

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-17-036 (To be completed by CGL Office)

600 Fuels and Transportation Division	Tomas Ortiz	27	916-654-5005
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Monterey Regional Waste Management District	94-1603769
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Monterey Regional Waste Management Landfill Gas to Renewable Transportation Fuel Project
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5 / 23 / 2018	12 / 31 / 2020	\$ 1,816,800
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☐ ARFVTP agreements \$75K and under delegated to Executive Director.

Proposed Business Meeting Date	5 / 9 / 2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
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Business Meeting Presenter	Tomas Ortiz	Time Needed:	5 minutes
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Please select one list serve. Altfuels (AB118- ARFVTP)

Agenda Item Subject and Description

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT. Proposed resolution approving Agreement ARV-17-036 with Monterey Regional Waste Management District for a \$1,816,800 grant to produce renewable natural gas from biogas created from decomposing organic waste material and captured from the district's operating anaerobic digestion composting system and landfill gas wells located at the Monterey Peninsula Landfill. The renewable natural gas produced by this project will be used to fuel the district's fleet and has the potential for scale-up in production to serve other local and regional fleets. The project will result in approximately 520,785 diesel gallon equivalents of renewable natural gas, displacing over 6,300 MT CO₂e/yr.

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**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. (Attach draft NOE)☐ Statutory Exemption. List PRC and/or CCR section number:☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit. 14, § 15301(b) (existing facilities), § 15303 (small structures)☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section:

For context, the Monterey Regional Waste Management Landfill Gas to Renewable Transportation Fuel Project (proposed project) would be developed at the Monterey Peninsula Landfill, approximately two miles northeast of Marina in Monterey County. This landfill is a 315-acre, nonhazardous, municipal solid waste landfill, permitted to accept 3,500 tons per day of solid waste. The District has an anaerobic digestion composting system for organic waste. Neither the landfill's nor the anaerobic digestion system's capacities would be expanded by the proposed project.

The purpose of this grant from the California Energy Commission is to purchase equipment for the proposed project. The proposed project would treat waste biogas from the landfill and the anaerobic digestion composting system to produce Renewable Natural Gas (RNG). The RNG would fuel Monterey Regional Waste Management District's vehicle fleet, including franchise (waste collection) trucks and possibly other vehicles. The biogas treatment would remove hydrogen sulfide and siloxanes. Siloxanes are organic silicon molecules that form silicon dioxide powder when burned. This silicon powder can damage engines and other equipment. The proposed project would result in approximately 520,785 diesel gallon equivalents of renewable natural gas, displacing over 6,300 metric tons of carbon dioxide equivalent annually (MTCO₂e/yr).

The California Code of Regulations, title 14, section 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination are exempt from of the California Environmental Quality Act (CEQA). This project would involve the design and construction of a minor alteration of the existing facilities of a utility providing "other public utility services" (i.e., landfill disposal and organic solid waste composting), thus falling squarely within the exemption of subsection 15301(b).

In addition, California Code of Regulations, title 14, section 15303 provides that projects which consist of the construction and location of limited numbers of new, small facilities or structures; or the installation of small, new equipment and facilities in small structures, are exempt from CEQA. The project's components consist of primarily skid-mounted equipment, such as the biogas conditioning system and hydrogen sulfide treatment equipment. These are relatively small compared to other equipment and facilities at the landfill. Piping (mostly underground) would convey the biogas to the treatment equipment. Therefore, the proposed project is exempt under section 15303.

☐ 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

Legal Company Name:

Budget

Cornerstone Environmental Group, LLC

\$ 724,000

Edgar & Associates

\$ 38,000

BIOCNG, LLC

\$ 1,816,800

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Legal Company Name:

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTP	17/18		\$1,816,800
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$
R&D Program Area:	Select Program Area		\$1,816,800
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Tim Flanagan	Name:	Guy Petrabor
Address:	14201 Del Monte Boulevard	Address:	14201 Del Monte Boulevard
City, State, Zip:	Marina, California, 93933	City, State, Zip:	Marina, California, 93933
Phone:	831-264-6385	Fax:	831-384-3567
E-Mail:	tflanagan@mrwmd.org	E-Mail:	gpetrabor@mrwmd.org

<input checked="" type="checkbox"/> Competitive Solicitation	Solicitation #: GFO-15-606
<input type="checkbox"/> First Come First Served Solicitation	

1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/> Attached
2. Exhibit B, Budget Detail	<input type="checkbox"/> Attached
3. CEC 105, Questionnaire for Identifying Conflicts	<input type="checkbox"/> Attached
4. Recipient Resolution	<input type="checkbox"/> N/A <input type="checkbox"/> Attached
5. CEQA Documentation	<input type="checkbox"/> N/A <input type="checkbox"/> Attached

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

List all subcontractors (major and minor) and equipment vendors:	
Legal Company Name:	Budget
Tetra Tech, Inc.	\$0

**Exhibit A
SCOPE OF WORK**

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Engineering and Design
3		Preconstruction
4	X	Readiness to Construct
5		Construction, Installation, and Connection
6	X	Commissioning and Testing
7		Data Collection and Analysis

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Guy Petraborg	Tetra Tech/Cornerstone Engineering Group	
2	Guy Petraborg	Tetra Tech/Cornerstone Engineering Group	
3	Guy Petraborg	Tetra Tech/Cornerstone Engineering Group	
4	Guy Petraborg	Tetra Tech/Cornerstone Engineering Group	
5	Guy Petraborg	Tetra Tech/Cornerstone Engineering Group	

GLOSSARY

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

Term/ Acronym	Definition
AB	Assembly Bill
AD	Anaerobic Digester
AEG	American Environmental Group
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
CAM	Commission Agreement Manager
CEG	Cornerstone Environmental Group
CI	Carbon Intensity
CNG	Compressed Natural Gas
CPR	Critical Project Review
DGE	Diesel Gas Equivalent
FTD	Fuels and Transportation Division
GCCS	Gas Collection and Control System
gCO ₂ e/MJ	Grams of Carbon Dioxide Equivalent per Mega Joule of Energy
GGE	Gasoline Gas Equivalent
H ₂ S	Hydrogen Sulfide
LCFS	Low Carbon Fuel Standard
LFG	Landfill Gas
LFGTE	Landfill Gas to Energy Facility
P&ID	Piping and Instrumentation Diagram
Recipient	Monterey Regional Waste Management District
RNG	Renewable Natural Gas
SCFM	Standard Cubic Feet Per Minute

Background

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). The statute authorizes the California Energy Commission (Energy Commission) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024. The ARFVTP has an annual budget of approximately \$100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

The Energy Commission issued solicitation GFO-15-606 for low carbon biofuel production facilities to increase production capacity. To be eligible for funding under GFO-15-606, projects must also be consistent with the Energy Commission's ARFVTP Investment Plan, updated annually. In response to GFO-15-606, Monterey Regional Waste Management District (Recipient) submitted application 19, which was proposed for funding in the Energy Commission's revised Notice of Proposed Awards on December 7, 2017. GFO-15-606 and Recipient's application are hereby incorporated by reference into this Agreement in their entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient's Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient's Application and the terms of the Energy Commission's Award, the Energy Commission's Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient's Application, the terms of this Agreement shall control.

Problem Statement:

The proposed project seeks to address the ARFVTP goals of producing sustainable, alternative, and renewable low-carbon fuels in California in order, ultimately, to:

- Reduce California's use and dependence on petroleum transportation fuels.
- Increase the use of alternative and renewable fuels.
- Help attain the state's climate change policies, such as reducing greenhouse gas emissions and displacing petroleum fuel demand.
- Improve California's ability to meet Low Carbon Fuel Standard (LCFS) objectives to displace petroleum, reduce carbon, and improve air quality while creating jobs.
- Stimulate economic development in California.

Landfill gas (LFG) and/or biogas derived from decomposing waste organic matter is an underutilized feedstock source that can be cost-effectively collected and conditioned to produce renewable transportation fuel for fleets in California. As the state's energy and environmental goals increase to meet the demands of climate change and decreasing supplies of non-renewable fuels, converting organic waste derived LFG and/or biogas to renewable natural gas (RNG) for use in vehicles will serve as a local, regional, and statewide solution to future economic growth.

Goals of the Agreement:

The goals of this Agreement are to:

- Install a biogas conditioning system at the Monterey Peninsula Landfill (MPL) that will convert methane from waste organic matter to renewable natural gas (RNG) for use in the transportation sector.
- New biogas collection components (new anaerobic digester(s)) and the existing anaerobic digester (AD) will be included in the design to capture high quality feedstock in addition to the LFG.
- The system and facility will serve as one of the early prototype dual LFG and biogas-to-RNG facilities for publicly-owned California landfills.
- In addition, the site's existing anaerobic digester (AD) that produces electricity from yard/food waste organics will be directed to this new biogas conditioning system facility to be used as another feedstock to produce RNG.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Construct a biogas conditioning facility that will convert and upgrade up to 400 cubic feet per minute (CFM) of LFG and methane to approximately 1,431 diesel gallon equivalents (DGE) per day (or 520,785 DGE per year) of RNG from a currently under-utilized renewable fuel source to the California transportation sector.
- Reduce the nitrogen content of the LFG and/or biogas to less than one percent through design and new component installation in order to make the necessary upgrades to meet vehicle fuel specification.
- Produce RNG from LFG that has a carbon intensity (CI) of approximately 11.26 grams of carbon-dioxide equivalent per megajoule (gCO₂^e/MJ). Produce a CI of approximately negative (-)15.26 gCO₂^e/MJ for the methane extracted from an anaerobic digester(s) and the LFG collected.

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) biofuel 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 ENGINEERING AND DESIGN

The goal of this subtask is to complete process, mechanical, and electrical design packages for installing the Biogas Conditioning Facility, connecting the LFG Collection System and Anaerobic Digester(s) (AD) Collection System to the Biogas conditioning facility, implementing wellfield improvements for methane capture, and distributing renewable CNG to co-located refueling infrastructure for distribution.

The Recipient shall:

- Complete civil, mechanical, process and electrical drawings and engineering for the construction and installation of the biogas conditioning unit, collection and transportation of feedstock, and construction and installation of the RNG fueling station.
- Generate Design, Specification, and Engineering Packages for the following:
 - New piping and vacuum system to collect gas off AD to introduce into biogas conditioning unit
 - New biogas conditioning unit, valving, piping and controls
 - Gas conditioning vessels and media suitable and necessary to remove siloxanes and H₂S from incoming raw gas stream
 - Truck refueling improvements to present fill posts, two storage tanks (approx. 600 DGE capacity), controls and valving
- Develop a Piping and Instrumentation Diagram (P&ID) to integrate the biogas conditioning equipment with Recipient's existing equipment in wellfield, fueling station and LFGTE/flare.

Products

- Design, Specification, and Engineering Packages
- Piping and Instrumentation Diagram (P&ID)

TASK 3 PRECONSTRUCTION

The goal of this subtask is to assemble project request for proposals (RFP) for selected project subtasks, review submitted proposals, make final assessments, assemble agreements necessary to begin construction, and finalize the project equipment needs to be procured and construction costs prior to incurring major construction expenses.

The Recipient shall:

- Assemble RFP including, at a minimum, engineering drawings and project specifications.
- Assign recipients of selected subcontractor list provided by Owner and distribute RFP
- Prepare and release *Bid Packages* and specifications for following:
 - Electrical controls installation and automation for biogas conditioning unit, its associated components, and fueling station improvements to the filling posts
 - Mechanical, piping installation and steel supports
 - Concrete pads for Biogas conditioning unit, its associated equipment (electrical panel, chiller, gas conditioning vessels, etc) and fueling station storage tanks
- Review respondents and select construction firms.
- Prepare and provide to the CAM an *Agreements Letter* documenting the agreements necessary to construct the project. At a minimum, this letter will include a listing of:
 - Agreements or contracts with engineering and construction firms, including any key firms or subcontractors
- Secure the agreements as detailed in Agreements Letter.
- Prepare and provide to the CAM a *Construction and Equipment Lists*. At a minimum the list shall include:
 - Name of item
 - Make, model, size, weight, capacity, model number, etc as is appropriate for each item delivered
 - Identify entity to carry out and finalize purchase of item, supply, delivery and installation of item
 - Anticipated delivery date of item identified
 - Estimated cost of supply and installation of item (if not already part of approved agreement)

Products:

- Bid Packages
- Agreements Letter
- Construction and Equipment Lists

TASK 4 READINESS TO CONSTRUCT

The goal of this subtask is to document preparedness to build the project and to secure Commission approval to begin incurring major construction costs.

The Recipient shall:

- Prepare and provide to the CAM a *Notice to Proceed* stating project team has acquired the necessary permits, has finalized all agreements with contractors and suppliers, identified existing buried utilities, verified site survey monument control and any other necessary project start up tasks.
- Prepare and provide to the CAM a phased *Construction Report and Timeline*. The Report and Timeline will describe all activities related to construction, equipment installation, and equipment testing and startup.

Products:

- Notice to Proceed
- Construction Report (Draft and Final) and Timeline

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

TASK 5 CONSTRUCTION, INSTALLATION, AND CONNECTION

The goal of this subtask is to install a biogas conditioning facility at MPL and connect the facility to the LFG and AD Collection Systems for methane intake and refueling infrastructure for renewable CNG offtake.

The Recipient shall:

- Initiate procurement of required equipment and materials for construction.
- Begin execution of project in accordance with the engineering drawings, project specifications, project schedule and equipment list, etc. This construction/installation effort shall include the following major components of the project:
 - Layout of LFG wells and piping improvements, biogas conditioning unit and associated equipment for foundational work (i.e. chiller, compressors, storage tanks, electrical and gas conditioning vessels, etc.)
 - Wellfield well and piping modifications and/or installations
 - Installation of piping from AD to biogas conditioning unit
 - Mechanical connections and installation to connect wellfield and AD to biogas conditioning unit
 - Fueling station upgrades to valves and controls (includes mechanical and electrical service)
 - Placement of storage tanks and concrete supports
 - Electrical installations and terminations to aid in integration at landfill site and at/with fueling station
 - Media installation into gas conditioning vessels/equipment
 - Health and Safety
- Prepare and provide to the CAM a *Site Specific Health and Safety* plan.
- Prepare and provide to the CAM a *Hazard Communications* plan.
- Conduct training in accordance with *Site Specific Health and Safety* plan and *Hazard Communications* plan.

Products:

- Site Specific Health and Safety Plan (Draft and Final)
- Hazard Communication Plan (Draft and Final)

TASK 6 COMMISSIONING AND TESTING

The goal of this subtask is to make perform startup procedures, commission the installed unit and train site staff on operation of equipment.

The Recipient shall:

- Perform Commissioning of System.
- Purge installed system and perform biogas conditioning start up procedures.
- Perform system check and integration with site equipment (i.e. flare, LFGTE facility, wellfield, and site communications, as necessary).
- Perform verification/integration test on biogas conditioning unit and associated equipment (valving and integrated controls to operate, CO2 monitor, oil pressure, product and waste gas line pressure regulators, vacuum from landfill to BioCNG unit, methane quality testing equipment, etc.).
- Perform verification/integration test on fueling station operation including pressure regulating valves.

- Perform test run of installed system at landfill and at fueling station.
- Perform startup and commissioning of improvements at fueling station.
- Confirm equipment and site readiness to go live.
- Pull gas sample for lab analysis.
- Walkthrough of operational procedures of biogas conditioning with site personnel.
- Prepare a *Written Notification of Commissioning Verification* and submit to CAM within 10 working days of official startup.
- Document all system testing and startup activities. Submit Photos of System Testing and Start Up to the CAM.
- Operate facility for a minimum of six months and comply with all applicable regulatory standards.
- Document strategy for achieving and maintaining full production at the facility over a 5-year operation period and submit to the CAM in the *Full Commercial Production Strategy Report*.

Products:

- Written Notification of Commissioning Verification
- Full Commercial Production Strategy Report (Draft and Final)
- Photos of System Testing and Start Up

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

TASK 7 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 (waste water, 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
 - Specific jobs and economic development resulting from this project
 - Finished fuel price in terms of dollar per DGE at the time of the final report
 - 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 monthly 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 of Regulations.
- Provide data on potential job creation, economic development, and increased state revenue because 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

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

RESOLVED, that the State Energy Resources Conservation and Development Commission (Energy Commission) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the Energy Commission approves Agreement ARV-17-036 with Monterey Regional Waste Management District for a \$1,816,800 grant to produce renewable natural gas from biogas created from decomposing organic waste material and captured from the district's operating anaerobic digestion composting system and landfill gas wells located at the Monterey Peninsula Landfill. The renewable natural gas produced by this project will be used to fuel the district's fleet and has the potential for scale-up in production to serve other local and regional fleets. The project will result in approximately 520,785 diesel gallon equivalents of renewable natural gas, displacing over 6,300 MT CO₂e/yr; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall 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 May 9, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat