



GRANT REQUEST FORM (GRF)

A) New Agreement # FPI-19-013

B) Division	Agreement Manager:	MS-	Phone
ERDD	Kevin Uy	43	916-327-1533

C) Recipient's Legal Name	Federal ID Number
Aemetis Advanced Fuels Keyes, Inc.	27-1414325

D) Title of Project
Aemetis Integrated Microgrid Solution (AIMS) Project

E) Term and Amount

Start Date	End Date	Amount
6/15/2020	3/31/2024	\$ 8,000,000

F) Business Meeting Information

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

Proposed Business Meeting Date 5/13/2020 Consent Discussion

Business Meeting Presenter Kaycee Chang Time Needed: 5 minutes

Please select one list serve. Food Production Investment Program

Agenda Item Subject and Description:

Aemetis Advanced Fuels Keyes, Inc.

AEMETIS ADVANCED FUELS KEYES, INC. Proposed resolution approving Agreement FPI-19-013 with Aemetis Advanced Fuels Keyes, Inc. for a \$8,000,000 grant to design, install, and operate an emerging microgrid system at the Recipient's biofuels and animal food production facility in Keyes and adopting staff's determination that this action is exempt from CEQA. The microgrid system will produce and store renewable electricity, providing reliability while reducing operating costs and GHG emissions at the facility. This project is expected to benefit priority populations through criteria pollutant emission reductions and job creation. (GGRF funding)
 Contact: Kaycee Chang (Staff presentation: 5 minutes)

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:

Categorical Exemption. List CCR section number:

Cal. Code Regs., tit 14, § 15301 ; Cal. Code Regs., tit 14 § 15304 ; Cal. Code Regs., tit 14 § 15311



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Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section: California Code of Regulations, title 14, section 15301: The project involves minor alteration and operation of existing facilities. Solar arrays and battery energy storage system will be installed to power existing on-site biofuels and animal food production facility. These installations will not expand the existing use and will not have a significant effect on the environment.

California Code of Regulations, title 14, section 15304: The project to install solar arrays involves installation over disturbed land utilized in conjunction with the development. This project involves minor alterations in the condition of land including minor trenching and backfilling where the surface is restored. These activities will will not have a significant effect on the environment.

California Code of Regulations, title 14, section 15311: The project will install new solar arrays to serve the existing, onsite biofuels and animal food production facility. These installations will not expand the existing agricultural use and will not have a significant effect the environment.

Each exemption is an independent basis for finding the project exempt.

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
Build Momentum dba Momentum	\$ 99,000
REC Solar Commercial Corporation	\$ 99,000

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

Legal Company Name:



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J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
GGRF	18-19	301.002AB	\$8,000,000
			\$

R&D Program Area: EERO: FPIP

TOTAL: \$ 8,000,000

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

K) Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Jeff Welch

Address: 20400 Stevens Creek Blvd.
Ste 700

City, State, Zip: Cupertino, CA 95014-2296

Phone: 206-412-4253

E-Mail: jwelch@aemetis.com

2. Recipient's Project Manager

Name: Jeff Welch

Address: 20400 Stevens Creek Blvd Ste 700

City, State, Zip: Cupertino, CA 95014-2296

Phone: 206-412-4253

E-Mail: jwelch@aemetis.com

L) Selection Process Used

Competitive Solicitation Solicitation #: GFO-19-901

First Come First Served Solicitation Solicitation #:

M) The following items should be attached to this GRF

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

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

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I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Project Design
3	X	Site Preparation and Equipment Procurement
4	X	Equipment Installation
5	X	Measurement and Verification
6		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
BESS	Battery Energy Storage System
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
GHG	Greenhouse Gas
M&V	Measurement and Verification
PV	Photovoltaic
Recipient	Aemetis Advanced Fuels Keyes, Inc.

II. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES

A. Purpose of Agreement

The purpose of this Agreement is to fund the design, installation, and operation of an emerging microgrid technology that reduces electricity consumption and greenhouse gas (GHG) emissions at the Recipient's biofuels and animal food production facility.

B. Problem/ Solution Statement

Problem

The margins for food production are quite tight and food production operations are often carbon intensive. In addition, many food production facilities suffer from unreliable electric service, which can result in power outages. During a power outage any perishable feedstock, products, and by-products may degrade and become unsaleable. Power outages and increasing electricity costs result in production costs increasing as

¹ Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

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well. There is a need to demonstrate reliable, low-cost renewable electricity production at food processing facilities, which can lower GHG emissions while reducing food production costs.

Solution

The Recipient will design, install, and operate an emerging microgrid system that reduces energy consumption, operating costs, and GHG emissions at the Recipient's biofuels and animal food production facility. Specifically, solar photovoltaics (PV), a battery energy storage system (BESS), and a microgrid controller will be installed. In doing so, this project will demonstrate the potential to reduce the financial risk associated with power outages while also reducing GHG emissions at food processing facilities.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to reduce GHG emissions and energy consumption by implementing an emerging microgrid system at the Recipient's biofuels and animal food production facility.

Agreement Objectives

The objectives of this Agreement are to:

- Measure the facility's electricity and natural gas consumption in order to establish a baseline for future comparisons.
- Design, install, and operate a microgrid system including solar PV, BESS, and microgrid controller at the facility.
- Measure electricity production, battery charging and discharging, GHG emission reductions, and off-grid capabilities of the functional microgrid.
- Reduce output of the facility's existing boiler resulting in annual natural gas consumption reduction of at least 10 percent approximately equivalent to 1.2 million therms.
- Produce at least 3 million kilowatt hours of renewable electricity.
- Reduce facility GHG emissions by at least 10 percent approximately equivalent to 6,800 metric tons of carbon dioxide equivalent per year.
- Demonstrate the technical, economic, and resiliency benefits of microgrid systems in industrial facility application.
- Distribute \$30,000 in scholarships to students from low-income or disadvantaged communities.

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III. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V)**.

Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

The Recipient shall:

For products that require a draft version, including the Final Report Outline and Final Report

- Submit all draft products to the CAM for review and comment in accordance with the Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product.
- Submit the revised product and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

For products that require a final version only

- Submit the product to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

For all products

- Submit all data and documents required as products in accordance with the following:

Instructions for Submitting Electronic Files and Developing Software:

- **Electronic File Format**

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- Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the Energy Commission's software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

The following describes the accepted formats for electronic data and documents provided to the Energy Commission as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
- Text documents will be in MS Word file format, version 2007 or later.
- Documents intended for public distribution will be in PDF file format.
- The Recipient must also provide the native Microsoft file format.
- Project management documents will be in Microsoft Project file format, version 2007 or later.

○ **Software Application Development**

Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:

- Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
- Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
- Visual Studio.NET (version 2008 and up). Recommend 2010.
- C# Programming Language with Presentation (UI), Business Object and Data Layers.
- SQL (Structured Query Language).
- Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
- Microsoft SQL Reporting Services. Recommend 2008 R2.
- XML (external interfaces).

Any exceptions to the Electronic File Format requirements above must be approved in writing by the CAM. The CAM will consult with the Energy Commission's Information Technology Services Branch to determine whether the exceptions are allowable.

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MEETINGS

Subtask 1.2 Kick-off Meeting

The goal of this subtask is to establish the lines of communication and procedures for implementing this Agreement.

The Recipient shall:

- Attend a “Kick-off” meeting with the CAM, the Commission Agreement Officer (CAO), and any other Energy Commission staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:

- Terms and conditions of the Agreement;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.6);
- Permit documentation (subtask 1.7);
- Subcontracts (subtask 1.8); and
- Any other relevant topics.

The technical portion of the meeting will include discussion of the following:

- The CAM’s expectations for accomplishing tasks described in the Scope of Work;
 - An updated Project Schedule;
 - Technical products (subtask 1.1);
 - Progress reports and invoices (subtask 1.5);
 - Final Report (subtask 1.6); and
 - Any other relevant topics.
- Provide an *Updated Project Schedule, List of Match Funds, and List of Permits*, as needed to reflect any changes in the documents.

The CAM shall:

- Designate the date and location of the meeting.
- Send the Recipient a *Kick-off Meeting Agenda*.

Recipient Products:

- Updated Project Schedule *(if applicable)*
- Updated List of Match Funds *(if applicable)*
- Updated List of Permits *(if applicable)*

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CAM Product:

- Kick-off Meeting Agenda

Subtask 1.3 Critical Project Review (CPR) Meetings

The goal of this subtask is to determine if the project should continue to receive Energy Commission funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the Energy Commission and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient, and may include the CAO and any other individuals selected by the CAM to provide support to the Energy Commission.

CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR meetings generally take place at the Energy Commission, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

The Recipient shall:

- Prepare a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and a *List of Expected CPR Participants* in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a *Schedule for Providing a Progress Determination* on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.

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- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

Recipient Products:

- CPR Report(s)
- Task Products (draft and/or final as specified in the task)

CAM Products:

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- Progress Determination

Subtask 1.4 Final Meeting

The goal of this subtask is to complete the closeout of this Agreement.

The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum. The (meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
 - Disposition of any state-owned equipment.
 - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
 - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
 - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
 - "Surviving" Agreement provisions such as repayment provisions and confidential products.
 - Final invoicing and release of retention.

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- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written Products

REPORTS AND INVOICES

Subtask 1.5 Progress Reports and Invoices

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

The Recipient shall:

- Submit a quarterly *Progress Report* to the CAM. Each progress report must:
 - Summarize progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
- Submit a quarterly *Invoice* that follows the instructions in the “Payment of Funds” section of the terms and conditions, including a financial report on Match Fund and in-state expenditures.

Products:

- Progress Reports
- Invoices

Subtask 1.6 Final Report

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review the Final Report according to the Project Schedule. When creating the Final Report, the Recipient must use the Style Manual provided by the CAM.

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The Recipient shall:

- 1) Prepare a *Final Report* for this Agreement in accordance with the Style Manual, and Final Report Template provided by the CAM with the following considerations:
 - Ensure that the report includes the following items, in the following order:
 - Cover page (**required**)
 - Credits page on the reverse side of cover with legal disclaimer (**required**)
 - Acknowledgements page (optional)
 - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
 - Executive summary (**required**) following the Executive Summary Template
 - Include a summary table that includes the following information, but is not limited to (**required**):
 - Recipient name;
 - Project description;
 - Project location(s);
 - Census tract;
 - Dates: project selected and completed;
 - GGRF dollars allocated;
 - Leveraged and/or match funds;
 - Estimated/actual total project GHG emission reductions;
 - Estimated/actual energy saved (kWh, therms, or other fuels) for energy efficiency projects;
 - Estimated/actual energy generated (kWh or therm equivalents) for renewable energy projects;
 - Other benefits or results;
 - Other market sectors that can benefit from the project
 - Benefits to priority populations.
 - Appendices - Include a copy of the M&V report for each demonstration site funded by the Energy Commission grant). (**required**)
 - Follow the Style Guide format requirements for headings, figures/tables, citations, and acronyms/abbreviations.
 - Ensure that the document omits subjective comments and opinions. However, recommendations in the conclusion of the report are allowed.
- Submit a draft of the report to the CAM for review and comment according to the project schedule. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt
- Consider incorporating all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a written response explaining why the

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comment was not incorporated into the final product

- Submit the revised Final Report and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period or approves a request for additional time.
- Submit one bound copy of the *Final Report* to the CAM along with *Written Responses to Comments on the Draft Final Report*.

Products:

- Final Report (draft and final)
- Written Responses to Comments on the Draft Final Report

CAM Product:

- Written Comments on the Draft Final Report

MATCH FUNDS, PERMITS, AND SUBCONTRACTS

Subtask 1.7 Match Funds

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. The Recipient may only spend match funds during the Agreement term, either concurrently or prior to the use of Energy Commission funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. 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 this 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 cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
 - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the 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 must identify its owner and provide a contact name, address, telephone number, and the address where the

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property is located.

- If different from the solicitation application, provide a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
- Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

Products:

- Match Funds Status Letter
- Supplemental Match Funds Notification Letter (*if applicable*)
- Match Funds Reduction Notification Letter (*if applicable*)

Subtask 1.8 Permits

The goal of this subtask 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, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:
 - A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
 - The schedule the Recipient will follow in applying for and obtaining the permits.

The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project 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 progress reports and will be a topic at CPR meetings.

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- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

Products:

- Permit Status Letter
- Updated List of Permits (*if applicable*)
- Updated Schedule for Acquiring Permits (*if applicable*)
- Copy of Each Approved Permit (*if applicable*)

Subtask 1.9 Subcontracts

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

The Recipient shall:

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.
- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.
- If required by the CAM, submit a draft of each *Subcontract* required to conduct the work under this Agreement.
- Submit a final copy of the executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

Products:

- Subcontracts (*draft if required by the CAM*)

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IV. TECHNICAL TASKS

Products that require a draft version are indicated by marking “(draft and final)” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required.

Subtask 1.1 (Products) describes the procedure for submitting products to the CAM.

TASK 2: PROJECT ENGINEERING DESIGN

The goal of this task is to design the necessary equipment and plan the equipment layout for the demonstration site. The equipment to be designed for the microgrid are a solar PV array, BESS, microgrid controller, metering equipment, and upgrades to the plant site, including circuits.

The Recipient shall:

- Identify critical loads and quantify total power required to maintain them during a power outage. Determine necessary circuit upgrades, controls, and metering to manage these loads.
- Design the solar PV and BESS microgrid, including site integration with site preparation, solar PV layout, electrical equipment, control systems, and structural components at the facility.
- Design the required site upgrades, including electrical systems, ground preparation, fencing, and integration with existing load controls.
- Provide a *Project Design Memo* that shall include, but not be limited to:
 - Summary of the steps taken to reach the final design and final layout;
 - Discussion of barriers identified and the steps taken to overcome those barriers;
 - Discussion of the final engineering design and equipment.

Products:

- Project Design Memo (draft and final)

TASK 3: SITE PREPARATION AND EQUIPMENT PROCUREMENT

The goal of this task is to ready the site, and to procure the necessary equipment and materials for installation of the emerging microgrid system.

The Recipient shall:

- Procure equipment by:
 - Discussing equipment, electrical, and installation requirements with Schneider Electric and potential California-based vendors.
 - Finalizing equipment specification.
 - Preparing equipment list. For each item, the list shall provide the name of the item and make, model, size, capacity or other information as appropriate to the item. Items to include:
 - BESS;
 - Solar PV system;
 - High voltage switchgear and breaker;

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- Transformer;
 - Low voltage switchboard;
 - Microgrid controller; and
 - Metering and monitoring system.
- Issuing bid documents, reviewing responses, and selecting California-based vendors.
- Placing equipment orders.
- Secure all necessary permits required for installation and operation of all equipment.
- Prepare proposed locations at the site for installation of the new equipment.
Steps include:
 - Preparing the installation timeline.
 - Identifying drop sites for new equipment.
 - Accepting delivery of new equipment.
- Provide a *Site Preparation and Equipment Procurement Memo* that shall include, but not be limited to:
 - Summary of the steps to prepare the site;
 - Copy of the performance specifications for each equipment purchased by the grant;
 - Summary of the bids received including bidder name;
 - Copies of all required permits needed for installation at each site in accordance with subtask 1.8;
 - Copies of the final procurement documents and purchase orders;
 - Status of the planned installation including preliminary schedule for equipment delivery and installation; and
 - Copies of equipment list and installation timeline.
- Prepare *CPR Report #1* and participate in a CPR Meeting in accordance with subtask 1.3.

Products:

- Site Preparation and Equipment Procurement Memo
- CPR Report #1

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TASK 4: EQUIPMENT INSTALLATION AND COMMISSIONING

The goal of this task is to install and commission the equipment for this project, and resume normal plant operations.

The Recipient shall:

- Execute installation of the equipment as outlined in the Installation Timeline and Equipment List. Install each piece of equipment or group of equipment as follows:
 - Prepare drop sites as required
 - Shut down plant processes as required
 - Install new equipment
 - Install Measurement and Verification (M&V) meters and equipment
 - Conduct pre-startup safety review
 - Perform cold commissioning, which will include:
 - Completion and system check out
 - Confirmation of operational readiness
 - Perform hot commissioning, which will include:
 - Performance testing of new systems
 - Performance testing of integration with existing energy management and control systems
 - Performance test run of new system
 - Optimize system performance in response to testing in order to meet stated performance specification
- Provide an *Equipment Installation Memo* that shall include, but not be limited to:
 - Summary of the equipment installation requirements.
 - Discussion of barriers identified and the steps taken to overcome those barriers;
 - Discuss results of equipment start-up and commissioning with respect to whether the equipment as installed meets the stated performance specifications.
- Prepare *CPR Report #2* and participate in a CPR meeting in accordance with subtask 1.3.

Products:

- Equipment Installation Memo (draft and final)
- CPR Report #2

Exhibit A Scope of Work

TASK 5: MEASUREMENT AND VERIFICATION

The goal of this task is to report the benefits resulting from this project by performing M&V of GHG and energy consumption reduction.

The Recipient shall:

- Enter into agreement with M&V subcontractor per subtask 1.9 (if using outside vendor)
- Coordinate demonstration site visits with the M&V subcontractor at the demonstration site
- Develop M&V protocol for pre-installation measurements (and calculations):
 - Electric, natural gas and/or other fossil fuel consumption and GHG emissions (use appropriate emissions factor from Attachment 8, FPIP Calculator Tool of the grant solicitation) of the equipment/process/system(s)/sub-system(s) that are to be upgraded and/or replaced and/or modified.
 - Ensure installation of sub-metering equipment and data loggers for pre/post data analysis.
- Prepare and provide a detailed *M&V Plan* for each project demonstration site to include but not be limited to:
 - A description of the monitoring equipment and instrumentation that will be used.
 - A description of the key input parameters and output metrics that will be measured.
 - A description of the M&V protocol and analysis methods to be employed.
 - A description of the independent, third-party M&V services to be employed, if applicable.
- Perform three months (or shorter period as approved in writing by the CAM) of pre-installation measurements (and calculations) based on the M&V protocol for pre-installation.
- Prepare and provide a *Pre-Installation M&V Findings Report* that includes M&V protocol, pre-install measurements (and calculations), analysis, and results performed in this task.
- Develop M&V protocol for post-installation measurements (and calculations) of:
 - Electric, natural gas and/or other fossil fuel consumption and GHG emissions (use appropriate emissions factor from Attachment 8 of the grant solicitation) of the equipment/process/system(s)/sub-system(s) that will be upgraded and/or replaced and/or modified
- Perform 12 months (or shorter period as approved in writing by the CAM) of post-installation measurements based on M&V protocol for post-installation.
- Provide a summary of post-installation M&V progress in Progress Report(s) (see subtask 1.5) which shall include but not be limited to:
 - A narrative on operational highlights from the reporting period, including any stoppages in operation and why; and
 - A summary of M&V findings from the reporting period.
- Analyze post-installation electrical, natural gas and/or other fossil fuel consumption and GHG emissions.

Exhibit A Scope of Work

- Prepare and provide a *Post-Installation M&V Findings Report* that includes M&V protocol, pre and post install measurements (and calculations), analysis, and results performed in this task. Results should at a minimum report on the reduction of electricity, natural gas and/or other fossil fuel usage and reductions of GHG emissions that directly result from this project, and include:
 - All key assumptions used to estimate and determine energy and GHG reductions (and additions, if applicable).
 - All key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations.
 - Discuss whether the energy and GHG reduction goals in section II.C were met.
- Prepare *CPR Report #3* and participate in a CPR meeting in accordance with subtask 1.3.

Products:

- M&V Plan (draft and final)
- Pre-Installation M&V Findings Report (draft and final)
- Post-Installation M&V Findings Report(s) (draft and final)
- CPR Report #3

TASK 6: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

The goal of this task is to make the knowledge gained, project results, and lessons learned available to the public and key decision makers.

The Recipient shall:

- Provide scholarships to students from low-income and disadvantaged communities.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission- sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in workshops symposium(s) sponsored by the California Energy Commission.
- 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 site(s) or related project photographs.

Products:

- Presentation Materials (draft and final)
- High Quality Digital Photographs

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

To: Office of Planning and Research
 PO Box 3044
 1400 Tenth Street, Room 113
 Sacramento, CA 95812-3044

From: California Energy Commission
 1516 Ninth Street, MS-48
 Sacramento, CA 95814

Project Applicant: Aemetis Advanced Fuels Keyes, Inc.

Project Title: Aemetis Integrated Microgrid Solution (AIMS) Project

Project Location – Specific: 4209 Jessup Rd, east of Faith Home Road, north of Jessup Road (APN# 045-026-039)

Project Location – City: Ceres 95307 **Project Location – County:** Stanislaus

Description of Nature, Purpose and Beneficiaries of Project:

This project will design, install, and operate an emerging microgrid system consisting of a 1.56 megawatt (MW) photovoltaic array and 1.25 MW/2.5MWh battery energy storage system to offset the use of natural gas and electricity by generating it onsite for the animal food production facility. Specifically, solar photovoltaics, battery energy storage, and a microgrid controller will be installed which will produce renewable electricity and reduce greenhouse gas emissions. The 10.95-acre site includes M (Industrial) zoning east of the main drive aisle and P-D (Planned Development) zoning to the west. The arrays will be installed on an elevated structure over the site’s stormwater basin and over areas with vehicle traffic.

The lead agency, Stanislaus County Planning Department, determined that the project was exempt under CEQA.

Name of Public Agency Approving Project: California Energy Commission

Name of Person or Agency Carrying Out Project: Aemetis Advanced Fuels Keyes, Inc.

Exempt Status: *(check one)*

- Ministerial Exemption (Pub. Resources Code § 21080(b)(1); Cal. Code Regs., tit 14, § 15268);
- Declared Emergency (Pub. Resources Code § 21080(b)(3); Cal. Code Regs., tit 14, § 15269(a));
- Emergency Project (Pub. Resources Code § 21080(b)(4); Cal. Code Regs., tit 14, § 15269(b)(c));
- Categorical Exemption. State type and section number
Cal. Code Regs., tit 14, § 15301, 15304, 15311
- Statutory Exemptions. State code number.
- Common Sense Exemption. (Cal. Code Regs., tit 14, §15061(b)(3))

Reasons why project is exempt:

California Code of Regulations, title 14, section 15301: The project involves minor alteration and operation of existing facilities. Solar arrays and battery energy storage system will be installed to power existing on-site biofuels and animal food production facility. These installations will not expand the existing use and will not have a significant effect on the environment.

California Code of Regulations, title 14, section 15304: The project to install solar arrays involves installation over disturbed land utilized in conjunction with the development. This project involves minor alterations in the

Authority cited: Sections 21083 and 21110, Public Resources Code. Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

condition of land including minor trenching and backfilling where the surface is restored. These activities will will not have a significant effect on the environment.

California Code of Regulations, title 14, section 15311: The project will install new solar arrays to serve the existing, onsite biofuels and animal food production facility. These installations will not expand the existing agricultural use and will not have a significant effect the environment.

Each exemption is an independent basis for finding the project exempt.

Responsible Agency

Contact Person: Kevin Uy **Area code/Telephone/Ext:** 916-327-1533

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No

Signature: _____ **Date:** _____ **Title:** _____

Signed by Responsible Agency

Signed by Lead Agency

Signed by Applicant

Date received for filing at OPR: _____

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: AEMETIS ADVANCED FUELS KEYES, INC.

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

RESOLVED, that the CEC approves Agreement FPI-19-013 with Aemetis Advanced Fuels Keyes, Inc. for a \$8,000,000 grant to design, install, and operate an emerging microgrid system at the Recipient's biofuels and animal food production facility in Keyes. The microgrid system will produce and store renewable electricity, providing reliability while reducing operating costs and GHG emissions at the facility. This project is expected to benefit priority populations through criteria pollutant emission reductions and job creation; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

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 CEC held on June 10, 2020.

AYE:

NAY:

ABSENT:

ABSTAIN:

Cody Goldthrite
Secretariat