

December 24, 2019

California Air Resources Board
1001 I Street,
Sacramento, CA 95814

Re: Tier 2 Pathway Application: Application No. B0037; SMUD (S3338)

To Whom It May Concern,

Association of Irrigated Residents, Central California Asthma Collaborative, and Leadership Counsel for Justice and Accountability write in opposition to the dairy waste to energy project proposed by Sacramento Municipal Utility District (SMUD) and Van Warmerdam Dairy Farm for California Dairy Manure Biogas to Low-CI Electricity for four primary reasons: (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 air pollution and threatens water quality in the locality and region, thus undermining the state's climate, environmental justice, and equity goals, (3) it appears that the GHG calculations ignore the GHG emissions from the production and management of methane on dairies, and (4) this project will actually incentivize the production of methane.

Lack of Available Information and Data Transparency

The applicants and / or the California Air Resources Control Board (CARB) withheld and redacted information regarding both dairy operations (including herd size, amount of manure managed) and energy generation (including biogas conditioning, and kilowatts produced) 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 the public's 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.

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forage crops at Van Warmerdam farm.

Biogas cleaning or treatment description: Biogas clean-up at Van Warmerdam dairy digester uses two systems to remove hydrogen sulfide (H₂S) from the biogas.

[REDACTED]

The total volumetric flow in standard cubic feet (SCF) of biogas combusted was recorded each day using a

[REDACTED]

[REDACTED] MEW measured and recorded the biogas production data shown in Table 1 below in Data Sources and Pathway Inputs Section.

3. Fuel Phase (Electricity)

The biogas is conveyed underground from the covered lagoon digester to fuel the engine generator system to generate electricity (as fuel for GREET 3.0 Model) and charge electric vehicles in SMUD Region, as described below.

Engine-Generator Description: The engine generator chosen for Warmerdam is

[REDACTED]

Heat Recovery Description: The genset recovers heat from three sources at Warmerdam dairy digester system.

[REDACTED]

The materials available for review also leave out critical information regarding the demand for generated electricity for vehicles taking into consideration other sources of electricity.

Additionally, CARB withheld the following information, alleging that they contain confidential business information: Attestation Letter, Utilities Invoices and Electricity Bills, 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.

Air and Water Quality Impacts

This project will threaten environmental degradation in the local community and throughout the region due to increased air pollution and groundwater contamination. This project, by generating methane and then combusting methane to produce electricity will

create NOx. Furthermore, due to the information redacted in the application and supporting paperwork, it is impossible to understand the scope and severity of the air quality impacts of this project. NOx is key to ozone formation in the warm months and similarly catalytic in the formation of PM2.5 in the cooler months. Reducing NOx emissions in the Sacramento Valley is key to the Valley reaching compliance with the federal clean air standards and protecting the health of the region. Additionally, studies find that manure exiting a digester emits as much as 81% more ammonia than raw manure. Increased ammonia together with increases in NOx creates an even more intensive ammonium nitrate PM 2.5 impact.

This project, because it will worsen local air quality, is in conflict with the language of AB32 which, in summary, says that efforts to reduce GHG emissions should not compromise or conflict with efforts to reduce air pollution. Additionally, this project and similar projects undermines the state's efforts to make truly clean, zero emissions electricity available to the public. We have access – and can increase access – to zero emission electricity sources, including wind and solar for electric. There is simply no need to generate polluting electricity when other sources are available and expanding.

Large scale dairies are a primary contributor to groundwater contamination crisis communities throughout the Central Valley are facing. Cow manure, and in particular liquefied manure applied to cropland, contributes nitrate to groundwater, which impacts the health and economic well-being of residents and communities in nearby towns and cities. Digesters, like the digester at issue in this application, rely on manufactured, liquefied manure that is so deleterious to the environment and nearby communities to generate profits through energy production. As no information is available with respect to herd size, volume of liquefied manure produced, or application of manure applied to land, it is impossible to know the extent to which this project could exacerbate the quality of already very polluted water.

Incomplete GHG Analysis

Similarly, the calculation of GHG emissions and alleged reductions ignore the GHG emissions of manure production. The GHG emissions from the dairy—including methane released from manure, enteric emissions, and other dairy operations—are not regulated. Therefore, these emissions must be calculated and applied to the lifecycle GHG analysis for this project.

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 dairies are making manure and waste management decisions to increase methane production – such as increasing herd size to increase manure production, opting out of solid separation to increase methane, 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 – Van Warmerdam Dairy Farm should not reap the benefits of the LFCS program, designed to reduce greenhouse gases, instead of incentivize production thereof.

* * * *

In conclusion, this project should be denied because it will harm local air quality, threaten water quality, and fails to consider the full lifecycle emissions of methane production from dairies. 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, this project will reduce greenhouse gas emissions that could not otherwise be reduced, CARB must deny this application.

Sincerely,

Phoebe Seaton, Leadership Counsel for Justice and Accountability
Tom Frantz, Association of Irrigated Residents
Kevin Hamilton, Central California Asthma Collaborative