January 15, 2020

California Air Resources Board
1001 I Street
Sacramento, CA 95814

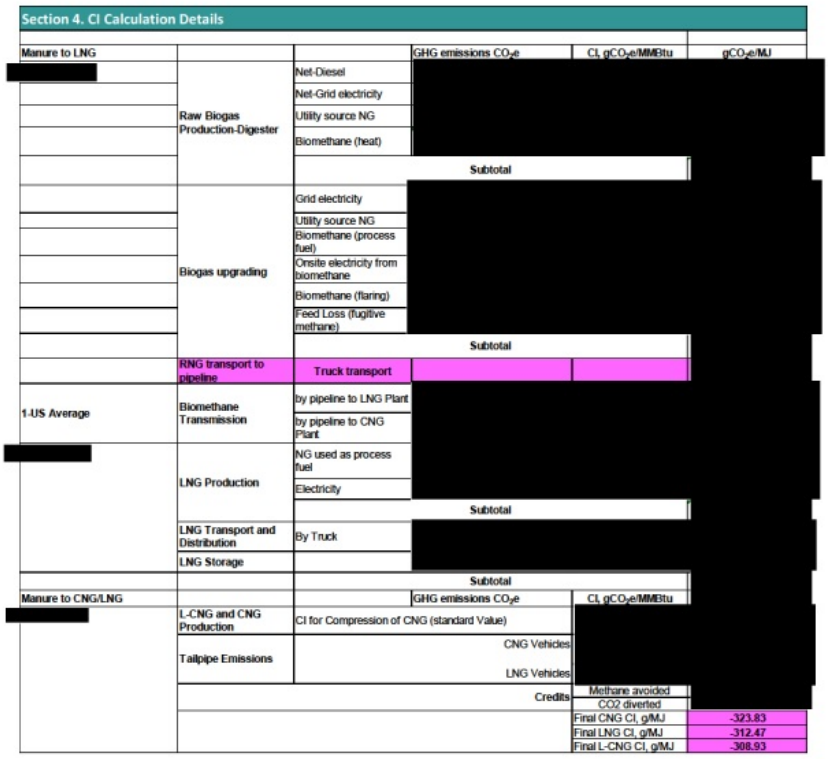
**Re: Tier 2 Pathway Application: Application No. B0009**

To Whom It May Concern,

The undersigned organizations write in opposition to this swine waste to energy project proposed by Smithfield Foods, Locust Ridge Farms, Roeslein Energy, and EMRE: (1) information and data included in the application and relied upon for approval is redacted such that an independent review of the proponent's claims and the accuracy of calculations and impacts is impossible, (2) the project will increase and/or sustain air pollution and threats to water quality in the locality and region from these related swine CAFO's, thus undermining universal climate, environmental justice, and equity goals which are also legislated in California, (3) it appears that the GHG calculations ignore both potential GHG emissions and double count alleged GHG reductions, (4) this project will actually incentivize the production of methane, and (5) the project will contribute to methane leakage from transport of gas.

Lack of Available Information and Data Transparency

The applicants and/or the California Air Resources Control Board (CARB) withheld and redacted information regarding swine operations, energy production, and calculations related to GHG emission reduction such that it is impossible to determine both the air quality and water quality impacts that the project will produce, as well as the energy conversion and energy production rates which, along with information regarding dairy operations, is necessary to assess the veracity of the claimed project benefits and the carbon intensity value. In short, based on our review of the available documents there is no way to comment in any informed way on the proposed project or assess the accuracy and value of the justification presented. Below we have reproduced just one page that is illustrative of the amount and kind of data and information hidden from public review.



| Section 4. CI Calculation Details | | | | | |
|---|---|---|---|---|---|
| Manure to LNG | | | GHG emissions $CO_2e$ | CI, $gCO_2e$/MMBtu | $gCO_2e$/MJ |
| [redacted] | Raw Biogas Production-Digester | Net-Diesel | [redacted] | | |
| | | Net-Grid electricity | | | |
| | | Utility source NG | | | |
| | | Biomethane (heat) | | | |
| | | Subtotal | | | |
| | Biogas upgrading | Grid electricity | | | |
| | | Utility source NG | | | |
| | | Biomethane (process fuel) | | | |
| | | Onsite electricity from biomethane | | | |
| | | Biomethane (flaring) | | | |
| | | Feed Loss (fugitive methane) | | | |
| | | Subtotal | | | |
| | RNG transport to pipeline | Truck transport | | | |
| 1-US Average | Biomethane Transmission | by pipeline to LNG Plant | | | |
| | | by pipeline to CNG Plant | | | |
| [redacted] | LNG Production | NG used as process fuel | | | |
| | | Electricity | | | |
| | | Subtotal | | | |
| | LNG Transport and Distribution | By Truck | | | |
| | LNG Storage | | | | |
| | | Subtotal | | | |
| Manure to CNG/LNG | | | GHG emissions $CO_2e$ | CI, $gCO_2e$/MMBtu | |
| [redacted] | L-CNG and CNG Production | CI for Compression of CNG (standard Value) | | [redacted] | |
| | Tailpipe Emissions | CNG Vehicles | | | |
| | | LNG Vehicles | | | |
| | Credits | Methane avoided | | | |
| | | CO2 diverted | | | |
| | | Final CNG CI, g/MJ | | -323.83 | |
| | | Final LNG CI, g/MJ | | -312.47 | |
| | | Final L-CNG CI, g/MJ | | -308.93 | |

*Figure 4, Table copied from the calibrated GREET Model attached to the application.*

The materials available for review also leave out critical information regarding the demand for CNG and fail to take into consideration the availability of other, cleaner sources of energy for transportation fuels (e.g. solar, wind, etc.).

Additionally, CARB withheld the following information, alleging that they contain confidential business information: Attestation Letter, Utilities Invoices, Facility Process Flow Diagram, and Monthly Data and Calculation for GREET Input Values. Without access to data critical to allow an independent analysis of truly monumental carbon intensity values or environmental and ecological impacts of the proposed project, the application must not be approved.

Finally, it is critical that there be up-to-date, accurate, verifiable, and ongoing monitoring of greenhouse gas emissions and air pollution along with water discharges from the subject swine operations and related digester operations. No application should be approved without agreement from all applicants to participate in ongoing environmental monitoring that is available to the public and relevant agencies.

<u>Environmental Issues with these Swine CAFO's are Unaddressed</u>

Smithfield Foods operates swine CAFO's in multiple states and internationally. It is generally accepted that their CAFO's contribute to both local and regional environmental problems such as nuisance and local air quality issues plus nutrient runoff that pollutes local streams and rivers plus contributes to the dead zone in the Gulf of Mexico.

More specifically, in North Carolina Smithfield Foods has been found responsible at least five times for illegal hog operations. California should not be doing business with bad actors such as Smithfield Foods.

https://www.insurancejournal.com/news/southeast/2019/03/11/520115.htm

CARB must verify that each applicant is conforming with all mandated environmental requirements prior to approving any application and must incorporate reporting procedures that ensure ongoing compliance with legal mandates.

Double Counting of Carbon Credits

Smithfield Foods is claiming that these and similar projects they own are part of their goal to reduce their GHG emissions. "Capturing gas from pig manure is a key part of the pork producer's goal to reduce 25% of the greenhouse gas emissions it produced in 2010 by 2025. Many of the company's farms capture the methane and carbon dioxide created from pig manure, said Kraig Westerbeek, senior director of Smithfield Renewables and Hog Production Environmental Affairs."

https://news.stlpublicradio.org/post/access-pig-manure-powered-energy-grows-northern-missouri#stream/0

To the extent that the LCFS proposal overlaps with Smithfield's public relations and marketing strategy of reducing greenhouse gas emissions by 25%, the proposal constitutes double counting of carbon credits. The reduction in GHG emissions cannot be claimed by Smithfield Farms in Missouri as a marketing ploy and also claimed by whoever purchases the negative carbon credits in California under the LCFS. Please explain how and to what extent this LCFS proposal is part of this 25% GHG reduction goal. As stated in the application staff summary: "The biomethane and its environmental attributes claimed under this pathway shall not be claimed by any entity for any other purpose, nor under any other program notwithstanding the exceptions listed in LCFS Regulation section 95488.8(i)(1)(B)(3)." (underline added)

https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/comments/tier2/b0009_cover.pdf

Incentivized Production of Methane

This project and similar projects do not just undermine California's climate and environmental justice goals, but actually incentivize increased production of methane (and the concomitant pollution that accompanies methane production). To the extent that hog farms are making manure and waste management decisions to increase methane production – such as increasing herd size to increase, in whole or in part, manure production, opting out of solid separation to increase methane, sometimes taking in food wastes for digestion, and even opting for liquefied manure management instead of methods that prevent production of methane in the first place – they should not reap the benefits of the LFCS program, designed to reduce greenhouse gases, instead of incentivizing production thereof.

The Life Cycle Assessment (LCA) fails to account for alternatives to swine manure management. These industrialized hog operations are not forced to have liquid manure lagoons underneath the barns. Dry manure handling and placing animals on pasture can both reduce methane emissions. This project does not even propose to collect methane from all of the lagoons. The methane released to the air by this operation must offset any methane collected and accounted for in the LCA. This methane is also not

produced except with fossil fuel based inputs for raising the hogs plus processing and exporting the meat. These inputs must be accounted for in the LCA.

The LCA must look at the totality of the methane released by this hog farm. Not all of the lagoons are covered and collecting methane. From the lagoons which are covered, not all of the methane is collected. The additional methane emissions and other GHG emissions associated with this hog operation must be calculated applied as an offset towards the collected methane.

In order to claim this gas in California the LCFS requires a direct pipeline route for the gas to theoretically travel. This project proposes trucking the gas at two stages including from Arizona to California. Trucking of fuel over long distances is directly counter to California's goal of carbon neutrality by 2045. Will those trucks use zero emission technologies? If not, all emissions from the transport of the gas must be included in the LCA.

<u>The project will either maintain or increase current levels of methane leakage</u>

The use of this hog manure gas as a negative carbon transportation fuel appears to be directly against California's GHG reduction goals. This and other similar LCFS projects forces California to accept fossil fuel based natural gas vehicles for the indefinite future as a replacement for diesel vehicles. The infrastructure of pipelines and natural gas fueling stations will be expanded because of projects like this. Leakage of methane is abundant throughout the natural gas system from production to pipelines to trucking to end use.

It should be obvious that the use of fossil fuel in internal combustion engines designed for transportation is not part of California's future. This contradiction must be explained.

* * * *

In conclusion, this project should be denied because it will harm air quality in both Missouri and California, threaten water quality in Missouri and the Gulf of Mexico, and fails to consider the full lifecycle emissions of methane production from the hog farm and feedstocks. Furthermore, there is inadequate data to determine the extent to which the project will reduce greenhouse gas emissions and fails to take into consideration how the project will incentivize production and emission of greenhouse gases. Unless and until there is publicly available and verifiable data demonstrating that this project will not produce negative local air and water impacts, and the extent to which this project will actually reduce greenhouse gas emissions that could not otherwise be reduced by other means, CARB must deny this application.

Sincerely,

Phoebe Seaton, Leadership Counsel for Justice and Accountability
Tom Frantz, Association of Irritated Residents
Kevin Hamilton, Central California Asthma Collaborative
Ara Marderosian, Sequoia ForestKeeper
Rebecca Spector, Center for Food Safety
Jim Walsh, Food and Water Watch and Food and Water Action