



DDRDP Workshop



Expanding Access and Enhancing Competitiveness

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

January 6 & 9, 2020



Purpose of Workshop

- Introduce DDRDP to dairy producers, new developers and other interested parties
 - Assist applicants in improving their competitiveness in the application process
 - Discuss the most common errors and issues in applications
 - Share tips with applicants
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DDRDP Overview

Award funds to CA dairy operations and developers for the implementation of dairy digesters to capture methane for generation of renewable energy (renewable natural gas or electricity)

Projects must reduce methane emissions on commercial CA dairies

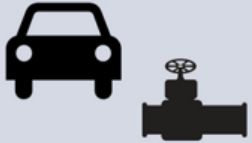


Program Updates

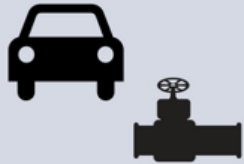
2015



2017



2018



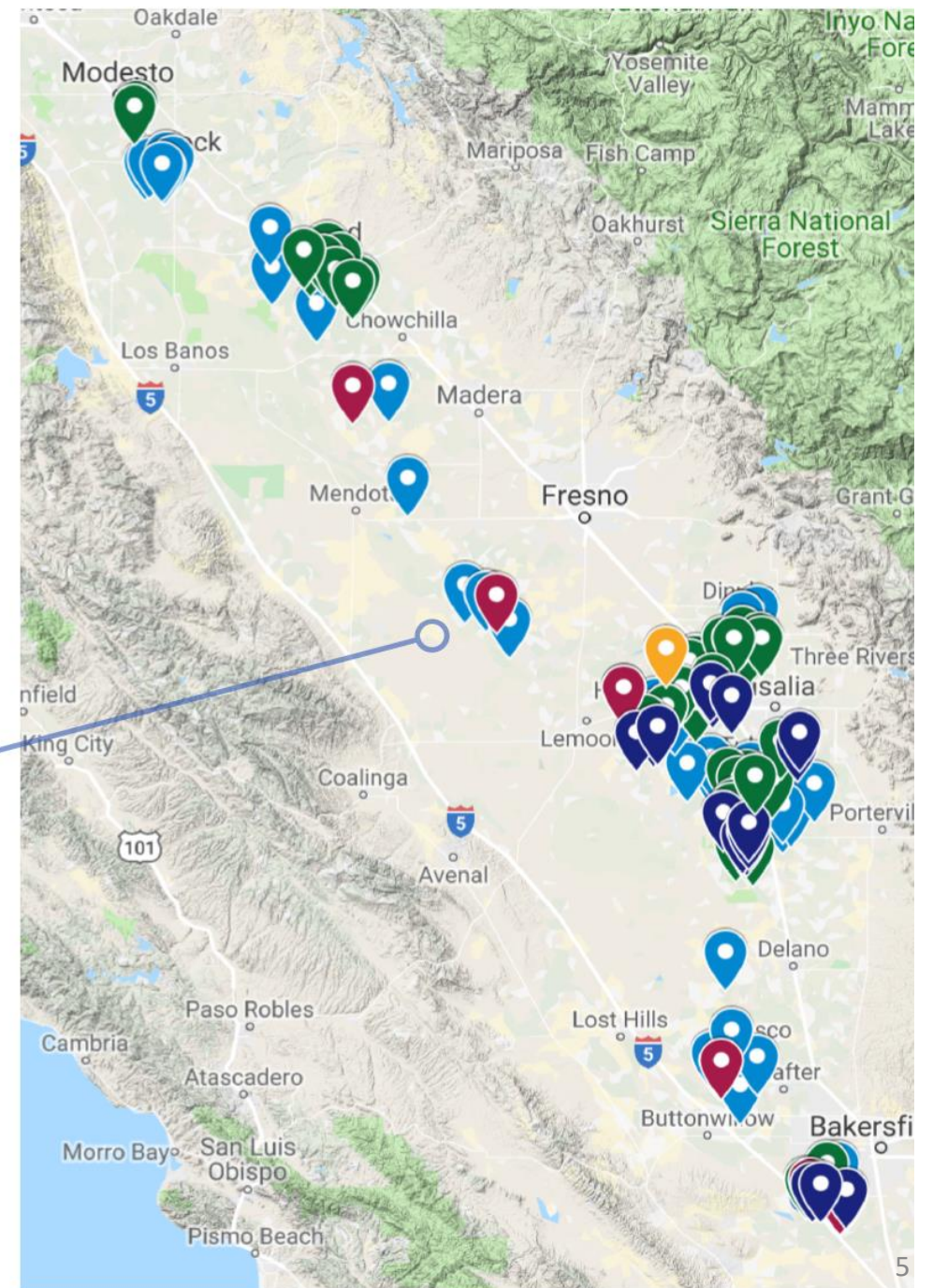
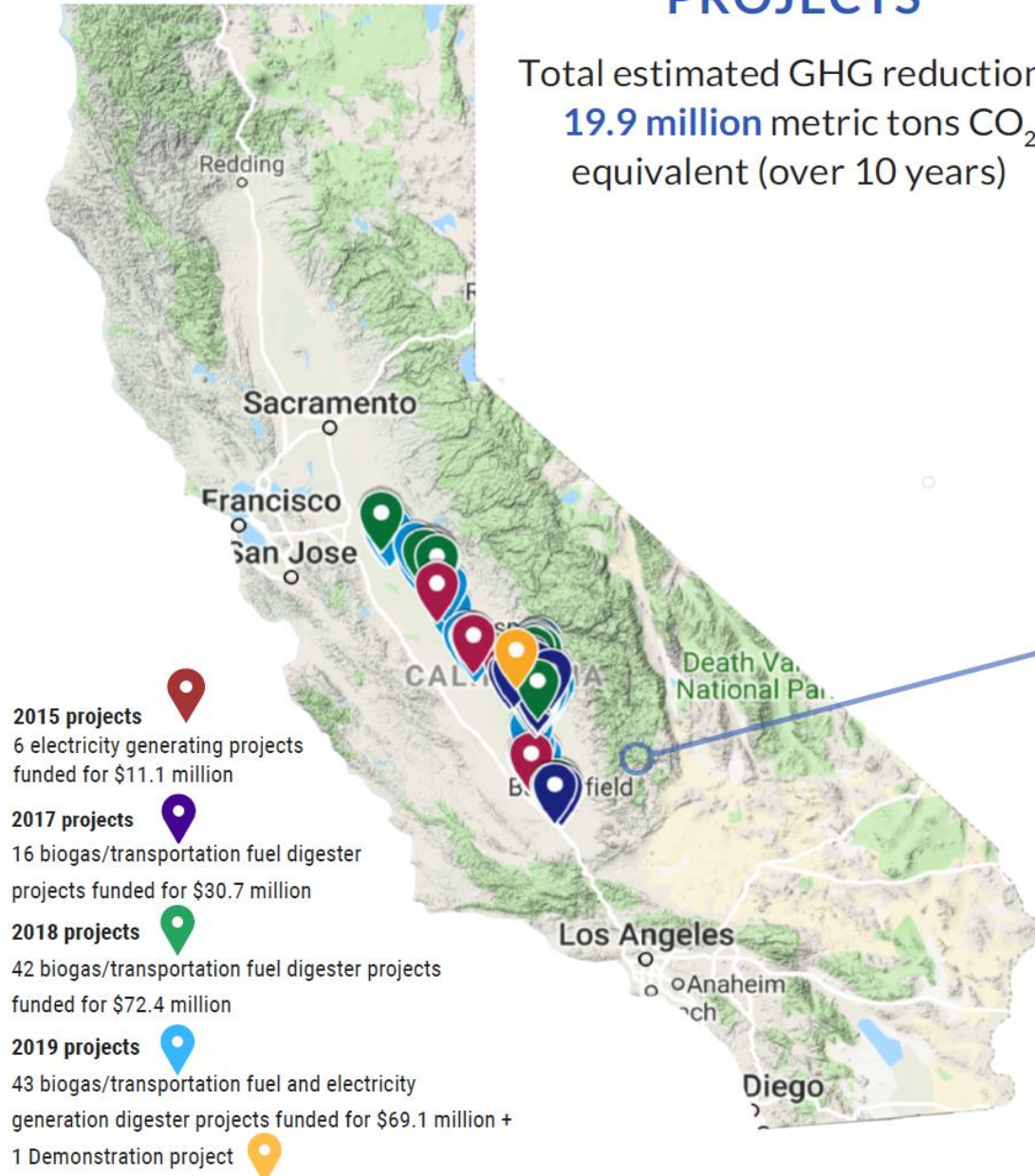
2019



- CDFA awarded \$11.1 million to **6 projects** to generate electricity from biogas. These projects provided \$23.4 million in matching funds
- CDFA awarded \$30.7 million to **16 projects** that will generate RNG. These projects provided \$74 million in matching funds
- CDFA awarded \$72.4 million to **42 projects** that will generate RNG. These projects provided \$102 million in matching funds
- CDFA awarded \$69.1 million to **43 DDRDP projects** and **1 DDRDP Demo** project that will generate RNG and electricity for EVs. These projects provided \$170 million in matching funds

DDRDP FUNDED PROJECTS

Total estimated GHG reductions
19.9 million metric tons CO₂
equivalent (over 10 years)





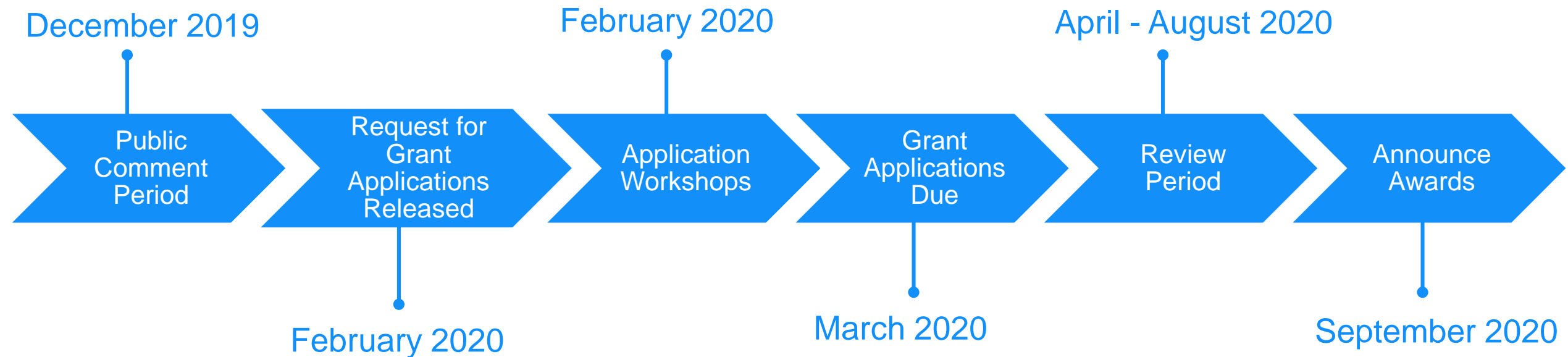
Program Updates

	2015	2017	2018	2019
Projects Awarded	6	16	42	43
Projects Received	12	36	74	66
Over-subscription Rate	200%	225%	175%	153%

2020 DDRDP Solicitation

CDFA received \$34 million from California Climate Investments for methane emission reduction from dairy and livestock operations

65% - 80% of the funds to support digester projects in CA dairy operations



Program Requirements

- Methane used for energy or fuel production → flaring as sole end-use of biogas is not eligible
 - To be used on-site or injected into pipeline, or for utilization of useful thermal energy onsite or neighboring facility
- At least 80% of feedstock (dry weight) for anaerobic digestion must be manure from dairy livestock
- Must use the latest CARB's Quantification Methodology and DDRDP Benefits Calculator Tool: www.arb.ca.gov/cc-resources
- Digester design, construction and operation must maximize air and water quality protection

Program Requirements

- Use of commercially available technology with proven history for the capture and destruction of methane
- Use of double-lined ponds consistent with Tier 1 specification of Dairy General Order (R5-2013-0122), above-ground or below-ground vessels designed to be water tight and built in accordance with strict construction quality assurance (CQA) program
- For electric projects, total NOx emissions must be **no greater than 0.5 lb/MWhr**
- Project partners must not have filed for bankruptcy in the last 5 years

Grant Application

1. Digester Project Plan and Long-Term Viability

Dairy operation background and history, type of digester proposed, plans for renewable power, site control, project sustainability, maintenance, team experience

2. Budget Worksheet and Financials

Information about the dairy's and developer's financial strength, and additional funding sources

3. Estimated GHG Emissions Reduction

Project GHG emissions reduction using the latest "DDRDP Benefits Calculator Tool" and any necessary justification

4. Project Readiness

Permitting documents and status

5. Environmental Performance

Description of impact on criteria pollutants, air pollutants and contaminants, and additional benefits

6. Community Impact

Description of economic benefit to community, detail any negative impact and mitigation measures to be implemented

Common Errors in Applications

1. Digester Project Plan and Long-Term Viability
 2. Budget Worksheet and Financials
 3. Estimated GHG Emissions Reduction
 4. Project Readiness
 5. Environmental Performance
 6. Community Impact
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Common Errors:

Digester Project Plan and Long-Term Viability

- Not providing the address of the dairy in the application questionnaire or project narrative (i.e., no latitude & longitude, no map)
- Inconsistent information across application sections (e.g., herd size, secondary biogas end-use)
- Insufficient or incorrect detail of current manure management practice(s)
- Limited information of long-term maintenance and repair plans
- Insufficient details of long-term project viability (e.g., long-term power purchase agreements)

Common Errors:

Digester Project Plan and Long-Term Viability

- Insufficient information of how a new technology applies to California conditions
- Incomplete or missing drawings and schematics to show the overall layout of project and equipment
- Missing resumes or team qualifications
- If project is part of a cluster, insufficient information on the priority of each project to the cluster (e.g., “all projects are high priority”)
- Project term in the Work Plan starts before the allowed start date and/or after the allowed end date (e.g., January 2019 – December 2021)

Common Errors: Budget Worksheet and Financials

- Incomplete information provided, resulting in inability to conduct a complete evaluation (e.g., no including the financial information of the dairy operation partner)
- No vendor/service provider quotes to support costs included in the Budget
- Project partners that had filed for bankruptcy within the last five years

Common Errors: Estimated GHG Emissions Reduction

- Lack of justification for data inputs in the DDRDP Benefits Calculator Tool (e.g., covered secondary lagoon, baseline solid separator)
- DDRDP Benefits Calculator Tool submitted as PDF (or other format) and not as Excel file; or missing, unreadable or corrupt content
- Not providing accurate energy and diesel consumption records in the pre- and post-digester scenario
- No justification for significant increase or decrease of energy and/or diesel consumption in the post-digester scenario
- Data inputs in DDRDP Benefits Calculator Tool inconsistent with information provided in Project Narrative.

Common Errors: Project Readiness

- Lack of information regarding biogas end-use:
 - If electric project → power purchase agreements for either EV or grid
 - If RNG or RCNG project → biomethane purchase agreement for either transportation fuel or pipeline injection
- Insufficient information regarding permits and their status

Common Errors: Environmental Performance

- Insufficient supporting materials and calculations for claimed NOx and Particulate Matter (PM 2.5 and PM10)
- Failure of some electric projects to meet Program Requirement of no greater than **0.5 lb/MWh NOx emission**
- Limited information regarding NOx and other criteria pollutant mitigation practices
 - Implementation and cost of mitigation strategies (e.g., replacement of diesel vehicles with RCNG vehicles, installation of local RCNG station) not reflected in Work Plan and Budget

Common Errors: Environmental Performance

- Inconsistency between Environmental Performance section values and discussions and DDRDP Benefits Calculator Tool – Co-Benefits tab output

Common Errors: Community Impact

- Outreach efforts not specific to the current funding round/outdated
- Outreach efforts not specific to proposed project or relevant target communities (e.g., outreach meeting conducted in Sacramento for a project located in Tulare)
- Providers of letter of support did not include community members from local residents or local grassroots organizations
- Missing detailed information on how the project is going to generate jobs, or mitigate negative project impacts.

TIPS AND SUGGESTIONS

- Include summary tables where appropriate (e.g., permits list)
- Add table of contents (with the correct page numbers!)
- Ensure provided information is consistent across application sections
- Ensure all activities and tasks necessary for project are listed in Work Plan and accounted for in the Budget, either supported through DDRDP grant funds or matching funds
- Ensure attached information is the correct attachment for that section



TIPS AND SUGGESTIONS

- When using dairy-specific values for milk properties (fat, lactose, true protein) and milk production, provide supporting documentation
- If utilizing social media for community impact/outreach, ensure to add information including but not limited to documentation/proof of public notifications, type of platform utilized, number/shares/attendees, and type of information shared



Questions?

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THANK YOU!

California Department of Food and Agriculture

CDFA.CA.GOV/OEFI/DDRDP
