### SEVANA 🍪 BIOENERGY

March 15, 2023

Dr. Cheryl Laskowski Chair California Air Resources Board 1001 I Street Sacramento, CA 95814

#### **RE:** Sevana Bioenergy Comments Regarding Potential Changes to the Low Carbon Fuel Standard

Dear Dr. Laskowski,

Thank you for the opportunity to submit comments in response to the February 22, 2023 Public Workshop regarding potential changes to the Low Carbon Fuel Standard (LCFS). By way of background, Sevana Bioenergy develops RNG projects throughout the United States. We actively manage our projects from feedstock negotiation, permitting, contracting, design, construction and operations, providing long term value to our partners and the local communities we serve. Our mission is to accelerate the production of RNG from anaerobic digestion facilities and contribute significantly to worldwide greenhouse gas reduction through net carbon-negative projects.

As you consider comments on this round of rulemaking, Sevana Bioenergy would like to offer feedback for your consideration.

#### Carbon Intensity - 35% reduction, with excess bank draw down ratchet

Sevana Bioenergy applauds CARB's commitment to reducing carbon and is pleased to see a proposed reduction target of 30% minimum, and recommend CARB implement a 35% carbon reduction target for 2030 given the overhang in excess banked credits, the cumulative and irreversible impact of delayed vs earlier GHG reductions, and the demonstrated ability of the LCFS thus far, when implemented as a science-based, technology and geographically neutral lifecycle GHG fuels standard, to deliver actual carbon reductions far in excess of CARB and industry's expectations.

We believe that this move will continue to support CARB's long-term goal of attaining and maintaining healthy air quality, not only for California residents but for the entire country. However, in the near-term, we believe that in order to support project developers working diligently to help CARB meet their goals and deploy necessary private capital, the CI reduction target should be accelerated to accommodate the current market conditions with respect to the large bank of LCFS credits that have already been generated.

After reviewing the CATS model, which appears could have overly high cost and limited availability assumptions that will be mitigated by learning curves commonly implemented in models of this kind and demonstrated by actual prices and supplies, we ran numerous scenarios, analysed the effect on projected total credit price per ton. We respectfully propose the following revisions in annual reduction percent of the gasoline benchmark, with a ratchet mechanism to move forward carbon intensity reductions from outer years of the curve to any year in which the bank grows in the previous year or builds to more than 20% of annual deficits.

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		Baseline			Recommended Revisions			Minimum Proposed Revisions		
Year	Benchmark	Standard	Reduction %	Delta	Standard	Reduction %	Delta	Standard	Reduction %	Delta
2020	GasolineBenchmark	91.98	7.5%		91.98	7.5%		91.98	7.5%	
2021	GasolineBenchmark	90.74	8.7%	1.25%	90.74	8.7%	1.25%	90.74	8.7%	1.25%
2022	GasolineBenchmark	89.50	10.0%	1.25%	89.50	10.0%	1.25%	89.50	10.0%	1.25%
2023	GasolineBenchmark	88.25	11.3%	1.26%	88.25	11.3%	1.26%	88.25	11.3%	1.26%
2024	GasolineBenchmark	87.01	12.5%	1.25%	83.03	16.5%	5.25%	83.03	16.5%	5.25%
2025	GasolineBenchmark	84.11	15.4%	2.92%	79.97	19.6%	3.08%	81.04	18.5%	2.00%
2026	GasolineBenchmark	81.21	18.3%	2.92%	76.90	22.7%	3.08%	79.05	20.5%	2.00%
2027	GasolineBenchmark	78.31	21.3%	2.92%	73.83	25.8%	3.08%	77.07	22.5%	2.00%
2028	GasolineBenchmark	75.41	24.2%	2.92%	70.77	28.8%	3.08%	75.08	24.5%	2.00%
2029	GasolineBenchmark	72.51	27.1%	2.92%	67.70	31.9%	3.08%	72.59	27.0%	2.50%
2030	GasolineBenchmark	69.61	30.0%	2.92%	64.64	35.0%	3.08%	69.61	30.0%	3.00%

The result of this ratchet as shown in 2024 would incentivize the private sector to continue to support CARB's goals and provide much needed stability to the LCFS market. If near-term CI targets are left unchanged or only linearly increased, this runs the risk of rendering nearly all projects developed and installed over the past 5 years being uneconomic in the near term and further cementing doubt around CARB's practical implementation of the Legislature and Governor's transportation emission reduction goals, resulting in potential non-operation of projects under construction and the diversion and delay of future investments across the industry, with the ultimate effect of causing potential for the 2030 reduction target of 30% being unmet (aka a "death spiral"). A 35% target with ratcheting reductions triggered by excess banked credits, specifically setting a 2030 target of 35% and ratcheting the 2024 target to 16.5%, would begin to draw down the credit bank and restore economic supply-demand signals to create a virtuous cycle of sustained progress toward California's ultimate GHG reduction goals.

#### Book & Claim

While we are grateful for CARB's leadership on environmental matters, we are troubled to see CARB's proposal in the workshop that would effectively limit RNG projects throughout the United States to participate in the California LCFS by limiting Book & Claim.

CARB has a well-earned reputation and legacy as a visionary pacesetter for the kind of change that begins at home in California but ultimately drives environmental policy across the country. Though we are pleased to see some states establish their own LCFS programs, there are still too few and California remains the gold standard other states strive to meet. Currently, the LCFS is a best practice a for science-based technology/geographically lifecycle-based neutral fuel standard. The current proposal appears to risk losing this powerful policy tool by creating impractical barriers to commerce with the intent to advantage potential in-state producers and explicitly exclude certain market participants, which possibly restarts the cycle of challenges on this topic the LCFS faced in the 2010s. Blocking access to the California market for non-western RNG producers would be a major setback to national adoption of low-carbon fuels and their future availability to future end-uses of RNG and expose the LCFS to unnecessary risk.

Instead California could demonstrate leadership and steadfastness while still incentivizing instate production with higher overall carbon intensity targets, and focus on removing the root cause of artificial barriers to instate RNG production, such as California's exceptionally restrictive renewable-only pipeline gas standards, which don't even apply equally for fossil natural gas, and encourage shared interconnection infrastructure (common access interconnects).



The changes to the Book & Claim program proposed by CARB last month will have the unintended consequence of derailing most planned investments in RNG projects east of the Rockies and shake the viability of the LCFS. These projects all divert methane emissions from our skies, into pipelines where they without question displace fossil fuels on a MMBTU for MMBTU basis, and in fact do so with far less total emissions utilizing the long standing displacement basis than they would if CARB arbitrability forced additional pipeline emissions of compressing and pushing these molecules through a network of interconnected pipelines where they are fungible already. An arbitrary geographical limit mirroring the electrical grid is not defensible as science based, but on the other hand, CARB would effectively prohibit most out-of-state projects from participating in the LCFS by requiring rigid directional pipeline flows and flowing from distribution to interstate pipelines. An abrupt cessation of access to the LCFS, as soon as 2028 as indicated, would not only hurt California's ability to decarbonize transportation fuels in the near term but worse, would eliminate a major incentive that drives our national pivot away from fossil fuels over the long term, at the very least CARB should grandfather under construction projects for their investment lifecycle (20 years).

The current LCFS's book-and-claim rules allow for consistent claims in RNG volume across the RFS and the LCFS and the EPA correctly recognizes this in its rulemakings. Deviating from this approach for imports into California's NGVs will inherently create misalignment in claims, administrative confusion at reporting entities and CARB, increased compliance costs and fewer financially viable projects. Recently proposed changes from US EPA to the RFS in the Set rule are likely to enhance the incentive for the biogas/RNG resource to be sent toward electricity generation for electric vehicle use (eRINs), for use in hydrogen production, and as a bio-intermediate to producing liquid fuels. We recommend that CARB consider even further alignment between the LCFS and RFS, especially with respect to matching biogas/RNG electricity pathways to EV fleets.

We strongly urge CARB to leave Book & Claim unchanged to avoid "stroke of pen" risk precedent after which the LCFS would be seen as an unstable policy, discouraging participants even in California from building projects and other jurisdictions from adopting similar strong policies. But, if CARB is committed to the proposed changes to Book & Claim, Sevana Bioenergy strongly urges you to implement as long of a wind-down period as possible which grandfathers projects under construction for their investment lifecycle (typically 20 years). A longer phaseout would allow ample time for other states to bring LCFS programs online or the creation of a national clean fuel standard, and pay off initial invested capital so that projects can then switch to lower revenue end uses (residential, industrial etc). Instead, a more substantial carbon intensity reduction target is a better way to for CARB to demonstrate leadership and create opportunities for in state producers and overall supply of negative carbon fuels.

#### **Avoided Emissions Credits**

Sevana Bioenergy strongly opposes a decision to phase out avoided emissions credits (AECs). This incentivebased approach has proven highly successful and supported by lifecycle emission science for more than two decades under CARB's AB32 carbon offset and LCFS programs. We encourage CARB to stand up for science and GHG reductions, and not limit crediting for eliminating emissions of methane on of the more potent and damaging GHG until another comparable policy incentive is in place. Many RNG projects rely on LCFS revenues to be economically feasible and phasing out AECs would limit the implementation and operation of those projects as investors will see RNG projects "at risk". This would lead to massive additional methane emissions without a suitable replacement policy – reversing decades of CARB's leadership and directly causing methane-based GHG emissions to increase.

However, If CARB does impose a limit on the availability of an AEC for DSM pathways, it should only go into effect for fuel pathway applications **after another comparable methane reduction policy is in effect, and projects under construction should be grandfathered for the lifecycle of their investment (20 years)**. (From the workshop slide 32, it appears that only pathways certified **through 2030** will get the AEC.) To be defensible, any phase down of the credit should be based on science and the concept of additionality, so only phase down after another policy required mitigation of methane emissions through other means (eg a national cap and trade). Otherwise projects built could stop producing and methane emissions will resume, or projects will not be built in the first place because they are uneconomic with such a short crediting period.



As recognized by the Dairy and Livestock AB 1383 working group economic and alternatives analysis led by CARB staff-member Floyd Vergara, without the support of science based avoided methane crediting, achieving CARB SLCP objectives will not be viable. A recent UC Davis analysis, *Meeting the Call: How California is Pioneering a Pathway to Significant Dairy Sector Methane Reduction*, states:

"... misguided efforts to change course by forced coercion to pasture-based operations, direct regulation of dairy farms, or limitation on dairy digesters incentives will not only fail to achieve the desired greenhouse gas emissions reductions but will exacerbate the problem by causing significant emissions leakage. Revenue streams that incentivize investment in biogas capture and beneficial use are critical. Phasing out of avoided methane crediting in the dairy sector would jeopardize existing projects, making them uneconomic in the long-term, and dry up investment capital for the additional digester projects sought by CARB to achieve the state's ambitious and aggressive targets." (https://www.arb.ca.gov/lists/com-attach/91-lcfs-wkshp-nov22-ws-AWJWMVwvVWQGXwFt.pdf)

#### **Improvements in Pathway Processing and Updates to Tier 1 Calculators**

We were pleased to see a commitment from CARB staff at the Workshop to release improved Tier 1 calculators for this rulemaking. We support the majority of RNG pathways being Tier 1 in the future.

# A Credit True-up Remains Necessary to Properly Recognize the True Environmental Performance of All Pathways

True-up crediting should be offered to improve clean fuel economics and help the program correctly account for the full GHG benefits all pathways produce. At the August 2022 Workshop CARB Staff proposed providing a credit true up to correct for under crediting to pathway holders who choose to use temporary CI scores at the outset of their credit generation. Such a limited true up would help reduce the pressure on CARB from developers to process LCFS applications quickly. We continue to support this concept, as well as a full true up to verified actual CI performance.

We would support a broader inclusion of updating Tier 1 calculators to include avoided anaerobic emissions from other scientifically based sources where applicable such as beef cattle, deep pits, and suggest CARB consider research in Europe and Canada that recognize lifecycle emissions reductions from digestion of agricultural residues.

We hope these comments and suggestions are helpful in the rulemaking and decision process. Thank you for your consideration.

Sincerely,

Steve Compton President & COO Sevana Bioenergy LLC