Amp Americas

May 10, 2024

Matt Botill
Chief, Industrial Strategies Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814

**RE: AMP AMERICAS COMMENTS ON APRIL 10, 2024 LOW CARBON FUEL STANDARD WORKSHOP**

Dear Mr. Botill:

Thank you for the opportunity to comment on the April 10, 2024, Low Carbon Fuel Standard ("LCFS") Public Workshop. Amp Americas ("Amp") appreciates the California Air Resource Board's ("CARB's") leadership on addressing climate change and the significant success the LCFS program has had in decarbonizing transportation, as described by the benefits and outcomes highlighted in the workshop slides. Amp especially appreciates CARB staff's thorough and ongoing stakeholder engagement throughout the LCFS amendment process.

Amp strongly supports amending the LCFS quickly and in a manner that will ensure its ongoing success as a driver of investment in a broad array of low carbon fuels for California, including dairy methane capture projects. We appreciate your consideration of these comments.

**ABOUT AMP**

Founded in 2011, Amp develops, owns, and operates renewable natural gas ("RNG") facilities that convert dairy waste into carbon-negative renewable energy. Over our history, Amp's projects have prevented nearly 2 million metric tons of carbon equivalent emissions. In 2022 alone, our projects abated approximately 480,000 metric tons of carbon equivalent emissions, and we plan to rapidly expand our impact over the next several years.

As a pioneer in the dairy RNG industry, Amp registered the first 5 dairy RNG-to-CNG pathways in California's LCFS program, and we were the RNG supplier for the first 11 dairy RNG-to-hydrogen pathways. Our experience developing, operating, and reporting on these and other assets gives us a unique perspective on the impact CARB policy has on investment and project development activity related to low carbon fuels. Our projects and resulting methane and carbon dioxide reductions have been made possible by CARB's leadership in decarbonizing transportation, and we encourage CARB to continue to support the policy decisions that have made it so successful.

**A STRONG, TECHNOLOGY NEUTRAL AND PERFORMANCE-BASED LCFS IS CRITICAL TO MEETING CALIFORNIA'S SLCP REDUCTION AND CARBON NEUTRALITY GOALS**

To meet California's Short-Lived Climate Pollutant ("SLCP") reduction and carbon neutrality goals, it is imperative to maintain a robust LCFS that is technology-neutral and performance-based. Investments supported by the LCFS are vital for developing dairy digesters and other projects that mitigate methane emissions. California's strategy of leveraging the LCFS to support methane mitigation projects, including at dairies, has proved tremendously successful, with hundreds of digesters now online and under development throughout the state and nationally.

Accordingly, we re-iterate our earlier comments regarding RNG-based pathways and other technical provisions of the program:[1]

- We urge CARB to follow the deep and sound science and maintain avoided methane crediting for all RNG pathways.
- We support efforts to develop RNG pathways for zero emission vehicle ("ZEV") fuels and stationary sources, and encourage CARB to enable book-and-claim delivery for RNG-to-electricity to further support this transition.
- We support the proposed true-up provisions and recommend CARB allow true-ups during the Temporary CI period for any pathway using a Temporary CI.
- We endorse remote, less intensive verifications for all fuel transactions (not just electricity) to streamline processes and reduce costs.
- We support the proposed Calculation of Deficit Obligation for Verified CI Exceedance concept in Section 95486.1(g), but recommend applying this to the 2024 fuel transaction year, rather than starting in 2025.
- We strongly encourage maintaining the ability to report missing data provisions and force majeure events and associated emissions, especially from biological processes that cannot be easily controlled or mitigated in the event of unexpected outages of other equipment. We encourage keeping Section 95488.8(k) as currently exists in the current regulation.
- We encourage CARB to allow additional carbon capture, removal, utilization and sequestration ("CCRUS") protocols to be utilized as they are developed.

**A NEAR-TERM STEP-DOWN OF GREATER THAN 9% IS NEEDED TO STRENGTHEN THE MARKET AND MAINTAIN THE PROGRAM AS A DRIVER OF INVESTMENT IN CLEAN FUELS PROJECTS**

The ongoing development and operation of low carbon fuel projects, including dairy RNG projects, requires programs like the LCFS to provide and maintain a strong and clear market signal sufficient to attract capital for new projects and to maintain operations at existing RNG facilities. As indicated by the market response following the April 10, 2024 workshop (the price of credits fell from $64.50 on April 9, 2024 to $48.00 on May 8, 2024 according to Argus Air Daily), even the stronger near-term targets presented at the workshop are insufficient to return the market to balance and restore investor confidence.

In our previous comments,[1] we described how the bank of excess credits could reach about 38 million by the end of 2024, almost 6 times quarterly deficit generation. According to our analysis, a step-down to 25% in 2025, coupled with a stronger target of at least 35% in 2030, is necessary to correct for this projected level of surplus credits. Note that this would translate to a ~11% step down in 2025 – greater

[1] "Amp Americas' Comments on Proposed Low Carbon Fuel Standard Amendments," February 20, 2024. https://www.arb.ca.gov/lists/com-attach/7007-lcfs2024-UjNdNlEgUl4CdAFz.pdf

than the scenarios presented at the workshop – and aligns with similar analysis and findings from ICF.[2] **We encourage CARB to continue evaluating appropriate step-downs, including levels greater than 9%,** in order return the market to conditions that will support ongoing investment towards California's climate goals.

As a general rule, we strongly urge CARB to select targets – for 2025, 2030 and other dates through 2045 – that align with the State's Scoping Plan and other climate targets, and avoid relying on the Auto Acceleration Mechanism ("AAM") to "get it right" or correct for overly conservative targets. **We believe a step-down of greater than 9%, specifically 11%, stronger 2030 targets of at least 35% and a more responsive Auto Acceleration Mechanism ("AAM"), as described below, are necessary to fully align the program with the state's climate change goals and return to the LCFS to a position where it is supporting additional low carbon fuels projects and volumes for California.**

**TIME IS OF THE ESSENCE**

We very much appreciate the diligent effort CARB staff, leadership, and the Board are putting into this rule-making process. Over the past 2 years, staff have hosted numerous workshops, heard from myriad stakeholders, and modeled countless scenarios. All this effort is critical to putting forth the best proposal to balance climate and market impact with affordability and other program goals.

At this point, however, we strongly urge CARB staff to put forth its best proposal and for the Board to vote on it as soon as possible. The longer this rulemaking delays, the more the program and low carbon fuels market suffers. A prompt vote on the LCFS rulemaking is critical to reinvigorating the market and maintaining California's climate policy leadership.

**RESPONSE TO QUESTIONS POSED AT THE WORKSHOP**

We appreciate the thoughtful presentation at the workshop, and the specific questions posed. We offer the following responses to the questions on target setting.

- **Short-term vs long-term market conditions – how should staff approach the increased stringency need? Is it a onetime near-term need or do stakeholders anticipate rapid and sustained decarbonization progress through the next 10+ years?**

  CARB certainly needs to prioritize strengthening the market in the near-term to remove the glut of excess credits. Until the massive credit bank is significantly reduced, it will prevent LCFS prices from recovering and will continue to send a signal not to invest in low carbon fuels for the California market. Setting targets that cause the bank to reduce will support immediate investment in additional low carbon fuels projects that are needed now to achieve the state's near-, mid-, and long-term climate change goals.

[2] Based on its analysis, "ICF recommends a step down of 10.5% to 11.5% in 2025 to achieve a target credit bank equivalent of 2-3 quarters worth of deficits." See pg. 1 of ICF comments at: https://www.arb.ca.gov/lists/com-attach/7078-lcfs2024-VDVcNFIyVGsLdFQu.pdf

It will be important to provide clear, on-going guidance to the market, as well, to support continued, ongoing investment in low carbon fuels – including low-carbon ZEV fuels – at the end of this decade and into the 2030s. At the moment, providing near- and mid-term certainty is far more important to guide the market through the next 5 years.

We think CARB has proposed an appropriate conceptual approach to support short-term and long-term market conditions through a near-term step down, strengthened 2030 targets, 2045 guidepost targets, and the addition of the AAM to account for uncertain market conditions. However, we urge strengthening the step-down to 11% and the 2030 target to at least 35%, while adjusting the AAM to make it more responsive to market conditions and align it with other commodity market practices.

- **Which approach can provide a smooth/sustained market signal to support deeper decarbonization in the 2030s?**

  We believe a stronger 2030 target is critical to supporting near-term and ongoing investment in deeper decarbonization in the 2030s. Coupled with the AAM, we hope this structure provides a framework for maintaining conditions supportive of investment in deeper decarbonization on an ongoing basis. We also urge CARB to maintain and add elements that will support continued innovation and development of additional low carbon fuels, even as the state's vehicle fleet evolves. Among other items, these include:

  - Maintaining avoided methane crediting and book-and-claim accounting for biogas-based pathways,
  - Enabling additional fuel pathways, such as biogas-to-electricity and process energy for any fuel pathway,
  - Supporting the widest array of CCRUS protocols possible, to support continued innovation and decarbonization of existing or new fuel pathways, and
  - Allowing for on-farm innovations and other strategies to continually reduce the carbon intensity of new or existing pathways.

  Finally, while we appreciate this may be beyond the scope of this rulemaking, we encourage CARB to consider expanding the LCFS to other transportation end uses and sectors. For biogas, in particular, expanding the LCFS to cover all gas end uses (e.g., industry, buildings, power, etc..) would provide the most equitable program and market signal to transition biogas from the transportation sector to stationary sources.

- **Should staff consider any changes to the trigger conditions for the AAM?**

  Yes. As described in our previous letter,[1] we strongly support the addition of an AAM to the program, and encourage the following adjustments that would allow it to be more responsive to market conditions, without creating significant risks for the program:

  - The **AAM should take effect as soon as the regulation does**, with the first test occurring in 2026 to evaluate 2025 performance.

- We strongly believe the **AAM trigger should be 1x quarterly deficits**, rather than 3x, in recognition that 1) the LCFS is now a liquid and mature market, and 2) that liquid and mature markets are in surplus conditions when inventory is greater than 0.6x quarterly demand. However, with the other changes mentioned here, we believe a 3x trigger is workable.
- There should be **no limit to applying the AAM in consecutive years**. The market can absorb this dynamic, and we see no reason to artificially limit the functioning of this important mechanism.

The AAM will help to strengthen the program and potentially help to avoid future market weakness driven by as-yet unforeseen trends in low carbon fuels supplies. These trends could include accelerated transportation electrification, widespread use of E15 or deployment of CCRUS, or any number of other factors. While the market is currently overachieving its targets, ironically, overachieving targets in the near term may lead to sustained price weakness, which would inevitably lead subsequently to low levels of investment and sustained periods of underachievement and high prices. If the market swings from undersupply to oversupply, prices will be volatile, undermining public confidence in the program and jeopardizing long term goals. An AAM can help provide a clear, ongoing signal that there will be a market for low carbon fuels, providing greater certainty to investors and incentivizing continuous investments in clean fuels and ongoing greater emissions reductions, provided that it is designed appropriately. It is important to get its design right and ensure it is sufficiently responsive to market conditions, in order to allow it to fulfill this crucial role.

Thank you again for the opportunity to comment on the April 10, 2024 workshop, and your ongoing collaboration with stakeholders through this public process. We appreciate your consideration of these comments and your work to amend and strengthen this critical program.

Sincerely,

Cassandra Farrant

Cassandra Farrant
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Amp Americas