GENERATE

March 15, 2023

VIA ELECTRONIC FILING

Cheryl Laskowski
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: Low Carbon Fuel Standard February 2023 Workshop

Dear Dr. Laskowski:

Generate Capital, a Public Benefit Corporation, is a leading sustainable infrastructure company driving the infrastructure revolution. Generate builds, owns, operates and finances infrastructure solutions for clean energy, water, waste and transportation. Founded in 2014, Generate partners with over 40 technology and project developers and owns and operates more than 2,000 assets globally. Generate offers leading developers and technology pioneers of the infrastructure revolution the tailored funding and support needed to build projects. Our Infrastructure-as-a-Service model delivers affordable, reliable and sustainable resources to over 2,000 customers, companies, communities, school districts and universities.

Our work that is relevant to the LCFS includes financing electric bus fleets, financing EV charging infrastructure, and owning and operating anaerobic digesters (ADs) that produce electricity and/or RNG. Generate operates six food waste AD sites in North America. We do not have a food waste AD development site in California at this time due to the difficulty finding sites, and due to the permitting timeline and associated costs. Generate is also a significant owner of Amp Americas, a leading dairy-RNG project developer and operator. We look forward to working with the California Air Resources Board (CARB) and other key agencies to work through these challenges to accelerate our collective work to address the climate crisis.

Generate appreciates the opportunity to submit comments to CARB in response to the Low Carbon Fuel Standard February 2023 Workshop. As an investor in, and owner/operator of, clean energy infrastructure, we can state unequivocally that the LCFS program has been a key factor in our clean transportation related investments, and a critical enabler of large-scale, long-term investments in a host of climate solutions for the transportation sector. We appreciate CARB's commitment to continuous improvement of the underlying regulatory framework.

We appreciate your emphasis in the workshop on the need to send long-term price signals, and your statement during the workshop that, "public private partnerships are key to securing the investments needed to meet the goals." We look forward to being a long-term partner working with CARB and the State of California to help meet the goals laid out in the Scoping Plan.

In general, we endorse the comments submitted by The Coalition for Renewable Natural Gas (RNG) and Net Negative Partners. Below we share some insights from our many years of experience as one of the nation's largest food and animal waste recycling infrastructure owner/operators, as well as investment professionals in the climate space. For greater clarity we have split our comments into three sections: (1) comments that relate to the macro level programmatic changes around CI targets and Acceleration Mechanism concepts; (2) comments that relate to proposed changes around Avoided Methane Crediting and BioMethane Book and Claim eligibility; and (3) our perspective on the building blocks necessary to attract investment into Food Waste Diversion and Recycling infrastructure in California.

There are two critical elements that investors need to continue to grow investments in sustainable transportation related infrastructure for California:

- Predictable programmatic targets, and
- Stable crediting pathways.

Stable crediting pathways (and hence credit production volumes) and predictable prices are both essential to providing stable and predictable revenue and cashflows over time, and hence critical to the greenlighting of investments in capital-intensive clean fuel production infrastructure that have long development and payback periods.

(1) Program Level CI Targets and Acceleration Mechanism

Generate endorses the modelling scenarios presented by Asher Goldman at Net Negative Partners and Will Faulkner at Carbon Acumen. At its core, the proposed CI targets and Acceleration Mechanism structure presented by Net Negative Partners in its comments submitted in December in response to the November 2022 workshop, are based on size of the credit bank and the dynamics of future credit to deficit ratios, respectively.

We feel it is important to stress the importance of the proposed 2024 CI Target of -19% as it sets the expectation for an immediate reduction in the credit bank, which in turn is expected to have an immediate positive effect on credit price and acceleration of project development.

The proposed 2030 CI Target of -30% is accordingly designed to sustain credit prices such that investors can look at the projected credits, deficits and credit bank and have confidence that credit pricing will be supportive of both: continued investment into new projects that will supply the LCFS; and continued operation of existing projects that currently supply the LCFS.

In addition, we also urge CARB to implement an Acceleration Mechanism. The combination of 2024 and 2030 CI target will not be enough on their own because no matter how good it is, the model will of course never perfectly predict the real-world market dynamics. In order to address unpredictable future market changes, the Acceleration Mechanism construct proposed by Net Negative Partners and Carbon Acumen provides an automatic CI target adjustment, whether up or down, which will have the effect of increasing or reducing credit prices – but crucially it will keep credit pricing stable by taking into account the dynamics of credit to deficit ratios over time. **In our opinion the Acceleration Mechanism is the**

most critical piece of the structure as it has the potential to limit volatility of credit pricing (whether prices are low or high), which is key to attracting sustained, long-term investment.

Lastly, we agree with the principal of reforming market participation. CARB has done the hard work to build a functioning market for LCFS credits and should now look to leverage the expertise of the financial markets to provide fixed price long-term contracts for credits. Ultimately, the facilitation of a market for such contracts will reduce the burden on CARB for future rulemakings.

(2) Avoided Methane Crediting and BioMethane Book and Claim Eligibility

We agree with the Coalition for RNG that, "Avoided Methane Crediting should continue in the LCFS unless and until a realistic and proven replacement policy is implemented." While we greatly appreciate the improvement in the February proposal relative to December, we must stress that providing an "off-ramp" is not useful if drivers stop taking the highway. Nor is it helpful if it doesn't lead to anywhere. CARB action to remove avoided methane crediting for RNG before new market policies have been developed and implemented, will have a significant cooling effect on investment today and will therefore slow progress towards achieving California's climate targets.

Without a stable and predictable long-term view on credit volume creation and revenue projections, many future projects won't get funded, and many existing projects will be at risk of becoming stranded and being shut down, resulting in an undesirable increase in methane emissions.

Further we believe the impacts of such a change could be more far-reaching than just Avoided Methane Crediting related investments. Actions by CARB that change the revenue profile of this pathway will be construed as stroke of the pen risk and will jeopardize investment in other climate solutions for California as the investment community will not know if crediting pathways will be reliable over the time horizon of their investments.

This in turn would have the effect of negating the pricing stability efforts being championed by CARB. Said another way, it is not sufficient to have price stability alone, the investment community needs price <u>and</u> volume stability, leading to revenue and cash flow stability.

Policy driven markets fail if regulators create investment uncertainty through "stroke of the pen" risk. We further agree with the Coalition for RNG that "California Renewable Portfolio Standard Language that Creates a Barrier to Imports, Should Not be Adopted in the LCFS." The current system of book and claim works and allows for consistent reporting among LCFS and RFS, streamlining administration and management time, and containing the associated costs for market participants.

To change the book and claim rules would create additional cost and burden for market participants and would exclude a large portion of the RNG market that doesn't meet RPS criteria. Such actions would be a signal to the investment community that, even if credit prices can be stabilized over time, the underlying pathways themselves can be arbitrarily modified and thus investors will not be able to have confidence in long-term revenue projections across any technology. **As mentioned above, both volume of credits and price are needed to produce the stable revenue and cashflows that will attract investment.**

It is worth noting that Generate explored investments in projects that would have been regulated by the RPS rule in the 2016-18 timeframe and the advice we received from market experts was not to invest in the biogas to power models that we were reviewing at that time.

Lastly, we believe that harmonizing with other states and with Federal programs (and for them to reciprocate) is the best course of action as it will create the foundation for credit producers to switch between programs easily and allow other programs to become operational quicker. Ultimately, this type of collaboration will reduce the burden on CARB for future rulemakings by allowing credit producers to switch programs with minimal cost.

Generate is consistent in this message across states and has been urging lawmakers in New York and other states to pursue the same rules as LCFS and RFS for efficiency and ease of execution for both the state and the private sector.

(3) Food Waste Diversion and Recycling

We would like to reiterate several key points that we've made in the past in written comments and during in-person meetings related to enabling the scale up of food waste recycling in California.

First, it is essential to appreciate that not all digester facilities are the same and that digesters can have radically different designs, operating complexity, and biogas (and thus RNG or electricity) production expectations depending on what type of feedstock they use (e.g. animal manure, wastewater treatment plant (WWTP) wastewater, or food waste). These differences lead to dramatically different construction design, cost to build, and cost to operate over time. We believe that expectations around food waste AD derived RNG supply do not account for the permitting nor business development challenges faced by the industry.

Second, and critically, curtailing RNG from out of state producers will not increase in-state food waste recycling because the key rate limiting factors holding back food waste recycling infrastructure development in California include:

- appropriate site acquisition,
- permitting complexity and timelines, and
- feedstock availability.

Currently, complex food waste digestion projects in California can take four years or more to develop (site control, permits, construction, commissioning, etc.). In other words, it takes half a decade just to get up and running and then many years more to pay back the upfront investment. These inherently long timelines require long line of sight, and high levels of investor confidence, to unlock the needed scale of capital.

Conclusion

We would like to thank CARB for the transparent process, willingness to meet in person with market participants and for moving in a direction that will catalyze private sector investment to meet CARB's ambitious and influential goals.

To conclude, it is our belief that by implementing the changes recommended in Section 1 above, and by leaving Avoided Methane Crediting and Book and Claim from RNG as is, CARB will both significantly reduce the risk of stranded assets and encourage new investment across all relevant infrastructure projects thereby advancing the decarbonization of the state's transportation sector and achieving the goals of the California Scoping Plan

John Dannan
Managing Director
Generate Capital