

11 December 2021

Low Carbon Fuels Standard Program
California Air Resources Board

Dear LCFS Staff:

Please consider the following comment on LCFS Tier 2 Pathway application number B0207, posted for public comment on December 6, 2021. Application number B0207 proposes two pathways B020701 and B020702 related to biogas generated from two digesters; this comment relates to pathway B020701 (“the Pathway”) covering biogas generated at Statz Home Farm.

I am aware of multiple community digester projects in development. The Pathway describes five satellite farms supplying manure to a central digester located at Statz Home Farm, making this application closer to a true, community digester than any other LCFS pathway certified to date. Precedents set by this application must work well for community digesters submitted for certification in the future.

Biogas pathway carbon intensity (CI) values are dominated by net methane emissions. That is, they are heavily influenced by (a) computed, baseline methane emissions and (b) fugitive methane emissions of the project. By “fugitive methane” I mean to include any and all methane from biological decomposition of manure, in addition to “feed loss” in the biogas cleanup system.

Baseline methane emissions and fugitive methane are determined by manure handling in the baseline and project scenarios -- the parameters input into the ‘Manure-to-Biogas (LOP Inputs)’ tab of the *Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure*. Each contributing farm’s manure may produce methane with a radically different CI, depending on the farm’s manure handling in the baseline and project cases. It seems to me like the only way to accurately compute the CI of a community digester, is to fill out a separate copy of the *Tier 1 Simplified CI Calculator* for each farm. It would remain the applicant’s choice to either seek a separate pathway certification for each farm, or to seek a single pathway certification for the weighted average CI. In the first case each farm’s volatile solids (VS) delivered to the digester would determine biogas per pathway; in the second case each farm’s VS delivered to the digester would weight the average CI.

Though an accurate quantification of the Pathway should require six copies of the *Tier 1 Simplified CI Calculator* and a correlating roster of farm-specific CIs, neither the Staff Summary nor the LCA Report indicate that this depth of analysis exists.

I recommend that the applicant populate a suite of six *Tier 1 Simplified CI Calculators* that properly account for the unique manure handling of each farm in the baseline and project cases, and therefore account for the large influences baseline methane and fugitive methane emissions have on the carbon balance. Presuming the applicant prefers a single CI representing the Pathway, this can still be computed as a weighted average. Doing so is critical for setting the right precedent for assessing CIs of future, community digester pathways.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Roel', with a large, sweeping flourish above the name.

Roel Hammerschlag
Principal, Hammerschlag LLC