



California Hydrogen Business Council Comments on Public Workshop to Discuss Potential Regulatory Revisions to the Low Carbon Fuel Standard

December 7, 2020

The California Hydrogen Business Council (CHBC) ¹ greatly appreciates the California Air Resources Board (CARB) considering the following comments on the recent Public Workshop to Discuss Potential Regulatory Revisions to the Low Carbon Fuel Standard (LCFS). **To summarize, we support continuing this discussion, which we hope will include in its scope among other issues the following recommended revisions to the program:**

- 1) expanding the eligible feedstocks for electrolytic hydrogen satisfying minimum renewable fraction requirements to also include non-fossil, zero carbon resources beyond those qualified in the RPS, with flexibility to add;**
- 2) broadening the LCFS to include non-core gas system customers, in order to accelerate the adoption of economical low and zero carbon hydrogen that is key to decarbonizing hard-to-abate applications.**

These points are explained in greater detail below.

Revising the LCFS is an important opportunity to broaden the program's definitional language to go beyond renewable hydrogen feedstocks for electrolytic hydrogen that satisfy RPS requirements to also include non-fossil, zero carbon resources and flexibility to add.

¹ The CHBC is comprised of over 100 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 dependence on oil. 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. Members are listed here: www.californiahydrogen.org/aboutus/chbc-members/

“Renewable hydrogen” per the current LCFS Code² includes hydrogen for use in vehicles that is derived from electrolysis of water or aqueous solutions using RPS eligible renewable electricity,³ catalytic cracking or steam methane reforming of biomethane, thermochemical conversion of biomass, including the organic portion of municipal solid waste (MSW). The CHBC supports all these pathways, but we also believe that it is important to make certain additions, in order to update the program to be fully technology inclusive and to enable the transition to decarbonized hydrogen for deployment across sectors.

First, the value of zero carbon feedstocks, such as legacy large hydropower, to power electrolysis ought to be fully recognized and integrated into the LCFS program and definitional language. This would help to fully realize the grid integration potential of electrolysis, as well as accelerate the economical production of electrolytic hydrogen, which is widely recognized as being needed to decarbonize hard to abate applications.

Second, the definition “renewable and zero carbon” hydrogen ought to be flexible enough to make room for emerging pathways.

A review of carbon intensity scores of various technologies and pathways to producing low and zero carbon hydrogen may also be merited to ensure they capture the full value to California.

The CHBC also supports broadening the LCFS program to include gas system noncore customers.

The LCFS has been highly successful at reducing carbon in the transportation sector, and the CHBC believes that expanding the program to stationary applications beyond refineries, and specifically to include noncore gas customers, would help accelerate achieving economies of

² Section 95481 of Title 17 <https://casetext.com/regulation/california-code-of-regulations/title-17-public-health/division-3-air-resources/chapter-1-air-resources-board/subchapter-10-climate-change/article-4-regulations-to-achieve-greenhouse-gas-emission-reductions/subarticle-7-low->

³ RPS eligibility, per LCFS Code, is defined in [PUC Code](#) sections 399.11- 399.36, which excludes most hydro among other limitations.

scale of low and zero carbon hydrogen. This in turn would enable decarbonization of hard to abate applications that hydrogen is especially if not uniquely suited for, such as heat and feedstock fuel switching in portions of the chemical industry and displacement of natural gas in utility electric generation.

Canada is pursuing a model that could inform such an approach in California.⁴ The proposed Canadian Clean Fuel Standard sets a greenhouse gas (GHG) emissions standards for all liquid, gaseous and solid gas end uses, with the aim to lower GHG by 30 MMT by 2030 and includes compliance flexibility that allows 10% of compliance in one stream to be met with credits from another stream.⁵ This could help spur the low/zero carbon hydrogen market by providing routes to market beyond transportation, as well as contain costs. We hope that this type of program will be part of the scope of review in an ongoing proceeding to revise the LCFS.

The CHBC looks forward to continuing the discussion of how CARB's successful LCFS program could be leveraged, refined, and expanded to accelerate the transition to low and zero carbon fuels, and specifically hydrogen and its derivatives, across sectors, which will be critical to California achieving its economy wide carbon neutrality goal. We thank you for considering the specific recommendations above, which we hope to have the opportunity to elaborate on and add to in an upcoming regulatory process at CARB.

Respectfully,



William Zobel

Executive Director

California Hydrogen Business Council

wzobel@californiahydrogen.org

⁴ <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard.html>

⁵ See Part II, 7.3 <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard/regulatory-approach.html#toc26>