

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement FPI-18-011 (To be completed by CGL Office)

ERDD	Chie Yee Yang	51	916-327-1536
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Smithfield Packaged Meats Corp.	95-1465844
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Waste Heat Recovery to Reduce Natural Gas Usage
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3/15/2019	3/30/2023	\$ 483,348
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☐ ARFVTP agreements under \$75K delegated to Executive Director.

Proposed Business Meeting Date	2/20/2019	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
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Business Meeting Presenter	Kevin Uy	Time Needed:	5 minutes
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Please select one list serve. Select

**Agenda Item Subject and Description**

SMITHFIELD PACKAGED MEATS CORP. Proposed resolution approving Agreement FPI-18-011 with Smithfield Packaged Meats Corp. for a \$483,348 grant to fund the installation of a heat recovery system at the recipient's food processing facility in Vernon, California, and adopting staff's determination that this action is exempt from the California Environmental Quality Act. The heat recovery system will capture and recycle waste heat from the facility's exhaust stacks and will reduce natural gas consumption, greenhouse gas emissions, and operating costs

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

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

Explain why Agreement is not considered a "Project":

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

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

☒ a) Agreement **IS** exempt. (Attach draft NOE)☐ Statutory Exemption. List PRC and/or CCR section number: \_\_\_\_\_☒ Categorical Exemption. List CCR section number: Cal. Code Regs., tit 14, § 15301☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section:

This project will fund the purchase of 6 commercially-available economizers for existing high-temperature exhaust stacks at a meat processing facility. The economizers will help improve the efficiency of the facility's boilers by reducing energy demands, which will lead to subsequent greenhouse gas reductions.

14 C.C.R. §15301: The project involves minor alteration of existing structures and mechanical equipment. Heat recovery exchanger systems on exhaust gas stacks will be installed at existing food processing facilities. The economizers will reduce emissions of existing boiler equipment. These installations will be minor alterations to the structures and equipment, with no expansion beyond the existing use of the food processing facilities and will not have significant effect on the environment."

☐ 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

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**List all subcontractors (major and minor) and equipment vendors: (attach additional sheets as necessary)**

Legal Company Name:	Budget
	\$
	\$
	\$
	\$
	\$
	\$
	\$
	\$
	\$
	\$
	\$

Legal Company Name:


Funding Source	Funding Year of Appropriation	Budget List No.	Amount
GGRF	17-18	301.002A	\$483,348
			\$
			\$
			\$
			\$
			\$
R&D Program Area:	EERO: IAW		\$483,348
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Hector Garcia	Name:	James Davidian
Address:	3049 E Vernon Ave	Address:	3049 E Vernon Ave
City, State, Zip:	Vernon, CA 90058-1800	City, State, Zip:	Vernon, CA 90058-1800
Phone:	323-583-4621 / Fax: - -	Phone:	323-583-4621 / Fax: - -
E-Mail:	HJGarcia@smithfield.com	E-Mail:	jhdavidian@smithfield.com

<input checked="" type="checkbox"/> Competitive Solicitation	Solicitation #: GFO-18-901
<input type="checkbox"/> First Come First Served Solicitation	

1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/> Attached
2. Exhibit B, Budget Detail	<input 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

**Exhibit A**  
**Scope of Work**  
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**I. TASK ACRONYM/TERM LISTS**

**A. Task List**

Task #	CPR <sup>1</sup>	Task Name
1		General Project Tasks
2	x	Site Preparation and Equipment Procurement
3		Equipment Installation
4		Measurement and Verification
5		Technology/Knowledge Transfer Activities

**B. Acronym/Term List**

Acronym/Term	Meaning
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
GHG	Greenhouse Gas Emissions
M&V	Measurement and Verification
MT of CO <sub>2e</sub>	Metric Ton of Carbon Dioxide Equivalent
Recipient	Smithfield
stack	Exhaust chimney which is used to dissipate flue gas out of the facility

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

**A. Purpose of Agreement**

The purpose of this Agreement is to fund the installation and commissioning of energy efficient drop-in ready equipment at the Recipient's food processing facility. The Recipient will install and commission heat recovery exchanger systems (economizers) on existing exhaust gas stacks. The Project will reduce greenhouse gas (GHG) emissions by recovering waste heat to reduce the natural gas demands at existing boilers.

**B. Problem/ Solution Statement**

**Problem**

High-temperature process exhaust gas streams represent a valuable source of thermal energy that is normally exhausted into the environment and wasted. Waste heat recovery of this exhaust heat could reduce natural gas consumption in the facility's existing boilers, thus reducing the GHG and criteria pollutant emissions. The facility has multiple high-temperature process exhaust gas

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<sup>1</sup> 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.

## **Exhibit A**

### **Scope of Work**

#### **Smithfield Packaged Meats Corp.**

streams where waste heat is not captured and recovered. Therefore, additional natural gas is consumed at the existing facility boilers to effectively replace the waste energy losses.

#### **Solution**

The Recipient will purchase, install, and commission commercially available economizers and related heat recovery equipment on existing high-temperature exhaust gas stacks to recover the waste energy and ultimately, reduce the natural gas combustion demands at three existing boilers.

### **C. Goals and Objectives of the Agreement**

#### **Agreement Goals**

The goals of this Agreement are to:

- Improve the plant's energy efficiency
- Reduce the plant's natural gas use by at least 800,000 therms/ year
- Reduce GHG emissions by at least 3725 MT of CO<sub>2e</sub> / year

#### **Agreement Objectives**

The objectives of this Agreement are to:

- Establish initial baseline through Pre-Install measurements
- Install and commission commercially available economizers
- Measure and verify the reduction in natural gas and GHG emissions

### **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.

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- 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 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.

## **Exhibit A Scope of Work Smithfield Packaged Meats Corp.**

- 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.

### **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*)

## **Exhibit A**

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#### **Smithfield Packaged Meats Corp.**

- Updated List of Permits (*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 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.
- 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.

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##### **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.
- 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



## Exhibit A Scope of Work Smithfield Packaged Meats Corp.

- 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.

#### The Recipient shall:

- 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;

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- 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 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.

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#### **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 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:

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- 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 1.9 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**

**TASK 2 SITE PREPARATION AND EQUIPMENT PROCUREMENT**

The goal of this task is to prepare the site and procure the necessary equipment and materials for this project. Six exhaust stacks have waste heat capture opportunities. The equipment to be procured includes economizers to capture waste heat and heat water to be used in the process. Detailed evaluations of each waste heat source must be completed to finalize performance specifications for each economizer. Site preparation will include isolating the equipment to be modified from the rest of the process. Safety reviews for the project will be completed as well as contractor site specific safety training. Air emission permits must be modified or renewed to accommodate changes resulting from the new economizer installations.

**The Recipient shall:**

- Obtain required permits including:
  - Building permits will be obtained by vendor completing installation
- Procure equipment:
  - Finalize detailed system evaluation of each waste heat source
  - Develop performance specifications for the economizers
  - Advertising open bidding and secure bids from manufacturers that meet the performance specification requirements
  - Review each bid and select a bid for procurement that best meets schedule, design specifications and performance specifications.
  - Establish staging area for equipment delivery allowing equipment storage and installation preparation
- Prepare the project site:
  - Shutdown/lock out existing process equipment
  - Conduct safety evaluations
  - Provide contractor site specific training
  - Establish work area boundaries/barriers
- 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)
  - Summary of evaluations of each waste heat source
  - Copy of the performance specifications for each equipment purchased by the grant
  - Summary and copy of the bids received and from whom
  - Copies of all required permits needed for installation
  - Copies of all procurement documents
  - Status of the planned installation including preliminary schedule for equipment delivery and installation.
- Prepare a *CPR Report* in accordance with subtask 1.3.
- Participate in a CPR Meeting.

**Products:**

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

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**TASK 3 EQUIPMENT INSTALLATION**

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

**The Recipient shall:**

- Hire equipment vendors and contractors to install economizers and accomplish the following activities:
  - Contractor staging and planning
  - Obtain necessary construction permits including safe work permits, hot work permits, etc.
  - Barricade construction area to prevent unauthorized access
  - Existing process equipment shutdown and lock out
  - Existing equipment preparation and retrofit modifications
  - Prepare new equipment for transfer and installation within the retrofitted equipment
  - Final installation checklist and prepare for final startup
- Engage equipment vendor start-up and commissioning services to ensure the equipment is correctly installed and meets the performance specifications
  - Equipment vendor will make adjustments accordingly to meet the performance specifications
- 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 with respect to whether the equipment as installed meets the stated performance specifications.

**Products:**

- Equipment Installation Memo (draft and final)

**TASK 4 MEASUREMENT AND VERIFICATION**

The goal of this task is to report the benefits resulting from this project.

**The Recipient shall:**

- Develop M&V protocol for pre-installation measurement (and calculation) Electric, natural gas and/or other fossil fuel consumption and greenhouse gas 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.
- If necessary, ensure installation of sub-metering equipment and data loggers for pre/post data analysis.
- Prepare and provide a detailed *Measurement and Verification 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 which will be measured.
  - A description of the M&V protocol and analysis methods to be employed.
- 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-install

**Exhibit A**  
**Scope of Work**  
**Smithfield Packaged Meats Corp.**

- Prepare and provide a *Pre-Installation Measurement and Verification 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 (or calculations) of:
  - Electric, natural gas and/or other fossil fuel consumption and greenhouse gas 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 greenhouse gas emissions.
- Prepare and provide a *Post-Installation Measurement and Verification 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 greenhouse gas emissions that directly result from this project.
  - Provide all key assumptions used to estimate and determine energy and greenhouse gas 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:**

- Measurement and Verification Plan (draft and final)
- Pre-Installation Measurement and Verification Findings Report (draft and final)
- Post-Installation Measurement and Verification Findings Report (draft and final)

**TASK 5 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:**

- 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.

**Exhibit A**  
**Scope of Work**  
**Smithfield Packaged Meats Corp.**

**Products:**

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

**V. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.



STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: SMITHFIELD PACKAGED MEATS CORP.

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

**RESOLVED**, that the Energy Commission approves Agreement FPI-18-011 with Smithfield Packaged Meats Corp. for a \$483,348 grant to fund the installation of a heat recovery system at the recipient's food processing facility in Vernon, California, and adopting staff's determination that this action is exempt from the California Environmental Quality Act. The heat recovery system will capture and recycle waste heat from the facility's exhaust stacks and will reduce natural gas consumption, greenhouse gas emissions, and operating costs; and

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

**CERTIFICATION**

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on February 20, 2019.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

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Cody Goldthrite,  
Secretariat