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Richard Corey
Richard.Corey@arb.ca.gov
Executive Officer

Rajinder Sahota
Rajinder.Sahota@arb.ca.gov
Industrial Services Division Chief

Arpit Soni
Arpit.Soni@arb.ca.gov
Manager, Alternative Fuels Section

Anil Prabhu
aprabhu@arb.ca.gov
Manager, Fuel Pathways

California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Correlation of Efficiency with Low Lifecycle GHG Emissions

Dear Mr. Corey, Ms. Sahota, Mr. Soni, and Mr. Prabhu,:

SustainRNG is a biomethane project developer utilizing a proprietary technology that stratifies organic particles by size enabling increased efficiency in fixed film anaerobic digesters to produce a larger volume of biomethane from the same quantity of feedstock than typical technologies currently used in the industry. We were founded to commercialize the Advance Methane Generation technology developed by Trane Technologies, and our company is financed by Duke Energy.

Although we are extremely supportive of the LCFS program, we believe the program can create the unintended consequence of disincentivizing the most efficient technologies which provide the best lifecycle GHG benefit. We hope this unintended consequence of the program can be corrected by the new rule making process. As is commonly understood, inefficient technologies in terms of RNG generation achieve strong CI scores compared to more efficient technologies. Thus, there is a marginal (and perverse) incentive that requires technology providers and developers to choose between maximizing technology efficiency OR maximizing a project's CI score. From a life cycle perspective that includes the amount of vehicle fuel offset, the LCFS program can promote a technology solution with a higher GHG emission impact.



We understand that more efficient technologies generate more credits under the LCFS program, and this is of course a strength of the program. However, this benefit is offset by two powerful forces in the LCFS carbon market:

- **CI Score floor.** It is common practice for buyers of LCFS credits to set a CI score floor (say between -100 and -200) regardless of how many credits a project may generate. Efficient technologies with scores less negative than this range may be locked out of the market, even though companies like ours could provide an overall better deal for buyers of LCFS credits, and a better lifecycle GHG performance.
- **CapEx and OpEx Costs.** To achieve higher efficiency, our AMG technology employs systems used in industrial processes scaled down for an agriculture project. Our highly efficient technology costs more to build and operate than commonly used less efficient systems. The overall business case for a project is not the product of only the CI score and number of credits generated, but also the cost of building and operating a facility is an integral part of the equation. Without taking the cost side of the equation into account, the LCFS program can create a higher reward for inefficient technologies creating a barrier to increased innovation.

We are not asking for CARB to promote efficiency for efficiency's sake. Since the AMG technology is 2 to 3 times more efficient in converting organics in manure to RNG, our technology will displace 2 to 3 times more vehicle fuel. Thus, our technology provides a significant increased benefit towards CARB's objective to reduce net GHG emissions. CARB recognizes the correlation of efficiency in other aspects of its LCFS program. For example, CARB set a benchmark efficiency of 50% from biogas to electricity in the modelling of dairy/swine manure biogas to electricity pathways. This efficiency is difficult to achieve by most reciprocating engines used in today's industry, but CARB installed this benchmark to encourage more efficient electricity production technologies.

We believe there are many ways to correct the unintended consequence of impeding continued innovation in the LCFS program. For example, CARB could establish rewards for meeting specific levels of efficiency. These rewards could be set up like the action CARB took to incentivize the build out of H2 and electricity dispensing infrastructure, but without dispensing fuels at the initial stage. Similar incentives could encourage the industry to move forward with more efficient technologies.

We look forward to participating in a dialogue or working group to help CARB think through efficiency issues and promote technologies that maximize the life cycle reduction of GHG emissions.

Thank you so much for your consideration.

Sincerely,



Michael Shore, CEO

