June 6, 2023

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

RE: AMP AMERICAS COMMENTS ON MAY 23, 2023 LOW CARBON FUEL STANDARD WORKSHOP

Dear Dr. Laskowski:

Thank you for the opportunity to comment on the May 23, 2023 Low Carbon Fuel Standard ("LCFS") Public Workshop: Auto-Acceleration Mechanism for the Low Carbon Fuel Standard. Amp Americas ("Amp") appreciates the California Air Resource Board's ("CARB") leadership on addressing climate change and the significant success the LCFS program has had on decarbonizing transportation. Amp also appreciates the thorough and ongoing stakeholder engagement CARB is creating through the LCFS amendment process, including on issues related to renewable natural gas ("RNG").

In response to the workshop, Amp strongly supports a step down to a 19% carbon intensity ("CI") reduction in 2024, per BTR's presentation. Amp urges CARB to avoid delay and implement the step down beginning January 1, 2024 even if this requires separating the process for setting CI targets from other program changes. Amp also strongly supports an auto-acceleration mechanism with a continuous increase that would pull forward all CI targets by one year, in the event of triggering market conditions, as well as clearly defined timelines and processes that avoid the need for Executive Officer discretion or Board review, which would introduce uncertainties that would limit the effectiveness of the mechanism. Together, a 19% step down in 2024 and and auto-acceleration mechanism will strengthen the LCFS and advance CARB's goals related to the program and climate change. Additional details and recommendations are discussed below.

ABOUT AMP

Founded in 2011, Amp develops and operates RNG facilities that convert dairy waste into carbon-negative renewable energy. Over our history, Amp's projects have prevented over 1.5 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 was 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 development activity. 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.

STEP DOWN AND AUTO-ACCELERATION MECHANISM CRITICAL ELEMENTS OF SUCCESSFUL PROGRAM

Amp supports California's climate change goals, including a future transition of RNG into other hard-to-electrify sectors, in-line with the Final 2022 Scoping Plan. We note, however, that successful development of additional RNG projects – which is critical to reducing methane and short-lived climate pollutant emissions from the agriculture and waste sectors, as well as providing renewable energy to meet California's climate goals in sectors that can't be easily electrified – requires programs, like the LCFS to provide a strong and clear market signal sufficient to attract capital for new projects and to maintain operations of RNG facilities. Amp has consistently advocated for maintaining conditions under the LCFS – such as avoided methane crediting and book-and-claim accounting for biogas pathways, including biogas-to-hydrogen and biogas-to-electricity – until other mechanisms, such as federal regulations, are in place to ensure ongoing and additional methane reductions occur.

In order to continue to see RNG projects developed, the market signal provided by the LCFS needs to be strengthened – both in the near-term, and on an ongoing basis. Accordingly, Amp supports strong targets, in-line with California's climate goals and the 2022 Scoping Plan, and sufficient to maintain the LCFS's historically strong market signal for low carbon fuels projects. In particular, Amp supports:

- A step down in CI in 2024 to at least 19%, as identified in BTR's presentation, to rapidly correct the market,
- CI reduction targets of no less than 35% in 2030 (although we encourage CARB to consider targets more in-line with California's climate goals of a 40-48% reduction by 2030), and
- An auto-acceleration mechanism to accelerate investment and greenhouse gas reductions if the program is overperforming.

The market for low carbon fuels has demonstrated strong appetite for investment in a wide array of low carbon fuels, and electric car sales are vastly outpacing CARB regulatory requirements and initial market expectations. Forthcoming regulatory requirements such as the Advanced Clean Fleets program, and significant federal and state incentives that will support a wide array of additional clean fuels pathways and CI reducing activites are coming online to further support investment in low carbon transportation. Significant incentives, including those related to renewable hydrogen production, carbon capture and sequestration ("CCS"), and other activities, rightly create economic incentives inline with the urgency of addressing climate change. Amp strongly urges CARB to take advantage of the constructive landscape and accelerate its commitment to reducing greenhouse gas emissions in transportation by applying the step down in 2024, rather than waiting until 2025. As BTR noted in its presentation (slide 2), "the path is as important as the destination." In fact, the path is *the most important* design aspect of the regulation, since cumulative emissions define climate impacts. Each of the three items identified above is therefore critical to charting a successful path for the LCFS that matches California's climate ambitions and leadership.

RECOMMENDATIONS FOR DESIGN OF AN AUTO-ACCELERATION MECHANISM

Amp appreciates CARB hosting the workshop on an auto-acceleration mechanism, which will help to strengthen the program and avoid cyclical "boom-bust" investment cycles common to commodity markets. An auto-acceleration mechanism provides 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. Regarding questions and design issues raised at the workshop, Amp offers the following comments:

- **Design Principles:** Amp supports the design goals described on slide 33 of CARB's presentation, and specifically encourages CARB to design a ratchet mechanism that provides:
  - Administrative simplicity,
  - Timely response to market dynamics,
  - Transparency to market participants, and
  - Advancement of CARB's goals, including achieving carbon neutrality as soon as possible and achieving and maintaining net negative emissions thereafter.
- **Trigger:** Amp supports a trigger based on credit-to-deficit and/or bank-to-deficit ratios. Either ratio would provide a simple and transparent mechanism that avoids explicitly imposing a trigger price. However, Amp believes that a bank-to-deficit ratio of 0.7 is likely much higher than necessary. The bank-to-deficit ratio is a common and fundamental metric that drives all storable commodities analysis. Markets such as grains, energy, and RINs all function well while maintaining similar ratios at much lower levels.
- **Measurement period for trigger:** Amp supports using the calendar year as a measurement period for the trigger. It is simple and catches seasonality, while offering a long enough period to eliminate noise.
- **Magnitude of increase if trigger occurs:** Should a trigger event occur, Amp supports pulling forward the standard by a year and providing a continuous increase so that the standard is advanced for all years. Credit generating assets are long-lived facilities, or in the case of growing zero emission vehicle sales, indicate an expectation of even more credits to come and that the market for low carbon fuels is ahead of schedule. It makes sense, therefore, should a triggering event occur, to simply advance the regulation in its entirety by a year. This maintains simplicity, transparency, and a strong market signal. It would reflect targets that the market is already planning for and ready to achieve, should a triggering event occur.

  Amp opposes requiring Board approval for multiple triggering events. As outlined in CARB's presentation, a ratchet would not occur in consecutive years due to a lag before market data are released (slide 34). If this were an element of the auto-acceleration mechanism, there would be absolutely no need for Board approval or different treatment for consecutive triggers. However, Amp questions the need to automatically delay a year in between triggering events. In the illustrative case on slides 34-35, for example, data for 2025 could simply be compared to an accelerated target (i.e., originally scheduled deficit requirements for 2026) and another auto-acceleration event could occur if the trigger repeats.

  Amp notes there remains some uncertainty about what targets would be set beyond levels originally set for 2045 (for example, 90% CI reduction in scenarios CARB has previously presented). This is something that can be addressed in a future rulemaking.
- **Lead time:** Amp supports the CARB staff concept that would have an acceleration mechanism announced by May 15 of a year following a calendar year's worth of data and the accelerated

standard taking effect in January 1 of the following year. The long lead time between the operative test period and implementation of the auto-adjustment of CI targets requires transparency on triggering data and a clear, well-establised and deterministic relationship between the trigger and the auto-adjustment. CARB should not provide discretion to set individual or repeated triggers to the Executive Officer or require Board review. Such discretion would add uncertainty that would prevent the market from pricing in the auto-adjustments.

Thank you again for the opportunity to comment on the May 23, 2023 workshop, and your ongoing engagement with stakeholders. Amp supports CARB's ongoing evaluation of appropriate programmatic changes to strengthen the LCFS and align it with State goals, and we look forward to continuing to work with CARB and stakeholders throughout the rulemaking process.

Sincerely,

Cassandra Farrant

Cassandra Farrant
Head of Environmental Credit Compliance
Amp Americas