



**CALIFORNIA  
ENERGY COMMISSION**



**California Energy Commission  
March 17, 2025 Business Meeting  
Backup Materials for County of Ventura**

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: 25-0317-11**

**STATE OF CALIFORNIA**

**STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION**

**RESOLUTION: County of Ventura**

**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 EPC-24-042 with the County of Ventura for a \$2,999,458 grant. This agreement will fund electrified retrofit measures in approximately 100 residences in Ventura, San Luis Obispo, and Santa Barbara counties and assess the impacts of consolidated and separate retrofit measures on air quality, comfort, and other non-energy metrics to provide guidance on how non-energy benefits can be integrated into the decision making process for the replacement of gas-fueled equipment with electric; 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 March 17, 2025.

AYE:

NAY:

ABSENT:

ABSTAIN:

Dated:

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Kristine Banaag  
Secretariat



## GRANT REQUEST FORM (GRF)

### A. New Agreement Number

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

**New Agreement Number:** EPC-24-042

### B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Maninder Thind
3. MS-:None
4. Phone Number: 916-776-0819

### C. Recipient's Information

1. Recipient's Legal Name: County of Ventura
2. Federal ID Number: 95-6000944

### D. Title of Project

Title of project: 3C-BEACH (Tri-County Benefits of Electrification for Affordability, Comfort, and Health)

### E. Term and Amount

1. Start Date: 4/14/2025
2. End Date: 3/30/2029
3. Amount: \$2,999,458.00

### F. Business Meeting Information

1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 3/17/2025 .
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Maninder Thind
5. Time Needed for Business Meeting: 5 minutes.
6. The email subscription topic is: EPIC (Electric Program Investment Charge).

#### **Agenda Item Subject and Description:**

COUNTY OF VENTURA. Proposed resolution approving agreement EPC-24-042 with the County of Ventura for a \$2,999,458 grant, and approving staff's recommendation that this action is exempt from CEQA. This agreement will fund electrified retrofit measures in approximately 100 residences in Ventura, San Luis Obispo, and Santa Barbara counties and assess the impacts of consolidated and separate retrofit measures on air quality, comfort, and other non-energy metrics to provide guidance on how non-energy benefits can be integrated into the decision making process for the replacement of gas-fueled equipment with electric. (EPIC funding) Contact: Maninder Thind



## 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, §§ 15301, 15306

Cal. Code Regs., tit. 14, §15301 exempts projects that involve minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features and which involve negligible or no expansion of use beyond that existing or former use.

This project entails the installation of integrated electrified retrofit measures in approximately 100 residences in Ventura, San Luis Obispo, and Santa Barbara counties. These retrofits will occur in existing residences and will entail the replacement of existing gas appliances including but not limited to natural gas furnaces with electric heat pumps, natural gas water heaters with electric heat pump water heaters, natural gas stoves with electric induction cooktops, and natural gas clothes dryers with electric dryers. This project will result in no expansion of use of these residences beyond that currently existing.



Cal. Code Regs., tit. 14, §15306 exempts projects which consist of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource from CEQA. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

The proposed activities are to conduct applied research that will assess the impact of consolidated and separate electrified retrofit measures on air quality, comfort, and other non-energy metrics, and will provide guidance on how non-energy benefits can be implemented in the decision-making to replace gas-fueled equipment with electric, which falls within this categorical exemption. The activities consist of field data collection, paper studies, and laboratory work, including documenting, analyzing, and reporting results; conducting instrument cross-calibrations and analysis of pollutant samples; and collecting air quality and other data samples from various indoor residential locations in Ventura, San Luis Obispo, and Santa Barbara counties.

For these reasons, this project will not have a significant environmental impact and is exempt from CEQA pursuant to §§15301 and 15306.

The project will not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; 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.

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.

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
Frontier Energy, Inc.	\$ 2,298,120	\$0
Community Action of Ventura County, Inc.	\$ 99,200	\$0
Energy Conservation Consultants	\$ 57,850	\$0
TBD - CBO	\$78,000	

**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
TBD - Installers	\$	\$270,000



## 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
San Luis Obispo County
Santa Barbara County

## 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
EPIC	23-24	301.001K	\$ 2,999,458

**TOTAL Amount:** \$ 2,999,458

R&D Program Area: ESB: EA

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: Not applicable

## M. Recipient's Contact Information

### 1. Recipient's Administrator/Officer

Name: Alejandra Téllez

Address: 800 S Victoria Ave

City, State, Zip: Ventura, CA 93009-0002

Phone: 805-654-3835

E-Mail: alejandra.tellez@ventura.org

### 2. Recipient's Project Manager

Name: Erica Helson

Address: 800 S Victoria Ave

City, State, Zip: Ventura, CA 93009-0001

Phone: 805-654-3835

E-Mail: erica.helsonz@ventura.org



## 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-23-310
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	No.

### Approved By

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

**Agreement Manager:** Maninder Thind

**Approval Date:** 1/29/2025

**Branch Manager:** Alex Horangic

**Approval Date:** 1/30/2025

**Director:** Jonah Steinbuck (*delegated to Manager*)

**Approval Date:** N/A

**Exhibit A**  
**Scope of Work**  
**County of Ventura, General Services Agency, Fleet Services**

**I. TASK ACRONYM/TERM LISTS**

**A. Task List**

Task #	CPR <sup>1</sup>	Task Name
1		General Project Tasks
2		Recruitment of Test Homes
3		Instrumentation and Monitoring Plans
4	X	Pre-retrofit Monitoring
5		Installations and Customer Care
6		Post-retrofit Monitoring and Decommissioning
7		Calculation of Metrics and Statistical Analysis
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

**B. Acronym/Term List**

Acronym/Term	Meaning
3C-BEACH	Tri-County Benefits of Electrification for Affordability, Comfort, and Health
3C-REN	Tri-County Regional Energy Network
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CBO	Community Based Organization
CEC	California Energy Commission
CPR	Critical Project Review
DAC	Disadvantaged Communities
HP	Heat Pump
HPWH	Heat Pump Water Heater
TAC	Technical Advisory Committee

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

**A. Purpose of Agreement**

The purpose of this Agreement is to assess the impact of consolidated and separate electrified retrofit measures on air quality, comfort, and other non- energy metrics in California homes, and provide guidance on how non-energy benefits can be implemented in the decision-making to replace gas-fueled equipment with electric.

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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**  
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**B. Problem/ Solution Statement**

**Problem**

Many households are not aware of the non-energy impacts and potential benefits of home electrification. There is a need for more complete knowledge of these impacts and benefits of electrification to help overcome market resistance due to potentially higher utility bills based on current natural gas and electricity prices. Existing programs that incentivize the replacement of gas equipment with their electric counterparts may result in higher utility bills, especially for low-income homeowners with inefficient building envelopes and higher heating loads.

**Solution**

Building the requisite knowledge base requires demonstration projects in existing homes to determine what works best for residents, understand impacts on indoor air quality, and benefits to health, comfort, and net cost. Although health impacts cannot be measured directly within the scope of this project, indoor air quality measurements will be combined with existing health studies to estimate health effects to the extent possible. This project will include strategies to ensure participants will achieve lower utility bills, including a pre-screening process to prioritize homes in advance based on expected load profiles and equipment efficiency. Electrification measures will often be bundled with efficiency improvements to help ensure both lower utility bills and reduced carbon emissions.

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

**Agreement Goals**

The goals of this Agreement are to:

- Establish measurable metrics for the most important non-energy impacts of common energy efficiency and electrification improvements.
- Quantify the impacts of these improvements in a statistically significant sample of homes in Ventura County, San Luis Obispo County, and Santa Barbara County using the established metrics.
- Evaluate a large and diverse enough sample of homes that these impacts can be attributed to specific measures, and differences between key populations (low income, near once through cooling (OTC) plants, single family homes) can be determined.
- Generalize results for other climate zones in California.
- Evaluate residents' experiences and perceptions of the retrofitting process.
- Research methods for increasing market adoption of an integrated retrofitting approach, as well as studying the associated costs, barriers, and benefits of such expansion.
- Evaluate the best strategies to increase homeowners' chances of reducing costs and enhancing non-energy benefits, especially for homes in disadvantaged communities and/or with low-income households.

# **Exhibit A**

## **Scope of Work**

### **County of Ventura, General Services Agency, Fleet Services**

Ratepayer Benefits:<sup>2</sup> This Agreement will result in the ratepayer benefits of lower costs, health, comfort, and increased safety by demonstrating and documenting non-energy benefits to homeowners/residents from replacing natural gas appliances and equipment with all-electric. Lower costs will be received from reducing or eliminating natural gas usage and from the installation of more energy-efficient appliances and equipment. Partial or full electrification of homes is expected to improve indoor air quality, which has a great impact on health and comfort. Improved safety will be provided on various fronts: enhanced safety through proper installation of contractor measures and adherence to best practices, increased safety leading to higher market value, and decreased risk associated with the use of flammable and explosive natural gas.

Technological Advancement and Breakthroughs:<sup>3</sup> This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by increasing the overall awareness of non-energy benefits from electrification retrofit measures in existing homes, and the potential of reducing greenhouse gas emissions. The market penetration of the outlined retrofit measures will have the potential to increase and bring retrofit packages to existing homeowners that offer immediate energy and non-energy benefits. In addition, the project will demonstrate innovative methods for measuring non-energy impacts in the field, for calculating non-energy metrics from indirect data, and for analyzing the dataset using advanced statistical methods.

#### **Agreement Objectives**

The objectives of this Agreement are to:

- Identify the impacts on indoor air quality and non-energy benefits from individual and combined electrification measures.
- Recruit a final sample of test sites that includes at least 51% in disadvantaged and/or low-income communities, and at least 10% near OTC power plants.
- Calculate the mean value of each non-energy benefit within a range of 30% uncertainty at a 95% confidence level for individual electrification measures and full packages including envelope improvements.
- Measure the percentage of participants that experience higher energy bills and aim to quantify energy bill impacts for participants, and ensure all participants are notified that lower energy bills are not guaranteed.
- Measure participant satisfaction with their experience.
- Develop at least 8 publications or presentations of project results to outside stakeholders through conferences, webinars, direct meetings, or other communication channel. Within the 8 publications or presentations topics, include:
  - How to scale up an integrated retrofitting approach and the associated costs, barriers, and benefits of scaling up

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<sup>2</sup> California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, [http://docs.cpuc.ca.gov/PublishedDocs/WORD\\_PDF/FINAL\\_DECISION/167664.PDF](http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF)).

<sup>3</sup> California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

**Exhibit A**  
**Scope of Work**  
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- Strategies for reducing cost and enhancing benefits of integrated retrofit packages in homes, communicating the non-energy benefits of building decarbonization, and best practices for stakeholders such as residents, contractors, and policymakers

**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)**. 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

**Exhibit A**  
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- 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.
- 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.

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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)
  - 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,

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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 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

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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 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.

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**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.

**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)

**Exhibit A**  
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**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 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 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

**Exhibit A**  
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**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.

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.

**Exhibit A**  
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**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. 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, the Recipient's ability to meet the target sample size, notify the CAM within 5 days. This 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)

**Task 1.10 Obtain and Execute Subawards and Agreements with Site Hosts**

The goal of this task is to ensure quality products and to execute subrecipients and site host agreements, as applicable, required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement and contracting policies and procedures.

**The Recipient shall:**

- Execute and manage subawards and coordinate subrecipient activities.
- Execute and manage site host agreements, and ensure the right to use the project site throughout the term of the Agreement, as applicable. A site host agreement is not required if the Recipient is the site host.
- Notify the CEC in writing immediately, but no later than five calendar days, if there is a reasonable likelihood the project site cannot be acquired or can no longer be used for the project.

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- Submit a letter to the CAM describing the subawards and any site host agreement needed or stating that no subawards or site host agreements are required. *For this agreement, Recipient shall submit evidence that the owners or occupants, as applicable, for all homes involved in this Agreement have consented to the project activities being performed therein.*
- If requested by the CAM, submit a draft of each subaward and any site host agreement required to conduct the work under this Agreement to the CAM for review.
- If requested by the CAM, submit a final copy of each executed subaward and any site host agreement.
- If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM.

**Products:**

- Letter describing the subawards needed, or stating that no subawards are required
- Draft subaward (if requested)
- Final subaward (if requested)
- Draft site host agreement (if requested)
- Final site host agreement (if requested)

**TECHNICAL ADVISORY COMMITTEE**

**Subtask 1.11 Technical Advisory Committee (TAC)**

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
  - Technical area expertise;
  - Knowledge of market applications; or
  - Linkages between the Agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.
- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in its effort to build partnerships, governmental support, and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.

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The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

**The Recipient shall:**

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.12.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

**Products:**

- List of Potential TAC Members
- List of TAC Members
- Documentation of TAC Member Commitment

**Subtask 1.12 TAC Meetings**

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

**The Recipient shall:**

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.

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- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

**The TAC shall:**

- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that insure a long-term perspective on decision-making and progress toward the project's strategic goals.
- Review and provide comments to proposed project performance metrics.
- Review and provide comments to proposed project Draft Technology Transfer Plan.

**Products:**

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

**Subtask 1.13 Project Performance Metrics**

The goal of this subtask is to finalize key performance targets for the project based on feedback from the TAC and report on final results in achieving those targets. The performance targets should be a combination of scientific, engineering, techno-economic, and/or programmatic metrics that provide the most significant indicator of the research or technology's potential success.

**The Recipient shall:**

- Complete and submit the project performance metrics section of the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task, to the CAM.
- Present the draft project performance metrics at the first TAC meeting to solicit input and comments from the TAC members.
- Develop and submit a *TAC Performance Metrics Summary* that summarizes comments received from the TAC members on the proposed project performance metrics. The *TAC Performance Metrics Summary* will identify:
  - TAC comments the Recipient proposes to incorporate into the *Initial Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
  - TAC comments the Recipient does not propose to incorporate with and explanation why.
- Develop and submit a *Project Performance Metrics Results* document describing the extent to which the Recipient met each of the performance metrics in the *Final Project Benefits Questionnaire*, developed in the Evaluation of Project Benefits task.
- Discuss the *Project Performance Metrics Results* at the Final Meeting.

**Exhibit A**  
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**Products:**

- TAC Performance Metrics Summary
- Project Performance Metrics Results

**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: RECRUITMENT OF TEST HOMES**

The goals of this task are to secure the commitment of a minimum of 100 homeowners (or less as approved by the CAM in writing) to participate in this study and achieve the sample design targets for retrofit packages. Achievement of the goal will be demonstrated through signed Customer Participation and Access Agreements. Institutional Review Board approval shall be obtained if required for any part of this study.

**The Recipient shall:**

- Coordinate with 3C-REN program to determine how best to integrate with the existing infrastructure.
- Allocate the funding levels for participants in different categories (disadvantaged, low-income, etc.).
- Establish rules and restrictions for project participants
  - Screening criteria
  - Processes for equipment/installation rebates and incentives to allow field testing
  - Responsibilities of homeowners (site entry, internet access) and program staff (adequate notification before site access, feedback on equipment performance).
- Draft the *Customer Participation and Access Agreement Form* documenting the process, roles and responsibilities, possible risks, schedule, and points of contact.
- Create *Outreach Materials Report* for recruiting test sites, including benefits of participation, rules and restrictions, and application process.
- Establish a platform to track recruitment on a secure, limited access server
  - Application
  - Current house attributes
  - Requested measures
  - Assigned installer
  - Amount funded by the CEC grant
  - Status of application, incentives, installation, and testing once accepted
- Develop outreach channels for communicating the benefits of project participation, potentially including
  - Website/social media
  - Direct e-mail
  - Community gatherings
  - Door-to-door outreach
- Review applications to ensure criteria are met
- Communicate application acceptance to homeowners
- Submit a *Site Recruitment Plan* to CAM
- Obtain signed *Customer Participation and Access Agreements*

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- Create a *Summary of Household Characteristics and Planned Measures* that documents the attributes of each test site with personal data anonymized, measures to be installed, and schedule for test period and equipment installation

**Products:**

- Site Recruitment Plan
- Customer Participation and Access Agreement Form
- Outreach Materials Report (Draft and Final)
- Summary of Household Characteristics and Planned Measures

**TASK 3: INSTRUMENTATION AND MONITORING PLANS**

The goal of this task is to define the required instrumentation package, installation procedures, monitoring process, and data analysis methods.

**The Recipient shall:**

- Develop a set of research questions that will be addressed through field monitoring
- Select a monitoring instrumentation package that will provide the necessary data to answer the research questions.
- Identify specific non-energy impact metrics for assessing indoor air quality, health, comfort, heat resilience, and household costs
- Develop data collection methods to collect data on different target metrics including indoor air quality, heat resilience, comfort, and costs
- Develop methods for converting monitored data and survey results into estimates of non-energy benefits
- Define the statistical analysis approach that will be used to determine the confidence interval for key metrics
- Write a draft *Metrics, Instrumentation and Monitoring Plan* documenting research questions, identification of metrics, snapshot test requirements, the long-term instrumentation package, installation guidelines, data collection methods (field monitoring, surveys, utility bills), data analysis methodology, and field test schedule
- Following the review period by CEC, make changes to the final *Metrics, Instrumentation and Monitoring Plan* addressing each comment or explaining why recommended changes were not made
- Purchase instrumentation packages and data collection systems and services

**Products:**

- Metrics, Instrumentation and Monitoring Plan (draft and final)

**TASK 4: PRE-RETROFIT MONITORING**

The goal of this task is to collect baseline data that can be compared to post-retrofit data to quantify non-energy impacts.

**The Recipient shall:**

- Train local contractors or CBOs how to install and commission the instrumentation and perform snapshot tests, including blower door, duct blaster, and on-off testing of relevant equipment
- Develop the *Pre-Retrofit Occupant Survey Questions*, which will inquire about perceived comfort, indoor air quality, and affordability issues

**Exhibit A**  
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- Schedule site visits with project participants
- Verify that features of the home are consistent with those listed by the homeowner on the application, and take photos of the existing equipment and interior/exterior of the home
- Conduct *Pre-Retrofit Occupant Survey*
- Perform snapshot testing in accordance with the *Instrumentation and Monitoring Plan*, including short-term continuous operation of any equipment that will be replaced in order to identify the signal from the monitoring system
- Install long-term instrumentation and verify communications with the central server at Frontier in accordance with the *Instrumentation and Monitoring Plan*
- Provide the \$500 incentive payment to the homeowner
- Perform automated data quality checks on a daily basis
- Perform monthly data quality checks on usage patterns to identify potential problems with the instrumentation or equipment operation
- Document preliminary findings in a short summary of *Pre-Retrofit Lessons Learned*, which will describe initial conclusions about the air quality and comfort of the homes, and any issues related to the instrumentation package. It will also include results from the *Pre-Retrofit Occupant Survey*.
- Prepare *CPR Report #1* in accordance with subtask 1.3 (CPR Meetings).
- Participate in a CPR meeting.

**Products:**

- Pre-Retrofit Occupant Survey Questions
- Pre-Retrofit Lessons Learned Report
- CPR Report #1

**TASK 5: INSTALLATIONS AND CUSTOMER CARE**

The goal of this task is to perform the energy efficiency and electrification retrofits at the test site and support homeowners and installers throughout the process.

**The Recipient shall:**

- Obtain necessary permits
- Select and procure equipment and materials for retrofits
- Distribute incentive funding
- Install and commission retrofit measures
- Take hi-resolution photographs of installed measures
- Document results in a *Summary of Installed Measures Presentation*, including the final specifications of all measures, a comparison to the sample plan, and challenges encountered during installation
- Provide ongoing support to homeowners during planning, installation, and post-retrofit stages to ensure the process runs smoothly. Document homeowner support provided, along with other process evaluation results, in a *Summary of Customer Support Presentation*.

**Products:**

- Summary of Installed Measures Presentation
- Summary of Customer Support Presentation

**Exhibit A**  
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**TASK 6: POST-RETROFIT MONITORING AND DECOMMISSIONING**

The goals of this task are to monitor the non-energy impacts of the installed energy efficiency and electrification measures and conclude the field evaluation by decommissioning the instrumentation package and conducting a final occupant survey.

**The Recipient shall:**

- Verify that installed measures are consistent with those documented by the installer
- Make any necessary adjustments to sensor locations following the retrofits
- Monitor indicators of human health and comfort over a 6-12 month period, including both summer and winter seasons
- Develop the *Post-Retrofit Occupant Survey Questions* to gather information about perceived comfort, indoor air quality, affordability issues, and process evaluation.
- Perform snapshot testing in accordance with the *Instrumentation and Monitoring Plan*, including short-term continuous operation of any new equipment in order to verify the signal from the monitoring system
- Perform automated data quality checks on a daily basis
- Perform monthly data quality checks on usage patterns to identify potential problems with the instrumentation or equipment operation
- Decommission the instrumentation package
- Administer the post-retrofit occupant survey
- Process the raw data into useful summary data indicating trends over time and providing comparisons before and after the retrofit
- Document findings in a *Field Evaluation Report*, which will document the test methodology and changes in the air quality and comfort of the homes based on direct measurements

**Products:**

- Post-Retrofit Occupant Survey Questions
- Field Evaluation Report (draft and final)

**TASK 7: CALCULATION OF METRICS AND STATISTICAL ANALYSIS**

The goals of this task are to convert field test data into meaningful non-energy metrics and to evaluate the confidence interval for all final conclusions.

**The Recipient shall:**

- Aim to obtain utility bills covering the duration of the field monitoring
- Convert the measured data, utility bills, and survey data into non-energy metrics according to methodology defined in the *Instrumentation and Monitoring Plan* developed under Task 3
- Compare pre- and post-retrofit metrics to quantify non-energy impacts for the entire sample of homes, and each subsample representing specific measures or full electrification packages
- Perform statistical analysis on the resulting metrics to quantify the 95% confidence interval and determine if the results are statistically significant
- Use linear regression to identify drivers of non-energy impacts that can be modeled using building simulation software
- Model additional climate zones and multi-family applications to draw broader state-wide conclusions

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- Document the results in an *Assessment of Non-Energy Impacts Report*, including clear estimates of non-energy metrics, statistical analysis, extrapolation of results statewide, lessons learned, and recommendations for future research.

**Products:**

- Assessment of Non-Energy Impacts Report (draft and final)

**TASK 8: EVALUATION OF PROJECT BENEFITS**

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

**The Recipient shall:**

- Complete the *Initial Project Benefits Questionnaire*. The Initial Project Benefits Questionnaire shall be initially completed by the Recipient with 'Kick-off' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Complete the *Annual Survey* by January 31st of each year. The Annual Survey includes but is not limited to the following information:
  - Technology commercialization progress
  - New media and publications
  - Company growth
  - Follow-on funding and awards received
- Complete the *Final Project Benefits Questionnaire*. The Final Project Benefits Questionnaire shall be completed by the Recipient with 'Final' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Respond to CAM questions regarding the questionnaire drafts.
- 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](http://www.energizeinnovation.fund)), and provide *Documentation of Project Profile on EnergizeInnovation.fund*, including the profile link.
- 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](http://www.energizeinnovation.fund)), and provide *Documentation of Organization Profile on EnergizeInnovation.fund*, including the profile link.

**Products:**

- Initial Project Benefits Questionnaire
- Annual Survey(s)
- Final Project Benefits Questionnaire
- Documentation of Project Profile on EnergizeInnovation.fund
- Documentation of Organization Profile on EnergizeInnovation.fund

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**TASK 9: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

The goal of this task is to ensure the scientific and/or techno-economic analysis and tools developed under this agreement are utilized in the energy policy, and/or planning decisions at the state and/or local levels, academic community and/or commercial sector.

**The Recipient Shall:**

- Develop and submit a *Knowledge Transfer Plan* that identifies the proposed activities the recipient will conduct to meet the goal of the task. The *Knowledge Transfer Plan* should include at a minimum:
  - Specific policy and planning efforts this project is expected to inform.
  - Specific stakeholder groups and energy policy and planning practitioners who will utilize the results of this project.
  - Proposed activities the Recipient will conduct to ensure the tools and results from this project will be utilized and adopted by the groups identified above.
- Present the *Draft Knowledge Transfer Plan* to the TAC for feedback and comments.
- Develop and submit a Summary of TAC Comments that summarizes comments received from the TAC members on the Draft Knowledge Transfer Plan. This document will identify:
  - TAC comments the Recipient proposes to incorporate into the Final Knowledge Transfer Plan.
  - TAC comments the Recipient does not propose to incorporate with and explanation why.
- Submit the *Final Knowledge Transfer Plan* to the CAM for approval.
- Implement the activities as described in the *Final Knowledge Transfer Plan*.
- Develop a *Knowledge Transfer Summary Report* that includes high level summaries of the activities, results, and lessons learned of tasks performed relating to implementing the Final Technology Transfer Plan. This report should not include any proprietary information.
- When directed by the CAM, develop presentation materials for an CEC- sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California CEC.
- 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:**

- Knowledge Transfer Plan (draft and final)
- Summary of TAC Comments
- Technology Transfer Summary Report (draft and final)
- High Quality Digital Photographs

**V. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.