





California Energy Commission May 8, 2025 Business Meeting Backup Materials for The Northern California Land Trust, Inc.

The following backup materials for the above-referenced agenda item are available in this PDF packet as listed below:

- 1. Proposed Resolution
- 2. Grant Request Form
- 3. Scope of Work

RESOLUTION NO: 25-0508-03g

STATE OF CALIFORNIA

STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: The Northern California Land Trust, Inc.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves agreement EPC-24-051 with The Northern California Land Trust, Inc. for a \$8,000,000 grant. This agreement will support the build-out an all-electric affordable housing, mixed-use development in Berkeley featuring a suite of advanced energy assets and efficiency strategies and seek to validate the scalability and replicability of zero-net energy building design to advance decarbonization goals; and

FURTHER BE IT RESOLVED, that the Executive Director or their designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC 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 CEC held on May 8, 2025.

AYE: NAY: ABSENT: ABSTAIN:		
	Dated:	
	Kristine Banaag Secretariat	



STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION

GRANT REQUEST FORM (GRF)

A. New Agreement Number

IMPORTANT: New Agreement # to be completed by Contracts, Grants, and Loans Office.

New Agreement Number: EPC-24-051

B. Division Information

1. Division Name: ERDD

2. Agreement Manager: Molly Mahoney

3. MS-:None

4. Phone Number: 916-776-0790

C. Recipient's Information

1. Recipient's Legal Name: The Northern California Land Trust, Inc.

2. Federal ID Number: 23-7380534

D. Title of Project

Title of project: Woolsey Gardens

E. Term and Amount

Start Date: 5/16/2025
 End Date: 5/31/2028
 Amount: \$8,000,000.00

F. Business Meeting Information

- 1. Are the ARFVTP agreements \$75K and under delegated to Executive Director? No
- 2. The Proposed Business Meeting Date: 5/8/2025.
- 3. Consent or Discussion? Consent
- 4. Business Meeting Presenter Name: Molly Mahoney
- 5. Time Needed for Business Meeting: 0 minutes.
- 6. The email subscription topic is: Electric Program Investment Charge (EPIC).

Agenda Item Subject and Description:

The Northern California Land Trust, Inc. Proposed resolution approving agreement EPC-24-051 with The Northern California Land Trust, Inc. for a \$8,000,000 grant, and adopting staff's recommendation that this action is exempt from CEQA. This agreement will support the build-out of an all-electric, affordable housing, mixed-use development in Berkeley featuring a suite of advanced energy assets and efficiency strategies and seek to validate the scalability and replicability of zero-net energy building design to advance decarbonization goals. (EPIC Funding) Contact: Molly Mahoney



G. California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?

Yes

If yes, skip to question 2.

If no, complete the following (PRC 21065 and 14 CCR 15378) and explain why Agreement is not considered a "Project":

2. If Agreement is considered a "Project" under CEQA answer the following questions.

a) Agreement IS exempt?

Yes

Statutory Exemption?

No

If yes, list PRC and/or CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

PRC section number: None CCR section number: None Categorical Exemption?

Yes

If yes, list CCR section number(s) and separate each with a comma. If no, enter "None" and go to the next question.

CCR section number: Cal. Code Regs., tit. 14, § 15301; 15303

Common Sense Exemption? 14 CCR 15061 (b) (3)

No

If yes, explain reason why Agreement is exempt under the above section. If no, enter "Not applicable" and go to the next section.

California Code of Regulations, title 14, section 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond that existing at the time of the lead agency's determination, are categorically exempt from the provisions of CEQA. All of the components for this project will be installed at an existing commercial building site in Berkeley. Woolsey Gardens will be an 8-story multi-family, mixed-use development located within an existing structure in Berkeley. The existing structure was previously used for commercial purposes but is now vacant. The project consists of the installation of solar photovoltaics that will be mounted to the roof of the existing structure. These modifications will not result in any expansion of capacity beyond the currently existing plot. For these reasons, the proposed work will not have any significant effect on the environment and falls under section 15301.

Cal. Code Regs., tit. 14, sec. 15303 provides that projects which consist of construction and location of limited numbers of new, small facilities or structures;



installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure, are categorically exempt from the provisions of CEQA. This project consists of the installation of roof-mounted solar and storage microgrid equipment, in-unit electric circuit breakers, and demand flexibility equipment such as electric vehicle charging stations with demand flexibility capabilities, wi-fi enabled thermostats, and smart electrical panels. All such installations will be located within the existing structure (or in the case of solar photovoltaics, on the roof of such existing structure). For these reasons, the project falls within section 15303 and will not have a significant impact on the environment.

This project does not involve impacts on any particularly sensitive environment; does not involve any cumulative impacts of successive projects of the same type in the same place that might be considered significant; does not involve unusual circumstances that might have a significant effect on the environment; will not result in damage to scenic resources within a highway officially designated as a state scenic highway; the project site is not included on any list compiled pursuant to Government Code section 65962.5; and the project will not cause a substantial adverse change in the significance of a historical resource. Therefore, none of the exceptions to categorical exemptions listed in CEQA Guidelines section 15300.2 apply to this project, and this project will not have a significant effect on the environment.

For these reasons, the proposed work will not have any significant effect on the environment and falls under sections 15301 and 15303.

b) Agreement IS NOT exempt.

IMPORTANT: consult with the legal office to determine next steps.

No

If yes, answer yes or no to all that applies. If no, list all as "no" and "None" as "yes".

Additional Documents	Applies
Initial Study	No
Negative Declaration	No
Mitigated Negative Declaration	No
Environmental Impact Report	No
Statement of Overriding Considerations	No
None	Yes



H. Is this project considered "Infrastructure"?

No

I. Subcontractors

List all Subcontractors listed in the Budget (s) (major and minor). Insert additional rows if needed. If no subcontractors to report, enter "No subcontractors to report" and "0" to funds.

Subcontractor Legal Company Name	CEC Funds	Match Funds
Natural Capitalism Solutions Inc (dba Clean Coalition)	\$ 99,999	\$ 0
Solomon, Cordwell, Buenz & Associates, Inc.	\$ 573,621	\$349,329
Swinerton Builders	\$ 99,000	\$ 0
BKF Engineers	\$ 10,000	\$ 0
TBD - Construction Management	\$ 115,000	\$ 0
TBD - Research Analysis	\$ 215,000	\$ 0
TBD - Community Based Organization	\$ 85,000	\$ 0
TBD - Mechanical, Electrical, and Plumbing Engineer of Record	\$ 161,908	\$0
TBD – Solar Consulting	\$0	\$8,000

J. Vendors and Sellers for Equipment and Materials/Miscellaneous

List all Vendors and Sellers listed in Budget(s) for Equipment and Materials/Miscellaneous. Insert additional rows if needed. If no vendors or sellers to report, enter "No vendors or sellers to report" and "0" to funds. **Delete** any unused rows from the table.

Vendor/Seller Legal Company Name	CEC Funds	Match Funds
TBD - Commissioning the Microgrid	\$10,000	\$10,000
TBD - Legal Firm	\$ 15,000	\$50,000
TBD - Utilities & Trench	\$ 3,200	\$3,200
Rhoades Planning Group, Inc.	\$2,000	\$5,200

K. Key Partners

List all key partner(s). Insert additional rows if needed. If no key partners to report, enter "No key partners to report." **Delete** any unused rows from the table.

Key Partner Legal Company Name	
No key partners to report	



L. Budget Information

Include all budget information. Insert additional rows if needed. If no budget information to report, enter "N/A" for "Not Applicable" and "0" to Amount. **Delete** any unused rows from the table.

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
EPIC	23-24	301.001K	\$ 8,000,000

TOTAL Amount: \$ 8,000,000

R&D Program Area: TIEB: EDMF

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: Not applicable

M. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Wendy Boyle

Address: 1800 Garden St

City, State, Zip: Santa Barbara, CA 93101-1006

Phone: 408-316-5595

E-Mail: wendy@clean-coalition.org

2. Recipient's Project Manager

Name: Ian Winters

Address: 3120 Shattuck Ave

City, State, Zip: Berkeley, CA 94705-1823

Phone: 510-548-7878 x343 E-Mail: ian.winters@nclt.org

N. Selection Process Used

There are three types of selection process. List the one used for this GRF.

Selection Process	Additional Information
Competitive Solicitation #	GFO-20-305p3
First Come First Served Solicitation #	Not applicable
Other	Not applicable



Attached Items

1. List all items that should be attached to this GRF by entering "Yes" or "No".

Item Number	Item Name	Attached
1	Exhibit A, Scope of Work/Schedule	Yes
2	Exhibit B, Budget Detail	Yes
3	CEC 105, Questionnaire for Identifying Conflicts	Yes
4	Recipient Resolution	No
5	Awardee CEQA Documentation	No

Approved By

Individuals who approve this form must enter their full name and approval date in the MS Word version.

Agreement Manager: Molly Mahoney

Approval Date: March 20, 2025

Branch Manager: Anthony Ng **Approval Date:** March 25, 2025

Director: Jonah Steinbuck (delegated to Branch Manager)

Approval Date: N/A

I. TASK AND ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Design Review, Permitting and Finalization
3	Х	Finance
4		Procurement
5		Interconnection Planning & Interconnection Approval
6		Installation
7	Х	Commissioning
8		Measurement & Verification
9		Community Engagement & Demand Reduction Program
10		Evaluation of Project Benefits
11		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical project Review
DER	Distributed Energy Resources
EPIC	Electric Program Investment Charge
PV	Photovoltaic
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 the enhanced electrification and distributed energy resource (DER) deployment of Woolsey Gardens. This adaptive re-use development is a low-income, affordable, mixed-use multifamily building using the community land trust model. The goal of this development is to provide low-income residents with positive, equitable results while creating a zero-carbon, climate-resilient community. This project will demonstrate how to incorporate cutting-edge energy-efficiency tools, technologies, and construction techniques creatively and affordably into the planning and building of equitable, cost-competitive, mixed-use developments. It will also serve as a model for what a flexible, alternative,

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.

and interconnected community could look like. The project also includes the supporting efforts to navigate the metering agreements, DER configuration, enhanced commissioning, and tenant engagement required to operationalize the benefits of the property.

B. Problem/ Solution Statement

Problem

The availability of affordable housing is a significant challenge in California and the nation at large. Achieving the state goals for a net zero carbon economy by 2045 will require new builds to get as close to carbon neutrality as possible. Replicable showcase projects are critical to teach developers around the state how to create cost-effective, energy-efficient communities that also enhance health outcomes and lessen the energy load on the state's underprivileged populations. To add, the difficult regulatory climate of today makes it more and more difficult to design, configure, install, operate, and unlock value for developers and customers when it comes to providing integrated demand side management and alignment of energy use reduction incentives with unit owners. Navigating the process, documenting results, and sharing a scalable strategy for low-income multifamily developers requires a dedicated team to successfully achieve.

An improved approach for mixed-use affordable housing is required to address these serious issues California is currently facing. To satisfy the project's resilience and zero net energy goals, the project team is working with experts to navigate this process. Although the design satisfies these goals, much care must still be taken to guarantee that the property is built according to the plan after permissions are granted.

Solution

Woolsey Gardens will be an 8-story urban infill, multi-family, mixed-use project in Berkeley, California. Woolsey Gardens will provide 65 low-income households with homeownership opportunities through co-op shares and limited equity condominiums. The project will serve as a model for the future of multifamily living in California by showcasing and validating cutting-edge engineering, design, and building techniques together with a variety of cutting-edge energy technology.

Woolsey Gardens will also specifically seek to provide ownership opportunities to Black, Indigenous, and People of Color community members who were formerly displaced or are at risk of displacement. Ultimately, this project will increase the number of new low-income affordable housing built in the City of Berkeley, contributing to ownership and wealth-building opportunities in Berkeley's low-income communities. This housing will be affordable to a range of incomes, sustainable, and carbon-free on a net basis. Policymakers, scholars, developers, builders, property managers, and other stakeholders will get project knowledge to address California's housing and climate issues concurrently and promote reduced costs, replicability, and a better understanding of building decarbonization.

The development is set to incorporate advanced assets, including a microgrid equipped with energy management software, solar photovoltaic (PV) systems, a battery energy storage system, electric vehicle charging capabilities, demand flexibility equipment, and mass timber construction. The implementation of these innovative technologies will highlight their ability to lower living costs for residents and operational costs for property owners, thereby acting as a driving force for their integration within the affordable housing sector.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Generate and realize construction documents for the buildout of an all-electric, zeroemission, mixed-use, 65-unit residential project that benefits a disadvantaged and lowincome vulnerable community and integrates passive, active, and interactive emerging
 technologies, innovative building features, and advanced construction practices to meet
 Electric Program Investment Charge Program (EPIC) Program goals.
- Build an adaptive re-use development for an affordable housing, mixed-use development, including a suite of advanced energy assets such as solar photovoltaics and battery storage systems.
- Reduce the tenants' net energy use between 4 and 9 PM while still maintaining reliable, renewable electricity from on-site sources for critical Tier 1 loads.
- Obtain building permit(s) needed to commence construction and a certificate of occupancy to complete construction.
- Obtain financing commitments in addition to Build Phase funding to fund the total development costs required for project feasibility.
- Collect operational data to measure and verify that the project performance metrics are attained; and
- Demonstrate how a high-tech, zero-emission residential development can provide affordable housing that serves some of the most vulnerable populations.

Ratepayer Benefits:² This Agreement will yield significant advantages for ratepayers, including improved electricity reliability, reduced costs, and enhanced safety. The project aims to bolster reliability through high energy efficiency, thereby decreasing the energy load in comparison to a similarly sized building. It will incorporate rooftop photovoltaic systems and energy storage solutions to minimize reliance on grid energy, particularly during peak demand periods, while ensuring a consistent level of electricity availability. Additionally, residents will benefit from an on-site microgrid equipped with islanding capabilities, which will provide emergency power during outages and further prove the "value or resilience" (a standardized methodology for valuing the resilience benefits of solar and community microgrids)². Furthermore, the absence of on-site natural gas combustion will contribute to superior indoor air quality.

<u>Technological Advancement and Breakthroughs</u>: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 decarbonizing building stock using a combination of low-carbon intensity design strategies including multiple high-efficiency mechanical systems and materials and techniques. The public investment in this initiative will yield data regarding

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.

feasibility and cost-effectiveness, as well as the performance of high energy efficiency design strategies and all-electric infrastructure. This project will act as a practical case study, illustrating the concrete advantages of implementing all-electric, zero-carbon, and energy-efficient solutions in multi-family housing.

The sharing of this knowledge with stakeholders, developers, builders, and policymakers will provide valuable insight for effective implementation, thereby promoting the widespread adoption of energy-efficient technologies across California's housing sector. The findings will also contribute to the evolution of California's energy code and building standards.

Agreement Objectives

The objectives of this Agreement are to:

- Build an adaptive re-use, multi-family development with 65 units in Berkeley, California. The units will be designated as permanently affordable housing for low-and-moderate income households, targeting those in the 80% area median income range.
- Create a stewardship program facilitating the tenure of units to include a mix of 100% permanently affordable units at a range of income levels, using limited equity housing cooperative and limited equity condominium ownership types.
- Deploy a suite of advanced energy technologies in a new-construction, multi-family housing development designed to be all-electric, allowing building loads to regulate during high-demand periods from 4 to 9 p.m., assuring resource availability and thereby lowering energy costs.
- Develop and implement a "Comprehensive Demand Reduction Program" that will reduce residents' energy consumption by 5 to 10% of expected consumption and make best efforts to receive a PG&E rate structure aligning with that Comprehensive Demand Reduction Program.
- Obtain a Leadership in Energy and Environmental Design (LEED)latinum Certification.
- Install an estimated 512 kW Battery Energy Storage System and an estimated 184 kW solar photovoltaic (PV) system with an integrated controller. The objective is to ensure that 100% of the project's annual solar generation offsets 100% of annual expected electricity consumption.
- Install an estimated 72 smart circuit breaker panelboards with separately controllable circuit breakers, each with integral power and energy metering.
- Utilize mass timber construction to reduce the building's embodied carbon compared to a standard buildout.
- Collect operational data to measure and verify that the project performance metrics are attained.

III. TASK 1 GENERAL PROJECT TASKS

PRODUCTS

Subtask 1.1 Products

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the Project Schedule (Part V). All products submitted which will be viewed by the public, must comply with the accessibility requirements of Section 508 of the federal Rehabilitation Act of 1973, as amended (29 U.S.C. Sec. 794d), and regulations

implementing that act as set forth in Part 1194 of Title 36 of the Federal Code of Regulations. All technical tasks should include product(s). 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 California Energy Commission's (CEC) 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.

The following describes the accepted formats for electronic data and documents provided to the CEC 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.
- 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
- 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 CEC'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, and other CEC staff relevant to the Agreement. The Recipient's Project Manager and any other individuals deemed necessary by the CAM or the Project Manager shall participate in 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., Teams, Zoom), with approval of the CAM.

The Kick-off meeting will include discussion of the following:

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
- An updated Project Schedule;
- Terms and conditions of the Agreement;
- Invoicing and auditing procedures;
- 0 Travel:
- Equipment purchases;
- Administrative and Technical products (subtask 1.1);
- CPR meetings (subtask 1.3);
- 0 Monthly Calls (subtask 1.5)
- Quarterly Progress reports (subtask 1.6) 0
- Final Report (subtask 1.7)
- Match funds (subtask 1.8);
- Permit documentation (subtask 1.9);
- Subawards(subtask 1.10);

- o Technical Advisory Committee meetings (subtasks 1.11 and 1.12);
- Agreement changes;
- o Performance Evaluations; and
- Anv other relevant topics.
- Provide *Kick-off Meeting Presentation* to include but not limited to:
 - Project overview (i.e. project description, goals and objectives, technical tasks, expected benefits, etc.)
 - Project schedule that identifies milestones
 - List of potential risk factors and hurdles, and mitigation strategy
- Provide an Updated Project Schedule. Match Funds Status Letter, and Permit Status *Letter*, 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:

- Kick-off Meeting Presentation
- Updated Project Schedule (if applicable)
- Match Funds Status Letter (subtask 1.8) (if applicable)
- Permit Status Letter (subtask 1.9) (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 CEC 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 CEC 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 CEC.

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 may 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 CEC, 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 and submit 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.
- 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 with a list of expected CPR participants in advance of the CPR meeting. If applicable, the agenda may 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. A determination of unsatisfactory progress This may result in project delays, including a potential Stop Work Order, while the CEC determines whether the project should continue.
- 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)

CAM Products:

- CPR Agenda(s)
- 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 CEC 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.
- o The administrative portion of the meeting will involve a discussion with the CAM of the following Agreement closeout items:
 - Disposition of any procured equipment.

- The CEC'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 copies of All Final Products organized by the tasks in the Agreement.

Products:

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

MONTHLY CALLS. REPORTS AND INVOICES

Subtask 1.5 Monthly Calls

The goal of this task is to have calls at least monthly between the CAM and Recipient to verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to verbally summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, to verify match funds are being proportionally spent concurrently or in advance of CEC funds or are being spent in accordance with an approved Match Funding Spending Plan, to form the basis for determining whether invoices are consistent with work performed, and to answer any other questions from the CAM. Monthly calls might not be held on those months when a quarterly progress report is submitted or the CAM determines that a monthly call is unnecessary.

The CAM shall:

- Schedule monthly calls.
- Provide questions to the Recipient prior to the monthly call.
- Provide call summary notes to Recipient of items discussed during call.

The Recipient shall:

- Review the questions provided by CAM prior to the monthly call
- Provide verbal answers to the CAM during the call.

Product:

Email to CAM concurring with call summary notes.

Subtask 1.6 Quarterly 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 Quarterly 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 reporting period, 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. Progress reports are due to the CAM the 10th day of each January, April, July, and October. The Quarterly Progress Report template can be found on the ECAMS Resources webpage available at: https://www.energy.ca.gov/media/4691
- Submit a monthly or quarterly *Invoice* on the invoice template(s) provided by the CAM.

Recipient Products:

- **Quarterly Progress Reports**
- Invoices

CAM Product:

Invoice template

Subtask 1.7 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. When creating the Final Report Outline and the Final Report, the Recipient must use the CEC Style Manual provided by the CAM.

Subtask 1.7.1 Final Report Outline

The Recipient shall:

 Prepare a Final Report Outline in accordance with the Energy Commission Style Manual provided by the CAM.

Recipient Products:

Final Report Outline (draft and final)

CAM Products:

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

Subtask 1.7.2 Final Report

The Recipient shall:

Prepare a *Final Report* for this Agreement in accordance with the approved Final Report Outline, Energy Commission Style Manual, and Final Report Template provided by the

CAM with the following considerations:

- o 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)
- Submit a draft of the Executive Summary to the TAC for review and comment.
- Develop and submit a Summary of TAC Comments on Draft Final Report received on the Executive Summary. For each comment received, the Recipient will identify in the summary the following:
 - Comments the Recipient proposes to incorporate.
 - Comments the Recipient does propose to incorporate and an explanation for why.
- 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.
- Incorporate all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a Written Responses to Comments explaining why the comments were not incorporated into the final product.
- Submit the revised *Final Report* electronically with any Written Responses to Comments within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the CAM specifies a longer time period or approves a request for additional time.

Products:

- Summary of TAC Comments on Draft Final Report
- Draft Final Report
- Written Responses to Comments (if applicable)
- Final Report

CAM Product:

Written Comments on the Draft Final Report

MATCH FUNDS, PERMITS, AND SUBAWARDS

Subtask 1.8 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. 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 application that led to the CEC 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 application that led to the CEC 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.
 - If different from the solicitation application, provide 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 1.9 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 <u>no permits</u> 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 1.10 Obtain and Execute Subawards and Agreements with Site Hosts

The goals of this subtask are to: (1) procure and execute subrecipients and site host agreements, as applicable, required to carry out the tasks under this Agreement; and (2) ensure that the subrecipients and site host agreements are consistent with the Agreement terms and conditions and the Recipient's own contracting policies and procedures.

- Execute and manage subawards and coordinate subrecipients activities in accordance with the requirements of this Agreement.
- Notify the CEC in writing immediately, but no later than five calendar days, if there is a reasonable likelihood the project site cannot be acquired or can no longer be used for the project.
- Incorporate this Agreement by reference into each subaward.
- Include any required Energy Commission flow-down provisions in each subaward, in
 addition to a statement that the terms of this Agreement will prevail if they conflict with
 the subaward terms. Submit a Subaward and Site Letter to the CAM describing the
 subawards and any site host agreement needed or stating that no subawards or site
 host agreements are required.
- If requested by the CAM, submit a draft of each *Subaward* required to conduct the work under this Agreement.
- Notify and receive written approval from the CAM prior to adding any new subrecipient (see the terms regarding subrecipient additions in the terms and conditions).

Products:

- Subaward and Site Letter
- Draft Subawards (if requested by the CAM)
- Final Subawards (if requested by the CAM)

TECHNICAL ADVISORY COMMITTEE

Subtask 1.11 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
 - o 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.
- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate, to the extent the TAC members feel is appropriate, on behalf of the project in its effort to build partnerships, governmental support, and relationships with a national spectrum of influential leaders.
- Ask probing questions that ensure a long-term perspective on decision-making and progress toward the project's strategic goals.

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 1.12.
- 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 1.12 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* for each TAC Meeting that include any recommended resolutions of major TAC issues.

The TAC shall:

- Help set the project team's goals and contribute to the development and evaluation of its statement of proposed objectives as the project evolves.
- Provide a credible and objective sounding board on the wide range of technical and financial barriers and opportunities.
- Help identify key areas where the project has a competitive advantage, value proposition, or strength upon which to build.
- Advocate on behalf of the project in its effort to build partnerships, governmental support and relationships with a national spectrum of influential leaders.
- Ask probing questions that ensure a long-term perspective on decision-making and progress toward the project's strategic goals.

- Review and provide comments to proposed project performance metrics.
- Review and provide comments to proposed project Draft Technology Transfer Plan.

Products:

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

Subtask 1.13 Project Performance Metrics

The goal of this subtask is to finalize key performance targets for the project based on feedback from the TAC and report on final results in achieving those targets. The performance targets should be a combination of scientific, engineering, techno-economic, and/or programmatic metrics that provide the most significant indicator of the research or technology's potential success.

The Recipient shall:

- Complete and submit the project performance metrics section of the Initial Project Benefits Questionnaire, developed in the Evaluation of Project Benefits task, to the CAM.
- Present the draft project performance metrics at the first TAC meeting to solicit input and comments from the TAC members.
- Develop and submit a TAC Performance Metrics Summary that summarizes comments received from the TAC members on the proposed project performance metrics. The TAC Performance Metrics Summary will identify:
 - TAC comments the Recipient proposes to incorporate into the *Initial Project* Benefits Questionnaire, developed in the Evaluation of Project Benefits task.
 - TAC comments the Recipient does not propose to incorporate with and explanation why.
- Develop and submit a Project Performance Metrics Results document describing the extent to which the Recipient met each of the performance metrics in the Final Project Benefits Questionnaire, developed in the Evaluation of Project Benefits task.
- Discuss the Project Performance Metrics Results at the Final Meeting.

Products:

- TAC Performance Metrics Summary
- Project Performance Metrics Results

IV. TECHNICAL TASKS

TASK 2 - DESIGN REVIEW. PERMITTING AND FINALIZATION

The goals of this task are to finalize the EPIC design plans as needed and develop construction documents in collaboration with the contractor, design team, and municipal building department to obtain approvals to ensure the project remains on schedule.

The Recipient shall:

- Prepare and submit a set of Final Design Plans, including but not limited to:
 - Architectural design development.
 - Mechanical, electrical, and plumbing system design.
 - Energy asset integration design, including emerging energy technologies, solar microgrids, and demand flexibility components.
 - Any additional pro-environmental factors.
- Based on the final designs of energy assets, provide results in the Build-Phase Building Energy and Emissions Performance Workbook, including but not limited to:
 - PV array rated power
 - Battery energy storage capacity
 - Site energy use intensity
 - Greenhouse gas emissions

Products:

- Final Design Plans
- Build-Phase Building Energy and Emissions Performance Workbook

TASK 3 - FINANCE

The goals of this task are to obtain commitments from debt and equity partners to close on construction financing necessary to fund the project. This task also aims to provide evidence that the project has secured all necessary regulatory approvals and incentives needed to begin construction.

- Execute a Construction Lender(s) Commitment Letter, a formal binding agreement between a lender and a borrower
- If applicable, execute a Tax Credit Equity Investor Commitment Letter(s), or other Equity Investor Commitment Letters for third parties providing equity investment.
- Execute a Lender Commitment Letter(s), as needed to fill financing gaps, or other Equity **Investor Commitment Letters**
- Apply for state and federal incentives (as may exist) for energy components, such as Building Initiative for Low-Emissions Development Programncentive, Self-Generation Incentive Program, etc., and obtain Approval Letters for State and Federal Incentives for Energy Components, if applicable and available.
- Provide Tax Determination Forms and Receipts for IRA Funds from the IRS, as applicable and available.
- Prepare a CPR Report #1 and participate in a CPR meeting, per Task 1.3.
- Close escrow on construction financing.

Products:

- Construction Lender(s) Commitment Letter
- Tax Credit Equity Investor Commitment Letter(s) (or other Equity Investor Commitment Letter(s))
- Lender Commitment Letter(s) (or other Equity Investor Commitment Letter(s))
- Approval Letters for State and Federal Incentives for Energy Components
- Tax Determination Forms and Receipts for IRA Funds from the IRS
- CPR Report #1

TASK 4 - PROCUREMENT

The goal of this task is to secure the required equipment, energy assets, and materials identified in the final development design following the EPIC grant design requirements.

Subtask 4.1 – Planning and Procurement of the Solar + Storage Microgrid System

The Recipient Shall:

- Engage vendors to identify one(s) that can provide the solar + storage microgrid equipment meeting established design phase criteria.
- Execute Service Provider Arrangement Document, a long-term contract between two parties related to designing, installing, and maintaining the system
- Prepare and submit a *Solar Microgrid Procurement Plan* detailing equipment, anticipated timeline for delivery, and the remediation plan for equipment delay as applicable.
- Procure all equipment, materials, and technology and receive delivery of, verify completeness of, and quality check all equipment.
- Summarize the final procurement details in the *Final Microgrid Procurement Memorandum*.

Products:

- Service Provider Arrangement Document
- Solar Microgrid Procurement Plan
- Final Microgrid Procurement Memorandum

Subtask 4.2 Planning and Procurement of Demand Flexibility Equipment

- Engage vendors to identify one(s) that can provide the demand flexibility equipment that meets the GFO-20-305 p3 design phase criteria.
- Execute Service Provider Arrangement Document, a long-term contract between two parties related to designing, installing, and maintaining the systemPrepare Demand Flexibility Equipment Procurement Plan detailing equipment, the anticipated timeline for delivery, and remediation plan for equipment delay as applicable.
- Procure all equipment, materials, and technology including but not limited to:
 - Automated demand flexibility-related equipment and technologies such as electric vehicle charging stations with demand flexibility capabilities.
 - Manual demand flexibility-related equipment and technologies, such as in-unit tablets or mobile apps used for immediate changes by customers for load management and demand flexibility events, Wi-Fi-enabled thermostats, and smart electrical panels.
- Receive delivery of, verify completeness of, and quality check all equipment.

 Summarize the final procurement details in the Final Demand Flexibility Equipment Procurement Memorandum, including but not limited to the vendors, models, operation strategy, quality checks, and costs of all demand flexibility-related components.

Products:

- Service Provider Arrangement Document
- Demand Flexibility Equipment Procurement Plan
- Final Demand Flexibility Equipment Procurement Memorandum

Subtask 4.3 - Planning and Procurement of Miscellaneous Advanced Energy Features and **Advanced Construction Materials**

The Recipient shall:

- Engage vendors to identify one(s) that can provide the miscellaneous advanced energy features and advanced construction materials meeting established design phase criteria.
- Execute a Service Provider Arrangement Document, a long-term contract between two parties related to designing, installing, and maintaining the system. Prepare Miscellaneous Advanced Energy Features and Advanced Construction Materials Procurement Plan detailing equipment, the anticipated timeline for delivery, and the remediation plan for equipment delay as applicable.
- Procure all equipment, materials, and technology reimbursable with grant funds and that were not listed in Subtasks 4.1 to 4.2, such as heat pump water heaters, heat pump dryers, etc. from the preliminary list included in the Design Phase Application. The final list will be determined under as-built conditions.
 - Receive delivery of, verify completeness of, and quality check all equipment.
- Summarize the final procurement details in the Final Miscellaneous Advanced Energy Features and Advanced Construction Materials Procurement Memorandum, including but not limited to the vendors, models, operation strategy, and quality checks.

Products:

- Service Provider Arrangement Document
- Miscellaneous Advanced Energy Features and Advanced Construction Materials Procurement Plan
- Final Miscellaneous Advanced Energy Features and Advanced Construction Materials Procurement Memorandum

TASK 5 - INTERCONNECTION PLANNING AND INTERCONNECTION APPROVAL

- Submit a Rule 21 Pre-application Support Request and provide a Pre-Application Confirmation.
- Negotiate with the local utility around islanding configurations and benefits.
- Submit the Interconnection Application, a written notice to a utility company of plans to construct, install and operate any system which will be connected to the grid and must be submitted prior to the start of construction. Provide a Permission to Operate (PTO) from the utility.
- Develop an Interconnection Case Study to show how community developers can work with their local utilities on interconnecting similar communities to the grid.

Products:

- Pre-application Confirmation
- Interconnection Application
- Permission to Operate
- Interconnection Case Study

TASK 6 - INSTALLATION

The goal of this task is to complete and report on all construction activities.

The Recipient shall:

- Install the advanced energy technologies as outlined in Task 4 in compliance with CEC build requirements outlined in GFO-20-305p3, and applicable federal, state, county, and local acts, codes, and laws.
- Capture *High-Quality Digital Photos of Construction Progress*, at minimum, the site before work begins, work occurring, and work near completed or completed.
- Prepare and submit an *Installation Report* to include the following:
 - A final schedule of completed milestones
 - A description of lessons learned including any major changes between planning and completion

Products:

- High Quality Digital Photos of Construction Progress
- Installation Report

TASK 7 - COMMISSIONING

The goals of this task are to test and commission the grant-funded energy assets and interconnect with the local investor-owned utility.

- Apply for or verify approval of all applicable operational permits and schedule inspections.
- Prepare and submit a Commissioning Plan comprised of:
 - A risk assessment and associated mitigation strategy
 - A description of the equipment to be tested
 - o A description of the methodology to test the identified equipment
 - A list of goals and objectives for each test
 - A description of the quality control and quality assurance practices for the test methodology
- Implement all aspects of the Commissioning Plan.
- Commission the grant-funded energy assets and interconnect with the local investorowned utility
- Perform necessary testing to receive utility signals for grid-interactive energy components, such as demand flexibility and the microgrid.
- Prepare and submit a Commissioning Report to include the following:
 - A final schedule of completed milestones
 - A description of lessons learned, including the results of the interconnection, metering arrangement, and system commissioning process
 - A summary of major project changes and any unique challenges or lessons faced with bringing the development's system online.

- A description of the results with commissioning testing including commissioning testing forms completed by Contractor.
- Obtain a Certificate of Occupancy and Notice of Completion before the end term of the build phase agreement.
- Prepare an Estimated Sales Pricing, showing the rents and/or sales prices for affordable and/or low-income units that confirm that the development dedicates a minimum of 20% of the total units to affordable housing with at least 10% of the total units being dedicated to lower-income units or providing evidence of local affordability requirements via the approved entitlements.
- Obtain a Title Report or Deed, showing evidence of deed restrictions or ground lease structure (if applicable).
- Prepare and provide a Written Notification of Completion of Commissioning, which confirms that the grant-funded energy assets have been successfully put into operation
- Submit High Quality Digital Photos of Completed Development and all applicable advanced energy assets.
- Prepare a CPR Report #2 and participate in a CPR per task 1.3.

Products:

- Commissioning Plan
- Commissioning Report
- Certificate of Occupancy
- Notice of Completion
- **Estimated Sales Pricing**
- Title Report or Deed
- Written Notification of Completion of Commissioning
- High Quality Digital Photos of Completed Development
- CPR Report #2

TASK 8 - MEASUREMENT AND VERIFICATION

The goal of this task is to measure and verify performance of grant-funded equipment to ensure adherence to minimum operational standards, assure quality, and validate performance.

- Prepare and provide a detailed *Measurement and Verification (M&V) Plan* to include:
 - o A description of monitoring and data collection equipment.
 - A description of data to be measured, to what purpose, and in what terms.
 - Identification of required data acquisition criteria, such as sampling frequency for various parameters.
 - A description of the analysis methods to be employed. Analysis methods will allow for measurement of all performance criteria listed in the Agreement Objectives section of this Scope of Work.
 - Independent, third-party measurement and verification services to be employed, if applicable.
 - Identification of additional information that will be necessary to complete the measurement and verification task (e.g., costs for implementing baseline design vs. proposed design).
 - Identification of system operating modes and/or procedures to enable comparison of the baseline design vs. proposed design.

- Engage a third party to prepare a *Third-Party Measurement and Verification Report* to document the following items:
 - The operational performance, including operational constraints, interactions with the grid, and response to grid emergencies.
 - Barriers and solutions to the deployment of the emerging energy technologies, demand flexibility technologies, the microgrid, and EVSE, including but not limited to technical complications, operational considerations, financing options, permitting requirements, and regulatory activities.
 - Measurements showing achievement of the project goals and objectives.
- Leverage demand flexibility equipment (including microgrid controller and smart water meter) to measure and verify general energy saving and demand response performance.
- Install/integrate monitoring software or hardware.
- Collect 6-12 months of data documenting grant-funded equipment operation
- Digitally Integrate HEMs

Products:

- Measurement and Verification (M&V) Plan (Draft and Final)
- Third-Party Measurement and Verification Report

TASK 9 - COMMUNITY ENGAGEMENT & DEMAND REDUCTION PROGRAM

The goals of this task are to proactively identify and address knowledge and awareness gaps relating to the existence and use of the advanced energy systems; continue a robust, meaningful dialogue with community members and new residents; and analyze and evaluate racial and socioeconomic realities in new affordable housing. This task will also implement a Comprehensive Demand Reduction Program to foster an energy-conscious culture for the tenants of the building.

The Recipient shall:

- Engage residents through educational workshops and community meetings.
- Create and execute a Community Engagement Memorandum including but not limited to information related to hosting a Build Phase community engagement session to solicit community input and share project details.
- Develop and implement the Comprehensive Demand Reduction Program and produce a Demand Reduction Report that will summarize and analyze the building and resident energy consumption data.
- Develop Resident Educational Materials to raise awareness about the functionality and benefits of the unique features of the development.
- Facilitate energy-saving competitions and incentives for the tenants.
- Develop Building Operator Educational Materials geared toward the use and understanding of the energy-related features of the development.

Products:

- Community Engagement Memorandum
- Demand Reduction Report
- Resident Educational Materials
- Building Operator Educational Materials

TASK 10: EVALUATION OF PROJECT BENEFITS

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

The Recipient shall:

- Complete the Initial Project Benefits Questionnaire. The Initial Project Benefits Questionnaire shall be initially completed by the Recipient with 'Kick-off' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Complete the Annual Survey by January 31st of each year. The Annual Survey includes but is not limited to the following information:
 - Technology commercialization progress
 - New media and publications
 - Company growth
 - Follow-on funding and awards received
- Complete the Final Project Benefits Questionnaire. The Final Project Benefits Questionnaire shall be completed by the Recipient with 'Final' selected for the 'Relevant data collection period' and submitted to the CAM for review and approval.
- Respond to CAM questions regarding the questionnaire drafts.
- Complete and update the project profile on the CEC's public online project and recipient directory on the Energize Innovation website (www.energizeinnovation.fund), and provide Documentation of Project Profile on EnergizeInnovation.fund, including the profile link.
- If the Prime Recipient is an Innovation Partner on the project, complete and update the organizational profile on the CEC's public online project and recipient directory on the Energize Innovation website (www.energizeinnovation.fund), and provide Documentation of Organization Profile on EnergizeInnovation.fund, including the profile link.

Products:

- Initial Project Benefits Questionnaire
- Annual Survey(s)
- Final Project Benefits Questionnaire
- Documentation of Project Profile on EnergizeInnovation.fund
- Documentation of Organization Profile on EnergizeInnovation.fund

TASK 11 - TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

The goal of this task is to ensure the technological learning that resulted from the project is captured and disseminated to the range of professions that will be responsible for future deployments of this technology or similar technologies. The Recipient Shall:

- Develop and submit a Project Case Study Plan (Draft/Final) that outlines how the Recipient will document the planning, construction, commissioning, and operation of the technology or system being demonstrated. The Project Case Study Plan should include:
 - An outline of the objectives, goals, and activities of the case study.
 - The organization that will be conducting the case study and the plan for conducting
 - A list of professions and practitioners involved in the technology's deployment.
 - Specific activities the recipient will take to ensure the learning that results from the project is disseminated to those professions and practitioners.

- Presentations/webinars/training events to disseminate the results of the case study.
- Present the Draft Project Case Study Plan to the TAC for review and comment.
- Develop and submit a Summary of TAC Comments that summarizes comments received from the TAC members on the Draft Project Case Study Plan. This document will identify:
 - TAC comments the recipient proposes to incorporate into the Final Technology Transfer Plan.
 - TAC comments the recipient does not propose to incorporate with an explanation of
- Submit the Final Project Case Study Plan to the CAM for approval.
- Execute the Final Project Case Study Plan and develop and submit a Project Case Study (Draft/Final)
- When directed by the CAM, develop presentation materials for a CEC-sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in the annual EPIC symposium(s) sponsored by the California CEC.

Products:

- Project Case Study Plan (Draft/Final)
- Proiect Case Study (Draft/Final)
- Summary of TAC Comments

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.