

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-15-052 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	Juventino Mendoza	51	916-445-5281

Recipient's Legal Name	Federal ID Number
ZipPower, LLC	37-1794796

Title of Project
ZipPower San Leandro

Term and Amount	Start Date	End Date	Amount
	6/1/2016	3/30/2018	\$ 1,495,338

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
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Business Meeting Presenter	Juventino Mendoza	Time Needed:	5 minutes
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Please select one list serve. EPIC (Electric Program Investment Charge)

Agenda Item Subject and Description

ZipPower, LLC. Proposed resolution approving agreement EPC-15-052 with ZipPower, LLC for a \$1,495,338 grant to develop and pilot a platform that optimizes distributed energy resource planning by integrating and automating all the data required to target optimal sites across city areas and streamline pre-approval of the permitting and interconnection at those sites. The proposed solution optimizes local energy resources and their value as a citywide program, using a technical platform along with aggregated customer financing to integrate and automate all the data and functionality required to design, finance, deploy, scale, and replicate Advanced Energy Communities.



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: PRC §§ 21102, 21150; CCR., tit 18, § 15262

Categorical Exemption. List CCR section number: 14 CCR Section 15306 & 14 CCR 15061

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 categorical exemption applies to basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. 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. Specifically, this project will develop and pilot a platform that optimizes distributed energy resource planning by integrating and automating all the data required to target optimal sites across city areas and streamline pre-approval of the permitting and interconnection at those sites for possible future projects which the Energy Commission has not yet approved or funded. No physical changes to the environment will be made. Therefore, the project falls within section 15306 and will not have a significant effect on the environment.

14 CCR 15061(b)(3) Common Sense Exemption: A project is exempt from CEQA if the activity is covered by the general rule that CEQA applies only to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is not possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. 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. Specifically, this project will develop and pilot a platform that optimizes distributed energy resource planning by integrating and automating all the data required to target optimal sites across city areas and streamline pre-approval of the permitting and interconnection at those sites for possible future projects which the Energy Commission has not yet approved or funded. No physical changes to the environment will be made. Therefore, the project falls within the common sense exemption and will not have a significant effect on the environment.

Section 15262 of CEQA provides statutory exemption for a project "involving only feasibility or planning studies for possible future actions which the agency, board, or commission, has not approved, adopted, or funded". The project consists of the feasibility study and planning of a proposed Advanced Energy District in the City of San Leandro. Therefore, the project qualifies as a statutory exemption under Section 15262. Creation and funding of the Advanced Energy District will be subject to future environmental review under CEQA and approval by the City.

b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)

- Check all that apply
- Initial Study
 - Negative Declaration
 - Mitigated Negative Declaration
 - Environmental Impact Report
 - Statement of Overriding Considerations

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

Legal Company Name:	Budget
Growing Energy Labs, Inc.	\$ 98,438
OSISoft, LLC	\$ 75,000
DOE- Lawrence Berkeley National Laboratory	\$ 180,000
City of San Leandro	\$ 92,000

Exhibit A Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2	X	Identification of Citywide Optimal Microgrid Sites/Areas
3		Citywide Planning, Permitting and Approval Automation Design
4		Citywide Waste-to-Energy Assessment and Design
5		Citywide Incentive Program Design
6		Integrated System Design
7		Integration Proof-of-Concept
8		Use Case Study
9		Tools and Financing Strategies
10		Outreach Strategy
11		Evaluation of Project Benefits
12		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
AEC	Advanced Energy Community
API	Application Programming Interface
CAISO	California Independent System Operator
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
COG	Cost of Generation
CPR	Critical Project Review
dc	direct current
DER	Distributed Energy Resources
DRP	Distribution Resources Plans
DSO	Distribution Service Operator
EPC	Electric Power Corporation
EV	Electric Vehicle
Energy Commission	California Energy Commission
GIS	Geographic Information System
GELI	Growing Energy Labs, Inc. (GELI)
GHG	Greenhouse Gas
ISO	Independent System Operator
JEDI	Job and Economic Development Impact
LBNL	Lawrence Berkeley National Laboratory
MW	Megawatt

¹ 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.

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Acronym/Term	Meaning
NREL	National Renewable Energy Laboratory
OSI	OSISoft
PDE	Pacific Data Electric
PG&E	Pacific Gas and Electric
SAM	System Advisory Model
SOL	SolSystems
PGE	Pacific Gas & Electric
PV	Photovoltaic
TAC	Technical Advisory Committee
TSO	Transmission Service Operator

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

A. Purpose of Agreement

The purpose of this agreement is to fund an energy system design and technical proof-of-concept that accelerates and scales distributed energy resource planning and deployment across entire community areas and cities. The proposed solution optimizes local energy resources and their value as a citywide program, using a technical platform along with aggregated customer financing to integrate and automate all the data and functionality required to design, finance, deploy, scale, and replicate Advanced Energy Communities (AECs).

B. Problem/ Solution Statement

Problem

Solar penetration in California has reached approximately 5%, according to the U.S. Energy Information Administration, with the majority provided by photovoltaic and concentrating solar power plants greater than 1 Megawatt (MW). However, a fully researched distribution grid power flow analysis conducted by members of this grant team has proven that communities and cities can achieve a lot more: using targeted locations that occur commonly across cities and communities, at least 25% or more of annual energy can be provided by local renewables, all while maintaining grid reliability, and without incurring expensive transmission grid upgrades or the inherent losses due to long-distance transmission of electricity. In fact, as a general guideline, cities in the range of 100,000 population can reach over 100MW of distributed solar capacity at targeted locations, providing at least 25% or more of their annual energy from local renewables.

Traditionally, renewable energy in communities has been implemented one rooftop at a time without basing investment decisions on an assessment of the community's energy system as a whole, and without the integration and automation of all the required components that accelerate and scale these deployments. The absence of an integrated, community-wide energy planning and implementation process results in a lost opportunity to increase distributed renewable energy output in a more efficient, scalable, and strategic manner.

Exhibit A Scope of Work

Solution

The Recipient will deliver a local energy system design and technical proof-of-concept that integrates and automates all aspects required to scale and replicate AECs, including: 1) targeting sites and energy sources based on variables that determine optimal potential; 2) accelerating adoption and lowering soft costs through automation of proposals, permitting and interconnection; 3) delivering innovative and lower cost financing solutions via customer aggregation and select finance partners, and including city financial incentives; and 4) featuring the operational components required to move quickly from design to viable citywide deployments, including planning and operational support from the distribution and transmission grid. This system design and proof-of-concept will be replicable and scalable in order to accelerate AECs across the state.

With this project, the City of San Leandro will target 100 MW of local renewable energy satisfying at least 25% or more of its annual energy use – compared with a statewide average of less than 2% of distributed solar penetration, for example. Combined with the mix of utility scale and regional renewables plus non Greenhouse Gas (GHG) emitting energy sources such as hydropower, this approach provides cities and communities with a cost-effective solution for achieving their stated goals of 100% renewable energy. At the same time, this replicable solution will improve access to affordable electricity for not only San Leandro ratepayers but for communities throughout California.

C. Goals and Objectives of the Agreement

Agreement Goals

The goal of this Agreement is to deliver a design and technical proof-of-concept for a system that enables rapid planning and deployment of distributed energy resources across entire community and city areas, providing a model for establishing AECs statewide.

Ratepayer Benefits:² This Agreement will result in a system design and proof of concept that can bring ratepayer benefits of greater electricity reliability, lower costs due to technology cost curves versus commodities, and increased resilience and security. The initial target deployment for San Leandro using this system is 100 MW of solar PV, focused on the commercial and industrial areas and benefitting all city residents. Relying on the National Renewable Energy Laboratory (NREL) Job and Economic Development Impact (JEDI) and System Advisory Model (SAM) tools plus other data sources including the Energy Commission and California Independent System Operator (CAISO), 100 MW of local solar will result in the following benefits to the City and region over 20 years, based on a cost of \$2.75 per watt of direct current (dc).

² 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).

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Energy Benefits:

Cost Parity: A wholesale cost for distributed solar photovoltaic (PV) equal to or less than conventional natural gas generation (using a 20 year levelized cost of energy (LCOE))
\$520M: Spent on local energy resources instead of spending those dollars out of the region
\$160M: Avoided transmission costs, including Transmission Access Charges, avoided line losses, and deferred transmission upgrades, based on 100MW of locally-produced energy and thus system peak reduction
\$60M: Avoided costs by reducing power interruptions due to greater reliability of distributed energy systems

Economic Benefits:

\$400M: Total added regional economic output
\$200M: Total added local wages from construction, installation, operations and maintenance
3,400 Job-Years: Total new near-term and ongoing employment
\$20M: Site leasing income to property owners

Environmental Benefits:³

156M lbs.: Annual reductions in GHG emissions
30M Gallons: Annual water savings
750: Acres of land preserved by generating energy from roof and parking lot areas

Technological Advancement and Breakthroughs:⁴ 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 providing a design and integrated system that enables rapid, targeted, and wide-scale deployment of distributed energy resources across entire community and city areas.

Current state of the art technology does not optimize energy resource planning and deployment across local geographic areas, nor are there solutions today that provide a technology framework with integrated automation features enabling all of the following: (1) customer engagement, profiling, and benefits analysis for distributed energy resources covering an aggregated area; (2) targeted locations that create optimal value for an aggregated area; (3) shared generation and consumption of aggregated energy resources within a geographic region including the resulting benefits such as energy cost reductions, GHG emission reductions, and local grid balancing; (4) an innovative financing solution specific to a given set of aggregated

³ Sources for the above calculations:

- NREL JEDI model. Results from \$2.75/W(dc) 2015 estimated gross weighted average cost. Higher or lower costs by installation type or year installed will proportionately influence results.
- Energy Commission 2013 Cost of Generation (COG) Calculator. NOTE: This analysis uses the most recent Energy Commission COG model available, COG_Model_Version_3_revision_91e.
- CAISO 2013 TAC schedule and infrastructure projections
- NREL Emissions Health Calculator, PG&E service territory
- Civil Society Institute – "Hidden Costs of Electricity"

⁴ 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.

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energy resources within a geographic region; and (5) the fulfillment, installation and operations of energy resources across an aggregated geographic area, including aggregated performance metrics and integration with utility and balancing authority operations. This project will move beyond the “one rooftop at a time” approach currently used by the industry in order to achieve the renewable energy goals and benefits required by the state and its communities and cities. This new approach integrates and automates all of the data across the system and its participants, thus enabling the successful proliferation of Distributed Energy Resources (DER) including support from the grid. This grant team will deliver a design and proof-of-concept – including technical and other input from PG&E, CAISO, developers, and finance partners – that achieves this integrated and automated system. The result is a solution that accelerates adoption and deployment of AECs using a model that is replicable and scalable.

Agreement Objectives

The objectives of this Agreement are to:

- Design and develop an integrated technical proof of concept system that automates all aspects of local energy system assessment and deployment across a citywide program. This includes: 1) targeting sites based on variables that determine optimal potential; 2) accelerating adoption and lowering soft costs through automation of proposals, permitting and interconnection; 3) delivering innovative and lower cost financing solutions via customer aggregation and focused finance partners; and 4) featuring the operational components required to move quickly from design to deployment, including planning and operational support from the utility and the CAISO.
- Prepare this system to be used initially in the City of San Leandro, targeting 100 MW of local renewable energy deployment satisfying at least 25% or more of its annual energy use – compared with a statewide average of less than 2% of distributed solar penetration, for example.
- Integrate other local renewable energy sources focused initially on waste-to-energy.
- Develop and deliver innovative financing strategies, business models, and city incentives based on the value of aggregated and targeted energy resources across the city area.
- Deliver a complete Use Case Study that documents the approach and benefits of the proposed design and technical proof-of-concept.
- Complete an Outreach program that targets 10 cities across California to engage in an AEC design and deployment.
- Prepare this system to measure specific performance metrics once deployed. The performance metrics will be finalized during development but are planned to include the following: total number of MW deployed via the system; total duration in time from program kickoff to interim deployment targets, measured quarterly; total number of targeted sites that participate in the program; duration in response times for targeted sites to participate in the program, once engaged; responses measured in success or failure rates to various presentation and data methods; the effort and duration in time of integrating partner tools and data; the effort and duration in time to integrate and automate city-specific data; and, standard software development methodologies, such as Agile, and app/platform metrics.

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

- 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.
- Submit the final product to the CAM once agreement has been reached on the draft. The CAM will provide written approval of the final product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- If the CAM determines that the final product does not sufficiently incorporate his/her comments, submit the revised product to the CAM within 10 days of notice by the CAM, unless the CAM specifies a longer time period.

For products that require a final version only

- Submit the product to the CAM for approval.
- If the CAM determines that the product requires revision, submit the revised product to the CAM within 10 days of notice by the CAM, unless the CAM specifies a longer time period.

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.

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The following describes the accepted formats for electronic data and documents provided to the Energy Commission as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:

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

Exhibit A Scope of Work

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.

The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and

Exhibit A Scope of Work

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 all Agreement activities conducted by the Recipient for the preceding month, including 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.
 - Provide a synopsis of the project progress, including accomplishments, problems,

Exhibit A Scope of Work

milestones, products, schedule, fiscal status, and any evidence of progress such as photographs.

- Submit a monthly or quarterly *Invoice* that follows the instructions in the “Payment of Funds” section of the terms and conditions. In addition, each invoice must document and verify:
 - Energy Commission funds received by California-based entities;
 - Energy Commission funds spent in California (*if applicable*); and
 - Match fund 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 and approve 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 a 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.
- Submit a draft of the outline to the CAM for review and comment.
- Once agreement has been reached on the draft, submit the final outline to the CAM. The CAM will provide written approval of the final outline within 10 days of receipt.

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)

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- 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.
- 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 Products:

- 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.

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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.
 - 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.

Exhibit A Scope of Work

Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

The Recipient shall:

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

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

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

Products:

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

Subtask 1.9 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).

Exhibit A Scope of Work

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:

- 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.

Exhibit A Scope of Work

- 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:

- 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 Identification of Citywide Optimal Microgrid Sites/Areas

The goal of this task is to identify the optimal microgrid sites and areas across the city based on local generation potential and expected financial benefits per site, as well as least likely grid impacts.

The Recipient shall:

- Develop a Geographic Information System (GIS) Database and Resource Map of Citywide Targeted Optimal Microgrid Sites that will identify optimal sites and optimal city areas as the initial targets for the citywide program. These targets will include:
 - Sites and areas that will have the most local generation potential and likely financial benefits, and that (from past detailed research) are most likely to have the least impact on grid reliability.
 - Emergency and other critical and priority services such as police stations, fire stations, designated shelters, hospitals, other critical medical service locations, schools, gas stations, food suppliers, etc. that will be prioritized for installation of onsite and/or nearby local energy systems that will provide each location with electricity in the case of either a distribution grid or transmission grid outage. These locations will receive priority in the Design and resulting implementation, designated as “Emergency Service” locations.
 - Key locations to assign Electric Vehicle (EV) charging stations to incent higher penetration of EVs in the city. This EV support plan will include a model for shared ownership of EVs for targeted demographics such as seniors, small businesses, students, certain families, and commuters.
- Submit a *GIS Database and Resource Map Report* to provide access and instructions to navigate through the database and maps and to include the following:
 - A list of sites and areas with high generation, financial and reliability potential.
 - A list of “Emergency Service” locations.
 - A list of EV charging key locations.
- Integrate into and automate this data via the ZipPower platform using Task 3 below.
- Prepare a *CPR Report* summarizing the needs and accomplishments for the project.
- Participate in a CPR Meeting in accordance with Subtask 1.3

Products:

- GIS Database and Resource Map Report
- CPR Report

TASK 3 Citywide Planning, Permitting and Approval Automation Design

The goal of this task is to design the Application Programming Interface (API), data exchange format, and workflow associated with automating the planning, permitting and approval process for microgrids across the city area.

Exhibit A Scope of Work

The Recipient shall:

- Collaborate with the City of San Leandro to design a system that includes automated data integration with the city's permitting software vendor, Accela, including the APIs, data formats, and workflows as required, covering a range of system designs from solar only to more complex microgrids.
- Design a system that will integrate easily with any permitting software as well as migrate paper-based systems to online and automated web forms.
- Develop a *City Technical Interface Specification* - a technical architecture document with diagrams and details specifying the data integration required between the City's permitting system Accela and Recipient in order to automate microgrid planning, permitting, and approval/pre-approvals.

Products:

- City Technical Interface Specification (draft and final)

TASK 4 Citywide Waste-to-Energy Assessment and Design

The goal of this task is to assess the waste-to-energy opportunity via the waste resources available in the city, including waste processed by Waste Management, the Water Treatment Center, the Oro Loma Sanitary District, and including waste resources from large local commercial enterprises such as Ghirardelli and Coca Cola.

The Recipient shall:

- Collaborate with the City of San Leandro to develop a *Citywide Waste-to-Energy Plan* that will supply additional local renewable energy to the city and the ZipPower San Leandro program. The following will be included in the plan:
 - Waste resources available in the city
 - Waste-to-energy/biofuel vendor solutions
- Integrate into and automate this data via the ZipPower platform.

Products:

- Citywide Waste-to-Energy Plan

TASK 5 Citywide Incentive Program Design

The goal of this task is to develop the incentive program that helps accelerate participation by city building owners and residents.

The Recipient shall:

- Collaborate with the City of San Leandro to design an incentive program that will focus on financial benefits such as local tax credits, free local workforce training, local hiring, and other monetary benefits.
- Submit a *Citywide Incentive Program Plan* that contains a definition of the citywide incentive program including a list of incentives and recommended incentive types and amounts for building owners and residents who participate in the San Leandro ZipPower program.
- Integrate into and automate this data via the ZipPower platform.

Products:

- Citywide Incentive Program Plan

Exhibit A Scope of Work

TASK 6 Integrated System Design

The goal of this task is to develop the Integrated System Design covering all aspects of the proposed AEC system, which will include interfaces and data integration methods that are replicable and scalable for any city or community area.

The Recipient shall:

- Collaborate with OSI, GELI, PG&E and CAISO to architect a system that meets the objective of featuring operational components required to move quickly from design to deployment including utility and ISO integration.
- Design and deliver *Advanced Energy Community System Design* - a technical architecture document with diagrams and detailed specifications, including a GIS database and mapping details, specifying all Design elements. The design will enable the entire system to be integrated and automated holistically and efficiently, and then deployed.
- Design a replicable system via technical interfaces that can integrate and automate required data with multiple solution partners and be replicable across any city and/or grid area.
- Design user interface, data formats and data integration for:
 - Innovative financing
 - Business models
 - City financial incentives
 - EPC partner participation
 - Social media
 - Customer referrals via email
- Define method for the City to analyze overall city renewable potential and discover optimal sites for marketing and community engagement
- Define method for customers to engage with proposals, developers, and finance partners.
- Submit a *Master Community Design*, which showcases the real world conceptual design and includes descriptions of the proposed location(s) for the development; a full citywide interactive map; engineering designs of proposed buildings, streets, and community spaces; energy technologies to be deployed; potential interconnection sites; advanced energy infrastructure; and how these elements are combined in a systems approach.

Products:

- Advanced Energy Community System Design
- Master Community Design

Subtask 6.1 Utility Data Exchange Design, System Planning

The goal of this task is to design a platform to enable data to be automated between the utility (PG&E), CAISO, and the ZipPower system for system planning, accelerating utility and ISO approvals and support for community power programs.

The Recipient shall:

- Design ZipPower integration with Utility for ingesting, from Utility, the hosting capacity and optimal location data (e.g. ingesting Distribution Resources Plan data) to facilitate city planning of optimal site locations and grid overlay, including emergency facilities.
- Design ZipPower integration with Utility for automated pre-approval of optimal sites for

Exhibit A Scope of Work

Utility interconnection

- Design ZipPower integration with Utility and ISO to feed customer adoption (deployment planning) from ZipPower to Utility and ISO.
- Develop a *DSO-TSO Technical Interface Specification for System Planning* - a technical architecture document with diagrams and specifications detailing the technical integration and data elements to be implemented between the utility, ISO, and the ZipPower platform.

Products:

- DSO-TSO Technical Interface Specification for System Planning (draft and final)

Subtask 6.2 Utility Data Exchange Design, System Operation

The goal of this task is to design a platform to enable data to be automated between the utility, ISO, microgrid controllers, and the ZipPower platform for system operations in order to solidify utility and ISO support for deployment of community power programs.

The Recipient shall:

- Collaborate with GELI, OSI, the utility and ISO to develop a coordination framework for the distribution service operator (DSO) and the transmission and wholesale market operator (TSO or ISO) to coordinate activities to ensure stable, reliable operation of the distribution and transmission systems and the interfaces between them, in an electric system that features high penetration of DER.
- Include the operational data feeds that will be populated in the OSI database from the GELI microgrid controllers.
- Design interfaces for aggregation of real time power generation and net load profile by integrating microgrid controller aggregated operational data with utility-operated and ISO-operated OSI systems.
- Design common API and data exchange formats for this project, as well as for publication that can be used as a standard for the industry.
- Complete the design of the DSO-TSO interface between the utility and ISO, as part of the overall system design.
- Design authentication mechanisms for secure data.
- Develop a *DSO-TSO Technical Interface Specification for System Operations* - a technical architecture document with diagrams and detailed specifications specifying the technical integration and data elements to be implemented between the utility, ISO, OSI as a data analytics vendor to the utility and ISO, and the GELI energy operating system for microgrids.

Products:

- DSO-TSO Technical Interface Specification for System Operations (draft and final)

Subtask 6.3 Design Review, Additional Technical, Developer, and Finance Expertise

The goal of this task is to strengthen and complete the system design and technical proof-of-concept through additional input and guidance from experts.

The Recipient shall:

- Collaborate with LBNL to provide additional technical expertise.
- Collaborate with Pacific Data Electric, Inc. (PDE) to provide additional developer

Exhibit A Scope of Work

expertise.

- Incorporate financing details and design criteria from SolSystems (SOL) to confirm support for financing innovations related to bulk, aggregated, community scale systems
- Create and submit an *Expert Guidance Memo* describing the expertise sought out and the input received.

Products:

- Expert Guidance Memo

TASK 7 Integration Proof-of-Concept

The goal of this task is to integrate the system components as defined in the final system design as an integrated and functioning technical proof-of-concept of the AEC system. This will validate the system design, particularly the multi-party integration points, enabling the solution to be hardened and subsequently deployed rapidly and across multiple cities.

The Recipient shall:

- Integrate all the system components as defined in the final system design as a technical proof-of-concept.
- Deliver the technical proof-of-concept test plan - the *Systems Test Plan*. The Systems Test Plan summarizes the tests required to validate that all system components are functioning correctly as designed.
- Prepare this system to measure specific performance metrics once deployed, including: total number of MW deployed via the system; total duration in time from program kickoff to interim deployment targets, measured quarterly; total number of targeted sites that participate in the program; duration in response times for targeted sites to participate in the program, once engaged; responses measured in success or failure rates to various presentation and data methods; the effort and duration in time of integrating partner tools and data; the effort and duration in time to integrate and automate city-specific data; and, standard software development methodologies, such as Agile, and app/platform metrics.
- Finalize the performance metrics and describe them in the *Performance Metrics Plan*.
- Submit *Advanced Energy Community System Technical Proof-of-Concept* – an integrated and functioning technical proof-of-concept of the AEC system, as designed.

Products:

- Systems Test Plan
- Performance Metrics Plan
- Advanced Energy Community System Technical Proof-of-Concept

TASK 8 Use Case Study

The goal of this task is to develop the Use Case Study documenting the ZipPower San Leandro approaches and outcomes, including recommendations.

The Recipient shall:

- Document the steps taken to identify the optimal sites in San Leandro.
- Document the benefits of the solution, including the calculations of the energy, economic, and environmental benefits as a result of aggregating and targeting optimal

Exhibit A Scope of Work

sites. These aggregated benefits include economic development, energy cost savings, GHG reductions, energy resiliency and security, etc.

- Document the intended results of the ZipPower platform, including all performance statistics such as customer response and adoption rates, developer engagement and installation success rates, results and engagement of bulk/program wide financing models, etc.
- Document the intended correlation between Distribution Resources Plans (DRP) / utility capacity data, optimal sites, and adoption rates.
- Document any regulatory changes that are required or adopted as a result of the Program.
- Document the intended cost reductions accomplished by the Program across customer acquisition, project financing, project permitting, and utility interconnection.
- Document the intended performance results and financial benefits of the system's real-time microgrid controls and energy optimizations on both individual sites and as an aggregation of city customers, including the real-time integration with utility operations.
- Document the intended utility infrastructure savings as a result of the Program including 1) distribution grid cost deferrals such as deferred transformer upgrades, and 2) transmission cost deferrals resulting from reducing the energy delivered to the substation by at least 25%.
- Document other relevant aspects of the AEC system as a result of the ongoing data analysis, including specific recommendations.
- Include and submit all above mentioned documentation in the *ZipPower San Leandro Use Case Study Report*.

Product:

- ZipPower San Leandro Use Case Study Report (draft and final)

TASK 9 Tools and Financing Strategies

The goal of this task is to deliver the integrated system proof-of-concept as defined in Task 2 as the “tool” – the “DER Platform” – that streamlines and accelerates planning and deployment of AECs. This DER system as described in Task 2 integrates and automates the critical functions across the entire ecosystem – cities, city planning departments, building owners, residents, finance partners, developers, and the utility – enabling both scale and acceleration for citywide power programs.

The Recipient shall:

- Submit *Financing and Business Model Innovations Documentation* including the intended financing and business model innovations and efficiencies that result from aggregating customer sites across a city area combined with using optimal locations that reduce or eliminate grid impacts and thus overall system costs.
- Collaborate with local government to strengthen financial innovations using a model that will be replicable across many AECs.

Product:

- Financing and Business Model Innovations Documentation

Exhibit A Scope of Work

TASK 10 Outreach Strategy

The goal of this task is to develop an outreach strategy promoting the ZipPower San Leandro program and the replicable AEC system solution.

The Recipient shall:

- Develop and submit an *Outreach Plan* that targets 10 California cities, or a lesser number with CAM written approval, by the end of the agreement period and includes, but is not limited to, the following elements:
 - Marketing and outreach core materials based on the resulting financing documentation and Use Case Report.
 - Core materials for use in journal articles.
 - Customer referral to potential customers via email, text and integration with social media.
 - “City Power for CA” as a campaign for Advanced Energy Communities using the ZipPower website and social media.
- Conduct webinars and give conference presentations promoting the AEC approach and system
- Submit a *Presentation Agenda* prior to each webinar and conference presentation
- Meet with multiple city leaders across the state to increase education and adoption of the AEC approach and solution.
- Submit *City Leaders Meeting Minutes* summarizing discussion topics and participation.

Product:

- Outreach Plan
- Presentation Agenda
- City Leaders Meeting Minutes

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.
 - 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.

Exhibit A Scope of Work

- 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 have 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.

Exhibit A Scope of Work

Products:

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

TASK 12 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 sponsored by the California Energy Commission.
- 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.
- Provide signed photo waiver release form by the Energy Commission.
- 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)

Exhibit A Scope of Work

- Technology/Knowledge Transfer Report (draft and final)

V. PROJECT SCHEDULE

Please see the attached Project Schedule Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: ZIPPOWER, LLC

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-15-052 from GFO-15-312 with ZipPower, LLC for a \$1,495,338 grant to develop and pilot a platform that optimizes distributed energy resource planning by integrating and automating all the data required to target optimal sites across city areas and streamline pre-approval of the permitting and interconnection at those sites. The proposed solution optimizes local energy resources and their value as a citywide program, using a technical platform along with aggregated customer financing to integrate and automate all the data and functionality required to design, finance, deploy, scale, and replicate Advanced Energy Communities; 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