

GRANT REQUEST FORM (GRF)CEC-270 (Revised 10/2015)
COMMISSION

CALIFORNIA ENERGY

New Agreement EPC-18-002 (To be completed by CGL Office)

ERDD	Benson Gilbert	51	916-445-5406
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California Clean Energy Fund dba CalCEF Ventures	77-0640000
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California Test Bed Initiative

12/10/2018	3/31/2023	\$ 10,999,701
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☐ ARFVTP agreements under \$75K delegated to Executive Director.

Proposed Business Meeting Date	12/10/2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Benson Gilbert	Time Needed:	5 minutes

Please select one list serve. EPIC (Electric Program Investment Charge)

Agenda Item Subject and Description

CALIFORNIA CLEAN ENERGY FUND DBA CALCEF VENTURES. Proposed resolution approving agreement EPC-18-002 with California Clean Energy Fund dba CalCEF Ventures for a \$10,999,701 grant to fund the development of the California Test Bed Initiative (CalTestBed). CalTestBed will accelerate the time it takes to move new energy technologies from the prototype stage to the pilot demonstration stage. As part of this project, the recipient will establish and manage a statewide network of eligible test beds and a complementary voucher program to ensure California energy entrepreneurs have access to testing and certification services needed to refine their technology prototypes based on user feedback; and verify their technology meets customer performance and safety specifications prior to field trials. (EPIC funds) Contact: Benson Gilbert

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, § 15306
☐ Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section:
 Agreement will fund collaboration efforts of organizations and entrepreneurs, information gathering and analysis, technology testing within existing facilities, information-based services, and small forums and other meetings consisting of the operation of existing public and private facilities involving negligible or no expansion.

☐ b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
 Check all that apply
☐ Initial Study ☐ Environmental Impact Report
☐ Negative Declaration ☐ Statement of Overriding Considerations
☐ Mitigated Negative Declaration

Legal Company Name:	Budget
The Grant Farm	\$ 225,954
Los Angeles Cleantech Incubator	\$ 75,000
TBD	\$ 99,500
TBD	\$ 99,500
	\$
	\$
	\$
	\$
	\$

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Legal Company Name:

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	17-18	301.001E	\$10,999,701
			\$
			\$
			\$
			\$
			\$
R&D Program Area:	EDMFO: EDMF		\$10,999,701
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Danny Kennedy	Name:	Danny Kennedy
Address:	436 14Th St Ste 1220	Address:	436 14Th St Ste 1220
City, State, Zip:	Oakland, CA 94612-2723	City, State, Zip:	Oakland, CA 94612-2723
Phone:	415-957-0167 /	Fax:	- -
E-Mail:	danny.kennedy@calcef.org	E-Mail:	danny.kennedy@calcef.org

☒ Competitive Solicitation Solicitation #: GFO-17-301
☐ First Come First Served Solicitation

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 type="checkbox"/> N/A <input checked="" type="checkbox"/> Attached

Agreement Manager

Date

Office Manager

Date

Deputy Director

Date

Exhibit A Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2	CPR	Develop CalTestBed Initiative Pre-Launch Materials
3		Launch CalTestBed Initiative
4		Target Customer Engagement
5		Required Reporting And Attendance For Group 1 Funding
6		Technology & Knowledge Transfer
7		Evaluation of Project Benefits

B. Acronym/Term List

Acronym/Term	Meaning
CalCEF	California Clean Energy Fund
CalSEED	California Sustainable Energy Entrepreneur Development Initiative
CalTestBed	California Test Bed Initiative
CalTestBed Network	California Test Bed Network
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
Energy Commission	California Energy Commission
CPR	Critical Project Review
CPUC	California Public Utilities Commission
CSU	California State University
DAC	Disadvantaged Community
DER	Distributed Energy Resources
DVBE	Disabled Veteran Business Enterprise
EPIC	Electric Program Investment Charge Program
EIE	Energy Innovation Ecosystem
Entrepreneur	An organization that applies for, or receives a, voucher. See Exhibit C for complete definition. May also be referred to as voucher recipients.
ERDD	Energy Research and Development Division
IOU	Investor Owned Utility
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LI	Low-Income
Plan	CalTestBed Initiative Plan
REIC	Regional Energy Innovation Clusters
TAC	Technical Advisory Committee
UCM	Uniform Contracting Mechanism

¹ Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review Meetings.

Exhibit A

Scope of Work

Acronym/Term	Meaning
UC	University of California
UCOP	University of California Office of the President

Additional terms are defined in the Agreement, including but not limited to definitions located in Exhibits C and D.

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

A. Purpose of Agreement

The purpose of this Agreement is to fund the development of the California Test Bed Initiative (CalTestBed) voucher program. The Project Team will develop, implement, and manage a voucher program that will include a Uniform Contracting Mechanism (UCM) that will enable California Distributed Energy Resources (DER) entrepreneurs to have access to the testing and certification facilities needed to refine their technology prototypes, meet customer specifications, and accelerate the successful commercialization of California's most promising DER technologies, including but not limited to distributed renewable generation resources, energy efficiency, energy storage, and demand response technologies.

B. Problem/ Solution Statement

Problem

California's early-stage clean energy entrepreneurs face a series of significant hurdles in accessing testing, validation, and certification facilities as they attempt to move their technologies from prototype to pilot and demonstration scale. This problem must be addressed at this time because clean energy innovations that are critical to helping to meet California's ambitious energy goals are stalling out in the product-testing, -validation and -certification phases and are slowed or stopped on their path to successful commercialization in California's energy marketplace.

Test beds are existing facilities that provide these testing, validation and certification services for DER technologies. Test beds primarily focus on hardware technologies, though they may also be able to support testing of software in relationship with hardware technologies. A host of clean energy test bed facilities exist in California, including those contained within the University of California (UC) and California State University (CSU) systems, as well national laboratory test beds, utility test beds, and privately-owned test bed operations. Currently, these test beds are largely disorganized, disparate, disconnected, and underfunded. Further, little or no ecosystem or infrastructure is in place to provide clean energy innovators with a roadmap for understanding how to identify, access, solicit, negotiate, contract, and fund these test bed services.

Solution

The CalTestBed Initiative is a voucher program that will dramatically advance the rate of technological and scientific innovation in California by assisting California's clean energy entrepreneurs in gaining access to critical testing, validation and certification facilities as they move their innovative technologies from prototype to pilot-scale demonstration. Streamlining access to these facilities by providing vouchers to California DER entrepreneurs, the CalTestBed Initiative will assist entrepreneurs in refining their technology prototypes, better meeting customer specifications, and, ultimately, accelerating some of California's most promising early-stage clean energy technologies on the pathway to successful commercialization.

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C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are:

- Test and refine standardized entrepreneur-facing services in the starting cohort of testbeds as a first step towards all of California's testbeds refining and adopting a suite of entrepreneur support services that will attract early stage clean energy entrepreneurs to bring their product ideas to California for development and testing.
- Develop, manage, and administer a voucher-type UCM that accelerates the most promising clean technologies by making funding available to test beds.
- Add additional testbed and certification resources to the project, as needed.
- Create an online portal for all current and future clean energy entrepreneur-facing services in one accessible location.
- Facilitate the adoption of an industry-accepted intake process in which entrepreneurs are trained to navigate and plan for the testbed phase and use the facilities and services;
- Develop industry-accepted customer feedback procedures that include the needs of Disadvantaged Communities and are integrated into the testbed system.
- Develop and implement an outreach program to inform disabled veteran-owned businesses of California Energy Commission (Energy Commission) workshops, training, and funding opportunities;
- Creating a transparent process that fairly and neutrally engages, coordinates and optimizes the entirety of services and assets available to clean energy entrepreneurs.

Ratepayer Benefits:²

This Agreement will result in the ratepayer benefits of greater electricity reliability, lower costs, and increased safety.

Increased Reliability

- Increase electricity reliability by increasing the array of energy efficient technologies that decrease demand on the grid.
- Testing new clean energy technologies for failure in testbeds increases the reliability of the end product for the California ratepayer.

Lower Costs

- Lower costs to the ratepayer by accelerating new clean energy technologies to the market that offer energy efficiency and lower costs to the ratepayers.
- Avoided cost to California ratepayers of current slow and stalling entrepreneur-facing services.
- Faster commercialization of clean energy products reduces costs to the ratepayer of older non-renewable and inefficient energy products.

² California Public Resources Code, Section 25711.5(a) requires projects funded by the EPIC program to result in ratepayer benefits. The California Public Utilities Commission (CPUC), 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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- Lower costs of ratepayers' future investment in early clean energy technology testing as a result of a highly sophisticated California Testbed Network (CalTestBed Network) and their adoption of a suite of services supportive to accelerating the early stage entrepreneur through testing to bring technologies to market that help California achieve its clean energy goals.

Increased Safety

- Increase safety by streamlining the ratepayer / customer feedback process among testbeds to better meet customer safety specifications.
- Coordinate standardization of safety testing and certifications for testbeds in CalTestBed.
- Coordinated testbeds can share and respond better to a growing number of decentralized power vendors and their needs for safety testing for clean energy technologies.

Technological Advancement and Breakthroughs:³

This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by advancing an inspiring long-term vision in which clean tech entrepreneurs can be introduced to a coordinated ecosystem of streamlined entrepreneur-facing services established across California's testbeds. The project team will lead the promotion and outreach of the voucher program; the development and dissemination of the voucher results to the broader EPIC community and specifically back to the target customers; and lead the development of a standardized contracting mechanism for the testbeds and managed labs.

Agreement Objectives

The objectives of this Agreement in relation to Market Facilitation are:

- Formalize a CalTestBed Network that begins with the entirety of test beds⁴ within the project team, and seek to add more test bed assets both inside and outside of the existing testbeds, as appropriate and beneficial;

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.

⁴ The initial set of participating testbeds consists of the Center for the Built Environment (CBE), California Institute for Energy and the Environment, Center for Information Technology Research in the Interest of Society (CITRIS), Western Cooling Efficiency Center, California Lighting Technology Center, Green Transportation Battery Laboratory, Irvine Smart Grid Demonstration Project (ISGD), Advanced Power and Energy Testbed Program (APEP), National Fuel Cell Research Center (NFCRC), WINSmartGrid, Smart Grid Energy Research Center (SMERC), UC Advanced Solar Technology Institute, Center for Environmental Research and Technology (CE-CERT), Southern California Research Initiative for Solar Energy, Sustainable Integrated Grid Initiative (SIGI), Sustainable Power and Energy Center (Microgrid), UC San Diego Urban Mobility Testbed and Laboratory, Solid Oxide Fuel Cell Laboratory (SOFC), System Identification and Control Laboratory (SICL), Kleissl Urban Energy Efficiency Laboratory, Laboratory for Energy Storage and Conversion (LESC), ARPA-E CHARGES Project, Microgrid & Energy Research Park, Institute for Energy Efficiency, Materials Research Laboratory, Independent testbed facilities, FLEXLAB, Demand to Grid Laboratory (D2G), Appliance Standards Test Chambers, Lawrence Livermore National Laboratory (LLNL) and Lawrence Berkeley National Laboratory (LBNL). With the exception of

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- Disburse \$8.8 million in vouchers within the Agreement period to approximately 70 of the most promising new DER technology entrepreneurs for two tiers of projects ⁵;
- Create a streamlined UCM to ensure that the program serves to accelerate, rather than decelerate, commercialization of early stage clean energy technologies;
- Work with Energy Commission staff to devise a plan that ensures promising technologies are elicited from a wide range of demographics and communities
- Manage entrepreneur-facing services developed for and evaluated by Entrepreneurs.

LLNL and LBNL, the test labs listed above are within campuses of the University of California and are part of the UC system. LBNL is a U.S. Department of Energy (DOE) facility, operated by the University of California, Berkeley Campus, under agreement with U.S. DOE. LLNL is a U.S. DOE facility, operated by Lawrence Livermore National Security.

⁵ The Recipient's initial assumptions for a two-tier structure is as follows, subject to revisions and refinement based on program learnings, which will be incorporated into CalTestBed Initiative Plan updates and Annual Solicitation Schedules as appropriate: Tier One would have a budget range of \$10,000 - \$50,000 per voucher. Tier One would be suitable for technologies that have very few variations of their prototypes in development, and Entrepreneurs who desire a quick, comparative assessment of their performance relative to a standard set of conditions. A Tier One engagement could typically be 3 months. Tier Two would have a budget range of \$50,000 - \$300,000 per voucher. Technologies without an existing, pre-defined standardized test protocol, or that require significant test set-up, would be eligible for Tier Two. A typical Tier Two engagement could be between 9 months and 1 year.

Exhibit A Scope of Work

II. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

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

The Recipient shall:

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

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

For products that require a final version only

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

For all products

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

Instructions for Submitting Electronic Files and Developing Software:

- **Electronic File Format**

- Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the Energy Commission’s software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

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

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- 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);
- Critical Project Review meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);

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- 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:

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- 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.

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The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
 - Disposition of any state-owned equipment.
 - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
 - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).
 - Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
 - "Surviving" Agreement provisions such as repayment provisions and confidential products.
 - Final invoicing and release of retention.
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
- Prepare a *Schedule for Completing Agreement Closeout Activities*.
- Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written Products

REPORTS AND INVOICES

Subtask 1.5 Progress Reports and Invoices

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

The Recipient shall:

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
 - Summarize progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions, including a financial report on Match Fund and in-state expenditures.

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Products:

- Progress Reports
- Invoices

Subtask 1.6 Final Report

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the Style Manual provided by the CAM.

Subtask 1.6.1 Final Report Outline

The Recipient shall:

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

Recipient Products:

- Final Report Outline (draft and final)

CAM Product:

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

Subtask 1.6.2 Final Report

The Recipient shall:

- Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Style Manual, and Final Report Template provided by the CAM with the following considerations:
 - Ensure that the report includes the following items, in the following order:
 - Cover page (**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.

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- 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 is 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.

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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. 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

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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

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- 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.

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The Recipient shall:

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

Products:

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

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III. TECHNICAL TASKS

Note:

By mutual agreement, the following language is not incorporated by reference from CalCEF's grant application, Attachment 4, pages 15-16:

"By maximizing their standing resource sharing agreements, the sister family of organizations—CalCEF Innovations, CalCEF Ventures, and CalCEF Catalyst, with its wholly owned subsidiary CalCharge—are poised to execute and manage CalTestBed."

The purpose of this exclusion is to emphasize that California Clean Energy Fund (d.b.a., CalCEF Ventures) is the Recipient, and the affiliates mentioned above (i.e., CalCEF Innovations, CalCEF Catalyst, and CalCharge), are not subcontractors or subrecipients.

TASK 2 DEVELOP CALTESTBED INITIATIVE PRE-LAUNCH MATERIALS

The goals of this task are to develop and finalize all materials necessary to launch the CalTestBed Initiative.

Subtask 2.1 CALTESTBED INITIATIVE PLAN

The goal of this subtask is to develop the CalTestBed Initiative Plan (Plan) to serve as the strategic and operation plan for the CalTestBed Initiative, and develop and manage the technical aspects of the CalTestBed Initiative in accordance with the Plan.

The Recipient shall work with the University of California Office of the President (UCOP) in developing the Plan. The UCOP's role will be as a partner to coordinate the various UC Campuses and test labs and LBNL regarding the CalTestBed Initiative. The UCOP is not a subcontractor; nor it is providing match funding or in-kind match services to the Project.

The Recipient shall:

- Develop and submit a *Draft CalTestBed Initiative Plan* to the CAM for review and comment. The *CalTestBed Initiative Plan* should include:
 - Description of the procedures, processes, tools and resources that will be used to implement, develop, and manage the CalTestBed Initiative in a manner that achieves the Goals and Objectives of the agreement.
 - Description of all participating test bed facilities. Descriptions should include, at a minimum, technical capabilities of each facility, range of DER technologies that can be tested at each facility.
 - Procedure for including additional test facilities beyond the initial set of participating facilities.
- Incorporate CAM feedback and submit the *Final CalTestBed Initiative Plan* for CAM approval.
- Develop and maintain the tools and resources identified in the Plan.
- Provide or make available on an as-needed-basis the tools and resources for use by applicants and recipients.
- Develop, maintain, and update, as needed, a *CalTestBed Network List* of technical experts that, upon request from the Recipient, will provide:
 - Independent technical reviews to be used by the CalTestBed-TAC in evaluating applications for awards.
 - Technical consulting to recipients of awards.
- The CalTestBed Network List shall include the following for each technical expert as permissible while achieving compliance with evolving data privacy standards:

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- Name
- Affiliation
- Area(s) of expertise
- Contact information
- Services provided to CalTestBed: technical review of proposals, technical consulting.

Products:

- CalTestBed Initiative Plan (draft and final)
- CalTestBed Network List

Subtask 2.2 CALTESTBED APPLICATION AND AWARDEE PROCESS

The goal of this subtask is to develop application materials and on-line application forms to solicit applications for inclusion in the CalTestBed Initiative.

The Recipient shall:

- Develop and submit to the CAM a draft *CalTestBed Initiative Application Manual and FAQ* that communicates the aspects of the CalTestBed Initiative necessary for entrepreneurs and researchers to produce quality applications for receiving vouchers. This will be a public document that will describe the following to potential applicants (i.e., Entrepreneurs):
 - The solicitation release and notification process;
 - An intuitive and streamlined application system for applicants;
 - The eligibility requirements for applicants;
 - The application screening and selection criteria;
 - The award recommendation and Energy Commission approval process;
 - The process for unsuccessful applicants to request debriefings.
 - The contract management process
- Incorporate CAM feedback and submit a final *CalTestBed Initiative Application Manual and FAQ*
- Utilize existing research assets developed by California Energy Commission in parallel solicitations on scientific breakthroughs, possible future scientific breakthroughs, and their potential applications to energy for inclusion in the CalTestBed Initiative Application Manual.
- Create on-line *Application Forms* for the CalTestBed Initiative in accordance with the final *CalTestBed Initiative Application Manual and FAQ*.
- Develop an *Annual Solicitation Schedule(s)* and schedule up to three solicitations per year as directed by the CAM, taking into account the number of voucher applications received, the budget, and the status of program administration workload.
- Seek approval from the Energy Commission for the solicitation focus areas as each new solicitation is developed, ensuring all solicitations are consistent with the EPIC Triennial Investment Plans. Upon approval of the solicitation package, develop, release, and advertise the solicitation to promote geographically and organizationally diverse applicants in accordance with the CalTestBed Initiative Plan developed under Subtask 2.1.
- Develop target awardees for initial solicitation rounds, which may include, but not be limited to, CalSEED Awardees, Small Business Innovation Research and Advanced Research Projects Agency-Energy Awardees, and National Renewable Energy

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Laboratory (NREL) Demonstration Program Awardees; and develop *REIC Awardee Nomination and Evaluation Plan* for four Regional Energy Innovation Clusters (REIC), including Los Angeles Regional Energy Innovation Cluster, Central Valley Regional Energy Innovation Cluster, San Diego Regional Energy Innovation Cluster and Bay Area Regional Energy Innovation Cluster.

- Participate in a CPR meeting and prepare a *CPR Report* prior to the public launch of the CalTestBed Initiative

Products:

- CalTestBed Initiative Application Manual and FAQ (draft and final)
- Application Forms (draft and final)
- Annual Solicitation Schedule#1-5
- REIC Awardee Nomination and Evaluation Plan
- CPR Report

Subtask 2.3 Develop Universal Contract Mechanism (UCM)

The goal of this subtask is to develop standard contract terms and formats for scopes of work, budgets and instructions, personnel classifications and rates, and invoices for voucher recipients and Test Beds. The idea is to prepare a set of template user agreements (or purchase order-type agreements) and related documents (a.k.a. contract package) to govern the relationships between Entrepreneurs, Test Beds, and the Recipient.

If testing of a technology involves testing energy technology performance in buildings outside of a laboratory-type setting or testing of the buildings themselves (e.g., how the building energy usage changes), then the testing may involve utility customer information that may be “Personal Information” under the Information Practices Act. Under these circumstances, pursuant to Exhibit D, if any information under this Agreement is “Personal Information” as defined under the Information Practices Act (see California Civil Code section 1798.3(a) and Exhibit D section 3 of this Agreement for the definition of “Personal Information”) then Recipient must, and ensure any subcontractor, partner, Test Bed, or Entrepreneur who collects or otherwise has access to the Personal Information must, comply with the Information Practices Act (California Civil Code sections 1798 et seq.) when performing activities under this Agreement.

The Recipient shall:

- Develop and submit to CAM *Draft User Agreement for Entrepreneurs* and *Draft User Agreement for Test Beds*. The user agreements will govern the relationship between a successful CalTestBed Initiative Entrepreneur that receives a voucher and a Test Bed facility. The *Draft User Agreement for Test Beds* will also cover the payment relationship between the Recipient and the Test Beds, along with several provisions similar to certain flow-down requirements for subcontractors. Because these user agreements will be essential to success of the Project, the Recipient will work closely with the Energy Commission staff in developing the user agreements. In addition, the UCOP and LBNL will be consulted during development of the user agreements. More than one draft may be necessary. Items to be included in the user agreements shall include, but are not limited to:
 - Services, facilities, and equipment the Test Bed will provide to the Entrepreneur;
 - Intellectual property rights regarding any innovations developed at a TestBed facility;
 - Confidentiality of data and information;

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- Consequences for Test Beds and Entrepreneurs who fail to carry out agreed upon tasks or otherwise breach the user agreement;
 - Conflicts of interest
- Incorporate CAM feedback and submit *Final User Agreement for Entrepreneurs* and *Final User Agreement for Test Beds*.
- Develop *Draft Standard Terms and Conditions for Entrepreneurs*. The terms and conditions will govern the relationship between CalTestBed Entrepreneurs and the Recipient.
- Incorporate CAM feedback and submit *Final Standard Terms and Conditions for Entrepreneurs*.
- Develop a *Uniform Contract Package for Entrepreneurs*, which will provide the necessary templates and instructions for CalTestBed Entrepreneurs to be accepted into the CalTestBed Initiative. The *Uniform Contract Awardee Package* will include standardized templates for documents that include, but are not limited to:
 - Scopes of work
 - Project timelines
 - Budgets
 - Invoices with instructions on how to list items such as personnel classifications and rates

Products:

- User Agreement for Entrepreneurs (draft and final)
- User Agreement for Testbeds (draft and final)
- Standard Terms and Conditions for Entrepreneurs (draft and final)
- Uniform Contract Package for Entrepreneurs (draft and final)

(Note: The draft names of the various types of agreements listed in this subsection may be altered, or a different number of standardized agreements may be the final result. Whatever the final set of agreements and related documents, they must comply with the requirements in this agreement, including this subtask. More than one draft may be necessary)

Subtask 2.4 CALIFORNIA TESTBED NETWORK

The goal of this subtask is to coordinate and organize a CalTestBed Network of public and private energy test beds in California to streamline funding for the delivery of technology testing, validation, and certification services to early stage clean energy entrepreneurs.

The Recipient shall:

- Publish *Directory of California Energy Test Beds* that identifies their facilities, capacities, services, and point of contacts. Update as needed.
- Prepare and submit to the CAM a *Draft Business Requirements Document* which will discuss the branding, and design, of public-facing materials describing the CalTestBed Initiative
- Incorporate CAM feedback and submit a *Final Business Requirements Document*
- Publish a website in accordance with the Final Business Requirements Document. The website should organize and present all test bed services provided by the testbeds; present relevant news and upcoming opportunities; detail the process of receiving a voucher as a CalTestBed Entrepreneur; provide downloadable instructions for managing and invoicing a successful Award; guide for planning tests in the testbeds.

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Products:

- Directory of California Energy Test Beds
- Business Requirements Document (draft and final)

Subtask 2.5 APPLICANT RECRUITMENT AND OUTREACH

The goal of this task is to create, implement, and manage an outreach process to assure a robust pool of clean energy entrepreneurs that can apply for the CalTestBed Initiative.

The Recipient shall:

- Create and submit to CAM *Draft Marketing Materials* to encourage participation in the CalTestBed Initiative including by underrepresented groups. The marketing materials should be consistent with the Final Business Requirements Document developed under Subtask 2.4. Examples of marketing materials may include:
 - Entrepreneur Success Story video testimonials
 - Brochures
 - Pamphlets
 - Postcards
- Incorporate feedback from CAM and submit *Final Marketing Materials*.
- Develop and submit to CAM *Draft Presentation Materials* to present CalTestBed Initiative at public events, which could include but are not limited to Energy Commission events.
- Incorporate feedback from CAM and submit *Final Presentation Materials*.
- Promote the CalTestBed Initiative to organizations with a presence throughout California, including, but not limited to, non-governmental organizations, federal/state agencies, university partners, test beds, California-based incubator and accelerators, and the EIE.
- Promote and coordinate CalTestBed Initiative with EIE events to determine if a role exists for CalTestBed at the events.
- Coordinate introduction of the CalTestBed Network at four locations in California.
- Develop and submit to CAM *Draft Press Notifications and Media Releases* regarding the CalTestBed Initiative and upcoming solicitations.
- Incorporate CAM feedback and submit *Final Press Notifications and Media Releases*
- Distribute *Email Notifications* to Energy Commission email distribution list for solicitation round if requested by the CAM.

Products:

- Marketing Materials (draft and final)
- Presentation Materials (draft and final)
- Press Notifications and Media Releases (draft and final)
- Email Notifications

TASK 3.0 LAUNCH CALTESTBED INITIATIVE

The goal of this task is to publicly launch the CalTestBed Initiative – including accepting applicants into the initiative, match-making them with the appropriate test bed facility, managing the voucher program, and reporting on the progress of Entrepreneurs who received vouchers.

Subtask 3.1 APPLICANT SCORING AND REVIEW

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The goal of this subtask is to screen applications for eligibility; initiate project evaluation and selection processes; and recommend selected projects for funding to the CAM.

The Recipient shall:

- Develop *Scorer and Reviewer Forms* in accordance with the Final CalTestBed Initiative Application Manual and FAQ developed under Subtask 2.2 for CalTestBed applicant reviewers.
- Identify a Technical Review Team to evaluate applicant proposals and submit a *List of Technical Review Team Members* that includes the team members' names, companies, and email addresses.
 - The Technical Review Team is responsible for independently reviewing, evaluating, and scoring CalTestBed applications received.
 - The Technical Review Team may be comprised of individuals including, but not limited to, those identified in the CalTestBed Network List (developed under Subtask 2.1), members of the TAC, and Energy Commission staff, with the following exception. No one, including employees, officers, directors, and consultants to the California Clean Energy Fund and/or any of its affiliates, shall be permitted to participate in the Technical Review Team, unless such an individual has no actual or foreseeable conflict of interest and no circumstances that may be perceived as a conflict of interest, as demonstrated in documentation provided to the CAM prior to that person's involvement on the Technical Review Team.
- Conduct at least one training session for the Technical Review Team prior to the start of application scoring.
 - The training session will cover, at a minimum, scoring policies, procedures, conflicts of interest, and expected timeline consistent with the CalTestBed Initiative Application Manual and FAQ
- Ensure that members of the Technical Review Team do not have conflicts of interest with any of the applicants they are scoring.
 - Provide proof to the CAM that members of the Technical Review Team do not have actual or foreseeable conflicts of interest with any applicants they are scoring, nor circumstances that may be perceived as a conflict of interest.
- Distribute eligible applications to Technical Review Team and ensure that scoring is conducted properly.
 - Submit to the CAM a *Recommended Entrepreneur Package* after the Technical Review Team has finished its review of eligible applications. The *Recommended Entrepreneur Package* should include the following information for each recommended voucher recipient:
 - Entrepreneur's name (e.g., corporate name)
 - Project Manager
 - Organization
 - Address and Project Location (if different from address)
 - Status, if applicable, as Disabled Veteran Business Enterprise (DVBE), minority-, women-, or LGBT-owned business (not mandatory, only if available based on optional survey questions)
 - Requested Voucher Amount
 - Requested Test Bed facility
 - Project description
 - Description of how the project will benefit California IOU electric ratepayers

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- A sequential identification number
- A composite score and rank order
- A funding justification
- A project scope of work, and schedule
- A project budget showing all proposed expenditures.
- A fact sheet for each proposed voucher recipient with a Project Summary; description of Technology Readiness Level (TRL); discussion of Entrepreneur Qualifications, Objectives and Needs; and discussion of prospective customer development and commercialization plan for distribution to audiences identified in other tasks.

Products:

- List of Technical Review Team Members
- Scorer and Reviewer Forms (draft and final)
- Entrepreneur Packages

Subtask 3.2 PAIRING AWARDEES WITH TESTBED FACILITIES

The goal of this task is to implement a system to match CalTestBed Entrepreneurs with participating test beds once the Entrepreneurs' vouchers are approved by the Energy Commission, and to aid Entrepreneurs with executing the required documents to begin testing their technology at a testbed. This pairing process will support an efficient and transparent process that can guide Entrepreneurs to the best available test bed resources for their proposed innovation.

The Recipient shall:

- Utilize the Directory of California Energy Test Beds developed in Subtask 2.4 to inform participating entrepreneurs of the test bed facilities available within the voucher program.
- Distribute Entrepreneur fact sheets to participating test beds once Entrepreneur has received approval from the Energy Commission.
- Develop and use recurring *CalTestBed Webinars* to introduce participating test beds to Entrepreneurs.
- Support Entrepreneurs in completing the Uniform Contract Package for Entrepreneurs developed under Subtask 2.3.
- Support Entrepreneurs in executing the User Agreement for Entrepreneurs, developed under Subtask 2.3; and ensure Entrepreneurs understand all aspects of the Standard Terms and Conditions for Entrepreneurs, developed under Subtask 2.3.
- Submit to CAM, an *Executed Entrepreneur Award Package* for each approved Entrepreneur, which shall include:
 - A Completed Uniform Contract Package for Entrepreneurs
 - Executed copy of the User Agreement for Entrepreneurs
 - Executed copy of the User Agreement for Testbeds

Products:

- CalTestBed Webinars
- Executed Entrepreneur Award Package

Subtask 3.3 VOUCHER AGREEMENT AND AWARD MANAGEMENT

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The goal of this task is to actively manage CalTestBed Entrepreneurs, including award evaluation and outcomes analysis.

The Recipient shall:

- Develop and manage an evaluation of the quality of service provided to Entrepreneurs by each test bed facility and the experience of the test bed facilities as partners in the voucher program.
 - Contract third-party evaluator to evaluate the quality of service provided to the Entrepreneurs by each test bed facility and the experience of the test bed facilities as partners in the voucher program. Compile the findings and provide recommend improvements in quality of service in a *Summary Results of Voucher Program Evaluation for Entrepreneurs and Test Beds Report*.
- Develop and submit to the CAM *Draft Tracking and Evaluation Tools* to measure and track the progress of Entrepreneurs and the voucher program as a whole. Examples of metrics to include in the tools include, but are not limited to:
 - Public, high-level, non-confidential data query to filter and sort data
 - User survey data
 - Real-time updates of available and expended voucher funds
 - Map the geographic array of voucher applications and awards as well as participating test beds with overlays of Disadvantaged Communities.
 - Array of types of technologies funded by the voucher program.
 - Number of Entrepreneurs that successfully graduate from the Research and Development phase to Pilot phase.
 - Amount of time it takes for Entrepreneurs to complete the Test Bed phase and its various components including: research testbeds, application for voucher, matchmaking process, intake process, testing, and customer feedback.
 - Number of vouchers from underrepresented and/or Disadvantaged Community groups.
- Incorporate CAM feedback and develop *Final Tracking and Evaluation Tools*

Products:

- Summary Results of Voucher Program Evaluation for Entrepreneurs and Test Beds
- Tracking and Evaluation Tools (draft and final)

Task 4 TARGET CUSTOMER ENGAGEMENT

The goals of this task are to engage target customer groups and to advise Entrepreneurs as to the potential commercial value of their innovation; refine prototypes in order to meet customer specifications; and provide feedback to Entrepreneurs on test bed results and outcomes.

Subtask 4.1 Entrepreneur Information Dissemination

The goal of this task is to distribute information about Entrepreneurs to various stakeholders and include Entrepreneurs at public events throughout the state to attract potential customers and investors.

The Recipient shall:

- Distribute Entrepreneur Fact Sheets to UC/CSU/Utility Energy Efficiency Partnership for customer feedback and refinement.
- Integrate Entrepreneur Presentations on their technologies at a conference with the approval of the CAM.

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- Preview technologies to customer groups for feedback and refinement of specifications at public events, which may include, but are not limited to the following:
 - Annual CalCharge Battery Summit bringing together energy storage and power electronics customers and developers. Hosted at Lawrence Berkeley Lab and Lawrence Livermore National Lab.
 - Los Angeles CleanTech Institute's Southern California Conference of IOUs to showcase DER technologies.
- Utilize the following methods to have customers in the listed groups preview the technologies and provide feedback.
 - Technology demonstration and pitches
 - Develop and distribute *Report on CalTestBed Technologies* that discusses
 - Description of technologies tested
 - Description of testing performed
 - Lessons learned
 - Future needs
 - Customer / technology matchmaking
- Coordinate customer feedback to technology developers by collecting surveys from each group that previewed technologies and delivering the information to each CalTestBed Entrepreneur. Summarize the process and customer feedback in *Report on Customer Feedback Process*.
- Develop informal USTestBed Network to engage emerging state test bed efforts around the country in regular meetings to discuss best practices, evaluate emerging trends and opportunities and common goals, and summarize in *USTestBed Network Annual Symposium Memos*
- Provide a *List of Participating Organizations in USTestBed Network*. Update as needed.

Products:

- Report on CalTestBed Technologies
- Report on Customer Feedback Process
- USTestBed Network Annual Symposium Memos
- List of Participating Organizations in USTestBed Network

Subtask 4.2 TECHNOLOGY DEMONSTRATION

The goal of this subtask is to connect Entrepreneurs to pilot and demonstration opportunities post prototype, but before commercialization.

The Recipient shall:

- Conduct evaluation of pilot and demonstration opportunities
- Survey utility, private and governmental (local, regional, state and federal) programs that provide opportunities to pilot DER technologies in operational environments to evaluate pilots or demonstrations of Entrepreneur technologies.
- Invite Entrepreneurs to demonstrate their technologies at customer events listed in Subtask 2.5.
- Summarize the process of supporting technology demonstrations in *Summary Report of Pilot Programs*.
- Host annual CalTestBed Network Symposium and prepare an *Annual CalTestBed Network Symposium Memo* detailing the event and action items following the event.

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Products:

- Summary Report of Pilot Programs
- Annual CalTestBed Network Symposium Memo

Task 5 REQUIRED REPORTING AND ATTENDANCE FOR GROUP 1 FUNDING

The goal of this task is to fulfill additional requirements set for Group 1 under GFO-17-301.

The Recipient shall:

- Produce and submit to CAM an annual *Draft CalTestBed Initiative Annual Report* that details:
 - Vouchers distributed
 - What services were provided by test bed facilities
 - High-level summary of the results of completed tests, excluding Entrepreneur Confidential Information
 - Full scale pilots resulting from voucher program
 - Evaluation of the test bed facilities used
 - Survey of the Entrepreneurs as to their satisfaction with the CalTestBed Initiative
 - Types of feedback given by customers
 - Summary of the tools and resources developed as identified in the CalTestBed Initiative Plan developed under Subtask 2.1
 - Summary of the findings derived from the Final Tracking and Evaluation Tools developed under Subtask 3.3
 - Efforts to sustain CalTestBed after funding expires.
- Incorporate CAM feedback and develop a *Final CalTestBed Initiative Annual Report*
- Attend an annual California Energy Innovation Strategy Meeting and, after the event, submit a *Strategy Meeting Action Items Memo*.

Products:

- CalTestBed Initiative Annual Report (draft and final)
- Strategy Meeting Action Items Memo

Task 6 TECHNOLOGY & KNOWLEDGE TRANSFER

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 Report* that includes:
 - A case study documenting the steps taken to create, implement, and manage the CalTestBed Initiative.
 - Lessons learned and recommendations for developing similar voucher programs in other areas (e.g. other states).
 - 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

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documents were disseminated.

- Additional areas as determined by the CAM.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California Energy Commission.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre-and post-technology installation at the project sites or related project photographs.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

Products:

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

Task 7 EVALUATION OF PROJECT BENEFITS

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

The Recipient shall:

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:
 - For Product Development Projects and Project Demonstrations:
 - Published documents, including date, title, and periodical name.
 - Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
 - Greenhouse gas and criteria emissions reductions.
 - Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
 - Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
 - A discussion of project product downloads from websites, and publications in technical journals.
 - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.

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- 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

IV. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.

RESOLUTION NO: 2018-1210-12

STATE OF CALIFORNIA

**STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

**RESOLUTION - RE: CALIFORNIA CLEAN ENERGY FUND DBA CALCEF
VENTURES**

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-18-002 with California Clean Energy Fund dba CalCEF Ventures for a \$10,999,701 grant to fund the development of the California Test Bed Initiative (CalTestBed). CalTestBed will accelerate the time it takes to move new energy technologies from the prototype stage to the pilot demonstration stage. As part of this project, the recipient will establish and manage a statewide network of eligible test beds and a complementary voucher program to ensure California energy entrepreneurs have access to testing and certification services needed to refine their technology prototypes based on user feedback; and verify their technology meets customer performance and safety specifications prior to field trials; 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 December 10, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat