goals and tactics to build opportunities for H2 (e.g. long duration, seasonal storage, helping solve the duck curve, etc.) that the CAISO can support.	CARB
<b>14. Executive Order for a California Green New Deal that prominently features H2</b> <i>Engagement Level: 4</i>	Under development is a potential Executive Order for a California Green New Deal (e.g. “Climate for All”), with a call to transition to 100% renewable and zero carbon energy across all sectors that includes a major role for renewable and low carbon hydrogen. Specifics, including tactics, are being worked out in the Initiative process.	CAISO
<b>15. Secure passage of <a href="#">AB 1143</a> (Renewable Gas Building Program)</b> <i>Engagement level: 3</i>	This bill, which as of its last iteration in 2019 would allocate \$50 million a year for four years to incentivize a renewable gas building program, funded by gas utility greenhouse gas allowances. It stalled in the Assembly Committee in 2019. Specific tactics to resuscitate and pass it will be addressed in the Initiative process	Governor’s Office
Additional recommendations for these Initiatives may be found in UCI APEP’s <i>Renewable Hydrogen Production Roadmap Project Results Summary</i> .		

## Sector Action Groups

Staff proposes developing a webinar series for the year in which each month a different issue is covered with a balance among the SAGs. The webinars would be developed in collaboration with other organizations when appropriate to expand the reach and to approach new audiences.

## Hydrogen Energy Storage and Renewable Hydrogen

### Educational Materials (Webinars, Fact Sheets, Case Studies)

- Develop sector specific presentations approved by industry for CHBC and partnership events
- Fact Sheets
  - How the portfolio of solutions with hydrogen complement each other.
  - Highlighting the applications and roles hydrogen storage can play for islanding and microgrids to improve resilience
- Case Studies
  - HES projects in Europe, Canada, US
  - Hydrogen's role to enhance energy resilience
  - Address the California duck curve issue with specific case studies on what CHBC members are deploying. Studies would target a specific audience on specific issues.

### Research & Analysis

- CHBC could work with agencies to explore the role of hydrogen for seasonal energy storage, e. g. at stranded oil fields

### Events & Networking

- Hydrogen Energy Storage Workshop at the CPUC
- Renewable Hydrogen Production Workshop

## Freight and Goods Movement, Ports

### Educational Materials (Webinars, Fact Sheets, Case Studies)

- Develop sector specific presentations approved by industry for CHBC and partnership events
- Develop a tracking of commercialization timeline for HD trucks
- Develop analysis of infrastructure cost for fleets
- Develop fact sheets outlining benefits of hydrogen for different applications to educate and engage ports personnel, environmental justice groups, agencies and the legislature

### Research & Analysis

- Pursue funding for cost analysis at scale study and technology comparison of duty cycles, in collaboration with SCAQMD, CARB and CEC.

### Events & Networking

- Fleets workshop at ACT Expo
- Plan and conduct a CHBC sponsored international ports workshop at CHFCA Conference in Vancouver

## Public Transport

### Educational Materials (Webinars, Fact Sheets, Case Studies)

- Develop sector specific presentations approved by industry for CHBC and partnership events
- Continue to create awareness about the FCEB ("the other electric bus") for public transit
- Direct engagement with transit agencies and CTA

- Continue to develop and update fact sheets to update key stakeholders (CARB, CEC) on industry progress
- Develop Fact Sheets on FC and H2 applications in public transportation: coaches, ferry, rail (commuter/light rail).

### Research & Analysis

- Develop a vision for 100% fleet deployment at transit depot (H2 infrastructure @ scale)
- 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

### Events & Networking

- Organize a FCEB workshop in 2020 (end of February at SunLine Transit Agency)
- Participate in industry events (CTA, APTA) to reach beyond CHBC choir

## Events

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Some members have indicated a strong desire for regular events to be hosted by the CHBC, in the absence of other hydrogen events in the State and beyond. Some members seek the creation of business development opportunities, project collaboration and networking as key benefits of their CHBC membership, essentially providing a positive bottom line for their ROI in membership dues. Events are key for creating such opportunities, aside of the work of the SAGs.

While CHBC hosted eight events in 2018, it only hosted three events in 2019.

- Events are important for the development of the market in California, for the benefit of members, and to educate and develop relationships with potential members, decision makers, and allied organizations. 2020 will see an increase in events support by SAGs.
- CHBC-led events proposed, reflecting the COVID-19 pandemic, are:
  - 1) Transit Workshop at Sunline, proposed by Public Transit SAG
  - 2) Hydrogen Energy Storage Workshop at the PUC in SF, proposed by the HES/RH2 SAG and referred to the corresponding Initiative
  - 3) CHBC Policy Summit in March 2020
  - 4) Freight Workshop at ACT Expo (with ACT Expo postponement, substituted by series of webinars)
  - 5) Policy Retreat for CHBC members
  - 6) CHBC Business Summit (at Marriot/Hyatt in Sacramento) with Supply Chain Workshop (under evaluation as a virtual Summit for member business and technology communications with the marketplace and government officials)
  - 7) Annual Membership Meeting

## Budgeting Comparisons and Allocation

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- For an organization that is trying to represent an entire industry, from production through delivery, to all end uses, CHBC has a comparatively small budget. In 2019, membership dues were projected to raise around \$300,000. With revenue from events and additional funding, this amounted to ~\$450,000.
- Overall, membership survey feedback indicated that a 40% to 60% ratio between convening vs advocacy functions should be achieved. Currently, about 55% of dues are allocated towards advocacy.
- A stronger presence in Sacramento is desired, which will require an increase in revenue from member dues.

## Membership and Revenue

- The board changed the membership and dues structure to help improve the governance of the CHBC by the larger members and to increase revenue and effectiveness in meeting CHBC goals.
- The 2019 Membership structure was:
  - Innovator Level: \$600 36 Members
  - Silver: \$1,800 48 Members
  - Gold: \$5,000 11 Members
  - Platinum: \$12,000 11 Members
  - Platinum (Executive): \$17,000 1 Member
  - Total Revenue: ~\$312,000
- The Board adopted the following 2020 dues structure that would create a 2020 budget that fits the Plan and CHBC's aspirations:
  - Dues:
    - Innovator: \$650 (+\$50; 8%);
    - Silver: \$2,000 (+\$200; 11%);
    - Gold: \$6,000 (+\$1,000; 17%);
    - Platinum: \$15,000 (+\$3,000; 20%)
    - Platinum (Executive): \$26,500 (+9,500; 56%)
  - Assuming a 90% retention rate, this may yield an additional \$27,210 in revenue; and would yield \$340,000 in total dues revenue.

### Summary of Dues

Level	# of Members	2019 Dues	Adopted 2020 Dues
<b>Bronze</b>	<b>36</b>	600	650
<b>Silver</b>	<b>48</b>	1,800	2,000
<b>Gold</b>	<b>11</b>	5,000	6,000
<b>Platinum</b>	<b>11</b>	12,000	15,000
<b>Platinum (Executive)</b>	<b>1</b>	17,000	26,500
<b>Total Revenue</b>		<b>312,000</b>	<b>376,900</b>
Retention Rate			90%
<b>Revenue w/ Retention</b>		<b>312,000</b>	<b>339,210</b>
Difference from 2019			27,210

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