





## California Energy Commission September 10, 2025 Business Meeting Backup Materials for Rivian Automotive, LLC

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

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

**RESOLUTION NO: 25-0910-XX** 

#### STATE OF CALIFORNIA

# STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

**RESOLUTION: Rivian Automotive, LLC** 

**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-25-012 with Rivian Automotive, LLC for a \$2,144,780 grant. This project will take place in Los Angeles County and develop an alternating current (AC) bidirectional charging system that significantly reduces the cost of vehicle-to-everything (V2X) participation and provides access to a broad swath of EV owners through use of common industry standards; 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

#### **GRANT REQUEST FORM (GRF)**

#### A. New Agreement Number

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

**New Agreement Number**: EPC-25-012

#### **B.** Division Information

1. Division Name: ERDD

2. Agreement Manager: Antonio Gomez

3. MS-51

4. Phone Number: 916-232-9188

#### C. Recipient's Information

1. Recipient's Legal Name: Rivian Automotive, LLC

2. Federal ID Number: 47-3556480

#### D. Title of Project

Title of project: Low-Cost Interoperable AC Bidirectional Charging Solution

#### E. Term and Amount

Start Date: 10/1/2025
 End Date: 3/31/2029
 Amount: \$2,144,780.00

#### 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:**

**Rivian Automotive, LLC.** Proposed resolution approving agreement EPC-25-012 with Rivian Automotive, LLC for a \$2,144,780 grant and adopting staff's recommendation that this action is exempt from CEQA. This project, taking place in Los Angeles County, will develop an alternating current (AC) bidirectional charging system that significantly reduces the cost of vehicle-to-everything (V2X) participation and provides access to a broad swath of EV owners through use of common industry standards. (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 that consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use, are categorically exempt from the provisions of CEQA. The locations affected by the proposed project are at existing facilities, which have already been graded, disturbed, paved, and have structures constructed. The development and demonstration of the Rivian EVSE and Islanding Device will take place in Rivian's existing research facilities and will not require any material changes to their site. The project activities involve negligible or no expansion of existing or former use and will not have a significant effect on the environment and thus fits within section 15301.

This project does not involve impacts on any particularly sensitive environment; 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 sites are 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"?

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
GRID Alternatives	\$ 50,000	<b>\$</b> 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
Asteelflash USA Corp.	<b>\$</b> 56,400	<b>\$</b> 142,550
FULLTECH SYSTEMS, INC.	<b>\$</b> 0	\$355,000
Pacific Accuenergy Automation Co., LTD.	<b>\$</b> 7,140	<b>\$</b> 0
XOMETRY, INC.	\$8,850	<b>\$</b> 0
Eaton Group Inc	\$3,300	<b>\$</b> 0
McMaster-Carr Supply Company	<b>\$</b> 580	<b>\$</b> 0
TBD - Electronics Distributor	<b>\$</b> 870	\$17,910

#### 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	\$ 2,144,780

**TOTAL Amount:** \$ 2,144,780

R&D Program Area: ESB: Transportation

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: 101

### M. Recipient's Contact Information

#### 1. Recipient's Administrator/Officer

Name: Gene Sirovskiy

Address: 14600 Myford Rd

City, State, Zip: Irvine, CA 92606-1005

Phone: 925-216-6509

E-Mail: gsirovskiy@rivian.com

#### 2. Recipient's Project Manager

Name: Gene Sirovskiy

Address: 14600 Myford Rd

City, State, Zip: Irvine, CA 92606-1005

Phone: 925-216-6509

E-Mail: gsirovskiy@rivian.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: Antonio Gomez

**Approval Date:** 07/28/2025

Branch Manager: Reynaldo Gonzalez

**Approval Date:** 07/28/2025

**Director:** Reynaldo Gonzalez for Jonah Steinbuck

**Approval Date:** 07/28/2025

#### I. TASK ACRONYM/TERM LISTS

#### A. Task List

Task #	CPR <sup>1</sup>	Task Name
1		General Project Tasks
2	Χ	Development of EVSE
3	Х	Development of Islanding Device
4		Manufacturing Plan
5	Χ	Lab Testing
6		Measurement & Verification Plan
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

#### B. Acronym/Term List

Acronym/Term	Meaning
AC	Alternating Current
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CPR	Critical Project Review
DC	Direct Current
EMC	Electromagnetic Compatibility
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
OEM	Original Equipment Manufacturer
POC	Proof of Concept
PRD	Product Requirements Document
TAC	Technical Advisory Committee
V2G	Vehicle to Grid
V2X	Vehicle to Everything

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

#### A. Purpose of Agreement

The purpose of this Agreement is to fund the development of an AC bidirectional charging system that significantly reduces the cost of vehicle-to-everything (V2X) charging and provides access to a broad swath of electric vehicle (EV) owners through use of common industry standards.

<sup>&</sup>lt;sup>1</sup> 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.

#### B. Problem/ Solution Statement

#### Problem

V2X technology has enormous potential to contribute to downward pressure on electric rates. contribute meaningfully to the state's load shift goal, improve grid reliability and customer resiliency, and support integration of renewable energy. However, commercially available V2X systems are expensive and largely proprietary to a specific original equipment manufacturer's (OEM) vehicles. Additionally, many of these systems require upgrades to a home's electrical panel, which adds significant cost and time, and limits the availability of V2X for EV drivers that live in older vintage homes.

As more OEMs are launching their second and third generation EVs and becoming more vertically integrated, there is an opportunity for more vehicles with inherent AC bidirectional charging technology to enter the market in support of a lower cost V2X solution compared to DC bidirectional charging. Innovations in V2X technology that reduce the amount of additional hardware needed, simplify installation, and are interoperable across EV makes, are needed to promote widescale adoption of V2X and the adjoining benefits.

#### Solution

The Recipient will develop a level 2 bidirectional charger that addresses barriers to adoption through a two-system product architecture: a charger and an islanding device. The islanding device will be installed between the utility service entry and the main electrical panel, acting as the central interface and automatically isolating the home during grid outages. This device will be rated to handle the current carrying capacity of typical residential panels, eliminating the need for a dedicated critical load panel in many cases, which reduces cost and simplifies installation.

The islanding device will incorporate smart load shedding technology. This technology will intelligently manage household loads during grid outages, extending the resilience of the backup power system by prioritizing essential appliances and shedding non-essential loads. This ensures a longer backup duration and optimizes the use of energy stored in the EV battery. The islanding device will also serve as the point of connection for the charger, providing overcurrent protection for the system while saving breaker space in the home's electrical panel.

The charger will serve as the primary interface for the customer to interact with the system. It will facilitate bidirectional transmission of power and communication between the electrical service equipment and the vehicle. The charger will incorporate safety features to guarantee the safe operation of the system, and it will possess control and metering capabilities, enabling the transmission of status and performance updates to the user through a mobile application. Most importantly, the charger unlocks the bidirectional capability of the EV to which it is connected. This eliminates the need for expensive off-board power conversion by utilizing the vehicle's onboard technology to convert direct current (DC) power from the vehicle's battery to AC power. significantly reducing hardware costs for the customer.

Finally, the Recipient will work proactively with certification bodies and industry-led V2X efforts in California to ensure our solution meets all relevant safety and performance standards. This will expedite approval and accelerate market entry. The Recipient will consider the following standards: UL 1741 SC, UL 2231, UL 2594, ISO 15118-20, IEEE 1547, IEEE 2030.5, California

Rule 21, SAE J3072 and SAE J3400. Using open communication standards will ensure the solution is not proprietary to Rivian vehicles.

#### C. Goals and Objectives of the Agreement

#### **Agreement Goals**

The goal of this Agreement is to develop a functional prototype of an AC bidirectional charging product that:

- Meets key performance (i.e. charge/discharge power), safety and grid interconnection standards.
- Has a projected installed cost that is at least 35% lower than competing products. inclusive of equipment purchase and installation, and
- Is interoperable with non-Rivian EVs capable of AC bidirectional charging.

#### Ratepayer Benefits:2

This Agreement will result in ratepayer benefits that include reduced energy costs and improved equity, downward pressure on electric rates, improved grid reliability, customer-specific resiliency, and non-energy benefits in the form of reduced greenhouse gas emissions.

The project reduces energy costs and promotes equity by reducing the upfront cost of installing a V2X system and allowing a broader set of customers to participate in utility programs that can significantly lower a ratepayer's energy burden and their total cost of ownership of an EV. By focusing on broad interoperability and incorporating input from market research focused on households in disadvantaged and low-income communities, this project will support access to the benefits of V2X for a variety of EVs across different price points.

The project will improve electric grid reliability and drive down rates by developing an AC bidirectional charging product that conforms with industry standards and enables widespread use of EVs as distributed energy resources by reducing the cost of V2X systems. When aggregated, this supports grid reliability through increased availability of dispatchable assets across broad geographic areas, and the ability to either reduce load or increase supply in a highly localized manner.

<u>Technological Advancement and Breakthroughs</u>:<sup>3</sup> 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 demonstrating interoperable AC charging technology capable of delivering bidirectional power flow using onboard power electronics to reduce the overall cost of ownership of bidirectional charging technology. The project also aims to demonstrate the ability of an AC bidirectional charging solution to comply with all expected grid code requirements that can be tested and measured in a representative lab environment.

EPC-25-012 September 2025 Page 3 of 23

<sup>&</sup>lt;sup>2</sup> 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).

<sup>&</sup>lt;sup>3</sup> 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.

#### **Agreement Objectives**

The objectives of this Agreement are to:

- Develop and lab test a functional prototype of an AC bidirectional system that meets the following target performance metrics:
  - Total installed cost of no more than \$9,000 (target of \$6,000)
  - V2X discharge power of 11 kW
  - V2X conformance of at least 80% (target 100%) to standards required for interconnection of AC V2X (e.g., UL 1741 CRD plus UL 1741 SB or UL 1741 SC)
  - Interoperable through conformance to ISO 15118-20
- Develop a Manufacturing Plan and execute a Technology and Knowledge Transfer Plan that prepares the product for commercialization, and advances the state of the art of bidirectional charging.

#### **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:

<u>Instructions for Submitting Electronic Files and Developing Software:</u>

#### 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;
- o 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., TeamsWebEx), 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:
  - o Ensure that the report includes the following items, in the following order:
    - Cover page (required)
    - Credits page on the reverse side of cover with legal disclaimer (required)
    - Acknowledgements page (optional)
    - Preface (required)
    - Abstract, keywords, and citation page (required)
    - Table of Contents (required, followed by List of Figures and List of Tables, if needed)
    - Executive summary (required)
    - Body of the report (required)
    - References (if applicable)
    - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
    - Bibliography (if applicable)
    - Appendices (if applicable) (Create a separate volume if very large.)
    - Attachments (if applicable)
- Submit a draft of the Executive Summary to the TAC for review and comment.
- Develop and submit a Summary of TAC Comments on Draft Final Report received on the Executive Summary. For each comment received, the Recipient will identify in the summary the following:
  - Comments the Recipient proposes to incorporate.
  - Comments the Recipient does propose to incorporate and an explanation for why.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt.
- Incorporate all CAM comments into the Final Report. If the Recipient disagrees with any

comment, provide a *Written Responses to Comments* explaining why the comments were not incorporated into the final product.

 Submit the revised Final Report electronically with any Written Responses to Comments within 10 days of receipt of CAM's Written Comments on the Draft Final Report, unless the CAM specifies a longer time period or approves a request for additional time.

#### Products:

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

#### **CAM Product:**

• Written Comments on the Draft Final Report

#### MATCH FUNDS, PERMITS, AND SUBAWARDS

#### **Subtask 1.8 Match Funds**

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

#### The Recipient shall:

 Prepare a Match Funds Status Letter that documents the match funds committed to this Agreement. If no match funds were part of the application that led to the CEC awarding this Agreement and none have been identified at the time this Agreement starts, then state this in the letter.

If match funds were a part of the application that led to the CEC awarding this Agreement, then provide in the letter a list of the match funds that identifies:

- The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
- The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
- If different from the solicitation application, provide a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
- At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.

- Provide a Supplemental Match Funds Notification Letter to the CAM of receipt of additional match funds.
- Provide a Match Funds Reduction Notification Letter to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

#### **Products:**

- Match Funds Status Letter
- Supplemental Match Funds Notification Letter (if applicable)
- Match Funds Reduction Notification Letter (if applicable)

#### **Subtask 1.9 Permits**

The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

#### The Recipient shall:

- Prepare a Permit Status Letter that documents the permits required to conduct this Agreement. If 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.
- 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:**

- Subawards
- 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: DEVELOPOMENT OF FUNCTIONAL PROTOTYPE BUILD FOR ELECTRIC **VEHICLE SUPPLY EQUIPMENT (EVSE)**

The goal of this task is to build upon existing design concepts to finalize EVSE design and cost analysis and develop a fully functional prototype for comprehensive testing.

#### The Recipient shall:

- Generate the requirements and produce an EVSE Product Requirements Document (PRD) detailing all functional and non-functional requirements for the product, including performance, features, and constraints.
- Create and share the EVSE Design Package. The design package will provide a visual representation of the system, call out major components, interconnections, and signal
- Perform a product cost analysis and provide an EVSE Cost Tracking Report analyzing component costs relative to budget allocations, highlighting cost variances, and providing volume-based cost forecasts.
- Complete the prototype assembly and provide an EVSE Prototype Validation Plan that describes the tests and criteria used to confirm that a product or system meets its intended purpose and requirements.
- Perform laboratory testing and provide a draft EVSE Prototype Build and Test Report to the CAM detailing the testing and performance of the functional prototype, including results, analysis, and any identified issues.
- Submit the draft EVSE Prototype Build and Test Report to the CAM for feedback and incorporate changes as requested in the final EVSE Prototype Build and Test Report.
- Conduct a charging demonstration and provide Charging Demonstration Documentation Materials prepared including presentations, scripts, and any supporting visuals or videos.
- Analyze the test results and provide an EVSE Design Update Document outlining any changes or modifications made to the product design after the POC or functional prototype phase.

#### **Products:**

- **EVSE PRD**
- EVSE Design Package
- EVSE Cost Tracking Report
- EVSE Prototype Validation Plan (Draft and Final)
- EVSE Prototype Build and Test Report (Draft and Final)
- Charging Demonstration Documentation Materials
- EVSE Design Update Document
- CPR Report #1

#### TASK 3: DEVELOPMENT OF ISLANDING DEVICE

#### Subtask 3.1: Design and Development of Islanding Device

The goal of this task is to create a detailed design for the islanding device, ensuring safe and reliable functionality during V2G operations.

#### The Recipient shall:

- Conduct "voice of the customer" interviews to inform product design and better understand customer preferences. Provide a "Voice of the Customer" Market Research Report documenting interview results and findings.
- Generate the requirements and produce an Islanding Device Product Requirements Document (PRD) detailing all functional and non-functional requirements for the product, including performance, features, and constraints.
- Create and share the Islanding Device Design Package. The design package should provide a visual representation of the system, call out major components, interconnections, and signal flows.
- Perform a product cost analysis and provide a Draft Islanding Device Cost Tracking Report analyzing component costs relative to budget allocations, highlighting cost variances, and providing volume-based cost forecasts.
- Incorporate CAM feedback and provide a Final Islanding Device Cost Tracking Report.

#### **Products:**

- "Voice of the customer" Market Research Report
- Islanding Device PRD (Draft and Final)
- Islanding Device Design Package
- Islanding Device Cost Tracking Report (Draft and Final)

#### Subtask 3.2: Proof of Concept (POC) Build for Islanding Device

The goal of these tasks is to demonstrate the feasibility of the islanding device design by building a functional prototype that showcases core product functionalities. A POC assembly is not a full system build but is meant to quickly validate the feasibility of a design approach.

#### The Recipient shall:

- Complete the POC assembly. An Islanding Device POC Validation Plan will be provided, describing the tests and criteria used to confirm that the product meets its intended purpose and requirements.
- Conduct POC testing and compare results against the Islanding Device POC Validation
- Prepare a Draft Islanding Device POC Build and Test Report documenting the build process and test results of the POC prototype will be provided.
- Submit the Draft Islanding Device POC Build and Test Report to the CAM for feedback and incorporate changes as requested in the final Islanding Device POC Build and Test
- Prepare a CPR Report #2 in accordance with subtask 1.3 (CPR Meetings)

#### **Products:**

- Islanding Device POC Validation Plan
- Islanding Device POC Build and Test Report (Draft and Final)
- CPR Report #2

#### Subtask 3.3: Functional Prototype Build for Islanding Device

The goal of this task is to develop a fully functional prototype of the islanding device, integrating necessary hardware and software components for comprehensive testing.

#### The Recipient shall:

- Complete the prototype assembly and provide an *Islanding Device Prototype Validation Plan* that describes the tests and criteria used to confirm that a product or system meets its intended purpose and requirements.
- Perform laboratory testing and provide a Draft Islanding Device Functional Prototype
   Test Report to the CAM detailing the testing and performance of the functional
   prototype, including results, analysis, and any identified issues.
- Submit the draft Islanding Device Functional Prototype Test Report to the CAM for feedback and incorporate changes as requested in the final Islanding Device Functional Prototype Test Report.
- Conduct a charging demonstration and provide V2G Demonstration Documentation Materials prepared including presentations, scripts, and any supporting visuals or videos.
- Analyze the test results and provide an Islanding Device Design Update Document outlining any changes or modifications made to the product design after the POC or functional prototype phase.

#### **Products:**

- Islanding Device Prototype Validation Plan (Draft and Final)
- Islanding Device Prototype Build and Test Report (Draft and Final)
- V2G Demonstration Documentation Materials
- Islanding Device Design Update Document

#### **TASK 4: MANUFACTURING PLAN**

The goal of this task is to develop a comprehensive plan for manufacturing the EVSE and islanding devices at scale including sourcing, production processes, and quality control. Within the task, the product development team will work with the Recipients intellectual property team to identify unique innovations as candidates for patent applications in support of commercialization and potential licensing of technology post program conclusion. This task will also involve the Recipients commercial team to draft a go-to-market plan for the product and installation services.

#### The Recipient shall:

- Develop a *Procurement Strategy and Vendor Selection Plan* outlining the strategy for procuring components, materials, and top-level assemblies. This document is to include vendor selection criteria and rationale.
- Perform a Design for Manufacturing (DFM) review for the EVSE and provide an EVSE
   Manufacturing Readiness Evaluation of the product design and manufacturing
   processes to ensure it is ready for mass production.
- Perform a Design for Manufacturing (DFM) review for the Islanding Device and provide an *Islanding Device Manufacturing Readiness Evaluation* of the product design and manufacturing processes to ensure it is ready for mass production.
- Develop an *Intellectual Property Plan* identifying the key innovations from the technology developed on the project and submitting patent disclosures and, potentially, patent applications.
- Prepare a Draft *Go to Market Plan*. The go to market plan includes proposed pricing, sales channels, installation partnerships and customer outreach and education plans.

Submit the Draft Go to Market Plan to the CAM for feedback and incorporate changes as requested in the Final Go to Market Plan.

#### **Products:**

- Procurement Strategy and Vendor Selection Plan
- EVSE Manufacturing Readiness Evaluation
- Islanding Device Manufacturing Readiness Evaluation
- Intellectual Property Plan
- Go to Market Plan (Draft and Final)

#### **TASK 5: LAB TESTING**

The goal of these tasks is to evaluate the performance of the complete system (EVSE and Islanding Device) in a controlled lab setting.

#### The Recipient shall:

- Conduct Electromagnetic Compatibility (EMC) testing on the EVSE and provide an EMC Test Report: EVSE detailing the test setup, procedures, and results.
- Perform V2G communication testing and provide a V2G Communication Test Report documenting the communication protocols, test cases, and performance analysis.
- Conduct safety and compliance testing on the EVSE and provide an EVSE Safety and Compliance Test Report outlining the tests performed, standards adhered to, and compliance verification.
- Perform environmental testing on the EVSE and provide an Environmental Test Report: EVSE detailing the environmental conditions tested, test procedures, and results.
- Conduct Electromagnetic Compatibility (EMC) testing on the Islanding Device and provide an EMC Test Report: Islanding Device detailing the test setup, procedures, and results.
- Perform safety and compliance testing on the Islanding Device and provide an Islanding Device Safety and Compliance Test Report outlining the tests performed, standards adhered to, and compliance verification.
- Perform environmental testing on the Islanding Device and provide an Environmental Test Report: Islanding Device detailing the environmental conditions tested, test procedures, and results.
- Prepare a CPR Report #3 in accordance with subtask 1.3 (CPR Meetings)

#### **Products:**

- EMC Test Report: EVSE
- V2G Communication Test Report
- EVSE Safety and Compliance Test Report
- Environmental Test Report: EVSE
- EMC Test Report: Islanding Device
- Islanding Device Safety and Compliance Test Report
- Environmental Test Report: Islanding Device
- CPR Report #3

#### TASK 6: MEASUREMENT AND VERIFICATION (M&V) PLAN

The goal of these tasks is to quantify and document the impact of the project and ensure that the claimed benefits are real and verifiable.

#### The Recipient shall:

- Develop the M&V Plan detailing how the project's benefits will be measured and quantified. The plan will specify the metrics, data collection methods, analysis techniques, and responsible parties.
- Publish an M&V Report presenting the results of the M&V activities outlined in the M&V Plan. The report should include at minimum:
  - Collected data
  - Analysis performed
  - Summary of achieved benefits compared to project goals

#### **Products:**

- M&V Plan
- M&V Report

#### **TASK 7: 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 8 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

The goal of this task is to conduct activities that will accelerate the commercial adoption of the technology being supported under this agreement.

#### The Recipient Shall:

- Develop and submit a Technology Transfer Plan that identifies the proposed activities
  the recipient will conduct to accelerate the successful commercial adoption of the
  technology.
- Present the draft *Technology Transfer Plan* to the TAC for feedback and comments.
- Develop and submit a Summary of TAC Comments that summarizes comments received from the TAC members on the Draft Technology Transfer 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 *Technology Transfer Plan* to the CAM for approval.
- Implement activities identified in final *Technology Transfer Plan*.
- Develop and submit a Technology Transfer Summary Report that includes high level summaries of the activities, results, and lessons learned of tasks performed relating to implementing the Final Technology Transfer Plan. This report should not include any proprietary information.
- When directed by the CAM, develop presentation materials for an CEC- sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the 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:**

- Technology Transfer Plan (draft and final)
- Summary of TAC Comments
- Technology Transfer Summary Report (draft and final)
- High Quality Digital Photographs

### V. PROJECT SCHEDULE

Please see the attached Excel spreadsheet.