

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-15-056 (To be completed by CGL Office)

| Division | Agreement Manager: | MS- | Phone        |
|----------|--------------------|-----|--------------|
| ERDD     | Molly O'Hagan      | 51  | 916-445-5311 |

| Recipient's Legal Name                                 | Federal ID Number |
|--|-------------------|
| Natural Capitalism Solutions, Inc. dba Clean Coalition | 14-9018777        |

| Title of Project                           |
|--|
| Peninsula Advanced Energy Community (PAEC) |

| Term and Amount | Start Date | End Date  | Amount       |
|-----------------|------------|-----------|--------------|
|                 | 6/27/2016  | 3/30/2018 | \$ 1,318,997 |

**Business Meeting Information**
 ARFVTP agreements under \$75K delegated to Executive Director.

|                                |           |                                  |  |
|--------------------------------|-----------|----------------------------------|--|
| Proposed Business Meeting Date | 5/17/2016 | <input type="checkbox"/> Consent | <input checked="" type="checkbox"/> Discussion |
|--------------------------------|-----------|----------------------------------|--|

|                            |            |              |           |
|----------------------------|------------|--------------|-----------|
| Business Meeting Presenter | Anthony Ng | Time Needed: | 5 minutes |
|----------------------------|------------|--------------|-----------|

Please select one list serve. Select

**Agenda Item Subject and Description**

NATURAL CAPITALISM SOLUTIONS, INC. DBA CLEAN COALITION. Proposed resolution approving agreement EPC-15-056 with Natural Capitalism Solutions, dba Clean Coalition for a \$1,318,997 grant to accelerate the planning, approval, and deployment of an Advanced Energy Community, including a planned and designed Solar Emergency Microgrid, within a diverse community in the southern portion of San Mateo County.

**California Environmental Quality Act (CEQA) Compliance**

1. Is Agreement considered a "Project" under CEQA?  
 Yes (skip to question 2)  No (complete the following (PRC 21065 and 14 CCR 15378)):  
 Explain why Agreement is not considered a "Project":  
 Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because
2. If Agreement is considered a "Project" under CEQA:  
 a) Agreement **IS** exempt. (Attach draft NOE)  
 Statutory Exemption. List PRC and/or CCR section number: \_\_\_\_\_  
 Categorical Exemption. List CCR section number: Cal. Code Regs., tit 14, § 15306  
 Common Sense Exemption. 14 CCR 15061 (b) (3)  
 Explain reason why Agreement is exempt under the above section:  
 14 CCR Section 15306 Information Collection Exemption: This agreement will fund information collection, research, analysis and evaluation activities related to existing processes, planning, and funding opportunities for possible use by advanced energy development efforts, and which do not result in a serious or major disturbance of an environmental resource.  
  
 14 CCR 15601 Common Sense Exemption: This agreement will fund information collection, research, analysis and evaluation activities related to existing processes, planning, and funding opportunities for possible use by advanced energy development efforts without the possibility of having a significant effect on the environment because it consists of information gathering, analysis, and sharing.
- b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)  
 Check all that apply  
 Initial Study  Environmental Impact Report  
 Negative Declaration  Statement of Overriding Considerations  
 Mitigated Negative Declaration

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

# GRANT REQUEST FORM (GRF)



| Legal Company Name:      | Budget     |
|--------------------------|------------|
| DNV GL                   | \$ 198,054 |
| Menlo Spark              | \$ 69,750  |
| Sovereign Storage, LLC   | \$ 65,800  |
| Sven Thesen & Associates | \$ 42,600  |
| To Be Determined         | \$ 195,800 |
|                          | \$         |
|                          | \$         |
|                          | \$         |
|                          | \$         |

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CALIFORNIA ENERGY COMMISSION



|   |
|---|
| <b>List all key partners:</b> (attach additional sheets as necessary) |
| Legal Company Name:   |
| Pacific Gas and Electric Company                                      |
| San Mateo County  |
|   |
|   |

| Budget Information                |                               |                      |             |
|-----------------------------------|-------------------------------|----------------------|-------------|
| Funding Source                    | Funding Year of Appropriation | Budget List No.      | Amount      |
| EPIC                              | 14-15                         | 301.001B             | \$1,319,003 |
|                                   |                               |                      | \$          |
|                                   |                               |                      | \$          |
|                                   |                               |                      | \$          |
|                                   |                               |                      | \$          |
|                                   |                               |                      | \$          |
| R&D Program Area:                 | EDMFO: EDMF                   | TOTAL:               | \$1,318,997 |
| Explanation for "Other" selection |                               |                      |             |
| Reimbursement Contract #:         |                               | Federal Agreement #: |             |

| Recipient's Administrator/ Officer |                             |      |     | Recipient's Project Manager |                             |      |     |
|------------------------------------|-----------------------------|------|-----|-----------------------------|-----------------------------|------|-----|
| Name:                              | Heyward Robinson            |      |     | Name:                       | Heyward Robinson            |      |     |
| Address:                           | 16 Palm Ct                  |      |     | Address:                    | 16 Palm Ct                  |      |     |
| City, State, Zip:                  | Menlo Park, CA 94025-5755   |      |     | City, State, Zip:           | Menlo Park, CA 94025-5755   |      |     |
| Phone:                             | 650-465-8633 /              | Fax: | - - | Phone:                      | 650-465-8633 /              | Fax: | - - |
| E-Mail:                            | heyward@clean-coalition.org |      |     | E-Mail:                     | heyward@clean-coalition.org |      |     |

| Selection Process Used  |                            |
|---|----------------------------|
| <input checked="" type="checkbox"/> Competitive Solicitation  | Solicitation #: GFO-15-312 |
| <input type="checkbox"/> First Come First Served Solicitation |                            |

| The following items should be attached to this GRF  |                          |          |                          |
|---|--------------------------|----------|--------------------------|
| 1. Exhibit A, Scope of Work                         | <input type="checkbox"/> | Attached | <input type="checkbox"/> |
| 2. Exhibit B, Budget Detail                         | <input type="checkbox"/> | Attached | <input type="checkbox"/> |
| 3. CEC 105, Questionnaire for Identifying Conflicts | <input type="checkbox"/> | Attached | <input type="checkbox"/> |
| 4. Recipient Resolution                             | <input type="checkbox"/> | N/A      | <input type="checkbox"/> |
| 5. CEQA Documentation                               | <input type="checkbox"/> | N/A      | <input type="checkbox"/> |

|                   |       |                |       |                 |       |
|-------------------|-------|----------------|-------|-----------------|-------|
| _____             | _____ | _____          | _____ | _____           | _____ |
| Agreement Manager | Date  | Office Manager | Date  | Deputy Director | Date  |

**Exhibit A**  
**Scope of Work**  
**Natural Capitalism Solutions, Inc. dba Clean Coalition**

**I. TASK ACRONYM/TERM LISTS**

**A. Task List**

| Task # | CPR <sup>1</sup> | Task Name   |
|--------|------------------|---|
| 1      |                  | General Project Tasks   |
| 2      | X                | Streamlining of Local Government Planning and Permitting        |
| 3      |                  | Finance and Business Models for Advanced Energy Communities     |
| 4      |                  | Streamlining the Interconnection of Advanced Energy Communities |
| 5      | X                | Solar Emergency Microgrid                                       |
| 6      |                  | Electric Vehicle Charging Infrastructure Master Plan            |
| 7      |                  | Atherton Civic Center Sustainability Features                   |
| 8      |                  | Solar Siting Survey   |
| 9      |                  | Peninsula Advanced Energy Community Case Study                  |
| 10     |                  | Peninsula Advanced Energy Community Master Community Design     |
| 11     |                  | Evaluation of Project Benefits                                  |
| 12     |                  | Technology/Knowledge Transfer Activities                        |

**B. Acronym/Term List**

| Acronym/Term       | Meaning   |
|--------------------|---|
| AEC                | Advanced Energy Community   |
| CAM                | Commission Agreement Manager  |
| CAO                | Commission Agreement Officer  |
| CCA                | Community Choice Aggregation  |
| CPR                | Critical Project Review   |
| DER                | Distributed Energy Resources  |
| EE                 | Energy Efficiency   |
| Energy Commission  | California Energy Commission  |
| EVCI               | Electric Vehicle Charging Infrastructure  |
| Fault Ride Through | An electric generators' ability to stay connected in short periods of network dip |
| GHG                | Greenhouse gases  |
| ICA                | Integration Capacity Analysis   |
| MP                 | Master Plan   |
| PAEC               | Peninsula Advanced Energy Community   |
| PV                 | Photovoltaic  |
| RE                 | Renewable Energy  |
| SEM                | Solar Emergency Microgrid   |
| TAC                | Technical Advisory Committee  |
| ZNE                | Zero Net Energy   |

<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**  
**Natural Capitalism Solutions, Inc. dba Clean Coalition**

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

**A. Purpose of Agreement**

The purpose of this Agreement is to reduce the time, cost and uncertainty of planning, financing, and deploying Advanced Energy Communities.

**B. Problem/ Solution Statement**

**Problem**

In order to meet state mandated future energy and environmental goals, significant improvements are needed in the way California generates, transmits, and uses electricity. The majority of California's electrical power, despite being one of the "greenest" in the nation, comes from centralized, non-renewable sources. While solar and other renewable energy sources are expanding statewide, they are doing so at a rate that will not achieve AB32's goal of an 80% reduction in greenhouse gases (GHGs) by 2050<sup>2</sup>. With electric vehicles (EV), appliance electrification, and other "clean" technologies creating even more demand, the need to reduce the overall consumption of electricity and accelerate the adoption of fossil free electrical generation becomes even more imperative.

There are many reasons that demand reduction – through energy efficiency (EE) and other measures, and local distributed energy resources (DER) – primarily solar and energy storage, have not become more widespread. These include:

- High cost of renewables relative to centralized power
- Up front capital costs and lack of financing options
- Long payback times
- Electrical storage technology is immature and expensive
- Uneven, confusing regulations and permitting
- Not required by code
- Majority of buildings are existing and considered expensive to retrofit
- Cost and uncertainty, with respect to connecting local renewables to the electrical grid

In addition, there are several problems with the current way renewables are being deployed, particularly with respect to the impact large concentrations of local renewables can have on the electrical grid. Although local communities are doing much in the way of sustainability, the large-scale transformative solution these problems require cannot be undertaken at the municipal or even county level. Moreover, the problems listed above are not isolated to one locality or region – they are statewide and are thus appropriately addressed by a state agency such as the California Energy Commission (Energy Commission).

To address these deployment and end-user issues, the Recipient, along with its project partners, is proposing to design and plan an Advanced Energy Community that will become a model for cost effective, efficient use of local electricity energy use and generation.

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<sup>2</sup> Relative to 1990 levels

# Exhibit A Scope of Work Natural Capitalism Solutions, Inc. dba Clean Coalition

## **Solution**

Accelerating the adoption of clean electricity requires fundamental changes to the traditional, centralized, one way, and generate-transmit-distribute-use model. Solar and other DER allow the end user to become both a consumer and a generator, with power flowing bi-directionally. This new power model, while providing significant energy and environmental benefits, also creates new challenges in power and grid management. The solution is to continue to promote renewables – indeed their deployment should be accelerated – while simultaneously planning for the integration of renewables in ways that provide greater grid reliability and resilience, not less. This solution is known as an Advanced Energy Community (AEC).

Besides local renewables, the key components of an AEC are energy storage, usually in the form of batteries, low or zero net energy (ZNE) buildings, microgrids for power management and islanding of critical loads during outages, and EVs for much of the transportation needs. Making an AEC a reality requires a mix of policy, financing, and design/engineering solutions to address the barriers currently limiting the proliferation of AEC projects. The Recipient and its project partners will carefully compare current and best practices to identify opportunities for streamlining the planning, approval, interconnection, and deployment of AEC projects. Appropriate engineering and technology solutions for AECs will be reviewed and the best locations for deploying these will be recommended. Taken together, these steps will significantly accelerate the adoption of AEC projects and bring enormous energy and environmental benefits to the local community as well as California's ratepayers.

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

### **Agreement Goals**

The goals of this Agreement are to:

- Incentivize and accelerate the planning, approval, financing and deployment of AECs
- Reduce the time, cost, and uncertainty associated with permitting and interconnecting commercial-scale solar and other DER
- Leverage ZNE, efficiency, local renewables, energy storage, and other DER to reduce 25 MW of peak energy across San Mateo County, which will strengthen the grid, reduce use of natural gas, and minimize the need for new energy infrastructure
- Create a model project and project elements that can be replicated throughout California and beyond

### **Ratepayer Benefits:**<sup>3</sup>

This project will provide the ratepayer benefits of: 1) lower costs for electricity from expansion of ZNE buildings and zones resulting in reduced energy usage and increased local generation, lowering overall ratepayer costs related to the marginal price of wholesale energy, reduce peak transmission and generation capacity requirements, and reduce energy losses; 2) increased customer adoption and total deployment of distributed generation through improved identification of local hosting capacity, optimally utilizing existing grid capacity and lowering interconnection costs; 3) enhanced reliability through the deployment of distributed resources

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<sup>3</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)).

## **Exhibit A Scope of Work Natural Capitalism Solutions, Inc. dba Clean Coalition**

supporting fault ride-through ; 4) ongoing power supply to critical public facilities through Solar Emergency Microgrid (SEM) deployment; 5) increased adoption of electric vehicles through expanded EV charging station availability; 6) reductions in GHGs and criteria pollutant air emissions.

Technological Advancement and Breakthroughs:<sup>4</sup> This Agreement will support the development and commercialization of technological advancements and breakthroughs that overcome barriers to the achievement of the State of California's statutory energy goals by accelerating the approval/permitting, financing, and deployment of AECs.

The key components of an AEC are solar electricity, energy storage, and other DER, low or ZNE buildings, SEM for power management and islanding of critical loads during outages, and EVs for much of the transportation needs. However, significant barriers impede the planning and deployment of AECs despite the fact that DER, ZNE buildings, SEM, etc. would often achieve the most cost-effective results for ratepayers and superior outcomes for all Californians with respect to healthy environments and resilient grids. Finding viable sites, obtaining permits, securing project financing, and connecting to the grid all represent key challenges. The Peninsula Advanced Energy Community (PAEC) proposal is designed to overcome these barriers and establish a replicable model that can be used by other communities across California and beyond

Through extensive collaboration with multiple cities, San Mateo County, PG&E, a local fire district, multiple school districts, numerous developers and major property owners, the Recipient will incentivize and accelerate the planning, approval, financing, and deployment of AEC projects in the PAEC region, encompassing the cities of Atherton, East Palo Alto, Menlo Park, and Redwood City, as well as surrounding unincorporated areas. Specific breakthroughs that will support California's achievement of statutory energy goals include: streamlined permitting and interconnection processes for DER, ZNE, SEM, & EVCI; use of creative models – such as the PACE program, solar feed-in-tariff, green bonds, Community Choice Aggregation (CCA) programs, and utility cooperation – to finance and deploy AECs; enhanced AEC commercialization through market stimulation and potential Phase II, real-world deployments. The project will showcase projects like the sustainability features integrated into the Atherton Civic Center design, and proven examples of successful AEC integration with at least one Solar Emergency Microgrid (SEM) designed to provide ongoing, renewables-based, backup power to critical loads in the event of a grid outage.

### **Agreement Objectives**

The objectives of this Agreement are to:

- Identify pilot permitting and interconnection best practices that can be standardized for use throughout California and beyond
- Provide educational and training material and forums for regulatory staff, developers, building professionals, planning commissioners, and others on best practices
  - Create effective tools for analyzing the costs and benefits of AECs and associated DER projects

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<sup>4</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**  
**Natural Capitalism Solutions, Inc. dba Clean Coalition**

- Develop comprehensive financial and business models to help make AECs financially attractive to similar community developments without advanced energy attributes.
- Plan and design at least one SEM to provide indefinite, renewable driven power backup to critical facilities
- Plan and design an electric vehicle charging infrastructure (master plan (MP))
- Calculate the solar siting potential across the PAEC region
- Develop a Case Study documenting actions taken and lessons learned in planning the Peninsula Advanced Energy Community. Lessons learned may be included in the Case Study, detailing both successful and unsuccessful endeavors for the advancement of the project, and recommendations for improvement of any and all of the subtasks of the agreement.
- Develop a Master Community Design showcasing the primary elements of the Peninsula Advanced Energy Community

### III. TASK 1 GENERAL PROJECT TASKS

#### **PRODUCTS**

##### **Subtask 1.1 Products**

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V)**. Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

##### **The Recipient shall:**

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

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

###### For products that require a final version only

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

###### For all products

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

**Exhibit A**  
**Scope of Work**  
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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, or in SmartSheets, an online project management platform compatible with Microsoft programs.

○ **Software Application Development**

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

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

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

**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

**Exhibit A**  
**Scope of Work**  
**Natural Capitalism Solutions, Inc. dba Clean Coalition**

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 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); 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);
  - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
  - Any other relevant topics.
- Provide an *Updated Project Schedule, List of Match Funds, and List of Permits*, as needed to reflect any changes in the documents.

**The CAM shall:**

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

**Recipient Products:**

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

**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, 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 Energy Commission.

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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.

**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.

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**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
- 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 monthly *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

**Exhibit A**  
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Progress Report Format Attachment for the recommended specifications.

- Submit a monthly or 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, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the Style Manual provided by the CAM.

**Subtask 1.6.1 Final Report Outline**

**The Recipient shall:**

- Prepare a *Final Report Outline* in accordance with the *Style Manual* provided by the CAM. (See *Task 1.1* for requirements for draft and final products.)

**Recipient Products:**

- Final Report Outline (draft and final)

**CAM Product:**

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

**Subtask 1.6.2 Final Report**

**The Recipient shall:**

- Prepare a Final Report for this Agreement in accordance with the approved Final Report Outline, 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
    - Credits page on the reverse side of cover with legal disclaimer
    - Acknowledgements page (optional)
    - Preface
    - Abstract, keywords, and citation page
    - Table of Contents (followed by List of Figures and List of Tables, if needed)
    - Executive summary
    - Body of the report

**Exhibit A**  
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- 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)
- Ensure that the document is written in the third person.
- Ensure that the Executive Summary is understandable to the lay public.
  - Briefly summarize the completed work. Succinctly describe the project results and whether or not the project goals were accomplished.
  - Identify which specific ratepayers can benefit from the project results and how they can achieve the benefits.
  - If it's necessary to use a technical term in the Executive Summary, provide a brief definition or explanation when the technical term is first used.
- 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.
- Include a brief description of the project results in the Abstract.
- 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
- 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

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match funds during the Agreement term, either concurrently or prior to the use of Energy Commission funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

**The Recipient shall:**

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state this in the letter.  
If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter:
  - A list of the match funds that identifies:
    - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
    - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
    - A copy of 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.

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**The Recipient shall:**

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

The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.

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

**Products:**

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

**Subtask 1.9 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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**TECHNICAL ADVISORY COMMITTEE**

**Subtask 1.10 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.

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 1.11.
- 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.

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**Products:**

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

**Subtask 1.11 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.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

**Products:**

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

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**IV TECHNICAL TASKS**

**TASK 2: STREAMLINING OF LOCAL GOVERNMENT PLANNING AND PERMITTING**

The goal of this task is to recommend steps that PAEC communities should take to update and streamline regulations ordinances, and other laws and procedures relating to AEC projects, including permit approvals Streamlining will facilitate the approval of AEC projects and reduce the time, cost, and uncertainty in planning, financing, and deploying them.

**The Recipient shall:**

- Investigate the permitting and approval processes of AEC projects, including renewable energy, energy efficiency, zero-net energy, and electric vehicle charging infrastructure. Analyze both in-state and out-of-state practices, including reach codes. Reach codes, or stretch codes, are enacted for local jurisdictions when mandated codes or compliance regulations are not in keeping with the advances in technology and design practices, or are not considered aggressive enough to suit the needs of a local jurisdiction.
- Draft a *Best Practices Report* detailing the topics investigated in the above bullet.
- Draft a *Gap Analysis* comparing the *Best Practices Report* to existing practice in PAEC regulatory jurisdictions, including the cities of Atherton, East Palo Alto, Menlo Park and Redwood City, the Menlo Park Fire Protection District, and the County of San Mateo.
- Draft a *Benefits and Cost Analysis Report for Each Jurisdiction* to quantify the benefits and costs of streamlining the permitting and approval of AEC projects in accordance with *Best Practices*.
- Develop *Draft Ordinances for the PAEC Region* jurisdictions, that include:
  - A short list of possible example regulatory changes, or new policies/ordinances
  - Concept and outlines of 2-3 policies or ordinances
- Review *Draft Ordinances for San Mateo County* with PAEC team and countywide working group via conference call, email and/or webinar and edit draft ordinances as necessary.
- Draft *Jurisdictional Recommendations for AEC Permitting and Approval* for each jurisdiction with respect to streamlining the permitting and approval of AEC projects.
- Prepare *CPR Report #1* and participate in a CPR Meeting per subtask 1.3.

**Products:**

- Best Practices Report (draft and final)
- Gap Analysis (draft and final)
- Benefits-Cost Analysis Report for Each Jurisdiction (draft and final)
- Draft Ordinances for the PAEC Region (draft and final)
- Jurisdictional Recommendations for AEC Permitting and Approval (draft and final)
- CPR Report #1

**TASK 3: FINANCE AND BUSINESS MODELS FOR ADVANCED ENERGY COMMUNITIES**

The goal of this task is to develop comprehensive financial and business models to help make AECs financially attractive to similar community developments without advanced energy attributes.

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**The Recipient shall:**

- Draft a *Lending, Customer Compensation, and Government Incentive Report* that includes a summary on the following:
  - Local lending enhancement strategies and how they relate to and support AECs.  
These include:
    - Loan collateral and repayment support risk reduction strategies such as the PACE program
    - Public capitalization and financing cost reduction strategies (i.e. green bonds)
    - Local private Clean Energy Social Investment funds to finance AEC program participants
    - Customer aggregation for reduced cost and simplified loan qualification
    - Public bonding of qualified project PAEC loans to local owners
  - Customer compensation strategies (i.e. Solar Feed in Tariff) for the Peninsula Clean Energy (PCE) CCA and how they relate to and support AECs
  - Government incentives and disincentives (i.e density bonuses, accelerated permitting, carbon taxes) and how they relate to and support AECs
- Perform an *Economic Analysis of Energy Efficiency and Fuel Switching Measures* for prototypical buildings (i.e large office, large municipal, school, multi-tenant residential, retail) and submit to CAM.
- Perform a *Benefit-Cost and Value Stream Analysis* of distributed energy storage systems and submit to CAM.
- Perform a *Benefit-Cost Analysis of Electric Vehicle Charging Infrastructure* and submit to CAM.
- Investigate tools to allow building owners and tenants to assess and benchmark energy use and associated economics, and pro forma analysis of deploying these tools for on-site Advanced Energy Solutions. Also investigate tools for portfolio analysis that can be used by government agencies, property/managers, and others to monitor building energy use.
- Develop a draft *Energy Systems, Tracking and Management Report* , including systems researched and materials developed on energy tracking and management systems of use by property managers, tenants, developers, regulators, auditors, policy makers, and the public
- Submit Final *Energy Systems, Tracking and Management Report*
- Develop a Draft *Finance and Business Models for Advanced Energy Communities Summary Report*, including appendices and documentation of assumptions and summary tables of all key data, including the assumptions associated with the defined prototypical buildings and the results of the economic analyses, will be provided in a professional tabular form that provides results that are easy to comprehend and compare.
- Submit a Final *Finance and Business Models for Advanced Energy Communities Summary Report*

**Products:**

- Lending, Customer Compensation, and Government Incentive Report (draft and final)
- Model: Financial pro-forma, delineating the cost of capital, tenor, and risk/return profile of each financing arrangement
- Model: Dispatch model of energy storage system (draft and final)

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- Model: Financial pro-forma for project, delineating value streams of energy storage (draft and final)
  - List of model assumptions for each of the 5 building types (baseline and for each measure)
  - Finance and Business Models for Advanced Energy Communities Summary Report (draft and final)
  - Benefit-Cost Analysis of Electric Vehicle Charging Infrastructure (draft and final)
- Energy Systems, Tracking and Management Report* (draft and final)

**TASK 4: STREAMLINING THE INTERCONNECTION OF ADVANCED ENERGY SOLUTIONS TO THE GRID**

The goal of this task is to reduce the time, cost, and uncertainty associated with interconnecting AEC projects to the electrical grid.

**The Recipient shall:**

- Host a kickoff meeting with PG&E and any interested stakeholders to review the Task 4 areas of focus
- Draft *Best Practices: Interconnection for Local, Commercial-Scale, Renewable Energy Projects* identifying and recommending best practices for interconnection of local, commercial-scale renewable energy projects. Report will detail:
  - Whether the utilities are implementing recent improvements from the Rule 21 proceeding<sup>5</sup>
  - Data collection and access practices
  - Necessary steps to incorporate data and automate processes
  - The current practice of individual interconnection cost responsibility
  - Methods to refine dispute resolution procedures
  - Technical and regulatory advice on interconnecting local renewables to grid to assist public agencies and other entities in navigating the interconnection process
  - Recommended siting opportunities with high Interconnection Hosting Capacity
- Review *Best Practices: Interconnection for Local, Commercial-Scale Renewable Energy Projects* draft with stakeholders via conference call, email and/or webinar and incorporate edits as necessary.
- Working with PG&E, *Design of Pilot for Testing Streamlined Interconnection Procedures For Commercial-Scale Renewables, Beyond Rule 21*
- Publicize report after receiving approval from the CAM, including:
  - Draft and secure media placements for a *Press Release* and *Blog Posts*.
  - Submit drafted media (including press release, blog posts, and any additional products) to CAM for approval.
  - Incorporate CAM feedback of drafted media as needed.
- Draft *Webinar Agenda* and provide to CAM for approval
- Host a webinar on interconnection best practices and provide a *Summary Report of Webinar* to CAM.

**Products:**

- Best Practices Report: Interconnection for Local, Commercial-Scale Renewable Energy Projects (draft and final)

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<sup>5</sup> [http://www.pge.com/tariffs/tm2/pdf/ELEC\\_RULES\\_21.pdf](http://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_21.pdf)

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- Design of Pilot for Testing Streamlined Interconnection Procedures For Commercial-Scale Renewables, Beyond Rule 21 (draft and final)
- Blog Posts (draft and final as requested by the CAM)
- Press Release (draft and final)
- Webinar Agenda (draft and final)
- Summary Report of Webinar

**Task 5: SOLAR EMERGENCY MICROGRID**

The goal of this task is to plan and design a SEM within the PAEC region. The SEM will provide renewables-driven power backup for critical facilities – police and fire stations, emergency operations centers, emergency shelters, and other facilities prioritized by the jurisdiction – over the agreement term.

**The Recipient shall:**

- Establish criteria for selecting SEM sites – i.e. critical facilities and loads; renewable energy capacity; existing backup systems; physical location; distance to and capacity of nearest feeder; financing plan, etc.
- Survey PAEC jurisdictions about potential SEM site locations and needs
- Identify an SEM site within the PAEC region
- Draft *SEM Site Design and Deployment Plan*, detailing:
  - Goals and general requirements for the SEM
  - Site survey, identify critical loads, review blueprints
  - Baseline grid analysis and determine DER hosting capacity from Integration Capacity Analysis (ICA)
  - A survey of existing and potential new renewable energy generation
  - Site compliance with CA California and Federal rules for locating EV chargers, including Americans with Disabilities Act requirements
  - A design for the SEM and plans to optimize the SEM
  - Benefit-Cost analysis (economic, environmental, & energy)
  - A deployment plan that meets goals and requirements
- Submit draft of *SEM Site Design and Deployment Plan* to CAM for review
- Incorporate CAM feedback of *SEM Site Design and Deployment Plan*, as necessary
- Submit final of *SEM Site Design and Deployment Plan* to CAM for approval
- Prepare *CPR Report #2* and participate in a CPR Meeting per subtask 1.3.

**Products:**

- SEM Site Design and Deployment Plan (draft and final)
- CPR Report #2

**Task 6: ELECTRIC VEHICLE CHARGING INFRASTRUCTURE MASTER PLAN**

The goal of this task is to create a master plan for EVCI in one jurisdiction within the PAEC region.

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**The Recipient shall:**

- Establish criteria with input from local municipalities, and potential input of the TAC, for selecting EVCI MP Site – i.e. physical locations; feeder locations and hosting capacity; existing EVCI; projected EVCI demand; financing plan, etc.
- Select jurisdiction for *Electric Vehicle Charging Infrastructure MP*
- Draft *Potential Locations for Electric Vehicle Charging Infrastructure Master Plan*, detailing for each site:
  - Feeder lines and interconnection hosting capacities at potential public parking locations
  - Numbers of existing charger stations and type plus overall parking spaces per parking location
  - Existing electrical equipment and any repairs, upgrades, and equipment required to install EV chargers by type (Level 1, 2 and/or 3), and potential placement location
  - Site compliance with CA and Federal rules for locating EV chargers, including Americans with Disabilities Act requirements
  - Charger purpose (Destination, Corridor or Workplace)
  - Construction requirements and cost estimates
  - Local generation potential and cost to install
  - Prioritization of possible EV charger locations
  - Development of cost and timeline estimates to deploy EV chargers at specific locations
- Submit draft *Potential Locations for Electric Vehicle Charging Infrastructure Master Plan* to CAM for review
- Incorporate CAM feedback of *Potential Locations for Electric Vehicle Charging Infrastructure Master Plan*, as necessary
- Submit final *Potential Locations for Electric Vehicle Charging Infrastructure Master Plan* to CAM for approval
- With CAM authorization, submit *Potential Locations for Electric Vehicle Charging Infrastructure Master Plan* to the jurisdiction for approval at a City Council meeting or other such event leading to a resolution.

**Products:**

- Electric Vehicle Charging Infrastructure Master Plan showing potential locations for EV charging stations (draft and final)

**Task 7: ATHERTON CIVIC CENTER SUSTAINABILITY FEATURES**

The goal of this task is to assess the technical and economic feasibility of incorporating sustainability features (beyond code requirements) into Atherton's new Civic Center, which will provide a model for other PAEC jurisdictions and beyond.

**The Recipient shall:**

- Develop a *Scorecard of Potential Green Building Initiatives* to address the potential green building initiatives, from LEED Compliant to Net Zero that can be integrated into the final building design. The score card will itemize all areas of the project, including sustainable site, water efficiency, energy & atmosphere, materials and resources and indoor environmental quality.
- Draft the *Technical and Economic Feasibility of Sustainability Features for Atherton Civic Center Report*, which will detail an analysis of sustainability technologies to:

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- make the Civic Center zero net energy or net energy positive
- provide all heating and cooling for the Civic Center with passive architectural features, heat pumps, and/or phase-change materials
- A Benefit-Cost analysis of potential sustainability measures (beyond code requirements), including RE, EE, and Fuel Switching (FS)

**Products:**

- Scorecard Of The Potential Green Building Initiatives (draft and final)
- Technical and Economic Feasibility of Sustainability Features for Atherton Civic Center Report (draft and final)

**Task 8: SOLAR SITING SURVEY**

The goal of this task is to identify feasible, commercial-scale sites for installing 100KW (AC) or larger solar PV within the PAEC region, leading to a recommended site location.

**The Recipient shall:**

- Draft a *Summary Report of Commercial-Scale Sites for 100KW (AC) or Larger Solar PV*, which will identify sites that:
  - are commercial, industrial, public, or multi-family residential
  - can accommodate >100KW solar PV
  - information for each site including:
    - location
    - potential PV capacity
    - distance to nearest feeder line
    - Determine DER hosting capacity from ICA
- Develop a *Google Earth™ Map (.kmz format)* displaying identified sites within the PAEC region:
  - the locations
  - generation potential per site and per aggregated sites (e.g. shopping malls, office parks)
  - rating (e.g. high, medium, or low density)
  - proximity to the feeder
  - DER hosting capacity for all prospective sites
- Provide a *Correlating Excel Database* that contains the site addresses, generation potential, rating, and proximity to the nearest feeder, provided to the CAM by thumb drive or external hard drive provided by the recipient. If database is not able to be shared via a drive because of its size, the recipient will host a website where the CAM may access it.

**Products:**

- Summary Report of Commercial-Scale Sites for 100KW (AC) or Larger Solar PV (draft and final)
- Google Earth™ Map (.kmz format)
- Correlating Excel Database

**Task 9: PENINSULA ADVANCED ENERGY COMMUNITY CASE STUDY**

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The goal of this task is to develop a case study documenting actions taken to reduce the time, cost, and administrative cost to plan and permit an AEC in the PAEC region.

**The Recipient shall:**

- Draft a *Case Study of the PAEC Development*, describing and analyzing:
  - the actions, challenges and lessons learned in planning, designing, and obtaining approval for the PAEC
  - how the development of the PAEC will impact savings on electrical distribution infrastructure

**Products:**

- Case Study of the PAEC Development (draft and final)

**Task 10: PENINSULA ADVANCED ENERGY COMMUNITY MASTER COMMUNITY DESIGN**

The goal of this task is to develop a Master Community Design showcasing the Peninsula Advanced Energy Community.

**The Recipient shall:**

- Draft *PAEC Design Report* which will:
  - identify the locations of the proposed PAEC elements, including map coordinates
  - describe PAEC that form a synergistic AEC, including:
    - Local renewable energy resources
    - Solar Emergency Microgrid
    - Zero Net Energy and energy net positive buildings
    - Electric Vehicle Charging Stations
  - Describe how and where PAEC elements are to be connected to the grid

**Products:**

- Peninsula Advanced Energy Community Design Report (draft and final)

**TASK 11: EVALUATION OF PROJECT BENEFITS**

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

**The Recipient shall:**

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- 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. Examples of information that may be requested in the questionnaires include:
  - For Product Development Projects and Project Demonstrations:
    - Published documents, including date, title, and periodical name.

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- Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
- Greenhouse gas and criteria emissions reductions.
- Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
- Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
- A discussion of project product downloads from websites, and publications in technical journals.
- A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Additional Information for Product Development Projects:
  - Outcome of product development efforts, such copyrights and license agreements.
  - Units sold or projected to be sold in California and outside of California.
  - Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.
  - Investment dollars/follow-on private funding as a result of Energy Commission funding.
  - Patent numbers and applications, along with dates and brief descriptions.
- Additional Information for Product Demonstrations:
  - Outcome of demonstrations and status of technology.
  - Number of similar installations.
  - Jobs created/retained as a result of the Agreement.
- For Information/Tools and Other Research Studies:
  - Outcome of project.
  - Published documents, including date, title, and periodical name.
  - A discussion of policy development. State if the project has been cited in government policy publications or technical journals, or has been used to inform regulatory bodies.
  - The number of website downloads.
  - An estimate of how the project information has affected energy use and cost, or has resulted in other non-energy benefits.
  - An estimate of energy and non-energy benefits.
  - Data on potential job creation, market potential, economic development, and increased state revenue as a result of project.
  - A discussion of project product downloads from websites, and publications in technical journals.
  - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.

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- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

**Products:**

- Kick-off Meeting Benefits Questionnaire
- Mid-term Benefits Questionnaire
- Final Meeting Benefits Questionnaire

**TASK12: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES**

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

**The Recipient shall:**

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare a *Technology/Knowledge Transfer Plan* that includes:
  - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end users, utilities, regulatory agencies, and others.
  - A description of the intended use(s) for and users of the project results.
  - Published documents, including date, title, and periodical name.
  - Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
  - A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
  - The number of website downloads or public requests for project results.
  - Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop on the results of the project.
- When directed by the CAM, participate in annual EPIC 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 sites or related project photographs
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

**Products:**

- Initial Fact Sheet (draft and final)

**Exhibit A**  
**Scope of Work**  
**Natural Capitalism Solutions, Inc. dba Clean Coalition**

- Final Project Fact Sheet (draft and final)
- Presentation Materials (draft and final)
- High Quality Digital Photographs
- Technology/Knowledge Transfer Plan (draft and final)
- Technology/Knowledge Transfer Report (draft and final)

**IV. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CLEAN COALITION

**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 EPC-15-056 from GFO-15-312 with Natural Capitalism Solutions, dba Clean Coalition for a \$1,318,997 grant to accelerate the planning, approval, and deployment of an Advanced Energy Community, including a planned and designed Solar Emergency Microgrid, within a diverse community in the southern portion of San Mateo County; and

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

**CERTIFICATION**

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on May 17, 2016.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

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Cody Goldthrite,  
Secretariat