

CHBC Advocacy Committee and SAG Chair Joint Call to Approve 2018 Policy Goals January 26, 2017

Purpose: Discuss the 2018 Policy Priorities of each SAG with the Advocacy Core Committee. The following priorities were developed by the SAGs, Committees and Board in late 2017 and discussed in January SAG calls.

Advocacy Committee

The policy priorities for the advocacy committee reflect the priorities of each SAG.

Policy Goals & Priorities

The CHBC will:

1. Ahead of the legislative session, work with SAGs on **defining legislative positions** and coordinate outreach to potential partners and other associations to support mutual causes and avoid last minute surprises.
2. Identify and seek **commitments** from **Legislative Champions** that can carry the torch for hydrogen and fuel cell technology and sponsor bills.
3. **Monitor legislative, regulatory activity** and investment plans, and identify and prioritize policy and regulatory areas in which the CHBC and its members have an interest.
4. Keep a **current calendar for key deadlines** and milestones for these items, communicate them to the membership, and advocate where needed. This includes **tracking bills**, weighing in where appropriate, and alerting members and staff of key developments and opportunities to shape policy. Consolidate communication of these advocacy activities to members in a quarterly webinar or briefing, inviting comments and recommendations from individual members.
5. Conduct a **CHBC Hydrogen and Fuel Cell Policy Summit with legislative briefings and Fly-in** in February or March in Sacramento to educate new and existing members of the legislature on hydrogen and fuel cells in coordination with the CaFCP, CSFCC and other key stakeholders. The focus will be on creating the information for policy decision makers necessary to include hydrogen and fuel cell technology in active bills, and to work with regulatory agencies on supportive regulation and funding. The Advocacy Committee will determine the exact format, but could include a fly-in and briefings.
6. Continuously identify and refine understanding of high priority areas and the people that the CHBC needs to **engage with to achieve CHBC objectives**, along with **developing communication materials** tailored to various groups and creating meetings with key decision makers, in coordination with SAGs, with a clear agenda and desired outcomes. Implementation includes drafting position statements and correspondence, letters, legislative language, CHBC executive communications to key government people, and personal visits by CHBC representatives. Support this effort by continuing to develop a list of key individuals and proceedings, tracking interaction history and action items, and ensuring the Advocacy Committee has access to this information.
7. Host a **lobbying reception in January** for members and their lobbyists to discuss CHBC priorities and plans. To be sure this best reflects what is best for CHBC membership, conduct an annual policy assessment of member policy needs and emerging policy issues to identify areas that could benefit from proactive CHBC action.
8. Continue to **build relationships with key legislators and regulatory commissioners** and their staffs, focusing on areas identified in the member policy assessment. This is to allow CHBC to be proactive

during the year and identify issues likely to affect the CHBC and its members, before policy positions and actions become drafted.

Public Transportation SAG:

Policy Goals & Priorities

The CHBC will:

1. Seek to secure over next 2-3 years **funding for buses and other transit vehicles** (like HVIP program) and hydrogen fueling infrastructure via key agencies, including ARB, CEC and Air Management Districts. Coordinate efforts with Advocacy Committee.
2. Participate and **comment in agency workshops** and rulemakings affecting hydrogen **transit**, including **dedicated funding** and/or **mandates** for zero emission transit.
3. Analyze and comment on the **CARB Innovative Clean Transit (ICT)** ruling: Transit Agencies have not expressed concern over 2040 Zero Emission Mandate but there is concern over lack of funding associated with mandate and timescale.
4. Provide input and updates to **CARB** regarding **hydrogen transit solutions** including performance and cost
5. Advocate for **conversion of rail to hydrogen**, at railyards or rail lines not using catenary electricity supply as a means to reduce emissions from Diesel locomotives.

Non-Policy Activities and Goals

1. Educate NGOs about the experience and benefits of hydrogen in zero emission transit.
2. Increase awareness and education to get more transit agencies on board and more fuel cell buses deployed by developing materials that share experiences and case studies of transit agencies to educate others, develop more champions in transit agencies, and influence decision makers at transit agencies board of directors.
3. Develop materials highlighting the scalability of H2 infrastructure versus BEB infrastructure.
4. Work with Zero Emission Bus Resource Advocacy (ZEBRA) group to gather transit needs for hydrogen infrastructure: type of business model; hydrogen consumption, desire for renewable hydrogen, length of contract.
5. Host a hydrogen public transport workshop in support of the above goals.

Heavy Duty Transportation, Good Movement, and Clean Ports SAG

Policy Goals & Priorities

The CHBC will:

1. Advocate for **funding to go toward Class 7 & 8 ZE trucks** by advocating at CARB Board meetings in coordination with other stakeholders, including the **Sustainable Freight Action Plan**, and developing strategy papers with relevant agencies. Interact with existing initiatives, e.g. electrification of ports programs. Provide input to California ports in the development of their **Clean Port Action Plans**.
2. Advocate for **funding of additional Class 8 trucks** and **infrastructure** deployment to show scalability.
3. Advocate for **funding for conversion of freight rail to hydrogen**. SMAQMD has expressed interest in utilizing fuel cells for rail applications.

Non-Policy Activities and Goals

1. Provide input to California Ports in the development of their Clean Port Action Plans.
2. Assess the cross-sector value of hydrogen in ports for trucking, refrigerated cargo, equipment, and stationary power with a potential white paper or opportunity paper, based on data gathered from Ports and Freight Workshops and address ports needs.
3. Develop a whitepaper on ports that provides a moderate, neutral case for hydrogen for heavy-duty and ports applications, including a comparison sheet for different low-and zero carbon technology options
4. CHBC to participate in NGO and agency events to communicate the industry potential in these areas.
5. Support the development U.S. EPA West Coast Collaborative Medium & Heavy-Duty Alternative Fuel Infrastructure Corridor Coalition.
6. In coordination with efforts taking place at the CaFCP, host a workshop in support of the above activities.

Hydrogen Energy Storage and Renewable Hydrogen SAG:

Policy Goals & Priorities

1. Advocate for **hydrogen pipeline projects** and continue to **advocate for P2G** (natural gas injection) projects.
2. Continue to advocate for **LCFS to support various pathways**.
3. Complete the development of member and industry consensus on the **definition of renewable hydrogen** as well as develop a **certification model** to accurately capture renewable hydrogen properties and production.
4. Ask for funding from **DOE for Commercial Demonstration** in CA – not just R&D funds.
5. Advocate for **renewable hydrogen from waste** (solid and gaseous feedstocks) as a production pathway
6. Secure **California funding for RH2 production** to help the deficit CA is predicting for renewable hydrogen production for vehicle fuel (26t/day by 2023)
7. Break down **silos** between state agencies for hydrogen
8. Follow and **comment on relevant proceedings** identified by the SAG, including **Integrated Resource Planning, Distributed Energy Storage, and Integrated Energy Policy Report Update**.
9. Make sure the **Resolve model** has the data needed to **evaluate power-to-gas**.
10. Continue efforts to **engage E3**, Electric Power Research Institute, Southern California Edison, and San Diego Gas & Electric, to broaden member input to our HES and P2G work, and provide them with necessary data to develop more accurate hydrogen-related models.
11. Support the **passage of a 100% renewable energy bill** with roles for renewable hydrogen.
12. Advocate for dedicated **funding for large-scale renewable hydrogen production facilities** in California to improve economies of scale and meet renewable hydrogen demand from fueling stations.
13. Support efforts to **inject hydrogen into the natural gas grid** and advocate for pipelines as an energy storage component.
14. Continue to **advocate to ISO & PUC for wholesale and low “duck belly” pricing** for energy related to hydrogen production. CHBC and members will engage in agency activities to shift ongoing discussion in favor of a supportive hydrogen and fuel cell environment.
15. Work with key agencies to require using a **percentage of renewable hydrogen in oil refining**, e.g. with ARB on LCFS changes.
16. Advocate for **large-scale hydrogen users to use renewable hydrogen** to create stronger demand for large-scale renewable hydrogen production facilities.
17. Build **bridges** to other players in the **energy storage community, community choice aggregators, IOUs and IPPs** to allow for alignment in policy activities.

18. Develop an understanding of the **future increase of renewable hydrogen** (mandated or otherwise) to compete with renewable electricity messaging.
19. Develop a formal working group (e.g. a **Multiagency Stakeholder Group**) with the Governor and key agencies on advancing renewable hydrogen production in California.
20. Ensure that **hydrogen-based products** remain part of the implementation of **SB 1383**, in which the legislature explicitly directed the Energy Commission to look at “renewable gas” to include agency consideration of electrolyzer-produced renewable hydrogen.
21. Influence the CPUC to ensure that **P2G facilities** are **eligible** for wholesale or low rate retail **electricity rates**, as well as **low T&D rates** for hydrogen fuel production and industrial process applications.
22. Push for the creation of a framework that allows **gas utilities** to be allowed to **purchase renewable gas**, including hydrogen, along with associated renewable attributes, and work with stakeholders to develop in-state markets of hydrogen and other renewable gases through procurement policies.
23. Push for allowing the **gas utilities that procure renewable hydrogen** and the corresponding green attributes to monetize (**sell**) the **attributes** and return the value of them to their ratepayers, similar to the model authorized by the CARB and CPUC for electric utilities to provide electricity to EV customers and monetize the LCFS for the benefit of the customer via rebates. By allowing the gas utilities to purchase renewable hydrogen for transportation end users, it dramatically opens up the renewable gas market, facilitates the scalability of the fuel development, and can provide the mechanism to benefit individual customers who may not have the opportunity to participate in the LCFS.
24. Have the state look for opportunities to support **gas utility involvement in the fueling station infrastructure**, as well as to support in-state renewable hydrogen production. This can include working with electric generation or electric system managers to coordinate access to low-cost renewable electricity for full capacity electrolyzer hydrogen production, as well as grid management opportunities. Studies show that the higher the electrolyzer capacity factor, the lower the cost of fuel produced, particularly in times where wholesale or negative priced electricity is available.
25. When qualifying renewable hydrogen to participate in a **new renewable gas market**, the state ought to **utilize an emission based metric**, similar to that used for electric vehicles in transportation sector or electric batteries in the energy storage markets. Hydrogen produced by splitting water with electricity has significantly lower GHG emission profile than conventional hydrogen. The state should consider the carbon intensity or similar GHG lifecycle metric.
26. With the new increased renewable energy mandates and a shift in the way electric generation contracts are structured, there is an opportunity to **expand electricity storage and re-evaluate the existing CAISO ancillary services market**. While doing so, opportunities should be created for **renewable hydrogen** to provide grid balancing services, storage and new, long-term seasonal storage. Today, the storage market excludes P2G, and the CAISO ancillary services market is limited in scope, as well as short-term (day ahead), which is not a market structure that can be used to finance new hydrogen investments.
27. The state ought to adopt a **method for testing compliance of power to gas with advancing state energy and climate goals**. An appropriate test would be along the lines of that which is applied to energy storage in AB 2514: An “energy storage system” shall be cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or improve the reliable operation of the electrical transmission or distribution grid. When an electrolyzer serves a power to gas function, it would not only be cost effective and reduce greenhouse gas emissions, it would also serve as a grid asset.
28. Pursue that State agencies become more closely **aligned with federal agencies on advancing renewable hydrogen**. For example, state energy agencies could more formally cooperate and coordinate with the

US DOE and its National Renewable Energy Laboratory (NREL) on their programs such as H2@Scale and the P2G pilot project at the NREL campus in Golden, CO.

Non-Policy Activities and Goals

1. Work with battery energy storage groups as hybrid partner and not as competitor.
2. Support the publication of findings from the Roadmap to Renewable Hydrogen, and support outreach activities to key California agencies to communicate the findings and recommendations. Host a webinar on the subject, led by EIN.
3. Host a workshop on both HES/P2G and/or RH2 to engage with legislators early in the legislative session. Staff and contractors will work diligently to identify key influencers to attend.
4. Work with environmental organizations to increase their understanding of the key roles renewable hydrogen can play in California's energy future.
5. Develop a roadmap on renewable hydrogen, based on the EIN work and the CHBC HES P2G White Paper.

Communication and Business Expansion

Policy Goals & Priorities

The CHBC will:

1. Secure **funding for public outreach** addressing hydrogen and fuel cells.

Non-Policy Activities and Goals

1. Provide support to Advocacy Committee in developing 2018 Hydrogen and Fuel Cell Policy Summit.
2. Develop the CHBC California Hydrogen and Fuel Cell Business Summit at SPI in combination with Hannover Fair USA Expo.
3. Host side events at other energy conferences for members and non-members to build relations to hydrogen-related sectors, with a focus on supply chain development.
4. Host Technology Tours around Summits and workshops, attempting to serve all market sectors and important agency leadership.
5. Host quarterly workshops at relevant venues for topics developed by each SAG. Each workshop will plan to raise between \$15,000 to \$25,000 in registration and sponsorship. The workshop proceedings and results will be compiled in reports and publicized widely, including a follow-up webinar to increase exposure and impact of the findings. This approach proved to be successful in 2017.
6. Continue efforts to lead new members to join at higher levels and to lead existing members to upgrade to higher levels, to continue the 2018 growth of CHBC services. The Board will undertake an effort to upgrade existing silver members to higher levels.
7. Continue to obtain important new members. CHBC will expand staff efforts already begun to lead international companies, air districts, supply chain companies and utility companies to see the CHBC as an important tool for information, advocacy and business expansion.
8. Develop a printed Member Directory Handbook, which can be shared at meetings and workshop, outlining key products and services of members available in California.
9. Update and expand CHBC's database of key journalists and media contacts in order to better message hydrogen and fuel cell content and activities. However, education of the public will not be an area of activity for this Committee due to the efforts undertaken by other organizations in the same area and limited CHBC resources.

10. Compile and promote CHBC's event and conferences calendar to keep the membership informed about workshops, proceedings and other activities of interest.

Infrastructure and Vehicle Deployment Program

Policy Goals & Priorities

The CHBC will:

1. Develop fuel cell electric vehicle industry **position** to a **potential ban of sales of combustion vehicles** in the future - AB 1745 (Clean Cars 2040 Act).
2. Provide **input** in agency reports and planning on **transportation electrification to be inclusive of hydrogen and fuel cell technology** and products.
3. Advocate for additional station funding and support industry activities to develop station funding beyond the initial 100 stations in California.
4. Follow the changes to the **LCFS program** and provide input where needed to establish additional LCFS pathways. Since ARB can be presented with a pathway, this activity would lead to broader ARB acceptance of hydrogen from biogas, biofuel and electrolysis to be formally accepted as pathways.
5. Provide guidance to ARB and key agencies, VW and CHBC members on the **disbursement of future funds from the VW settlement**, with a goal of allocating at **least 10% to hydrogen and fuel cell projects**, including infrastructure expansion and vehicle deployment.
6. Ensure any **electric vehicle bills are inclusive of fuel cell electric vehicles** and treat them equal to other EVs, e.g. AB 1184 (Vehicular Air Pollution)

Non-Policy Activities and Goals

1. Following the 101st Station Workshop in 2016, CHBC will offer to host a meeting to develop potential private financing approaches in the context of current experience, cross sector opportunities and vehicle deployment plans that might be able to attract private capital from interested parties.