

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-15-065 (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
City of Berkeley	94-6000299

Title of Project
Berkeley Energy Assurance Transformation (BEAT) Project

Term and Amount	Start Date	End Date	Amount
	5/31/2016	3/30/2018	\$ 1,499,214

**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. EPIC (Electric Program Investment Charge)

**Agenda Item Subject and Description**

CITY OF BERKELEY. Proposed resolution approving Agreement EPC-15-065 with the City of Berkeley for \$1,499,214 grant to design, plan and facilitate the permitting of a Clean Energy Microgrid Community (CEMC) that incorporates advanced energy efficiency technologies and will be operated to aggregate and share clean energy resources across several facilities, including facilities whose function is critical in the event of a disaster. This project will develop a regulatory plan, technical plan, business & financial model, procurement plan, and cost/benefit analysis that will ultimately become a Master Community Design of a Downtown Berkeley CEMC Pilot Project. (EPIC funding) Contact: Anthony Ng. (Staff presentation: 5 minutes)

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

- 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
- 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

<input type="checkbox"/> Initial Study	<input type="checkbox"/> Environmental Impact Report
<input type="checkbox"/> Negative Declaration	<input type="checkbox"/> Statement of Overriding Considerations
<input type="checkbox"/> Mitigated Negative Declaration	

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

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION



Legal Company Name:	Budget
URS Corporation	\$ 612,303
Lawrence Berkeley National Laboratory	\$ 415,000
Interface Engineering	\$ 30,000
Center for Sustainable Energy	\$ 50,000
Association of Bay Area Governments	\$ 50,000
West Coast Code Consultants Inc.	\$ Match Only
NHA Advisors	\$ 7,500
	\$
	\$

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

Legal Company Name:
Center for Sustainable Energy
Association of Bay Area Governments
Interface Engineering
URS Corporation

**Budget Information**

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	14-15	301.001B	\$1,499,214
			\$
			\$
			\$
			\$
			\$
R&D Program Area:	EDMFO: EDMF	TOTAL:	\$1,499,214
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				Recipient's Project Manager			
Name:	Neal De Snoo			Name:	Neal De Snoo		
Address:	2180 Milvia Street			Address:	2180 Milvia Street		
City, State, Zip:	Berkeley, CA 94704-1122			City, State, Zip:	Berkeley, CA 94704-1122		
Phone:	510-981-7439 /	Fax:	- -	Phone:	510-981-7439 /	Fax:	- -
E-Mail:	ndesnoo@cityofberkeley.info			E-Mail:	ndesnoo@cityofberkeley.info		

**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
2. Exhibit B, Budget Detail	<input type="checkbox"/> Attached
3. CEC 105, Questionnaire for Identifying Conflicts	<input type="checkbox"/> Attached
4. Recipient Resolution	<input type="checkbox"/> N/A <input type="checkbox"/> Attached
5. CEQA Documentation	<input type="checkbox"/> N/A <input type="checkbox"/> Attached

\_\_\_\_\_  
Agreement Manager\_\_\_\_\_  
Date\_\_\_\_\_  
Office Manager\_\_\_\_\_  
Date\_\_\_\_\_  
Deputy Director\_\_\_\_\_  
Date

## Exhibit A Scope of Work

### I. TASK ACRONYM/TERM LISTS

#### A. Task List

Task #	CPR <sup>1</sup>	Task Name
1		General Project Tasks
2	X	Prototype Analysis & Case Study: Clean Energy Microgrid Communities (CEMCs) in Urban Settings
3	X	Downtown Berkeley Master Community Design
4		Evaluation of Project Benefits
5		Technology/Knowledge Transfer Activities

#### B. Acronym/Term List

Acronym/Term	Meaning
BEAT	Berkeley Energy Assurance Transformation
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEMC(s)	Clean Energy Microgrid Community(ies)
CPR	Critical Project Review
DER(s)	Distributed Energy Resource(s)
GHG	Greenhouse Gas
TAC	Technical Advisory Committee
ZNE	Zero Net Energy

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

#### A. Purpose of Agreement

The purpose of this Agreement is to fund the Berkeley Energy Assurance Transformation (BEAT) project, which includes: (1) general project tasks including processing subcontracts and convening of a Technical Advisory Committee (TAC); (2) a case study compiling the regulatory, technical, and financial lessons learned of how to accelerate the deployment of Clean Energy Microgrid Communities (CEMCs) in urban areas; (3) a design for a pilot CEMC in Downtown Berkeley; (4) evaluation of the project's benefits; and (5) packaging and dissemination of information to the public and key stakeholders.

#### B. Problem/ Solution Statement

##### **Problem**

Meeting ambitious State and local Zero Net Energy (ZNE) and greenhouse gas (GHG) emissions reduction goals and advancing energy reliability requires increased uptake of distributed energy resources (DERs), active and engaged energy management, and utilization of smart grid technology.

To achieve multiple economic, environmental, and resilience benefits, a combination of clean

<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**

DERs, in concert with energy efficiency and demand response, can be operated within a microgrid to enable a facility to “island” from the main grid during periods of peak demand and when power supply is disrupted.

Despite much of the State’s population living and working in urban centers, there are few viable or replicable microgrid demonstration projects in urban settings. This is in part because it is difficult for a given new or existing facility in an urban area, such as Downtown Berkeley, to incorporate the DERs and grid control improvements necessary to offset a building’s energy load. For example, buildings in downtowns often have shaded or little roof space relative to the overall square footage of the building. Additional challenges to operationalizing the microgrid models include local government permitting of relatively new technologies, high transaction costs for early adopters, state regulations that limit the ability of multiple entities to share on-site power, and the lack of a business model that attracts participation and investment.

### **Solution**

New demonstration projects are needed that focus not only on individual facilities in isolation, but also on developing microgrids that connect multiple facilities into a Clean Energy Microgrid Community (CEMC). A CEMC would incorporate advanced energy efficiency technologies and be operated to aggregate and share clean energy resources across several facilities, including facilities whose function is critical in the event of a disaster. An effective CEMC would demonstrate the potential for a network of buildings to together transition toward ZNE while also improving energy reliability and community resilience.

The BEAT project will develop an innovative, scalable, and replicable model for advancing energy reliability, increasing energy efficiency and sustainable water use, and improving access to clean energy for multiple facilities in a dense urban context. At the core of the BEAT project are clean energy microgrids. The Recipient will design a demonstration project in Downtown Berkeley that connects multiple facilities into a CEMC, the recipient’s strategy for developing Advanced Energy Communities. By advancing a collaborative multi-disciplinary approach and innovative technology solutions, this project will help establish a model for transitioning urban areas in California towards increased energy assurance and ZNE communities.

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

#### **Agreement Goals**

The BEAT project will have two phases. Phase I, the subject of this agreement, will analyze and illustrate the regulatory, operational, financial, and technological feasibility of CEMCs and, based on that analysis, develop a case study and shovel-ready Downtown Berkeley CEMC Pilot Plan to be built in Phase II, not included within this agreement.

The goals of the Berkeley BEAT Project in Phase I are to:

- Develop a financially attractive, scalable, and replicable CEMC model and case study for advancing energy reliability, increasing energy efficiency and sustainable water use, and improving access to clean energy for public and private facilities;
- Design a shovel-ready Downtown Berkeley CEMC Pilot Plan to be built in Phase II based on the CEMC model; and
- Develop a set of guidelines that will reduce the risks and uncertainties associated with planning, permitting, and financing multi-facility CEMCs throughout the State.

## **Exhibit A Scope of Work**

**Ratepayer Benefits:**<sup>2</sup> This Agreement will result in a model for CEMCs in urban areas that will create ratepayer benefits including greater electricity reliability, lower costs, and increased safety. The designed approach for CEMCs will: (a) increase reliability by providing clean and reliable energy such as solar and batteries as a source of backup power to supplement or displace existing diesel generators; (b) increase safety through smart grid technologies that can monitor and manage real-time load and reduce congestion leading to reduced risks of infrastructure failure; and (c) reduce ratepayer costs associated with capital improvements for new grid and generation infrastructure and operating costs to maintain grid stability while realizing environmental benefits through clean generation, smart grid technologies including intelligent controls, demand management, and energy efficiency.

**Technological Advancement and Breakthroughs:**<sup>3</sup> This Agreement will support the development and commercialization of technological advancements to achieve the State of California's statutory energy goals by advancing an innovative approach to clean and reliable distributed generation that will reduce grid congestion and provide back-up generation by connecting multiple facilities in an efficient and financially attractive way. This Agreement will also break through the regulatory barriers that hinder technological advancements such as CEMCs by providing recommendations for policy updates and a set of guidelines to streamline local permitting, planning, and financing pathways.

### **Agreement Objectives**

The objectives of this Agreement are to:

- Conduct a local and State regulatory feasibility analysis to identify barriers and recommended solutions to reduce risk and uncertainties with advancing CEMCs;
- Develop guidelines charting a permitting and regulatory pathway for local governments to develop CEMCs that advance energy reliability, clean energy, and energy and water efficiency under existing or emerging permitting and regulatory conditions;
- Conduct a technical analysis, including modeling of several prototype facilities, in order to identify specific, feasible design configurations of facilities that can aggregate energy resources and form a CEMC that achieves maximum societal and economic benefits;
- Identify financially attractive and feasible business model(s) to finance, procure, develop, and operate a CEMC system, including the design of customer care and engagement programs that support active acceptance and participation in microgrid offerings;
- Develop a regulatory plan, technical plan, business & financial model, procurement plan, and cost/benefit analysis that will ultimately become a Master Community Design of a Downtown Berkeley CEMC Pilot Project able to connect multiple facilities and scalable to include additional facilities;
- Engage multi-disciplinary stakeholders, including businesses, developers, regulatory agencies, institutions, and utilities in the above processes; and
- Disseminate the information to the public, local governments and other agencies in the Bay Area and throughout the State and nation.

---

<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

### III. TASK 1 GENERAL PROJECT TASKS

#### **PRODUCTS**

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

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

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

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

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

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

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

##### For all products

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

##### Instructions for Submitting Electronic Files and Developing Software:

###### ○ **Electronic File Format**

- 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:

## **Exhibit A Scope of Work**

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
  - Text documents will be in MS Word file format, version 2007 or later.
  - Documents intended for public distribution will be in PDF file format.
  - The Recipient must also provide the native Microsoft file format.
  - Project management documents will be in Microsoft Project file format, version 2007 or later.
- **Software Application Development**
- Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:
- Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
  - Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
  - Visual Studio.NET (version 2008 and up). Recommend 2010.
  - C# Programming Language with Presentation (UI), Business Object and Data Layers.
  - SQL (Structured Query Language).
  - Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
  - Microsoft SQL Reporting Services. Recommend 2008 R2.
  - XML (external interfaces).

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

### **MEETINGS**

#### **Subtask 1.2 Kick-off Meeting**

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

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

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

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

- Terms and conditions of the Agreement;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and
- Any other relevant topics.

## **Exhibit A Scope of Work**

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.

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.

## **Exhibit A Scope of Work**

- 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.

### **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).

## Exhibit A Scope of Work

- 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 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.

## **Exhibit A Scope of Work**

### **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
- Approval 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 (**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)
  - 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.

## Exhibit A Scope of Work

- 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 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.

## Exhibit A Scope of Work

- 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.

### 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:

## **Exhibit A Scope of Work**

- 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)

### **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:

## **Exhibit A Scope of Work**

- 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.

### **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:**

## **Exhibit A Scope of Work**

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

## Exhibit A Scope of Work

### 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: PROTOTYPE ANALYSIS & CASE STUDY: CLEAN ENERGY MICROGRID COMMUNITIES (CEMCS) IN URBAN SETTINGS**

The goals of this task are to conduct regulatory, technical, and financial feasibility analyses and combine these analyses with lessons learned from Task 3 to prepare a case study for developing CEMC’s in urban areas. The analyses from this task will both inform and be informed by activities in Task 3, and therefore Tasks 2 and 3 will occur simultaneously at points.

##### **TASK 2.1: Regulatory Feasibility Analysis**

The goal of this task is to complete a regulatory feasibility analysis on how to advance CEMCs in urban settings, including in Downtown Berkeley. This task will inform Task 3.1 Implementation Roadmap for the Downtown Berkeley Master Community Design, and lessons learned that can apply to developing CEMCs in urban areas in general will be included in Task 2.4 Case Study Report: CEMCs in Urban Settings.

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

- Develop a draft *Regulatory Feasibility Analysis* that includes but is not limited to the following:
  - Review of relevant current State regulations;
  - Review of current local regulations including zoning code, franchise rights, water and energy efficiency, encroachment permits, building code;
  - Set of guidelines for streamlining local permitting, planning, & financing processes to provide guidance on how local governments can advance CEMCs. These guidelines will be used by City of Berkeley staff and included as part of Task 2.4 Case Study Report;
  - Identify a regulatory path for developing a CEMC in urban areas, including Downtown Berkeley, given current regulatory conditions;
  - Identify regulatory barriers and recommendations on future regulatory changes to advance CEMCs in urban areas; and
  - Evaluate opportunities to streamline local permitting, planning and financing processes for CEMCs including energy and water efficiency.
- Submit draft of Regulatory Feasibility Analysis to CAM for review
- Incorporate CAM feedback on draft Regulatory Feasibility Analysis, as necessary
- Submit final Regulatory Feasibility Analysis

##### **Products:**

- Regulatory Feasibility Analysis (draft and final).

##### **TASK 2.2: Technical Feasibility Analysis**

The goal of this task is to complete a *Technical Feasibility Analysis* for a CEMC in urban areas, starting with prototypes in Downtown Berkeley. This task will inform Task 3.2 Technical Design, and any lessons learned that can apply to developing CEMCs in urban areas in general will be included in Task 2.4 Case Study Report: CEMCs in Urban Settings.

## Exhibit A Scope of Work

### The Recipient shall:

- Develop a draft *Technical Feasibility Analysis* that includes but is not limited to the following:
  - Review of technical needs to determine which types of typical sites work best for CEMCs for urban areas, including site specifications, grid specifications, and any technical barriers;
  - 6 potential prototype site and building combination scenarios in Downtown Berkeley as options for the Downtown Berkeley Master Community Design by using URS Corporation's SIMM-D modeling technology; and
  - A technical options analysis to identify optimal site specifications, grid specifications, and technical configurations of CEMCs for the 6 prototypes, which will inform the Downtown Berkeley Master Community Design.
- Submit draft of *Technical Feasibility Analysis*
- Incorporate CAM feedback on draft *Technical Feasibility Analysis*, as necessary
- Submit final *Technical Feasibility Analysis*
- Compile and submit to CAM a *Set of Technical Lessons Learned* based on the findings above for optimal technical feasibility requirements & recommendations that apply generally to developing CEMCs in urban areas, the final version of which will be included in Task 2.4 Case Study Report: CEMCs in Urban Settings.
- Prepare a *CPR Report #1* and participate in a CPR meeting per subtask 1.3.

### Products:

- Technical Feasibility Analysis (draft and final)
- Set of Technical Lessons Learned
- CPR Report #1

### TASK 2.3: Financial Feasibility Analysis

The goal of this task is to complete a *Financial Feasibility Analysis* identifying strategies on how to make CEMCs financially attractive in urban settings. This task will inform Task 3.3 Financial Model Design for the Downtown Berkeley Master Community Design, and any lessons learned that can apply to developing CEMCs in urban areas in general will be included in Task 2.4 Case Study Report: CEMCs in Urban Settings.

### The Recipient shall:

- Develop a draft *Financial Feasibility Analysis* that includes but is not limited to the following:
  - Review & analysis of potential business models for financing and operating CEMCsTriple bottom line community impact analysis of the 6 prototype configurations for Downtown Berkeley identified in Task 2.2 using a pre-identified set of performance indicators determined as follows:
  - Triple bottom line metrics will be identified to measure environmental, social/community and economic performance. An initial set of metrics will be developed through interviews and data requests from the City departments and key stakeholders, and reviews of existing plans (e.g. grant requirements, technical specifications of energy systems, City resilience and energy plans). Personal information will not be collected. Once baseline objectives and metrics are established, the BEAT baseline metrics will be benchmarked against other best practice metrics and standards for sustainability, clean energy and resilience. A final list of metrics will incorporate both baseline metrics and best

## **Exhibit A Scope of Work**

practices. All metrics will be quantifiable, documented, directly related to the performance objectives of the microgrid and within the control of the microgrid City and microgrid owner/operator.

- Financing strategies for public procurement identifying how local governments can pursue capital & pay for ongoing costs for a CEMC
- Operational model analysis to identify options for who will own/operate the CEMC(s), and what the terms of agreement would be
- Submit *Draft Financial Feasibility Analysis* to CAM for review
- Incorporate CAM feedback on the *Draft Financial Feasibility Analysis*, as necessary
- Submit *Final Financial Feasibility Analysis*
- Compile and submit to CAM a *Set of Potential Business Models*, implementation strategies for public procurement, and potential operational organizations for developing CEMCs in urban areas, the final version of which will be included in Task 2.4 *Case Study Report: CEMCs in Urban Settings*.

### **Products:**

- Financial Feasibility Analysis (draft and final).
- Set of Potential Business Models

### **TASK 2.4 Case Study Report: CEMCs in Urban Settings**

The goal of this task is to develop a case study providing the regulatory, technical, and financial lessons learned and recommendations for developing CEMCs in urban areas. The case study will identify which microgrid prototypes are the most feasible with only minor adjustments to the regulatory environment and those that would see significant market penetration given meaningful changes to the regulatory environment. This task will be informed by Tasks 2.1-2.3 and Tasks 3.1-3.3, and will be shared with the public to advance CEMCs in other local jurisdictions.

### **The Recipient shall:**

- Prepare a *Draft Case Study Report* which will provide regulatory, technical, and financial guidance and lessons learned on optimal recommendations to build a CEMC in urban areas from Tasks 2.1-2.3, and which will inform the Downtown Berkeley Master Community Design, including potential site locations and configurations.
- Submit the *Draft Case Study Report* to CAM for review
- Incorporate CAM feedback on the *Draft Case Study Report* as necessary
- Prepare a *Final Case Study Report* which will build on the *Draft Case Study Report* by adding any additional regulatory, technical, and financial lessons learned from Tasks 3.1-3.4 as part of the Downtown Berkeley Master Community Design.
- Submit *Final Case Study Report* to CAM for approval

### **Products:**

- Case Study Report (draft and final)

### **TASK 3: DOWNTOWN BERKELEY MASTER COMMUNITY DESIGN**

The goals of this task are to develop the regulatory, technical and financial components necessary to make the BEAT Downtown Berkeley CEMC Pilot Project shovel-ready and eligible

## **Exhibit A Scope of Work**

for Phase II of the Energy Commission's Grant Funding Opportunity (GFO)-15-312 grant in 2018.

### **TASK 3.1: Implementation Roadmap**

The goal of this task is to identify the regulatory pathway for implementing the BEAT Downtown Berkeley CEMC Pilot Project in Phase II.

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

- Develop the *Implementation Roadmap* for the BEAT Downtown Berkeley CEMC Pilot Project in Phase II, including California Environmental Quality Act (CEQA) review, and a plan for achieving all other local, state and federal regulatory requirements. This task will build on the information gathered in Tasks 2.1-2.4, and will be incorporated in Task 3.4 Downtown Berkeley CEMC Pilot Plan.
- Submit *The Implementation Roadmap (draft)* to the CAM for review
- Incorporate CAM feedback on *The Implementation Roadmap* as necessary
- Submit *The Implementation Roadmap (final)* to the CAM for approval.

#### **Products:**

- Implementation Roadmap (draft and final).

### **TASK 3.2: Technical Design**

The goal of this task is to develop the technical design for implementing the BEAT Downtown Berkeley CEMC Pilot Project in Phase II. The technical design will be incorporated in Task 3.4 Downtown Berkeley CEMC Pilot Plan.

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

- Draft a *Technical Building Design* on the information gathered in Task 2.2 that will include, but is not limited to:
  - 2 prototypes out of the 6 prototypes evaluated in Task 2.2. Analysis will include fatal flaw criteria to eliminate parcels, near-term readiness of the prototypes, evaluation of the appropriate islanding sites, and outreach to those building managers;
  - A modeling analysis using Lawrence Berkeley National Laboratory's Distributed Energy Resources Customer Adoption Model for 2 prototype configurations, evaluating for each the design if the CEMC were to have (a) only City-owned buildings; or (b) facilities with multiple owners; and
  - A Downtown Berkeley CEMC Pilot Technical Design which will include, but is not limited to:
    - A system design & engineering memo, including implementation schedule, engineering specifications, plan set, CEMC system configuration & controller protocols;
    - Engineering cost estimates;
    - A Cyber Security Plan; and
    - A System Performance Monitoring & Evaluation Plan.
- Submit the *Draft Technical Building Design* to CAM for review
- Incorporate CAM feedback on *Draft Technical Building Design* as necessary
- Submit *Final Technical Building Design* to CAM for approval
- Prepare a *CPR Report #2* and participate in a CPR meeting per subtask 1.3.

#### **Products:**

- Technical Building Design (draft and final)

## **Exhibit A Scope of Work**

- CPR Report #2

### **TASK 3.3: Financial Model Design**

The goal of this task is to develop the financial model for implementing the BEAT Downtown Berkeley CEMC Pilot Project in Phase II, building upon the information gathered in Task 2.3 Financial Feasibility Analysis. The financial model will be incorporated in Task 3.4 Downtown Berkeley CEMC Pilot Plan.

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

- Draft the *BEAT Downtown Berkeley CEMC Business Model Design* for selected prototype scenario that will be selected on the basis of technical, regulatory and financial feasibility of the BEAT Downtown Berkeley CEMC Pilot Project that includes, but is not limited to, the following:
  - The operational & governance structure for the BEAT Downtown Berkeley CEMC Pilot Project.
  - A Sustainable Return on Investment benefit cost analysis for the selected prototype scenario of the BEAT Downtown Berkeley CEMC Pilot Project.
  - An Operational & Governance Design which will include organizational and governance structure and draft participant agreements.
  - A Business & Financial Model Design which will include potential revenue streams, capital plan, and cost structures.
  - A Procurement Plan detailing how to procure all components of the BEAT Downtown Berkeley Pilot Project.
- Submit *Draft BEAT Downtown Berkeley CEMC Business Model Design* to CAM for review
- Incorporate CAM feedback as necessary
- Submit *Final BEAT Downtown Berkeley CEMC Business Model Design* to CAM for approval

#### **Products:**

- BEAT Downtown Berkeley CEMC Business Model Design (draft and final).

### **TASK 3.4: Downtown Berkeley CEMC Pilot Plan**

The goal of this task is to develop a comprehensive conceptual design for the BEAT Downtown Berkeley Pilot Project based on Tasks 3.1 – 3.4.

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

- Prepare a *Draft Downtown Berkeley CEMC Pilot Plan* which will incorporate the regulatory, technical and financial components outlined in Tasks 3.1 – 3.3, and will enable the project to be shovel-ready for implementation as part of Phase II, not included under this agreement.
- Submit *Draft Downtown Berkeley CEMC Pilot Plan* to CAM for approval
- Incorporate CAM feedback as necessary
- Submit *Final Downtown Berkeley CEMC Pilot Plan* to CAM for approval

#### **Products:**

- Downtown Berkeley CEMC Pilot Plan (draft and final)

## Exhibit A Scope of Work

### TASK4: 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.
    - 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.

## **Exhibit A Scope of Work**

- 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.
- 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

### **TASK 5: 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.

## **Exhibit A Scope of Work**

- When directed by the CAM, develop Presentation Materials for an Energy Commission- sponsored conference/workshop on the results of the project.
- Provide at least 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)
- 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)

## **V. PROJECT SCHEDULE**

Please see the attached Exhibit A, Attachment A-1 Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CITY OF BERKELEY

**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-15-065 from GFO-15-312 with the City of Berkeley for a \$1,499,214 grant to design, plan and facilitate the permitting of a Clean Energy Microgrid Community (CEMC) that incorporates advanced energy efficiency technologies and will be operated to aggregate and share clean energy resources across several facilities, including facilities whose function is critical in the event of a disaster. This project will develop a regulatory plan, technical plan, business & financial model, procurement plan, and cost/benefit analysis that will ultimately become a Master Community Design of a Downtown Berkeley CEMC Pilot Project; 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]

---

Cody Goldthrite,  
Secretariat