

**SOLICITATION  
FOR  
SB 1383 DAIRY PILOT PROJECTS**

**By  
Selection Committee**

**Thanks to:**

**PACIFIC GAS & ELECTRIC COMPANY**

**SAN DIEGO GAS & ELECTRIC®**

**SOCALGAS®**

**SOUTHWEST GAS CORPORATION**

**For your continued support of these projects.**

**March 7, 2018**

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# CHAPTER 1 – Overview and Protocol

## 1.0 Solicitation Objective

On December 18, 2017, the California Public Utilities Commission (CPUC) issued Decision (D.)17-12-004 which establishes the necessary framework to direct natural gas corporations (“Utility” or “Utilities”) to implement not less than five dairy biomethane Pilot Projects to demonstrate interconnection to the common carrier pipeline system and allow for rate recovery of reasonable infrastructure costs pursuant to Senate Bill (SB) 1383. Participating Utilities are SoCalGas®, Pacific Gas & Electric Company (PG&E), San Diego Gas & Electric® (SDG&E) and Southwest Gas Corporation (Southwest Gas). The objective of this Dairy Pilot Solicitation (Solicitation) is for the Selection Committee to select and award at least five (5) dairy biomethane Pilot Projects that are financially sustainable in the long-term to ensure these investments provide the expected environmental benefits to ratepayers and the State of California.

## 2.0 SB 1383 Background

SB 1383 was signed by Governor Brown on September 19, 2016 and requires the California Air Resources Board (ARB) to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030. One of the requirements of SB 1383 requires the CPUC, in consultation with ARB and the California Department of Food and Agriculture (CDFA), to direct Utilities to implement not less than five dairy biomethane Pilot Projects to demonstrate interconnection to the common carrier pipeline system. SB 1383 also states for the purposes of these Pilot Projects Utilities may recover in rates the reasonable cost of Pipeline Infrastructure developed pursuant to the Pilot Projects.

On June 15, 2017, the CPUC issued Rulemaking (R.) 17-06-015 (Rulemaking), to develop a framework which directs the Utilities to implement the dairy biomethane Pilot Projects and allow for rate recovery of reasonable infrastructure costs pursuant to SB 1383. The proposed implementation framework covers four general categories: Pilot Project selection; definition of infrastructure; cost recovery framework; and data gathering. Interested parties were able to comment on the proposed framework consistent with the schedule and procedure described in the Rulemaking and on the scope, the schedule, and other procedural matters.

On December 18, 2017, the CPUC issued Decision D.17-12-004 which establishes the necessary framework to direct Utilities to implement not less than five dairy biomethane Pilot Projects. D.17-12-004 also directs the Utilities to issue a draft Solicitation for the Pilot Projects no later than January 18, 2018. The Selection Committee, made up of CPUC, ARB, and CDFA, controls the terms of the Solicitation and selects the Pilot Projects to move forward to contract with Utilities.

### 3.0 Pilot Project Program Eligibility Requirements

1. The Pilot Projects must utilize biomethane from California dairy operations and result in permanent, annual, and quantifiable Greenhouse Gas (GHG) emission reductions. A dairy operation is defined as an entity that operates a dairy herd, which produces milk, cream, or cheese commercially, and/or whose bulk milk or bulk cream is received or handled by any distributor, manufacturer, or any nonprofit cooperative association of dairy producers.
2. Compliance with the CPUC Strategic Directive on Safety: Under the CPUC Strategic Directive on Safety, the CPUC secures health and safety with a goal of achieving zero accidents and injuries. Within its jurisdictional authority, the CPUC focuses on safety policy, risk management, safety assurance, and safety promotion. The CPUC adopts leading safety policies and standards to maximize safety in a cost efficient manner above and beyond compliance. The CPUC continually identifies, assesses, mitigates, or eliminates the safety risk faced or posed. The CPUC assures that entities comply with the law and have sufficient resources to ensure the safety of the public, workers, and the environment. The CPUC supports efforts to assure that the public, workers and customers, are able to make informed choices and know how to respond to unsafe situations. The CPUC is committed to promoting and continuously improving safety culture.<sup>1</sup>

No funding can be awarded for pipeline construction that carries hydrogen sulfide (H<sub>2</sub>S) at concentration levels detrimental to human health and safety. All projects must submit a safety action plan with initial processes and procedures drafted that indicate potential unsafe conditions and preliminary processes and procedures delineated to respond to each.<sup>2</sup>

3. Existing dairy operations and developers who have a written commitment from a dairy operation are eligible for the Pilot Projects. At least 80% or more dry weight must be manure from dairy livestock.
4. A group of dairy operations can submit one Application to develop centralized dairy digesters, known as a “cluster” or “hub and spoke” project and describe the phased-approached or the full cluster plan (e.g., construction, operation timeline, number of dairies in total cluster and amount of biomethane that will be generated in each phase of the cluster construction). The phased-approached cluster project must include a signed lease and feedstock agreement, not just a letter of interest or future addition. The appropriate location of the centralized biogas conditioning/upgrading facility can be determined by participating dairy operations.

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<sup>1</sup>[http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/Transparency/Strategic\\_Planning\\_Initiative/Strategic\\_Directives\\_and\\_Governance\\_Policies\\_Revised\\_August%2010,2017.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Transparency/Strategic_Planning_Initiative/Strategic_Directives_and_Governance_Policies_Revised_August%2010,2017.pdf)

<sup>2</sup> <https://www.osha.gov/SLTC/hydrogensulfide/hazards.html>

5. To be considered in the selection process, Applicants are required to meet and agree with the following requirements:
  - a. Demonstrate CEQA and Permits Compliance (see Section 7.2 and Attachment A)
  - b. Quantify expected GHG Emissions Reduction
    1. Applicants are required to use the quantification methodology titled “Greenhouse Gas Quantification Methodology for the California Department of Food and Agriculture Dairy Digester Research and Development Program (DDRDP) Fiscal Year 2017-18” and associated DDRDP GHG Emission Reduction Calculator Tool (ARB GHG Reduction Calculator) developed by ARB. The quantification methodology and tool are available on ARB’s website at <http://www.arb.ca.gov/cqi-quantification>.
  - c. Biomethane produced by the Pilot Project must be used in California
  - d. Report parameters and participate in evaluation (See Section 7.3 and Attachment B)

These requirements allow for compliant operation of facilities under multi-level permitting regimes while ensuring protection of the environment, including reduced methane and criteria pollutant emissions. These terms are non-negotiable.

## 4.0 Dairy Pilot Project Components and Funding

A dairy cluster project consists of various components to move the biogas from each individual dairy to the Utility pipeline. Figure 1<sup>3</sup> illustrates and defines several components of a typical dairy Pilot Project that will be connected to a Utility pipeline.

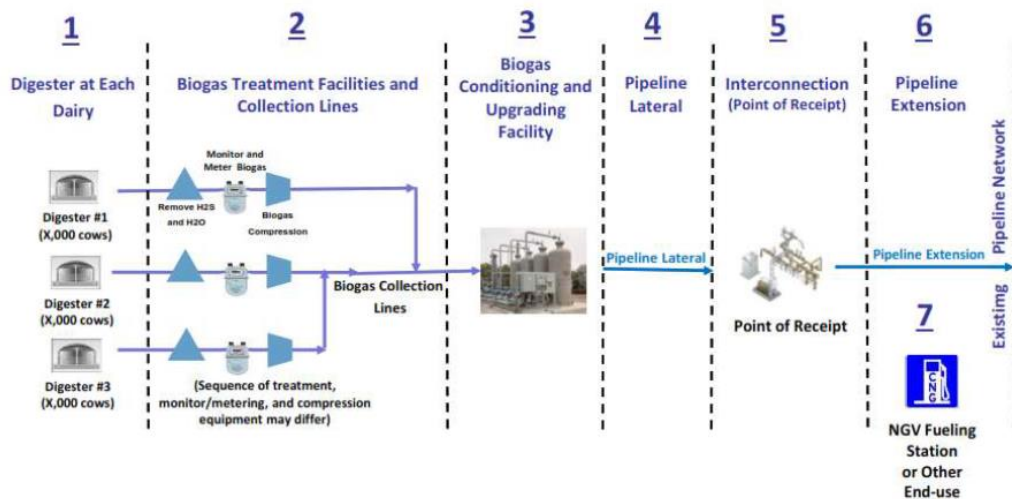


Figure 1: Dairy Biomethane Pilot Primary Components

<sup>3</sup> Figure 1 is from (D.)17-12-004, page 16

For the SB 1383 dairy Pilot Projects, the costs of digesters (Lane 1 of Figure 1), biogas conditioning and upgrading facility (Lane 3 of Figure 1) and NGV fueling station or other end-use (Lane 7 of Figure 1) are **not considered Pipeline Infrastructure** and are **not eligible for funding** from the Utilities.<sup>4</sup>

Biogas from livestock operations that do not directly produce dairy products (“non-dairy”), such as heifer operations, will be allowed to be injected into Pipeline Infrastructure. However, biogas treatment facilities at non-dairy livestock operations and collection lines connecting those non-dairy livestock operations to Pipeline Infrastructure, **are not considered Pipeline Infrastructure**, and **are not eligible for funding** from the Utilities in this Solicitation.

The following Pipeline Infrastructure components **are eligible for funding**:

- a) Biogas collection lines and facilities for treatment of biogas before it enters the collection lines (Lane 2 of Figure 1) – owned and operated by Applicant;
- b) Pipeline lateral and compression that delivers biogas from a biogas conditioning facility to the point of receipt (Lane 4 of Figure 1) – owned and operated by the Utility;
- c) Point of receipt, where the utility receives gas that has been upgraded at a biogas conditioning/upgrading facility (Lane 5 of Figure 1) – owned and operated by the Utility;
- d) Pipeline extension that delivers biogas to the Utility’s existing gas pipeline system (Lane 6 of Figure 1) – owned and operated by the Utility;

If a Pilot Project includes both delivery of biomethane to an onsite electric generator (e.g., combustion turbine, reciprocating internal combustion engine, microturbine or fuel cell) and injection of biomethane into the Utility pipeline, the Pipeline Infrastructure costs that are eligible for funding shall be reduced by the percentage of the biomethane that is delivered to an onsite electric generator, rather than injected into the Utility pipeline. This reimbursement reduction will not apply if the pipeline infrastructure is sized to an appropriate capacity for the amount of biomethane proposed for pipeline injection in the project’s application. This reimbursement reduction will apply if the pipeline infrastructure is sized to include an amount of biomethane that is dedicated for use in an onsite electric generator at the time of the project’s application.

If a Pilot Project obtains feedstock from non-dairy livestock operations, such as heifer operations, and directs biogas from that feedstock into Pipeline Infrastructure that is eligible for funding from the Utilities under Section 4.1 of this Final Solicitation, the Pilot Project is solely responsible for the costs of the biogas treatment facilities and collection lines from those “non-dairy” livestock operations. The Pilot Project is also solely responsible for the incremental cost increase to Pipeline Infrastructure caused by adding “non-dairy” livestock feedstock into Pipeline Infrastructure. An Applicant must include detailed information about this arrangement in the relevant portions of its application such as the general information located in Chapter 1, section 5.5.1 of this Final Solicitation, and the Dairy Waste-to-Biomethane Business Model in

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<sup>4</sup> There are other potential sources of funding for these facilities, such as the CDFR Dairy Digester Grant Program and as stated in (D.)17-12-004, SoCalGas’ biogas conditioning and upgrading services tariff



Chapter 2, section 2.0 of this Final Solicitation.<sup>5</sup> If a Pilot Project decides to add such “non-dairy” livestock feedstock to its project after it is selected as a Pilot Project, the Pilot Project must alert the appropriate Utility and CPUC of that decision and include detailed information about this project addition as requested by the Utility and CPUC. The Applicant (or the Pilot Project) must itemize the incremental cost added to Pipeline Infrastructure by injecting the “non-dairy” livestock biogas into Pipeline Infrastructure for purposes of ensuring appropriate cost reimbursement.

#### **4.1 Applicant Ownership of Pipeline Infrastructure**

Applicant shall own, operate, and maintain in accordance with applicable safety regulations, the biogas collection lines and any biogas treatment or conditioning equipment (Lane 2) to remove hydrogen sulfide and water from the raw biogas prior to it entering the biogas collection lines. Applicant owned and operated gas gathering lines are regulated under California Code of Regulations (CCR) Title 8 Industry Safety Regulations.<sup>6</sup> The upfront costs<sup>7</sup> associated with the biogas collection lines and treatment equipment will be recovered from utility ratepayers and provided as a reimbursement to the Applicant. To ensure only reasonable and verified costs of Pipeline Infrastructure developed pursuant to the dairy Pilot Projects are collected from ratepayers, Applicant-owned Pipeline Infrastructure costs will be recorded in a Utility balancing account and costs above the bid amount will be subject to reasonableness review by the CPUC.<sup>8</sup> Selected Pilot Projects should keep detailed project and cost information, and be prepared to provide this information should a reasonableness review be necessary.

Applicant may pursue an operation and maintenance contract with an Investor Owned Utility or third party for the Applicant-owned biogas treatment facilities and collection lines so long as contract terms are known, clear, cost effective, and result in increased safety.

#### **4.2 Utility Ownership of Pipeline Infrastructure**

Utilities will own and operate all facilities downstream of the biogas conditioning and upgrading facilities (Lanes 4, 5 and 6), including pipeline lateral and compression from such facilities to the point of receipt and any pipeline extensions. These facilities are also referred to as Utility-Owned Pipeline Infrastructure. Utility owned and operated pipeline facilities are regulated in accordance with PHSMA guidelines, 49 CFR Part 192 and GO 112-F.<sup>9</sup>

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<sup>5</sup> E.g., location of the non-dairy livestock operation, location of the interconnection of the non- dairy livestock biogas with the Pipeline Infrastructure, and methane reductions generated from the non-dairy livestock biogas.

<sup>6</sup> D.17-12-004, COL 4 (page 21)

<sup>7</sup> Excluding any operation and maintenance costs

<sup>8</sup> The bid amount refers to the estimates provided in an Application for Applicant-Owned Pipeline Infrastructure

<sup>9</sup> D.17-12-004, COL 4 (page 21)

## 5.0 How to Participate in the Solicitation

### 5.1 Schedule

The following is a schedule of planned milestones. This schedule is subject to change by the Selection Committee as required:

1. On **January 18, 2018**, SoCalGas will issue a draft joint utility Solicitation.
2. On **January 31, 2018**, SoCalGas will hold a bidder Workshop/Webinar to explain the Solicitation process, gather inputs to clarify the Solicitation process, and to answer questions. Energy Division and ARB staff will participate in the Workshop/Webinar to provide agency perspective.
3. By **February 5, 2018**, interested parties to file Comments to the draft Solicitation (refer to Section 5.3).
4. By **February 12, 2018**, interested parties to file Reply Comments to the draft Solicitation (refer to Section 5.3).
5. On **February 15, 2018**, SoCalGas shall make modifications deemed necessary and submit the revised draft joint utility Solicitation to the Selection Committee at [renewablegas@cpuc.ca.gov](mailto:renewablegas@cpuc.ca.gov) for review and approval. In the submittal, SoCalGas shall provide a short summary of bidders' input on the draft Solicitation and explain the reasons for adopting, modifying, or rejecting bidders' input.
6. On **March 7, 2018**, the Selection Committee will issue the final Solicitation to the market.
7. By **March 17, 2018**, Applicants must submit a request for the Utilities to perform a SB 1383 dairy pilot-specific "Pipeline Infrastructure Scoping and Cost Estimation," providing necessary data such as digester locations and characteristics of biomethane (volume, temperature, pressure, constituents, etc.).<sup>10</sup> A request should be made to the Utility where the proposed Pilot Project is located. As part of this Pipeline Infrastructure Scoping and Cost Estimation, the Utilities will perform the initial desktop engineering studies necessary to assess common-carrier natural gas pipeline offtake capacity, and provide a preliminary design and cost estimates of Utility-owned Pipeline Infrastructure. These costs will primarily be assessed from the engineering office and will not represent a fully-vetted, firm cost estimate. The results of this engineering study will be shared with each Applicant within 45 days of the Applicant's request. After receiving the engineering and cost estimate, the Applicants shall have 15 days to submit changes to its project description. If any changes are made, the Utilities will have another 15 days to provide a final Pipeline Infrastructure Scoping and Cost Estimation.
8. By **June 25, 2018**, Applicants will electronically submit an Application for their proposed dairy Pilot Project(s) to [renewablegas@cpuc.ca.gov](mailto:renewablegas@cpuc.ca.gov) and to the Utilities in their respective service

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<sup>10</sup> The Pipeline Infrastructure Scoping and Cost Estimation is paid for by the Utility.

- territories (use email addresses listed in Chapter 1, Section 5.6) within 110 days following the issuing of the final Solicitation. The Pipeline Infrastructure Scoping and Cost Estimation should include two references to actual historical or current competitive cost data for similar work. The CPUC will evaluate cost estimations (both Utility-Owned Pipeline Infrastructure and Applicant-Owned Pipeline Infrastructure). The Selection Committee and/or independent auditors will evaluate and verify project benefits. The Selection Committee has the discretion to modify the cost estimation (both Applicant and Utility-Owned Pipeline Infrastructure) and GHG Reduction value used as an input for Financial Plan/Soundness (Chapter 2, Section 3.0) and GHG Reduction and Cost Effectiveness (Chapter 2, Section 4.0). Estimated cost documentation provided shall be itemized, such that the CPUC can understand the exact breakdown of labor, operations and maintenance, and capital expenditures for each job activity and each installed piece of equipment.
9. The Selection Committee will choose a short list of Pilot Projects (First Shortlist) based on the selection criteria and submit it to the Utilities to review and refine the Utility-Owned Pipeline Infrastructure cost estimates, including researching land acquisition, site development, right-of-way, metering, gas quality, compression requirements, permitting, regulatory, environmental, unusual construction, operating and maintenance costs.
  10. Within 30 days of receiving the Pilot Project shortlist from the Selection Committee, Utilities will provide refined cost estimates to the Selection Committee that includes reference to actual historical or current competitive cost data for similar work.
  11. Once the refined cost estimates are reviewed, the Selection Committee will submit to the Utilities a narrowed-down selection of at least five projects (Second Shortlist).
  12. Within 30 days of the selection of the final Pilot Projects, Utilities will complete a final Utility-Owned Pipeline Infrastructure cost estimate of projected revenue requirement, including a description of all costs of construction, development of complete engineering construction drawings, preparation of all construction and environmental permit applications and right-of-way acquisition requirements. Reference to actual historical or current competitive cost data for similar work should be included.
  13. With the final Utility-Owned Pipeline Infrastructure cost estimate, the Selection Committee will review and select at least five Pilot Projects based on the Selection Criteria. The Selection Committee has the discretion to choose dairy Pilot Projects that are not the highest scoring to ensure that dairy Pilot Projects are selected in a variety of geographic locations and are developed by at least two or more developers in order achieve project diversity. If there is no consensus within the Selection Committee, the CPUC will make the final selection.
  14. The Selection Committee will inform the Utilities of the selected Pilot Projects, and within 10 days of award, the Utilities will each file a Tier 2 Advice Letter to open a balancing account to record expenditures for biogas collection lines, and a memorandum account to record capital for point of receipts and pipeline extensions.

15. Within 30 days of the date the Selection Committee notifies the Utilities of the selected Pilot Projects, the Utilities will file a Tier 2 Advice Letter seeking approval of the contracts with the dairy Pilot Projects.
16. The Utilities will manage and implement the Pipeline Infrastructure portion of the Pilot Projects in their respective service territories.
17. The Utilities must work with the awarded Applicants to establish a construction plan for necessary Utility-owned Pipeline Infrastructure. The Utilities must pay for and construct the portion of a Pilot Project that is defined as Utility-owned Pipeline Infrastructure.

## 5.2 Applicants Workshop

The Utilities will conduct a workshop/webinar on the SB 1383 Solicitation process on January 31, 2018. All interested Applicants are encouraged to participate in the workshop and details are below:

California Department of Food and Agriculture, Room 101  
 2800 Gateway Oaks Dr,  
 Sacramento, CA 95833

January 31, 2018

1:00 p.m. to 3:00 p.m.

Webinar and call-in information will be posted to the CPUC’s website:

[http://www.cpuc.ca.gov/renewable\\_natural\\_gas/](http://www.cpuc.ca.gov/renewable_natural_gas/)

## 5.3 Comments and Reply Comments to the Joint Utility Draft Solicitation

Table 1 provides the schedule for interested parties to file Comments and Reply Comments to the joint utility draft Solicitation. Comments and Reply Comments shall be submitted to the (D.)17-12-004 service list. Comments and Reply Comments will be posted to the CPUC’s website at [http://www.cpuc.ca.gov/renewable\\_natural\\_gas/](http://www.cpuc.ca.gov/renewable_natural_gas/).

Comments Due By:	Reply Comments Due By:
February 5, 2018 by 5:00 p.m.	February 12, 2018 by 5:00 p.m.

**TABLE 1: Note: All times listed above are Pacific Standard Time (PST)**

## 5.4 Questions and Answers to the Final Solicitation

Questions pertaining to the final Solicitation issued by the Selection Committee should be submitted to [renewablegas@cpuc.ca.gov](mailto:renewablegas@cpuc.ca.gov). Responses to all questions received will be posted to the CPUC’s website at [http://www.cpuc.ca.gov/renewable\\_natural\\_gas/](http://www.cpuc.ca.gov/renewable_natural_gas/).

To maintain the integrity of the competitive grant process, the Selection Committee is unable to advise and/or provide individuals with any information except through the process identified above.

## 5.5 Applicant Request for the Utility to Complete a Pipeline Infrastructure Scoping and Cost Estimation

As stated in Step 7 of Chapter 1, Section 5.1, the Applicant is required to submit a Pipeline Infrastructure Scoping and Cost Estimation by March 17<sup>th</sup>, 2018 to the Utility where the proposed dairy Pilot Project is located. The following information is to be submitted to each Utility:

### 5.5.1 General Information to be Provided by Applicant to Utility for Each Project

Provide a map that provides a project overview including:

1. The dairies where the Applicant has an agreement for the feedstock
2. The dairies where the Applicant does not have an agreement for the feedstock but could be added at a future time
3. The location of the dairy digesters: existing, under development, and planned
4. Location of the biogas collection lines (along with diameter size) from each dairy to the central biogas conditioning and upgrading facility
5. Location of the central biogas conditioning and upgrading facility
6. Location(s) of the proposed Utility point of receipt
7. Location(s) of the Utility pipeline extension
8. Identify public right-of-way and private right-of-way for each component

### 5.5.2 Utility Specific Information to be Provided by Applicant to Utility for Each Project

Applicant to complete the Utility form where the proposed project is located:

1. **SoCalGas and SDG&E** – Gas Supplier Interconnection Fact Sheet  
<https://www.socalgas.com/1443740708188/gas-supplier-interconnection-factsheet.pdf>
2. **PG&E** – Request for Gas Supply Interconnection  
[https://www.pge.com/pge\\_global/common/pdfs/for-our-business-partners/interconnection-renewables/interconnections-renewables/request-for-gas-supply-interconnection.pdf](https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/interconnection-renewables/interconnections-renewables/request-for-gas-supply-interconnection.pdf)
3. **Southwest Gas** – To be included in the Final Solicitation

## 5.6 How to Apply

Applicants are requested to submit an electronic version of their Application in **PDF format** to the Selection Committee at [renewablegas@cpuc.ca.gov](mailto:renewablegas@cpuc.ca.gov) and to the Utilities within their respective

services territories. For SoCalGas and SDG&E, the email address is [SB1383Pilots@semprautilities.com](mailto:SB1383Pilots@semprautilities.com). For PG&E, the email address is [biomethane@pge.com](mailto:biomethane@pge.com). For Southwest Gas, the email address is [KeyAccountManagement@swgas.com](mailto:KeyAccountManagement@swgas.com). Chapter 2 of this Solicitation provides the required documentation for submitting an Application. Applications are due no later than June 25<sup>th</sup>, 2018 at 5:00 p.m. Applications received after this time **will not be accepted.**

## 6.0 Selection Criteria

A Selection Committee comprised of the CPUC as the lead agency, in consultation with ARB and CDEFA will determine which dairy biomethane Pilot Project proposals are accepted for inclusion in the dairy Pilot Projects. Applicants shall submit a response that includes a detailed description of the proposed Pilot Project, its operational goals and objectives. The score will be based on the criterion chart below:

Scoring Criteria	Maximum Points
Dairy Waste-to-Biomethane Business Model <ul style="list-style-type: none"> <li>• Dairy Operation</li> <li>• Technology Plan</li> <li>• Marketing Plan</li> <li>• Scalability</li> </ul>	20
Financial Plan/Soundness	15
Greenhouse Gas Reduction and Cost Effectiveness	25
Environmental Benefits	15
Disadvantaged Communities	10
Project Readiness and Implementation	15

Pilot Project Applications will be evaluated and verified by the Selection Committee and/or independent auditors.

Pilot Projects with the five highest scores will be chosen for participation. However, the Selection Committee has the discretion to choose Pilot Projects that are not the highest scoring to ensure that Pilot Projects are selected in a variety of geographic locations and are developed by at least two or more developers to achieve project diversity. In the event of multiple Pilot Projects with identical scores as the fifth-highest, the CPUC representative on the Selection Committee has the discretion to authorize more than five Pilot Projects. The Pilot Projects selected are required to participate in a dairy biomethane evaluation study and to report specified data to the Selection Committee and the California Energy Commission (CEC) on an annual basis.

The Selection Committee may send project applicants written questions about their projects and applications and expect to receive written responses in 10 days.

Depending on the results of this solicitation, the Selection Committee can put forth a future solicitation at its discretion in order to comply with the terms of SB 1383.

## **7.0 Requirements for Selected Pilot Projects**

### **7.1 Agreement/Contracts**

Applicants with Selected Pilot Projects will receive a SB 1383 Agreement package with specific instructions regarding award requirements. Once the agreement(s) are executed, Selected Pilot Projects can begin implementation of the project. Selected Pilot Projects are responsible for the overall management of their awarded project to ensure all project activities are completed. It is required that selected projects will comply with the terms of their application for five (5) years from the date that the project receives Milestone Payment 3.

The target date for Selected Pilot Projects to be connected to the Utility pipeline and flowing renewable natural gas is two years after the Applicant has received notification by the Selection Committee of a successful Application. If the proposed project is not online in two years from the date of selection, the applicant must submit an Extension Request to the Selection Committee delineating project steps and expected online date.

### **7.2 Demonstrate CEQA Compliance**

Selected Pilot Projects must demonstrate substantial compliance with CEQA and all applicable permits within six months of receiving notification from the Selection Committee of a successful bid, with the opportunity to request additional time for good cause. More specifically, Pilot Projects must undergo any required CEQA process to provide information on potential impacts of the project. Continued compliance with all environmental permit requirements is required for the duration of the Pilot Project's operation. CEQA Guidance is located in Attachment A.

### **7.3 Reporting**

Selected Pilot Projects must agree to report specific data to the Selection Committee and the CEC on a quarterly basis. Pilot Projects must also agree to allow these agencies to monitor and evaluate these data. Pilot Projects have an obligation to report the costs incurred, by both the dairy and utility, as long as the pilots are operational or the costs from the Pilot Projects are included in Utility rates, but not to exceed 15 years. Finally, Pilot Projects must agree to participate in reasonable research projects undertaken by these State agencies, sometimes in collaboration with the dairy industry, designed to better understand the emissions profiles of the Pilot Projects, their cost and revenue potential, the relative effectiveness of various design features, as well as reasonable related data reporting parameters. Confidential business information evaluated during reporting,

monitoring, and subsequent research is protected from disclosure under existing law. Details of the report parameters and evaluations are located in Attachment B.

#### **7.4 Interaction Between Existing Public Funding Programs**

Applicant-owned Pipeline Infrastructure costs for which the applicant intends to or does pay with another source of public funding or statutorily authorized funding (such as AB 2313 or the CDFA Dairy Digester Research and Development Program) are not eligible for reimbursement. A project shall document how funds received pursuant to the dairy biomethane pilot project program are spent on costs not otherwise covered by another funding source.

#### **7.5 Reimbursement Mechanism for Applicant-Owned Pipeline Infrastructure**

There will be a milestone payment reimbursement structure for Applicant-Owned Pipeline Infrastructure as follows:

**Milestone Payment 1:** When a selected pilot project spends 35% of the approved bid amount for Applicant-Owned Pipeline Infrastructure, the selected pilot project may seek reimbursement of those costs by providing detailed vendor invoices and proof of payment(s) for materials/services provided to the appropriate utility for approval. The amount of reimbursement may not exceed the costs reflected by the invoices and proof of payment(s).

**Milestone Payment 2:** When the selected pilot project spends 70% of the approved bid amount for Applicant-Owned Pipeline Infrastructure, the selected pilot project can seek reimbursement of those costs by providing detailed vendor invoices and proof of payment(s) for materials/services provided to the appropriate utility for approval. The amount of reimbursement may not exceed the costs reflected by the invoices and proof of payment(s).

**Milestone Payment 3:** Reimbursement payment up to 15% of the approved bid amount for Applicant-Owned Pipeline Infrastructure will be provided to the selected pilot project after meeting the 30 out of 40 days flow requirement as established in the Biomethane Monetary Incentive Program established in D.15-06-029, as modified by D.16-12-043:

Applicant to produce biomethane flow for 30 out of 40 days within the minimum and maximum measurement range of the meter. Applicant must declare in a written notice to the Utility at least two business days in advance, the specific start and end date of this 40 day testing period. The 30 out of 40 day requirement is extended 1 day for each day that the Applicant is unable to produce flow because of an interruption of delivery as set forth in Rule No. 23. Applicants may elect to restart the 40 day testing period by providing a new written notice declaring the new start and end dates at least two business days in advance of when the new 40 day testing period is to begin.<sup>11</sup>

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<sup>11</sup> See D.15-06-029, p. 42, Conclusion of Law 12; D.16-12-043, pp. 33, 42, Conclusion of Law 2.



Once the 30 out of 40 days flow requirement is met, the selected pilot project must provide the appropriate utility with detailed vendor invoices and proof of payment(s) for materials/services provided not to exceed 15% of the bid amount for Applicant-Owned Pipeline Infrastructure for approval. The amount of reimbursement may not exceed the costs reflected by the invoices and proof of payment(s).

**Milestone Payment 4:** The final reimbursement payment of up to 15% of the bid amount for the Applicant-Owned Pipeline Infrastructure will be provided to the selected pilot project after meeting the forecasted renewable natural gas production volume as provided in the solicitation application. Once this requirement is met, the selected pilot project must provide detailed vendor invoices and proof of payment(s) for materials/services provided not to exceed the bid amount for Applicant-Owned Pipeline Infrastructure to the appropriate utility for approval. The amount of reimbursement may not exceed the costs reflected by the invoices and proof of payment(s). The final reimbursement payment will be available for 2 years, starting from the date the 30 out of 40 days flow requirement is met.

- Utilities shall submit reimbursement summaries to the Selection Committee & make all receipts reviewable available upon request.
- If a selected project withdraws from the pilot and has incurred any costs, the project must return any funds received.

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# CHAPTER 1 – Attachments

## ATTACHMENT A: CEQA Guidance

1. **Air Quality Protection.** Projects shall demonstrate protection of air quality such that project specific air quality impacts are mitigated to a level of insignificance. The design and construction of digester vessels (i.e., ponds and tanks), low pressure raw biogas pipeline, biogas upgrading and conditioning equipment, biomethane compression equipment, post-cleanup pipeline and interconnection components under this program shall be demonstrated to be protective of air quality. To meet air quality requirements, the following is required:
  - a. Pilot Projects must prepare and deploy methane leak detection or a plan covering the interconnection point, post-upgrading pipeline, compressor stations, biogas upgrading system, low-pressure pipeline, and anaerobic digester. Post-upgrading component methane leak monitoring shall be conducted in accordance with the leak<sup>12</sup> detection and repair<sup>13</sup> requirements of Section 95669 (Leak Detection and Repair) of the ARB Oil and Gas Regulation (California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 10 Climate Change, Article 4)<sup>14</sup> and is the responsibility of the gas corporations. The cost of methane leak detection equipment is recoverable in rates.
  - b. Projects with existing or planned onsite generation technologies operating on dairy biogas (e.g., combustion turbine, reciprocating internal combustion engines, microturbines or fuel cells) must meet Best Available Control Technology (BACT) standards under new source review and shall demonstrate compliance for the life of the project.
  - c. Flaring of raw biogas or biomethane meeting pipeline specifications shall only be allowed in case of emergency. The local Air District(s) shall define what constitutes an emergency under this provision.
  - d. Any offsite emission reductions to offset a project’s criteria pollutant and toxic air contaminant emissions must occur in the same air basin as the project site.
2. **Water Quality.** Projects shall demonstrate protection of water. 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 as determined by the appropriate regional water quality control board, including, but not limited to, each of the following:
  - a. 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;
  - b. Above-ground tank;
  - c. Below-grade concrete lined tank

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<sup>12</sup> Leak is defined in § 95667 (a)(27) of the ARB Oil and Gas Regulation as “the unintentional release of emissions at a rate greater than or equal to the leak thresholds specified in this subarticle.”

<sup>13</sup> Leak detection and repair is defined in § 95667 (a)(28) of the ARB Oil and Gas Regulation as “the inspection of components to detect leaks of total hydrocarbons and the repair of components with leaks above the standards specified in this subarticle and within the timeframes specified in this subarticle.”

<sup>14</sup> Text of the Oil and Gas Regulation, effective October 1, 2017 is available at: <https://www.arb.ca.gov/regact/2016/oilandgas2016/ogfro.pdf>

## **ATTACHMENT B: Data Reporting Parameters and Participation in Evaluations**

Each selected dairy Pilot Project must participate in data reporting and evaluations and shall be submitted to the Selection Committee and CEC on a quarterly basis. Commercially sensitive data may be submitted with a request for limits on disclosure. Data reporting includes:

- A. Pilot Project Information and Description, including (but not limited to):
  1. Location
  2. Detailed dairy cow population (by dairy for clusters, segregated by age, gender, and lactation status)
  3. Discussion of business model
  4. Demonstrated dairy/site control for third party developer projects
  5. Description of current manure handling and all proposed modifications
  6. Description of equipment to be installed, including location of any centralized facilities shared between dairies
  7. Proximity to pipeline with injection capacity
  8. Proximity to transportation corridors
  9. Proximity to disadvantaged communities as defined by the Office of Environmental Health Hazard Assessment (OEHHA) by CalEnviroScreen 3.0.
  10. Description of related on- and off-dairy heavy-duty vehicle fleets (milk hauling, feed delivery) that could potentially be converted to low-NOx natural gas power.
  11. Discussion of fuel and transportation off-taker contracts completed or under development.
  
- B. Provide all information listed in the “FAAST Grant Application Questions”<sup>15</sup> section of the CDFA’s 2017 Dairy Digester Research and Development Program Solicitation.
  
- C. Costs, including but not limited to:
  1. Project Development and Construction, including the cost of design, engineering, installation, and individual component capital costs (e.g. including digesters, gathering lines, biomethane upgrading/conditioning, and pipeline injection point of receipt), including how any project delays impacted costs;
  2. Interconnection Studies;
  3. Component Operation and Maintenance (including consumables, labor, and energy requirements); and
  4. Description (including total amounts) of costs recovered through the utility ratebase.

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<sup>15</sup> Referenced material currently begins on page 12 of the May 3, 2017 Request for DDRDP Grant Applications <https://www.cdfa.ca.gov/oefi/ddrdp/>

D. Costs shall also be reported as follows:

1. Energy production cost-effectiveness (annual diesel gallon equivalents (DGEs) produced divided by annualized project expenditures);
2. Methane emissions abatement cost effectiveness (annual emissions avoided divided by annualized project expenditures); and
3. Percent of total project costs recovered from utility ratepayers (defined as Pipeline Infrastructure Costs).

E. Project developers agree to allow the following to be monitored, evaluated, or otherwise studied:

1. Feasibility
2. Cost-effectiveness
3. Method to track and verify delivery of biomethane to transportation fuel fleets or customers
4. Determinants of technical performance, including the following:
  - i. Emissions (GHG and criteria) and emissions reductions
    - Methane emission reductions must be calculated using either the ARB Livestock Projects Compliance Offset Protocol<sup>16</sup> or the FY 17/18 CDFA Dairy Digester Research and Development Program Quantification Methodology.<sup>17</sup>
    - Projects are required to provide GHG calculations in the following formats:
      - Total annual biomethane injection;
      - Total annual GHG emission reduction;
      - GHG reduction per unit of energy-corrected milk (ECM) produced by the dairy operation;
      - GHG reduction per dollar CDFA-DDRDP and additional GGRF (if any) grant money invested. (If applicable)
  - ii. Renewable energy potential (amount of biogas and fuel produced)
  - iii. Effectiveness of selected technology components
    - Dairy digestion technology, including monitoring and testing of baseline and post-digester emissions, at a minimum methane, nitrous oxide, criteria pollutants, and toxic air contaminants from anaerobic digestion, handling of post-digestion manure, and any other air emissions from a project
    - Biogas upgrading and conditioning, including monitoring biogas quality achieved pre- and post-cleanup by methods including, but not limited to standard leak-detection and remote sensing

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<sup>16</sup> Information on the ARB Livestock Projects Compliance Offset Protocol available on the ARB website at: <https://www.arb.ca.gov/cc/capandtrade/protocols/livestock/livestock.htm>

<sup>17</sup> The Greenhouse Gas Quantification Methodology for the CDFA DDRDP is available at: [https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/cdfa\\_ddrdp\\_finalqm\\_17-18.pdf](https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/cdfa_ddrdp_finalqm_17-18.pdf)

- Pipeline and interconnection point of receipt
  - iv. Impact on daily operation of dairy
  - v. Lessons learned
    - Key ingredients for success
    - Pitfalls to avoid
    - Potential for cost reductions
    - Transferability to other biomethane submarkets (e.g., wastewater treatment plants, organic diversion at landfills, food waste)
  - vi. Scalability and replication potential
5. Future research<sup>18</sup> related to understanding and encouraging dairy pipeline injection projects.

F. Prior to project initiation,<sup>19</sup> project developers must conduct reasonable outreach to neighboring disadvantaged communities identified by CalEnviroScreen 3.0,<sup>20</sup> as specified by the Selection Committee, and CEC as appropriate, concerning project benefits, impacts, and measures that will increase benefits and reduce impacts. Input from the communities must be solicited, recorded, and (when feasible) incorporated into development plans. Agency representatives will attend the outreach events when feasible. Summaries of comments received, and proposed responses to each will be prepared and submitted to the agencies for approval.

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<sup>18</sup> This requirement allows for appropriate planning and allocation of funding and resources for integrated interagency research plans and projects which may not be finalized before the release and adoption of the Rulemaking. ARB desires to retain the right to conduct reasonable research on pilot project facilities in the event that research plans and projects are not finalized before pilots are selected.

<sup>19</sup> For the purposes of the pilot project selections, ARB defines “prior to project initiation” for environmental justice outreach purposes as meaning before biomethane commences injection into the natural gas pipeline network.

<sup>20</sup> Information on CalEnviroScreen 3.0 is available at: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

## **ATTACHMENT C: Confidentiality**

### **Selection Committee Confidentiality Requirements**

For the solicitation process, utilities will treat information confidentially as follows:

### **Utility Confidentiality Requirements**

- **SoCalGas and SDG&E**

When a party requests an Interconnection Capacity Study under the existing Rule 39 process, one of the first steps is for the party and SoCalGas/SDG&E to execute a Non-Disclosure Agreement (NDA) to ensure information exchanged remains confidential. SoCalGas and SDG&E will utilize this same existing procedure for the Solicitation and will execute a NDA with the Applicant immediately after the Applicant requests a Pipeline Infrastructure Scoping and Cost Estimation (Step 7 of Chapter 1, Section 5.1). This will ensure the information exchanged during the Solicitation process will be treated as confidential.

- **PG&E**

At the time Applicants submit a request for PG&E to perform a “Pipeline Infrastructure Scoping and Cost Estimation” (Step 7 of Chapter 1, Section 5.1), PG&E will require execution of a Non-Disclosure Agreement to protect proprietary information furnished to the Applicant.

- **Southwest Gas**

As applicable, Southwest Gas will negotiate an NDA with Applicants to ensure information exchanged remains confidential.

## ATTACHMENT D: Key Terms and Definitions

Word/Term	Definition
Applicant(s)	The respondent(s) to this solicitation
Applicant-Owned Pipeline Infrastructure	Applicant shall own and operate the biogas collection lines and any biogas treatment or conditioning equipment to remove hydrogen sulfide and water from the raw biogas prior to it entering the biogas collection lines (refer to Chapter 1, Section 4.0, Figure 1, Lane 2)
Application	An applicant’s formal written response to this solicitation
Greenhouse Gas (GHG) Emissions Reduction	A calculated decrease in GHG emissions relative to a project baseline scenario over a specified period of time.
Pilot Pilots	Dairy pilot projects that propose to demonstrate interconnection to the common carrier pipeline system under SB 1383
Pipeline Infrastructure	Includes both Applicant-Owned Pipeline Infrastructure and Utility-Owned Pipeline Infrastructure (refer to Chapter 1, Section 4.0, Figure 1, Lanes 2, 4, 5 and 6)
Rulemaking	CPUC (R.) 17-06-015
Selected Pilot Projects	Dairy Pilot Projects selected by the Selection Committee to demonstrate interconnection to the common carrier pipeline system under SB 1383
Selection Committee	Made up of CPUC, ARB, and CDFA, controls the terms of the Solicitation and selects the Pilot Projects to move forward to contract with Utilities
Selection Criteria	As described in Chapter 1, Section 6.0
Utility or Utilities	Pacific Gas & Electric (PG&E), San Diego Gas and Electric (SDG&E), SoCalGas, and Southwest Gas Corporation (Southwest Gas)
Utility-Owned Pipeline Infrastructure	Utility owned and operated pipeline lateral and compression, interconnection point of receipt, and interconnection pipeline extension (refer to Chapter 1, Section 4.0, Figure 1, Lanes 4-6)



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## CHAPTER 2: Required Documentation For Submitting Application

**Include:** Applicant shall respond to all questions in adequate detail for Sections 1 to 7 below, which will be inputs for the Selection Criteria.

**Format for Submittal:** Times New Roman font size 11, 1 inch margins, and single-spaced. Do not change order of sections, margins, font size, or spacing. Label all supplemental attachments according to their numbering below. If providing additional supporting documentation, commence numbering and make it clear which Application section it applies to.

### 1. Pilot Project Basics

<b>Pilot Project Name:</b>	
<b>Applicant Entity:</b>	
<b>Additional Pilot Project Partners:</b>	
<b>Dairy Cluster? (Y/N):</b>	
<b>Dairy Location(s) - City, County:</b>	
<b>Existing Digester(s)? (Y/N):</b>	
<b>Existing or Anticipated Contract(s) for Electric Generation? (Y/N):</b>	
<b>Primary Contact Name:</b>	
<b>Primary Contact Email:</b>	
<b>Primary Contact Phone:</b>	
<b>Executed Feedstock Agreement</b>	
<b>Existing Site Control Agreement</b>	

### 2.0 Dairy Waste-to-Biomethane Business Model (Maximum Points = 20)

#### 2.1 Dairy Operation

- 1) Provide the details of the history and background for each dairy operation for the Pilot Project.
  - a. Provide herd size and breed, including average number of lactating cows (in freestalls and in open lot corrals), dry cows, replacement calves, replacement heifers, and any other livestock for each dairy.
  - b. Explain the 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.).

- c. As **Attachment 1**, include a schematic diagram showing total solids flows into and lost from the manure treatment system.
  - d. 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.
  - e. Explain if each facility will be able to guarantee the minimum feedstock needed for each digester, and how manure will be handled when the system is not operational.
- 2) For the Pilot Project, describe the phased-approach or the full cluster plan (e.g., construction, operation timeline, number of dairies in total cluster and amount of biomethane that will be generated in each phase of the cluster construction). The Selection Committee will only consider GHG emission reductions based on executed feedstock agreements in this scoring criteria. The Selection Committee may also review and consider future expected feedstock agreements, but these non-executed agreements will not be considered for methane destruction scoring purposes.
  - 3) Explain in detail how current dairy manure management operations compare to the proposed pilot methane management operations.
  - 4) As **Attachment 2**, provide a map (as included in your Pipeline Infrastructure Scoping and Cost Estimation Request) that provides a project overview including:
    - a. The dairies where the developer has an agreement for the feedstock
    - b. The dairies where the developer does not have an agreement for the feedstock but could be added at a future time
    - c. Location of the biogas collection lines (along with diameter size) from each dairy to the central biogas upgrading facility
    - d. Location of the central biogas upgrading facility
    - e. Location of the utility point of receipt
    - f. Location of the utility pipeline extension
    - g. Identify public right-of-way and private right-of-way for each component

## 2.2 Technology Plan

- 1) Dairy Digesters
  - a) Describe the proposed digester technologies in sufficient detail to explain how it works and its technical feasibility and/or commercialization status.
  - b) Provide a clear description about what the Pilot Project is currently committed to accomplish and future plans.
  - c) In **Attachment 3**, provide Project design documents, including schematics, figures, graphics and plans, must be submitted as part of the 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:
    - Manure input rate (mass or gallons with estimated total solids)
    - Digestate outflow rate (mass or volume with estimated total solids)
    - Expected bio-gas flow with methane content estimate.
- 2) Biogas Collection Lines
  - a) Describe how biogas collection lines will be maintained in accordance with city, state and local codes, and any other codes and regulations that are applicable.
  - b) Describe any additional measures, beyond what is required in code, that will be taken to ensure the safe installation (e.g., installation depth, utility clearance, safety tape/mesh).
  - c) Describe any additional measures, beyond what is required in code, that will be taken to ensure the ongoing safety performance with operation and maintenance of the pipelines (e.g., leak survey, valve installation).

- d) Describe any permits required for the installation and maintenance of the biogas collection lines and the status of each permit.
  - e) Describe how to manage any condensates in the lines and monitoring of integrity.
  - f) As **Attachment 4** provide a diagram or a drawing showing the expected pressures and temperatures at various points in the biogas collection lines. Provide the type(s) of materials used to create the biogas collection lines.
- 3) Biogas Conditioning and Upgrading Facility
- a) Describe the proposed biogas conditioning/upgrading technologies in sufficient detail to explain how it works and its technical feasibility and/or commercialization status.
  - b) Describe any gas processing of the biogas at each dairy prior to the biogas entering collection lines.
  - c) Describe any gas compression of the biogas to be done at each dairy prior to the biogas entering the collection lines.
  - d) In **Attachment 5** provide the following:
    - Process flow diagrams for the central biogas conditioning and upgrading facility, include expected pressure of the biogas entering the central biogas conditioning and upgrading facility.
    - Describe the design parameters for the biogas upgrading facility:
      - Flow capacity
      - Gas composition of feed gas
      - Gas composition of product gas
      - Heat and Material Balance
      - Preliminary calculations
      - Equipment data sheets
      - Utility requirements
      - Chemicals used (provide Safety Data Sheets)
  - e) Describe the nitrogen and oxygen removal capabilities (include maximum levels). If so, what are the maximum levels of nitrogen and oxygen while still able to meet the utility pipeline quality specifications.
  - f) Describe any performance guarantees provided by the biogas upgrading system vendors.
  - g) Should the renewable natural gas not meet pipeline quality specifications and the Utility does not accept the gas into the common carrier pipeline, explain how the applicant will remedy this situation, including description of how any non-compliant gas and upstream gas production will be managed through this process.
  - h) Describe how the biogas upgrading facility will be installed in accordance with city, state and local codes, and any other codes and regulations that are applicable
  - i) Describe any additional measures, beyond what is required in code, that will be taken to ensure safe installation
  - j) Describe any additional measures, beyond what is required in code, that will be taken to ensure the ongoing safety performance with operation and maintenance of the biogas upgrading facility
  - k) Describe any permits required for the installation and maintenance of the biogas upgrading facility and the status of each permit
  - l) Describe expected amount of tail gas flaring, including methane content and expected combustion emissions.

- 4) Pipeline Lateral and Compression
  - a) Provide the distance from the biogas conditioning and upgrading facility to the point of receipt.
  - b) Provide the expected pressure (minimum, average and maximum in psig), temperature, gas composition, and volumes (minimum, expected average and maximum in standard cubic feet per hour) of the renewable natural gas leaving the biogas conditioning and upgrading facility and entering the pipeline lateral.
  - c) Provide site conditions including ambient temperatures, elevation and available utilities.
- 5) Complete End-to-End Technology Solution (Digester to Central Conditioning/Upgrading Facility)
  - a) Describe how proposed technologies and processes contribute to the facility's/project's ability to compete in the commercial California marketplace. Provide assumptions and sources of relevant data.
  - b) Identify and document the role of technology partners, including the legal or contractual relationship and obligations between partners.
  - c) If applicable, discuss how the proposed technology is a transformative approach to tackling a critical technology issue or market barrier.

### **2.3 Marketing Plan**

- 1) Identify credible target markets for biomethane, market drivers, and anticipated market growth.
- 2) Identify market barriers to the development of dairy biomethane, including existing or potential competitions, and how the Pilot Project will overcome them.
- 3) Describe and document the role of strategic marketing partners, customers, and other partners in ensuring Pilot Project success, including fuel and co-product off-take agreements (existing or conditional agreements).
- 4) Submit preliminary draft 1-page summary showcasing the benefits of the project. Please include information for public consumption including: costs, benefits, uses of new technology, partnerships, community benefits, any other information that could be provided to the public to explain why the project is of benefit to the State of California.

### **2.4 Scalability**

- 1) Discuss the replicability of the proposed digester and conditioning technologies and the long-term viability of scaling up capacity.
- 2) Describe how feasible it is for the interconnect location to accept biomethane from potential additional digesters.
- 3) Describe the potential for future expected feedstock agreements and the expected timing for such agreements and the inclusion of such feedstock in proposed Pipeline Infrastructure.

### **2.5 Project Team Qualifications**

- 1) 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.

- 2) If a Pilot Project is being submitted by a project developer, a contractual agreement documenting project support from the dairy producer(s) must be included as **Attachment 6**. Letters of commitment from team members demonstrating understanding of their participation and specific role(s) in the Pilot Project must also be included.
- 3) Provide an explanation of how various tasks will be managed and coordinated and how the Pilot Project manager's technical expertise will help achieve the goals of the project. Describe previous experience of the Pilot Project team with dairy digester projects in California or other parts of the United States.
- 4) List past successful digester projects developed by the Pilot Project team, including digesters implemented in California and their operational status.

## **2.6 Long Term Viability of Project**

- 1) Demonstrate how the operations and maintenance costs of the Pilot Project will be sustained for the life of the Pilot Project. Explain all ongoing funding sources for the Pilot Project. List personnel positions assigned to carry out operations and maintenance through the life of the Pilot Project.
- 2) 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.

## **3.0 Financial Plan/Soundness (Maximum Points = 15)**

### **3.1 Economic Viability**

- 1) Demonstrate economic viability of the proposed Pilot Project by providing the following financial documentation (with assumptions listed) over the duration of the proposed Pilot Project.
- 2) In **Attachment 7** provide balance sheet and cash flow statements for the past three (3) year for Applicant's firm and any other partners that have a substantial stake in the Pilot Projects, if available. Documents must be audited and certified by a Certified Public Accountant (CPA). If audited financial statements are not available by submission date, then financial statements certified by a CPA are acceptable.
- 3) In **Attachment 8** provide five-year pro forma financial statements for Applicant's firm and any other partners that have a substantial stake in Pilot Project, including projected balance sheet, income statement, cash flow statement, and debt service schedule for existing and planned long-term debt, if any. List assumptions, including but not limited to, market supply and demand conditions of the industry, market fluctuations, and monthly or quarterly fixed costs and variable costs.
- 4) In **Attachment 9** (the Project Scoping and Cost Estimation) provide Applicant's estimated costs should include the following: Pipeline Infrastructure (include all Applicant and Utility owned infrastructure costs, biogas treatment facilities and collection lines and compression, point of receipt, pipeline lateral and Utility-owned compression, pipeline extension, etc.), equipment (e.g., valves, meters, and protection devices), digester, conditioning facility, design, engineering, and installation costs. Within each job activity, cost should be broken down by labor, operation and maintenance, and each installed piece of equipment. At least two references to actual historical or current competitive cost data for similar work must be included to justify the cost for biogas collection line, conditioning equipment to remove hydrogen sulfide and water from the raw biogas, pipeline lateral, point of receipt, and pipeline extension. CPUC has the discretion to modify the cost estimation. An Applicant pursuing a phased approach to its project should include anticipated costs of all phases of the Pilot Project. The phased-approached cluster Pilot Project must include a signed lease and a feedstock agreement, not just a letter of interest or future

addition. Include all Utility supporting documentation, reports, studies, etc. used to calculate Utility owned infrastructure costs.

- 5) Identify applicant's sources of funding for the Pilot Project, such as grants, loans and equity contributions, and types, terms, and conditions of match agreements. If funding is from a public funding source, identify what project components will be paid for by the public funding source. Project funding should be described by both financial resources and percentage of total equity. Provide contact information for each match source.
- 6) Identify the financial risks to the proposed Pilot Project and describe the methods the Applicant will use to effectively manage and mitigate those risks. At a minimum, Applicant should address risks associated with construction, cost overruns, operation, maintenance, technology, regulations, and economic conditions.
- 7) Demonstrate the economic viability of the long-term plan following Pilot Project completion.
- 8) Identify and demonstrate how co-products or other revenue streams contribute to the business plan. Discuss assumptions about expected income from all revenue sources. Discuss how much Pilot Project viability depends on co-product revenues.
- 9) Discuss estimated values and planned disposition of any potential Low Carbon Fuel Standard credits, Renewable Fuel Standard Program credits (RINs), and/or carbon cap-and-trade credits.
- 10) List any pending or filed litigation in which Applicant is a party, and explain the extent of Applicant's liability coverage, if any. **Please list only litigation that pertains to or impacts the Pilot Project's execution. Explain how the pending or filed litigation affects the applicant's ability to complete and/or operate the Pilot Project.**
- 11) Will any of the biogas flowing through the collection lines not be injected into the utility pipeline system? If yes, please provide: 1) the expected total volume (standard cubic feet per day) of biogas flowing through the collection lines and 2) the volume of biogas flowing through the collection lines that will not be injected into the pipeline and the end-use equipment for this biogas.
- 12) In **Attachment 10** provide the Applicant's proposed schedule. The schedule should include the tasks identified in Attachment 9, the Project Scoping and Cost Estimation. CPUC has the discretion to modify the project schedule. An Applicant pursuing a phased approach to its project should include anticipated schedule of all phases and major milestones of the Pilot Project. Include the permitting schedule (as described in Chapter 2, Section 7.1).

## **4.0 GHG Reduction and Cost Effectiveness (Maximum Points = 25)**

### **4.1 Greenhouse Gas Reduction**

Explain how the proposed Pilot Project will result in reduction of metric tonnes of GHG emission annually compared to existing practices for the dairy. Provide the estimated GHG emission reduction resulting from the proposed Pilot Project(s) based on executed feedstock agreements. The Selection Committee will not consider GHG emission reductions that are based on future expected feedstock agreements in this scoring criteria. Download and complete the ARB GHG Emissions Reduction Calculation Tool. Scroll down and select latest version of the CDFA Dairy Digester Research and Development Program. The tool may allow applicant to change the default setting if justification is made with reference to research studies (e.g., electrical conversion efficiency for specific technology). However, this setting is currently being evaluated by ARB and CDFA and may change in future versions.

<https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm>

### **4.2 Cost-Effectiveness**

A higher score will be given to Pilot Projects providing the greatest GHG emissions reductions per dollar invested (cost-effectiveness). Provide a description and relevant documentations of the cost effectiveness of

the proposed Pilot Project, measured according to a standard cost-effectiveness metric. A standard cost-effectiveness methodology is dividing the amount of estimated methane emission reductions, based on executed feedstock agreements, over 10 years based on the California Air Resources Board's "Dairy Digester GHG Emission Reduction Calculator" by the total cost of the project based on the Pipeline Infrastructure costs which includes utility reimbursement for biogas collection line(s) and the utility's "Project Scoping and Cost Estimation," (Attachment 9) which includes construction, maintenance and operation cost for pipeline lateral, compression, point of receipt, and pipeline extension. The Selection Committee will not consider GHG emissions reductions that are based on future expected feedstock agreements in this scoring criteria.

- Please indicate in cost estimates what costs are related to safety as these costs are necessary components of the dairy pilots.

### **4.3 Justification and Reference Requirement**

Inputs to the applicant's GHG emission reduction and the cost estimation may be added or modified if the Selection Committee finds it inadequate. Justification must be made if there are changes to the default setting in the GHG emission calculation tools. At least two references are required to support the cost estimation. References should include historical or current competitive cost data for similar work.

## **5.0 Environmental Benefits (Maximum Points = 15)**

### **5.1 NOx and Criteria Pollutants**

- 1) Priority will be given to projects based on the criteria pollution benefits achieved by the project. Describe the Pilot Project's impact on NOx, other criteria pollutants, toxic air contaminants and hazardous air pollutants. Include all potential emission sources and how emissions would change before and after implementation of project. In **Attachment 11** provide supporting documents to support written explanation. Examples of options that can reduce or minimize generation of air pollutants mentioned above include, but are not limited to, upgrading biogas to biomethane for vehicle fuel production (either onsite or through injection into a common Carrier Pipeline), Microturbine Installation (onsite Electrical Generation), Fuel Cell Installation (Onsite Electrical Generation), Natural Gas Process Fuel Replacement, Agricultural Pump Electrification.
- 2) A higher score will be given to Pilot Projects that minimize criteria pollutant and Toxic Air Contaminant (TAC) emissions and maximize net criteria pollutant reductions.

### **5.2 Mitigate Emissions On-Site**

Explain how the proposed Pilot Project will incorporate feasible mitigation measures, in accordance with the California Environmental Quality Act, to mitigate to a level that is less than significant, any potential adverse impact on local air quality from project specific criteria pollutants and TAC emissions from all aspects related to the project, including emissions resulting from construction, operation of the project, and resultant increases in vehicle miles travelled to and from the project site. Emissions not associated with the operation of the pilot project (e.g., agriculture pumps, normal farm vehicle operation, etc.) do not require mitigation. Any offsite mitigation of project's criteria pollutant and TAC emissions must occur in the same air basin as the project site.

- Describe related on-dairy heavy-duty vehicle fleets (milk hauling, feed delivery) that could potentially be converted to low-NOx natural gas power.

### **5.3 Mitigate Emissions Off-Site**

Explain how the proposed pilot project reduces net criteria pollutant emissions.

- 1) Provide information and description of the project's proximity to transportation corridors.



- 2) In **Attachment 12** provide documents that support vehicle fuel sold to and utilized by freight transport vehicles along the State's major freight and transportation corridors (e.g., Interstate 5, State Route 99) or other locations.
- 3) In **Attachment 13** provide documents that verify any partnership with local delivery fleets (e.g. milk hauling, feed delivery) to convert diesel freight vehicles to natural gas vehicles and supply them with renewable compressed natural gas from a pilot injection project. These conversions will reduce NOx and diesel particulate matter of existing fleets.
- 4) In **Attachment 14** provide documents that verify contracts for the use of pipeline-injected renewable natural gas in electricity generation.

#### 5.4 Project Co-Benefits

Describe any additional environmental co-benefits the project will have beyond methane reductions and mitigation of NOx and other criteria pollutants, toxic air contaminants and hazardous air pollutants. Provide an explanation of additional co-benefits provided by the Pilot Project by written explanation, supporting documentation and citations from published literature. Examples of additional co-benefits that can potentially increase the project ranking include, but not limited to: clustering of projects; water conservation measures; water quality improvements; development of value-added post-methane production products such as fertilizers and soil amendments; utilization of waste heat; and expanding RCNG vehicle fuel network and on-farm equipment or transportation fleet conversion from fossil fuel use to electricity, RCNG or CNG.

### 6.0 Disadvantaged Communities (Maximum Points = 10)

#### 6.1 Community Impacts and Mitigation

A proposed Pilot Project that thoroughly explains, discusses, quantifies, and mitigates impacts and demonstrates outreach and engagement efforts will receive higher scores (e.g., a community benefit agreement will receive a higher score compared to community meeting summary).

- 1) Provide information and describe the project's proximity to disadvantaged communities.
- 2) Discuss and quantify the potential impacts (positive or negative) of the proposed Pilot Project on disadvantaged communities within California (within the top 25 percent of disadvantaged communities as defined by CalEnviroScreen 3.0).<sup>21</sup>
- 3) Describe in detail specific mitigation measures that will be included in the Pilot Project, including but not limited to, methods to mitigate impacts such as toxic air contaminants, hazardous air pollutants, criteria pollutants, groundwater and surface water impacts, truck traffic, and odor.
- 4) Describe how the Pilot Project proponent(s) engaged the community. Did community-based non-profit organization(s) involved in potentially impacted communities provide assistance in engagement efforts? Did discussion include potential adverse impacts of proposed Pilot Project(s), including a net increase in criteria pollutants, toxic air contaminants, hazardous air pollutants, groundwater and surface water impacts, and truck traffic, and odor?
- 5) List the public, community organizations and/or government stakeholders involved.
- 6) Provide details of community meetings, including but not limited to method of notification, attendance, location, date/time, translation services provided, childcare provided, meals provided.
- 7) In **Attachment 15** provide support letters from community members and/or leaders demonstrating that outreach was conducted (at least 3).

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<sup>21</sup> <http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>

- 8) Describe any community benefits agreement with local communities that describes the intentions for developing mutually beneficial outreach and requirements for each group.

## 6.2 Localized Economic Benefits

Applicants must explain economic benefits that will be provided to the community (or communities) where the Pilot Project is located. If your project will create temporary construction and/or permanent jobs in the community, indicate how many jobs, total project work hours, job classification/trade, approximate salaries and benefits for each job classification and trade, how long these jobs will last, and how they compare to current unemployment rates. Please be consistent with project work plan and the budget.

## 7.0 Project Readiness and Implementation (Maximum Points = 15)

- 1) **Overall Readiness/Permitting.** Include information about the permitting required for the Pilot Project and whether or not the permitting has been completed. This includes any description of permits required for the Utility-owned Pipeline Infrastructure. If the permitting has not been completed, include a permitting schedule that ensures successful project completion within the timeframes specified in this solicitation.
- 2) **Site Control.** In **Attachment 16** describe the proposed Pilot Project site and provide documentation and/or descriptions of site and equipment control. This includes any site control required for the Utility-owned Pipeline Infrastructure. Site and equipment control includes, but is not limited to: leases, ownership, or access rights. Proposed point of interconnection to a natural gas pipeline must be identified along with the distance between the proposed project and proposed point of interconnection. Applicants must also demonstrate thorough safety, maintenance, and training procedures will be in place.
- 3) **California Environmental Quality Act.** Include information documenting progress towards achieving compliance under the California Environmental Quality Act (CEQA). If CEQA compliance has not been obtained for an application, then include a schedule to complete CEQA activities for the proposed project.
- 4) **Community Outreach.** Include information about planned community outreach, including outreach and discussions with fire marshals and educational efforts to explain the proposed project to the public.
- 5) **Previous awards.** Include any received previous grants or awards from CEC, CDFG, and ARB, and describe how the requirements of the agreement(s) have been fulfilled/are being fulfilled. Describe previous grants or awards for the project from any source.
- 6) **Safety Action Plan.** Delineate potential unsafe conditions and note preliminary processes and procedures to respond to each.

## CHAPTER 2 Appendices: Attachment Checklist

**Include:** Applicant shall respond to all requests for attachments in adequate detail as shown below, which correspond with the sections and will be inputs for the Selection Criteria.

**Format for Submittal:** Times New Roman font size 11, and single-spaced. Label all supplemental attachments according to their numbering below. If providing additional supporting documentation, add rows to the table and commence numbering and make it clear which Application section it applies to.

	Attach-ment	Section	Description
<input type="checkbox"/>	1	2.1.1c	As Attachment 1, include a schematic diagram showing total solids flows into and lost from the manure treatment system.
<input type="checkbox"/>	2	2.1.4	Provide a map (as included in your Project Scoping and Cost Estimation Request) that provides a project overview including: <ol style="list-style-type: none"> <li>1. The dairies where the developer has an agreement for the feedstock</li> <li>2. The dairies where the developer does not have an agreement for the feedstock but could be added at a future time</li> <li>3. Location of the biogas collection lines (along with diameter size) from each dairy to the central biogas upgrading facility</li> <li>4. Location of the central biogas upgrading facility</li> <li>5. Location of the utility point of receipt</li> <li>6. Location of the utility pipeline extension</li> <li>7. Identify publi right-of-way and private right-of-way for each component</li> <li>8. The location of the dairy digesters: existing, under development, and planned</li> </ol>
<input type="checkbox"/>	3	2.2.1c	Provide project design documents, including schematics, figures, graphics and plans, must be submitted as part of the 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: <ol style="list-style-type: none"> <li>1. Manure input rate (mass or gallons with estimated total solids)</li> <li>2. Digestate outflow rate (mass or volume with estimated total solids)</li> <li>3. Expected bio-gas flow with methane content estimate</li> </ol>
<input type="checkbox"/>	4	2.2.2f	Provide a diagram showing the expected pressure at various points in the biogas collection lines. Provide the type(s) of materials used to create the biogas collection lines.
<input type="checkbox"/>	5	2.2.3c	Provide process flow diagrams for the central biogas conditioning and upgrading facility, include expected pressure of the biogas entering the central biogas conditioning and upgrading facility. Describe the design parameters for the biogas upgrading facility: <ol style="list-style-type: none"> <li>1. Flow capacity</li> <li>2. Gas composition of feed gas</li> <li>3. Gas composition of product gas</li> <li>4. Heat and Material Balance</li> <li>5. Preliminary calculations</li> <li>6. Equipment data sheets</li> <li>7. Utility requirements</li> <li>8. Chemicals used (provide Safety Data Sheets)</li> </ol>
<input type="checkbox"/>	6	2.5.2	If a Pilot Project is being submitted by a project developer, a contractual agreement documenting project support from the dairy producer(s) must be included. Letters of commitment from team members demonstrating understanding of their participation and specific role(s) in the Pilot Project must also be included.

<input type="checkbox"/>	7	3.1.2	Provide balance sheet and cash flow statements for the past three (3) year for Applicant's firm and any other partners that have a substantial stake in the Pilot Projects, if available. Documents must be audited and certified by a Certified Public Accountant (CPA). If audited financial statements are not available by submission date, then financial statements certified by a CPA are acceptable.
<input type="checkbox"/>	8	3.1.3	Provide five-year pro forma financial statements for Applicant's firm and any other partners that have a substantial stake in Pilot Project, including projected balance sheet, income statement, cash flow statement, and debt service schedule for existing and planned long-term debt, if any. List assumptions, including but not limited to, market supply and demand conditions of the industry, market fluctuations, and monthly or quarterly fixed costs and variable costs.
<input type="checkbox"/>	9	3.1.4	Provide the Project Scoping and Cost Estimation. Applicant's estimated costs should include the following: Pipeline Infrastructure (include all Applicant and Utility owned infrastructure costs, biogas treatment facilities and collection lines and compression, point of receipt, pipeline lateral and Utility-owned compression pipeline extension, etc.), equipment (e.g., valves, meters, and protection devices), digester, conditioning facility, design, engineering, and installation costs. Within each job activity, cost should be broken down by labor, operation and maintenance, and each installed piece of equipment. At least two references to actual historical or current competitive cost data for similar work must be included to justify the cost for biogas collection line, conditioning equipment to remove hydrogen sulfide and water from the raw biogas, pipeline lateral, point of receipt, and pipeline extension. CPUC has the discretion to modify the cost estimation. An Applicant pursuing a phased approach to its project should include anticipated costs of all phases of the Pilot Project. The phased-approached cluster Pilot Project must include a signed lease and a feedstock agreement, not just a letter of interest or future addition. Include all Utility supporting documentation, reports, studies, etc. used to calculate Utility owned infrastructure costs.
<input type="checkbox"/>	10	3.1.12	Provide the Applicant's proposed schedule. The schedule should include the tasks identified in Attachment 9, the Project Scoping and Cost Estimation. CPUC has the discretion to modify the project schedule. An Applicant pursuing a phased approach to its project should include anticipated schedule of all phases of the Pilot Project. Include the permitting schedule (as described in section 7.1).
<input type="checkbox"/>	11	5.1.1	Provide supporting documents to support written explanation: Describe the Pilot Project's impact on NOx, other criteria pollutants, toxic air contaminants and hazardous air pollutants. Include all potential emission sources and how emissions would change before and after implementation of project.
<input type="checkbox"/>	12	5.3.2	Provide documents that support vehicle fuel sold to and utilized by freight transport vehicles along the State's major freight and transportation corridors (e.g., Interstate 5, State Route 99) or other locations.
<input type="checkbox"/>	13	5.3.3	Provide documents that verify any partnership with local delivery fleets (e.g. milk hauling, feed delivery) to convert diesel freight vehicles to natural gas vehicles and supply them with renewable compressed natural gas from a pilot injection project. These conversions will reduce NOx and diesel particulate matter of existing fleets.
<input type="checkbox"/>	14	5.3.4	Provide documents that verify contracts for the use of pipeline-injected renewable natural gas in electricity generation.
<input type="checkbox"/>	15	6.1.7	Provide support letters from community members and/or leaders demonstrating that outreach was conducted (at least 3).
<input type="checkbox"/>	16	7.0.2	Describe the proposed Pilot Project site and provide documentation and/or descriptions of site and equipment control. This includes any site control required for the Utility-owned Pipeline Infrastructure.
<input type="checkbox"/>	17	Specify section	[Provide description of attachment]