

March 15, 2023

Ms. Cheryl Laskowski, Branch Chief
Transportation Fuels Branch
California Air Resources Board
1001 I St
Sacramento, CA 95814

Re: Low Carbon Fuel Standard Workshop February 22, 2023

Dear Ms. Laskowski,

The Renewable Fuels Association (RFA) appreciates the opportunity to comment on the workshop on potential changes to the Low Carbon Fuel Standard (LCFS) program held on February 22, 2023. The RFA supports the LCFS and looks forward to continued engagement in this process to strengthen and extend the program beyond 2030. The RFA is also working around the country in collaboration with other stakeholders to develop and implement LCFS and other clean fuel programs in other states.

The RFA commented extensively on the key issues of the LCFS modifications in our letters of August 8, 2022 (in response to the July 27, 2022 LCFS workshop) and December 20, 2022 (regarding the November 9, 2022 workshop). These new comments should be considered in combination with the earlier comments and are responsive to CARB staff's request at the most recent workshop for stakeholder input on specific topics.

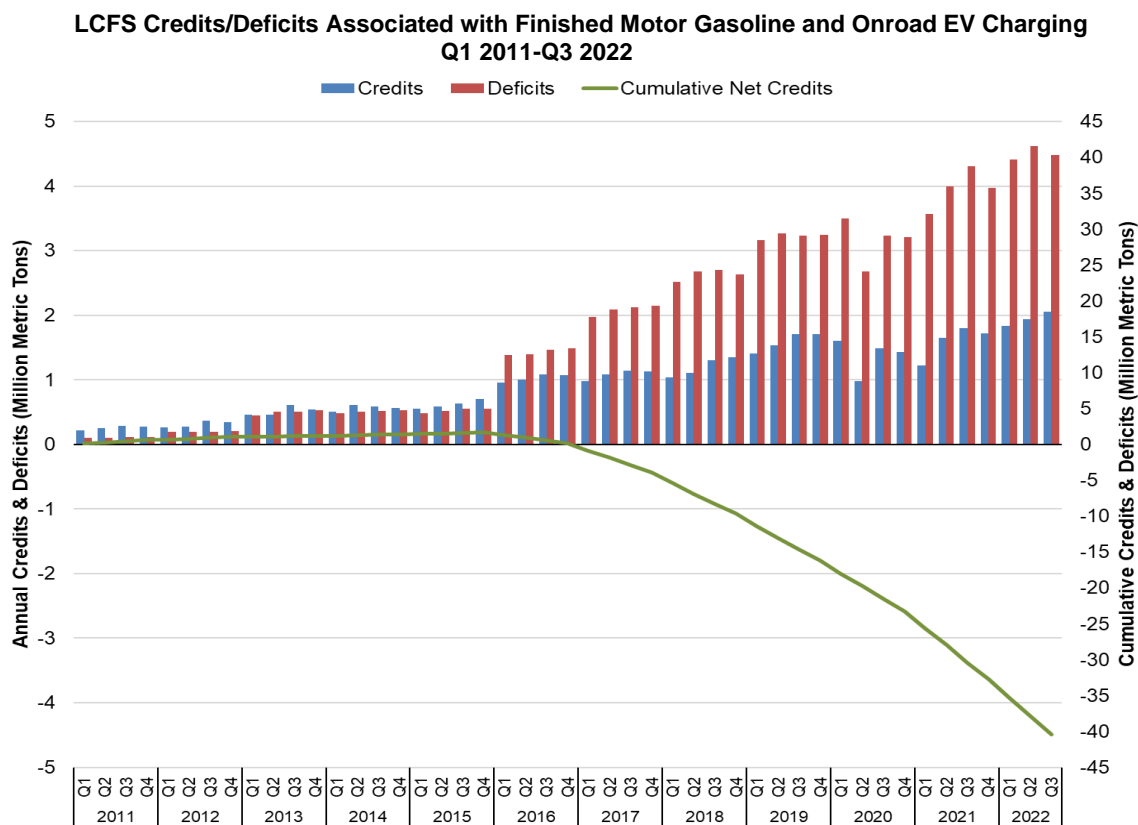
Since the earlier workshops were considered informal workshops, and the February workshop is considered the first formal workshop for the proposed LCFS modifications rulemaking, we are including the earlier comments with this comment letter to ensure that they are included in the formal rulemaking record.

Higher blends of ethanol are necessary to meet the goals of the newly adopted CARB Scoping Plan.

The CARB presentation at the last workshop identified the current *Decade of Action* to achieve the near-term statewide goal of achieving a 48% reduction of GHG emissions below 1990 levels by 2030 and a rapid transition away from fossil fuels in the transportation sector. In addition to aggressive electrification goals, higher blends of low- to zero-carbon ethanol are a critical component of achieving the 2030 targets on the path to carbon neutrality by 2045. CARB has all the data to support the immediate approval of E15 for use in California. Migrating all E10 to E15 in California today would

result immediately in approximately 2 million metric tons annually of additional GHG reductions while also reducing criteria pollutants and toxics, all at a lower cost to California consumers.

As RFA has commented before, while the overall LCFS program has resulted in a significant credit surplus (currently over 13 million metric tons with the most recent third quarter report of 2022), the deficit generation in the gasoline pool continues to grow rapidly with a current deficit balance of 40 million metric tons and accelerating as shown below.



The RFA and a preponderance of stakeholders support both strengthening the 2030 carbon reduction target to at least 30 percent and a stepdown of the current compliance curve starting in 2024. Without addressing the growing deficit generation in the gasoline pool, such a robust strengthening of the compliance curve will not be possible. With a greater inclusion of higher ethanol blends in the California gasoline supply, RFA believes that the 2030 target reduction could be moved to as much as 35 percent. Oregon has strengthened their Clean Fuels Program compliance target to 37 percent by 2035, and the modelling to support this includes both a transition of gasoline blends to E15 and significant growth in the E85 market.

Beyond 2030, intermediate blends above 15 percent and continued growth of E85 are needed to further displace fossil fuels and achieve carbon neutrality. The Scoping Plan includes a large volume of “bio-based gasoline” in achieving carbon neutrality. Ethanol is the only commercially practical and affordable “bio-based gasoline” substitute in the market today, and the LCFS and other CARB policies must clear unnecessary regulatory hurdles to its increased use. Simply stated, by not encouraging higher blends of low- and zero-carbon ethanol in the transportation market today, CARB would be abdicating its own stated goal of maximizing GHG reductions as soon as possible.

Further modify the CATS model to better reflect current and projected ethanol economics, carbon intensities and volumes.

RFA appreciates the revisions in version two of the CATS model that were partially responsive to our comments on carbon intensities and carbon capture and sequestration (CCS), but we believe further revisions would more appropriately reflect the current market and future trends in the ethanol industry.

The updated CATS model incorporates the average carbon intensity (CI) of ethanol in the market today and assumes that CI improvements will continue in the future. Yet, it also assumes that the CI of ethanol produced at facilities using CCS will remain at a constant 35 gCO₂e/MJ through 2045. Given trends in agricultural practices and in the processing of both corn starch and corn fiber ethanol, which were well documented in the RFA comment letter of December 20, 2022, it is reasonable to expect substantial reductions in the CI of ethanol over the next two decades. Accordingly, for ethanol produced using CCS, the model should be modified to assume the CI will decline to zero CI by 2045. This is consistent with recent research and the 2021 pledge by RFA’s producer-members to ensure that ethanol achieves net zero lifecycle GHG emissions, on average, by 2050 or sooner.¹

Additionally, the CATS model baseline should reflect rapid adoption of E15 starting in 2024 for the reasons discussed above, and CARB should consider loosening the binding constraint on E85 usage. RFA would also draw attention to the comments in our December 20, 2022 letter regarding corn price, ethanol conversion costs, E85 infrastructure costs and corn distillers oil, which have not yet been addressed or, in the case of conversion costs, were adversely revised in the latest version of CATS, apparently without referencing available survey-based data.

Regarding E85, the CATS model assumes a 2022 volume of 49 million gallons of E100 equivalent, which translates to approximately 62 million gallons of E85, a volume similar to that reported for 2021. While CARB has not yet published E85 sales for 2022, our market sources would suggest that the E85 number is closer to 100 million gallons. The success of the LCFS and attractive pricing of E85 in California (selling for \$1.50 to

¹ <https://ethanolrfa.org/pledge>

\$2.00 per gallon less than gasoline) has resulted in approximately 60-percent increases in E85 demand annually over the last two years. The CATS model should be adjusted to the actual number for E85 sales in 2022. E85 is an extremely effective GHG reduction strategy in California and should be further incentivized in the LCFS program.

RFA is available to provide CARB staff with information on the topics raised regarding the CATS model. With updated and more accurate assumptions, CATS will “choose” more low- to zero-carbon ethanol as one of the most cost-effective ways to lower GHG emissions now and out to 2045 and reduce the pervasive LCFS deficits generated by the gasoline pool.

An Acceleration Mechanism is appropriate for sending a consistent market signal for innovation and investment in new supplies of low carbon fuels.

The current low credit prices under the LCFS are clearly inhibiting new investment in low carbon fuel production. The long period of time (up to three years) to update the LCFS given the regulatory process in California is creating uncertainty as to the longer-term trajectory of the program. Some form of an Acceleration Mechanism could address this problem.

Of the concepts advanced by CARB, RFA believes that a mechanism based on some ratio of credit to deficit generation on an annual basis would be the preferred approach for triggering a compliance mechanism. This is a preliminary assessment, and we look forward to working with CARB staff and other stakeholders in building longer-term market certainty into the LCFS modifications.

It is critically important for CARB to move quickly and concisely in strengthening the LCFS program. Timely and accurate modelling and scenario development through the CATS model and other analyses is a valuable tool in this regard.

Ethanol has generated the single largest volume of credits in the LCFS program, accounting for roughly four of every 10 credits generated since the program’s inception. But constraining ethanol’s use to 10 percent blends is sacrificing additional carbon reductions possible today. We urge CARB to move quickly to adopt regulations approving E15, which will allow the ethanol industry to help displace more fossil fuel in California and lower carbon emissions now.

An accurate modelling of ethanol’s benefits and an integration of CARB fuels policy to incentivize higher ethanol blends will result in immediate reductions of GHG emissions and criteria pollutants while lowering the cost of compliance to obligated parties and California consumers.

RFA looks forward to working with CARB staff and other stakeholders to strengthen and extend the successful LCFS program.

Sincerely,

Scott Richman
Chief Economist