



November 5, 2020

Rajinder Sahota
Chief, Industrial Strategies Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: LCFS Regulatory Amendment Workshop Oct 14 -15, 2020

Dear Ms. Sahota,

The Renewable Fuels Association (RFA) is writing to provide our comments on the recent Low Carbon Fuel Standard (LCFS) regulatory amendments workshop. Below we outline our support for the inclusion of an optional upstream LCFS pathway that would provide credits to the agricultural sector and utilizing ethanol-based vehicles to help California meet its carbon targets as rapidly as possible.

RFA is the leading national trade association representing U.S. ethanol producers. Its mission is to advance the development, production, and use of low-carbon 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.

RFA believes that renewable fuel, especially ethanol, can further decarbonize passenger cars and light-duty trucks today. Promising research and development initiatives show ethanol can also power medium duty and heavy-duty engines in the future as well. As we've seen from CARB's emissions inventories, there is a critical need to immediately reduce emissions from the transportation sector.

As CARB data shows, ethanol has been a primary driver of reducing climate change emissions under the LCFS policy. Today's ethanol reduces greenhouse gas emissions by an average of 35-45% compared to petroleum fuels and is on a technological curve to be carbon negative with the integration of carbon capture and sequestration. The LCFS has encouraged lower carbon intensity (CI) fuels, and investment in new technologies has led to a reduction of more than 30% in ethanol's average CI score since program inception. In addition, the fuel standard has driven growth of E85 (85% ethanol blends) for Flex Fuel Vehicles (FFV), which can boast a 70-75% reduction in carbon intensity per mile over gasoline when ultra-low CI ethanol is used (such as cellulosic ethanol from kernel fiber).

We believe certain vehicle technology and liquid fuel combinations could meet California's long-term objective of net zero emission from transportation and we would encourage CARB to think beyond electric vehicles as it considers pathways to net zero. For example, a flex fuel vehicle operating on an E85 blend made with net-zero CI ethanol and a renewable denaturant like bio-naphtha could provide the same—or even better—lifecycle carbon performance as a battery electric vehicle running on California grid electricity. But for this type of pathway to become a reality on a broad scale, CARB must provide fair and equitable treatment for all technologies and fuels.

Consideration should be given for an FFV refueling infrastructure credit similar to the LCFS ZEV infrastructure crediting provision supporting the deployment of ZEV infrastructure. The ZEV infrastructure

provision currently covers Hydrogen Refueling Infrastructure (HRI) and Direct Current (DC) Fast Charging Infrastructure (FCI). In addition to generating LCFS credit for dispensed fuel, the eligible hydrogen station, or DC fast charger can generate infrastructure credits based on the capacity of the station or charger minus the quantity of dispensed fuel. Adding a lower cost option for decarbonization, like FFVs operating on renewable E85, provides consumers choices when it comes to vehicles and fuels. Substantial gains are possible for both GHG and criteria emissions – with the speed of implementation being the largest driver of near-term carbon displacement. Not waiting for the required infrastructure associated with electrification and/or hydrogen-based alternative will speed the adoption and resulting mitigation effects.

RFA strongly supports the proposal to include upstream credits for agricultural practices that can reduce GHG emissions at the farm level. CARB can help drive large scale change in corn farming practices through optional credits. Research from the Argonne National Laboratory updated GREET model show that farmers could significantly reduce GHG emissions from corn production. Already some carbon-friendly practices are being utilized by corn farmers, such as cover crops, low-to-no tillage, crop rotations, and selective fertilizer applications. However, these practices are considered experimental and do not have widespread adoption due to the lack of a price signal. In fact, today there is only risk, and no reward for experimenting with low carbon ag practices. If CARB were to adopt crediting provisions for these practices, farmers across the country could help deliver better, lower carbon ethanol for California's use. These practices would have many ancillary benefits, including additional watershed protection, greater biodiversity, and healthier soil.

RFA is also a signatory on additional comments related to support for credits at the farm level for sustainable practices forwarded from The Midwestern Clean Fuels Policy Initiative, a broad coalition of fuel producers and marketers, nonprofit and research organizations, scientists and engineers, and agriculture and industry stakeholders exploring a clean fuels policy at the state or regional level.

Lastly, the RFA also supports allowing for renewable natural gas injected into the pipeline in the US to be booked and transferred to biofuel production. This is now allowed for hydrogen production in California and for the use of renewable natural gas directly in vehicles in California. Allowing the same for biofuel production is consistent with fuel and technology neutrality and will encourage additional renewable natural gas production and maximize carbon reductions in biofuel production.

Thank you for your consideration of our comments. If you have any questions, feel free to contact me at kdavis@ethanolrfa.org

Sincerely,

Kelly Davis
Vice President of Regulatory Affairs