California Energy Commission
September 10, 2025 Business Meeting
Backup Materials for Nuvve Holding Corp.

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: 25-0910-XX

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: Nuvve Holding Corp.

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-25-020 with Nuvve Holding Corp. for a $2,834,090 grant. This project, taking place at UC Davis, UC Irvine, and other locations, will develop a low-cost energy management kit that enables vendor-agnostic integration of solar, storage, and bidirectional EV chargers for residential home energy management and participation in grid services; 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 September 10, 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-25-020

B. Division Information

1. Division Name: ERDD
2. Agreement Manager: Ran Laviv
3. MS-:None
4. Phone Number: 916-258-2951

C. Recipient's Information

1. Recipient's Legal Name: Nuvve Holding Corp.
2. Federal ID Number: 86-1617000

D. Title of Project

Title of project: Bidirectional Residential Integration for Dispatchable Grid Energy (BRIDGE)

E. Term and Amount

1. Start Date: 9/15/2025
2. End Date: 4/30/2028
3. Amount: $2,834,090.00

F. Business Meeting Information

1. Are the ARFVTP agreements $75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 9/10/2025
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Antonio Gomez
5. Time Needed for Business Meeting: 5 minutes.
6. The email subscription topic is: Electric Program Investment Charge (EPIC)

Agenda Item Subject and Description:

Nuvve Holding Corp. Proposed resolution approving agreement EPC-25-020 with Nuvve Holding Corp. for a $2,834,090 grant, and adopting staff's recommendation that this action is exempt from CEQA. This project, taking place at UC Davis, UC Irvine, and other locations, will develop a low-cost energy management kit that enables vendor-agnostic integration of solar, storage, and bidirectional EV chargers for residential home energy management and participation in grid services. (EPIC funding) Contact: Antonio Gomez

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":

Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because:

2. **If Agreement is considered a "Project" under CEQA 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 ;

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.

Cal. Code Regs., tit 14, sec. 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 existing or former use at the time of the lead agency's determination, are categorically exempt from the provisions of California Environmental Quality Act (CEQA). The approximately 7 locations (2 R&D labs at UC Davis and UC Irvine, and 5 TBD residential sites) involved in the project are at existing facilities, which have already been graded, disturbed, paved, and have structures constructed. Installation and deployment of the Energy Management Kit (EMK) for an optimized home energy management solution will require limited alteration activities, such as the installation of electric vehicle supply equipment inside residential homes. This project will result in negligible or no expansion of use beyond that already existing. Therefore, the project falls within section 15301 and will not have a significant effect on the environment.

The project does not involve impacts on any particularly sensitive environment; 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.

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"?

Yes

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
New Sun Road	$ 428,815	$42,915
Kia America, Inc.	$ 0	$98,937
Regents of the University of California, Davis	$ 95,772	**$**0
The Climate Center	$ 95,000	**$**0
The Regents of the University of California on behalf of the Irvine Campus	$ 95,000	**$**0

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 - Electrical Engineer of Record, Contracting, Upgrades	**$**200,000	**$**0
TBD - UI/UX Engineering (Microsite Development)	**$**50,000	**$**0
TBD - UI/UX Engineering (Frontend Development)	**$**200,000	**$**0
Wallbox USA, Inc.	**$63,984**	

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	24-25	301.001L	$ 2,834,090

TOTAL Amount: $ 2,834,090

R&D Program Area: ESB: Transportation

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: Richard Olesco

Address: 2488 Historic Decatur Rd Ste 230

City, State, Zip: San Diego, CA 92106-6134

Phone: 901-383-0094

E-Mail: richard@nuvve.com

2. Recipient's Project Manager

Name: Anna Bella Korbatov

Address: 2488 Historic Decatur Rd Ste 230

City, State, Zip: San Diego, CA 92106-6134

Phone: 310-666-8010

E-Mail: annabella@fermataenergy.com

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-24-302
First Come First Served Solicitation #	Not applicable
Other	Not applicable

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	Yes

Approved By

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

Agreement Manager: Ran Laviv

Approval Date: 7/31/2025

Branch Manager: Reynaldo Gonzalez

Approval Date: 8/1/2025

Director: Jonah Steinbuck delegated to Branch Manager

Approval Date: 8/1/2025

Exhibit A
Scope of Work
Nuvve Holding Corp.

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR[1]	Task Name
1		General Project Tasks
2		Project Initiation and Management
3	X	Research and Development
4		Device Integration and Energy Management
5		Testing, Certification, and Deployment
6		Utility and Customer Engagement
7	X	Bidirectionality and Microgrid Implementation
8		Market Strategy and Reporting
9		Travel, Workshops, and Conferences
10		Evaluation of Project Benefits
11		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
ATS	Automatic Transfer Switch
BRIDGE	Bidirectional Residential Integration for Dispatchable Grid Energy
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
DERs	Distributed Energy Resources
EMK	Energy Management Kit
PCC	Point of Common Coupling
PSPS	Public Safety Power Shutoffs
TAC	Technical Advisory Committee
V2G	Vehicle-to-Grid
V2X	Vehicle-to-Everything
MIDAS	Market Informed Demand Automation Server

[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.

Exhibit A
Scope of Work
Nuvve Holding Corp.

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

A. Purpose of Agreement

The purpose of this Agreement is to fund the Bidirectional Residential Integration for Dispatchable Grid Energy (BRIDGE) project, which aims to integrate residential vehicle-to-everything (V2X) systems with behind-the-meter solar and storage. It will create an Energy Management Kit (EMK) for optimized home energy management and grid service participation.

B. Problem/ Solution Statement

Problem

Current V2X integration into Californian home energy systems faces various barriers, including a lack of data acquisition technologies and detailed engineering designs for the residential market. Market barriers include limited consumer exposure to the technology and the benefits of using V2X for residential applications. Available solutions are costly, have limited V2X capabilities, and are not interoperable across electric vehicle (EV) makes and models. The lack of plug-and-play solutions prevents seamless interaction between EVs, home energy systems, and the grid. Finally, during Public Safety Power Shutoffs (PSPS), which are commonly implemented during extreme weather conditions to reduce wildfire risks, impacted customers have limited options, if any, to provide clean resilient backup power for their homes.

Solution

The Recipient will leverage innovative platforms and software solutions to contribute to the advancement and wider adoption of V2X systems. The BRIDGE project will develop a cost-effective, integrated EMK that includes communication protocols, smart metering, and local energy management capabilities. This will enable EVs to act as distributed energy resources (DERs) and participate in grid services while ensuring consumer mobility needs are met. The EMK is designed to be flexible and compatible with various EV chargers, EVs, solar systems, meters, or battery systems. It will allow users to choose from a variety of options and shop for competitive prices. This flexibility ensures that critical functions can continue without interruption, even when the main grid power supply is unavailable. This makes it a valuable solution for enhancing customer resilience during PSPS events, particularly in areas vulnerable to extreme weather or climate events.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Develop a low-cost, plug-and-play, EMK for residential V2X integration.
- Enable seamless communication between EVs, home DERs, and the grid.
- Demonstrate interoperability using the applicable standards and protocols.
- Deploy a target of 5 pilot sites in California investor-owned utility territories to validate effectiveness.
- Integrate with an aggregator platform for grid service participation.

Ratepayer Benefits:[2] This Agreement will result in the ratepayer benefits of greater electricity reliability and lower costs by providing emergency backup during blackouts and enabling bi-directional EV charging, allowing electric vehicle batteries to store excess solar energy and discharge it when needed to support the grid. Additionally, the solution offers flexibility in choosing from a variety of battery, EV bidirectional charger, and solar solutions, allowing customers to shop for competitive prices.

By mitigating capacity limitations at the point of common coupling (PCC), the solution allows for the addition of bidirectional EV chargers without requiring utility service upgrades. This prevents the need for costly grid upgrades, which would otherwise result in upward pressure on rates.

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 addressing the lack of a grid-tied, all-in-one plug-and-play UL-listed device by leveraging existing industry standards to unify various devices under a single connectivity framework. This will mitigate fragmentation within the current ecosystem and provide users with a unified view of energy generation and consumption through a single user interface. The solution will make homes dispatchable, allowing them to be aggregated to support grid needs, and mitigate capacity limitations PCC, enabling the addition of EV chargers without upgrading utility services.

Additionally, the solution will integrate with the Market Informed Demand Automation Server (MIDAS) for real-time pricing ingestion, optimizing energy use dynamically for cost savings. It will support seamless V2X integration, dynamic load management, and smart energy orchestration across solar, storage, and EV charging. Designed for interoperability across multi-vendor DERs, it will promote universal compatibility and rapid deployment with minimal infrastructure upgrades. The solution will also offer automated demand response and virtual power plant (VPP) capabilities, transforming homes into grid-responsive assets, and is built to adapt to future regulatory changes, ensuring a future-proof design.

Agreement Objectives

The objectives of this Agreement are to:

- Design, build, and test an integrated hardware-software EMK solution that enables vendor-agnostic integration between solar, storage, and bidirectional chargers with a target price of $1,000 per kit.
- Develop AI-driven predictive energy management, cloud integration, and V2X optimization.
- Validate cost reductions from V2X-enabling technologies.
- Demonstrate the EMK at 5 residential pilot sites in California to validate effectiveness and collect performance data.
- Identify and demonstrate participation in grid services where the EMK can be used to provide net benefits to ratepayers and reduce the total cost of ownership (TCO) for customers.

[2] California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF).

[3] California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

- Demonstrate peak shaving, time-of-use optimization, islanding, and grid services integration.
- If applicable, ensure compliance with UL 3141 certification for safe and easy residential deployment without electrical upgrades.
- Integrate with MIDAS and test the EMK using a real time signal to demonstrate home dispatchability for all 5 sites.
- Develop a scalable go-to market strategy.
- Develop customer education materials and technical documentation.

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 1.7) *(if applicable)*
- Permit Status Letter (subtask 1.8) *(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., Teams) 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., Teams) 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 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 subawards required to carry out the tasks under this Agreement; and (2) ensure that the subawards are consistent with the terms and conditions of this Agreement.

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 and as a result, tasks under this Agreement are unable to be carried out or the Agreement is at-risk of not achieving its goals and objectives.
- 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 of 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* 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: PROJECT INITIATION AND MANAGEMENT

The goal of this task is to establish a solid foundation for the project through effective planning, community outreach, and stakeholder engagement, ensuring clear communication, risk mitigation, and alignment of project objectives.

Subtask 2.1: Community Outreach

The goal of this subtask is to engage and inform the community about the project, gather feedback, and build support through various outreach activities.

The Recipient Shall:
- Conduct webinars, surveys, and distribute flyers and marketing collateral to educate communities about the project and V2X technology and gather feedback to inform project direction.
- Identify customers with support from project partners (e.g., Kia) and develop a customer identification plan.
- Create a project microsite, consisting of a new website that will showcase the BRIDGE project's goals, benefits, and pilot opportunities to homeowners and the public. It will serve as an outreach tool to educate, engage, and recruit participants by providing clear, accessible information and updates about the project.
- Create *Community Outreach Plan,* including a comprehensive plan detailing the project's community engagement strategy, including schedules and content for webinars, surveys, flyers, marketing collateral, customer identification efforts, and the project microsite.

Products:
- Community Outreach Plan

Subtask 2.2: Planning

The goal of this subtask is to develop a comprehensive plan that outlines the project schedule, work breakdown structure, communication strategies, risk mitigation, and equipment identification to ensure effective project execution.

The Recipient Shall:
- Develop a comprehensive internal project schedule, including milestones and meeting schedules with all relevant stakeholders.
- Create a communication plan and a risk management plan.
- Identify all equipment (bidirectional EV chargers, batteries, solar inverters, meters, etc.) that the EMK would integrate with.
- Analyze and understand MIDAS connectivity protocol to inform path forward for integration with the EMK.
- Obtain utility drawings (e.g., site plans, single line diagrams, facility schematics) if required for installation and interconnection.

- Develop *Project Execution Plan*, which will include the project schedule, work breakdown structure, communication plan, risk management plan, equipment integration list, and summary of MIDAS protocol and utility drawings.

Products:
- Project Execution Plan.

TASK 3: RESEARCH AND DEVELOPMENT LAB SETUP
The goal of this task is to advance the project's technological capabilities by setting up R&D facilities, conducting prelaunch tests, and developing supporting technologies such as mobile applications.

The Recipient Shall:
- Set up R&D labs at the UC Davis California Lighting Technology Center (CLTC) and UC Irvine Advanced Power and Energy Lab to enable prototyping and testing needed to develop the EMK. Document the R&D lab setups, including equipment and test capabilities.
- Develop a mobile app, with design input from an EV original equipment manufacturer (OEM) partner, to provide a simple user interface that can provide EMK users with a unified view of energy generation and consumption.
- Develop *R&D Setup and Mobile App Development Summary*, combining a R&D lab setup report with mobile app design and development description, including lab capabilities and app features for EMK user interface integration.
- Participate in a CPR meeting.
- Prepare a *CPR Report #1*

Products:
- R&D Setup and Mobile App Development Summary
- CPR Report # 1

TASK 4: DEVICE INTEGRATION AND ENERGY MANAGEMENT
The goal of this task is to ensure seamless integration of devices into the EMK and develop an optimized energy management system that enhances the efficiency and reliability of the microgrid.

Subtask 4.1: Device Integration
The goal of this subtask is to identify, procure, and integrate devices into the EMK based on open standards and commercial viability, ensuring seamless interaction between components.

The Recipient Shall:
- Identify, evaluate and conduct market research on 5–10 commercially viable residential-scale inverters and battery systems for integration with the Alpha prototype EMK.
- Develop a screening criteria matrix to identify devices suitable for integration with the EMK.
- Develop a device identification plan that summarizes the results of the market research, including device requirements and the screening criteria matrix Align on integration pathways for all devices and coordinate with each device vendor's technical team as required.
- Identify and procure hardware from various suppliers for lab integration and testing.

- Integrate the Alpha prototype EMK and procured hardware and complete an integration implementation plan, summarizing integration pathways used for each device.
- Leverage existing project team integrations for microgrid hardware.
- Define and implement a local interface with the bidirectional EVSE leveraging the existing standard(s).
- Complete *Device Integration and Energy Management Report* summarizing hardware selection, device identification and integration plans, integration pathways, interface definitions, and implementation of both local and cloud-based control strategies.

Products:
- Device Integration and Energy Management Report

Subtask 4.2: Energy Management System
The goal of this subtask is to design and implement an optimized energy management system that integrates site-level and cloud-based controls, enhancing the efficiency and reliability of the microgrid.

The Recipient Shall:
- Design and implement *Site-Level Optimization Design Report*, including EV scheduling and grid services, providing PCC level dispatch site design.
- Implement local energy management via EMK to follow cloud-based signals. Complete *Local Energy Management Implementation Report,* summarizing local energy management via EMK communicating locally with other devices like solar, batteries and EVSEs.
- Develop interface with the cloud, leveraging open and standard protocols where applicable (EMK to cloud). Complete *Cloud Interface Development Report*, summarizing the cloud interface with the EMK.
- Develop Alpha Prototype EMK, including microgrid controller, current transformers (CTs), and IOs to connect to chargers, automatic transfer switches (ATS), inverters, etc.

Products:
- Site-Level Optimization Design Report
- Local Energy Management Implementation Report
- Cloud Interface Development Report

TASK 5: TESTING, CERTIFICATION, AND DEPLOYMENT
The goal of this subtask is to validate the functionality and reliability of the EMK through rigorous testing and certification, ensuring readiness and interoperability with a variety of commercially available solar and Battery Energy Storage System (BESS) solutions for field deployment. Prototype testing includes two phases: 1) integration and prototype testing, and 2) pre-launch testing.

The Recipient Shall:
- Build and test a prototype of the EMK solution to validate functionality in various operational scenarios, including grid-tied and islanded modes.
- Evaluate interoperability with EV charger, inverters, and Distributed Energy Resource Management System (DERMS) platforms.
- Conduct integration and prototype testing at the R&D lab(s):

  - Collaborate with project partners to develop and execute a use-case driven integration and prototype test plan.
  - Validate interoperability, demand response capabilities, and islanding/reconnection performance using the EMK Alpha and Beta prototypes.
  - Verify integrated metering accuracy to support residential V2X and DER deployments in California.
  - Generate actionable recommendations to prepare for field pilot deployments.
- Conduct prelaunch tests at the R&D lab(s):
  - Collaborate with project partners to develop and execute a prelaunch test plan.
  - Testing the final prelaunch with EMK integrated with the bidirectional charger and other equipment (e.g., solar inverters and batteries).
  - Conduct prelaunch tests focused on user journey and untested edge cases and report results in a *Prelaunch Test Report*. The report will summarize prelaunch testing activities conducted in the lab, focusing on final EMK system integration with residential bidirectional charger, solar, and BESS equipment, user journey validation, untested edge cases, and system readiness assessment. The report will include test results and pre-deployment improvements.
- Analyze data from test user deployment to quantify energy savings and grid services.
- Provide Beta EMKs for field deployments.
- Certify EMK to Power Control System (PCS) under UL3141 and receive a certification report, if needed, from a Nationally Recognized Testing Laboratory.
- Install 5 systems (EMK & bidirectional EVSE) at homes located in California investor-owned utility territories. Prepare an Installation Report with photos and brief summaries of the installation process at the 5 sites.
- Prepare *Prototype and Integration Test Report***,** including documentation of integration and prototype testing conducted at the lab, test plan execution, interoperability validation (EVSE, solar, BESS, DERMS), islanding/reconnection performance, demand response functionality, and integrated metering accuracy. The report will include findings, test data, and recommendations to prepare for prelaunch testing.
- Prepare *Certification Package*, which will include a complete UL 3141 Power Control System certification documentation for the EMK, including NRTL test results, certification report, and deployment impact summary. If exemption is applicable by the IOUs, the report will include rationale and supporting documentation to confirm eligibility for field deployment.

Products:

- Prototype and Integration Test Report
- Prelaunch Test Report
- Certification Package

TASK 6: UTILITY AND CUSTOMER ENGAGEMENT

The goal of this task is to engage with utility companies and customers, gather feedback, and develop site selection criteria to ensure successful project implementation and customer participation.

The Recipient Shall:

- Conduct customer surveys and develop site selection criteria with the project team.

- Engage in utility programs and market integration. Document in a utility engagement plan.
- Conduct customer surveys and develop site selection criteria. Record in a customer survey plan.
- Perform site assessments based on the site selection criteria, develop a site assessment plan, and acquire customers.
- Enroll customers in utility programs.
- Prepare *Utility and Customer Engagement Report,* which will include a comprehensive report summarizing utility coordination efforts, customer survey insights, site selection logic, site assessments, and customer enrollment outcomes.

Products:
- Utility and Customer Engagement Report.

TASK 7: BIDIRECTIONALITY AND MICROGRID IMPLEMENTATION
The goal of this task is to demonstrate the capabilities of Vehicle-to-Grid (V2G) technology and establish robust microgrids that can provide power during utility outages and participate in grid services, enhancing energy resilience and sustainability.

The Recipient Shall:
- Demonstrate several successful EMK discharges at each project site and document them.
- Participate in grid services, such as EV-related tariffs, grid emergency event programs like Emergency Load Reduction Program or Demand Side Grid Support (DSGS), demand response, and other utility programs, as available.
- Demonstrate cost-saving mechanisms such as Time of Use rate arbitrage.
- Create a microgrid with bi-directional EVSEs and EMKs at each site, using the ATS or microgrid interconnect device to disconnect some of the premise wiring from the local distribution utility.
- Prepare *V2X and Microgrid Demonstration Report,* documenting bidirectional discharges, grid services programs participation, customer energy savings, and microgrid functionality demonstrated at pilot sites.
- Participate in a CPR meeting.
- Prepare a *CPR Report #2.*

Products:
- V2X and Microgrid Demonstration Report:
- CPR Report #2

TASK 8: MARKET STRATEGY AND REPORTING
The goal of this task is to assess the financial impact of the EMK, develop a scalable go-to-market strategy, and document the project's success through case studies, ensuring the project's commercial viability and scalability.

The Recipient Shall:
- Assess the financial impact of the EMK at the household level and the utility system level.
- Develop a go-to-market strategy to scale the solution, including plans for customer engagement, regulatory compliance, and production scalability.

- Identify target markets and key stakeholders for deployment.
- Define revenue share agreements between the homeowner, aggregators, and OEM.
- Prepare *Commercialization and Market Strategy Report*, detailing the financial analysis, go-to-market plan, customer segmentation, and stakeholder incentive structures for scaling the solution post-project.

Products:
- Commercialization and Market Strategy Report

TASK 9: TRAVEL, WORKSHOPS, AND CONFERENCES
The goal of this task is to facilitate knowledge sharing and collaboration through site visits, conferences, workshops, and lab testing, ensuring the project's success and dissemination of findings.

The Recipient Shall:
- Conduct site visits to support the demonstration and deployment activities.
- Attend conferences and participate in workshops. After attending, prepare summaries of key learnings and resulting benefits to the project objectives.
- Travel to the R&D lab(s) to support integration, prototype, and pre-launch testing.
- Prepare *Engagement and Travel Summary Report*, summarizing all workshops, conferences, site visits, and travel activities related to lab and deployment coordination.

Products:
- Engagement and Travel Summary Report

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 demonstration(s) are 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 *Technology Transfer 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

I. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.