July 12, 2023

The Honorable Liane Randolph, Chair

California Air Resources Board

1001 I Street

Sacramento, CA 95814

RE: Roeslein Alternative Energy Comments Regarding Draft Proposed Changes to the Low Carbon Fuel Standard, the Tier 1 Simplified Carbon Intensity Calculators, Avoided Emissions Credits, and Climate Smart Agriculture

Dear Chair Randolph,

On behalf of Roeslein Alternative Energy, we are writing to offer constructive commentary in response to the Draft Proposed Changes for Tier 1 Simplified Carbon Intensity (CI) Calculators and associated Instructions Manuals. While we understand trade-offs are necessary and recognize the implicit goals to accelerate and simplify the Low Carbon Fuel Standard (LCFS) pathway application and certification process, the new calculator will have significant impacts on the biogas industry, RNG producers, and farms. The concerns with the new calculator, as articulated below, should guide the California Air Resource Board (CARB) with the implementation of these changes while providing an opportunity to mitigate adverse effects on an industry committed to CARB’s effort to fully account for greenhouse gas (GHG) emissions.

As a developer of swine manure digester projects, Roeslein Alternative Energy fully recognizes the importance of addressing the challenges posed by waste generation, greenhouse gas (GHG) emissions, and the equitable distribution of waste management infrastructure, practices, and procedures in the swine, dairy, and beef cattle industries. Roeslein Alternative Energy (RAE) has been a leader for over ten years in developing and enhancing the anaerobic digestion of livestock manure and the production of renewable natural gas at facilities throughout the United States. RAE has been leading the way to a better future by maximizing all of the positive environmental and economic impacts from biogas systems when they are used to recycle organic materials into renewable energy and rich, organic soil products.

Biogas systems protect our air, water, and soil by recycling organic material, like food waste, livestock manure, and biomass from crop residues into renewable energy and soil products. Biogas systems are a biological means to capture methane that would otherwise be emitted into the atmosphere for use as a renewable fuel. This process specifically decreases baseline methane emissions by converting methane back into carbon dioxide. All of this is an effort to protect and enhance our air, water, and soil – crucial parts of the solution to the challenges CARB seeks to address.

As you consider comments on this round of rulemaking, RAE would like to offer feedback for your consideration on the proposed Draft Tier 1 Simplified CI Calculators:

**Draft Tier 1 Simplified CI Calculator Clean Out Modification**

Our review of the Draft Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure indicates that these changes may reduce CARB’s administrative burden and speed the LCFS pathway application and certification process by as much as 12 months. This would be a significant improvement on the current, lengthy application process and may provide more opportunities for biogas producers to bring GHG-reducing projects to fruition. However, the proposed annual modelled lagoon cleanout will significantly lower the availability of avoided emissions credits (AECs) if operators are required to model a full lagoon clean-out each year, regardless of actual frequency. Fewer AECs means there will be fewer LCFS credits available, financially constraining a significant number of existing and proposed projects. Initial analysis shows that this change could lower CI scores by as much as 40 points. These impacts will likely result in fewer projects submitted for approval, and lower GHGs avoided through the LCFS program. More importantly, this anticipated decline in project development means existing manure management practices continue, and methane emissions to atmosphere from those organic wastes continue. The model achieves standardization at the cost of fuel supply and environmental benefit.

This modelling assumption, if implemented, puts the results of the Tier I calculator at odds with real, on-the-ground conditions, making the resulting avoided emissions inaccurate, and underrepresented in the LCFS program. The reality is that manure storage and management systems are diverse, and each industry operates under different standards. For example, dairy and swine systems, simply due to the inherent nature of the species, feed, and solids content of manure, require very different manure management systems, resulting in drastically different lagoon clean-out schedules. Couple this variability with crop and other land management strategies, and the diversity of manure clean out strategies expands further. We recognize that a simple model cannot account for every potential combination of systems and schedules; and while CARBs intent may have been to standardize this variability using the Tier I model, the result is an arbitrary, assumed frequency that is inconsistent with existing standards, unnecessarily ignoring real avoided emission benefits provided by biogas and RNG systems.

We recommend the following alternatives with respect to treatment of lagoon clean outs:

* **Keep the existing policies and procedures in place and initiate a study:** The proposed requirement to model annual lagoon cleanouts is impactful to fuel supply coming to the LCFS market, to the overall emissions accounting of the program, and to the agriculture and energy industries more broadly; yet no analysis nor supporting data was utilized to guide CARB to the 1-year benchmark as a standard. A study should be completed to evaluate current practices within each specific segment (swine, dairy, beef), determine a clean out standard that best reflects each segment separately and represents the majority of systems in each segment. The study should also include an impact analysis outlining how the reduction in avoided emission credits will impact fuel supply, market pricing, and the ability of LCFS to achieve its CI reduction targets.The analysis will enable CARB to determine the appropriate changes, if any, to the Tier 1 Dairy/Swine Manure Calculator, including whether it should include an obligatory, across-the-board annual complete lagoon clean-out lagoon. Having the actual data will provide CARB with the information to scientifically support future LCFS Tier 1 applications from dairy and swine operations.
* **Establish a standard clean out for each manure type that better aligns with real world operations:** As noted, there is a wide range of timelines employed by farms in their manure and lagoon management strategies. An annual modeling assumption is not reflective of this reality. Under its existing model, CARB could still require applicants to model a full clean out, at a more realistic frequency, nearer to their operation. There is a middle ground between annual clean outs and zero clean outs, and allowing applicants to select a different frequency can still accomplish a model that is more accurate and aligned with operations.

**Implementation and Timing**

To implement the Draft Tier 1 Simplified CI Calculators smoothly and efficiently, **we request CARB delay implementation for one year and clearly establish that projects submitted prior to the effective date of the new calculator (e.g., January 2024 or 2025), are still under the auspices of the current Tier 1 Calculators until the following calendar year.** Significant calculations and analysis under these calculators are still in process and requiring projects to re-calculate after submitting the project would incur additional burden and costs. We believe this clarification would benefit both the industry and CARB in clearly outlining which calculator is applicable to the project.

Additionally, we believe **a crediting true-up should be offered to fully realize biogas and RNG production benefits** by analyzing actual and verified CI performance rather than forecasting future CI performance. This change will mitigate unexpected impacts outside the control of facility operators.

**Avoided Emissions Credits**

Roeslein Alternative Energy strongly opposes a decision to phase out avoided emissions credits (AECs). This incentive-based approach has proven highly successful, and we encourage CARB to not limit crediting until another incentive is in place. This is another area where CARB is deviating from science-based implementation and its own precedents under the carbon offset protocol and the LCFS to recognize methane emissions, one of the most potent GHG.

CARB should clarify that additional types of livestock manure, such as chicken and beef cattle manure, can obtain an avoided emissions credit (AEC) and confirm treatment of deep pit swine facilities as anaerobic. While we believe the current Tier 2 process is sufficient for a user to develop and CARB to approve avoided emissions credits for feedstocks such as poultry and beef cattle manure, project developers and users may benefit from further regulatory clarity with explicit statements of support by CARB.

CARB should add chicken and beef cattle manure to the new Tier 1 Calculator, which should be renamed Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Livestock Manure and amend the Livestock Offset Protocol (LOP) to include them. The scientific basis exists to do so in the document CARB used to create the LOP. We would also recommend changing the name of the Protocol to the LCFS Livestock Protocol.

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 digester’s 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*](https://www.arb.ca.gov/lists/com-attach/91-lcfs-wkshp-nov22-ws-AWJWMVwvVWQGXwFt.pdf)*)*

**Climate Smart Agriculture**

In addition to the many benefits of producing biogas, renewable natural gas, and organic soil products, Roeslein Alternative Energy is committed to enhancing the anaerobic digestion process by developing biomass feedstocks from perennial prairie and winter-hardy biogas crops. The recent $80 million USDA Partnerships for Climate Smart Commodities grant received by Roeslein Alternative Energy and its fourteen (14) partners will help develop and enhance climate-smart markets, reduce greenhouse gas emissions, and improve carbon sequestration in the production of corn, soybeans, pork, and beef commodities, while creating opportunities for small and underserved producers and benefitting soil health, clean water, flood control, and habitats for native wildlife. The grant project provides financial compensation for producers to plant prairie grasses and cover crops to be harvested and converted to biogas and biofertilizer in anaerobic digesters.

We encourage CARB to establish a process for expanding the scope of recognized climate smart agriculture (CSA) practices including soil carbon sequestration in future rulemakings. By recognizing CSA in CA-GREET and in LCFS pathways, CARB would take a leadership role in incentivizing climate-smart farming practices in all locations that grow feedstock for LCFS fuel pathways, build knowledge regarding the short and long-term effectiveness of various CSA strategies, and speed fulfillment of California’s aggressive decarbonization goals. Roeslein Alternative Energy advocates for synchronizing the LCFS program with USDA programs that support the adoption of perennial prairie and winter-hardy biogas crops and their utilization in anaerobic digestion systems.

Winter-hardy biogas cover crops, which are a potential crop-based feedstock grown on land typically devoted to another crop and grown during the base crop’s “off-season”, would have no impact to either land-use or the nation’s food supply. Winter-hardy biogas cover crops could generate crop-based transportation fuels from a feedstock not currently available. CARB should promote such innovation in farming and renewable fuels processing and creation rather than trying to limit crop-based fuels in California. As noted in the 2022 Scoping Plan, California “must continue to support low-carbon liquid fuels during this period of transition for the much harder sectors for ZEV technology such as aviation, locomotives, and marine applications”. Cover crop “biomass” can serve as an excellent substrate that can be used in anaerobic digestion, along with other organic feedstocks such as livestock manure and food waste, to produce renewable natural gas. RAE believes CARB should encourage and incentivize the use of cellulosic feedstocks from cover crops and perennial prairie by incorporating these feedstocks in both the LCFS and Tier 1 calculators.

Roeslein Alternative Energy appreciates the opportunity to comment. The primary issues identified in this document are key issues for our organization and company as we continue to provide leadership in this industry. We hope these comments and suggestions are helpful in the rulemaking and decision process.

Thank you for your consideration.

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Sincerely,

Chris Roach, President

Roeslein Alternative Energy