



**CALIFORNIA
ENERGY COMMISSION**



**California Energy Commission
January 21, 2026 Business Meeting
Backup Materials for Harvest Food Products**

The following backup materials for the above-referenced agenda item are available in this PDF packet as listed below:

1. Proposed Resolution
2. Grant Request Form
3. Scope of Work

[PROPOSED]

RESOLUTION NO: 26-0121-XX

STATE OF CALIFORNIA

**STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

RESOLUTION: Harvest Food Products

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-25-002 with Harvest Food Products for a \$2,500,000 grant. This agreement will replace an aging, inefficient freon (R-22) refrigerant system with a new transcritical CO2 refrigeration system incorporating substantial efficiency improvements, including heat recovery, variable frequency drives, advanced controls, and an adiabatic gas cooler at the Recipient's frozen food facility in Hayward. The upgraded system will improve energy efficiency and reduce the facility's energy usage and greenhouse gas emissions; and

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

CERTIFICATION

The undersigned Secretariat to the CEC 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 January 21, 2026.

AYE:

NAY:

ABSENT:

ABSTAIN:

Dated:

Kim Todd
Secretariat



GRANT REQUEST FORM (GRF)

A. New Agreement Number

IMPORTANT: New Agreement # to be completed by Contracts, Grants, and Loans Office.

New Agreement Number: FPI-25-002

B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Claire Sweeney
3. MS-:None
4. Phone Number: 916-232-8182

C. Recipient's Information

1. Recipient's Legal Name: Harvest Food Products
2. Federal ID Number: 94-3045075

D. Title of Project

Title of project: Harvest Food Refrigeration System Upgrade

E. Term and Amount

1. Start Date: 2/2/2026
2. End Date: 3/29/2030
3. Amount: \$2,500,000.00

F. Business Meeting Information

1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 1/21/2026 .
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Claire Sweeney
5. Time Needed for Business Meeting: 5 minutes.
6. The email subscription topic is: Food Production Investment Program (FPIP).

Agenda Item Subject and Description:

Harvest Food Products. Proposed resolution approving agreement FPI-25-002 with Harvest Food Products for a \$2,500,000 grant, and adopting staff's determination that this action is exempt from CEQA. This agreement will replace an aging, inefficient freon (R-22) refrigerant system with a new transcritical CO2 refrigeration system incorporating substantial efficiency improvements, including heat recovery, variable frequency drives, advanced controls, and an adiabatic gas cooler at the Recipient's frozen food facility in Hayward, California. The upgraded system will improve energy efficiency and reduce the facility's energy usage and greenhouse gas emissions. (FPIP funding) Contact: Claire Sweeney

G. California Environmental Quality Act (CEQA) Compliance

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

Yes

If yes, skip to question 2.



If no, complete the following (PRC 21065 and 14 CCR 15378) and 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 answer the following questions.

a) Agreement **IS** exempt?

Yes

Statutory Exemption?

No

If yes, list PRC and/or CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

PRC section number: None

CCR section number: None

Categorical Exemption?

Yes

If yes, list CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

CCR section number: Cal. Code Regs., tit. 14, § 15302 ;

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

No

If yes, explain reason why Agreement is exempt under the above section. If no, enter "Not applicable" and go to the next section.

Categorical Exemption - CCR 14, Section 15302 requires that a project must meet all of the following criteria: 1) Consist of replacement or reconstruction of existing structures and facilities where 2) the new structure will be located on the same site as the structure replaced and 3) the new structure will have the same purpose and capacity as the structure replaced.

This project involves the replacement of existing mechanical equipment at an existing food processing facility. This project will replace existing inefficient equipment at an existing food processing facility to reduce energy consumption and greenhouse gas emissions. The equipment to be replaced includes compressors, heat exchangers, piping and fittings, and associated control systems at the Recipient's food processing facility. The new equipment will be located on the same site as the equipment replaced and will have substantially the same purpose and capacity as the equipment replaced. For these reasons, the project meets the criteria required for categorical exemption CCR 14, Section 15302.

This project does not involve impacts on any particularly sensitive environment; does not involve any cumulative impacts of successive projects of the same type in the same place that might be considered significant; does not involve unusual circumstances that might have a significant effect on the environment; will not result



in damage to scenic resources within a highway officially designated as a state scenic highway; the project site is not included on any list compiled pursuant to Government Code section 65962.5; and the project will not cause a substantial adverse change in the significance of a historical resource. Therefore, none of the exceptions to categorical exemptions listed in CEQA Guidelines section 15300.2 apply to this project, and this project will not have a significant effect on the environment.

b) Agreement **IS NOT** exempt.

IMPORTANT: consult with the legal office to determine next steps.

No

If yes, answer yes or no to all that applies. If no, list all as “no” and “None” as “yes”.

Additional Documents	Applies
Initial Study	No
Negative Declaration	No
Mitigated Negative Declaration	No
Environmental Impact Report	No
Statement of Overriding Considerations	No
None	Yes

H. Is this project considered “Infrastructure”?

No

I. Subcontractors

List all Subcontractors listed in the Budget (s) (major and minor). Insert additional rows if needed. If no subcontractors to report, enter “No subcontractors to report” and “0” to funds.

Delete any unused rows from the table.

Subcontractor Legal Company Name	CEC Funds	Match Funds
Michas Ltd.	\$ 0	\$242,120
Cascade Energy, Inc.	\$ 0	\$60,000

J. Vendors and Sellers for Equipment and Materials/Miscellaneous

List all Vendors and Sellers listed in Budget(s) for Equipment and Materials/Miscellaneous. Insert additional rows if needed. If no vendors or sellers to report, enter “No vendors or sellers to report” and “0” to funds. **Delete** any unused rows from the table.

Vendor/Seller Legal Company Name	CEC Funds	Match Funds
Michas Ltd.	\$2,500,000	\$1,701,408

K. Key Partners



List all key partner(s). Insert additional rows if needed. If no key partners to report, enter "No key partners to report." **Delete** any unused rows from the table.

Key Partner Legal Company Name
No key partners to report

L. Budget Information

Include all budget information. Insert additional rows if needed. If no budget information to report, enter "N/A" for "Not Applicable" and "0" to Amount. **Delete** any unused rows from the table.

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
GGRF	23-24	303.203	\$ 2,500,000

TOTAL Amount: \$ 2,500,000

R&D Program Area: ICMB: FPIP

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: 101 Local Assistance

M. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Peter Cook

Address: 710 Sandoval Way

City, State, Zip: Hayward, CA 94544-7111

Phone: (510)219-9398

E-Mail: cook@harvestfoodproducts.com

2. Recipient's Project Manager

Name: Peter Cook

Address: 710 Sandoval Way

City, State, Zip: Hayward, CA 94544-7111

Phone: (510)219-9398

E-Mail: cook@harvestfoodproducts.com

N. Selection Process Used

There are three types of selection process. List the one used for this GRF.

Selection Process	Additional Information
Competitive Solicitation #	GFO-24-311



First Come First Served Solicitation #	Not applicable
Other	Not applicable

O. Attached Items

1. List all items that should be attached to this GRF by entering “Yes” or “No”.

Item Number	Item Name	Attached
1	Exhibit A, Scope of Work/Schedule	Yes
2	Exhibit B, Budget Detail	Yes
3	CEC 105, Questionnaire for Identifying Conflicts	Yes
4	Recipient Resolution	No
5	Awardee CEQA Documentation	Yes

Approved By

Individuals who approve this form must enter their full name and approval date in the MS Word version.

Agreement Manager: Claire Sweeney

Approval Date: 12/12/2025

Branch Manager: Alexandra Horangic

Approval Date: 12/12/2025

Director: Jonah Steinbuck delegated to Branch Manager

Approval Date: 12/12/2025

Exhibit A
Scope of Work
Harvest Food Products

I. TASK AND ACRONYM/TERM LISTS

A. Task List

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

B. Acronym/Term List

Acronym/Term	Meaning
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CIP	Clean-In-Place
CO ₂	Carbon Dioxide
CPR	Critical Project Review
GHG	Greenhouse Gas
GWP	Global Warming Potential
M&V	Measurement and Verification
R-22	Freon, a high-GWP refrigerant
Recipient	Harvest Food Products
VFD	Variable Frequency Drive

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

A. Purpose of Agreement

The purpose of this Agreement is to replace an aging, inefficient freon (R-22) refrigerant system with a new transcritical carbon dioxide (CO₂) refrigeration system incorporating substantial efficiency improvements, including heat recovery, variable frequency drives, advanced controls, and an adiabatic gas cooler at the Recipient's frozen food facility in Hayward. The upgraded system will improve energy efficiency and reduce the facility's energy usage and greenhouse gas (GHG) emissions.

B. Problem/ Solution Statement

Problem

The existing refrigeration system at the Recipient's facility is inefficient and relies on approximately 8,500 pounds of R-22 refrigerant, which remains at risk of leakage despite diligent maintenance practices. Conventional refrigeration systems commonly use high-global

Exhibit A

Scope of Work

Harvest Food Products

warming potential (GWP) refrigerants with climate impacts 1,500 to 4,000 times that of carbon CO₂. R-22, in particular, has a high GWP of 1,810 and also possesses ozone-depleting properties.

Solution

The Recipient will install a new transcritical CO₂ refrigeration system to modernize facility operations, improve energy efficiency, substantially reduce greenhouse gas emissions, enhance grid reliability, and lower operational costs, demonstrating that California's frozen food processing industry can remain competitive, resilient, and sustainable within the state. The upgraded system will significantly reduce water use and eliminate the majority of high-GWP refrigerants in the packaging and food processing areas. The project will serve as an industry model for the effective transition from conventional refrigeration systems to advanced, high-efficiency, low-GWP refrigeration technologies.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Reduce electricity use in the spiral freezer at the Recipient's Hayward facility.
- Reduce GHG emissions associated with the use of high-GWP refrigerants at the Recipient's Hayward facility.
- Reduce energy costs associated with the spiral freezer at the Recipient's Hayward facility.
- Demonstrate the market potential of energy-efficient equipment to a broad range of California processors and similar industries.
- Benefit disadvantaged communities in California by reducing GHG emissions generated.

Agreement Objectives

The objectives of this Agreement are to:

- Design and install a transcritical CO₂ refrigeration system with heat recovery, including but not limited to VFDs on the compressors and evaporator, intelligent control systems, heat exchangers, and an adiabatic gas cooler.
- Develop and implement Measurement and Verification (M&V) protocols to monitor and verify energy savings, efficiency, leakage rate, water usage, and GHG emission reductions for pre- and post- installation of the equipment.
- Reduce electricity consumption by approximately 450,000 kilowatt-hours per year, gas consumption by approximately 5,500 therms, and GHG emissions by approximately 1,000 metric tons of carbon dioxide equivalent per year.
- Share the knowledge gained, project results, lessons learned, and benefits with California processors, other industries, and the public.

III. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

Exhibit A

Scope of Work

Harvest Food 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)**. All products submitted which will be viewed by the public, must comply with the accessibility requirements of Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. Sec. 794d), and regulations implementing that act as set forth in Part 1194 of Title 36 of the Federal Code of Regulations. All technical tasks should include product(s). 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**

- Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the California Energy Commission’s (CEC) 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.

The following describes the accepted formats for electronic data and documents provided to the CEC 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.

Exhibit A Scope of Work Harvest Food Products

- Text documents will be in MS Word file format, version 2007 or later.
- 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 CEC's Information Technology Services Branch to determine whether the exceptions are allowable.

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, and other CEC staff relevant to the Agreement. The Recipient's Project Manager and any other individuals deemed necessary by the CAM or the Project Manager shall participate in 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., Teams, Zoom), with approval of the CAM.

The Kick-off meeting will include discussion of the following:

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
- An updated Project Schedule;
- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- Travel;
- Equipment purchases;
- Administrative and Technical products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Monthly Calls (subtask 1.5)

Exhibit A Scope of Work Harvest Food Products

- Quarterly Progress reports (subtask 1.6)
 - Final Report (subtask 1.7)
 - Match funds (subtask 1.8);
 - Permit documentation (subtask 1.9);
 - Subawards (subtask 1.10);
 - Technical Advisory Committee meetings (subtasks 1.11 and 1.12);
 - Agreement changes;
 - Performance Evaluations; and
 - Any other relevant topics.
- Provide *Kick-off Meeting Presentation* to include but not limited to:
 - Project overview (i.e. project description, goals and objectives, technical tasks, expected benefits, etc.)
 - Project schedule that identifies milestones
 - List of potential risk factors and hurdles, and mitigation strategy
 - Provide an *Updated Project Schedule, Match Funds Status Letter, and Permit Status Letter*, 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:

- Kick-off Meeting Presentation
- Updated Project Schedule (*if applicable*)
- Match Funds Status Letter (subtask 1.8) (*if applicable*)
- Permit Status Letter (subtask 1.9) (*if applicable*)

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 CEC 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 CEC and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, 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 CEC.

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 may 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 CEC, but they may take

Exhibit A Scope of Work Harvest Food Products

place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

The Recipient shall:

- Prepare and submit 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.
- 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* with a list of expected CPR participants in advance of the CPR meeting. If applicable, the agenda may 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. A determination of unsatisfactory progress This may result in project delays, including a potential Stop Work Order, while the CEC determines whether the project should continue.
- 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)

CAM Products:

- CPR Agenda(s)
- 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 CEC 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.

Exhibit A Scope of Work Harvest Food Products

- The administrative portion of the meeting will involve a discussion with the CAM of the following Agreement closeout items:
 - Disposition of any procured equipment.
 - The CEC'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.
- 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 copies of *All Final Products* organized by the tasks in the Agreement.

Products:

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

MONTHLY CALLS, REPORTS AND INVOICES

Subtask 1.5 Monthly Calls

The goal of this task is to have calls at least monthly between the CAM and Recipient to 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 verbally 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, to verify match funds are being proportionally spent concurrently or in advance of CEC funds or are being spent in accordance with an approved Match Funding Spending Plan, to form the basis for determining whether invoices are consistent with work performed, and to answer any other questions from the CAM. Monthly calls might not be held on those months when a quarterly progress report is submitted or the CAM determines that a monthly call is unnecessary.

The CAM shall:

- Schedule monthly calls.
- Provide questions to the Recipient prior to the monthly call.
- Provide call summary notes to Recipient of items discussed during call.

The Recipient shall:

- Review the questions provided by CAM prior to the monthly call
- Provide verbal answers to the CAM during the call.

Product:

- Email to CAM concurring with call summary notes.

Exhibit A

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Harvest Food Products

Subtask 1.6 Quarterly 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 reporting period, 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. Progress reports are due to the CAM the 10th day of each January, April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at: <https://www.energy.ca.gov/media/4691>
- Submit a monthly or quarterly *Invoice* on the invoice template(s) provided by the CAM.

Recipient Products:

- Quarterly Progress Reports
- Invoices

CAM Product:

- Invoice template

Subtask 1.7 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.

When creating the Final Report Outline and the Final Report, the Recipient must use the CEC Style Manual provided by the CAM.

Subtask 1.7.1 Final Report Outline

The Recipient shall:

- Prepare a *Final Report Outline* in accordance with the *Energy Commission Style Manual* provided by the CAM.

Recipient Products:

- Final Report Outline (draft and final)

CAM Products:

- Energy Commission Style Manual
- Comments on Draft Final Report Outline
- Acceptance of Final Report Outline

Subtask 1.7.2 Final Report

The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report

Exhibit A

Scope of Work

Harvest Food Products

Outline, Energy Commission 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)
 - Preface (**required**)
 - Abstract, keywords, and citation page (**required**)
 - Table of Contents (**required**, followed by List of Figures and List of Tables, if needed)
 - Executive summary (**required**)
 - Body of the report (**required**)
 - References (if applicable)
 - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
 - Bibliography (if applicable)
 - Appendices (if applicable) (Create a separate volume if very large.)
 - Attachments (if applicable)
- Submit a draft of the Executive Summary to the TAC for review and comment.
- Develop and submit a *Summary of TAC Comments on Draft Final Report* received on the Executive Summary. For each comment received, the Recipient will identify in the summary the following:
 - Comments the Recipient proposes to incorporate.
 - Comments the Recipient does not propose to incorporate and an explanation for why.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt.
- Incorporate all CAM comments into the *Final Report*. If the Recipient disagrees with any comment, provide a *Written Responses to Comments* explaining why the comments were not incorporated into the final product.
- Submit the revised *Final Report* electronically with any Written Responses to Comments within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the CAM specifies a longer time period or approves a request for additional time.

Products:

- Summary of TAC Comments on Draft Final Report
- Draft Final Report
- Written Responses to Comments (*if applicable*)
- Final Report

CAM Product:

- Written Comments on the Draft Final Report

MATCH FUNDS, PERMITS, AND SUBAWARDS

Subtask 1.8 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.

Exhibit A Scope of Work Harvest Food Products

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. 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 application that led to the CEC 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 application that led to the CEC 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 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 1.9 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.

Exhibit A Scope of Work Harvest Food Products

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.

- 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 1.10 Obtain and Execute Subawards and Agreements with Site Hosts

The goals of this subtask are to: (1) procure and execute subrecipients and site host agreements, as applicable, required to carry out the tasks under this Agreement; and (2) ensure that the subrecipients and site host agreements are consistent with the Agreement terms and conditions and the Recipient's own contracting policies and procedures.

The Recipient shall:

- Execute and manage subawards and coordinate subrecipients activities in accordance with the requirements of this Agreement.
- Include any required Energy Commission flow-down provisions in each subaward, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subaward terms.
- Submit a *Subaward and Site Letter* to the CAM describing the subawards and any site host agreement needed or stating that no subawards or site host agreements are required.
- If requested by the CAM, submit a draft of each *Subaward* and any *Site Host Agreement* required to conduct the work under this Agreement.

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- If requested by the CAM, submit a final copy of each executed *Subaward* and any *Site Host Agreement*.
- Notify and receive written approval from the CAM prior to adding any new subrecipient (see the terms regarding subrecipient additions in the terms and conditions).

Products:

- Subaward and Site Letter
- Draft Subawards (*if requested by the CAM*)
- Draft Site Host Agreement (*if requested by the CAM*)
- Final Subawards (*if requested by the CAM*)
- Final Site Host Agreement (*if requested by the CAM*)

IV. TECHNICAL TASKS

TASK 2 PROJECT ENGINEERING DESIGN (*if applicable and budgeted in Attachment 5*)

The goal of this task is to design the necessary equipment and plan the equipment layout for the project site. Equipment to be designed includes, but is not limited to, CO₂ compressor skids, an adiabatic gas cooler, heat exchangers with associated tanks and piping, evaporator variable frequency drives, and related electrical and mechanical systems. All equipment will be installed at the Recipient's facility.

The Recipient shall:

- Determine the location of existing and new system, including but not limited to:
 - Transcritical CO₂ skid system.
 - Adiabatic gas cooler.
 - Supportive foundation and pad.
 - Heat exchangers.
 - Storage tank.
- Complete a load calculation on the electrical system to confirm that there is sufficient amperage on each of the circuits intended to serve the new refrigeration system.
- Design and draft infrastructure, electrical, and mechanical logistics, including but not limited to:
 - Piping and instrumentation diagram of the fully designed refrigeration system that will show major equipment, piping with line sizes, and valves located on the new refrigeration system.
 - One-line Electrical Diagram to show major circuits, their ampacity, and the major equipment on each circuit at the facility.
 - Mechanical Drawing of the heat recovery system showing major equipment, piping sizes, and valves.
 - Controls Drawing of the heat recovery system showing control valves, sensors, and control sequences.
- 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;
 - Identification of barriers involved and discuss the steps taken to overcome those barriers;
 - Discussion of the final engineer design and equipment layout for each site.

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Products:

- Project Design Memo

TASK 3 SITE PREPARATION AND EQUIPMENT PROCUREMENT

The goal of this task is to procure the necessary equipment and materials for this project.

The Recipient shall:

- Prepare all mechanical, electrical, and structural engineering drawings and materials to secure all required permits necessary to conduct site preparation and equipment installation.
- Secure final equipment, including performance specifications for each piece of equipment, and secure bids from California-based vendors.
- Secure preliminary schedule for equipment delivery and installation.
- Identify the preliminary plans for site preparation and secure any necessary contractors
- Conduct site preparation for new equipment
- Identify the removal plan and steps of existing equipment and refrigerant(s).
- Provide a *Site Preparation and Equipment Procurement Memo* that shall include, but not be limited to:
 - Summary of the steps to prepare the site(s);
 - Copy of the performance specifications for each piece of equipment purchased by the grant;
 - Summary of the bids received and from whom;
 - Copies of all required permits needed for installation at each site;
 - Copies of the final procurement documents and purchase orders; and
 - Status of the planned installation including a preliminary schedule for equipment delivery and installation for each site.

Products:

- Site Preparation and Equipment Procurement Memo

TASK 4 EQUIPMENT INSTALLATION

The goal of this task is to install and commission the equipment for this project.

The Recipient shall:

- Prepare site for installation of new equipment
 - Prepare concrete pad, re-design the skid area, and upgrade electrical panel to support the installation of the refrigeration systems
- Install new refrigeration system(s) with heat recovery system, including but not to be limited to:
 - Pre-assembled compressors, condensers, evaporators, associated piping, valving, and insulation, variable frequency drives, and CO2 refrigeration.
- Commission the new refrigeration systems for proper operation and energy-efficient control parameters.
- Decommission existing refrigeration system(s) at site as per State of California guidelines.

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- Provide an *Equipment Installation Memo* that shall include, but not be limited to:
 - Summary of the equipment installation requirements for each demonstration site;
 - Identification of barriers involved during installation and discuss the steps taken to overcome those barriers;
 - Discuss results of equipment start-up and commissioning at each site with respect to whether the equipment installed meets the stated performance specifications.
- Prepare a *CPR Report #1* in accordance with subtask 1.3.
- Participate in a CPR Meeting.

Products:

- Equipment Installation Memo (*draft and final*)
- CPR Report #1

TASK 5 MEASUREMENT AND VERIFICATION

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

The Recipient shall:

- Enter into an agreement with M&V subcontractor per Task 1.9 (if using an outside vendor)
- Coordinate site visits with the M&V subcontractor at the demonstration site(s)
- Develop M&V protocol for **pre-installation** measurement (and calculation):
 - 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 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 which 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 a 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* for each demonstration site 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

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- Perform at least 6 months or two seasons, for seasonal facilities, (or a 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.
- Prepare and provide a *Post-Installation M&V Findings Report* for each demonstration site 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.
- Provide all key assumptions used to estimate and determine energy and GHG reductions (and additions, if applicable).
- Provide 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.

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*)

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:

- Complete and update the project profile on the CEC's public online project and recipient directory on the [Energize Innovation website](http://www.energizeinnovation.fund) (www.energizeinnovation.fund), and provide *Documentation of Project Profile on EnergizeInnovation.fund*, including the profile link, as determined by the CAM.
- If the Prime Recipient is an Innovation Partner on the project, complete and update the organizational profile on the CEC's public online project and recipient directory on the [Energize Innovation website](http://www.energizeinnovation.fund) (www.energizeinnovation.fund), and provide *Documentation of Organization Profile on EnergizeInnovation.fund*, including the profile link, as determined by the CAM.
- When directed by the CAM, develop *Presentation Materials* to be presented at a CEC sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual symposium(s) sponsored by the CEC.

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- 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:

- Documentation of Project Profile on EnergizeInnovation.fund (*if requested by the CAM*)
- Documentation of Organization Profile on EnergizeInnovation.fund (*if requested by the CAM*)
- Presentation Materials (*draft and final*)
- High Quality Digital Photographs

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.