

California Air Resources Board
1001 I Street
Sacramento, CA 95814

January 12, 2022

RE: Potential Future Changes to the LCFS Program Workshop

The California Hydrogen Business Council (CHBC)¹ welcomes the opportunity to comment on the California Air Resources Board (CARB) “Potential Future Changes to the LCFS Program” workshop (“Workshop”) that was held December 7, 2021. The CHBC applauds the efforts of CARB in the administration of the Low Carbon Fuel Standard (LCFS) program. The LCFS program has been incredibly successful in decreasing the greenhouse gas emissions (GHG) of California’s transportation fuels by awarding credits to low-carbon fuels such as hydrogen. The LCFS credits awarded on a carbon-intensity score basis sent market signals to hydrogen producers and hydrogen fueling station developers to kickstart the deployment of the hydrogen refueling system that now supports the growing number of California’s fuel cell electric vehicle (FCEV) drivers. With California’s swift transition to zero-emission vehicles within the next decade, it is imperative the LCFS program continues to support the use and production of low-carbon fuels such as hydrogen.

The Workshop proposed great questions about how to improve and expand the LCFS program and the CHBC is appreciative of the opportunity to provide feedback. The CHBC’s comments on the topics in which input is sought from the Workshop follows below:

1. Incentivize Investment and Align with Long-term Climate Goals

¹ The CHBC is comprised of over 135 companies and agencies involved in the business of hydrogen. Our mission is to advance the commercialization of hydrogen in the energy sector, including transportation, goods movement, and stationary power systems to reduce emissions and help the state meet its decarbonization goals. **The views expressed in these comments are those of the CHBC, and do not necessarily reflect the views of all of the individual CHBC member companies.** CHBC Members are listed here: <https://www.californiahydrogen.org/aboutus/chbc-members/>

- a. *Seeking input: Establish declining CI compliance targets post-2030, and potentially strengthen interim pre-2030 targets.*
 - i. CHBC's response: The CHBC is fully supportive of a carbon intensity-based crediting system and is supportive of hydrogen production that leads to a glidepath of low and negative carbon. Although the CHBC is not prepared to propose a specific CI compliance target, we do propose that the potential future CI compliance targets for hydrogen be equal to the CI compliance targets for grid-supplied electricity that is used as a fuel for battery-electric vehicles (BEV).
- b. *Seeking input: Allow for book-and-claim accounting of new-or-expanded low-CI hydrogen injected into hydrogen pipelines.*
 - i. CHBC's response: The CHBC is supportive of allowing book-and-claim accounting of new-or-expanded low-CI hydrogen injected into hydrogen pipelines as well as supportive of provisions to avoid resource shuffling. Since biomethane as a feedstock for hydrogen is already allowed under book-and-claim accounting, hydrogen should also be allowed.
- c. *Seeking input: Promote electricity storage.*
 - i. CHBC's response: The CHBC supports hydrogen as a means of storing electricity. As noted in CHBC's Scoping Plan comments, the transition to an all-electrified economy requires mid to long-term storage that cannot be serviced by batteries alone. Hydrogen can be stored in depleted oil fields, rock formations, salt caverns (out of state), and pressurized storage tanks for

months to years to capture current curtailed energy and be dispatched when necessary.

2. Accelerate Transition to ZEVs

a. Seeking input: Support hydrogen refueling infrastructure for medium-and-heavy duty vehicles.

- i. CHBC's response: To ensure California's meets its air quality and decarbonization goals, it is critical the medium-and-heavy duty vehicles in the state are transitioned to zero-emission vehicles like FCEV trucks and busses. The CHBC seeks a statewide goal of 200 heavy-duty hydrogen fueling stations by 2035² and the implementation of Hydrogen Refueling Infrastructure (HRI) credits for heavy-duty stations. The 200 heavy-duty hydrogen fueling station goal can be met if the HRI credits fund receives an additional 2.5% deficit allotment and an increase in the 1,200 kilogram per day capacity limit. The CHBC proposes a capacity increase that reflects the quantities of hydrogen needed to support the 70,000 heavy-duty FCEVs that will be utilizing the 200 heavy-duty hydrogen fueling stations. Further, the CHBC supports continued expansion of the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) funding and the distribution of vouchers for heavy-duty FCEVs in parity with heavy-duty BEVs.

3. Reflect Changes in Technology and Data

² As referenced in the following report: <https://cafcp.org/blog/california-fuel-cell-partnership-envisions-70000-heavy-duty-fuel-cell-electric-trucks-supported>.

- a. *Seeking input: Update emission factors as appropriate.*
 - i. CHBC's response: the CHBC supports the update to emissions factors of LCFS eligible fuels like hydrogen to reflect the growth of technologies over recent years. The CHBC looks forward to participating as a stakeholder in the development of models, reports, inventories, and peer-reviewed research.
- 4. Streamline Implementation and Enhance Exportability
 - a. *Seeking input: Allowing for preferential allocation of low-CI hydrogen to specific fuel pathways used for reporting.*
 - i. CHBC's response: The CHBC supports preferential allocation of low-CI hydrogen fuels used for reporting. When identifying hydrogen fuels as eligible, the CHBC supports identification based on the carbon intensity of that hydrogen fuel and not an identification based on the specific fuel pathway that achieved that carbon intensity target.
 - b. *Seeking input: Allow hydrogen production facilities not co-located with refinery to generate credit under refinery investment provision.*
 - i. CHBC's response: The CHBC supports the flexibility of credit generation regardless of hydrogen production location, as it encourages the use and production of carbon reducing fuels.

The Workshop held on December 7, 2021, reflects the commitment CARB has to improving the GHG emissions levels in California. The CHBC is appreciative of the CARB LCFS staff's thoughtful recommendations to potential future changes to the LCFS program. We look forward to continued participation and engagement throughout this process.

Respectfully Submitted,

A handwritten signature in black ink, appearing to be 'Sara Fitzsimon', with a long horizontal flourish extending to the right.

Sara Fitzsimon, J.D.
Policy Director
California Hydrogen Business Council