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Sent: Monday, May 15, 2017 9:27 AM
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Subject: Stakeholder Feedback - Fossil and Renewable Natural Gas

To whom it does concern,

The following are our comments regarding the April 17th discussion on Fossil and Renewable Natural Gas, Including Biomethane From Dairy and Livestock Operations.

1. We support maintaining Single additionality rule for both AB-32 and LCFS
2. LCFS pathways must allow for the likelihood of phasing in multiple digester projects into a system over time.
3. We agree that in situations where biogas from a single project has multiple end uses (for example power generation and CNG), it is appropriate to attribute the ROCs from that project to LCFS or to Cap and Trade based on the percentage of biogas that was consumed by each end use as staff has proposed. This practice would prevent double counting of credits. However, we do not agree that the total amount of credits available from a project should be reduced by the amount of flaring. The emissions reductions occur whether or not 100% of the gas is beneficially used for fuel, electricity etc. There seems to be general agreement on this point, and staff stated that the main reason for ARB's proposed "flare reduction" is prevent outcomes where a project is flaring large amounts of gas but still claiming LCFS credits in full even though a small amount was used to create the transportation fuel. We understand this concern, but thankfully the ROC verification process already contains a technical mechanism for checking the reasonableness of verified reduction credits versus gas usage.

   During the Livestock Protocol verification process, the verifier will calculate the total amount of "modeled" greenhouse gas reductions (baseline emissions minus project emissions) and generally speaking that "modeled" amount is the amount of verified ROCs awarded. However, the verifier will also compare that modeled amount to the actual amount greenhouse gases that were generated, metered and destroyed by the project. This quantity is referred to as the "metered" emissions reductions. In most cases, the metered emissions reductions exceed the modeled emissions reductions and thus the lower modeled emissions reduction number is used to quantify the ROCs issued. However, the verifier using the ARB protocol runs an additional check to ensure that the digester actually destroyed as much as the model says it should. if the "metered" amount of greenhouse gases destroyed are lower than the modeled amount, then the Protocol determines that the digester did not achieve the emissions reductions that the model expects. Consequently the project would be awarded ROCs only in the amount of the lower, metered mount of greenhouse gases destroyed. We propose that this extant verification step be applied in lieu of the proposed "flare reduction" proposal.

   More specifically, we propose that a project be able to attribute avoided methane emissions as LCFS credits equal to its verified Livestock Protocol emissions provided that the amount of biogas used as transportation fuel is at least equal to the total emission reductions as verified under the Livestock Protocol: that total is by definition the lower of the metered emissions reductions of the modeled emissions reductions. Put another way, projects should not be penalized for creating more gas than the modeled emissions reductions. Put yet another way, we propose that a project whose total biogas used for transportation fuel is lower than the project's verified emissions reductions would have to reduce its LCFS credits proportionally.

Project Name	Metered Flare Combustion (SCF CH4)	Metered Electrical Generation Combustion (SCF CH4)	Metered CNG Deliveries (SCF CH4)	Metered Emissions Reductions (SCF CH4)	Modeled Emissions Reductions (SCF CH4)	ROCs Credits Awarded under Livestock Protocol (current practice) (SCF CH4)	Emissions Reductions Credits that can be claimed as LCFS	Final/Remaining Emission Reductions Credits that can be claimed as Cap and Trade ARBOCS
Alpha	5,000,000	20,000,000	0	25,000,000	30,000,000	25,000,000	0	25,000,000
Bravo	10,000,000	10,000,000	30,000,000	50,000,000	30,000,000	30,000,000	30,000,000	0
Charlie	30,000,000	10,000,000	10,000,000	50,000,000	30,000,000	30,000,000	10,000,000	20,000,000

*Note that these numbers are in standard cubic feet of methane since combustion is reported in those units, even though the final credit award will be converted into MT CO-2e.

Project Alpha is a situation where the metered emissions reductions are lower than the modeled emissions reductions. In this situation, the verifier would award the project ROCs equal to the metered total, since it is the lower of the two numbers. There was no CNG in this project and no LCFS credits can be claimed.

Project Bravo is a situation where a project has total metered emissions reductions exceed the modeled emissions reduction, as is normally the case. The verifier would award the project ROCs equal to the modeled total, since it is lower. Since the total CNG deliveries were at least as high as the modeled emissions reductions, the project would be able to claim 100% of this amount as LCFS credits. No additional amount may be claimed as cap and trade credits since total ARBOCs and LCFS credits cannot exceed the verified amount of ROCs.

Project Charlie also has total metered emissions reductions exceeding the modeled emissions reductions. Thus the verifier would award the project ROCS equal to the modeled total. However, due to the high amount of flaring and also due to consumption of gas for electrical generation, the project's CNG deliveries are less than the modeled emissions reductions. It is not appropriate to award all the emissions reductions as LCFS credits. The project should only be able to claim LCFS credits equal to the actual amount of fuel supplied as CNG. The remaining verified ROCs can be claimed a ARBOCs.

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