

February 20, 2024

VIA ELECTRONIC FILING

Matthew Botill
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: Anew Climate Comments Regarding the Proposed Amendments to the Low Carbon Fuel Standard as outlined in the Staff Report: Initial Statement of Reasons, published on January 5, 2024

Dear Mr. Botill:

Anew Climate, LLC (“Anew”) is one of the largest climate solutions providers in North America and has an established track record of participating in California’s various sustainability programs, including the Low Carbon Fuel Standard (“LCFS”). We commend the California Air Resources Board (“CARB”) and its staff for its successful implementation of the LCFS, driving the decarbonization of California’s transportation sector, and proposing amendments to the LCFS in response to the 2022 Scoping Plan Update. The LCFS has a significant role in helping California achieve its ambitious climate goals and we appreciate the opportunity to provide comments on the proposed amendments as outlined in the Initial Statement of Reasons (“ISOR”).

Increased Program Ambition and Timely Implementation of a Step-Down in CI Targets Are Critical to the Success of the LCFS

Given the LCFS credit surpluses generated over the last two years, a significant and near-term step-down in the Annual Carbon Intensity (CI) Benchmarks is critical. Based on available market information to date, the LCFS credit bank will continue to grow in 2024 as more credits are being generated than are needed to meet the current CI benchmarks. This will cause the market to stall or even fall further, undermining a key goal of the program - to incentivize investment in low-carbon fuels and fuel technologies.

A significant step-down in CI benchmarks as soon as possible is the only feasible way in the near term to prevent continued building of the credit bank. In addition, we recommend a step-down of at least 7% to a level of at least 20.75% below the 2010 baseline.

In response to the recent over-performance in the LCFS market, staff proposed a one-time step-down in the form of a 5% reduction in carbon intensity beginning in 2025. In the ISOR, CARB noted accurately that “[a] step-down in stringency was strongly supported by feedback provided by stakeholders, particularly in response to February and May 2023 technical workshops. The step-

Houston Office

3200 Southwest Freeway
Suite 1310
Houston, TX 77027

Salt Lake City Office

2825 E. Cottonwood Parkway
Suite 400
Cottonwood Heights, UT 84121

Additional Offices

Carlsbad, CA
San Francisco, CA
Los Angeles, CA

Calgary, AB
Budapest, Hungary

down reflects the current effectiveness of the program, which suggests that the pace of CI reductions can be increased through the benchmarks.”¹

Given the ongoing overcompliance and related realities in the market, many groups initially urged CARB to target an implementation date of no later than January 2024. CARB subsequently invited comment on a potential mid-year 2024 implementation date, which we supported in our previous comments and still support today to the extent feasible. We understand the complexities involved with modeling revisions to the LCFS program and developing proposed amendments and appreciate CARB’s continued efforts to conclude this process in the near future. Given the dramatic oversupply in the market, implementation of a step-down as soon as possible is critical to the integrity of the market going forward. Near-term action by CARB would send a strong signal that California remains committed to rapid decarbonization of its transportation sector and that investments in low-carbon fuels continue to be adequately rewarded and incentivized in California.

We agree with other stakeholders that a **step-down of at least 7% to a CI reduction level of at least -20.75% in 2025 over the 2010 baseline** is appropriate and necessary to create the desired market response for market impact. We believe this is one of the most consequential and important steps CARB could take in this rulemaking process and it is vital to the future of the LCFS program.

We Support a 30% or Greater Reduction in Carbon Intensity by 2030

While we would also support a higher CI reduction target, we recognize that a reduction scenario of at least 30% would help set California on a path to meet its ambitious target of at least a 40% reduction in economy-wide GHGs by 2030 and carbon neutrality by 2045. Strong CI reduction goals will continue to accelerate carbon reductions in the transportation sector while establishing clear market signals that will drive innovation and investments.

We Support Tightening the Automatic Acceleration Mechanism

We have consistently supported the concept of creating an automatic adjustment mechanism (“AAM”) as a tool within the LCFS and appreciate the inclusion of the AAM in CARB’s proposal. We urge CARB to design the details of the mechanism to ensure that the AAM is triggered when the market truly needs it.

The AAM should be amended such that it could be triggered as soon as 2026 if the applicable trigger conditions are met. Additionally, the AAM should be triggered when both the “Credit Bank to Average Quarterly Deficit Ratio” exceeds 2.5 and the annual credit generation exceeds the annual deficit generation for the compliance year preceding the year of the May 15 announcement.

Additional RNG-Related Comments

Anew appreciates the many occasions on which CARB staff has explicitly reiterated the Board’s support for RNG throughout the informal workshop process and in the ISOR. If CARB truly wants methane abatement from sources such as agricultural wastes to continue, this rulemaking must

¹ California Air Resources Board, Initial Statement of Reasons (“ISOR”), January 5, 2024, p. 25

convince the clean fuel investment community that RNG will remain a viable and important contributor to the LCFS framework.

Despite assertions to the contrary, there is no credible evidence that decarbonization programs like the LCFS incentivize the growth or consolidation of large dairies or other concentrated animal feeding operations (“CAFOs”). Even skeptical academic experts studying this issue have found no empirical evidence to support the “perverse incentive” claims made by some opponents of avoided methane crediting.² Anew is partnered with swine and dairy farmers who are committed to reducing emissions from their waste products. Our direct experience aligns fully with what the data indicates: decisions around development and operations in the dairy and swine livestock sectors are firmly driven by strategic intent to maximize current and future value in the meat and milk markets, while maintaining strong environmental stewardship – not by increasing RNG value or an intent to incur additional waste production.

As Americans consume meat and dairy products, the companies developing RNG projects are investing at-risk capital to abate emissions from the waste products of an essential industry. The capture and conversion of methane creates undeniable and immediate climate benefits. The LCFS today correctly recognizes RNG from agricultural digesters as an impactful methane abatement opportunity for lowering GHG emissions of livestock operations – we urge CARB to stay the course towards realizing the full climate benefit of the substantial investments made to date and providing investors with the clarity and confidence necessary for continued development.

Avoided Methane Crediting Phase-Out

Methane is the second-largest contributor to global warming after carbon dioxide due to its alarmingly high concentration in the atmosphere and the fact that it is a potent greenhouse gas (GHG) with impact over 80 times greater than carbon dioxide over a 20-year period. The critical need to address methane as a potent short lived climate pollutant was well stated in CARB's 2017 Short Lived Climate Pollutant (SLCP) Reduction Strategy and echoed by other leading authorities. There is no more effective or immediate step that can be taken to address climate change than aggressively and rapidly reversing emissions of fugitive methane from all sectors, including society's organic waste streams.

We therefore strongly urge CARB to refrain from imposing an arbitrary end-date for avoided methane crediting. Any such measure would not only hinder continued investment into methane abatement at farms that LCFS has been instrumental in catalyzing, but also jeopardize existing RNG production assets, which are subject to significant operational expense.

Mandatory methane abatement from farming operations is not currently on the horizon either at the state level in California or at the federal level. If mandatory abatement is implemented, the current LCFS regulation already contemplates in Section 95488.9(f)(3)(B) the phase-out of avoided methane crediting for projects subject to mandatory abatement. Given the absence of mandatory methane abatement and the continued methane emissions from farming operations that

² Smith, Aaron, “Are Manure Subsidies Causing Farmers to Milk More Cows?” April 8, 2023. Available at https://agdatanews.substack.com/p/are-manure-subsidies-causing-farmers?r=i2qe&utm_campaign=post&utm_medium=web

are meeting America’s meat and dairy demands, imposing a specific date for phasing out avoided methane crediting does not make sense for the climate. Capturing methane from California’s methane sources (e.g., landfills, dairies, and wastewater) is critical for achieving California’s climate targets. As staff noted in the ISOR, “[...] capturing methane from dairies is one of the primary measures for achieving the state’s 2045 greenhouse gas reduction targets and SB 1383 methane reduction target.”³ Without anaerobic digesters, California would not be able to meet its SB 1383 methane reduction goals. Eliminating biomethane pathways used to produce hydrogen may also unduly restrict the development of low-CI hydrogen supply that California needs in order to displace fossil fuels. Increasing the supply of low-CI renewable hydrogen is a key strategy identified in the 2022 Scoping Plan Update and supports MDV and HDV ZEVs.⁴

While we oppose putting any end-date on avoided methane crediting, we recognize that CARB has faced unsubstantiated criticism and repeated calls for an immediate or near-term phase-out. We commend CARB for taking a measured position in support of avoided methane crediting generally and opposing any near-term phase out. We strongly urge CARB to continue following climate science on a technology-neutral basis and to maintain the framework that has catalyzed unparalleled investment into methane abatement at swine and dairy operations.

CARB Should Maintain Eligibility for Delivery of Biomethane from All Sources

Currently, the LCFS regulation allows for indirect accounting of biomethane when injected into the North American natural gas pipeline system. In the ISOR, staff proposed that biomethane projects that break ground after December 31, 2029 in which biomethane is injected into a common carrier pipeline or claimed indirectly under the LCFS program for use as a transportation fuel or input to hydrogen production must meet new deliverability requirements. Starting January 1, 2041 for bio-CNG, bio-LNG and bio-LCNG pathways and January 1, 2046 for biomethane used as an input to hydrogen production, the entity reporting biomethane must demonstrate that the pipeline or pipelines along the delivery path physically flow from the initial injection point toward the fuel dispensing facility at least 50 percent of the time on an annual basis. The stated reason for these new deliverability requirements is that these requirements would “help ensure that California is making progress on the state’s methane reduction targets.”⁵

We appreciate that CARB has resisted pressure to include immediate new directional flow requirements for biomethane pathways, and that the proposal would not impact any biomethane fuel pathways for projects that break ground before January 1, 2030. However, we do not agree with CARB’s decision to impose directional flow requirements on deliveries from biomethane projects that break ground in 2030 or later. Given the realities of the interconnected U.S. gas market, the 50% directional flow requirement is arbitrary and provides preferential treatment to fossil gas imported to California relative to imported RNG.

³ ISOR, p. 124

⁴ Id.

⁵ ISOR, p. 31.

A Full Credit True Up Would Reflect the True Environmental Performance of RNG Pathways

We support the proposed inclusion of a “Credit True Up” after Annual Verification. When implemented properly, such a concept can ensure that the LCFS program correctly accounts for the full GHG benefits all fuel pathways produce. Such a true up should apply both in the case of temporary pathways, as originally proposed by CARB during previous workshops, as well as for provisional and fully certified pathways.

Biological systems such as anaerobic digesters experience substantial increases and decreases in gas production due to weather, livestock herd changes, and other factors that are not present in other fuel pathways. Because the carbon intensity of the gas from these systems is calculated against a quantity of avoided methane emissions, these variations in biogas production operating conditions result in outsized changes in the digesters’ carbon intensity (CI) scores every year. Pathways should be allowed to fully “true up” LCFS credit generation to their actual CI score once that score is determinable based on actual greenhouse gas performance data.

We support the provisions in the proposed rule that provide for generation of additional credits if the verified CI is lower than the certified pathway CI based on the incrementally lower verified score using backward-looking actual performance. This true up process should be automated by CARB in the LRT-CBTS system for all fuels. However, we do not support the Proposed Rule’s approach requiring a 4x “pay back” in cases where a verified CI exceeds the certified CI. This is overly punitive and not symmetrical. Instead, we recommend that if the verified CI is higher than the certified CI, the project should simply repay CARB for any excess credits claimed, and not be subject to any further enforcement liability unless there is malfeasance or other conduct contrary to the objectives of the program.

Anew is proactively developing an updated CI management approach to ensure we continue to provide maximum value recognition potential to our partners coupled with compliance risk mitigation.

Tier 1 Calculator Improvements

Anew supports allowing fuel pathway applicants to submit site specific inputs to demonstrate fugitive emissions on the ‘Biogas-to-RNG’ tab as outlined in comments submitted by the Coalition for Renewable Natural Gas in response to the draft Tier 1 Calculator. In addition, Anew requests that CARB allow fuel pathway applicants to submit site specific inputs to demonstrate digester leakage emissions on the ‘Avoided Emissions’ tab. This would allow projects to provide actual operating values that may differ from the default values of 2% for enclosed vessels and 5% for covered lagoons.

Regarding GREET inputs for L1. (1-6).14 Retention Time and Drainage, it is Anew’s understanding that in the proposed GREET calculator for each September, “System Emptied in This Month” must be selected by the fuel pathway applicant. This assumption requires that all projects model their operations to include a complete annual cleanout of volatile solids. A complete

annual cleanout is currently only required as a baseline assumption for greenfield projects in Table A.10 of the Compliance Offset Protocol for Livestock Projects.

The implementation of this proposed default assumption could result in non-greenfield projects being certified with a carbon intensity that is not representative of normal operating conditions. It could also result in a project's baseline methane emission levels being set below what would have otherwise been emitted to the atmosphere. This proposed default assumption may be more applicable to the average dairy operation, but the same conclusion is not as appropriate for the average swine operation. Swine industry leaders and project operators have expressed that lagoons are cleaned out far less frequently than annually over a 10 to 15-year time frame. Therefore, on the 'Manure-to-Biogas (LOP Inputs)' tab, applicants should be able to enter the project-specific lagoon cleanout frequency for swine livestock populations in the Tier 1 Calculator. Applicants should be able to select from lagoon cleanout frequencies that are less frequent than annual and have default inputs "amortized" according to CARB's current guidance document.

As an alternative, Anew encourages CARB to consider allowing swine projects to submit their site-specific lagoon clean out frequencies as part of a Tier 2 fuel pathway registration. The annual loss in volatile solids results in a significant detrimental impact to the baseline methane emissions of swine projects and unfairly penalizes the project's CI score. Anew appreciates CARB's intention to simplify and streamline the project registration process, however, this should not be done at the expense of swine projects. To accurately reflect actual operating conditions of swine manure projects and minimize pathway registration processing time, we urge CARB to consider allowing applicants to enter actual cleanout frequencies by project in the Tier 1 Calculator.

EV Considerations

Anew is supportive of the addition of medium and heavy duty ("MHDV") Fast Charging Infrastructure ("FCI") credits. The adoption of MHDV vehicles into private fleets remains an economic challenge that LCFS crediting could help address. Given the difficulties with adoption, we believe the 50% reduction for private fleets should be eliminated. Additionally, requiring proximity to a Federal Highway Administration Alternative Fuel Corridor unnecessarily restricts private operations and should be applicable only to public infrastructure projects. The minimum power requirement of 250kW also unduly restricts private operations. Operating multiple lower power chargers overnight provides many operations with the opportunity to charge in a manner more suited to extended battery life, incur less operational costs associated with moving vehicles in and out of chargers, especially in off hours, and lower utility impact and investment requirements by spreading a lower power load over a longer period of time. CARB already envisions overnight charging based on the exception to the requirement of being within 1 mile of an AFC.

We support continuing the Light Duty Vehicle ("LDV") FCI. However, in our view, the geographic restrictions, particularly the 10-mile requirement from any fast charging station, will effectively eliminate too many of the major routes in the states and cities/towns that have a minimal amount of charging but much less than is required based on EV adoption. Geographic limitations

of this nature would encourage a disproportionate amount of infrastructure in locations that have inherently low utilization and would not further the objective of increased EV adoption. As an alternative, we ask CARB to consider FCI approvals to maintain a balance between the number of publicly available fast chargers and the number of EVs registered in a given area. If CARB is looking to reduce the number of overall LCFS credits from LDVs while encouraging continued adoption, it would be more effective to remove base credits from LDVs available to the utilities and allocate them to FCI credits. This approach would directly address one of the largest barriers to continued growth of EV adoption.

We thank CARB for its important work in implementing the LCFS program. Should you have any questions about anything we have stated here or seek further clarification, please contact [Randy Lack](mailto:rlack@anewclimate.com) at rlack@anewclimate.com

Sincerely,

Anew Climate, LLC