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May 23, 2023

California Department of Food and Agriculture Dairy Digester Research & Development Program 1220 N Street Sacramento, CA 95814

Re: CALBIO'S COMMENTS ON THE 2023 CDFA DDRDP REQUEST FOR GRANT APPLICATIONS

Dear DDRDP team:

California Bioenergy LLC (CalBio) would like to thank CDFA for the opportunity to submit comments on the DDRDP 2023 Request for Grant Applications (RGA). Please see our comments below:

I. <u>Exclusions for Projects Which Undergo a Change in Ownership</u>

On page 7 of the RGA, it states:

"Once a project has been submitted to the DDRDP electronic application submission platform and awarded funds, the project may not:

• Change ownership of the dairy and/or partnership entities. Should the grantee sell the dairy operation that was the subject of a grant award, the grant agreement will be canceled and all grant monies awarded shall be returned to the CDFA."

CalBio would like to point out that there could be a number of reasons why a dairy may undergo an ownership change or legal restructuring which should not automatically disqualify the grant. For instance, there could be a death in the family which prompts the assets of the dairy to transfer from one individual or legal entity to another. Similarly, the dairy entity could be placed under the name of a newly formed trust or restructured in such a way where there is no material impact to the financial stability of the dairy. CDFA should consider revising the language to state (a) that should an ownership change within the family, the grant would not terminate and (b) that in other situtations, CDFA has the ability, but not the obligation, to terminate the grant.

II. Requirements for Demonstrating Progress

On the top of page 10 in the RGA, the following language was added:

California Bioenergy LLC Page 1 of 3

Additionally, grant applicants are also required to demonstrate progress within twelve (12) months by securing matching funding, ordering related supplies/equipment, submitting invoices to CDFA for reimbursement, providing proof of matching costs expenditures, obtaining all necessary permits, and getting the dairy operation ground ready for the implementation of the project. Failure to demonstrate progress in the activities mentioned above may result in termination of the grant agreement.

CalBio supports the concept proposed by CDFA which is to ensure the applicant is making progress towards completion of the project. However, CalBio believes that this language needs to be clarified to reduce ambiguity and projects from being terminated unnecessarily while at the same time achieving certain relevant milestones. Please see proposed revisions to language and explanation below:

Additionally, grant applicants are also required to demonstrate progress within twelve (12) eighteen (18) months by securing matching funding, ordering at least one related supplies/equipment, submitting at least one invoices to CDFA for reimbursement, providing proof of matching costs expenditures, obtaining all necessary planning permits, and getting the dairy operation ground ready for the implementation of the project. Failure to demonstrate progress in the activities mentioned above may result in termination of the grant agreement.

- 1. The language as currently written could be interpreted such that <u>all</u> supplies/equipment and <u>all</u> invoices must be submitted to CDFA within 12-months of the execution of the grant agreement. This is not practical as equipment is ordered and invoices are submitted throughout the project term as the project is developed and built. CalBio proposes modifying this language to state that at least some equipment is ordered and one invoice is submitted to CDFA to meet this requirement. An alternative would be a defined minimum dollar spend.
- 2. The language as written states that all necessary permits need to be obtained within 12-months of the execution of the grant agreement. This too is impractical as many permits (for instance building permits or the permit-to-fill the digester) can only be obtained well into the construction period which happens at a later date. CalBio has proposed clarifying this to specify that planning permits are required to be obtained. Planning permits, also known as discretionary permits, are applied through the relevant county where the project is located and are necessary to demonstrate CEQA compliance. Other permits approvals such as the "Authority to Construct" (Air District) and updates to the Waste Management Plan (Water Board) are dependent on CEQA approval and are processed according to the timelines and resources available to these state agencies which are outside of the applicant's control. CDFA should further clarify which specific permits are needed to demonstrate sufficient progress within the specified timeframe and work with applicants to ensure the timelines are reasonable.
- 3. Lastly, it should be noted that securing matching funding has become increasingly challenging as the credit values in the state's Low Carbon Fuel Standard program have declined substantially. Additionally, the signal that the state is considering eliminating avoided methane crediting is creating hesitancy from capital providers to provide funding. These and other factors expressed above which are outside the applicant's

CalBio Comments on the 2023 DDRDP Request for Grant Applications

control may also prohibit ground preparation work from occurring within the specified time period. As a result, CalBio is requesting the timeline to demonstrate progress be extended to 18 months.

Thank you for the time and consideration in reviewing these comments.

Sincerely,

Andrew Craig

California Bioenergy LLC

Vice President, GHG Programs



May 23, 2023

Leadership Counsel for Justice and Accountability (LCJA) submits these comments to express grave concerns with CDFA's continued incentivization of dairy digesters, a false solution that perpetuates and exacerbates pollution in nearby communities.

LCJA works alongside the most impacted communities in the San Joaquin and Eastern Coachella Valleys. In particular, we work alongside residents who live near the largest dairies in the state, and by extension, some of the largest dairies in the country. They live with the daily impacts on their quality of life and their health. These industrial operations contaminate their drinking water and the air they breathe. They stay inside with the windows shut to avoid the deluge of odor and flies surrounding their community.

Digesters have not addressed these impacts. In fact, in many ways they have made the problem worse. Digesters do not address any of the pollution or nuisance impacts from industrial dairies. The facilities continue to pollute the air and water of nearby communities. Residents who live near digesters report continuing and even worsening odors from a dairy after it installs a digester. It is unconscionable that CDFA does not require ongoing demonstration from projects of no impact to air or water quality.

CDFA vastly overstates the purported climate benefit of digesters. First, the modeling presupposes the most GHG intensive herd and manure management practices, including an open liquid manure cesspool, as the baseline. Any capture above that is considered GHG emission reductions, even other, less GHG intensive management practices are available. Second, this accounting does not consider the full lifecycle of emissions, including feed, enteric emissions, and post-digestion emissions. Finally, DDRDP claims all of the supposed methane emission reductions from facilities that received funding. However, these same reductions are being claimed by CARB, the CPUC, the CEC, and the Aliso Canyon Mitigation fund. This undermines CDFA's assertion that its investment is an effective or cost effective climate investment.

CDFA now proposes two alarming expansions of investments in this false solution. First, it would be a mistake to fund digesters on dairies that have received AMMP funding. Public funds have already paid for interventions aimed at methane reductions and sustainable and

environmental herd management practices. CDFA must not encourage these facilities to maintain wet manure storage, which produces methane emissions and pollutes groundwater. These layered investments disproportionately benefit the largest dairies that can afford and accommodate both AMMP and DDRDP projects.

Second, the new Dairy Plus program would provide federal investments to reduce nitrate and methane pollution. LCJA takes no position on the efficacy of the interventions. We do, however, question the funding model CDFA proposes. California dairies already have an existing regulatory mandate to stop polluting groundwater with nitrates. They are failing to meet this mandate because they concentrate their herds and manure in order to maximize profits through multiple revenue streams: milk, gas, and LCFS credits. California dairies already have the ability to stop causing and contributing to nitrate contamination through improved management practices, bringing herd sizes into balance with available cropland on which to dispose resulting nitrogen, lining lagoons and corral areas, denitrification through vermifiltration and other methods, and by reducing nitrogen applications to cropland such that applications to not exceed the crop's ability to remove the nitrogen. While the draft Dairy Plus guidelines propose to incentivize some of these management practices, there is no need to incentivize pollution control activities that are already required under applicable waste discharge requirements issued and enforced by the Central Valley Regional Water Quality Control Board.

This is not the first time that we have raised these issues. As one example, attached please find comments regarding the Dairy Digester Research and Development Program that we submitted on October 16, 2019. In these comments, we noted that:

"The DDRDP is based on a false premise that by capturing methane from cow manure produced by large, industrial dairies with extremely expensive technology, the State will curb greenhouse gas emissions and help dairy farmers remain in business, all while benefiting local communities. Unfortunately, this premise is misleading and taking California down the wrong path."

Unfortunately, CDFA chose to ignore these comments in 2019. We submit these comments to again raise the alarm that using public funds in the way that CDFA proposes will continue to perpetuate pollution in nearby disadvantaged communities. We urge CDFA to reconsider its approach. This is an opportunity to refocus on the agency's mandate to transition agricultural producers toward practices that steward the land, air, water, and climate that we all share.

Jamie Katz Staff Attorney Leadership Counsel for Justice and Accountability







Via Email: cdfa.oefi@cdfa.ca.gov

California Department of Food and Agriculture

Attn: Secretary Karen Ross

1220 N Street,

Sacramento, CA 95814

October 16, 2019

Re: California Department of Food and Agriculture Dairy Digester Research and Development Program

Dear Secretary Ross,

We, the undersigned organizations, are deeply committed to tackling our state's climate crisis, while simultaneously improving air and water quality throughout the state. We envision and support investments, programs, and policies that create environmentally sustainable and just agricultural systems and truly clean energy solutions. We write in response to a recent request for comments on the Dairy Digester Research and Development Program (DDRDP), which misses the mark by instead doubling down on the problem of intense consolidation in the dairy industry that has contributed to harmful local impacts, and will delay a transition away from dirty energy. CDFA should support manure management practices for dairies that shift farmers away from the dependence on extremely high herd densities, which cause manure excess and result in over-application on cropland. The agency should additionally ensure that dairy farms receiving State funds meet water and air quality standards as a prerequisite. A holistic approach to manure management that accounts for methane, groundwater quality, and air quality is desperately needed.

The largest dairies in the state are concentrated in the Central Valley, which suffers from widespread groundwater contamination, poor air quality, heavy truck traffic, and high rates of asthma, among several other chronic and acute health vulnerabilities. Large industrial dairies contribute to these problems. These operations result in nitrate contamination in groundwater and produce air contamination beyond methane, that have local and basin-wide impacts. In the San Joaquin Valley, dairies are the largest source of ammonia, which is both a toxic air contaminant and a main precursor to fine particle pollution, and also a significant source of smog-forming volatile organic compounds (VOCs)¹. A recent report on nitrate impacts from

¹ San Joaquin Valley Air Pollution Control District. (Feb 2012). "Air Pollution Control Officer's Revision of the Dairy VOC Emission Factors."

https://www.valleyair.org/busind/pto/emission_factors/2012-Final-Dairy-EE-Report/FinalDairyEFReport(2-23-12).pdf (p. 7)





Central Valley dairies documents elevated nitrogen concentrations beneath all dairies participating in the dairy representative monitoring program and notes significant nitrogen contamination of both deep and shallow groundwater under dairies².

Dairy digesters do not address the dairy's contribution to air pollution and water contamination, which result in large part from dairy operations beyond manure lagoons; for example, contamination from land application of manure, silage, pre- and post-digester management of manure, and dust generally all contribute to local pollution. Approximately 96% of nitrate contamination is caused by nitrogen applied to cropland, 33% of which is from animal manure applications³. Similarly, digesters do not eliminate the noxious odors that impact nearby neighborhoods. Furthermore, digesters do nothing to address the massive climate impacts of enteric emissions which account for about half of the methane emissions from dairies⁴. In fact, digesters likely have a deleterious impact on the local environment by encouraging increased herd sizes to generate greater revenue from energy production and by incentivizing greater concentration of dairies around energy infrastructure. Concentrating cows and their waste will only increase the air, odor, and water impacts from dairies.

While we appreciate CDFA's consideration of incorporating programs and projects to reduce nitrate contamination of groundwater into the digester program, we cannot support an approach to this issue that relies on subsidizing dairies that continue to pollute the air and water. The dairy industry must be accountable to existing water and air quality regulations, and paying dairies to do so sends an inappropriate signal: that failing to protect water and air quality will be rewarded by State investments. Instead of paying dairies to comply with climate, air and water quality mandates, compliance should be a precondition for receiving funding from the State.

The State should refrain from putting more and more financial resources into operations in the form of dairy digesters, with no clear evidence of the benefits to disadvantaged, nearby communities. Awarded projects in the past were deemed beneficial to disadvantaged communities despite applicants' failure to demonstrate any meaningful or verifiable benefits to disadvantaged neighborhoods. While applicants for funding assistance for digesters through the DDRDP are required to demonstrate benefits to disadvantaged communities, these applications do not point to any direct reductions in air pollution from dairies as a result of digester

² Central Valley Dairy Representative Monitoring Program. 2019. Summary Representative Monitoring Report (Revised). April 19, 2019

³ Harter, Thomas. Addressing Nitrate in California's Drinking Water With a Focus on Tulare Lake Basin and Salinas Valley Groundwater Report for the State Water Resources Control Board Report to the Legislature. Feb 2012.

http://watermanagement.ucdavis.edu/files/2214/5886/6964/Harter_et_al._2012_Addressing_Nitrate_in_C A Drinking Water.pdf page 3

⁴CA Air Resource Board. (2019). GHG Current California Emission Inventory Data, https://ww2.arb.ca.gov/ghg-inventory-data







installation and operation. Instead, we find that existing DDRDP applicants rely on the purported air quality improvements from the use of biomethane to replace diesel in trucks. Unfortunately, this relies on several unsupported assumptions: that these vehicles would not transition away from diesel without the digester project, that diesel replacement is based on sure contracts with fleet operators, and that the diesel emissions reductions will take place locally. We remain deeply concerned that the most recently awarded 2019 projects will follow in the same footsteps, without any demonstrable contribution to the environmental, social, and economic wellbeing of nearby residents.

The State has invested hundreds of millions of dollars in the development of dairy digesters that will create new revenue streams in the form of gas sales and credits (e.g. Low Carbon Fuel Standard Credits) for the largest, most intensively polluting dairy farms, while the vast majority of smaller dairies are left out of both the investments and the resulting revenue streams. Biomethane production depends on massive operations and only makes sense for dairies that produce large amounts of manure handled through wet storage lagoons. Based on our estimates from the information that we have been able to obtain, dairies that received funding for digester awards averaged ~7,000 cows, though this number could be higher as data has not been made easily available to the public. By further incentivizing methane creation, biomethane production, and markets for biogas, the State is choosing winners and losers: large industrial dairies as winners, and smaller dairies as losers. From an environmental and environmental justice perspective, investments in digesters will have the perverse effect of further intensifying herd densities, further solidifying the unsustainable practice of lagoon manure management, and driving small family owned operations out of business.

Not only are the State's investments into dairy digesters only accessible to the largest dairies in the state, they are also concentrated among only two digester developer companies, California Bioenergy LLC (CalBio) of Dallas, Texas and Maas Energy Works, Inc. (Maas Energy) of Redding, California. These two developers have received all but one of the 62 California DDRDP awards in 2017 and 2018, and 100% of the funding, and have captured 100% of the funds for DDRDP's 2019 awards.⁵

Furthermore and despite misleading statements to the contrary, biomethane is not a clean fuel.⁶ Burning manure-produced gas emits the same air contaminants as the combustion of fossil gas. Moreover, biomethane production costs are too high, and the supply is too constrained, for it to be a sustainable or financially feasible long-term solution. Even in the most optimistic

⁵ CDFA. 2019 Dairy Digester Research and Development Program Projects Selected for Award of Funds. https://www.cdfa.ca.gov/oefi/ddrdp/docs/2019-DDRDP_ApplicationsAwarded.pdf

⁶ Food and Water Watch. Issue Brief: Biogas From Factory Farm Waste Has No Place in a Clean Energy Future

https://www.foodandwaterwatch.org/insight/biogas-factory-farm-waste-has-no-place-clean-energy-future





renewable gas scenarios, pipeline gas blends would remain 56% fossil in 2050.⁷ Subsidizing the production of biomethane on the backs of rate-payers and tax-payers locks California into maintaining a costly gas distribution system that the State must transition away from to meet its climate goals and protect consumers.⁸

The DDRDP is based on a false premise that by capturing methane from cow manure produced by large, industrial dairies with extremely expensive technology, the State will curb greenhouse gas emissions and help dairy farmers remain in business, all while benefiting local communities. Unfortunately, this premise is misleading and taking California down the wrong path. CDFA should focus instead on ways of helping the dairy industry reverse the trends that have caused severe pollution and economic challenges that will only become increasingly unsustainable in the long term.

Sincerely,

Leadership Counsel for Justice & Accountability

Kevin Hamilton

Allen Hernandez
Executive Director

Erica Martinez
Earthjustice

Genevieve Gale
Executive Director
Central Valley Air Quality (CVAQ) Coalition

Rebecca Spector West Coast Director

⁷ Energy and Environmental Economics, Draft Results: Future of Natural Gas Distribution in California (Slide 15)

https://ww2.energy.ca.gov/research/notices/2019-06-06_workshop/2019-06-06_Future_of_Gas_Distribution.pdf

⁸ Energy and Environmental Economics, Draft Results: Future of Natural Gas Distribution in California (Slide 6)

 $https://ww2.energy.ca.gov/research/notices/2019-06-06_workshop/2019-06-06_Future_of_Gas_Distribution.pdf$





Center for Food Safety



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May 23, 2023

TO: cdfa.oefi_ddrdp_tech@cdfa.ca.gov.

Re: Biofiltro's comments on the draft 2023 DIGESTER RESEARCH AND DEVELOPMENT PROGRAM Request for Grant Applications (RGA).

Biofiltro (<u>www.biofiltro.com</u>) appreciates the opportunity to comment on the CDFA OEFI "**2023 DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM.**"

Biofiltro offers a greenhouse gas (GHG) reduction, water filtration, and nutrient capture vermifiltration system that provides the environmental benefits sought by the dairy industry and the State of California. Biofiltro vermifiltration technology is complementary to dairy digesters in achieving the goals set forth in the DDRDP. It reduces not only emissions of methane (CH₄) but also of ammonia (NH₃) and nitrous oxide (N₂O). It removes nutrients from wastewater, including otherwise fugitive nitrogen, reduces odors, and produces reusable water and a highly biologically active product well suited as a fertilizer replacement and soil health amendment.

On page 9, the draft states, "the DDRDP will support the implementation of dairy digester projects on California dairy operations that result in permanent, annual, and measurable GHG emission reductions."

The IPCC assigns to manure management not only CH_4 but also N_2O emissions, which are based on the N content of the manure. Therefore, a "measurable GHG emissions reduction" would be the net effect of a project on both CH_4 and N_2O emissions. However, currently DDRDP and quantification tool don't include N_2O impacts.

Even if the IPCC guidelines specify that the anaerobic lagoons do not emit direct N_2O , they cause NH_3 emissions, which affect air quality and cause indirect N_2O emissions. In addition, applying lagoon water to crop fields causes direct and indirect N_2O emissions. Currently, in the DDRDP quantification tool, NH_3 is not included as a co-benefit, even if IPCC assessed that up to 80% of the N can be lost in anaerobic lagoons, and digesters will most likely not reduce these emissions. The effects of a digester on NH_3 and N_2O emissions will depend on if a cover is used on the digester and effluent pond and the irrigation methods used for land application. Projects can affect these emissions in different ways. Therefore, the project co-benefits should include positive and negative effects on nutrients, and NH_3 and N_2O emissions.

CDFA is a critical contributor to the *Dairy Plus* program, which aims to remove GHG and nitrogen from liquid manure. However, currently, the DDRDP includes fossil fuels/electricity emissions but excludes the principal, largest, and direct manure N-related losses, which can largely affect air and water quality.

Quantification of the excess nutrients and N_2O and NH_3 emissions that anaerobic lagoons/digesters generate during treatment and land application would help educate dairy operators and other stakeholders on the importance of these losses. This could facilitate and accelerate the adoption of corrections methods, for example, with technologies provided by the Dairy Plus program.

Biofiltro appreciates the opportunity to comment on the draft and looks forward to seeing the implementation of this simple but effective practice/technology to reduce CH₄, N₂O, NH₃, and excess nutrients in California dairies.

Respectfully,

Cheri Harrington, Chief Business Officer



May 23, 2023

California Department of Food and Agriculture Office of Environmental Farming and Innovation 1220 N Street Sacramento, CA 95814

RE: Dairy Digester Research and Development Program Draft Request for Grant Applications - Comments

To Whom It May Concern,

Sustainable Conservation applauds the Department of Food and Agriculture for its work in reducing greenhouse gas emissions by administering the Dairy Digester Research and Development Program (DDRDP). This important funding program provides resources for dairy operations to implement anaerobic dairy digester projects, which are a key element of the state's efforts to reduce harmful greenhouse gas emissions. We support the Department's work in overseeing the next round of funding for this program.

In order for this program to fully achieve its intended purpose and to result in the maximum environmental benefits possible, Sustainable Conservation recommends the following changes to the Draft Request for Grant Applications (Draft RGA):

Attachment 7 (Environmental Performance Template) should include a requirement for a whole-farm nutrient balance plan associated with the project.

UC Davis and the Central Valley Dairies Regional Monitoring Program, among others, have found that over application of manure to cropland is by far the largest source of nitrate leaching from dairies in California. Over application of manure to cropland often occurs when dairies (1) have more manure nutrients than their crops demand and (2) are not able to export those nutrients off-site for beneficial use elsewhere. Therefore, if a dairy has excess nutrients, it needs a robust manure export strategy in order to avoid water quality impacts.

Managing surplus nitrogen is a challenge for many dairies, but the installation of a digester poses an additional challenge for achieving whole-farm nutrient balance. Digesters require dairies to keep manure on-site for energy generation – in many cases a contractual obligation – for 10+ years. And since digestion does not reduce manure nitrogen levels, dairies with surplus manure nutrients that are considering installing digesters must have a robust and reliable manure export strategy for the duration of the digester lifespan. Without such a strategy, the dairy could be locking itself into a water quality dilemma. We have begun to see this with previously funded projects, which are now contending with how to address surplus nitrogen stored as part of these projects.

Requiring an adequate whole-farm nutrient balance plan as part of the DDRDP RGA process would help to ensure that state funds are not being used in a manner that results in water quality



issues. There is no need for greenhouse gas emission reductions to come at the expense of community water supplies; both of these goals can be achieved with our recommended changes.

Water quality impacts should be more explicitly cited in Attachment 7, and should be a separate scoring category in Appendix E.

As discussed above, the storage of on-site manure for anaerobic digester projects can have profound water quality impacts if there is not a clear and adequate plan for achieving whole-farm nutrient balance throughout the lifespan of the digester. There are numerous state efforts underway to address nitrate contamination of groundwater, including Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), the Regional Water Quality Control Boards' Dairy General Orders, the Safe and Affordable Funding for Equity and Resilience (SAFER) program for clean drinking water, and others. State funding initiatives such as DDRDP should be as coordinated as possible with these programs to ensure that monies meant to result in environmental benefits do not unintentionally undermine other environmental protection initiatives.

The Draft RGA does contain language referencing water quality. However, we recommend that descriptions of water quality impacts be more explicitly required in a stand-alone section as part of Attachment 7 of the RGA, just like the "NOx and Criteria Pollutants" section. Additionally, the scoring criteria set forth in Appendix E includes a component for environmental performance. We recommend that the environmental performance section include a specific category and a score for water quality, which is currently relegated to a sub-topic under the project co-benefits category. NOx and Criteria Pollutants rightfully have a score due to the likelihood of those impacts, and water quality is no different. The need to protect our groundwater supplies is recognized throughout state planning efforts and regulatory oversight priorities; we believe that the importance of this issue and risks specific to digesters should also be reflected in the RGA.

If you have any questions about our feedback, please feel free to contact me at 916.469.5159, or cdelgado@suscon.org.

Sincerely,

Charles R. Delgado Policy Director