California Department of Food and Agriculture

Dairy Digester Research and Development Program

Program Framework - Phase II (Research)

2015

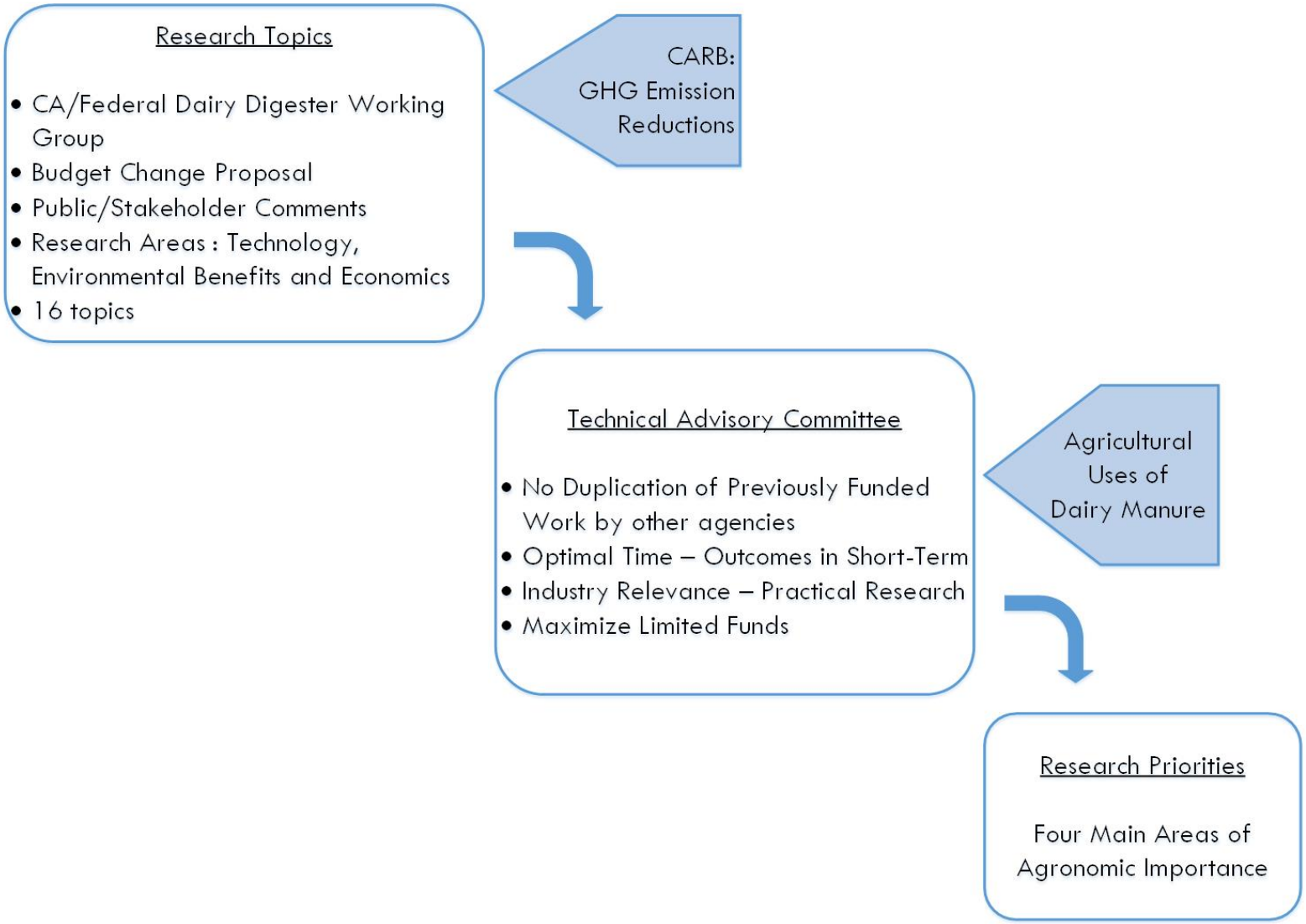
BACKGROUND

- CDFA's Dairy Digester Research and Development Program authorized by the Budget Act of 2014 (Chapter 25, Statutes of 2014).
- $12 million: CDFA to support projects that reduce greenhouse gas (GHG) emissions from California dairy operations by capturing GHGs, harnessing GHGs as a renewable bioenergy source and promoting low carbon fuels.
- CDFA has structured the program in two phases (Phase I Development and Phase II Research).
- CDFA has until 6/30/16 to expend or encumber the funds and 2 fiscal years after the encumbrance to spend the encumbrance.

PHASE II - OBJECTIVE, FUNDING AND ELIGIBILITY

- ***Objective***: To fund projects that reduce greenhouse gas emissions and provide a better understanding of the scientific and technical aspects of dairy digesters, including methods to enhance their economic feasibility, widespread implementation and environmental benefits.
- Total funding amount: $500,000.
- Estimated timeline: Feb – July 2015.
- ***Eligibility***:
  - California Research Universities
  - Non-profit Organizations.

SELECTION OF RESEARCH PRIORITIES



RESEARCH PRIORITIES (1)

High priority areas identified by TAC:

Digester By-product Analysis

- Development of effective amendments for crop nutrient recovery systems from digester byproducts, and their effects on stored soil carbon, soil nitrogen and GHG (CO_2, CH_4 and N_2O) emissions in California cropping systems, such as:
  - Characterization of digestate resulting from distinct digestion processes to determine their optimal uses, and,
  - Analysis for nitrogen speciation and salts (ions such as Na, Cl, Ca, K, P, etc.) for plant crop fertilizer use and their impacts on water and soil quality.

RESEARCH PRIORITIES (2)

Project Feasibility

- Decision support tools that evaluate and test project feasibility with regards to quantified GHG emission reductions, co-digestion feedstocks, and environmental (water, soil and air quality) benefits from dairy digesters, such as :
  - Comparison and monitoring of GHGs among dairy management practices, e.g. scrape versus lagoon systems.

GRANT SIZE AND DURATION

- **Grant Size**
  - CDFA proposes funding 3-4 projects, award ranging from $50,000 to $ 250,000 per grant recipient, based upon extent of research proposed:
    - Field studies, sampling, sample analysis – bigger budgets.
    - Economic analysis and reporting – smaller budgets.
- **Grant Duration**
  - Projects to be completed within 2 years from funding date.
- Matching funds not required but encouraged.

GRANT SIZE (Contd.)

Research Area	Research Topic	Suggested Project Max. Funding
Development of effective amendments for crop nutrient recovery systems from digester byproducts, and their effects on stored soil carbon, soil nitrogen and GHG emissions in California cropping systems. Characterization of digestate resulting from distinct digestion processes. Analysis for nitrogen speciation and salts for plant crop fertilizer use and their impacts on water and soil quality.	Technology, Environmental Benefits	Up to $250,000
Decision support tools.	Economics, Environmental Benefits	Up to $100,000

GRANT PROCESS

- Public Comment Process to help guide practical, industry-relevant research that increases dairy digester implementation.
  - Public Stakeholder Meeting/Workshop on March 4.
  - Program framework posted on DDRDP website and comments solicited in writing.
  - Framework revised and RFP released.
- Application Process:
  - Electronic (via e-mail).

REVIEW PROCESS

I. Administrative Review

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II. Peer Review – Scientific Soundness

- CDFA will organize a peer-review panel
- *Specific Criteria*: Significance, Investigators, Innovation, Study/Experimental Design and Analytical Methods, Resources available, GHG Emissions Reduction

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III. TAC Review – Relevance to Research Needs, Overall Feasibility and Soundness

- *Specific criteria*: Proposal addresses key research needs of the program including GHG Emissions Reduction, Proposal Quality, Feasibility and Impact, Professional Qualifications, Fiscal Merit

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IV. TAC Recommendations to CDFA Secretary

TIMELINE (Subject to Change)

TAC Meeting for Feedback on Program Framework	Feb 4, 2015
Public meeting and comment period commences	March 4
End of public comment period	March 18
RFP released to accept applications	March 26
Application due	April 30
Peer Review	May/June
TAC Review	June/July
Awards announced	July
Contracts begin	July

PROGRAM CONTACTS

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A copy of this presentation will be available online from March 4 to March 18, 2015 at
http://www.cdfa.ca.gov/go/dd
Submit comments to grants@cdfa.ca.gov