

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-15-055 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	Joshua Croft	51	916-445-5328

Recipient's Legal Name	Federal ID Number
Charge Bliss, Inc.	45-4012582

Title of Project
The Charge Bliss Advanced Renewable Energy Community for a Disadvantaged Southern California Community

Term and Amount	Start Date	End Date	Amount
	6/1/2016	3/31/2018	\$ 1,500,000

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

CHARGE BLISS, INC.. Proposed resolution approving agreement EPC-15-055 with Charge Bliss, Inc. for a \$1,500,000.00 grant to design a replicable Advanced Energy Community that balances over three megawatts of photovoltaic generation with an electric vehicle charging network of at least 100 charging stations and stationary battery storage. This project will conduct planning, permitting, financial modeling and engineering design to bring this Advanced Energy community to a shovel-ready state for a test site in the Los Angeles region.

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":

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

 a) Agreement **IS** exempt. (Attach draft NOE)

 Statutory Exemption. List PRC and/or CCR section number: _____

 Categorical Exemption. List CCR section number: Cal. Code Regs., tit 14, § 15301 and 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.

14 CCR Section 15301 Existing Facilities: This agreement will fund the temporary installation of small indoor sensors that measure approximately 1 foot by 1 foot next to electrical panels in existing facilities and involve no expansion of the facility's use beyond that existing at the time of the lead agency's organization. The sensors only serve to establish the baseline energy usage data for the facility.

 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
Charge Bliss Construction California, Inc.	\$ 359,866
The Regents of the University of California, San Diego	\$ 116,969
The Regents of the University of California, on behalf of the Los	\$ 184,800
Mazzetti, Inc.	\$ 416,576
OSISoft, LLC	\$ 25,000
Adopt A Charger	\$ 25,000
EFACEC USA, INC. dba CSC	\$ 30,000
TB Design	\$ 25,000
Matt Sumrow Legal Services	\$ 10,000

List all key partners: (attach additional sheets as necessary)
Legal Company Name:

Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	14-15	301.001B	\$1,500,000
			\$
R&D Program Area: EDMFO: EDMF		TOTAL:	\$1,500,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Recipient's Administrator/ Officer				Recipient's Project Manager			
Name:	David Bliss			Name:	David Bliss		
Address:	8228 W Sunset Blvd Ste 204			Address:	8228 W Sunset Blvd Ste 204		
City, State, Zip:	West Hollywood, CA 90046-2414			City, State, Zip:	West Hollywood, CA 90046-2414		
Phone:	323-364-9936 /	Fax:	- -	Phone:	323-364-9936 /	Fax:	- -
E-Mail:	dbliss@chargebliss.com			E-Mail:	dbliss@chargebliss.com		

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

Agreement Manager _____

Date _____

Office Manager _____

Date _____

Deputy Director _____

Date _____

I. TASK ACRONYM/TERM LISTS

A. Task LIST

Task #	CPR1	Task Name
1		General Project Tasks
2	X	Develop a Master Community Design
3		Determination of Baseline Community Loads
4		Design EVSE
5	X	DER Design
6		Financial Modeling
7		Streamlining of Permitting, Inspection, and Interconnection
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
AEC	Advanced Energy Community
ADR	Automated Demand Response
CAISO	California Independent System Operator
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CO ₂	Carbon Dioxide
CPR	Critical Protect Review
DER	Distributed Energy Resource
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
GWh	Gigawatt-hour

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.

IOU	Investor Owned Utility
MW	Megawatt
PV	Photovoltaic
SCE	Southern California Edison
STEM	Science, Technology, Engineering, and Math
TAC	Technical Advisory Committee

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

A. Purpose of Agreement

The purpose of this agreement is to fund innovative and replicable approaches for accelerating the deployment of an Advanced Energy Communities (AEC) within a disadvantaged community in Southern California.

B. Problem/Solution Statement

Problem

As California adopts aggressive statutory clean energy goals, new communities in California must incorporate energy efficiency standards, distributed generation, storage, Electric Vehicle (EV) charging infrastructure, and smart grid elements. To accomplish this, AECs must innovate with respect to: the planning and permitting of these communities at the local and regional levels of government; the design, engineering, and financing of these communities; and the roles and coordination of stakeholders involved in the process of deploying AECs.

Solution

For a disadvantaged region in the South Bay area of Los Angeles, the team will develop planning, permitting, and financial strategies for the integration of 3MW+ photovoltaic generation, energy efficient technology such as LED lighting, 100 EV charging systems, and multiple megawatts of standing energy storage. With local government, utility, and technical expert collaboration, the team will report on methods to streamline AEC design, engineering, permitting, inspection, and interconnection.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Build a Master Community Plan for a renewable, Net Zero energy usage AEC
- Design and engineer a “shovel ready” AEC in a disadvantaged community.
- Show value to utility ratepayers through revenue from clean generation, efficiencies, usage and demand reduction, and CAISO fast power regulation market participation.
- Develop a Case Study of the target community
- Streamline processes for AEC permitting, inspection, and interconnection
- Develop financial and business models to promote the adoption and proliferation of renewable energy AEC

Ratepayer Benefits:²

The proposed integrated Net Zero Energy Advanced Energy Community will significantly decrease energy expense in a disadvantaged community, increase power reliability, decrease fossil fuel emissions, decrease strain on the Investor Owned Utilities (IOUs) and California Independent System Operator (CAISO), and boost the adoption of EVs.

The project will lower site costs through renewable generation, lighting efficiency, mitigation of peak demand, and novel revenue streams from Automated Demand Response (ADR). Additional savings may accrue from improved device efficiencies due to improved power quality. The redundancies of enhanced site energy generation, spinning power reserve, demand mitigation, and automated demand response will support power quality, allow site operation despite limitations on power or energy supply from the IOU, and decrease utility draw-improving power quality for regional consumers. Furthermore, safety will be increased by mitigating power quality fluctuations, excessive power export to the utility, and demand spikes, the project will protect electrical devices and utility infrastructure from harm. This can result in fewer damaged power lines and transformers which, in turn, mitigates safety risks to IOU personnel and the public. Moreover, the AEC will mitigate substantial CO₂ production (4,000+ tons/year) through the production of 3.0GWh+ per year.

Technological Advancement and Breakthroughs:³

This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of California's statutory energy goals by improving processes for interconnection, permitting, and finance of Zero Net Energy Advanced Energy Communities. The development of these communities is essential to build a cooperative network of DER projects across the state that will be coordinated, efficient, and effective at providing discretionary power from clean resources despite the temporal mismatch of generation and demand. In turn, this will permit the rapid expansion of all forms of renewable energy generation; reduce fossil fuel use and related emissions; and unburden the utilities of further costs of centralized energy infrastructure development, operation, and maintenance.

Agreement Objectives

The objectives of this Agreement are to:

- Design and engineer community distributed energy resources (DERs) to achieve Net Zero energy usage
- Design and engineer Electric Vehicle Supply Equipment (EVSE) to meet current and projected EV driver needs
- Study the target community electrical loads, usage patterns, and future state to determine needs for DER, EVSE, and other key AEC systems.
- Evaluate the need and capacity for EV charging and EVSE.
- Evaluate the opportunities for LED lighting substitution for conventional systems.

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).

³ 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.

- Demonstrate the capacity for AEC load management and demand response.
- Fully document the design of the AEC system design processes, data, components, and modeling of technical and financial performance.

III. TASK 1 GENERAL PROJECT TASKS (Mandatory Task)

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.

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

- Data sets will be in MS Access or MS Excel file format
- (version 2007 or later), or any other format approved by the CAM.

- Text documents will be in MS Word file format, version 2007 or later.
- Documents intended for public distribution will be in PDF file format.
- The Recipient must also provide the native Microsoft file format.
- Project management documents will be in Microsoft Project file format, version 2007 or later.

- **Software Application Development**

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

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

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.
- 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).
 - 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, 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)
 - 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 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.
- 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:

- 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:

- 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:

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

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 Develop a Master Community Design

The goals of this task are to select an AEC host site and develop an Initial Project Plan for that site.

The Recipient Shall:

- Identify possible host sites, working with City of Carson officials and other government agencies and taking into consideration available space for renewable energy as well as electrical capacities.
- Select final location as host site.
- Conduct site surveys for the selected host site.
- Develop the *Host Site Selection Process Report* which will include a detailed analysis of merits and limitations of the final selection.
- Coordinate with Southern California Edison (SCE) and city planning departments to incorporate their requirements and obtain necessary approvals of the AEC design concept. Submit copies of *Written Approvals from SCE and City Planning Departments*.
- Prepare and submit an *Initial Project Plan*, which will include but not be limited to: DER placement drawings, possible and suggested DER technologies, and suggested power outputs.
- Prepare a *CPR Report for Task 2* to include a description of the Initial Project Plan design.
- Participate in a CPR Meeting in accordance with Subtask 1.3.

Products:

- Host Site Selection Process Report
- Written Approvals from SCE and City Planning Departments
- Initial Project Plan
- CPR Report for Task 2

TASK 3 Determine Baseline Community Loads

The goals of this task are to install load monitoring equipment and map granular load data for the community.

The Recipient Shall:

- Install temporary load monitoring equipment, such as small indoor sensors, in existing facilities in the community and map granular load data for that community. This data will be used to create the Baseline Community Load Planning Report.
- Prepare and submit to the CAM a *Baseline Community Load Planning Report* for the selected site that includes:
 - Historical utility usage data for the community.
 - Installation notes on electrical load monitoring equipment that details the process in a way that enables replication of the engineering analysis for future AECs.
 - A summary of the material and equipment for all load monitoring components.
 - A load monitoring analysis that reflects the actual installation and monitored load results.

- Installation photos of the completed load monitoring equipment installation.
- A comparison of load monitoring equipment data with historical data from the utility.
- A load shedding plan that will be the basis for future ADR participation.

Products:

- Baseline Community Load Planning Report

TASK 4 Design EVSE

The goal of this task is to design an interconnected network of EV chargers based on the principles of achieving an AEC.

The Recipient Shall:

- Prepare and submit a *Draft Electric Vehicle Advanced Energy Community Report* to the CAM for review and comment that:
 - Defines the goals for the EV charging network.
 - Benchmarks the obstacles for EVSE adoption.
 - Documents possible options and recommendations to mitigate obstacles to EVSE integration into the community.
 - Analyzes existing and projected demographics of EV drivers in the community. The demographics will include arrival and departure information, energy consumption information, average power flow per charging session, and other related information collected by the EVSE network but will not include personal information about the EV drivers.
 - Analyzes the typical locations, durations, and intensity of EV charging in the community to help determine the type and number of proposed devices.
 - Predicts the community load profile for before and after the EVSE network is installed.
 - Determines benefits of the EVSE network, within the DER controlled Net Zero Community, for California rate payers.
 - Determines how EV adoption will contribute to mitigating transportation-related emissions in the ratepayer region.
 - Studies the financial, technical, permitting, utility, and community considerations that affect these designs.
 - Describes the features and capabilities of the EVSE network.
 - Provides tools and recommendations that will allow for more streamlined reviews of EVSE implementation by city planning and building departments in future AECs.
- Conduct, and submit a *Designing Electric Vehicle Supply Equipment Activities Summary* for, all design and collaboration activities necessary for the EVSE network including, but not limited to:
 - Developing models of EV charger throttling, sequencing, or binary control, and DER capacity to meet EVSE need.
 - Working collaboratively with the EVSE design group and DER designers to incorporate EV charging projections into DER sizing and performance specifications.
 - Designing the control system for operation of the proposed EVSE, which will include throttling, sequencing, or shedding or a combination of methods.
 - Determining the installation and operational costs associated with the EV charging network.
 - Collaborating with SCE on EVSE network development.
 - Designing an interconnected network of EVSE control with demand mitigation for end-user satisfaction with EV charging.
 - Developing a cloud control platform which can receive ADR signaling from SCE as is

- required for the SCE Charge Ready program.
- Investigating collaboration with programs for EV sharing and related mechanisms to improve the adoption of EV in the host community.
- Determining the maximum amount of power that can be allocated from the DER for EV charging while preserving the Net Zero usage goal.
- Involving local science, technology, engineering, and math (STEM) students in the design, analysis, and benefits of the EVSE network.
- Generating specifications, configurations, engineering planning, and all necessary installation plans to include in overall project design.
- Preparing EVSE Equipment Plan (draft and final), which will define the number, type, and proposed locations of EVSE.
- Once agreement has been reached between the Recipient and the CAM on the draft Electric Vehicle Advanced Energy Community Report, submit the *Final Electric Vehicle Advanced Energy Community Report*.

Products:

- Electric Vehicle Advanced Energy Community Report (draft and final)
- Designing Electric Vehicle Supply Equipment Activities Summary

TASK 5 DER Design

The goal of this task is to design DER system based on the principles of achieving an AEC.

The Recipient Shall:

- Prepare and submit a *Draft Advanced Energy Community Distributed Energy Resource Community Report* to the CAM for review and comment that:
 - Defines the goals for the DER system.
 - Benchmarks the obstacles for DER system.
 - Documents possible options and makes recommendations to mitigate obstacles to DER integration into the community.
 - Describes the features and capabilities of the recommended DER system.
 - Incorporates EV charging projections into DER sizing and performance specifications.
 - Predicts the community load profile for before and after the DER system is installed.
 - Details the installation and operational costs associated with the DER system.
 - Details benefits the benefits of the DER system for California rate payers.
 - Summarizes specifications, configurations, engineering planning, and all necessary installation plans to include in overall project design.
 - Includes pre-construction drawings stamped by the Professional Engineer responsible for the design.
 - Provides equipment and materials specifications, which will include EVSE equipment.
 - Includes a DER equipment plan, which will define the number, type, size, and proposed locations of the DER system.
 - Details the financial, technical, permitting, utility, and community considerations that affect these designs.
 - Includes recommendations for more streamlined reviews of DER system implementation by city planning and building departments.
- Conduct, and submit a *Designing Distributed Energy Resource Activities Summary* for, all design and collaboration activities with the DER design group necessary for the DER system including, but not limited to:
 - Collaborating with SCE on DER system development.
 - Performing engineering design for DER system.

- Designing an interconnected network of DER controls with demand mitigation.
- Developing a cloud control platform which can receive ADR signaling from SCE.
- Investigating collaboration and participation with CAISO.
- Involving local STEM students in the design, analysis, and benefits of the DER system
- Generating specifications, configurations, engineering planning, and all necessary installation plans to include in overall project design.
- Once agreement has been reached between the Recipient and the CAM on the Draft Advanced Energy Community Distributed Energy Resource Community Report, submit the *Final Advanced Energy Community Distributed Energy Resource Community Report*.
- Prepare a *CPR Report for Task 5* summarizing the EV Community Report in the context of the grant project as a whole
- Participate in a CPR Meeting in accordance with Subtask 1.3.

Products:

- Advanced Energy Community Distributed Energy Resource Community Report (draft and final)
- Designing Distributed Energy Resource Activities Summary
- CPR Report for Task 5

TASK 6: Financial Modeling

The goal of this task is to build a matrix of financial models for the recommended DER system.

The Recipient shall:

- Develop a *DER Value Matrix Report* that includes financial models and narratives showing the financial value of various DER equipment including, but not limited to, energy storage. The financial value will be framed in a way where investors/owners, utilities, and end-users of the selected AEC site are able to easily evaluate the expected financial returns and benefits of the AEC.
- Include comments and suggestions in the DER Value Matrix Report from end users collected in an anonymous matter that does not require collection of personal information.
- Work with investors to determine the best financial model for garnering capital.
- Report the value-add of incorporating energy storage into Photovoltaic (PV) systems for inclusion in the *Draft Advanced Energy Community Financial Model and Value-Added Summary*.
- Prepare and submit to the CAM a *Draft Advanced Energy Community Financial Model and Value-Added Summary* that summarizes the financial model and value-add findings. The Advanced Energy Community Financial Model and Value-Added Summary should include sections that specifically relate to the selected AEC site and can include the name of the site in the title.
- Prepare and submit a *Final Advanced Energy Community Financial Model and Value-Added Summary*, incorporating CAM comments.

Products:

- DER Value Matrix Report
- Advanced Energy Community Financial Model and Value-Added Summary (draft and final)

TASK 7: Streamlining of Permitting, Inspection, and Interconnection

The goals of this task are to work with SCE and city planning departments to streamline the permitting, inspection, and interconnection process of the recommended DER system.

The Recipient shall:

- Work with SCE to develop possible changes in the interconnection process.
- Develop an *Interconnection Recommendation Report* that will note existing hurdles and make recommendations on how to streamline the process.
- Work with city planners to develop possible changes in the permitting and inspection process.
- Develop an *Advanced Energy Community Permitting & Inspection Recommendation Report* that will note existing processes and hurdles and make recommendations on how to streamline the process. This report must also include a section that includes repeatable, sequenced, and standardized method for the permitting, inspection, and interconnection of DER.
- Work to define design and safety standards that will assist in the streamlining of the interconnection, permitting, and inspection process. These definitions will be included in both the *Interconnection Recommendation Report* and the *Advanced Energy Community Permitting & Inspection Recommendation Report*.
- Work through the CEQA review process and develop the *CEQA Report*. The CEQA report will include a written summary of all communications and findings with the city of Carson as it relates to CEQA.

Products:

- Interconnection Recommendation Report
- Advanced Energy Community Permitting and Inspection Recommendation Report
- CEQA Report

TASK 8 Evaluation of Project Benefits (Mandatory Task)

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.
 - 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.

Products:

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

TASK 9 Technology/Knowledge Transfer Activities (Mandatory Task)

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)
- Technology/Knowledge Transfer Report (draft and final)

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CHARGE BLISS, INC.

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-15-055 from GFO-15-312 with Charge Bliss, Inc. for a \$1,500,000 grant to design a replicable Advanced Energy Community that balances over three megawatts of photovoltaic generation with an electric vehicle charging network of at least 100 charging stations and stationary battery storage. This project will conduct planning, permitting, financial modeling and engineering design to bring this Advanced Energy Community to a shovel-ready state for a test site in the Los Angeles region; 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