



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # LCF-19-002 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Hieu Nguyen	27	916-654-4163

C) Recipient's Legal Name	Federal ID #
Merced Pipeline LLC	37-1895477

D) Title of Project
Merced Pipeline Dairy Cluster Project

E) Term and Amount

Start Date	End Date	Amount
04 / 29 / 2020	03 / 31 / 2024	\$ 2,518,948

F) Business Meeting Information

☐ ARFVTP agreements \$75K and under delegated to Executive Director

Proposed Business Meeting Date 04 / 08 / 2020 ☐ Consent ☒ Discussion

Business Meeting Presenter Hieu Nguyen Time Needed: 5 minutes

Please select one list serve. Altfuels (AB118- ARFVTP)

Agenda Item Subject and Description:

Merced Pipeline LLC. Proposed resolution adopting California Environmental Quality Act Findings for Merced Pipeline LLC's (Merced) Merced Pipeline Dairy Cluster Project and approving grant agreement LCF-19-002 with Merced.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS. Findings that, based on the lead agency Merced County's (County) Initial Study and Mitigated Negative Declaration (MND), and the County's Conditional Use Permit No. CUP19-003 approving and adopting the MND, the work under the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered and mitigated.

II. MERCED'S PIPELINE CLUSTER DAIRY BIOGAS CONDITIONING SYSTEM PROJECT. Proposed resolution approving Agreement LCF-19-002 with Merced Pipeline LLC for a \$2,518,948 grant to construct a new facility for the clean up and upgrade of dairy biogas from nine participating dairies in Merced County. The resulting project will produce nearly 2.5 million diesel gallon equivalents (DGE) per year of renewable natural gas transportation fuel with a carbon intensity score of approximately -290 gCO₂e/MJ.

G) California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?

☒ Yes (skip to question 2) ☐ No (complete the following (PRC 21065 and 14 CCR 15378)):

Explain why Agreement is not considered a "Project":

Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because .

2. If Agreement is considered a "Project" under CEQA:

a) ☐ Agreement **IS** exempt.

☐ Statutory Exemption. List PRC and/or CCR section number:



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

☐ Categorical Exemption. List CCR section number:☐ Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section:

- b)
- ☒
- Agreement
- IS NOT**
- exempt. (consult with the legal office to determine next steps)

Check all that apply

☒ Initial Study☐ Negative Declaration☒ Mitigated Negative Declaration☐ Environmental Impact Report☐ Statement of Overriding Considerations**H) List all subcontractors (major and minor) and equipment vendors:** (attach additional sheets as necessary)

Legal Company Name:	Budget
See Attached	\$ 0.00
	\$ 0.00
	\$ 0.00

I) List all key partners: (attach additional sheets as necessary)

Legal Company Name:
Maas Energy Works Inc.

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
Other	18/19	601.328	\$2,518,948
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$

R&D Program Area: Select Program Area TOTAL: \$

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:

K) Recipient's Contact Information**1. Recipient's Administrator/Officer**

Name: Stephen Hatley

Address: 3701 Meadow View Dr.

City, State, Zip: Redding, CA 96002

Phone: 512-618-2987

E-Mail: stephen@maasenergy.com

2. Recipient's Project Manager

Name: Daryl Maas

Address: 3701 Meadow View Dr.

City, State, Zip: Redding, CA 96002



CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

L) Selection Process Used

- M) The following items should be attached to this GRF**

- | | |
|--------------------------|-----|
| <input type="checkbox"/> | N/A |
| <input type="checkbox"/> | N/A |

Date

Date

Date

Exhibit A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2	X	Engineering and Design
3		Construction of Biogas Upgrading Facility
4	X	System Startup
5		Data Collection and System Analysis
6		Project Fact Sheet

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Daryl Maas	Maas Energy Works	
2	Daryl Maas Guatam Arora	Maas Energy Works Biogas Engineering	
3	Daryl Maas – Maas Energy Works Guatam Arora – Biogas Engineering	Maas Energy Works Biogas Engineering Electric Innovations	
4	Daryl Maas Guatam Arora	Maas Energy Works Biogas Engineering Air Liquide Vilter Manufacturing	
5	Daryl Maas	Maas Energy Works	

GLOSSARY

Specific terms and acronyms used throughout this scope of work are defined as follows:

Term/ Acronym	Definition
CAM	Commission Agreement Manager
CNG	Compressed Natural Gas
CPR	Critical Project Review
DGE	Diesel Gallon Equivalents

Term/ Acronym	Definition
FTD	Fuels and Transportation Division
gCO ₂ e/MJ	Grams of Carbon Dioxide Equivalent per Megajoule
LCFPP	Low Carbon Fuel Production Program
MMBTU	Million British Thermal Units
MTCO ₂ e	Metric Ton of Carbon Dioxide Equivalent
PG&E	Pacific Gas & Electric
Recipient	Merced Pipeline LLC

Background

The Low Carbon Fuel Production Program (LCFPP) is part of California Climate Investments, a statewide program that puts billions of cap-and-trade dollars to work reducing greenhouse gas (GHG) emissions, strengthening the economy, and improving public health and the environment, particularly in disadvantaged communities. The Cap-and-Trade Program also creates a financial incentive for industries to invest in clean technologies and develop innovative ways to reduce pollution. California Climate Investments projects include affordable housing, renewable energy, public transportation, zero-emission vehicles, environmental restoration, more sustainable agriculture, recycling, and much more. At least 35 percent of these investments are located within and benefiting residents of disadvantaged communities, low-income communities, and low-income households across California. For more information, visit the California Climate Investments website at www.caclimateinvestments.ca.gov.

All California Climate Investments programs must advance Assembly Bill (AB) 32 and Senate Bill (SB) 32 as the primary program goal, and each project must provide real and quantifiable GHG emission reductions. The LCFPP will accelerate the adoption of renewable fuels and alternative fuel vehicle technologies that support achieving the state's long-term GHG emissions reduction goals while maximizing other co-benefits. The Energy Commission, in alignment with California Climate Investments principles, will prioritize funds investment in projects that achieve the highest GHG reductions, maximize benefits to disadvantaged communities, and are necessary to meet the state's climate goals. These investments are expected to encourage projects that support California's existing plans, policies, and initiatives (for example, California's *2017 Climate Change Scoping Plan* and the measures included therein, *California Sustainable Freight Action Plan*, *Mobile Source Strategy*, and *Short-Lived Climate Pollutant Strategy*).

This program gives applicants opportunities to work together with other agencies to provide and maximize benefits (for example, the California Department of Food and Agriculture's Dairy Digester Research and Development Program and the California Department of Resources Recycling and Recovery's (CalRecycle) Organics Grant Program). To avoid duplicative funding, applicants must coordinate with local, state, and federal programs.

A full description of all the energy and climate laws and policies governing LCFPP is found in the Guidelines (<https://www.energy.ca.gov/programs-and-topics/programs/low-carbon-fuel-production-program>). The major policies that govern LCFPP include the following:

- **AB 32** created a comprehensive program mandating a reduction in California GHG emissions to 1990 levels by 2020. In implementing AB 32, the California Air Resources Board (CARB) developed a scoping plan describing the approach California will take to reduce GHG emissions, including the Cap-and-Trade Program. CARB must update the plan every five years. [Additional information can be found at: http://www.arb.ca.gov/cc/ab32/ab32.htm](http://www.arb.ca.gov/cc/ab32/ab32.htm).
- **SB 32** requires CARB to adopt rules and regulations to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 levels by 2030.
- **SB 535** requires the California Environmental Protection Agency (CalEPA) to identify disadvantaged communities and requires CARB to provide guidance on maximizing benefits to these communities.
- **AB 1550** (Gomez, Chapter 369, Statutes of 2016) amends existing SB 535 (DeLeon, Chapter 830, Statutes of 2012) to set investment minimums for Greenhouse Gas Reduction Fund (GGRF) projects in and benefiting disadvantaged communities and low-income communities and includes the following requirements:
 - A minimum of 25% of the proceeds to be invested in projects located within and benefitting individuals living in disadvantaged communities;
 - An additional minimum of 5% be invested in projects located within and benefitting individuals living in low-income communities or benefitting low-income communities statewide; and
 - An additional minimum of 5% be invested in projects that are located within and benefitting individuals living in low-income communities, or benefitting low-income households that are within one-half mile of a disadvantaged community.

Problem Statement:

Dairy biogas represents both a major environmental challenge and a significant biofuels opportunity. The dairy methane emissions that currently escape into the atmosphere could provide carbon-negative fuels if several barriers were overcome. For years, dairy farmers have been storing their cows' manure in anaerobic lagoons that produce methane, carbon dioxide, hydrogen sulfide, and additional volatile organic compounds. Covered lagoon digester technology provides an economical, reliable system for capturing the gas for a variety of uses. However, almost none of the captured biogas is currently used for biofuels and is burned to generate electricity instead—producing new air pollutants. The California Air Resources Board, California Public Utilities Commission, California Department of Food and Agriculture, and other state agencies and legislators have been working together to find a solution that would continue to capture these dairy greenhouse gas emissions without increasing other criteria pollutants. The solution is to convert the biogas into pure biomethane for use in compressed natural gas (CNG) vehicles. However, the cost of developing and operating biomethane upgrading equipment dwarfs the financial and operational resources of any single dairy.

The proposed project overcomes the financial, operational and technological resources by combining multiple dairies to build a “cluster” of dairy digesters. When the biogas from these dairies is combined at a central hub, proven technology by internal leaders in biomethane conditioning can be brought to bear. The resultant economies of scale resolve the technology, financial, and operational barriers of dairy methane-to-biomethane projects. The project will

capture emissions from numerous dairies while building only one conditioning facility, overcoming technological limits to building multiple standalone projects. The resultant biomethane will be delivered to CNG fueling stations in California, providing a large supply of new renewable ultra-low carbon negative vehicle fuel.

Goals of the Agreement:

The goal of the Agreement is to construct a new facility to cleanup and upgrade dairy biogas to biomethane in Merced County; the new facility will process dairy biogas from nine participating dairy lagoon digesters. The resulting facility will produce 2,466,804 diesel gallon equivalents (DGE) per year of biomethane with a negative carbon intensity score of approximately -289.07 g CO₂e/MJ. The produced biomethane will be injected into the Pacific Gas and Electric (PG&E) utility pipeline for transport to new and existing CNG stations in the California Central Valley.

Objectives of the Agreement:

The objectives of this Agreement are as follows:

- Construct a biogas cleanup/upgrading facility that can process biogas from 9 dairy digesters.
- Condition the dairy biogas to create 383,640 MMBTU/year of pipeline-quality biomethane.
- Deliver the biomethane to third party CNG fueling stations in the Central Valley to create an annual average of 2,466,804 DGE of ultra-low carbon vehicle fuel in California with a negative carbon intensity score of approximately -289.07 gCO₂e/MJ.
- Reduce greenhouse gas emissions in California by 125,885 MTCO₂e per year.

TASK 1 ADMINISTRATION

Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement. The CAM shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

The Recipient shall:

- Attend a “Kick-Off” meeting with the Commission Agreement Manager, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the Commission Agreement Manager to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
 - Agreement Terms and Conditions
 - Critical Project Review (Task 1.2)
 - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
 - Permit documentation (Task 1.7)
 - Subcontracts needed to carry out project (Task 1.8)

- The CAM's expectations for accomplishing tasks described in the Scope of Work
- An updated Schedule of Products and Due Dates
- Monthly Progress Reports (Task 1.4)
- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.5)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

Commission Agreement Manager Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for frank discussions between the Energy Commission and the Recipient. The goal of this task is to determine if the project should continue to receive Energy Commission funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

The Commission Agreement Manager may schedule CPR meetings as necessary, and meeting costs will be borne by the Recipient.

Meeting participants include the CAM and the Recipient and may include the Commission Grants Officer, the Fuels and Transportation Division (FTD) program lead, other Energy Commission staff and Management as well as other individuals selected by the CAM to provide support to the Energy Commission.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. Prepare a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.

- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

CAM Products:

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the Commission Agreement Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Agreement Manager.

The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The Commission Agreement Manager will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the Commission Agreement Manager and the Grants Officer about the following Agreement closeout items:

- What to do with any equipment purchased with Energy Commission funds (Options)

- Energy Commission's request for specific "generated" data (not already provided in Agreement products)
- Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
- "Surviving" Agreement provisions
- Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Products:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

Task 1.4 Monthly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the Commission Agreement Manager within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving the Agreement's goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the Energy Commission and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

- Outline of the Final Report, if requested
- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of Energy Commission funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
 - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
 - Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Agreement Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Agreement Manager within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

Products:

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

Task 1.7 Identify and Obtain Required Permits

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit costs and the expenses associated with obtaining permits are not reimbursable under

this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies the:
 - Type of permit
 - Name, address and telephone number of the permitting jurisdictions or lead agencies
 - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the Commission Agreement Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Agreement Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Agreement Manager within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- A copy of each approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each final approved permit (if applicable)

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures. It will also provide the Energy Commission an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the Commission Agreement Manager for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Draft subcontracts
- Final subcontracts

TECHNICAL TASKS

TASK 2 DESIGN AND ENGINEERING

The goal of this task is to design and engineer a biogas conditioning facility capable of receiving 1,100 standard cubic feet per minute (SCFM) of raw biogas and cleaning up of that biogas to PG&E pipeline injection standards.

The Recipient shall:

- Provide design criteria to Biogas Engineering.
- Review and approve project designs.
- Coordinate with Biogas Engineering to keep project schedule.
- Prepare and provide to the CAM a *Written Notification of Design and Engineering Completion* to the CAM. The document shall include information regarding:
 - Design clarifications (if applicable)
 - Final Design from Biogas Engineering and any other project design documentation or drawings

Products:

- Written Notification of Design and Engineering Completion

[CPR WILL OCCUR DURING THIS TASK. See Task 1.2 for details.]

TASK 3 CONSTRUCTION OF BIOGAS CONDITIONING FACILITY

The goal of this task is to procure equipment and construct the biogas conditioning facility.

The Recipient shall:

- Prepare and provide a *Procurement Plan* for the facility that will detail the process for procurement of equipment, materials, and services. The *Procurement Plan* will include, but is not limited to:
 - A list of equipment to be purchased
 - A description of the bid packages to be assembled
 - A methodology for receiving and evaluating responses
- Execute the *Procurement Plan*. Procure equipment for the construction of the biogas conditioning production facility.
- Prepare and provide a *Construction Plan* for the facility that will outline the budget and schedule for the completion of all construction and installation activities. The *Construction Plan* will include, but is not limited to:
 - An updated list of construction and installation milestones
 - Detailed Project Schedule
- Prepare and provide a *Written Notification of Site Preparation* for the facility that will notify the CAM that the site has been prepared to initiate construction related activities.
- Implement the *Construction Plan*.
- Provide *Photographs of Completed Construction of the Facility and Installation of Equipment* to the CAM.

Products:

- Procurement Plan
- Construction Plan
- Written Notification of Site Preparation
- Photographs of Completed Construction of Facility and Installation of Equipment

TASK 4 SYSTEM COMMISSIONING AND STARTUP

The goal of this task is to startup and commission the biogas conditioning facility and equipment to produce biomethane at PG&E pipeline injection specifications.

The Recipient shall:

- Prepare and provide a *Testing and Commissioning Plan* for the facility that will detail the process, deliverables, and milestones associated with the testing and commissioning of the facility. The *Testing and Commissioning Plan* will include, but is not limited to:
 - A description of the equipment to be tested

- A description of the methodology to test the identified equipment
- A list of goals and objectives for the test
- A description of the quality control and quality assurance practices for the Test methodology
- Implement *Testing and Commissioning Plan*.
- Prepare and provide a *Testing and Commissioning Report* for the facility that will notify the CAM that commissioning activities have been completed and that the plan is ready to commence commercial operations.
- Coordinate with equipment vendors as needed to meet output specifications.
- Complete a *Lab Test – Natural Gas Assurance* report, a utility required lab test confirming that the equipment is operating as designed, and provide to the CAM.
- Coordinate receipt of biogas from participating dairies via existing pipeline.
- Confirm quality of biomethane meets utility requirements. Provide a *Letter from PG&E Confirming Biomethane Meets the Biomethane Quality Standard Requirement under Rule 21* to the CAM.
- Coordinate delivery of biomethane to a California CNG stations. Provide a *Sale of Fuel Receipt of Biomethane to CNG Station* to the CAM.
- Prepare and provide to the CAM a *Startup Report* for the facility that will notify the CAM that commissioning activities have been completed and that the facility is ready to commence commercial operations.

Products:

- Testing and Commissioning Plan
- Testing and Commissioning Report
- Lab Test – Natural Gas Quality Assurance
- Letter from PG&E Confirming Biomethane Meets the Biomethane Quality Standard Requirement under Rule 21
- Sale of Fuel Receipt of Biomethane to CNG Station
- Startup Report

[CPR WILL OCCUR DURING THIS TASK. See Task 1.2 for details.]

TASK 5 DATA COLLECTION AND ANALYSIS

The goal of this task is to collect operational data from the project, to analyze that data for economic and environmental impacts, and to include the data and analysis in the Final Report.

The Recipient shall:

- Develop a data collection plan.
- Troubleshoot any issues identified.

- Collect at least six months of data, including:
 - Throughput, usage, and operations data
 - Normal operating hours, up time, down time, and explanations of variations
 - Feedstock supply summary
 - Maximum capacity of the new fuel production system in diesel gallon equivalents (DGE) and ordinary units
 - Gallons of gasoline and/or diesel fuel displaced (with associated mileage information), along with value converted into DGE
 - Record of wastes from production processes (wastewater, solid waste, criteria emissions, etc.)
 - Expected air emissions reduction, for example:
 - Non-methane hydrocarbons
 - Oxides of nitrogen
 - Non-methane hydrocarbons plus oxides of nitrogen
 - Particulate Matter
 - Formaldehyde
 - Duty cycle of the current fleet and the expected duty cycle of future vehicle acquisitions, if applicable
 - Specific jobs and economic development resulting from this project
 - Levelized cost of fuel and finished fuel price
 - Analysis of total facility costs, operation and maintenance costs, marginal abatement costs
- Comply with the Petroleum Industry Information Reporting Act (PIIRA) and complete CEC Form M810E and CEC Form M13 on a monthly basis for submission to the California Energy Commission's PIIRA Data Collection Unit.
- Provide a written record of registering with the Low Carbon Fuel Standard and Renewable Fuel Standard programs.
- Identify any current and planned use of renewable energy at the facility.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.
- Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- Provide a quantified estimate of the project's carbon intensity values or provide an Air Resources Board approved pathway carbon intensity.
- Estimate annual life-cycle greenhouse gas emission reduction.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.

- Collect data, information, and analysis described above and include in the Final Report.

Products:

- Data collection information and analysis will be included in the Final Report

TASK 6 PROJECT FACT SHEET

The goal of this task is to develop an initial and final project fact sheet that describes the CEC-funded project and the benefits resulting from the project for the public and key decision makers.

The Recipient shall:

- Prepare an *Initial Project Fact Sheet* at start of the project that describes the project and the expected benefits. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that describes the project, the actual benefits resulting from the project, and lessons learned from implementing the project. Use the format provided by the CAM.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.

Products:

- Initial Project Fact Sheet
- Final Project Fact Sheet
- High Quality Digital Photographs

M e m o r a n d u m

To: LCF-19-002, Merced Pipeline LLC – Merced Pipeline Dairy Cluster Project, CEQA Analysis

Date: 3/23/2020

From: **Hieu Nguyen**
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Telephone: 916-654-4163

Subject: California Environmental Quality Act Analysis for LCF-19-002

I am an Energy Commission Specialist in the Fuels and Transportation Division of the California Energy Commission and am the Commission's Agreement Manager for proposed grant Agreement LCF-19-002, titled "Merced Pipeline Dairy Cluster Project "(MPDCP, or Agreement) with Merced Pipeline, LLC (Awardee).

This memo analyzes the environmental impacts of the proposed grant Agreement, which is part of a separate, but overlapping Project considered and approved by the Merced County Planning Commission (County). The County evaluated Conditional Use Permit Application No. 19-003, Merced Pipeline Project (Project) which is described the County's California Environmental Quality Act (CEQA) documentation as follows:

The Project proposes to allow the construction and operation of a biogas upgrade facility and up to 34 miles of associated pipeline. The proposed pipeline would transport biogas to a single biogas upgrading facility from a cluster of individual dairy digesters in the surrounding area. The upgraded biomethane would be piped to an injection point with a PG&E gas transmission pipeline or a private pipeline utility. The proposed project considers two alternate locations for the biogas upgrading and metering equipment.

The Project is located on the north side of Rahilly Road, approximately 0.5 miles west of highway 59 in the Merced area, identified as APN 065-110-007.

The County considered and adopted the Initial Study/Mitigated Negative Declaration (IS/MND) and Mitigation Monitoring and Reporting Program (MMRP) for the Conditional Use Permit Application No. 19-003 on November 20, 2019. The County concurred with the conclusions of the Staff Report and Recommendations, and made the project findings recommended in the

Staff Report. The actions of the County are reflected in the minutes of the November 20, 2019, Planning Commission meeting. The Staff Report contains, among other items, the IS/MND and the MMRP. The County filed a Notice of Determination with the County Clerk (County of Merced) on November 20, 2019.

Pursuant to my work in developing the Agreement, including the Scope of Work for the Agreement, I have reviewed the October 2019 IS/MND (IS/MND) for the Project, the September 2019 Merced Biogas Upgrade and Pipeline Project Air Emissions Report (Air Emissions), May 2019 Biological Survey Report, and the November 2019 MMRP. In the IS/MND, County identified and analyzed 84 environmental factors from the environmental checklist for potential impacts, identifying 69 with “No Impact” or “Less than Significant Impact.” Those 69 areas are in the following general categories: Aesthetics, Agriculture and Forestry, Air Quality, Biological Resources, Energy, Geology & Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology/Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, Tribal Cultural Resources, Utilities/Service Systems, Wildfire and Mandatory Findings of Significance. The County specified mitigation strategies, set forth in the IS/MND and MMRP, for the 15 checklist areas having at least one potential impact that is “Less than Significant with Mitigation.” Those areas are in the following categories: Air Quality, Biological Resources, Cultural Resources, Hazard and Hazardous Materials, Hydrology/Water Quality, Transportation and Mandatory Findings of Significance. The County concluded that the applied mitigation strategies would reduce these impacts to “Less than Significant with Mitigation”. (IS/MND, pages 32-33, 42-60, 63-64, 79-80, 82, 84, 86-87, 100-101 and 108-121. MMRP, pages 2-1 to 2-14.)

Based on my review and consideration of the above documents, it is my independent and professional opinion that, since the above CEQA documents have been finalized, there have been no new project changes, and no new, additional, or increased significant environmental impacts have occurred. Furthermore, I have not identified any new information which would change the conclusions of the County CEQA documents or render those conclusions inadequate. It is also my independent and professional opinion that the work to be performed under the proposed Agreement falls within the scope of the IS/MND, and that the Agreement will not result in any new significant environmental impacts. Finally, I have not identified any new mitigation measures, within the Commission’s authority, that would lessen or further mitigate the impacts of the MPDCP.

The reasons for my conclusions are as follows:

Under the Agreement, the Awardee will construct and operate a 2,466,804-diesel gallon equivalent per year biomethane production facility (facility). There would be excavation, gas-pipeline installation, vegetation clearing, and cut-and-fill would be balanced onsite. Facility monitoring would be performed 24 hours a day, 7 days a week remotely. Operation of this facility will require less than 2.6 round trips per day by service and delivery vehicles. 1 to 2 employees are expected to be on site during normal operations of this facility. The addition of 2 delivery trucks containing oil, spare parts, etc. per week. Disposal trucks containing biogas

condensate and waste compressor oil would make approximately one trip per month. Also, a disposal truck would pick up the spent sulfur media from the individual dairies, which would result in an average of approximately 2 trips per week. All trips for maintenance of the digesters and related facilities will not conflict with any circulation plans or contribute to existing congestion of nearby County streets. There are no plans, policies, or programs that relate to public transit, bicycle, or pedestrian facilities in this area. The surrounding development consists of large agriculture parcels, which have been planted with row crops or support dairies similar to the project site.

The environmental factors and mitigation measures identified for the Project by the Lead Agency's CEQA IS/MND and MMRP for the 15 environmental factors requiring mitigation measures are listed below:

Air Quality:

The Project may result in impacts to Air Quality at or near the proposed MPDCP site. Prior to and during construction, the Awardee will implement *Mitigation Measure AQ-1* and *AQ-2* of the MMRP, which San Joaquin Valley Air Pollution Control District (SJVAPCD) recommends providing a receipt of an approved Dust Control Plan or Construction Notification form in compliance with Regulations VIII – Fugitive Dust PM₁₀ Prohibits and compliance with all applicable SJVAPCD regulation. Therefore, with mitigation, the impacts on Air Quality will be reduced to less than significant levels.

Biological Resources:

The Project may result in impacts to special-status plant species, vernal pool branchiopods (fairy shrimp and tadpole shrimp and habitat), valley elderberry longhorn beetle, California tiger salamander, western spadefoot, giant garter snake, western pond turtle, nesting birds, tricolored blackbird, Swainson's Hawk, Northern harrier, Bats (Pallid bats or any other CSC-listed bat species), San Joaquin kit fox, and American badgers species at or near the propose MPDCP site. Prior to and during construction, the Awardee will implement *Mitigation Measures BIO-1 – BIO-12* of the MMRP, which California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Services (USFWS) recommends conducting pre-activity clearance surveys to avoid nesting/burrow/den/wetlands sites. Pipeline installation in or around the areas of special-status plant and animal species, the Applicant must consult with USFWS prior to implementation of the project to obtain required permits and authorizations for potential indirect impact to listed species. The applicant shall conduct a jurisdictional delineation of the project site to confirm the limits of jurisdictional areas and potential project impacts to state or federal projected wetlands. Therefore, with mitigation, the environmental impacts on Biological Resources will be reduced to less than significant levels.

Cultural Resources/Tribal Cultural Resources

:

The proposed Project will have less than significant impact with mitigation incorporated on Cultural Resources and will not change the impacts identified in IS and MMRP. There are no known cultural resources at any of the sites; however, *Mitigation Measure CUL-1 and CUL-2* of the MMRP are prescribed in the event historic and/or cultural resources are encountered during construction. If human remains are unearthed, no further disturbance is to occur until the Merced County Sheriff-Coroner has made the necessary findings as to origin and disposition. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American Heritage Commission within 24 hours.

Hazard and Hazardous Materials:

The Project will have less than significant impact with mitigation on Hazard and Hazardous Materials and will not change the impacts identified in the IS and MMRP. While the subject parcel has no known existing hazardous materials/waste sites determined present on the project site or along the proposed pipeline route, however there is the potential for unknown environmental contamination to be encountered during construction. If soil, groundwater, or any other environmental medium with suspected contamination is encountered unexpectedly during construction activities, implementation of the *Mitigation Measure HAZ-1 and HAZ-2* of the MMRP would reduce potential impacts of hazardous materials to less than significant.

Hydrology and Water Quality

The Project will have less than significant impact with mitigation on Hydrology and Water Quality. The land at or near the proposed MPDCP site have been previously graded and leveled for agricultural use, and no major grading or earth-moving activities would occur. Before and during construction, the project would disturb more than one acre, the awardee will be required to obtain a General Construction Activity Storm Water Permit from the State Water Resources Control Board (SWRCB) for storm water discharges associated with construction activities. Applicant is required to execute a stormwater pollution prevention plan (SWPPP). Implementation of the *Mitigation Measure HYD-1* of the MMRP would reduce impacts of Water Quality to less than significant. The project site is located within a Flood Zone, following construction of the biogas upgrading facility but prior to plant operations, applicant will implement *Mitigation Measure HYD-2*, to reduce potential impacts of Hydrology to less than significant.

Transportation

The Project may result in impacts to emergency access at or near the propose MPDCP site. Prior to construction and installation of underground pipeline, the Awardee will implement *Mitigation Measure TR-1* of the MMRP, which recommends providing a Traffic Control Plan, to detail how the applicant will manage roadway access for both emergency and public use. Therefore, with mitigation, the impacts on Transportation will be reduced to less than significant levels.

Mandatory Findings of Significance:

As noted in the Air Quality, Biological Resources, Cultural Resources, Hazard and Hazardous Materials, Hydrology and Water Quality, and Transportation sections above, the Project may result in potentially significant impacts and degradation to the quality of the environment. However, adoption and implementation of the Mitigation Measures in the IS/MND and MMRP would reduce these individual impacts to less than significant levels.

Air Quality: The project will comply with all SJVAPCD Air Quality regulations. Implementing mitigation measures for Air Quality will lessen impacts to Air Quality to less than significant by implementing an approved SJVAPCD Dust Control Plan or Construction Notification form.

Biological Resources: The pipeline route will run through private agricultural land. The presence of special-status plant and animal species on this site prior to ground disturbance cannot be positively determined. Based on habitat conditions surrounding the site with assumption that the site contains similar habitat characteristics, it is possible that special-status species (vernal pool branchiopods (fairy shrimp and tadpole shrimp and habitat), valley elderberry longhorn beetle, California tiger salamander, western spadefoot, giant garter snake, western pond turtle, nesting birds, tricolored blackbird, Swainson's Hawk, Northern harrier, Bats (Pallid bats or any other CSC-listed bat species), San Joaquin kit fox, and American badgers species) may have been present prior to site disturbances. Mitigation measures for Biological Resources will be implemented to mitigate the potential to degrade the quality of the environment, reduce habitat for special-species, or cause special-species populations to drop below self-sustaining levels.

Cultural Resources: There may be undiscovered subsurface paleontological, cultural or tribal resources are present at the project site. Implementation of the mitigation measure for Cultural Resources, which proposes avoidance and reporting requirements should such resources be discovered during construction, , will ensure that any impacts are less than significant.

Hazards and Hazardous Materials: There is the potential for unknown hazards and hazardous materials contamination to be encountered during the construction-phase of the Project. If contamination is encountered, all work shall not resume until all measures to protect human health and the environment by implementing mitigation measures will lessen the impacts to Hazard and Hazardous Materials.

Hydrology and Water Quality: In addition, before and during construction, the project may disturb more than one acre at or near the MPDCP site, which would impact Hydrology and Water Quality. Mitigation measures for Hydrology and Water Quality, the Applicant shall implement the SWPPP and complete flood proofing will reduce impacts to hydrology.

Transportation: The Project may limit emergency access to areas at or near the Project site. Applicant will prepare a Traffic Control Plan to be approved by Merced County will minimize impacts to Transportation.

The County also evaluated the Project's potential impacts on the resource areas listed below. In each case, the County found that the Project would have less than significant impacts or no impact in each area. Based on my independent analysis, it is my professional opinion that the Agreement would not impact any of the following areas, and that no mitigation measures are warranted or needed:

Aesthetics

The Project is expected to have less than significant to no impacts on Aesthetics.

Agricultural and Forestry Resources

The Project is expected to have less than significant to no impacts on Agricultural and Forestry Resources.

Energy

The Project is expected to have less than significant impacts on Energy Resources.

Geology and Soils

The Project is expected to have less than significant to no impacts on Geology and Soils.

Greenhouse Gas Emissions

The Project is expected to have less than significant impacts on Greenhouse Gas Emissions.

Land Use and Planning

The Project is expected to have less than significant to no impacts on Land Use and Planning.

Mineral Resources

The Project is expected to have no impacts on Mineral Resources.

Noise

The Project is expected to have less than significant to no impacts on Noise.

Population and Housing

The Project is expected to have less than significant to no impacts on Population and Housing.

Public Services

The Project is expected to have less than significant impacts on Public Services.

Recreation

The Project is expected to have no impacts on Recreation.

Utilities and Service System

The Project is expected to have less than significant impacts on Utilities and Service System.

Wildfire

The Project is expected to have no impacts on Wildfire.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: MERCED PIPELINE, LLC

WHEREAS, the Merced County Planning Commission is the Lead Agency for “Merced Pipeline Dairy Cluster Project” (hereinafter, “Project,”) a proposed dairy biogas upgrade project; and

WHEREAS, the Merced County Planning Commission, in 2019, prepared an Initial Study and Mitigated Negative Declaration (hereinafter “IS/MND”) and Conditional Use Permit No. 19-003 (hereinafter “CUP”), for the Project to evaluate the potential environmental impacts of implementing the Project, copies of which are on file with the California Energy Commission and are provided in the backup materials; and

WHEREAS, the Merced County Planning Commission, on November 20, 2019, considered and adopted the IS/MND and the CUP for the Project, and adopted a Mitigation Monitoring and Reporting Program (“MMRP”) thereby imposing mitigation measures upon the Project; and

WHEREAS, the Merced County Planning Commission adopted findings required by the California Environmental Quality Act (“CEQA”), and approved the Project, as shown in the minutes of the November 20, 2019 Planning Commission meeting, a copy of which minutes are on file with the Energy Commission and is provided in the backup materials; and

WHEREAS, the Energy Commission has reviewed and considered the County’s IS/MND, MMRP, Planning Commission minutes and the findings contained therein, and filed Notice of Determination, and the Energy Commission staff’s findings, which are contained in the Staff Memorandum and CEQA Analysis of LCF-19-002, which is included in the backup materials; and

WHEREAS, the Energy Commission is considering proposed Agreement LCF-19-002, “Merced Pipeline Dairy Cluster Project” (also referred hereafter as “LCF-19-002”), a grant to construct the biogas upgrade facility; and

Prior to acting on the Agreement LCF-19-002, the Energy Commission desires to make certain findings pursuant to the CEQA Guidelines, title 14, section 15096;

NOW THEREFORE, BE IT RESOLVED:

1. The Energy Commission has reviewed the information contained in the IS/MND, the MMRP, and the CUP that is relevant to its approval of LCF-19-002, and has reviewed the CEQA findings contained in the Merced County Planning Commission's IS/MND, the MMRP, and the CUP, which are adopted to the extent that they are relevant to the Energy Commission's decision to approve LCF-19-002, and has reviewed the Staff Memorandum identified above.
2. The Merced County Planning Commission has already adopted the mitigation measures recommended in the Mitigated Negative Declaration, the MMRP, and the CUP, and has authority to implement the mitigation measures or to seek any required approvals for the mitigation measures, and the Energy Commission has no direct authority to implement the mitigation measures.
3. The Energy Commission has reviewed and considered the IS/MND, MMRP, CUP, Planning Commission minutes, and Staff Memorandum, and finds that these documents are adequate for its use as the decision-making body for its consideration of LCF-19-002.
4. Approval of LCF-19-002 is within the scope of the Merced Pipeline Dairy Cluster Project approved by Merced County Planning Commission, and within the activities evaluated in the IS/MND and CUP.
5. Since the Mitigated Negative Declaration was finalized and adopted on November 20, 2019, there have been no substantial project changes and no substantial changes in the project circumstances that would require major revisions to the Mitigated Negative Declaration, either due to the involvement of new significant environmental effects or to an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusion set forth in the Mitigated Negative Declaration.
6. The Energy Commission has not identified any feasible alternative or additional feasible mitigation measures within its power that would substantially lessen or avoid any significant effect the Merced Pipeline Dairy Cluster Project would have on the environment.

THEREFORE BE IT RESOLVED, that the Energy Commission finds, on the basis of the entire record before it, that the mitigation measures incorporated in the Conditional Use Permit and Mitigated Negative Declaration will prevent LCF-19-002 from having any significant environmental impacts; and

BE IT FURTHER RESOLVED, that the Energy Commission approves Agreement LCF-19-002 with Merced Pipeline, LLC, for \$2,518,948; and

BE IT FURTHER RESOLVED, that this document authorizes the Executive Director or his or her designee to execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a RESOLUTION duly and regularly adopted at a meeting of the California Energy Commission held on April 8, 2020.

AYE: [*List Commissioners*]

NAY: [*List Commissioners*]

ABSENT: [*List Commissioners*]

ABSTAIN: [*List Commissioners*]

*Cody Goldthrite,
Secretariat*