



16-8-4
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September 22, 2016

California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: California Bioenergy's Comments to the Proposed Amendments to Mandatory Greenhouse Gas Reporting Regulation ("MRR") and California Cap on Greenhouse Gas Emissions and Market Based Compliance Mechanisms ("Cap and Trade")

Dear ARB Staff and ARB Board Members,

We would like to thank the ARB Staff and ARB Board for the opportunity to speak today and submit Comments.

We started California Bioenergy LLC ("CalBio") ten years ago in order to reduce dairy-manure methane emissions. The goal has been to capture this methane, destroy it and in that destruction process use it beneficially - to generate renewable electricity or to produce renewable compressed natural gas ("R-CNG") for truck and car fuel. We have three electricity projects in operations and three more that will start construction this year. We are also focused on building a dairy biogas upgrading facility to produce R-CNG for vehicle fuel use in a cluster outside of Bakersfield in Kern County and are one of the three finalists in the Sustainable Freight Action Plan. We have benefited from CEC and CDFA grants, which have made a great difference and for which we are grateful.

Regulatory Non-Compliance is an issue that can prevent the development of dairy projects at the speed and scale that ARB and the state of California are seeking - 40% reduction by 2030 as per SB 1383. We view Regulatory Non-Compliance as one of the two most critical issues standing in the way of large scale dairy methane R-CNG projects. The other is the lack of LCFS price and program certainty, but that is a separate discussion.

The staff proposal takes important steps forward, but it is vastly insufficient, and we discuss two important examples.

The staff proposal to limit the loss of carbon credits to the period of the violation is one step forward, and we strongly urge that it is supported. However, it is not enough. Violations may occur for long-periods of time and not be recognized. Or even violations that are recognized, for instance a PM 10 reading exceeding the permitted limit by 5%, could take multiple weeks to schedule a second external party test to close out the violation. The proposal also addresses all violations as if they are of equal consequence. The severity of a violation should also be taken

into account since many would be viewed by the regulating agency as of minor impact. In short, while the proposal decreases carbon credit revenue risk, significant risk will remain.

The recommendation to limit the boundary of the project is a separate significant step forward, and we strongly urge that it is supported. However, it has an important flaw. It includes within the boundary the effluent from the digester. In the Base Case dairies take manure water from their storage lagoon and use it to fertilize and irrigate their adjacent farmland to grow the feed crops. In a lagoon digester (and we estimate over 95% of manure processed in California digesters are covered lagoon digesters) the same thing happens: the manure water, called effluent, is given back to the farmer to apply to their farmland. If the dairy fails to submit a report, submits a report missing data, makes an error, or does something improper, it will receive a Notice of Violation (NOV). If the digester project does not own or control the effluent, it should not be held responsible and lose vital credit revenue for what is outside its control and is for an on-going process that pre-dates the digester. Thus the project boundary should end when the effluent is handed back to the farmer. By contrast if the project retains ownership of the effluent - for instance if the digester project is seeking to export and sell the nutrients - and in their handling process they receive an NOV, then it makes sense to include the effluent within the project boundaries.

Further, based on conversations with staff, an argument was made that if the digester output effluent goes into the dairy's lagoon, which is where it will likely go prior to irrigation, then the dairy - all of it - will be included in the project boundary. As a result, the advancement of project boundaries that apparently is being made would be illusory. We strongly urge the Board to determine that the project boundary begins at the point of receipt of the dairy manure and ends at the point it hands over the digester effluent whether to the farmer or an external party; and that this boundary is clear and that it assumes the effluent will go into the dairy's lagoon.

While limiting the loss of credits to the period of an NOV and correcting the project boundaries are important steps forward, there remains significant risk of a project receiving an NOV and losing carbon credits and credit revenue, at a potentially significant level. These are complex projects. Especially since an NOV can be a small exceedance of the permitting level, it is our view that there is a risk of a violation of a permit in any given year. It is our understanding this is also the view of the Air District.

The receipt of the NOV and the resulting loss of carbon credits will put a project in financial jeopardy. Moreover, simply the risk of loss of revenues from carbon credits - and the potential inability for a project to deliver returns to investors, pay bank debt, provide a new revenue stream to farmers, or prevent developers from building a viable business - will result in a significant slowdown in project development - at the very moment we need a massive acceleration.

Further this is a significantly larger issue with R-CNG projects, relative to electricity projects, since GHG methane destruction, as calculated by the ARB protocol, are a greater percentage of the overall revenues, roughly 50% to 60% for R-CNG project to versus roughly 15% for electricity projects. As a result, if there is uncertainty over the ability to receive carbon credit revenues, developers will be pushed to projects that generate electricity. However, it will also require a

higher electricity price, since the carbon revenue will be uncertain and this higher electricity price may never be achieved in the BioMAT. Furthermore, the risk of regulatory noncompliance, developed with the goal of advancing environmental protection, will inadvertently have a perverse consequence, since it would increase NOx emitting electricity projects while reducing NOx eliminating R-CNG projects fueling diesel truck replacements.

There is an additional important consequence: there are higher regulatory standards in California than many other states. Inadvertently the likely higher incidence of NOVs within California, based on the greater and tighter monitoring, will likely result in greater risk for loss of carbon credits for California based dairy manure reduction projects than those in other states, and result in a relative slowing of California digester projects and the inability to meet SB 1383's objectives.

We understand one considered reason for the requirement for a project to have 100% perfect regulatory compliance comes from the CEQA process that was used to support the regulation. It is important to note that while that may be important for many offset protocols in the case of dairy digesters many if not most projects are deemed CEQA exempt by the responsible agency (usually the Air District) since they have a diminutive effect on a large dairy's manure operation, yet deliver substantial benefits. As a result, there may be grounds to exempt dairies from this historically global ARB CEQA approach.

A Recommended Approach

The solution is to think significantly anew not incrementally about the issue of regulatory compliance. We and others suggest to ARB that the policy should be changed to make clear that an NOV that reduces carbon credits should only be those NOVs that impact greenhouse gas reductions. This would leave the other environmental and worker safety impacts to the local, state and federal agencies chartered with regulating these issues. Further, if a project is failing to address its NOV with the agency issuing the NOV then and only then, should its revenues from its reduction of GHGs be in jeopardy.

While there is a long history of the current interpretation of limiting carbon credits based on NOVs of any type, we would suggest the code itself provides an alternative approach.

In the Regulatory Code (Version dated 11-1-15), 95973, Requirements for Offset Projects Using ARB Compliance Offset Protocols, (b), it states:

"Local, Regional, and National Regulatory and Environmental Impact Assessment Requirements. An Offset Project Operator or Authorized Project Designee must fulfill all local, regional, and national requirements on environmental impact assessments that apply based on the offset project location. In addition, an offset project must also fulfill all local, regional, and national environmental and health and safety laws and regulations that apply based on the offset project location and that **directly apply to the offset project**, including as specified in a Compliance Offset Protocol. The project is out of regulatory compliance if the project activities were subject to enforcement action by a regulatory oversight body during the Reporting Period. An offset project is not eligible to receive ARB or registry offset credits for GHG reductions or GHG removal

enhancements for the entire Reporting Period if the offset project is not in compliance with regulatory requirements **directly applicable to the offset project** during the Reporting Period." (Emphasis added)

If "directly apply to the offset project" and "directly applicable to the offset project" refers to the GHG reduction aspect of the project only, then the relevant regulatory violations, as determined by outside agencies (non ARB agencies), are only those that apply to the GHG reductions. The definition of an offset project, per the Regulatory Code (Definition 245), furthers this interpretation, since it states, "'Offset Project' means all equipment, materials, items, or actions that are directly related to or have an impact upon GHG reductions, project emissions, or GHG removal enhancements within the offset project boundary." (Note "Project Emissions," definition 296, "means any GHG emissions associated with the implementation of an offset project....")

In the Staff Report: Initial Statement of Reasons, released August 2, 2016 and Scheduled for Consideration September 22, 2016, for instance, where the staff is proposing limiting the penalty for regulatory compliance violations to the duration of the violation, it states,

"Staff is proposing modifications to the requirement that offset projects may not receive ARB offset credits for the entire Reporting Period when they are out of regulatory compliance with any local, regional, and national environmental health and safety laws and regulation that apply to the offset project. The proposed amendments would limit the period of time livestock and mine methane capture offset projects are ineligible to receive ARB offset credits for not being in regulatory compliance to the time period the project was actually out of regulatory compliance, to the extent that time period can be substantiated by documentation." (Section 9 (c), page 70)

If the phrase "off set projects" reflects the code's definition, then the staff's proposal too could be interpreted to mean a project is only out of regulatory compliance if the NOVs impact GHG reductions.

Our focus and proposal to limit NOVs to those that impact GHG reductions are not a means to decrease overall environmental impacts. Rather it is the opposite. The change will increase the reliability of receiving carbon based revenues and, as discussed above, will increase the percentage of projects that produce R-CNG for vehicle use, reducing NOx emissions in the San Joaquin Valley, home to a vastly disproportionate number of disadvantaged communities. Further, we work every day, at advancing the co-benefits of dairy digesters. We construct double-lined lagoon digesters, increasing ground water protection. Digestion increases the mineralization of nitrogen, increasing the percentage in a plant absorbable form. We are studying this issue (and seeking funding for it), since it should further limit the risk of leakage as well as reduce the need for chemical fertilizers. We are also working to develop processes to add effluent into drip irrigation systems, decreasing water use while also increasing nitrogen absorption. A digester improves the starting point for drip irrigation at a flush dairy, providing manure water with less solids and greater consistency. A well designed digester will improve the sustainability, in both meanings of the word, of California dairies.

At the same time CalBio's focus is to decrease methane emissions and play our small part in slowing the rate of climate change. The proposed changes to limit NOV's to those that impact GHG reductions will help increase the chance to meet or exceed the goals in SB 1383, while simultaneously advancing other environmental goals. The failure to make these changes will make the state's methane reduction goals vastly less likely to be achieved.

