



May 15, 2017

Sam Wade
Branch Chief, Transportation Fuels Branch
California Air Resources Board

Dear Sam,

Thank you and your colleagues for the request for feedback. We address three issues: the ability to use dairy biogas to generate both vehicle fuel and electricity in a given year; the proposed changes in Regulatory Compliance; and the duration of the Crediting Period in vehicle fuel and electricity projects.

Multiple Uses of Dairy Biogas

We want to express the importance for dairy biogas projects to have the ability to generate both electricity and vehicle fuel in any given year. This is critical for meeting current obligations as well as for long-term policy.

California Bioenergy LLC ("CalBio") is a dairy digester developer. In Kern County we are developing a cluster of dairy digester projects. One has been built at the Old River Dairy and two are in construction, at the Lakeview Farms and Carlos Echeverria & Sons dairies. Twelve more are planned.

The Phase I development of the cluster has been based on the idea of combining the certainty of electricity contracts with the uncertainty of vehicle fuel credit programs. Electricity serves as a hedge.

In particular, the Lakeview Dairy project won CEC EPIC funding based on the long-term goal of diverting a portion of the biogas each year away from electricity to fuel generation. This proposal was further expanded in CalBio's application to the California Sustainable Freight Action Plan program, an application which resulted in the Kern Cluster becoming one of the three state Pilot Projects. It was also the basis of the recent grant award, through the CEC's 15-606 solicitation, where, in initial years, roughly two-thirds of the biogas from the first three digester projects will generate electricity and the balance fuel. As a result, CalBio currently has an obligation to deliver both electricity and vehicle fuel in a given year.

But even once the obligations end, an annual commitment, choosing for instance vehicle fuel, could put the cluster in financial risk if the vehicle fuel market were to perform very poorly in that year. Such risks will potentially diminish over time based on the development of a floor

price, contract for differences, or other mechanism for the LCFS program per SB 1383; the emergence of external market hedging mechanisms as the LCFS program matures; and the rise of greater certainty in the federal RIN program. However, these advances will likely take time to develop.

Further, the ability to split the use of dairy biogas between electricity and vehicle fuels; or between vehicle fuel and biomethane sales; or between electricity and biogas boiler fuel, could increase project profitability and decrease the need for state support programs. These are other viable hedging approaches and offering flexibility will be beneficial. (In fact, over time these other mixes may be more logical hedges, since they do not require two large capital investments.)

Regulatory Compliance

We would like to express our very strong support for the proposed changes on Regulatory Compliance for dairy biogas used as a vehicle fuel. While changes *are important for all uses* of the dairy biogas, they are even more important in fuel sales. In vehicle fuels projects the LCFS credit is a large portion of annual revenue - over 50% of revenues based on prices over the past year. By contrast, in electricity projects, the carbon credit is roughly 15% to 20% of revenues. The risk associated with Regulatory Compliance could push projects to electricity sales, given that roughly 80% of the revenue is free of this risk.

Crediting Periods

Based on a similar logic discussed with Regulatory Compliance, with one ten-year crediting period, the fact that a much larger portion of revenues in fuel projects is based on the LCFS credit could push farmers and developers to electricity generation. One ten-year crediting period with electricity works financially. The end of the ten-year period of GHG revenues will often coincide with the end of debt payments, and the project will continue generating electricity revenue for ten more years. By contrast, in fuel projects the vast majority (approximately 80%) of the LCFS revenue comes from the methane destruction component. Losing this revenue stream at a future date, and potentially having a money-losing project, creates a logical argument for electricity generation. Two ten-year crediting periods for fuel projects removes this concern.

Thank you again for the request for feedback.

Sincerely,

A handwritten signature in blue ink, appearing to read "Neil Black", with a stylized flourish at the end.

Neil Black
President