

Dairy Digester Solicitation

(Guidance Document)

Action

Solicitation for Dairy Digester Concept Proposals

Summary

California is the largest dairy state in the USA, with approximately 1.7 million cows producing more than 3.6 million bone dry tons of manure per year that must be managed to reduce or mitigate environmental impacts. Manure can be processed by anaerobic digesters to produce biogas, a flexible renewable source of energy. In addition to producing energy, the technology has many environmental and social benefits including minimizing air emissions, preventing water pollution, control of odor and flies the reduction of pathogens and greenhouse gas emissions and the production of fertilizer and other value-added products.

For more information on dairy digesters and permitting please visit the following websites:

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

<http://www.epa.gov/acstar/anaerobic/index.html>

Some of the challenges of implementing anaerobic digesters at dairy farms include high upfront costs, relatively long payback periods, and regulatory and permitting requirements that can be confusing, expensive and time-consuming with which to comply. As such, in May 2011, the U.S Environmental Protection Agency, U.S. Department of Agriculture and the California Department of Food and Agriculture convened the CA/Federal Dairy Digester Working Group. This collaborative partnership of state, federal and local agencies has the common goal of identifying and removing barriers to the wide-spread adoption of dairy digester systems in California.

In addition to government representatives, the CA/Federal Dairy Digester Working Group includes stakeholders from academia, industry, non-profits and utilities that participated in subcommittees on economic, regulatory, and technological barriers. More information on the CA/Federal Dairy Digester Working Group effort including the Statement of Principle and/or Recommendations can be found by visiting:

<http://www.cdfa.ca.gov/EnvironmentalStewardship/pdfs/StatemntOfPrinciples-CA-FederalDairyDigesterWorkGroup.pdf>

The CA/Federal Dairy Digester Working Group is soliciting concept proposals for the digestion of dairy waste. These proposals will include development, installation and

operation of dairy manure digester and co-digester projects and may include processes for the treatment and disposal of waste streams from the digester operations to address environmental impacts. Dairy digester and co-digester development is expected to take place on individual dairies or at centralized facilities located within California.

Funding may be provided by various participating agencies of the CA/Federal Dairy Digester Working Group for proposals that are deemed most viable with the greatest measurable outcomes. Individual digester projects will have to qualify for funding on a case-by-case basis and projects can potentially receive financial support from multiple participants. To assist in identifying potential funding sources, the CA/Federal Dairy Digester Working Group has put together a Funding Matrix document. The matrix identifies potential funding sources along with general criteria for the types of projects that would qualify for the funding. A copy of the Funding Matrix can be found at:

http://www.waterboards.ca.gov/centralvalley/dairy_digester_proposal/dd_funding_matrix.pdf

Proposals should include at a minimum: technical, financial and environmental information; preliminary engineering assessments; development plans; operational plans; and measurable outcomes. Refer to “Supplemental Information” for additional details and requirements of proposal submittal.

Other Dairy Digester information and helpful links can be found at:

http://www.waterboards.ca.gov/centralvalley/dairy_digester_proposal/

To assist in this effort, Central Valley Regional Water Quality Control Board (Water Board) will serve as the agency to collect and distribute the proposals to members of the CA/Federal Dairy Digester Working Group technical review committee. The committee will evaluate each proposal for merit and viability.

Proposals that are deemed viable with a high probability of success will be assigned to a CA/Federal Dairy Digester Work Group member that will work closely with the applicant to provide guidance on how best to move their project forward.

Funding may be available from any number of participants in the CA/Federal Dairy Digester Working Group; however, the amount and type of funding can vary from project to project. There is no commitment to fund any effort and any funding is contingent upon the availability of funds.

Table of Contents

- 1. DATES**
- 2. ADDRESSES and CONTACT**
- 3. SUPPLEMENTAL INFORMATION**
 - A. Objectives**
 - B. Eligibility Information**
 - C. Funding Information**
 - D. Proposal Requirements**
 - E. Proposal Evaluation**
 - F. Proposal Format**

1. **DATES**

Proposal Deadline: 5:00 pm on November 1, 2013.

2. **ADDRESSES and CONTACT**

All proposals should be sent to the attention of Richard Loncarovich at:

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Phone: (916) 464-3291400

For information and questions regarding this solicitation, contact :

Richard Loncarovich

Richard.Loncarovich@Waterboards.Ca.Gov

(916) 464-4640

3. **SUPPLEMENTARY INFORMATION**

A. Objectives:

The CA/Federal Dairy Digester Work Group is providing leadership and possible funding through a multi-agency cooperative effort for the development and implementation of dairy digester projects. All interested parties or groups are invited to submit proposals for the development and/or installation of commercially viable dairy digester systems.

The agreements awarded pursuant to this invitation may support one or more of the following goals:

- Protect the beneficial uses of surface and groundwater within the Central Valley Region from discharges to land associated with dairy manure digesters and co-digesters on- or off-site of dairies.
- Protect and improve air quality in California by ensuring the project proposal complies with all air quality regulations.
- Provide a regulatory framework for the water quality aspects of anaerobic biological digestion facilities using dairy manure and dairy manure with other organic substrates (co-digestion) to produce biogas (a flexible renewable fuel source).

- Assist the State in meeting GHG reduction measures in support of the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) through the production of biogas from dairy manure.
http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf
- Provide a renewable green energy source to allow energy companies to help achieve the 2010 and 2020 California Renewables Portfolio Standard (RPS) through the production
<http://www.energy.ca.gov/portfolio/documents/documents/SB1078.PDF>
http://www.energy.ca.gov/portfolio/documents/documents/sb_107_bill_20060926_chaptered.pdf
- Utilize nutrient management technologies to reduce the environmental impacts of nitrogen from manure
- Development of value-added products from the dairy and digester by-products
- Development of the upgrading, distribution, storage and transport systems for biogas.
- Innovative approaches to managing and financing dairy manure digester and co-digester project development.

B. Eligibility Information

There are no restrictions on who may submit proposals.

C. Funding Information

Funding may be available from the participants of the CA/Federal Dairy Digester Working Group; however, the amount and type of funding can vary from project to project.

The obligation under this effort is contingent upon the availability of funds. Individual digester projects will have to qualify for funding on a case-by-case basis and projects will typically receive support from only a few participants. Information on available funding sources and specific criteria for eligibility can be found at:

http://www.waterboards.ca.gov/centralvalley/dairy_digester_proposal/dd_funding_matrix.pdf

D. Proposal Requirements

Selected proposals will demonstrate that recipients have had prior working experience or demonstrate capacity to develop the technology. The following are key elements applicants will need to include in their proposal submission:

- A list of team members along with a short description of their background and experience. This must include, at a minimum, project developers and participating dairy farmers. Identify why this particular team composition and representation will enable successful implementation of the proposed work plan. Collaboration is encouraged. Letters of commitment from individual members or institutions to participate as part of the team should be included as appendices.
- The geographic scope of the project. Will the project be located and serve one location or multiple locations?
- The specific location(s) of the proposed project or proposed method for identifying the installation location(s).
- A scope of work for the life of the agreement which could be for a period of one to three years. The scope of work will include a statement of specific goals and/or objectives that articulates how the development and installation of the digester(s) will be accomplished.
- A timeline that identifies significant milestones and their expected completion dates.
- Engineering assessments and technical data that describes and supports the project.
- A funding analysis that identifies the total project cost and how it will be funded.
- Environmental and economic benefits of the proposed project.
- Potential challenges and uncertainties that could have a significant impact on the project.

E. Proposal Evaluation

Proposals will be evaluated against the criteria discussed in Section D. All proposals will be screened to ensure compliance with the process. Proposals not following the directions for submission may not be evaluated. If additional information or clarification is needed, the CA/Federal Dairy Digester Working Group technical review committee may contact the applicant to request clarification or additional information.

CA/Federal Dairy Digester Working Group technical review committee members will evaluate each proposal for merit and viability. Proposals that are deemed viable with a high probability of success will be assigned to a CA/Federal Dairy Digester Work Group participant who will work closely with the applicant to provide guidance on how best to move their project forward.

Each proposal will be reviewed and assessed by considering, but not limited to, the following criteria:

- Alignment with CA/Federal Dairy Digester Working Group goals
- Utilization of the CalEPA Consolidated permitting process
- Scientific and technical viability of the proposal
- Knowledge and skills of team members and if applicable, collaborative groups
- Leveraged resources, reliability of funding
- Scope of work, budget, and projected accomplishments
- Economic benefits of proposal
- Environmental and natural resources benefits of proposal
- Willingness to work with researcher's to document the life cycle costs and benefits of the project.
- Scalability of project (small vs. large dairy operations)
- Volume of manure processed
- Previous success with dairy digester projects either within or outside of California
- Project repeatability
- Other factors

F. Proposal Format

Each submittal shall be in PDF or Word format. Paper copy shall be double-sided on 8.5 by 11 inch plain white paper only (no colored paper, over-sized paper, or special covers). Do not staple. Submit all parts of the proposal at one time. Do not submit Letters of Commitment separately, rather as appendices. No proposals will be accepted by facsimile machine. Use an 11-point font or larger.

A maximum of 45 total pages per proposal. Format will be as follows:

- Section 1) Qualifications and Summary Portfolio of Participants (Limit 3 pages)
- Section 2) Executive Summary (Limit 4 Pages)
- Section 3) Scope of Work (Limit 20 Pages)
- Section 4) Budget (Limit 5 Pages)
- Section 5) Project Outcomes (Limit 8 Pages)
- Section 6) Appendices (Limit 5 Pages)