California Energy Commission
June 11, 2025 Business Meeting
Backup Materials for Cal Poly Humboldt Sponsored Programs Foundation

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

[PROPOSED]

RESOLUTION NO: 25-0611-07

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: Cal Poly Humboldt Sponsored Programs Foundation

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-24-053 with Cal Poly Humboldt Sponsored Programs Foundation for a $5,000,000 grant to fund the design and construction of a system of nested microgrids. This project will expand on the existing microgrid at the Blue Lake Rancheria and reduce costs, improve reliability, and demonstrate advanced protection and control strategies that can inform innovative approaches to resilient decarbonization of distribution circuits; 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 June 11, 2025.

AYE:
NAY:
ABSENT:
ABSTAIN:

Dated:

_____
Kim Todd
Secretariat

STATE OF CALIFORNIA
CALIFORNIA ENERGY COMMISSION

CEC-270 (Revised 01/2024)

GRANT REQUEST FORM (GRF)

A. New Agreement Number

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

New Agreement Number: EPC-24-053

B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Sean Anayah
3. MS-:None
4. Phone Number: 916-931-5044

C. Recipient's Information

1. Recipient's Legal Name: Cal Poly Humboldt Sponsored Programs Foundation
2. Federal ID Number: 94-6050071

D. Title of Project

Title of project: Blue Lake Rancheria Nested Community Microgrids

E. Term and Amount

1. Start Date: 7/15/2025
2. End Date: 03/29/2030
3. Amount: $5,000,000.00

F. Business Meeting Information

1. Are the ARFVTP agreements $75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 6/11/2025 .
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Sean Anayah
5. Time Needed for Business Meeting: 10 minutes.
6. The email subscription topic is: Electric Program Investment Charge (EPIC)

Agenda Item Subject and Description:
Cal Poly Humboldt Sponsored Programs Foundation. Proposed resolution approving agreement EPC-24-053 with Cal Poly Humboldt Sponsored Programs Foundation for a $5,000,000 grant to fund the design and construction of a system of nested microgrids, and adopting staff's recommendation that this action is exempt from CEQA. This project will expand on the existing microgrid at the Blue Lake Rancheria and reduce costs, improve reliability, and demonstrate advanced protection and control strategies that can inform innovative approaches to resilient decarbonization of distribution circuits. (EPIC Funding) Contact: Sean Anayah (Staff Presentation: 10 minutes)

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:

      CCR section number: None

      Categorical Exemption?
      No

      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: None

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

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

This project is covered by the Common Sense Exemption under 14 CCR 15061 (b) (3) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

The proposed project involves the expansion and reconfiguration of the existing renewable energy microgrid at the Blue Lake Rancheria, including the installation of solar photovoltaic (PV) panels, battery energy storage systems (BESS), control systems, and limited trenching and electrical infrastructure upgrades. All work will occur entirely on land owned and governed by the Blue Lake Rancheria Tribe, a federally recognized sovereign tribal government. The proposed project will develop and prove nested community microgrids that are used to coordinate operations of distributed energy resources across a distribution circuit by integrating new hardware and control systems into the existing microgrid system developed in a previous CEC-funded project from 2015. The proposed project will demonstrate significant advancements in the state-of-the-art in grid modernization by deploying an automated, self-balancing, deeply decarbonized and resilient electrical distribution circuit serving multiple facilities with the ability to island strategic sections of a nested system.

All project activities will occur on the Blue Lake Rancheria reservation. Project activities do not include burning or any other activity that may have an impact to land off of the Blue Lake Rancheria. In order for the CEC to comply with CEQA, the CEC must evaluate any impacts to land within the jurisdiction of the State of California, which is therefore limited to potential impacts of the project off of the Blue Lake Rancheria.

This project is exempt under the CEQA exemption because the proposed project will not:

- construct on or alter any land subject to jurisdiction of the State of California;
- impact local air quality;
- use groundwater resources or otherwise impact any water resources that might be subject to jurisdiction of the State of California
- build additional transportation infrastructure;
- increase vehicle miles traveled;
- increase ambient noise beyond the existing activities; or
- degrade the visual character or quality of views, including those of scenic resources or objects of aesthetic significance on land subject to the jurisdiction of the State of California.

Because the proposed project does not provide for any physical changes outside of the Blue Lake Rancheria reservation, it can be seen with certainty that there is no possibility that the proposed project may have a significant effect on the environment within the jurisdiction of the State of California. Based on all these factors, the proposed project meets the CEQA exemption.

The project will not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies; 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.

The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

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. **Delete** any unused rows from the table.

Subcontractor Legal Company Name	CEC Funds	Match Funds
Blue Lake Rancheria Tribal Government	$ 4,129,837	$1,000,000

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 - Battery Energy Storage	$1,029,249	$0
TBD - Solar Panel Installation	$1,395,744	$0
TBD - Electrical Installation	$1,704,844	$0

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
Blue Lake Rancheria Tribal Government

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	24-25	301.001L	$ 5,000,000

TOTAL Amount: $ 5,000,000

R&D Program Area: ESTB: ETSI

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #:

M. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Anthony Johnson

Address: Cal Ply Humboldt Sponsored Programs Foundation, 1 Harpst St SBS 427

City, State, Zip: Arcata, CA 95521

Phone: 707-826-5164

E-Mail: Anthony.Johnson@humboldt.edu

2. Recipient's Project Manager

Name: David Franklin

Address: Schatz Energy Research Center, 1 Harpst St

City, State, Zip: Arcata, CA 95521

Phone: 707-826-4345

E-Mail: David.Franklin@humboldt.edu

N. Selection Process Used

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

Selection Process	Additional Information
Competitive Solicitation #	Not applicable
First Come First Served Solicitation #	Not applicable
Other	Senate Bill 115 (Budget Act of 2020), Assembly Bill 148 (Budget Act of 2021)

O. 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: Sean Anayah

Approval Date: May 6, 2025

Branch Manager: Reynaldo Gonzalez

Approval Date: May 6, 2025

Director: Jonah Steinbuck *(delegated to Branch Manager)*

Approval Date: n/a

Exhibit A - Scope of Work
Cal Poly Humboldt Sponsored Programs Foundation

I. TASK AND ACRONYM/TERM LISTS

A. Task List

Task #	CPR[1]	Task Name
1		General Project Tasks
2	X	Engineering and Design
3		Permitting and Interconnection
4		Procurement and Construction
5	X	Pre-Energization Testing
6		Commissioning and O&M Documentation
7		Data Collection and Performance Reporting
8		Evaluation of Project Benefits
9		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
BESS	Battery Energy Storage System
BLR	Blue Lake Rancheria
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CHIL	Control Hardware-In-The-Loop
CONOPS	Concept of Operations
CPR	Critical Project Review
DERs	Distributed Energy Resources
EPIC	Electric Program Investment Charge
kV	Kilovolt
O&M	Operations and Maintenance
PET	Pre-Energization Testing
PG&E	Pacific Gas & Electric
PV	Photovoltaic
Recipient	Schatz Energy Research Center
RFP	Request for Proposals
TAC	Technical Advisory Committee

[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.

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

A. Purpose of Agreement

The purpose of this Agreement is to fund the design and construction of a system of nested microgrids at Blue Lake Rancheria (BLR) that will reduce costs, improve reliability, and demonstrate advanced protection and control strategies that can inform innovative approaches to resilient decarbonization of distribution circuits.

B. Problem/ Solution Statement

Problem
Rural electricity distribution circuits such as the Blue Lake 1102 serving BLR can have low reliability, a challenge that is exacerbated by climate change and growing wildfire risk. The BLR is deploying distributed energy resources (DERs) such as solar and battery storage to increase their resilience to outages, however there is limited hosting capacity available and distribution upgrades are needed. These upgrades are generally costly and take a long time to implement.

Solution
The Recipient will design, construct, and demonstrate a nested microgrid using advanced controls and protection schemes that can inform novel approaches to increasing the resilience and hosting capacity of primary voltage (e.g., 12 kilovolt (kV)) distribution circuits. This control system architecture, combined with additional solar and energy storage capacity and the rearrangement of the 12 kV circuitry on the BLR, will provide a testbed for evaluating alternative strategies for distribution operations. Additionally, the project will help reduce energy costs for BLR while increasing their resilience to outages. Pacific Gas and Electric (PG&E) is a long-term innovation partner of BLR and the Recipient and will be invited to participate in configuration, testing, and validation of the advanced controls and protection schemes used in the nested microgrids. These innovations will help reduce cost and improve reliability at BLR while helping PG&E accelerate grid modernization efforts, which can benefit ratepayers broadly while helping California meet its energy and climate goals.

C. Goals and Objectives of the Agreement

Agreement Goals
The goals of this Agreement are to:

- Design, build, test, commission, and document a nested microgrid system at BLR using advanced controls and protection schemes
- Reduce energy costs and increase resilience for BLR
- Provide a testbed to support collaboration between tribes, utilities, and other interested parties in evaluating advanced distribution grid architectures and operations
- Support replicability through open-source designs and knowledge transfer activities

Ratepayer Benefits:[2] This Agreement will result in the ratepayer benefits of greater electricity reliability, lower costs, and increased safety by demonstrating a system of nested microgrids with advanced controls and protection schemes that have potential to be replicated on rural distribution circuits with low reliability. Additionally, these solutions can increase hosting capacity for interconnecting more DER on these circuits, which could support more rapid electrification of end uses and decarbonization of supply. Broader development of community microgrids as demonstrated in this project, can support increased reliability, resilience, and affordability with equivalent performance as conventional approaches such as backup diesel generators, infrastructure upgrades, and distribution system hardening.

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 and demonstrating a novel architecture, protection schemes, and control algorithms in nested microgrids. These innovations can be adapted to other community microgrids or to primary voltage distribution feeders serving other rural communities experiencing low reliability or limited hosting capacity.

Agreement Objectives

The objectives of this Agreement are to:

- Increase electric reliability and safety at BLR by:
  - Expanding the electrical boundary of the existing BLR microgrid to encompass three facility-scale microgrids
  - Installing new 12 kV conductors and equipment to connect all facilities within the expanded microgrid boundary
  - Procuring, installing and commissioning a new battery energy storage system (BESS) within the expanded microgrid boundary
- Reduce energy costs and greenhouse-gas emissions at the BLR by installing new photovoltaic (PV) generation within the expanded microgrid boundary
- Demonstrate automated operations of a safe, resilient, decarbonized 12 kV circuit connecting facility microgrids
- Provide comprehensive operations & maintenance (O&M) documentation to support sustainable operations and energy sovereignty
- Document and report on the performance of the system of nested microgrids to evaluate the reliability, resilience, cost savings, and environmental benefits.

[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.

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 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 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;
  - Travel;
  - Equipment purchases;

- Administrative and Technical products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Monthly Calls (subtask 1.5)
- Quarterly Progress reports (subtask 1.6)
- Final Report (subtask 1.7)
- Match funds (subtask 1.8);
- Permit documentation (subtask 1.9);
- Subawards(subtask 1.10);
- Technical Advisory Committee meetings (subtasks 1.11 and 1.12);
- Agreement changes;
- Performance Evaluations; and
- Any 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.
  - 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:

  - 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 not 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 no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:

- A list of the permits that identifies (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
- The schedule the Recipient will follow in applying for and obtaining the permits.

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

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

Products:

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

Subtask 1.10 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.

The Recipient shall:

- Execute and manage subawards and coordinate subrecipients activities in accordance with the requirements of this Agreement.
- Execute and manage site host agreements and ensure the right to use the project site throughout the term of the Agreement, as applicable. A site host agreement is not required if the Recipient is the site host
- 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* and any *Site Host Agreement* required to conduct the work under this Agreement.
- If requested by the CAM, submit a final copy of each executed *Subaward* and any *Site Host 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)*
- Draft Site Host Agreement *(if requested by the CAM)*
- Final Subawards *(if requested by the CAM)*
- Final Site Host Agreement *(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
  - 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

*Products that require a draft version are indicated by marking **"(draft and final)"** after the product name in the "Products" section of the task/subtask. If "(draft and final)" does not appear after the product name, only a final version of the product is required.* ***Subtask 1.1 (Products)*** *describes the procedure for submitting products to the CAM.*

TASK 2: ENGINEERING AND DESIGN

The goal of this task is to develop engineering plans, specifications, and other documentation as needed to support construction, testing, and commissioning of the nested microgrids.

The Recipient shall:

- Prepare *10%, 50%, and 90% Engineering Plans and Specifications* that include civil, structural, electrical, and mechanical (as needed) designs for the following systems:
    - 1.4 MVA, 2450 kWh or greater BESS
    - 630 kW or greater photovoltaic systems with transformers and switchgear
    - Underground 12 kV circuits with pad mounted junctions and connections to new and existing transformers
    - Medium voltage switchgear
    - Grounding transformer
    - Line recloser with recloser control relay
    - Protection and control system components for each of the above new systems with integration to existing protection and control components that will remain
- Develop a concept of operations (CONOPS) and prepare a *Concept of Operations Summary* describing protection and control system components and functionality, including but not limited to:
    - Description of protection and control system components
    - Description of microgrid operating modes
    - Description of protection zones
    - Descriptions of failsafe states
    - Preliminary network diagram
- Prepare a *Functional Design Specifications Report* that describes the implementation details for the protection and control system that includes but is not limited to:
    - Roles of microgrid controllers
    - Communications between controllers
    - Controller software structure
    - Functions
    - Control and status variables
- Prepare a *Design and Engineering Memo* that includes a description of the design process, key design decisions, timeline, and lessons learned
- Prepare *CPR Report #1* and participate in a CPR meeting, per Task 1.3.

Products:

- 10% Engineering Plans and Specifications
- 50% Engineering Plans and Specifications
- 90% Engineering Plans and Specifications
- Concept of Operations Summary
- Functional Design Specifications Report
- Design and Engineering Memo
- CPR Report #1

TASK 3: PERMITTING AND INTERCONNECTION
The goals of this task are to support BLR in completing the tribe's permitting process and to modify the existing interconnection agreement for BLR microgrid.

The Recipient shall:
- Provide engineering support for permitting through completion of all permitting activities and provide copies of final environmental and/or building permit(s) to CAM, per subtask 1.9.
- Submit an interconnection modification application to PG&E and provide a copy of the *Final Interconnection Agreement* to CAM
- Coordinate utility inspection activities
- Obtain Permission to Operate and provide a copy of the *Permission to Operate Letter* from PG&E to CAM
- Prepare and provide a *System Ownership Application* and support BLR in applying to the California Public Utilities Commission for BLR to take ownership of PG&E transformers and a small amount of the local 12 kV distribution circuit.

Products:
- Final Interconnection Agreement
- Permission to Operate Letter
- System Ownership Application

TASK 4: PROCUREMENT AND CONSTRUCTION
The goals of this task are to procure the necessary equipment and to complete construction of the nested microgrid system according to the 100% Engineering Plans and Specifications.

The Recipient shall:
- Procure and install a 1.4 MVA, 2450 kWh or greater BESS for the main microgrid and connect to existing switchgear
- Procure and install 630 kW or greater of distributed PV systems inside the main microgrid including transformers, switchgear, utility disconnects, supervisory data acquisition and control, and metering
- Procure and install new medium voltage infrastructure to interconnect nested microgrids inside of the main microgrid including underground circuits, pad-mounted junctions, switchgear, grounding transformer, line recloser, and associated protection relays
- Develop an *Equipment Procurement Memo* that includes but is not limited to:
    - A list and description of all major components purchased and how they were selected
    - Description of the procurement processes followed
    - Timeline for delivery
    - Description of any challenges faced and lessons learned
- Develop a *Construction Activity Memo* that includes but is not limited to:
    - Summary of construction activities and their sequencing
    - Review of construction timelines relative to plans
    - Construction observation reports
    - Description of any challenges faced and lessons learned

- Prepare *As-Built Engineering Plans and Specifications* that reflect any differences between the 100% engineering plans and the final installed configuration and share with CAM
- Document procurement and construction progress through *High Quality Digital Photographs of Construction Activities and Installed Systems*

Products:
- Equipment Procurement Memo
- Construction Activity Memo
- As-Built Engineering Plans and Specifications
- High Quality Digital Photographs of Construction Activities and Installed Systems

TASK 5: PRE-ENERGIZATION TESTING
The goal of this task is to test new equipment, controls, and circuits prior to energization.

The Recipient shall:
- Develop a request for proposals (RFP) for Pre-Energization Testing (PET) from certified electrical testing companies
- Circulate the RFP and obtain bids for PET services
- Coordinate testing activities including tests for the following components
    - Medium voltage switchgear
    - PV system transformers
    - Grounding transformer
    - Underground medium voltage cables and pad mounted junctions
    - Protection relay settings
- Prepare a *Pre-Energization Testing Report* that includes but is not limited to:
    - Summary of all tests conducted and their results
    - Timeline of testing activities
    - Compilation of test reports from the testing contractor
    - Discussion of any challenges faced and lessons learned
- Provide PET results to PG&E as needed to complete interconnection
- Develop a *Control Hardware-in-the-loop (CHIL) Test Plan* for the new protection and control system that includes but is not limited to:
    - Descriptions of the tests to be performed with checklists
    - Diagrams showing testing setup and components
    - Anticipated testing schedule
- Complete CHIL testing for the new protection and control system and develop a *Control Hardware-in-the-loop Test Report* that includes but is not limited to:
    - Summary of tests conducted and their results
    - Compilation of test results and completed checklists
    - Discussion of any challenges faced and lessons learned
- Prepare *CPR Report #2* and participate in a CPR meeting, per Task 1.3.

Products:
- Pre-Energization Testing Report
- Control Hardware-in-the-loop Test Plan
- Control Hardware-in-the-loop Test Report
- CPR Report #2

TASK 6: COMMISSIONING AND O&M DOCUMENTATION
The goals of this task are to commission the BESS, PV arrays, and the protection and controls equipment and to prepare a comprehensive O&M package for BLR.

The Recipient shall:

- Commission all newly installed equipment including the BESS, PV arrays, and protection and control system
- Prepare a *Commissioning Memo* that includes but is not limited to:
    - Summary of commissioning plans for each system including the BESS, PV system, and protection and control system
    - Schedule for commissioning tests
    - Results of commissioning activities
    - Discussion of any challenges faced and lessons learned
- Prepare an *Islanded Functional Test Plan* that includes but is not limited to:
    - Description of each islanding test to be performed
    - Description of procedures and a checklist for each test
    - Anticipated schedule of testing activities
- Conduct islanding tests following the Islanded Functional Test Plan
- Prepare an *Islanded Functional Test Report* that includes but is not limited to:
    - Summary of all tests performed including the date, time, and list of attendees
    - Narrative summary of results for each test with operational data
    - Conclusions, challenges faced, and lessons learned
- Prepare an O&M Manual for the microgrid protection and control system
- Compile Manufacturer's O&M Manuals for all new equipment
- Create a comprehensive *O&M Encyclopedia* for BLR, and share a copy with the CAM, that includes but is not limited to:
    - Protection and Control System O&M Manual
    - Manufacturer's O&M Manuals
    - As-Built Engineering Plans and Specifications
    - CONOPS
    - FDS
    - Pre-Energization Testing Report
    - CHIL Testing Report
    - BESS Commissioning Report
    - PV System Commissioning Reports
    - Protection and Control Commissioning Report
    - Islanded Functional Test Report
    - Fully Executed Interconnection Agreement
    - Permission to Operate Letter

Products:

- Commissioning Memo
- Islanded Functional Test Plan
- Islanded Functional Test Report
- O&M Encyclopedia

TASK 7: DATA COLLECTION AND PERFORMANCE REPORTING
The goal of this task is to operate the nested microgrids, collect data documenting their performance for a minimum of six (6) months, and conduct analysis on the benefits provided.

The Recipient Shall:

- Prepare a *Data Collection and Analysis Plan* that covers the performance and other data that will be collected, including but not limited to:
    - Description of the microgrid systems to be measured and how they will be monitored including what monitoring equipment will be used.
    - Description of the data that will be collected, including the sampling frequency, and how it will be stored.
    - Explanation of how the data collected will support analysis and evaluation of the benefits such as avoided outages on BLR, cost savings, and avoided fossil fuel use.
    - Describe the planned approach for evaluating the unique benefits enabled through the nested microgrid architecture.
- Operate the microgrid and collect data for a minimum of six (6) months following the procedures outlined in the Data Collection and Analysis Plan.
- Prepare a *Nested Microgrid Performance Report* that summarizes the environmental, economic, and resilience benefits provided by the nested microgrids based on the data collected and analyses performed.

Products:

- Data Collection and Analysis Plan (draft and final)
- Nested Microgrid Performance Report

TASK 8: 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 9: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES
The goal of this task is to ensure the technological learning that resulted from the demonstration(s) 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* 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 it.
    - 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 *Project Case Study Plan*.
    - TAC comments the Recipient does not propose to incorporate with and explanation why.
- 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*.
- 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 annual EPIC symposium(s) sponsored by the California CEC.
- 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.

Products:

- Project Case Study Plan (draft and final)
- Summary of TAC Comments
- Project Case Study (draft and final)
- High Quality Digital Photographs

V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.