# DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM

## Request for Grant Applications

## 2015

Release Date: January 12, 2015

Applications Due: February 23, 2015 5:00 p.m. PST

*Late submissions will not be accepted.*

www.cdfa.ca.gov/go/dd

# Contents

# I. Background and Purpose

The California Department of Food and Agriculture (CDFA) is pleased to announce a competitive grant application process for the 2015 Dairy Digester Research and Development Program (DDRDP).

CDFA received funding from the Greenhouse Gas Reduction Fund to administer the DDRDP to support projects that reduce greenhouse gas emissions by capturing methane on California dairy operations.

The DDRDP was authorized by the Budget Act of 2014 (Chapter 25, Statutes of 2014). CDFA was appropriated $12 million from the Greenhouse Gas Reduction Fund to provide financial assistance for the implementation of dairy digesters in California.

# II. Funding and Duration

CDFA will award up to $11.1 million in competitive grants to California dairy operations and digester developers for the implementation of dairy digesters to promote methane greenhouse gas emission reductions in the agriculture sector. CDFA will fund up to 50% of the total project cost with a maximum grant award of $3 million per project. The maximum project term is two (2) years and grant funds cannot be expended before July 1, 2015, or after June 30, 2017. CDFA may offer an award different than the amount requested.

# III. Eligibility

The project site must be located on a California dairy operation. For purposes of this program, a *dairy operation* is defined as an entity that operates a dairy herd, which produces milk or cream commercially, and whose bulk milk or bulk cream is received or handled by any distributor, manufacturer, or any nonprofit cooperative association of dairy producers. Existing milk producers and dairy digester developers are eligible for this program.

An applicant can submit multiple grant applications; however, each grant application must represent an individual digester project at a unique project site i.e. dairy operation.

A group of dairy operations can submit one grant application to develop centralized dairy digesters, known as a “cluster” or “hub and spoke” project.

Defunct digesters that were constructed in the past and have become entirely non-functional, or never became functional since their construction, due to technical or other (e.g. regulatory) issues are eligible for this program.

# IV. Timeline

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| **January 12, 2015** | Invitation to submit Grant Applications |
| **January 21, 2015** | Application Workshop I (Tulare) |
| **January 27, 2015** | Application Workshop Webinar |
| **January 28, 2015** | Application Workshop II (Sacramento) |
| **February 23, 2015, 5:00 pm PST** | Grant Applications Due |
| **March/April 2015** | Technical Review Process |
| **May/June 2015** | Announce and Award Funding |

# V. Project Requirements

## A. Program Requirements

The DDRDP will support implementation of dairy digester projects on California dairy operations that result in permanent, annual, and measurable greenhouse gas emission reductions.

DDRDP grant funds ***cannot*** be used for upgrades to existing, functional dairy digesters to boost emission reductions and energy production.

DDRDP grant funds ***cannot*** be used to fund projects on dairy operations that propose to switch existing management practices to practices that increase baseline greenhouse gas emissions (e.g. from dry scrape to flush lagoon systems).

Projects must use methane for energy production or transportation fuel (i.e. compressed natural gas) with no more than 20% flared on an annual basis. Projects must either convert bio-methane to renewable electricity, or transportation fuel (i.e. renewable natural gas, RNG, or renewable compressed natural gas, RCNG), to use on-site or inject into an existing pipeline.

At least 80% or more dry weight of the feedstock for anaerobic digestion must be manure from dairy livestock. Other substrates, such as dairy processing wastes including whey, other agricultural waste, etc. can be added to the feedstock to up to 20% dry weight. Applicants must provide details regarding the nature and sources of all co-substrates.

Grant recipients will be required to submit quarterly status reports to CDFA explaining in detail the project progress. Recipients must also report their annual greenhouse gas emissions reduction data to CDFA for 10 years after the end of the project term and the digester is operational. Details of reporting requirements will be provided to grant recipients at the time of award.

## B. CEQA and Permits

CDFA's intent is to fund projects that can demonstrate "shovel readiness." Shovel readiness will be evaluated based on evidence of readiness by applicants. Evidence includes, but is not limited to, list of permits already obtained provided and details of process required to obtain remaining permits clearly outlined using Attachment 7, Appendix A: Permit Check List. Grant recipients are expected to declare compliance with all state and federal laws and regulations.

## C. Project Technology

Project must use commercially-available technologies. For purposes of this program, c*ommercially-available technologies* are defined as having a proven operating history specific to the grant application. Such a system is based on established design and installation procedures and practices. Professional service providers, traders, large construction equipment providers, and labor are familiar with installation procedures and practices. Please refer to Key Terms (Appendix C) for a detailed definition of 'commercially-available' as applicable to this program

DDRDP grant funds ***cannot*** be used for pre-commercial or new technology development. For purpose of this program, *pre-commercial technologies* are defined as new technologies or enhancements of existing technologies that are not commercially-available in California.

## D. Greenhouse Gas Emissions Reduction Calculations

Applicants are required to use California Air Resources Board (CARB) Compliance Offset Protocol – Livestock Projects to determine baseline greenhouse gas emissions and projected reductions for projects. The protocol can be found at CARB's website, http://www.arb.ca.gov/cc/capandtrade/protocols/livestock/livestock.htm.

Applicants are required to provide greenhouse gas calculations in the following three formats: (i) total annual GHG emission reduction; (ii) GHG reduction per unit of energy-corrected milk (ECM) produced by the dairy operation; and (iii) GHG reduction per dollar CDFA grant money invested.

See Appendix A, Attachment 5: Greenhouse Gas Emissions Reductions for detailed information on greenhouse gas calculation requirements and ECM calculations.

## E. Environmental (Water and Air Quality) Protection

Projects shall demonstrate protection of water and air quality. Accordingly, the design and construction of digester vessels (i.e. ponds and tanks) under this program shall be demonstrated to be protective of surface and ground water quality. To meet water quality requirements, one of the following is required: (i) double–lined ponds consistent with the Tier 1 specification of the Dairy General Order (R5-2013-0122) of the Central Valley Regional Water Quality Control Board, (ii) above-ground concrete tank, or, (iii) below-grade concrete lined tank. (See Additional Guidance for detailed information regarding water quality requirements).

In addition, the digester system design, construction, and operation must minimize emission of air pollutants. For power production projects, the total NOx (mono-nitrogen oxides) emissions must be no greater than 0.50 lb/ MW-hr.

## F. Matching Funds

CDFA will fund up to 50% of the total project costs up to $3 million, of which 25% can include in-kind contributions. Grant recipients shall report matching funds contributions contributed to the project and ability to commence work while waiting for grant payments in arrears.

*Matching funds* are defined as a portion of project costs not borne by the funding source. Matching contributions include allowable costs (i.e. supplies and materials, equipment, and contractor/consultant fees, and other associated project costs) incurred that are directly related to the implementation of the digester.

*In-kind contributions* are defined as donated goods or services for which fees would ordinarily be paid or provided to the applicant at no cash cost. Donated goods and services must be necessary to the project to be considered in-kind (i.e. goods/services would be purchased, if not donated). For professional donated services, the professional donating the service must be licensed to work in that profession and value their service at the same rate at which an ordinary professional with the same expertise and training would charge for the same or similar service.

In-kind contributions include contributions in the form of labor for project installation, pre-development activities conducted prior to the proposed project term that contributed to the project's "shovel-readiness" (i.e. pre-development activities such as permits, project design, etc).

Activities funded under the DDRDP cannot duplicate tasks of the project work plan funded by another Federal or State program. If other Federal or State funding sources have been secured, applicants must describe how the DDRDP project differs from the other Federal or State grant program(s) rather than duplicates funding efforts. In addition, applications must identify the Federal or State grant program(s), Federal and State agency administering the program(s), and the amount(s) of grant funds awarded. At any time an applicant is awarded funds from another

Federal, State, or other grant program, it is the responsibility of the applicant to notify CDFA immediately.

Applicants shall provide the contribution source, type, and amount of contributions in support of the project.

Grant recipients will be required to expend matching funds committed to the project throughout the project term. If matching funds are not expended at a rate consistent with grant funds, CDFA will withhold grant funds until matching funds are expended at a consistent rate.

## G. Allowable Costs

Project costs must clearly support the implementation of the digester, including, but not limited to: supplies and materials, equipment, contractors/consultants, and other costs associated with project implementation.

*Supplies and materials:* Supplies and materials are items with an acquisition cost under $5,000 per unit and have a useful life of less than one year.

*Equipment:* Equipment is an article of nonexpendable, tangible personal property and has a useful life of more than one year, and a purchase cost which equals or exceeds $5,000 per unit.

*Contractor/Consultant:* Contractor fees are for labor to install the project. Consultant fees are for a specific and identifiable service that is directly related to project implementation.

Design and engineering cost up to 5% of the total amount requested are allowable.

*Other Costs*: Other costs and general expenses not covered in any of the previous categories.

*NOTE: Compensation for individual contractor/consultant fees must be reasonable and consistent with fees in the marketplace for the same or similar services.*

## H. Unallowable Costs

The following costs are ***not*** allowed:

- DDRDP grant funds may not be used to reimburse applicants for costs incurred outside of the proposed project period.
- Costs currently covered by another Federal or State grant program.
- Pre-development costs, including, but not limited to: permits, project designs, and any other activities that contributed to a project's "shovel-readiness."
- Costs associated with environmental review required for project permits, including preparation of Environmental Impact Reports.

- Expenditures for purchasing or leasing land or buildings.
- Purchase of dairy manure (tipping fees) or other feedstocks.
- Costs associated with the 10-year greenhouse gas emissions reductions reporting.

# VI. Application Procedures

## Application Process

Grant applications must be uploaded electronically at the CDFA Grant Proposal Upload webpage, https://secure.cdfa.ca.gov/egov/upload/ by February 23, 2015 at 5:00 p.m. PST.

In order to submit a grant application, applicants must email CDFA at grants@cdfa.ca.gov to request login information for an account. CDFA will provide applicants a login account within 2 business days. Once the login account is received, applicants can upload all required forms and attachments to the submission website. ***All required forms, attachments and supporting documents must be combined into a single PDF file (not exceeding 1.9 GB), which will become the entire grant application.*** The grant application (PDF) file must be uploaded using the following name format (without the square brackets):

[dairy operation name]_[last 4 of taxID]

The grant application file name format outlined above will be used to identify each grant application during the solicitation process. Therefore, all pages within the grant application must also contain the file name in the top right corner. CDFA will send applicants a notification email to confirm grant applications were received within 2 business days.

CDFA will only consider a grant application complete, if all application components are included in the single PDF file. All forms and attachments must be completed using Times New Roman font, size 11, single-spaced with 1-inch margins. All pages must be numbered on the bottom right corner. Applicants must adhere to maximum page-limits for each of the application components indicated in their corresponding sections.

The Application Check List and the Cover Sheet **must** be signed by an authorized representative of the applicant's organization.

If additional pages are needed with the application attachments (see Appendix A), the format of the template document must be followed. Other supplemental documents (e.g. permits, letters of support, resumes, etc.) must be provided in a legible format attached to the grant application file.

In case an application is submitted more than once before the close of submission deadline, the last version (i.e. most recent) submitted will be considered final.

# Application Sections

## A. Cover Page

Applicants are required to complete and sign the Cover Page (Appendix A, Attachment 1).

## B. Application Check List

To facilitate effective and accurate submission of grant applications, applicants are required to complete and sign the Application Check List (Appendix A, Attachment 2).

## C. Project Narrative

### *1. Project Abstract*

Applicants shall provide a brief summary of the overall project not to exceed 250 words using non-technical terms.

### *2. Executive Summary*

Applicants shall provide a two (2) page executive summary of the overall project. The executive summary must include: (i) a project description; (ii) the project goals and objectives to be achieved; (iii) an explanation of how the goals and objectives will be achieved, quantified, and measured; and, (iv) a description of the project tasks and overall management of the project.

### *3. Project Proposal*

Applicants shall provide a thirty (30) page (maximum, not including supplemental documents e.g. design plans, letters of support, etc.) detailed description of the entirety of the proposed project, addressing, at a minimum, the following aspects of their planned operation outlined below.

### *A. Feasibility of the Digester Project*

#### A. (i) Project Implementation Plan

Provide a detailed explanation of the following items listed below for the project:

i. Demonstrate Site Control: Dairy digester developers proposing installation on a dairy site must demonstrate legal control of the site. Is there a lease agreement in place? Please provide a copy. If not, please discuss plans on finalizing contractual arrangements with a dairy operation. Owners of the dairy operation must submit a

copy of their deed if they are the primary applicant.Will project be located and serve one location or multiple locations (i.e. cluster projects)?

ii. Provide the details of the history and background of the dairy operation. Provide herd size and breed, including average number of lactating cows, dry cows, replacement calves, replacement heifers and any other livestock at your operation. Explain your current management practices in detail, including a description of lagoon(s) size (depth and volume) if currently using lagoon storage, parlor water use, bedding type, method and frequency of manure collection including percent of manure collected from each production group (i.e. lactating cows, heifers etc.). Include a schematic diagram showing total solids flows into and lost from the manure treatment system. Provide details of quantity, location and source of manure and other materials (if any) digested, and quantify minimum daily total solids loads needed for the system to operate optimally. Explain if your facility will be able to guarantee the minimum feedstock needed for the digester project, and how manure will be handled when the system is not operational.

In case of a defunct digester, provide the history and background of the installed digester. Include information requested above in addition to: the funding source(s) for past construction, reasons for digester becoming non-functional and current strategies for management of methane generated in the absence of a functional digester (e.g. release to the atmosphere, flaring, etc.).

iii. Provide details of type of digester planned and technologies proposed for anaerobic digestion. Project design documents, including schematics, figures, graphics and plans, must be submitted as part of the grant application. Project designs must be approved by a licensed professional engineer. Details such as digester volume, solids and hydraulic retention times and mass balance through the digester must be included. Mass balance must be illustrated in an annotated diagram with the following components clearly indicated:

a. Manure input rate (mass or gallons with estimated total solids)

b. Digestate outflow rate (mass or volume with estimated total solids)

c. Expected bio-gas flow with methane content estimate.

iv. Include a plan for renewable power or low-carbon fuels, i.e. your plan for utilization of the methane (bio-gas) produced in the project which will eventually result in destruction of the methane (i.e. emissions reduction). Provide details of the technology(ies) to be employed in your digester facility and for subsequent utilization of captured methane, specifically:

a. The make and model (or energy capacity) of the engine-generator, gas turbine, fuel cell, etc. or gas upgrade system (if product is RNG),

b. The make, model and capacity of the gas cleaning/conditioning system including information of constituents removed (e.g. hydrogen sulfide, carbon dioxide, moisture, etc.),

c. Describe the details of the air pollution control equipment proposed. Will this technology meet local air district rules and the requirements of this program?

d. How much energy product is expected to be produced by the system? Include the kW-h/year estimates for electricity projects and MMBtu per hour and per year of upgraded gas for RNG projects.

e. Is there a plan in place for conditioning of bio-gas and pipeline injection of RNG or use of RNG as transportation fuel?

f. Is a Power Purchase Agreement in place for electric power generation (if yes, provide a copy of agreement of support letter from the utility service as evidence)?

g. Are you proposing any other uses for bio-methane (if yes, please explain)?

v. Provide:

a. Timeline for the project to be operating at full capacity, expected lifetime of the digester, and a clear and concise description of the goals and objectives of the project,

b. Plan for proper use or disposal of the digestate and management of residual materials from pre- and post-digestion processes,

c. Justification for the need for CDFA funding, and an explanation of market viability including target markets, barriers, financial risks, partners, and economic viability with cash-flow projections, and,

d. Details pertaining to ensuring fuel quality and safety of use, and, safety, maintenance and training plan for the project facility and staff.

e. Discuss the potential for replicability of the project.

vi. Describe any potential challenges that applicant foresees to project implementation and provide plans to avoid or overcome them.

vii. Include a minimum of 3 letters in support of project from community organizations and local government agencies on organization letterhead, and attached as PDF to the application. Letters must demonstrate that key community representatives are in favor of project development, and their reservations (if any) have been adequately addressed by the applicant.

### A. (ii) Work Plan

Applicants are required to complete and attach the Work Plan template (Appendix A, Attachment 3) to their application. The work plan must identify measurable targets and timelines along with an evaluation component to measure the success of the project and to determine whether the project objectives were accomplished.

### A. (iii) Long-term Sustainability, Operations and Maintenance Plan

Demonstrate how the operations and maintenance costs of the project will be sustained beyond the project term (i.e. development and construction period ending June 30, 2017), and for the life of the project (minimum expected lifetime of digester projects is 10 years). Explain all ongoing funding sources for the project. List personnel positions assigned to carry out digester operations and maintenance through the life of the project.

Include details of the following:

i. Component Repair/Support (available technicians/repair parts): Examine, compare and describe the availability of required replacement parts and qualified service personnel to keep the system operating as effectively as possible with a minimum amount of downtime for repairs or maintenance.
   Provide information regarding availability of replacement parts and qualified service technicians, the cost of commonly replaced parts/services, and the availability of included maintenance packages.

ii. Component Maintenance: Examine and compare the maintenance requirements of the available internal combustion engine/generator packages, microturbines, fuel cells, FlexEnergy systems, pipeline injection systems, and vehicle fuel production systems. Provide information regarding necessary maintenance intervals, common maintenance requirements, cost of common maintenance parts/fluid replacement, complexity of maintenance, warranty required services, need for technicians to perform maintenance, typical annual maintenance cost, and time required for maintenance tasks.

### A. (iv) Project Personnel

Applicants are required to describe the organizational structure of the project team. Provide a list of team members along with a short description of their qualifications, experience, technical expertise, capabilities and credentials (e.g. a professional resume). This must include at a minimum, project developers, project manager and participating dairy farmer(s). Applicant must identify why this particular team composition and representation will enable successful

implementation of the proposed work plan. Collaboration is encouraged. If a project is being submitted by a project developer, a contractual agreement documenting project support from the dairy producer must be included. Letters of commitment from team members demonstrating understanding of their participation and specific role(s) in the project must also be included. Provide an explanation of how various tasks will be managed and coordinated and how the project manager's technical expertise will help achieve the goals of the project. Describe previous experience of the project team with dairy digesters in California or other parts of the United States.

### *B. Financial Soundness and Budget*

#### B. (i) Financial Soundness

Applicant must provide documentation regarding their organization's financial strength. In case of a partnership, information from all partners is required. This information includes:

- Independent CPA Auditor's Report (preferred).
- Three most recent fiscal year balance sheets.
- Profit/loss statements and federal tax returns.
- Other appropriate documentation that demonstrates your organization's (e.g. Limited Liability Company, LLC) financial stability, such as:
    - Articles of Organization,
    - Operating Agreement,
    - Bank Statements (including those related to operating and payroll), or,
    - General Ledger.

If the project will be a new partnership with little or no history, please submit key financial information from all collaborators (e.g. dairy operators and developer).

Indicate all additional funding sources and ability to commence work while waiting for grant payments in arrears.

Project partners must not have filed for bankruptcy in the past five years.

#### B. (ii) Budget/Cost Summary

Applicants must provide a clear account of project costs associated with all activities necessary to complete the project. All costs must be itemized into categories and consistent with activities included in the Work Plan. Complete and attach the Cost Summary template (Appendix A, Attachment 4) to your application.

### *C. Greenhouse Gas Emissions Reduction Calculation and Reporting*

Applicants must complete and attach the Greenhouse Gas Emissions Reductions template (Appendix A, Attachment 5) to their application. Applicants are required to use the California Air Resources Board Compliance Offset Protocol for Livestock Projects (http://www.arb.ca.gov/regact/2010/capandtrade10/coplivestockfin.pdf) to measure their greenhouse gas emissions data. Applicants must specify the life of the project (minimum 10 years) and how GHG emission reductions will continue to occur over the life of the project and beyond.

### *D. Environmental Benefits*

Environmental benefits from the digester project may include additional protection to air and water quality beyond requirements in the project's regional air and water quality permits, and environmental protection requirements for DDRDP projects. Provide a description of the environmental benefits anticipated from your project, supported by appropriate analyses, citations from published literature, etc. to support your claims.

Some examples of environmental benefits are provided below for your reference:

- NOx reduction via clean flames (for flaring, if any) and clean engines (for energy generation).
- Diesel displacement and reduction in particulate matter by switching the operation's truck fleet to Renewable Natural Gas (RNG).
- Plan to minimize salt concentration in digestate fluid to protect water quality, etc.

Grant awardees will be required to report the environmental benefits achieved as a result of the project in their quarterly reports to CDFA. Details of reporting criteria to grant recipients will be provided upon announcement of grant award.

### *E. Economic Benefits*

Explain the economic benefits and impacts anticipated as a direct result of the project. Discuss locations of created jobs, labor costs and needs (please be consistent with work plan and the budget). In the discussion of economic benefits created, address questions such as, including but not limited to: Number of jobs created? Average wages and benefits to be provided? Duration of new employment? Provide supporting documentation.

Include information about how the project will expand business opportunities for California-based businesses.

Grant awardees will be required to report the economic benefits projected or achieved as a result of the project in their quarterly reports to CDFA.

### *F. Additional Co-Benefits*

Projects that maximize economic benefits of the digesters and reduce waste will receive additional consideration for funding. Innovative benefits, apart from environmental benefits and economic benefits as defined in this solicitation that result in increased efficiency of the dairy digester, reduce waste generated, or bring increased revenue to the operation would be considered as co-benefits. Provide an explanation of co-benefits provided by your project, supported by appropriate analyses, citations from published literature, etc. to support your claims. Examples of co-benefits include ability to use digestate as a fertilizer or soil amendment, alternative uses for excess methane to replace flaring, etc.

Grant awardees will be required to include the co-benefits achieved as a result of the project in their quarterly reports to CDFA. Details of reporting criteria to grant recipients will be provided upon announcement of grant award.

### *G. Benefits to Disadvantaged Communities*

Applicants are required to complete and attach the Economic/Environmental Benefits and Impacts to Disadvantaged Communities template (Appendix A, Attachment 6) to their application. Instructions to determine DAC status with guidelines from the California Air Resources Board and Office of Environmental Health Hazard Assessment's CalEnviroScreen 2.0 tool are provided in the attachment.

### *H. Project Readiness - Regulatory Information, Permits and CEQA*

Applicants must complete and attach to their application the Permit Check List (Appendix A, Attachment 7) and evidence of compliance with all necessary state and federal statutes and regulations. Please see Additional Guidance for resources to assist with the project readiness component.

## VII. Review Process

CDFA's intent is to fund projects that can produce the highest results in permanent annual greenhouse gas reductions from handling dairy waste.

CDFA will conduct two levels of review during the grant application process. The first level of review is an administrative review to determine whether grant application requirements are met.

The second level is an overall and technical review to evaluate the merits of the grant applications based on the scoring criteria. The Technical Advisory Committee will complete the second level review. The Technical Advisory Committee (TAC) is a sub-committee of the California-Federal Dairy Digester Working Group.

In addition, the TAC will review evaluations from experts regarding the greenhouse gas emission reduction calculations and financial soundness components of the grant application. The greenhouse gas emission reductions calculations will be reviewed by several academic experts associated with California universities. CDFA's Audit Office will review the financial information submitted with the grant application, and provide recommendations to the TAC regarding the applicant's financial soundness and credibility.

CDFA will take the necessary precautions to protect confidential and proprietary information provided in the grant application as set forth in Appendix B: Confidential Information.

## Scoring Criteria

CDFA will follow the scoring criteria outlined below during the review process.

| SCORING CRITERIA | MAXIMUM POINTS |
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| **FEASIBILITY OF THE DIGESTER PROJECT** | **20** |
| Addressed all requirements of the feasibility section and work plan including, but not limited to:<br><br>1. Provided details of the technology(ies) to be employed in digester facility and for subsequent utilization of captured methane, e.g. PPA agreement in place, or, steps needed or taken to achieve PPA, plan for RNG pipeline injection, etc.<br><br>2. Tonnes of material digested and details of materials other than dairy manure if included in the project, provided.<br><br>3. Technologies have a track record of success in California and are commercially available in California.<br><br>4. For dairy digester development contracts, provide documentation that demonstrates control of the dairy site.<br><br>5. Guaranteed an adequate amount of feedstock will be provided to make the project feasible through a signed contract, letter of intent, or other documentation which showed the feedstock will be available by the time the project is operational.<br><br>6. Specific list of all grant eligible procedures or tasks used to complete | |

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| project using the Work Plan template provided.<br><br>7. Detailed Work Plan clearly and concisely described the tasks and activities required to achieve the goals/objectives in the proposed project narrative.<br><br>8. Included major work items (e.g., permitting, site planning, engineering, construction, equipment, field supervision, health and safety requirements, testing, bonds, etc.)<br><br>9. Reasonable estimate of projected timeline for the project to be operating at full capacity included.<br><br>10. Demonstrated that all tasks are logical and achievable within the grant term, and with available resources. Identified measurable targets that must be met to accomplish project within the grant timeline, with specific dates for each target.<br><br>11. Included an evaluation component to measure success of the project and to determine whether the goals/objectives were accomplished, and build in measurable milestones and a timeline to complete the evaluation before the grant term expires. Evaluation plan consistent with work plan.<br><br>12. Long term operations and maintenance plan included.<br><br>13. Demonstrated that the applicant (including its contractors) and cooperating organizations have sufficient staff resources, technical expertise, and experience to successfully complete the proposed project. Provided resumes of key project personnel and contractors.<br><br>14. For defunct digester project, included additional details of the defunct digester – funding source(s), reason(s) for non-function, current method of methane destruction or management, etc. | |
| **FINANCIAL SOUNDNESS AND BUDGET** | **15** |
| Adequate documentation regarding organization's financial strength provided through financial documents listed in the application. Additionally:<br><br>1. Evidence of ability to fund up-front costs while waiting for reimbursement provided. Demonstrated financial strength to sustain project beyond grant term.<br><br>2. Described and quantified sources and amount of local, state, and federal funds, loans, other grants, and all other funding necessary to complete the proposed project (if applicable).<br><br>3. Described and quantified expenditures already incurred to initiate work on project, such as engineering, site preparation, infrastructure, utility hookups, permitting and environmental review. | |

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| Provided a complete Cost Summary addressing issues including, but not limited to:<br>1. Costs itemized and consistent with Work Plan.<br>2. Back-up documentation including quotes, estimates, and equipment details provided, clearly marked in support of budget costs.<br>3. Overall budget well justified and consistent with Work Plan.<br>4. Provided a clear accounting of all costs associated with all activities necessary to complete the project. | |
| **GREENHOUSE GAS EMISSIONS REDUCTION CALCULATION AND REPORTING** | **30** |
| Described the proposed project and explained how it will result in reduction of metric tonnes of Greenhouse Gas (GHG) emissions annually compared to existing practices for the dairy.<br>Completed the Greenhouse Gas Emissions Reductions attachment: Calculations shown in detail and explanations for all values assigned to variables provided as appropriate. Proper justification for all assumptions made in the calculation process provided. Greenhouse Gas (GHG) calculations include destination and GHG impacts of all products and byproducts from the project.<br>Applicants reported GHG emission reduction results (in $MTCO_2e$) as:<br>1. Total GHG emissions reduction<br>2. GHG reduction per unit of energy corrected milk produced by operation and<br>3. GHG reduction per $ CDFA grant money invested.<br>Applications will be competitively ranked on their projected emissions reductions. | |
| **ENVIRONMENTAL BENEFITS** | **10** |
| Described the environmental benefits to be achieved by the project in detail, including:<br>1. Described and quantified air and water quality benefits (if any).<br>2. Does the project reduce emissions of air quality pollutants, their precursors or odors? Provide a calculation of the total amounts of emissions reductions for each criteria pollutant or precursor.<br>3. Does the project create long-term protection of ground water or surface water quality? Described a quantification methodology, including periodic | |

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| sampling strategy of appropriate samples for measuring benefits. Strategy consistent with work plan.<br><br>4. A plan for proper documentation and reporting of environmental benefits data is in place. | |
| **ECONOMIC BENEFITS** | **5** |
| Economic benefits and impacts anticipated as a direct result of the project explained in detail. Labor costs and needs consistent with work plan and budget described. Details of locations where jobs created, number of jobs, average wages and benefits, and how long the jobs would last provided. Details of business opportunities created for CA-businesses provided. Credible explanation of project's additional economic benefit provided. | |
| **ADDITIONAL CO-BENEFITS** | **5** |
| Described how much solid and liquid digestate will result and what will happen to the digestate. Explained management strategy for residual contaminants that are either removed in the preprocessing step or left over after processing is completed.<br><br>Explained uses for digestate, e.g. to develop fertilizers or soil amendments? Explained application strategy for fertilizer(s) and identified recipient farmlands.<br><br>If producing saleable by-products, detailed production and sales plan provided.<br><br>Other co-benefits: Other described benefits are legitimate and credible. Supporting literature showing feasibility and documented success of proposed applications cited. Proposed applications shown to be reasonably adoptable in California. Assumptions (if any) explained in sufficient detail. | |
| **BENEFITS TO DISADVANTAGED COMMUNITIES** | **5** |
| For direct, meaningful and assured benefits to a DAC:-<br><br>1. ***Step 1 – Located Within:***<br><br>a. Project provides incentives for a facility in a DAC and the project results in direct air or water quality benefits in the DAC; or<br><br>b. Project provides incentives for an anaerobic digester that is located in a DAC.<br><br>2. ***Step 2 – Provides Benefits To:***<br><br>*If the project does not meet the above criteria for "located within," evaluate the project to see if it meets at least one of the following criteria:*<br><br>a. The majority of waste processed in digester is generated by agricultural | |

| | |
|---|---|
| operations in a DAC;<br><br>b. Project includes recruitment, agreements, policies or other approaches that are consistent with federal and state law and result in at least 25% of project work hours performed by residents of a DAC; or<br><br>c. Project includes recruitment, agreements, policies or other approaches that are consistent with federal and state law and result in at least 10% of project work hours performed by residents of a DAC participating in job training programs which lead to industry-recognized credentials or certifications. | |
| **PROJECT READINESS - REGULATORY INFORMATION, PERMITS AND CEQA** | **10** |
| The permit check list is complete. Copies of permits obtained attached.<br><br>CEQA: NOD submitted.<br><br>Projects will be competitively ranked with regards to how far along they are in their permitting process. | |
| **TOTAL** | **100** |

## VIII. Assistance and Questions

CDFA will conduct two workshops and a webinar on the 2015 DDRDP solicitation process. Please visit CDFA's DDRDP website (www.cdfa.ca.gov/go/dd) for location details.

Email all questions regarding the solicitation process to: grants@cdfa.ca.gov. Responses to all questions received during the workshops, webinar, or by email will be posted as Frequently Asked Questions (FAQs) to CDFA's DDRDP website according the following schedule:

| Questions Received by: | Responses Posted by: |
|---|---|
| 02/02/15 – 5:00 pm PST | 02/05/15 – 5:00 pm PST |
| 02/09/15 – 5:00 pm PST | 02/12/15 – 5:00 pm PST |
| 02/16/15 – 5:00 pm PST | 02/19/15 – 5:00 pm PST |

***February 16, 2015 at 5:00 pm PST*** is the final deadline to submit questions for the DDRDP grant application.

In order to maintain the integrity of the competitive grant process, CDFA is unable to advise and/or provide individuals with any information regarding specific grant application questions during the solicitation process. Applicants are encouraged to review the FAQs.

# IX. Award Information

CDFA will notify all applications regarding the status of their grant applications in May/June 2015. Successful applicants will receive specific instructions regarding the award process, including informing on invoicing and reporting requirements.

## Invoicing

Upon execution of the Grant Agreement, grant recipients can submit invoices to CDFA for reimbursement of expenditures incurred during the project term to implement the project. Invoices must be submitted at least quarterly, but no more frequently than monthly and include all supporting financial documentation to substantiate expenses.

In addition, grant recipients are required to expend matching funds committed to the project throughout the project term. If matching funds are not expended at a rate consistent with grant funds, CDFA will withhold grant funds until matching funds are expended at a consistent rate.

## Reporting

Grant recipients will be required to submit quarterly Progress Reports during the project term. The Progress Report is used to identify tasks and activities achieved, potential concerns, matching funds expended to date, and other pertinent information, such as greenhouse gas reductions and project benefits. The Progress Report will require recipients provide project information including but not limited to:

i. Annual GHG emissions reductions calculated according to the CARB's Compliance Offset Protocol.

ii. Detailed explanation of environmental benefits achieved and description of efforts planned or in place for sustaining the project's environmental benefits through the life of the project.

iii. Detailed explanation of economic benefits (i.e. number of jobs provided, average wages, benefits etc.) achieved and describe efforts planned or in place for sustaining the project's economic benefits.

iv. Detailed explanation of co-benefits produced and description of efforts planned or in place for sustaining the project's co-benefits through the life of the project.

v. Detailed explanation of economic and environmental benefits accorded to disadvantaged communities through the project and description of efforts planned or in place for sustaining the project's economic and environmental benefits through the life of the project.

A Final Performance Report will be required no later than 30 days after the project installation is complete. The Final Performance Report will require applicants to provide an evaluation of project outcomes and how the project contributed to increased greenhouse gas reductions from the dairy operation. Among other important information, grant recipients must report on the following:

i. Greenhouse gas reductions, in $MTCO_2e$, achieved during the grant term, along with all supporting calculations. Estimate the annual GHG reductions in $MTCO_2e$ that will occur in each year until 2025. Report actual project emissions reductions annually to CDFA for 10 years.

ii. Describe benefits to disadvantaged communities, including improvements in air and water quality, and economic and social benefits identified in the grant application. Using the grant application as a guide, provide a comprehensive account of all benefits accorded to disadvantaged communities over the project term, and describe efforts planned or in place for sustaining the project's benefits to disadvantaged communities through the life of the project.

iii. Quantify and document all projected improvements in air and water quality resulting from the project.

In addition, grant recipients must report greenhouse gas reduction data for 10 years after implementation of the digester. Project emissions reductions determination and reporting must be consistent with guidelines provided in the CARB Compliance Offset Protocol – Livestock Projects.

## Critical Project Review

Grant recipients must agree to a Critical Project Review/Site Visit during the project term to verify project progress as reported in Progress Reports submitted to CDFA after reasonable notice by CDFA.

If it is determined by CDFA from the Critical Project Review that at that time the grant project is not meeting, and is unlikely to meet, certain milestones CDFA shall have the right to terminate the Grant Agreement pursuant to the Terms and Conditions of the Grant Agreement. If the grant is terminated and has incurred any costs during the term, the Grantee may be required by CDFA to return any previously reimbursed funds. Termination may result in forfeiture by the grantee of any funds retained pursuant to 10 percent retention policy.

# X. Additional Guidance

## Project Requirement on Water Quality Protection

Design and construction of digester vessels (i.e. ponds, tanks, or other vessels where bio-methane is produced) under the program shall be protective of surface and groundwater quality. Digester vessel designs considered protective of water quality under the program include double lined ponds consistent with the Tier 1 criteria of the Central Valley Regional Water Quality Control Board (Region 5) Dairy General Order (http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0122.pdf). Above-ground and below-ground concrete digester vessels are also considered protective of water quality provided they are designed to be water tight (e.g., vinyl water seals at joints, proper rebar density to minimize cracking) and built in accordance with a strict construction quality assurance (CQA) program (e.g., any cracks sealed).

Alternative digester vessel designs may be accepted provided they are demonstrated to the appropriate Regional Board through the submittal of technical reports that the design is as protective as or more protective than the three specified designs: doubled lined pond with a leachate collection and removal system, above-ground concrete vessel, and below-ground concrete digester vessel. The Design Report for a double lined pond, concrete digester vessel, or proposed alternative design must be signed and stamped by an appropriately licensed professional (e.g., California registered civil engineer) and submitted to the Regional Water Quality Control Board in the Region where the project is located for approval.

## Project Readiness Resources

To assist applicants with this component of their project, the following information is provided as a resource:

- CalEPA's general information on dairy digesters:

  http://www.calepa.ca.gov/digester/Dairies/default.htm#sthash.EIRzmPXo.dpuf

- For general assistance with siting and permitting a digester, please visit the Governor's Office of Business and Economic Development ("GoBiz").

  http://business.ca.gov/

- CalEPA has developed a consolidated permit process to aid permitting of dairy digesters and to clarify permitting processes and requirements. See more at: http://www.calepa.ca.gov/digester/Documents/2012/PermitFacts.pdf

- CalEPA also released with the Central Valley Water Board a Permitting Guide for Dairy Digesters (2011, PDF) to provide an in depth explanation of permitting requirements.

http://www.calepa.ca.gov/Digester/Documents/GuideDigester.pdf

- ***Water Quality****:* In 2010, the Central Valley Water Board released a Programmatic Environmental Impact Report (PDF) for dairy digester projects to simplify the CEQA review and permitting of these facilities. Note: this PEIR is for projects located in the Central Valley Region.

  http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/dairy_program_regs_requirements/dairy_peir_final_cert.pdf

- ***Air Quality***: District Best Available Control Technologies (BACT) Guideline 3.3.15 for Waste Gas-Fired IC Engines applies to engines fueled with dairy digester gas. The District BACT Guidelines can be found in the District's BACT Clearinghouse on the District website, http://www.valleyair.org/busind/pto/bact/bactidx.htm.
- Sacramento Metropolitan Air Quality Management District's BACT Clearinghouse: http://www.airquality.org/permits/BACT/BACTClearinghouse.pdf
- South Coast Air Quality Management District's BACT Guidelines: http://www.aqmd.gov/home/permits/bact/guidelines
- BACT contact's for other air Districts can be found on the ARB website at: http://www.arb.ca.gov/bact/contact.htm

# XI. APPENDIX A: Attachments

Appendix A includes all the attachments required with the project application. Please note the maximum page-limit for each attachment below for additional pages needed beyond the provided templates.

| Attachment | Page-limit (beyond template) |
|---|---|
| 1. Cover Page | 0 |
| 2. Application Check List | 0 |
| 3. Work Plan | 3 |
| 4. Cost Summary | Add rows to table as needed. |
| 5. Greenhouse Gas Emissions Reductions | No page limit |
| 6. Economic/Environmental Benefits and Impacts to Disadvantaged Communities | 2 |
| 7. Permit Check List | 1 |

***The page limit for the Project Proposal (not including attachments and supplemental documents, e.g. design plans, letters of support, etc.) is 30 pages.***

## Attachment 1: Cover Page

Please see the following page.

# 1. Cover Page

## DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM 2015

### APPLICANT DETAILS

Primary Contact Name: _____

Phone: _____ Email: _____

Type of Organization: ☐ Partnership ☐ Sole Proprietorship ☐ Other (explain)

_____

Applicant Organization: _____

Legal Business Name (if different): _____

Address: _____ City, State, ZIP: _____

Federal Tax ID: _____

### SUBMITTING ORGANIZATION

Organization Name: _____

Address: _____ City, State, ZIP: _____

Website: _____

Primary Contact Name: _____

Phone: _____ Email: _____

### PROJECT DETAILS

Project Title: _____

Project Site (i.e. Dairy Operation) Address: _____

City, State, ZIP: _____

Project Term: _____ to _____
*(Month/Year to Month/Year)*

Property Owner Name: _____

Phone: _____ Email: _____

## PROJECT BUDGET

Funding Amount Requested: _____

Matching Funds Secured: _____

Total Project Budget: _____

## PROJECT MANAGEMENT ROLE

Project Manager Name: _____

Phone: _____ Email: _____

**Please read the following certification statement before signing and submitting the grant application.**

I, certify under penalty of perjury the following:

- The information entered on behalf of the Applicant Organization is true and complete to the best of my knowledge;
- I am an employee of or a consultant for the Applicant Organization and I am authorized to submit the grant application on behalf of the Applicant Organization; and
- I understand that any false, incomplete, or incorrect statements made may result in the disqualification of this grant application.

Authorized Signature: _____

Date: _____

## Attachment 2: Application Check List

Please see the following page.

# Grant Application Checklist

## DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM 2015

A Grant Application must contain the following list of required forms and attachments. To confirm all required documents are submitted, check each box and provide an authorized signature below.

- ☐ **Cover Page (Attachment 1)**
- ☐ **Project Narrative**
- ☐ **Work Plan (Attachment 3)**
- ☐ **Cost Summary (Attachment 4)**
- ☐ **Greenhouse Gas Emissions Reductions (Attachment 5)**
- ☐ **Economic/Environmental Benefits and Impacts to Disadvantaged Communities (Attachment 6)**
- ☐ **Permit Check List (Attachment 7)**
- ☐ **Financial Documents**
- ☐ **All Other Supplemental Documents (i.e. permits, letters of support, resumes, invoices, lease agreements, etc.)**

**Please read the following certification statement before signing and submitting the grant application.**

I, certify under penalty of perjury the following:

- The information entered on this application is true and complete to the best of my knowledge;
- I am an agent or a consultant for the Applicant Organization and am authorized to submit the grant application on behalf of the Applicant Organization; and
- I understand that any false, incomplete, or incorrect statements made may result in the disqualification of this grant application.

*Authorized Signature* *Date*

## Attachment 3: Work Plan

Applicants must provide a detailed Work Plan template that clearly and concisely describes the tasks and activities required to accomplish goals/objectives in the proposed Project Narrative. The following, at a minimum, must be addressed:

i. Describe all activities necessary to complete the project (i.e. procuring permits, site planning, engineering, construction, equipment, field supervision, etc.).
ii. Identify measurable targets that must be met to accomplish the project within the grant timeline, with specific dates for each target.
iii. Identify who will perform the work of each activity including project cooperators, contractor/consultants, etc.
iv. Provide timeline in chronological order for all proposed grant activities.

Please download from www.cdfa.ca.gov/go/dd.

## Attachment 4: Cost Summary

Applicants must provide a clear accounting of project costs associated with all activities necessary to complete the project. All costs must be itemized into categories and consistent with activities included in the Work Plan. Applicants must identify the source and amount of matching (cash) funds, in-kind contributions, State and Federal funds, and all other funding sources necessary to complete the project. All budgeted items should demonstrate they are reasonable and adequate for the proposed project.

Please download from www.cdfa.ca.gov/go/dd.

## Attachment 5: Greenhouse Gas Emissions Reductions

Please see the following page.

# 5. Greenhouse Gas Emissions Reductions

## DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM 2015

*Project Plan*: Briefly describe the proposed project and explain how it will result in reduction of GHG emissions annually compared to existing practices for the dairy.

*GHG Emissions Reduction Calculations*: Use the **California Air Resources Board (CARB) Compliance Offset Protocol - Livestock Projects** to determine your project's baseline emissions and offset (emissions reductions due to implementing the project). Please ensure to use same variable names and symbology as in the protocol.

The protocol may be found at the California Air Resources Board Compliance Offset Protocol Livestock Projects webpage:-

http://www.arb.ca.gov/regact/2010/capandtrade10/coplivestockfin.pdf

Show your calculations in detail and provide explanations for all values assigned to variables as appropriate. Provide proper justification for any assumptions made in the calculation process. Greenhouse Gas (GHG) calculations should include destination and GHG impacts of all products and byproducts from the project; estimates for both the upstream and downstream emissions consistent with the CARB Compliance Offset Protocol should be included as well, e.g., transportation of feedstock and products, production of low-carbon fuels, renewable electricity, heat or power used on site, digestate, liquid products/effluents, fertilizer. Refer to Table 4.1 in the CARB Compliance Offset Protocol – Livestock Projects to determine all emission flows to be included. Provide a qualitative discussion of potential upstream/downstream impacts of methane that are in addition to those requested in the CARB Compliance Offset Protocol – Livestock Projects. Examples of all estimates for methane production and release include: fraction of methane produced that is not captured by the power generation engine, methane destruction efficiency of engine (or prime mover), loss of methane (fugitive emission) during conditioning/clean-up of bio-gas, amount of methane in tail gas of RNG upgrade system (methane slip), plan for disposing of methane slip, plan for temporary storage of specific quantity of methane to be subsequently fed to the electric power generator, etc.

Calculate emissions in metric tonnes of carbon dioxide equivalent ($MTCO_2e$). Provide your calculated results in the following three formats:

1. Total GHG emissions reduction per year,
2. GHG reduction per unit energy-corrected milk (calculation method provided in following section) produced by operation, and,
3. GHG reduction per $ CDFA grant money invested.

Failure to provide plausible and transparent calculation factors may be grounds for the denial of application.

Please complete and submit the accompanying Greenhouse Gas Reductions Supporting Data Sheet and the Summary of Greenhouse Gas Emissions Reductions.

Use additional sheets as necessary to complete this section.

## GREENHOUSE GAS EMISSIONS SUPPORTING DATA SHEET

Annual greenhouse gas emissions estimates are based upon previous 12 months' data for the dairy operation. Complete the table below and provide values for the variables requested using data for the proposed project/dairy operation for each month, to be summed to obtain annual emissions reduction estimates. Re-use the table below for each month as needed.

Refer to the California Air Resources Board Compliance Offset Protocol – Livestock Projects for a complete explanation of these variables and proper units. Refer to the California Climate Data Archive (http://www.calclim.dri.edu/pages/stationmap.html) for a local temperature dataset applicable to your project. Identify clearly the database and temperature source used from the CA Climate Data Archive in your calculation.

| Variable | Definition | Value |
|---|---|---|
| Month | Specify name of month. | |
| L | Livestock category† (refer to Table A.2. and A.3. of the CARB Compliance Offset Protocol – Livestock Projects) specific to your project. If more than one category applies, denote each category as $L_1$, $L_2$, $L_3$ (i.e. $L_n$), etc. | |
| $P_{Ln}$ | Annual average population of each appropriate livestock category '$L_n$'. | |
| $VS_{Ln}$ | Volatile solids produced by livestock category '$L_n$' on a dry matter basis (kg/animal/day). | |
| $VS_{Table}$ | Volatile solid excretion from lookup table (Table A. 3 and Table A. 5 of the CARB Compliance Offset Protocol – Livestock Projects). | |
| $VS_{avail-1, AS}$ | Previous month's volatile solids available for degradation in anaerobic system 'AS' (kg). e.g. If calculating for March, this value pertains to February. | |
| $VS_{deg-1, AS}$ | Previous month's volatile solids degraded by | |

| | | |
|---|---|---|
| | anaerobic system 'AS' (kg). | |
| $T_2$ | Monthly average ambient temperature (K). | |
| $Mass_{Ln}$ | Average live weight for appropriate livestock category. Indicate if value is from site specific data or Appendix A, Table A.2 of the CARB Compliance Offset Protocol – Livestock Projects. | |
| $B_{0,Ln}$ | Maximum methane producing capacity of manure for appropriate livestock category 'L'. | |
| $MS_{AS, Ln}$ | % of manure from appropriate livestock category 'L' sent to anaerobic manure management (storage/treatment) system 'AS'. | |
| $MS_{Ln, nAS}$ | % of manure from appropriate livestock category 'L' in non-anaerobic manure management (storage/treatment) system. | |
| $MCF_{nAS}$ | Methane Conversion Factor (%) for non-anaerobic storage/treatment system. Please refer to Table A.6.a for MCF values specific to your project. | |
| GWP | Global Warming Potential of methane based on radiative forcing, integrated up to 100 years †† | 25 |
| $Milk_A$ | Annual milk production in liters. | |
| ECM | Energy-Corrected Milk (kg/cow/day) ††† | |
| $Fund_R$ | Total funds requested from CDFA. | |

*Note*:

†Please see Appendix A, Table A.2 and A.3 of the CARB Compliance Offset Protocol – Livestock Projects to determine appropriate livestock category 'L' for your operation.

††The value for GWP has been updated to 25 by the Intergovernmental Panel for Climate Change in 2007 (Fourth Assessment). CARB Compliance Offset Protocol is based on a GWP of 21 as per previous IPCC reports. Please use 25 for GHG emissions calculations using the methodology outlined in the CARB Compliance Offset Protocol – Livestock Projects.

†††Please use the equation below to calculate for energy-corrected milk:
ECM (kg/cow/d) = ((((((milk fat % * 41.65) + (milk true protein % * 24.13) + (milk lactose% * 21.60) - 11.72) /1000) * 2.204)) * (milk, kg/d))) / (0.721),

where the values that are multiplied by the milk components (i.e. fat, protein and lactose) are their energetic values and the value that it is divided by (i.e. 0.721 Mcal/kg) is the energy value of 1 kg of standard milk. Standard milk is defined for this program as 3.75% fat, 3.0% true protein and 4.9% lactose.

# SUMMARY OF GREENHOUSE GAS EMISSION REDUCTIONS

**Directions**: Each section of this document must have a response. After you complete this document, save it to your computer, and attach to your application. Provide for 10-years ***only***, and choose the box when your project will begin emission reductions. ***Please note that estimated reductions are based upon project baseline methane calculations for the operation, and may change if there are changes in the herd size.*** Please account for any projected herd size changes at the dairy operation in 10-year future estimated GHG reductions calculations.

| | |
|---|---|
| **Applicant Name** | |
| **Project Name/Location** | |

## A. Estimated GHG Reductions ($MTCO_2e$ Per Year)

| | (2015) | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | (2026) | Total | Total $MTCO_2e$ per Grant $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anaerobic Digestion | | | | | | | | | | | | | | |
| **Cumulative Total** | | | | | | | | | | | | | | |

## B. $MTCO_2e$ Reductions per Unit Energy-Corrected Milk Produced by Dairy Operation

| | (2015) | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | (2026) | Total | Total $MTCO_2e$ per Grant $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anaerobic Digestion | | | | | | | | | | | | | | |
| **Cumulative Total** | | | | | | | | | | | | | | |

## C. $MTCO_2e$ Reductions per $ CDFA Grant

| | (2015) | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | (2026) | Total | Total $MTCO_2e$ per Grant $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anaerobic Digestion | | | | | | | | | | | | | | |
| **Cumulative Total** | | | | | | | | | | | | | | |

## Attachment 6: Economic/Environmental Benefits and Impacts to Disadvantaged Communities

Please see the following page.

# 6: Economic/Environmental Benefits and Impacts to Disadvantaged Communities

DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM 2015

In 2012, the Legislature passed SB 535 (De León, Chapter 830, Statutes of 2012) and directed that, in addition to reducing greenhouse gas emissions, 25 percent of the monies allocated from the Greenhouse Gas Reduction Fund also must go to projects that provide a benefit to disadvantaged communities and 10 percent to projects located in disadvantaged communities. The California Environmental Protection Agency (CalEPA) was given the responsibility for identifying disadvantaged communities for purposes of this legislation. After reviewing the *California Communities Environmental Health Screening Tool* (CalEnviroScreen) prepared by the Office of Environmental Health Hazard Assessment, CalEPA has decided on a designation of disadvantaged communities as required by SB 535. These areas are identified by census tract and scored at or above the 75th percentile using the methodology in CalEnviroScreen for ranking communities burdened by environmental and socioeconomic issues. More information and maps detailing this information can be found at the California Air Resources Board Disadvantaged Community Investment Guidance and Maps webpage:

http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/535investments.htm

Explain how the project will benefit and/or impact disadvantaged communities as defined in The Air Resources Board Disadvantaged Community Investment Guidance and Maps webpage:

Please provide names of which disadvantaged community(ies) will benefit (use table provided below) and explain environmental, economic and social benefits that will be provided to these communities. If the project will create construction and/or permanent jobs in disadvantaged communities, indicate how many jobs, what types, approximate salaries and benefits and how long these jobs will last. Also explain expected air and water quality as well as other environmental benefits that will accrue to the community.

**Directions**: Complete each column below for any community with direct economic and/or environmental impacts from the project. Use the online tools found at **CalEnviroScreen**:

http://oehha.ca.gov/ej/ces2.html

On this page, scroll down and click **ALL MAPS**. On the new webpage on the left column, scroll down to **CalEnviroScreen 2.0 scores.** To use the map, zoom to or type a location (street address) into the search bar. Clicking on a census tract on the map shows a popup window with the individual results for each of the 19 indicators that make up its CalEnviroScreen score.

Provide the census tract number, score and percentile ranking for each census tract directly impacted by the project in the table below.

**Community/City Name** is the common name for the area impacted; CalEnviroScreen does not supply this. Estimate the **percentage of benefits apportioned** to each impacted community on the far right; the total for all communities should add up to 100 percent.

*Please include explanations of benefits in additional sheets. If additional rows are needed in table below, include the completed table with explanation of benefits.*

**Project Name:** _____

| Street Address | Community /City Name | CalEnviroScreen 2.0 Score | Percentage of benefits apportioned to this Community | Project Census Tract Number |
|---|---|---|---|---|
| (Example) 2800 Gateway Oaks Drive, Sacramento CA 95833 | Sacramento | 46-50% | 10% | 6067007010 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

View interactive maps with depicting census tracts identified as disadvantaged communities by the California Air Resources Board on the Disadvantaged Community Map - Top 25% **webpage:**

http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/535top25map.htm

## Attachment 7: Permit Check List

Please see the following page.

# 7. Permit Check List

DAIRY DIGESTER RESEARCH AND DEVELOPMENT PROGRAM 2015

***Directions**: Each section must have a response. Complete and attach the document to the application as a PDF. You may add up to one additional sheet for explanation and provide copies of supporting documentation as needed. Please see Additional Guidance section where Project Readiness Resources are discussed.*

## A. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Is the project compliant with CEQA? Please attach a copy of the Notice of Determination (NOD) for the project. If not, please explain where the project is in CEQA process.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

If your project is tiering to Programmatic EIRs in other Region(s), please provide a Notice of Consistency.

## B. CONDITIONAL USE PERMIT

1. Is a conditional use permit (CUP) required for this project?

☐ Yes ☐ No

If yes, skip to 3. If no, check box below for reason and explain.

☐ Project has permit by right.

☐ Project is covered under existing CUP.

Explain in greater detail why no permit is needed.

_____
_____
_____
_____
_____

2. If your project does not require a CUP, does it require environmental review?

☐ Yes ☐ No

Describe any barriers or opposition to the CUP or the environmental review of the project.

_____
_____
_____
_____

3. Date of (anticipated) hearing:_____

4. Permit number (existing permit if new permit not required): _____

5. Date of (anticipated) permit approval: _____

## C. AIR QUALITY PERMIT

1. Do you have a Permit to Operate?

☐ Yes ☐ No

If yes, provide Permit # and Date Issued: _____

2. Do you have an Authority to Construct?

☐ Yes ☐ No

If yes, provide Permit #; Date Issued, Date of Expiration: _____

3. Indicate steps you will take to obtain and Authority to Construct and a Permit to Operate from the appropriate air quality agency.

_____
_____
_____
_____

4. Which Air Quality Management District or Air Pollution Control District is your project located in?

_____

5. Who is your contact person at the Air Quality Management District or Air Pollution Control District?

_____

6. If your project requires the use of Best Available Control Technologies (BACT), explain how your project will employ existing BACT or how you will obtain BACT status for your project.

_____
_____
_____
_____
_____

7. Does your project require Emission Reduction Credits (offsets)? If so, how do you plan to obtain the Emission Reduction Credits required for the project?

_____
_____
_____
_____
_____

## D. WATER QUALITY PERMIT

1. If your facility has a permit from the SWRCB or Regional Water Quality Control Board and has already been entered into the California Integrated Water Quality System Project (CIWQS), provide the following information:

Which Regional Board is the dairy project located in?

_____

Who is your contact at the Regional Board?

_____

Is the dairy covered under a General Order? If so, which one? If not, does the dairy have Report of Waste Discharge for Individual Waste Discharge Requirements? If not please discuss steps you will take to obtain coverage.

_____
_____
_____
_____
_____

2. What kind of digester vessel(s) will the project employ?

_____
_____

3. Has the Executive Officer of the Regional Board issued a letter approving the project or issued a "Notice of Applicability to Applicant (permit)"?

☐ Yes ☐ No

If yes, include copy, if not discuss anticipated approval.

_____
_____
_____
_____
_____

## E. CALRECYCLE/LOCAL ENFORCEMENT AGENCY

Do you have a permit from Local Enforcement Agency?

☐ Yes ☐ No

If yes, provide Permit # and Date Issued: _____

## F. CA PUBLIC UTILITIES COMMISSION

If your facility has Power Purchase agreement, please provide copy or copy of CPUC approval. If not, please discuss your plans to secure one, if applicable.

_____
_____
_____
_____
_____

## G. OTHER PERMITS

Depending on the type of project additional local, state or federal permits may be required.

Other potential permits may include (provide information):

Department of Toxic Substances Control; Federal Dept. of Transportation, Caltrans and the CHP; City/County Fire Departments; City/Fire Building and Safety Departments; and Air Tank Permits from CA Department of Industrial Relations.

_____
_____
_____
_____
_____

## H. PENDING ENFORCEMENT ACTIONS

Does a pending enforcement action of any kind exist against the dairy operation or any of the project partners? Please explain.

_____
_____
_____
_____
_____

# APPENDIX B: Confidential Information

CDFA determines what information provided by the applicant is confidential or proprietary and how it will be handled pursuant to the California Public Records Act (Government Code 6250, et seq.) and related statutes definition of "confidential or proprietary information." (also known as "trade secrets"). The following describes how questions are resolved regarding what information is confidential, the legal protections for confidential information, and internal and program procedures to maintain confidentiality.

**What is "confidential?"**

The California Public Records Act prevents the disclosure of confidential or proprietary information including, but not limited to:

(1) Confidential Business and financial information, including volume of business, costs and prices, customers, financial condition, trade secrets, and similar information obtained under an express or implied pledge of confidence. (Gov. Code § 6254(k) in conjunction with Ev. Code § 1060 and Gov. Code §§ 6254(e), 11180-11183).

(2) Personal data including tax information prohibited from disclosure. (Gov. Code §§ 6254(c) and 6255, and Rev. & Taxation Code § 19542.

Applicants are directed to clearly marked, on each page, "confidential/proprietary information" those documents they feel contain confidential or proprietary information. However, the mere marking of documents as "confidential/proprietary information" will not result in their being treated as confidential if they are not exempt from disclosure under the California Public Records Act.

**What if there is a question about what is confidential?**

If CDFA receives a Public Records Act request for documents submitted by the applicant, CDFA will notify the applicant of the request. The CDFA Legal Office will review the records and make a determination as to whether or not the records are exempt from disclosure under the California Public Records Act.

**What program procedures will keep information confidential?**

Financial information will be analyzed, on a need-to-know basis, by staff from the CDFA, kept confidential, and will be maintained with restricted access. Grantee businesses will agree to provide specific key financial information for three years to develop benchmarks to evaluate the program. The records will be kept for the amount of time set forth in CDFA's Internal Record Retention Policy.

# APPENDIX C: Key Terms and Definitions

| WORD/TERM | DEFINITION |
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| Applicant | The respondent to this solicitation. |
| Application | An applicant's formal written response to this solicitation. |
| Cluster Project | Projects that propose to develop centralized dairy digesters serving more than one dairy (also known as clusters or "hub and spoke" model) are eligible. These projects could include a hub facility where centrally located operations would occur such as the collection of raw dairy biogas from a group or cluster of existing dairy operations. The hub could serve as focal point for cleaning and conditioning, upgrading and injection to a pipeline. |
| Co-benefits | Innovative benefits, apart from environmental benefits and economic benefits as defined in this solicitation that result in increased efficiency of the dairy digester, reduce waste generated, or bring increased revenue to the operation. |
| Commercially-available Technologies | A system that has a proven operating history specific to the proposed application. Such a system is based on established design, and installation procedures and practices. Professional service providers, trades, large construction equipment providers, and labor are familiar with installation procedures and practices. Proprietary and balance of system equipment and spare parts are readily available. Service is readily available to properly maintain and operate the system. An established warranty exists for parts, labor, and performance.<br><br>Pre-commercial technologies are new technologies or enhancements of existing technologies that are not commercially available in California. Technologies can include pre-commercial and commercial components, but for the purposes of this solicitation, technology should be commercially available in CA for the particular component. |
| GHG | *Greenhouse Gas*(es), atmospheric gases that have the ability to trap infra-red radiation from the sun and contribute toward global warming and climate change, such as carbon dioxide, methane and nitrous oxide. The current solicitation will address projects aimed at reducing methane emissions. |
| GHG Emission | A calculated decrease in GHG emissions relative to a project baseline |

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| Reduction | over a specified period of time. |
| GHG Reduction Fund | A fund established by law in 2012 to receive State Cap and Trade Auction proceeds and define how funds will be used. |
| Matching Funds | Funds provided by the applicant toward the implementation of the dairy digester project, at least 50% of the total project cost. |
| Milk Producer | "Producer" means any person that operates a dairy herd which produces milk or cream commercially and whose bulk milk or bulk cream is received or handled by any distributor, manufacturer, or any nonprofit cooperative association of producers. |
| Permanent Greenhouse Gas Emission Reductions | In the context of offset credits, permanent means either that GHG reductions and GHG removal enhancements are not reversible, or that when GHG reductions and GHG removal enhancements may be reversible, mechanisms are in place to replace any reversed GHG emission reductions and GHG removal enhancements to ensure that all credited reductions endure for at least 100 years. |
| Project Baseline | In the context of a specific offset project, a conservative estimate of business-as-usual GHG emission reductions or GHG removal enhancements for the offset project's GHG emission sources, GHG sinks, or GHG reservoirs within the offset project boundary. |
| Project Manager | The person designated by the applicant to oversee the project and to serve as the main point of contact for the CDFA. |
| Quantifiable GHG Emissions Reduction | Quantifiable means, in the context of offset projects, the ability to accurately measure and calculate GHG reductions or GHG removal enhancements relative to a project baseline in a reliable and replicable manner for all GHG emission sources, GHG sinks, or GHG reservoirs included within the offset project boundary, while accounting for uncertainty and activity-shifting leakage and market-shifting leakage. |
| Real GHG Emissions Reduction | Real means, in the context of offset projects, that GHG reductions or GHG enhancements result from a demonstrable action or set of actions, and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources, GHG sinks, and GHG reservoirs within the offset project boundary and account for uncertainty and the potential for activity-shifting leakage and market-shifting leakage. |
| Verifiable GHG | Verifiable means that an Offset Project Data Report assertion is well |

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| Emissions Reduction | documented and transparent, such that it lends itself to an objective review by an accredited verification body. |