RFA RENEWABLE FUELS ASSOCIATION

July 5, 2018

Mr. Sam Wade, Chief
Transportation Fuels Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Mr. Wade,

The Renewable Fuels Association (RFA) appreciates the opportunity to submit these comments in response to the California Air Resources Board's (CARB) Supplemental 15-Day Notice regarding proposed amendments to the Low Carbon Fuel Standard (LCFS) regulation (Notice of Public Availability of Modified Text and Attachments; June 20, 2018).

RFA is the leading national trade association representing U.S. fuel ethanol producers. Its mission is to advance the development, production, and use of low-carbon fuel ethanol by strengthening America's ethanol industry and raising awareness about the benefits of renewable fuels. Founded in 1981, RFA serves as the premier forum for industry leaders and supporters to discuss ethanol policy, regulation, and technical issues. RFA's 300-plus members are working daily to help America become cleaner, safer, more energy secure, and economically vibrant.

Since the inception of the LCFS, liquid biofuels like ethanol have played a key role in the program's success. In fact, CARB data show that ethanol is responsible for reducing greenhouse gas (GHG) emissions by 14.5 million metric tons (CO_2-equivalent), or 45% of the total reductions achieved under the LCFS to date.

We offered detailed comments in response to the Initial Statement of Reasons (ISOR) during the 45-day comment period and we incorporate those comments by reference.[1] The comments presented herein are in response to the additional modifications to the LCFS as proposed June 20, 2018, in the 15-day package.

1. **The proposed crediting mechanism for DC fast charging and hydrogen refueling infrastructure threatens to undermine the performance-based, technology-neutral design of the LCFS**

[1] Comments of the Renewable Fuels Association (RFA) in response to the California Air Resources Board's (CARB) proposed amendments to the Low Carbon Fuel Standard regulation (Staff Report: Initial Statement of Reasons; March 6, 2018). https://www.arb.ca.gov/lists/com-attach/93-lcfs18-WylQMAZmWVUEYVc4.pdf

CARB is proposing to add section 95486.2 to the LCFS regulation, establishing a mechanism that would allow the generation of LCFS credits for the installation of "zero-emissions vehicle" (ZEV) refueling infrastructure. Specifically, the provisions would allow owners of hydrogen refueling equipment and DC fast charging infrastructure to generate LCFS credits simply for installing the equipment.

These proposed provisions threaten to subvert the original spirit and intent of the LCFS, which was to focus on decarbonization of transportation fuels (as opposed to providing direct incentives for low-carbon fuel infrastructure) and to "…offer a ***fuel-neutral platform*** in which alternative fuels can be incentivized ***without choosing winners or losers***."[2]

Hydrogen and electricity are only two of many low-carbon alternative fuels used in California under the LCFS. Ethanol, biodiesel, renewable diesel, biogas, and several other alternative fuels have made valuable contributions toward achieving the goals of the LCFS. Allowing only hydrogen and DC fast charging infrastructure to qualify for credit generation clearly violates the LCFS program's intended "fuel-neutral platform" and absolutely results in "choosing winners [and] losers."

The LCFS has been promoted worldwide as a policy model that is equitable, nonprescriptive, and drives decarbonization by valuing fuels *strictly on carbon intensity performance*. Indeed, CARB has stated that, "The design of the regulation ***is performance-based*** to ensure that all fuels that contribute to the goals of the LCFS are ***treated equitably***."[3] For the most part, the LCFS has operated effectively under these principles. However, the proposed crediting mechanism for hydrogen refueling and DC fast charging equipment would destabilize the performance-based design of the program and treat alternative fuels inequitably. At a time when other jurisdictions are considering programs patterned after the LCFS, these proposed provisions threaten to sully the reputation of the California program as a truly performance-based, technology-neutral policy.

a. Credits generated for ZEV infrastructure would not represent actual carbon reductions and may result in double-counting

When the LCFS was originally designed, it was clearly established that credits would serve as the currency of the program, with each credit representing one metric ton (MT) of CO_2-equivalent (CO_2e) reduction below the annual standard. The simple elegance and transparency of the LCFS credit instrument (i.e., one credit equals one MT of CO_2e) has enabled broad participation in, and effective operation of, the credit market. In addition to facilitating creation of the nation's first true market for monetized carbon, the LCFS credit

[2] California Air Resources Board. March 5, 2009. "Proposed Regulation to Implement the Low Carbon Fuel Standard, Volume I, Staff Report: Initial Statement of Reasons," at V-2. (emphasis added) https://www.arb.ca.gov/regact/2009/lcfs09/lcfsisor1.pdf

[3] Id., at ES-32. (emphasis added)

mechanism has served as a practical and straightforward metric for measuring carbon reductions achieved under the program.

Unfortunately, allowing generation of credits for ZEV infrastructure installation would jeopardize the integrity of the LCFS credit market and greatly complicate the accounting of actual carbon reductions achieved under the LCFS. This fact has been acknowledged by CARB officials, one of whom stated, "We acknowledge that these credits do not represent actual greenhouse gas emissions reductions."[4]

While this same official suggested that CARB "will remove those credits" when "making claims about the reductions the program has accomplished,"[5] the ZEV infrastructure credits will be indistinguishable from credits that actually represent GHG reductions when transacted in the marketplace. In other words, the LCFS credit market may become diluted with credits that don't actually represent real GHG reductions. ZEV infrastructure credits will have the same influence on the overall supply, demand, and pricing of LCFS credits as credits derived from actual GHG reductions, but they will not be providing any real service to the environment.

Further, allowing credits to be generated for ZEV infrastructure installation likely would result in "double-counting" when that infrastructure is used to actually dispense or distribute the fuel. That is, credits would be generated for both the *capacity* to distribute the fuel as well as for the actual distribution and use of fuel in the vehicle.

b. Other means are available to achieve the goals of Executive Order B-48-18 and spur installation of ZEV infrastructure

CARB has rationalized the proposed ZEV infrastructure crediting provisions by suggesting they are necessary to comply with Executive Order B-48-18, which directs "…State entities [to] work with the private sector and all appropriate levels of government to spur construction and installation of 200 hydrogen fueling stations and 250,000 zero-emission vehicle chargers, including 10,000 direct current fast chargers, by 2025." While the order directs agencies to "recommend ways to expand zero-emission vehicle infrastructure through the LCFS program," it certainly does not require the sort of crediting mechanism presently proposed by CARB.

RFA believes the most direct and effective means of spurring construction and installation of the desired ZEV refueling infrastructure would be for the state to issue grants or guaranteed loans. There are numerous examples of state and federal programs where this type of approach has been highly effective in driving installation of alternative fuel

[4] J. Godwin. June 25, 2018. "CARB Seeking Feedback in 15-Day Comment Period for LCFS Proposals." Oil Price Information Service. Biofuels Update.
[5] Id.

infrastructure. This would facilitate achievement of the goal to install the desired infrastructure without jeopardizing the integrity of the LCFS credit mechanism.

c. If CARB proceeds to adopt the ZEV infrastructure crediting mechanism as outlined in Section 95486.2, it should broaden its scope to allow credit generation for installation of *all* low-carbon alternative fuel infrastructure

Notwithstanding the concerns expressed above, if CARB moves forward with the proposed ZEV infrastructure crediting mechanism, it should broaden the provision to also allow credit generation for the installation of *all* infrastructure that facilitates greater distribution and consumption of low-carbon alternative fuels.

As referenced above, many low-carbon alternative fuels have contributed toward the achievement of the LCFS program's goals to date. Biogas, biodiesel, renewable diesel, and ethanol are among the fuels that have generated substantial carbon reductions under the LCFS. These fuels can play an even larger role in decarbonizing the state's transportation sector moving forward. However, for the full potential of these fuels to be recognized, CARB must maintain a fair and equitable approach to implementation of the LCFS.

Thus, "…to ensure that ***all fuels that contribute to the goals of the LCFS are treated equitably***…"[6], CARB should allow credit generation for all low-carbon alternative fuel infrastructure. This should include storage vessels and dispensers for biogas, E85 and mid-level ethanol blends, B20 and B100 biodiesel blends, and other fuels that have the potential to contribute meaningful carbon reductions under the LCFS.

In fact, broadening the provision to allow credit generation for installation of low-carbon liquid fuels like E85 could spur accelerated growth in the use of low-carbon vehicle technologies that combine biofuel-powered fuel cells with electric powertrains, such as Nissan's e-Bio fuel cell. The e-Bio technology uses ethanol as the feedstock for an onboard fuel cell, which in turn generates electricity to power the vehicle's drivetrain. Nissan has chosen to commercialize the e-Bio fuel cell technology in Brazil because retail ethanol refueling infrastructure is broadly available there. Equitably allowing credit generation for all alternative fuel refueling infrastructure would drive manufacturers to commercialize this type of innovative technology in California rather than overseas.

2. Comments regarding additional modification to CA-GREET 3.0 and carbon intensity (CI) calculators

RFA applauds CARB staff for its continued efforts to update the CA-GREET modeling platform and ensure the tool accurately represents current practices and trends in low-

[6] California Air Resources Board. March 5, 2009. "Proposed Regulation to Implement the Low Carbon Fuel Standard, Volume I, Staff Report: Initial Statement of Reasons," at ES-32. (emphasis added)

carbon fuel production. RFA supports many of the improvements to the CA-GREET 3.0 model and associated CI calculators, as proposed in the 15-day package. Specifically:

- We support modifying the farm-to-plant corn transport distance to 40 miles, although the literature supports an even lower value;
- RFA agrees with CARB's proposal to adjust heavy and medium heavy-duty truck capacities for farm-to-plant feedstock delivery;
- We support the proposed changes to fuel economy default values for heavy and medium heavy-duty trucks; and
- We agree with CARB's proposal to update the eGRID data in CA-GREET 3.0 to reflect the more current EPA values.

While we agree with most of the proposed changes to CA-GREET 3.0 and the CI calculators, we encourage CARB to consider additional improvements as detailed below.

- RFA disagrees that back-haul miles should be added for rail and truck transport, as we believe those miles (and related emissions) are already captured in GREET1_2016 (Argonne) and thus CA-GREET 3.0. Adding another factor for back-haul miles in CA-GREET 3.0 would result in double-counting of back-haul miles and emissions for rail and truck transportation.
- GREET1_2016 (Argonne) appears to assume that corn feedstock that is shipped via rail to ethanol plants outside of the Corn Belt is first transported 50 miles by truck to the rail terminal. Empirical data show the corn transport distance from farm-to-rail terminal is likely 20 miles or less. We request that CARB modify this transport distance in CA-GREET 3.0.

* * * * *

Thank you for considering our comments as you prepare to advance amendments and modifications to the LCFS program. Please contact me at 636.594.2284 with any questions or comments.

Sincerely,

Geoff Cooper

Geoff Cooper
Executive Vice President