February 19, 2024

California Air Resources Board
1001 Street
Sacramento, CA, 95814

SUBJECT: Proposed Low Carbon Fuel Standards Regulations and Its Impact on Bank Size and Credit Prices

Dear Respected Members of the California Air Resources Board,

We are writing this letter to share with you some of our concerns regarding the proposed LCFS regulation as it relates to the growing credit bank size, its impact on credit prices, and the ability to reach CARB's emission reduction goals.

First and foremost, we would like to thank the CARB team for putting in the effort to update the LCFS regulations, which are intended to help move the fuel pool mix toward being cleaner and more diversified. We would like to recognize that ensuring the alignment of the proposed regulations with California's goals, as well as having minimal impact on all of California's stakeholders, cannot be easy.

That being said, <u>we strongly feel that the proposed regulation, as it stands, would fall short of achieving CARB's goals in terms of diversifying the fuel pool mix as well as providing support for the LCFS credit prices</u>. In fact, we have run some simulation scenarios using CARB's input file and incorporated the proposed step-down CI values as well as any potential trigger of the Automatic Acceleration Mechanism (AAR). We have also included some plausible scenarios that may alleviate these limitations. Note that we have only focused on the period of 2024 through 2030 as we strongly believe that the market will not price future projections past this time frame.

1- Scenario 1 – Proposed Regulation: 5% CI Step-down in 2025 and AAR in 2028

We believe that CARB underestimated the growth of renewable diesel (RD) and biomethane, which has led to a large credit bank and depressed credit prices. As of Q3 2023, renewable diesel filled almost 60% of the state's liquid diesel pool and generated roughly 50% of all new LCFS credits. In fact, we expect 80% of the diesel complex to be made up of RD by early 2025. This has undermined the LCFS's support for electrification and more scalable low-carbon fuels. The LCFS credit current prices saw high 50's, which did not inspire much in terms of investment. As the bank continues to grow, prices will continue to drop.

While stepping down the CI target by 5% in 2025 should create more demand for LCFS credits, this will not be enough to curb the rapid growth of the LCFS credit bank and its downward pressure on credit prices. We have used CARB's input file, along with the present CARB data (Q3 2023), to model the size of the bank throughout Q4 2030, as shown in Fig. 1. We assumed that the AAR will be triggered in 2027 and the CI target will be updated in 2028. Under this scenario, the credit bank will grow to 91 million credits by Q4 2030. As the bank continues to grow, prices will continue to drop. It is important to note that current RD capacity utilization is in the high 60% and low 70%, and capacity in the pipeline is expected to double; the bottleneck is how quickly paperwork can get signed to have the fuel find its way into California.

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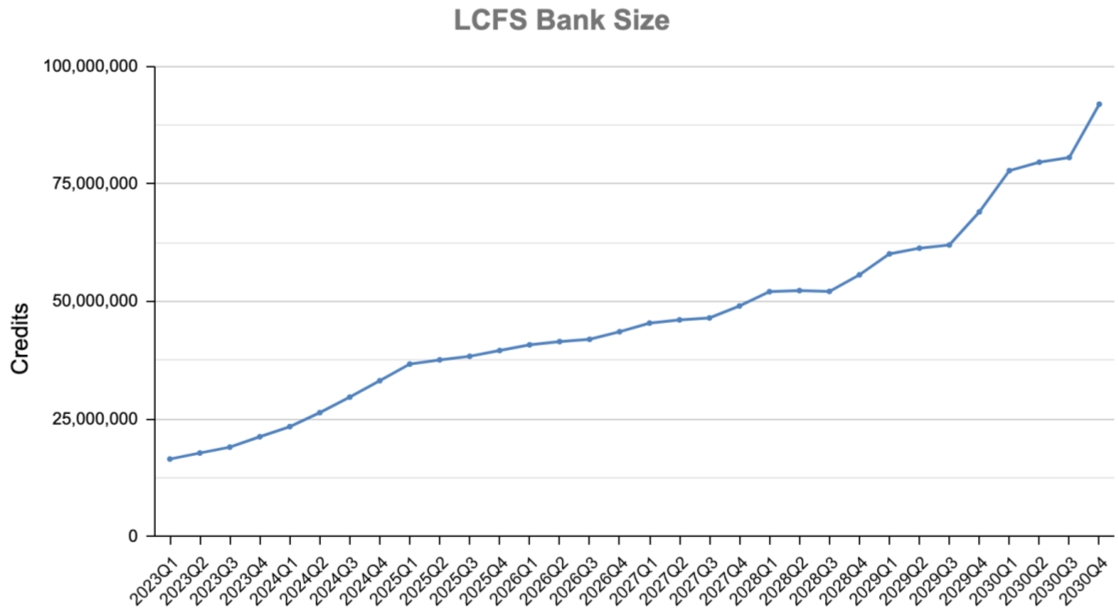

Fig. 1: Projected Bank Size Under Current Proposed Regulations (AAR in 2028)

2- **Scenario 2 – Incoming legislation + Stronger step-down to 21%**

In this scenario, we propose stepping down the CI target to **21% in 2025** while keeping the same rules in the proposed regulation. Under this scenario, the AAR isn't triggered until 2030, and the resulting credit bank will be shown in Fig. 2.

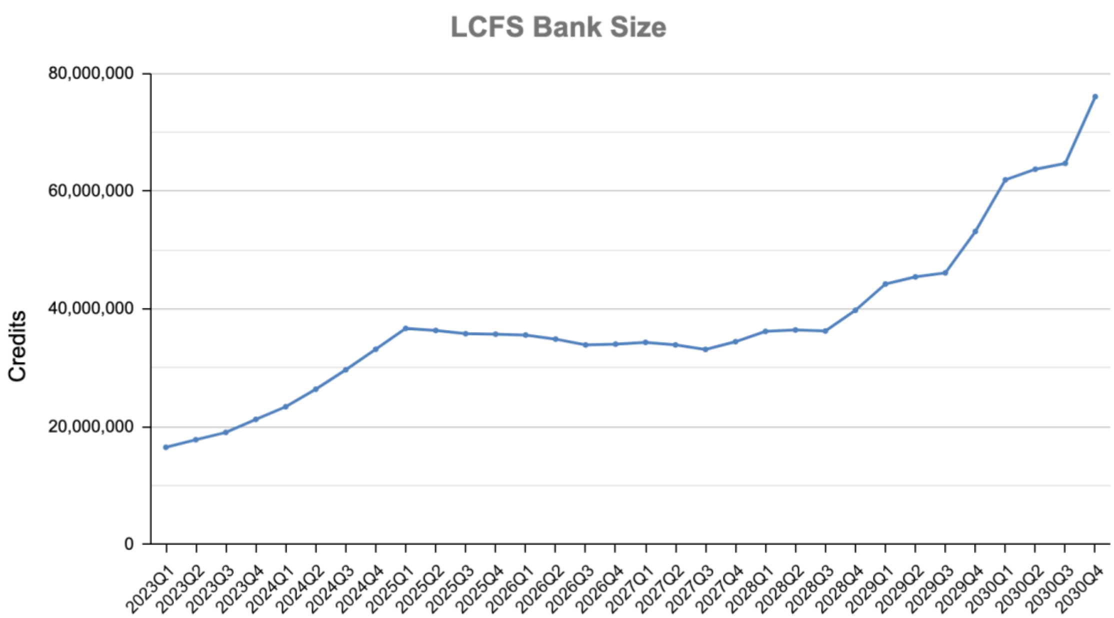

Fig. 2: Stronger step-down in 2025 to 21%

The impact of this would initially be positive between 2025 and 2028 as it would draw down the bank almost immediately. This may send a signal to the market, which can result in supporting LCFS credit prices. This change in CI step-down CI schedule can be easily implemented, allowing CARB to maintain the proposed regulation. CARB can then monitor the bank and assess whether a stronger action would be needed. However, it is important to note that the draw on the bank is relatively weak, so its impact on price levels may not be sufficient. The model predicts that the bank will resume rising in late 2028 and reach almost 77 million by the end of 2030.

3- **Scenario 3 – Incoming legislation + Stronger step-down to 23.5%**

In this scenario, we propose a bigger step down to 23.5% by 2025. This larger step down would quickly draw down the bank and correct prices. While the bank would rise starting in 2029, the size of the bank will be below the projected levels by the end of 2024. In addition, as the number of deficits grows, the bank's acceptable size can also become larger. In addition, the AAR may be triggered in subsequent years (past 2030) to address growing bank size and falling prices.

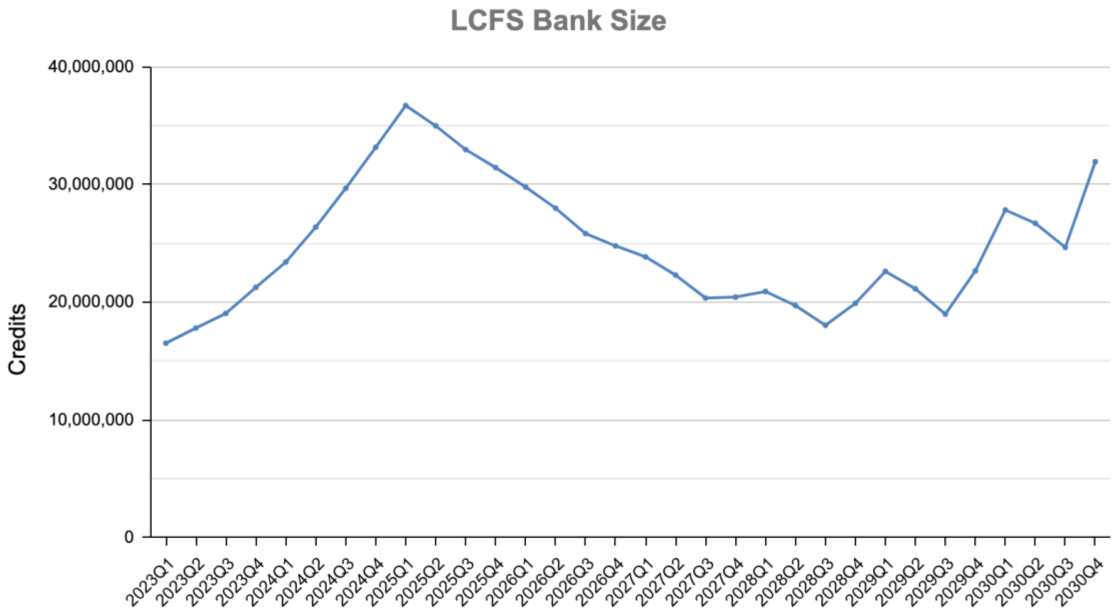

Fig. 3: Stronger step-down in 2025 to 23.5%

In summary, the current proposed regulation, as is, will not result in any measurable impact on the rapid growth trajectory of the credit bank and will almost eliminate any clean fuel technology, other than renewable diesel, from being competitive. We have presented some alternatives that may help stabilize the growth in the credit bank and stabilize LCFS credit prices. CARB can also put caps on RD and other biofuels to help other clean technologies get established and allow investments to flow into them.

We are committed to helping California reach its target CI reduction goals and hope the board will push CARB to address the above concerns to ensure the success of the LCFS program.

Respectfully,
/s/
Nasser Kutkut, PhD
CEO
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