



December 21st, 2022

VIA ELECTRONIC FILING

California Air Resources Board 1001 I Street
Sacramento, CA 95814

RE: California Low Carbon Fuel Standard Nov. 9th, 2022 Public Workshop

Dear Ms. Laskowski and California Air Resources Board's Transportation Fuels Branch Staff,

We are pleased to provide comments on potential changes to California's Low Carbon Fuel Standard ("LCFS") program. We appreciate the opportunity to engage with Air Resources Board ("ARB") staff during this process. These comments build and expand upon comments and analysis that we provided on August 9th in response to CARB's July 7th 2022 Public Workshop (the "July Workshop Comments").

Carbon Intensity Reduction Targets

We agree with ARB's assessment that California's LCFS program has been an important driver of the State's greenhouse gas emissions reductions and has, in fact, outperformed ARB's ambitions. Since the July 7th workshop, the magnitude of the program's outperformance has accelerated: ARB's quarterly data for Q2 2022, released on October 31st, showed a 12.5% CI reduction, equivalent to the current 2024 target!

We therefore also commend ARB's inclusion of a more aggressive 2030 CI reduction target of 35% ("Alternative C") and a 2045 CI reduction target of 90%. Both of these actions align with recommendations we made in our July Workshop Comments – namely that the proposed 25% or 30% linear CI reduction targets were insufficiently ambitious and should be rejected out-of-hand, and that ARB should consider a 2045 CI reduction target of 85%-100%.

We remain concerned, however, that even the more ambitious Alternative C risks the long-term success of the LCFS program for two reasons. First, it doesn't address the imperative need to rapidly rebalance the market to one without excess credits, deficits, or a large credit bank. Second, all three linear CI reduction target schedules – that is, Alternatives A, B and C – produce neither the optimal economic incentives nor the greatest GHG reductions compared to a non-linear CI reduction schedule.

The Path Is As Important As The Destination

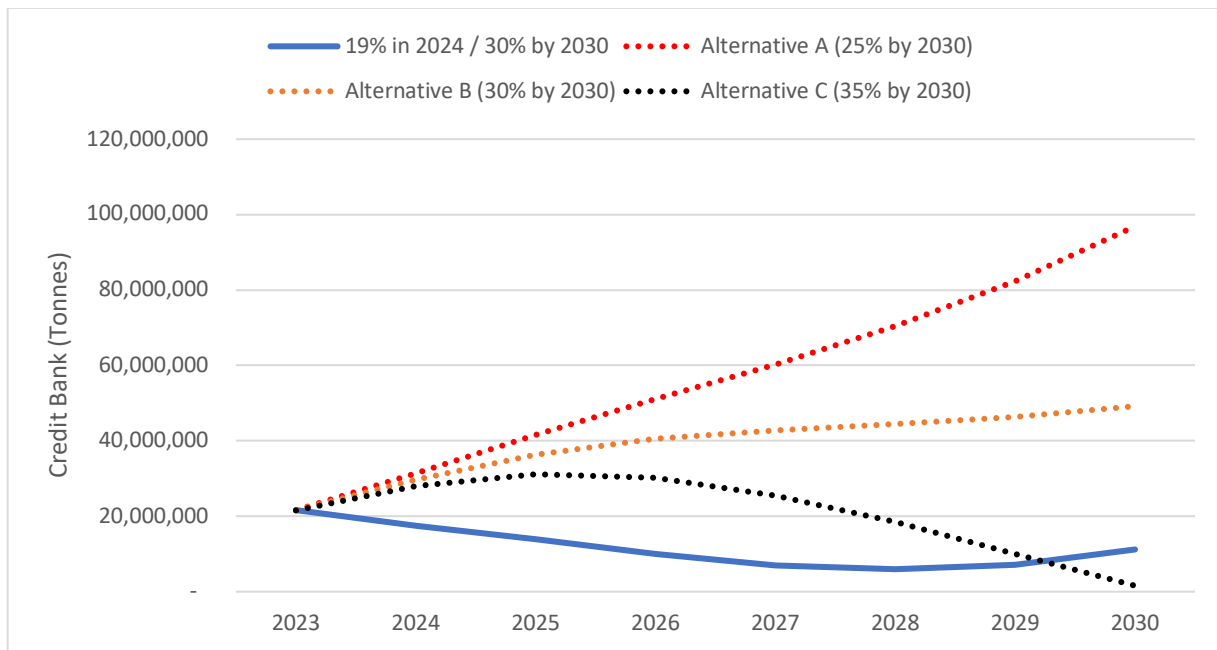
Re-emphasizing our conclusions from our July Workshop Comments, we continue to believe that a properly designed *non-linear* CI schedule will result in trifecta of successes for ARB, specifically:

- Rebalancing the program and allowing its emboldened ambition to swiftly re-take the lead
- Creating a more meaningful near-term economic incentive for decarbonization, including the deployment of electric vehicles
- Achieving a greater reduction in overall GHG emissions by 2030 relative to ARB’s Alternatives A, B and C *and* doing so at a lower cost than Alternative C.

We have modeled four scenarios: ARB’s Alternatives A, B and C and our proposal: **a non-linear CI reduction “step down” to 19% below 2010 levels in 2024 followed by a linear reduction to 30% by 2030.**¹

Figure 1 illustrates how the different CI reduction targets impact the supply and demand fundamentals of the LCFS credit market.

Figure 1: Estimated Credit Bank Trajectory Under Four Alternatives



Our conclusions about Alternatives A, B and C are identical to those in our July Workshop Comments, which included modeling of all three Alternatives. If ARB were to adopt Alternatives A or B, the credit bank would continue to increase through 2030. This would undermine the

¹ In all cases, we assume the credit bank will have grown to approximately 21.6 million MT by the end of 2023. This is roughly 6 million MT more than our assumption in the July Workshop Comments, due to the accelerated outperformance of the program. We have aligned inputs to our model with those from the California Transportation Supply (CATS) model in response to ARB’s November 9, 2022 Public Workshop in which staff provided inputs to their own modeling. We would be happy to provide ARB more details regarding the inputs of our modeling via confidential correspondence.

incentive value of the LCFS, discourage new investments, and jeopardize CI reduction targets in the long-term beyond 2030.

If ARB were to adopt Alternative C, the credit bank would nevertheless still grow through 2025 before depleting by 2030. While this would have an increasingly positive impact on the incentive value of the LCFS in years 2026 and beyond, new investments may be delayed until then. This would result in a program poorly positioned to meet the more ambitious targets post 2030, which would again jeopardize CI reduction targets in the long-term not to mention raising the long-term costs to meet them.

By contrast, a “step-down” in the 2024 CI reduction target to 19% on the way to a 30% by 2030 produces optimal outcomes on three key metrics:

- It results in an immediate inflection in the trajectory of the credit bank, rebalancing the market in response to the encouraging success of the LCFS in earlier years while keeping the bank in positive territory in later years.²
- It results in the most positive impact on the near-term incentive value of the LCFS while producing an average cost between 2024-2030 below Alternative C and similar to the average LCFS credit price between 2018 and 2021.
- It results in the greatest reductions of Greenhouse Gases by front-loading new investments such that, between 2026 and 2030, it achieves reductions higher than Alternatives A, B or C.

In short, adopting our proposed non-linear adjustment in 2024 affords ARB the opportunity to let the ambitions of the LCFS program re-take the lead on multiple fronts and signal ARB’s commitment to its long-term success.

Introduce Programmatic Flexibility

As Figure 1 showed, the front-loaded investment produced by our proposal leads to back-loaded outperformance relative to CI targets. Therefore, in addition to a properly calibrated CI reduction schedule, we also encourage ARB to seriously consider a self-adjusting CI target mechanism. This is alternatively referred to as an “acceleration” or “ratchet” mechanism.

The key benefits of such a mechanism are:

- It serves as a buffer against statutory limits on how quickly regulators are able to adjust the program’s CI targets.
- It limits the downside tail risk for LCFS credit prices which will, in turn, increase investor confidence in supporting new investments.

² We note that while this does not result in annual credits \geq deficits between 2024 and 2028, the more appropriate constraint, which applies in this case, is that credits + the credit bank \geq deficits in any given year.

- It would ensure that outperformance of credit supply is matched by sufficient credit demand.

We are aware of comments that Carbon Acumen ³ has previously submitted with regard to the potential design of such a mechanism, as well as comments submitted by Gladstein, Neadross and Associates (“GNA”) and Net Negative Partners in response to ARB’s Nov. 9th Public Workshop. As a matter of principle, we believe that any “acceleration” or “ratchet” mechanism ARB adopts should incorporate, at a minimum, these four features:

- A trigger based on the volume-weighted average realized CI of the rolling prior 4 quarters.
- A threshold based on an easily observable CI target
- An adjustment of each year’s future CI target by the amount that the trigger exceeds the threshold
- An implementation starting as soon as practicable after the trigger exceeds threshold

We would be happy to provide ARB more details regarding the examples of how we envision such a mechanism would function.

Conclusion

We are encouraged that ARB realizes it must consider a more aggressive 2030 CI reduction target and set a course for a 2045 CI reduction target of 90%. We are also encouraged that ARB is seeking feedback on alternatives that fulfill the purposes of ARB’s modeled scenarios as well as, or better than, those scenarios.

We believe that our proposal - a “step-down” in the 2024 CI reduction target to 19% on the way to a 30% by 2030, along with the incorporation of an acceleration mechanism – does just that, affording ARB the opportunity to let the ambitions of the LCFS program re-take the lead and continue ARB’s record of pursuing aggressive policies that support California’s climate goals.

As the transportation sector is the largest sector contributing to greenhouse gas emissions, reducing those emissions is critical to achieving carbon neutrality. The LCFS has been an important and effective tool, but it will only continue to perform if ARB makes changes like those described above.

We thank you again for the opportunity to provide these comments, and we look forward to continued engagement with ARB staff. If we can provide additional information or further support your efforts, please contact us.

³ [https://www.arb.ca.gov/lispub/comm2/bccomdisp.php?listname=lcfs-wkshp-aug18-
ws&comment_num=56&virt_num=52](https://www.arb.ca.gov/lispub/comm2/bccomdisp.php?listname=lcfs-wkshp-aug18-ws&comment_num=56&virt_num=52)

Sincerely,

Handwritten signature of Ashley P. Beaty in blue ink.

Ashley P. Beaty
Vice President of Policy and Partnerships
Bridge To Renewables, Inc.

Handwritten signature of Russell Dyk in black ink.

Russell Dyk
Head of Environmental Products
Bridge To Renewables, Inc.