California Energy Commission
November 12, 2025 Business Meeting
Backup Materials for CALSTART, Inc.

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

1. Proposed Resolution
2. Grant Request Form
3. Scope of Work
4. CEQA Materials

[PROPOSED]

RESOLUTION NO: 25-1112-xx

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: CALSTART, Inc.

WHEREAS, the County of Sacramento (County) is the Lead Agency under the California Environmental Quality Act (CEQA) for the CAT POWER Hub: The California Advanced Technology Probably Off-road Job Site Energy Resource Hub Project (Project), a proposed project to develop and demonstrate an off-road, off-grid operations hub in Sacramento for mobile, machine charging, and battery energy storage systems to support electric machines and equipment operating at two job sites; and

WHEREAS, pursuant to CEQA, the County prepared, and subsequently certified on April 24, 1996, the Final Environmental Impact Report (EIR) for the Morrison Creek Mining Reach Upstream (North) of Jackson Highway, which included a Mitigation Monitoring and Reporting Program, prepared an Environmental Coordinator Memorandum dated April 10, 2017, and on January 23, 2018 at the County's Board of Supervisor meeting approved Amended Use Permit PLNP2017-0049 (AUP), all of which are included in the backup materials; and

WHEREAS, at its January 23, 2018 Board of Supervisors Meeting, the County recognized the Environmental Coordinator Memorandum dated April 10, 2017, and determined, pursuant to CEQA Guidelines section 15162, that there are no substantial changes in the project or in the circumstances under which the project is to be undertaken and that the project involves no new significant impacts that were not considered in the previous EIR and AUP; and

WHEREAS, the Energy Commission is considering proposed Agreement ZVI-25-005, a grant for the CAT POWER Hub: The California Advanced Technology Probably Off-road Job Site Energy Resource Hub Project; and

WHEREAS, prior to acting on Agreement ZVI-25-005, the Energy Commission desires to make certain findings under CEQA.

THEREFORE, BE IT RESOLVED, the Energy Commission has reviewed and considered the County's EIR, Environmental Coordinator Memorandum, and AUP, and the findings contained therein, and the Energy Commission staff's findings, which are contained in the "California Environmental Quality Act (CEQA) Analysis for ZVI-25-005, CAT POWER Hub: The California Advanced Technology Probably Off-road Job Site Energy Resource Hub Project" memorandum, all of which are included in the backup materials, and finds these documents are adequate for its use as the decision-making body for its consideration of ZVI-25-005; and

FURTHER BE IT RESOLVED, the Energy Commission's approval of ZVI-25-005 is within the scope of the AUP, and within the activities evaluated in the EIR; and

FURTHER BE IT RESOLVED, since the EIR was finalized and certified by the County, and since the AUP was approved by the County, none of the circumstances within California Code of Regulations, title 14, section 15162 are present and there have been no substantial project changes and no substantial changes in the project circumstances that would require major revisions to the EIR or AUP, either due to the involvement of new significant environmental effects or to an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusions set forth in the EIR; and

FURTHER BE IT RESOLVED, the Energy Commission has not identified any feasible alternative or additional feasible mitigation measures within its power that would substantially lessen or avoid any significant effect the Project would have on the environment; and

FURTHER BE IT RESOLVED, the Energy Commission approves ZVI-25-005 with CALSTART, Inc. for a $16,775,193 grant; and

FURTHER BE IT RESOLVED, that this document authorizes the Executive Director or their designee to execute the same on behalf of the Energy Commission.

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 November 12, 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: ZVI-25-005

B. Division Information

1. Division Name: Fuels and Transportation
2. Agreement Manager: Lauren Jansen
3. MS-27
4. Phone Number: 279-226-1112

C. Recipient's Information

1. Recipient's Legal Name: CALSTART, Inc.
2. Federal ID Number: 95-4375022

D. Title of Project

Title of project: CAT POWER Hub The California Advanced Technology Portable Off-road Job Site Energy Resource Hub

E. Term and Amount

1. Start Date: 11-12-2025
2. End Date: 09-29-2028
3. Amount: $16,775,193

F. Business Meeting Information

1. Are the ARFVTP agreements $75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 11-12-2025
3. Consent or Discussion? Consent
4. Business Meeting Presenter Name: Lauren Jansen
5. Time Needed for Business Meeting: 5 minutes
6. The email subscription topic is: Clean Transportation Program

Agenda Item Subject and Description:

Proposed resolution adopting CEQA findings for CALSTART, Inc's CAT POWER Hub: The California Advanced Technology Portable Off-road Job Site Energy Resource Hub project, and approving agreement ZVI-25-005 with CALSTART, Inc. (General Fund Funding) Contact: Lauren Jansen

a. CEQA. Findings that, (1) based on the lead agency Sacramento County's (County) Environmental Impact Report (EIR) which included a Mitigation Monitoring and Reporting Program, certified on April 24, 1996, (2) County's Environmental Coordinator Memorandum dated April 10, 2017, and (3) County's Amended Use Permit PLNP2017-00049 (AUP) approved by County on January 23, 2018, work under the proposed project presents no new or substantially more severe environmental impacts beyond those already considered and mitigated; and that following County's certification and approval of the EIR and AUP, there are no substantial changes or new information requiring further review under California Code of Regulations, title 14, section 15162.

b. CALSTART, Inc. Proposed resolution approving agreement ZVI-25-005 with CALSTART, Inc. for a $16,775,193 grant develop and demonstrate an off-road, off-grid operations hub in Sacramento for mobile, machine charging, and battery energy storage systems (BESS) to support electric machines and equipment operating at two job sites. The project will install a minimum of 56 EV charging ports (Level 2, DC fast chargers, and mobile chargers), 12 acres of solar photovoltaic, and eight megawatt hours of BESS to support zero-emission construction vehicles across both job sites. This agreement is in coordination with a California Air Resources Board grant for zero-emission vehicles.

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?

   No

   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.

   Categorical Exemption?

   No

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

   CCR section number:

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

   Not applicable

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

   b) Agreement **IS NOT** exempt.
   IMPORTANT: consult with the legal office to determine next steps.

   Yes

   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	Yes
Statement of Overriding Considerations	No
None	No

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
Caterpillar Inc.	$11,030,162	$11,540,342
Teichert, Inc.	$0	$2,269,832
Critical Loop, Inc.	$1,684,762	$1,965,600
Xos, Inc.	$3,437,500	$3,437,499
TBD	$550,000	$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
Tangent Energy Solutions, Inc.	$750,000	$750,000
TBD	$2,430,000	$1,835,482
Caterpillar Inc.	$6,780,500	$7,260,000
Various	$52,500	$22,500
McMaster-Carr and/or Custom Fabricators	$50,000	$20,000
Digikey and/or Mouser Electronics, Inc. and/or Local Suppliers	$40,000	$15,000
W.W. Grainger, Inc. and/or The Home Depot, Inc. and/or Misc.	$52,500	$7,500
Contemporary Amperex Technology Co., Limited (CATL) and/or Coulomb Solutions Inc.	$150,000	$0

MiDa and/or Amphenol Electronics Corporation and/or DigiKey and/or RS Americas, Inc.	$28,000	$0
McMaster-Carr and/or Bossard, Inc. and/or Hellermann Tyton and/or UMPCO, Inc.	$5,000	$0
UUGreenPower and/or Delta Electronics Inc.	$38,000	$0
Custom Fabricators and/or Weld Shops and/or McMaster-Carr	$27,000	$0
Coulomb Solutions Inc. and/or Modine Manufacturing Company and/or McMaster-Carr	$22,000	$0
Phoenix Contact Development and Manufacturing, Inc. and/or Vector Electronics & Technology, Inc.and/or Modine Manufacturing Company and/or Bender Electronics Incorporated and/or Mochuan	$25,000	$0
Contemporary Amperex Technology Co., Limited (CATL) and/or Coulomb Solutions Inc.	$1,248,172	$1,161,578
MiDa and/or Amphenol Electronics Corporation and/or DigiKey and/or RS Americas, Inc.	$241,027	$98,973
McMaster-Carr and/or Bossard, Inc. and/or Hellermann Tyton and/or UMPCO, Inc.	$225,250	$199,750
UUGreenPower and/or Delta Electronics Inc.	$18,020	$15,980
Custom Fabricators and/or Weld Shops and/or McMaster-Carr	$225,250	$199,750
Coulomb Solutions and/or Modine Manufacturing Company and/or McMaster-Carr	$225,250	$199,750
Phoenix Contact Development and Manufacturing, Inc. and/or Vector Electronics & Technology, Inc. and/or Modine Manufacturing Company and/or Bender Electronics Incorporated and/or Mochuan	$101,363	$89,888
Xos, Inc.	$90,000	$0
Sacramento Municipal Utility District	$0	$1,000,000
Critical Loop, Inc.	$0	$1,638,000
Rocsys Inc.	$165,000	$0

K. Key Partners

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

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
General Fund	FY 21/22	601.211EO	$16,775,193

TOTAL Amount: $16,775,193

R&D Program Area: NA

Explanation for "Other" selection NA

Reimbursement Contract #: NA

Federal Agreement #: NA

M. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Piero Stillitano

Address: 48 S Chester Ave

City, State, Zip: Pasadena, CA 91106

Phone: (626) 744-5600

E-Mail: pstillitano@calstart.org

2. Recipient's Project Manager

Name: Steve Sokolsky

Address: 48 S Chester Ave

City, State, Zip: Pasadena, CA 91106

Phone: (909) 396-2780

E-Mail: ssokolsky@calstart.org

N. Selection Process Used

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

Selection Process	Additional Information
Competitive Solicitation #	SOL-2402-363
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: Lauren Jansen

Approval Date: 8/7/2025

Office Manager: Elizabeth John

Approval Date: 08/22/2025

Deputy Director: Melanie Vail

Approval Date: 9/4/2025

Exhibit A
SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration (Match-Funded and CARB-funded task)
2		Engineering, Procurement, and Construction (CEC-funded and CARB-funded task)
3	X	Grid Energy Management (CEC-funded task)
4		Workforce Training (CARB-funded task)
5		Community Workforce Development and Benefits (CARB-funded task)
6	X	Monitoring, Data Analysis, and Reporting (CARB-funded task)
7	X	Communications (CARB-funded task)
8		Operations and Reliability (Match-funded task)
9		Semi-Annual Electric Vehicle Charger Inventory Reports (Match-funded task)
10		Other Data Collection and Analysis (Match-funded task)
11		Project Fact Sheet (Match-funded task)

KEY NAME LIST

Task #	Key Personnel	Key Subrecipients(s)	Key Partner(s)
1	Steven Sokolsky – CALSTART Erica Slowik – CALSTART Kate Taylor – CALSTART	N/A	N/A
2	Milad Arouni – Burns & McDonnell Mark Nilsen – Teichert Idine Ghoreishian – Caterpillar	Teichert, Caterpillar	N/A
3	Idine Ghoreishian – Caterpillar	TBD, Caterpillar	N/A

Task #	Key Personnel	Key Subrecipients(s)	Key Partner(s)
4	Louie Heflen – Holt Jim Halloran- Holt Mark Nilsen – Teichert Steve Sokolsky - CALSTART	Holt, Teichert, Caterpillar	N/A
5	Angelina Rahimi – Aura Planning Jaime Lemus - SMAQMD	Aura Planning, TBD, SMAQMD,	N/A
6	Steven Sokolsky – CALSTART Idine Ghoreishian – Caterpillar Mark Nilsen – Teichert Paul Stith- Critical Loop Andrew Grinalds – Critical Loop Giordano Sordoni - Xos	Teichert, Caterpillar	N/A
7	Steven Sokolsky – CALSTART Erica Slowik- CALSTART Kate Taylor- CALSTART	N/A	N/A
8	Steven Sokolsky – CALSTART Erica Slowik – CALSTART Kate Taylor – CALSTART	N/A	N/A

Task #	Key Personnel	Key Subrecipients(s)	Key Partner(s)
9	Steven Sokolsky – CALSTART Erica Slowik – CALSTART Kate Taylor – CALSTART	N/A	N/A
10	Steven Sokolsky – CALSTART Erica Slowik – CALSTART Kate Taylor – CALSTART	N/A	N/A
11	Steven Sokolsky – CALSTART Erica Slowik – CALSTART Kate Taylor – CALSTART	N/A	N/A

GLOSSARY

Specific terms and acronyms used throughout this scope of work are defined as follows:

Term/ Acronym	Definition
AB	Assembly Bill
AC Level 2	Alternating current. A charger that operates on a circuit from 208 volts to 240 volts and transfers AC electricity to a device in an electric vehicle (EV) that converts AC to direct current to charge an EV battery.
ADA	Americans with Disabilities Act
API	Application programming interface. A type of software interface that offers service to other pieces of software. An API allows two or more computer programs to communicate with each other.
ATDPP	Advanced Technology Demonstration and Pilot Projects
Battery Energy Storage	Technology that stores electrical energy in batteries for later use, helping to stabilize the electric grid by balancing supply and demand, integrating renewable energy sources, and providing backup power during outages or peak demand periods.
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer

Term/ Acronym	Definition
CARB	California Air Resources Board
CEC	California Energy Commission
Charge attempt	Any instance of an EV driver taking action to initiate a charging session by taking one or all of the following steps in any order: 1) attaching the connector to the EV appropriately or 2) attempting to authorize a charging session by use of radio frequency identification (RFID) technology, credit card, charging network provider smartphone application (app), screen input, or calling the charging network provider's customer service number.
Charger	A device with one or more charging ports and connectors for charging EVs. Also referred to as electric vehicle supply equipment (EVSE). This definition excludes any charger used solely for private use at a single-family residence or a multifamily dwelling with four or fewer dwelling units.
Charging network	A collection of chargers located on one or more property(ies) that are connected via digital communications to manage the facilitation of payment, the facilitation of electrical charging, and any related data requests.
Charging network provider	The entity that provides the digital communication network that remotely manages the chargers. Charging network providers may also serve as charging station operators and/or manufacture chargers.
Charging port	The system within a charger that charges one EV. A charging port may have multiple connectors, but it can provide power to charge only one EV through one connector at a time.
Charging session	The period after a charge attempt during which the EV is allowed to request energy. Charging sessions can be terminated by the customer, the EV, the charger, the charging station operator, or the charging network provider.
Charging station	The area in the immediate vicinity of one or more chargers and includes the chargers, supporting equipment, parking areas adjacent to the chargers, and lanes for vehicle ingress and egress. A charging station could comprise only part of the property on which it is located.
Charging station management system	A system that may be used to operate a charger, to authorize use of the charger, or to record or report charger data, such as by using OCPP.

Term/ Acronym	Definition
Charging station operator	The entity that owns the chargers and supporting equipment and facilities at one or more charging stations. Although this entity may delegate responsibility for certain aspects of charging station operation and maintenance to subcontractors, this entity retains responsibility for operation and maintenance of chargers and supporting equipment and facilities. In some cases, the charging station operator and the charging network provider are the same entity.
Connector	The device that attaches an EV to a charging port in order to transfer electricity.
Corrective maintenance	Maintenance that is carried out after failure detection and is aimed at restoring an asset to a condition in which it can perform its intended function.
CPR	Critical Project Review
CTP	Clean Transportation Program
Depot	Type of “home base” behind-the-fence location where a vehicle is typically kept when not in use (usually parked on a nightly basis).
DCFC	Direct current fast charger. A charger that enables rapid charging by delivering direct-current (DC) electricity directly to an EV's battery.
Downtime	A period of time that a charger is not capable of successfully dispensing electricity or otherwise not functioning as designed. Downtime is calculated pursuant to Task 8.3.
ESS	Energy storage system
EV	Electric vehicle. A vehicle that is either partially or fully powered on electric power received from an external power source. For the purposes of this Agreement, this definition does not include golf carts, electric bicycles, or other micromobility devices
DSA	Data Sharing Agreement
EV	Electric vehicle. A vehicle that is either partially or fully powered on electric power received from an external power source. For the purposes of this Agreement, this definition does not include golf carts, electric bicycles, or other micromobility devices
EVITP	Electric Vehicle Infrastructure Training Program. It provides training and certification for electricians installing electric vehicle supply equipment.
EVSE	Electric vehicle supply equipment. A charger as defined.
Excluded downtime	Downtime that is caused by events pursuant to Task 8.3.

Term/ Acronym	Definition
Failed charging session	Following a charge attempt, the criteria for a successful charging session were not met.
FTD	Fuels and Transportation Division
GFO	Grant Funding Opportunity
Hardware	The machines, wiring, and other physical components of an electronic system including onboard computers and controllers.
Inoperative state	The charger or charging port is not operational.
Installed	Attached or placed at a location and available for use for a charging session. The date a charger is installed is the date it is first available for use for a charging session.
Interoperability	Successful communication between the software, such as the software controlling charging on the EV and the software controlling the charger. Interoperability failures are communication failures between the EV and charger that occur while the software of each device is operating as designed. Interoperability failure leads to failed charging sessions.
Maintenance	Any instance in which preventive or corrective maintenance is carried out on equipment.
Networked	A charger can receive or send commands or messages remotely from or to a charging network provider or is otherwise connected to a central management system, such as by using OCPP 2.0.1, for the purposes of charger management and data reporting.
Nonnetworked charger	A charger that is not networked.
OCPP	Open Charge Point Protocol. An open-source communication protocol that specifies communication between chargers and the charging networks that remotely manage the chargers.
Operational	Or “up.” A charging port’s hardware and software are both online and available for use, or in use, and the charging port is capable of successfully dispensing electricity.
Operative state	The charger is operational.
Preventative maintenance	Maintenance that is performed on physical assets to reduce the chances of equipment failure and unplanned machine downtime.
Primary Vehicle Type	A vehicle type depending on the GVWR such as "light duty" or "LD" (GVWR <= 10,000), "medium duty" or "MD" (10,000 < GVWR <= 26,000), "heavy duty" or "HD" (GVWR > 26,000).

Term/ Acronym	Definition
Private	Charging ports located at parking space(s) that are privately owned and operated, often dedicated to a specific driver or vehicle (for example, a charging port installed in a garage of a single-family home).
Public	Charging ports located at parking space(s) designated by the property owner or lessee to be available to and accessible by the public.
Recipient	CALSTART, Inc.
RSA	Registered Service Agency. An entity that repairs a commercial device that is registered with the California Department of Food and Agriculture Division of Measurement Standards.
SB	Senate Bill
SCAR	Successful Charge Attempt Rate
Shared Private	Charging ports located at parking space(s) designated by a property owner or lessee to be available to, and accessible by, employees, tenants, visitors, and residents. Examples include workplaces and shared parking at multifamily residences.
Software	A set of instructions, data, or programs used to operate computers and execute specific tasks.
Successful charging session	Following a charge attempt, a customer's EV battery is charged to the state of charge the customer desires and is disconnected manually by the customer or by the EV's onboard software system terminating the charging session, without an additional charge attempt.
Uptime	The time that a charger is installed during a reporting period excluding downtime pursuant to Task 8.3.

Background

The Budget Act of 2022 (Chapters 43, 45, and 249 of the Statutes of 2022) and Assembly Bill (AB) 211 (Chapter 574, Statutes of 2022), as amended by AB 158 (Chapter 996, Statutes of 2024), appropriated one-time funding from the General Fund to support infrastructure deployments, emerging opportunities, and manufacturing projects for zero-emission light-duty and medium- and heavy-duty vehicles.

On July 14, 2023, the California Air Resources Board (CARB) released a solicitation entitled "Advanced Technology Demonstration and Pilot Projects". This competitive grant solicitation was to support a wide array of emerging opportunities including zero-emission off-road equipment, marine vessel, and Green Zone projects. The California Energy Commission (CEC) would provide funding to support the purchase and installation of infrastructure in support of the resulting CARB projects. In response to the

Advanced Technology Demonstration and Pilot Projects (ATDPP) solicitation, CALSTART, Inc. (Recipient) submitted application #11 which was proposed for funding in the CEC's Notice of Proposed Awards on March 29, 2024. The ATDPP solicitation and Recipient's application are hereby incorporated by reference into this Agreement in their entirety.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient's Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient's Application and the terms of this Agreement, this Agreement shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Solicitation, the terms of this Agreement shall control.

NOTE: CEC is acting in coordination with CARB regarding the overall project, but CARB is not a party to this CEC grant agreement (Agreement). This Agreement is a companion agreement to the agreement between CARB and the Recipient. No work on this project can begin until CARB's agreement with the Recipient has been executed. Work under the agreement between CARB and the Recipient ("CARB agreement") is referenced in this Agreement as a "CARB Task" or a "CARB Sub-task;" these terms mean a task or sub-task for which (1) the CARB agreement governs; (2) where the Recipient's performance is due to CARB; and (3) where the Recipient's reimbursable costs will be funded by CARB.

Problem Statement:

Battery electric heavy machines and equipment cannot easily travel from project sites in order to be fueled. This is a major roadblock to deploying zero-emission equipment at job sites (construction, paving, recycling, and municipal operations). This project will demonstrate a cutting-edge energy management ecosystem for zero-emission equipment and vehicles operating at regional job sites. This charging hub presents a realistic and viable solution for electrifying job site machinery and will yield information to support the construction and resource extraction industries.

Goals of the Agreement:

The goal of this Agreement is to develop an off-road jobsite energy hub. This centralized, off-road, off-grid job site energy hub (Hub) aims to demonstrate a solution for issues that arise with the introduction of zero-emission off-road equipment, in particular charging in inaccessible and off-grid locations. The Hub will comprise a variety of equipment and energy technologies, including but not limited to: 1) mobile energy storage and charging systems that can be deployed to provide energy to off-road job sites; 2) stationary charging solutions to accommodate electric machines and electric vehicles; and 3) a solar-powered microgrid with fixed battery energy storage systems that can help provide grid stability and renewable energy time shift. This equipment will support heavy-duty battery-electric machines and equipment that will be deployed by Teichert and Sacramento County to job sites in the region. Each project site will be provided energy via mobile batteries deployed from the centralized facility (the CAT POWER Hub). These batteries, along with fixed install batteries, will store and

distribute renewable energy generated at the Hub to support grid resiliency. The project is intended to demonstrate zero-emission machinery and mobile battery energy systems for a variety of end uses, including offroad job sites, construction projects, municipal works, waste management, fixed install recycling, paving, and aggregate yards.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Demonstrate an operations hub for mobile, machine charging, and energy storage systems to support electric machines and equipment operating at job sites.
- Support grid resiliency and renewable energy time shift using installed energy storage systems (ESS).
- Provide workforce development and training in zero-emission equipment and machines to enable disadvantaged communities to participate in the transition to the green economy.
- Install a minimum of 56 EV charging ports from eight Level 2 chargers, 26 direct current fast chargers (DCFCs), and 22 mobile chargers, and 12 acres of solar photovoltaic, and eight megawatt-hours (MWh) of battery energy storage system (BESS), to power eight construction EVs that will be deployed to two worksites.

TASK 1 ADMINISTRATION (Match-fundedand CARB-funded task)

Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement. The Commission Agreement Manager (CAM) and CARB Project Liaison shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

The CAM shall:

- Send the Recipient the *kick-off meeting agenda*.

The Recipient shall:

- Attend a “Kick-Off” meeting that includes the CAM, the CARB Project Liaison, and may include the Commission Agreement Officer (CAO) and a representative of the CEC Accounting Office. The Recipient shall bring their Project Manager, Agreement Administrator, Accounting Officer, and any others determined necessary by the Recipient or specifically requested by the CAM to this meeting.
- Provide a *written statement of match share activities* that have occurred after the notice of proposed awards but prior to the execution of the agreement using match funds. If none, provide a statement that no work has been completed using match funds prior to the execution of the agreement. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

    - The statement should include the following project activities: key milestone dates, site specific charger information and any other equipment to be included at the site(s).
- Provide an updated *Schedule of Products*, *updated list of match funds (Private, Utility, Federal),* and *updated list of permits.*
- Submit a *Data Collection Plan* timeline, within 90 days of agreement execution, detailing the data collection period and schedule of data to be collected for all infrastructure. CAM written approval is required prior to proceeding with any subsequent project activities.
- Discuss the following administrative and technical aspects of this Agreement:
    - Agreement Terms and Conditions
    - Critical Project Review (Task 1.2)
    - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
    - Permit documentation (Task 1.7)
    - Subawards and site host agreements (if applicable) needed to carry out project (Task 1.8)
    - The CAM and CARB Project Liaison's expectations for accomplishing tasks described in the Scope of Work
    - An updated Schedule of Products and Due Dates
    - Monthly Calls (Task 1.4)
    - Quarterly Progress Reports (Task 1.5)
    - Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
    - Program Management Data Report (report template to be provided by CAM)
    - EV Utilization Data Report (report template to be provided by CAM)
    - GHG Intensity Report (report template to be provided by CAM)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits
- Data Collection Plan
- Written Statement of Match Share Activities

CAM Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for frank discussions between the CEC and the Recipient. The goal of this task is to determine if the project should continue to receive CEC funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

The CAM may schedule CPR meetings as necessary, and meeting costs will be borne by the Recipient.

Meeting participants include the CAM, CARB Project Liaison and the Recipient and may include the CAO, the Fuels and Transportation Division (FTD) program lead, other CEC staff and Management as well as other individuals selected by the CAM, or CARB Project Liaison to provide support to the CEC.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the CEC, but they may take place at another location or remotely.
- Send the Recipient the *CPR meeting agenda and a list of expected participants* in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. Prepare a *schedule for providing the written determination* described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.
- Provide the Recipient with a *written determination* in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a *CPR Report* for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

CAM Products:

- CPR Meeting agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)

Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with CEC staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

  This meeting will be attended by, at a minimum, the Recipient, CARB Project Liaison and the CAM. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the CAM or CARB Project Liaison.

  The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The CAM and CARB Project Liaison will determine the appropriate meeting participants.

  The administrative portion of the meeting shall be a discussion with the CAM and CARB Project Liaison about the following Agreement closeout items:

  - What to do with any equipment purchased with CEC funds (Options)
  - CEC request for specific “generated” data (not already provided in Agreement products)
  - Need to document Recipient’s disclosure of “subject inventions” developed under the Agreement, if applicable
  - “Surviving” Agreement provisions
  - Final invoicing and release of retention
- Provide *written documentation for meeting agreements*
- Prepare a *schedule for completing the closeout activities* for this Agreement.

Products:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

Task 1.4 Monthly Calls

The goal of this task is to have calls at least monthly between CAM, CARB Project Liaison 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 or CARB 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 or CARB Project Liaison. 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 and CARB Project Liaison shall:

- Schedule monthly calls.
- Provide and explain the Program Management Data Report Template during first monthly call and review with Recipient during subsequent 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 or CARB Project Liaison prior to the monthly call
- Complete the Program Management Data Report following the first monthly call and review and update with CAM during subsequent monthly calls as needed (Task 10)
- Provide verbal answers to the CAM and CARB Project Liaison during the call.
- Send an *email to CAM and CARB Project Liaison concurring with call summary notes*.

Product:

- Email to CAM and CARB Project Liaison concurring with call summary notes.

Task 1.5 Quarterly Progress Reports

The goal of this task is to periodically 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 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, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a *Quarterly Progress Report* which summarizes all Agreement activities conducted by the Recipient for the reporting period, including 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 and CARB Project Liaison 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.

Product:

- Quarterly Progress Reports

Task 1.6 Identify and Obtain Match Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a *letter* documenting the match funding committed to this Agreement and submit it to the CAM and CARB Project Liaison at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the CEC awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
    - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
    - Amount of each in-kind contribution, a description, documented market or book value, and its 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 shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a *copy of the letter of commitment* from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.

- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information, including but not limited to, a *letter of new match fund commitment* to the CAM and CARB Project Liaison if during the course of the Agreement additional match funds are received.
- Provide the CAM and CARB Project Liaison *written notification* within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

Products:

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Written notification that match funds were reduced (if applicable)

Task 1.7 Identify and Obtain Required Permits

The goal of this task 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. The CEC budget for this task will be zero dollars. The Recipient may budget match funds for any expected expenditures associated with obtaining permits or may seek reimbursement from CARB if permitted under Recipient's agreement with CARB. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

The Recipient shall:

- Prepare a *letter* documenting the permits required to conduct this Agreement and submit it to the CAM and CARB Project Liaison at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
    - A list of the permits that identifies the:
        - Type of permit
        - Name, address and telephone number of the permitting jurisdictions or lead agencies
    - The schedule the Recipient will follow in applying for and obtaining these permits.

- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement 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 the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the *appropriate information* on each permit and an *updated schedule* to the CAM and CARB Project Liaison.
- As permits are obtained, send a copy of each *approved permit* to the CAM and CARB Project Liaison.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM and CARB Project Liaison within 5 working days. Either of these events may trigger actions available to the CEC under this Agreement, such as an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- A copy of each final approved permit (if applicable)
- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)

Task 1.8 Obtain and Execute Subawards and Agreements with Site Hosts

The goal of this task is to ensure quality products and to execute subrecipient and site host agreements, as applicable, required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement and contracting policies and procedures.

The Recipient shall:

- Execute and manage subawards and coordinate subrecipient activities.
- 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.
- Submit a *letter* to the CAM and CARB Project Liaison describing the subawards and any site host agreements needed or stating that no subawards or site host agreements needed are required.

- If requested by the CAM and CARB Project Liaison, submit a *draft of each subaward and any site host agreement* required to conduct the work under this Agreement to the CAM and CARB Project Liaison for review.
- If requested by the CAM and CARB Project Liaison, submit a *final copy of each executed subaward and any site host agreement*.
- If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM and CARB Project Liaison.

Products:

- Letter describing the subawards and any site host agreements needed, or stating that no subawards or site host agreements are required
- Draft subaward(s) (if requested)
- Final subaward(s) (if requested)
- Draft site host agreement(s) (if requested)
- Final site host agreement(s) (if requested)

TECHNICAL TASKS

TASK 2 ENGINEERING, PROCUREMENT, AND CONSTRUCTION (EPC) (CEC-funded and CARB-funded task)

The goal of this task is to design project machines and infrastructure, procure necessary equipment and materials, and oversee construction and deployment activities, ensuring they align with the project's objectives.

Task 2a: Site Design and Procurement

The goal of this task is to prepare and complete the Engineering Design for the Project Hub, sign contracts with construction subcontractors and EV equipment installers, and submit procurement orders for all equipment and materials.

The Recipient shall:

- Complete 100% of the engineering design for the project site. Provide a *Final Engineering Design Report of the Hub* encompassing the design process, design analysis, and design evaluation to the CAM and CARB Project Liaison. (CARB-funded)
- Sign *Construction and Equipment Installation Contracts* with construction subcontractors and EV equipment installers and submit to the CAM and CARB Project Liaison. (CARB-funded)
- Prepare and submit to the CAM and CARB Project Liaison an *Equipment List* that includes a list of all equipment and service agreements that will be purchased for the project. Recipient must receive CAM and CARB Project Liaison Written Approval prior to purchasing equipment on the Equipment List. (CEC-funded)

- Submit internal and external equipment and materials *Procurement Orders* for eight Level 2, 26 DCFCs, 22 mobile chargers, battery storage systems and other equipment and materials. (CEC-funded)

Products:

- Final Engineering Design Report of the Hub
- Signed Construction and Equipment Installation Contracts
- Equipment List
- Procurement orders of ordered equipment and materials

Task 2b: Installation and Deployment

The goal of this task is to provide status updates on construction and installation, ensure compliance with project requirements, complete installation of the Project Hub and confirm deployment of vehicles and equipment.

The Recipient shall:

- Complete site assessment and planning: site survey and assessment, Develop site plans, and layouts, and order materials. Provide *Site Plans and Receipts of the Ordered Materials* to the CAM and CARB Project Liaison. (CARB-Funded)
- Conform to permitting and regulatory compliance: identify required permits and regulatory approvals for construction activities, prepare and submit permit applications, and obtain necessary approvals from local authorities. Provide *Completed Applications and Copies of All Required Permits* to the CAM and CARB Project Liaison. (CARB-Funded)
- Complete grading and earthwork: clear the site, excavate, grade, and prepare site for construction. Provide *Photographs of the Site* to the CAM and CARB Project Liaison. (CARB-Funded)
- Complete construction of office/training facilities: design and construct office and training facilities, coordinate with engineers and contractors, and monitor progress. Provide *Progress Photographs and Proof of Completion* to the CAM and CARB Project Liaison. (CARB-funded)
- Complete construction of storage facilities: design and construct storage facilities, procure necessary materials and equipment, ensure compliance with safety and building codes. Provide *Progress and Final Outcome Photographs with Documentation of Completion and Evidence of Compliance with Safety and Building Codes* to the CAM and CARB Project Liaison. (CARB-Funded)

- Install solar, energy storage system (ESS), and EV/Equipment chargers and build electrical connection to substation. Provide a *Report of the Completed Solar, ESS, and Charger Connections including Photographs* to the CAM and CARB Project Liaison. (CARB-funded)
- Deploy the 8 off-road electric equipment along with other required equipment. Provide *Proof of Equipment Deployment (Bill of Lading, Invoice of Equipment Retrieval, and Photographs of Equipment on Jobsite)* to the CAM and CARB Project Liaison. (CARB-funded)
- Deploy 22 mobile chargers. Provide *Proof of Mobile Charger Deployment (Bill of Lading, Invoice of Equipment Retrieval, and Photographs of Equipment on Jobsite)* to the CAM and CARB Project Liaison. (CEC-Funded)
- Develop and submit to the CAM and CARB Project Liaison a *Site Specific Project Schedule*, which is to include milestones and meeting schedules with all relevant stakeholders. This schedule will also define the objectives of each project site, including the desired outcomes, deliverables, and measurable success criteria. (CEC-Funded)
- Develop a *Financial Risk Management Plan*, that includes risk mitigation strategies for any subrecipients or vendors that CEC has identified as financially high-risk. CAM written approval is required prior to proceeding with any subsequent project activities. (CEC-Funded)
- Submit an *AB 841 Certification* that certifies the project has complied with all AB 841 (2020) requirements specified in Exhibit C or describes why the AB 841 requirements do not apply to the project. The certification shall be signed by Recipient's authorized representative. (CEC-funded)
- Submit *EVITP Certification Numbers* of each Electric Vehicle Infrastructure Training Program certified electrician that installed electric vehicle charging infrastructure or equipment. EVITP Certification Numbers are not required to be submitted if AB 841 requirements do not apply to the project. (CEC-funded)
- Ensure all electric vehicle supply equipment (EVSE) installed for commercial use has a type approval certificate issued through the California Type Evaluation Program (CTEP) administered by the California Department of Food and Agriculture (CDFA) Division of Measurement Standards (DMS) or Certificate of Conformance issued by the National Type Evaluation Program (NTEP) administered through the National Conference on Weights and Measures. California accepts NTEP certificates so long as the device also meets CCR Title 4, Section 4002.11. (CEC-funded)

- Unless otherwise updated by the CDFA DMS, ensure installation, repair, and/or maintenance on commercial EVSE is performed by a Registered Service Agency (RSA) and after the device is placed in service, the RSA must report this information to the county within 24 hours. Device owners are responsible for registering their device with the county. (CEC-funded)
- Collect and submit *Progress Updates from Sub-Recipients Developing Project-Related Equipment* to the CAM and CARB Project Liaison, as part of each Quarterly Progress Report (Task 1.5) or as requested. Progress updates shall include, but not be limited to, status summaries, key milestones achieved, anticipated delivery timelines, and any issues impacting progress. (CEC-funded)
- Create and submit regular *Progress Updates to Relevant Stakeholders*.(CARB-funded and CEC-funded)

Products:

- Site Plans and Receipts of the Ordered Materials
- Completed Applications and Copies of All Required Permits
- Photographs of the Site
- Progress Photos and Proof of Completion
- Progress and Final Outcome Photographs with Documentation of Completion and Evidence of Compliance with Safety and Building Codes
- Report of the Completed Solar, ESS, and Charger Connections including Photographs
- Proof of Equipment Deployment (Bill of Lading, Invoice of Equipment Retrieval, and Photographs of Equipment on Jobsite)
- Proof of Mobile Charger Deployment (Bill of Lading, Invoice of Equipment Retrieval, and Photographs of Equipment on Jobsite)
- Site Specific Project Schedule
- Financial Risk Management Plan
- AB 841 Certification
- EVITP Certification Numbers for all electricians installing EVSE
- Progress Updates from Sub-Recipients Developing Project-Related Equipment
- Progress Updates to Relevant Stakeholders

TASK 3 GRID ENERGY MANAGEMENT (CEC-funded task)
The goal of this task is to ensure grid connectivity, construction of a substation, and optimize energy consumption.

The Recipient shall:

- Engage with local utilities and energy experts to assess potential energy sources and validate onsite solar, Battery Energy Storage Systems (BESS), and utility interconnections and develop *Grid Connection and Energy Plans*.
- Test and ensure capabilities of energy supply systems and microgrid performance under normal and stress conditions and provide confirmation of *Onsite Solar, BESS and Utility Interconnection Validation*.
- Obtain *Permission to Operate* (PTO) from applicable utilities. Provide a copy to the CAM and CARB Project Liaison.
- Ensure sustainable energy use, minimize costs and environmental impacts to ensure Hub performance with information included in the *Energy Supply and Microgrid Performance Testing Results*.
- Analyze the Hub's effectiveness as a grid support asset during periods of low renewable energy generation or high demand, including performance testing during simulated emergency scenarios including information on Project Site performance within the *Project Site Grid Connection and Energy Report*.

Products:

- Grid Connection and Energy Plans
- Onsite Solar, BESS and Utility Interconnection Validation
- Permission to operate (PTO)
- Energy Supply and Microgrid Performance Testing Results
- Project Site Grid Connection and Energy Report

TASK 4 WORKFORCE TRAINING (CARB-funded task)

The goal of this task is to finalize a workforce training plan for zero-emission, heavy-duty vehicles, and equipment; mobile, fixed, and stationary battery systems; and electric vehicle and equipment charging infrastructure.

The Recipient shall:

- Finalize *Hub Equipment Workforce Training Plan* for zero-emission, heavy-duty vehicles, and equipment; mobile, fixed, and stationary battery systems; and electric vehicle and equipment charging infrastructure. Creating a comprehensive training manual with safety protocols, hands-on exercises, zero-emission vehicles and charging infrastructure, certification, and continued support. Provide a copy to the CAM and CARB Project Liaison.

- Initiate Hub Workforce Training Plan specifying targeted occupations, training & modules, methodology, training locations, and personnel. Develop *Training Material* that provides clear guidance for implementing the Workforce Training Plan. Provide a copy to the CAM and CARB Project Liaison.
- Establish a P*roject and Equipment Safety Protocols*. Provide a copy to the CAM and CARB Project Liaison.
- Implement equipment training for dealerships and subsequent operators on new Caterpillar machines and equipment (Online and in-person classes). Provide a *Copy of Training Materials and Links to Classes with Date, Time, and Place and a List of Registered Participants for Equipment Training* to the CAM and CARB Project Liaison.
- Work on Hub safety training (as needed). Provide a *Copy of Training Materials and Links to Classes with Date, Time, and Place and a List of Registered Participants for Hub Safety Training* to the CAM and CARB Project Liaison.
- Collect program participant feedback from the workforce training. Provide a copy of *Completed Participant Feedback Documents* to the CAM and CARB Project Liaison.
- Finalize the *Workforce Development and Training Program Report* and provide it to the CAM and CARB Project Liaison.
- Finalize project and equipment safety protocols. Provide a copy of the *Finalized Project and Equipment Safety Protocols* to the CAM and CARB Project Liaison.

Products:

- Hub Equipment Workforce Training Plan
- Project and Equipment Safety Protocols
- Copy of Training Materials and Links to Classes with Date, Time, and Place and a List of Registered Participants for Equipment Training
- Copy of Training Materials and Links to Classes with Date, Time, and Place and a List of Registered Participants for Safety Training
- Completed Participant Feedback Documents
- Workforce Development and Training Program Report
- Finalized Project and Equipment Safety Protocols

TASK 5 COMMUNITY WORKFORCE DEVELOPMENT AND BENEFITS (CARB-funded task)

The goal of this task is to collaborate with community leaders and organizations to identify tangible benefits to the community and potential areas of support, focused on job training for marginalized groups.

The Recipient shall:

- Develop and lead a community benefits program. Finalize and implement a *Community Workforce Development and Benefits Plan* which will include job market analysis, employer engagement strategy, curriculum development, strategy for trainee recruitment, and detailed schedules and budgets, including partnerships with CBOs (Community Based Organizations). Provide a copy to the CAM and CARB Project Liaison.
- Determine the feasibility of programs that emphasize the use of zero-emission equipment in green zone projects. Feedback from the community will be actively sought to shape these initiatives to better align with the community needs. Complete a *Report of the Framework/Criteria* required to assess municipal green zone zero-emission programs Provide a copy to the CAM and CARB Project Liaison.
- Develop community workforce development and logistical support program. Provide *Development and Logistical Support Material* that will include resources and budgets for supporting trainee s(childcare options, transportation, language support). Provide a copy to the CAM and CARB Project Liaison.
- Initiate program outreach and recruitment efforts in target communities. Develop a *Program Outreach Plan*, outlining strategy, goals, target communities, training, and timeline for program outreach. Provide a copy to the CAM and CARB Project Liaison.
- Initiate the first cohort of program participants into the Community Workforce Development Program. Provide a *List of Enrolled Participants* of the first cohort for the community workforce development to the CAM and CARB Project Liaison.
- Create a *Long-term Deployment Plan* for Hub equipment to municipal green zones and begin assessment of program improvements to encourage equipment use. Provide a copy to the CAM and CARB Project Liaison.
- Complete a *Community Benefits Report* as outlined by Appendix B in the Community Workforce Development and Benefits Plan. Provide a copy to the CAM and CARB Project Liaison.
- Finalize *Municipal Green Zone Zero-emission Equipment Analysis*. Provide a copy to the CAM and CARB Project Liaison.

Products:

- Community Workforce Development and Benefits Plan
- Report of the Framework/Criteria
- Development and Logistical Support Material
- Program Outreach Plan
- List of Enrolled Participants

- Long-term Deployment Plan
- Community Benefits Report
- Municipal Green Zone Zero-emission Equipment Analysis

TASK 6 MONITORING, DATA ANALYSIS, AND REPORTING (CARB-funded task)
The goal of this task is to ensure the project's success through comprehensive monitoring and data analysis.

The Recipient shall:

- Create a *Data Collection Plan* ranging from construction progress and energy consumption to workforce performance and community engagement metrics. Provide a copy to the CAM and CARB Project Liaison.
- Collect and analyze data, begin compiling reports and provide a *Finalized Data Collection and Project Monitoring Report* to the CAM and CARB Project Liaison, as outlined in Appendix: A Data Collection and Project Monitoring Plan.
- Complete project analysis and submit reports. Provide a *Comprehensive Report* that highlights the project's key findings and provide a broad analysis of the project's data to the CAM and CARB Project Liaison.
- Initiate project close-out outreach and knowledge transfer activities. Develop O*utreach and Training Material* to transfer knowledge of the project. Provide a copy to the CAM and CARB Project Liaison.

Products:

- Data Collection Plan
- Finalized Data Collection and Project Monitoring Plan
- Comprehensive Report
- Outreach and Training Material

TASK 7 COMMUNICATIONS (CARB-funded task)

The goal of this task is to ensure proper communication through the development of the CAT POWER Hub project landing page.

The Recipient shall:

- Develop the California Advanced Technology POWER Hub project landing page with completed web layout. Provide the *Link to the CAT Power Hub Project Landing Page with Completed Web Layout* to the CAM and CARB Project Liaison.
- Finalize development of the California Advanced Technology POWER Hub project landing page including a broadcasting platform and repository for project news, media, and publications. Provide a Link to the *Finalized CAT Power Hub*

Project Landing Page with First Round Content Posted to the CAM and CARB Project Liaison.

- Publish *Start-Up Experience Reports* documenting installation and deployment activities of demo equipment and charging infrastructure,highlighting lessons for future deployments and provide relevant information for future users. Provide a copy to the CAM and CARB Project Liaison.
- Publish *Project Fact Sheets*. Provide a copy to the CAM and CARB Project Liaison.
- Host CAT POWER Hub technology showcase event. Provide a *CAT Power Hub Technology Showcase List of Attendees* to the CAM and CARB Project Liaison.

Products:

- Link to the CAT POWER Hub Landing Page with Completed Web Layout
- Finalized CAT Power Hub Project Landing Page with First Round Content Posted
- Start-up Experience Reports
- Project Fact Sheets
- CAT Power Hub Technology Showcase List of Attendees

TASK 8 OPERATIONS AND RELIABILITY (Match-funded task)

Recipient shall comply with the reliability performance standards, recordkeeping, reporting, and maintenance requirements (Requirements) for EV chargers installed as part of this Agreement, excluding any charger used solely for private use at a single-family residence or a multifamily housing unit with four or fewer units. In the event the CEC adopts regulations that include Requirements, for example as required by AB 2061 (Chapter 345, Statutes of 2022) and/or AB 126 (Chapter 319, Statutes of 2023), those Requirements shall supersede the Requirements contained in this Scope of Work for this Agreement wherever, as determined by the CAM, they conflict or are redundant.

Task 8.1 Operations

- **Operational requirement for all chargers:** The Recipient shall operate charging ports installed as part of this Agreement during the term of this Agreement.
- **Uptime requirement for all chargers:** The Recipient shall ensure that the charging port uptime for each charging port installed in the project is at least 97 percent of each year for six years after the beginning of operation.
- **Successful charge attempt rate (SCAR) requirement for networked chargers:** The Recipient shall ensure that the charging port SCAR for each charging port installed in the project is at least 90 percent for each year for six years after the beginning of operation.
- **Maintenance requirements for all chargers:** The Recipient shall:

- Conduct preventive maintenance, as specified by the charger manufacturer, on the charger hardware by a certified technician annually. The time interval between consecutive preventive maintenance visits to any charger shall be no more than 13 months.
- Complete corrective maintenance within 5 business days of the beginning of a time when the charger or charging port is inoperative or exhibiting failures that result in an inability to charge.

- **OCPP requirements for networked chargers:** The Recipient shall retain the services of a charging network provider that meets the bulleted criteria below to record, retain, and transmit the Remote Monitoring data for networked chargers specified in Task 8.2.
  - The charging network provider must have an API of the CEC's choosing to permit the charging network provider to transfer the data required in this section directly to the CEC or the CEC's designee within 60 minutes of the record's generation.
  - The charging network provider must have Subset Certification of the Charging Station Management System in the Open Charge Alliance OCPP Certification Program for OCPP version 2.0.1, published May 24, 2023, or a subsequent version of OCPP for Core, Advanced Security, and ISO 15118 Support functionalities.
  - The charging network provider's central system must have connection to the chargers using OCPP version 2.0.1 or a subsequent version of OCPP. This does not preclude the additional use of other communication protocols.
  - The charging network provider and chargers must transmit the following protocol data units between the Central Management System and the charger(s) as specified in OCPP version 2.0.1 or a subsequent version of OCPP:
    - AuthorizeRequest shall be transmitted to the Central Management System by the charger.
    - AuthorizeResponse shall be transmitted by the Central Management System to the charger.
    - BootNotificationResponse shall be transmitted by the Central Management System to the charger in response to any received BootNotificationRequest.
    - HeartbeatRequest shall be transmitted to the Central Management System by the charger on a set interval.
    - HeartbeatResponse shall be transmitted to the charger by the Central Management System in response to any received HeartbeatResponse.
    - RequestStartTransactionRequest shall be transmitted by the Central Management System to the charger as specified in OCPP 2.0.1 or a subsequent version of OCPP.
    - StatusNotificationRequest shall be transmitted by the charger to the Central Management System any time the charger or an associated charging port's operative status changes.

- TransactionEventRequest shall be transmitted to the Central Management System by the charger as specified in OCPP 2.0.1 or a subsequent version of OCPP.
  - The optional field meterValue must be populated when the eventType field is set to either “Started” or “Ended.”
  - When populated, the sub-subfield Value of the subfield SampledValue of the field meterValue shall be transmitted in Watt-hours (Wh).
  - When populated, the sub-sub-subfield unit of the sub-subfield unitOfMeasure of the subfield SampledValue of the field meterValue shall be set to the default string, “Wh.”
  - When populated, the sub-sub-subfield multiplier of the sub-subfield unitOfMeasure of the subfield SampledValue of the field meterValue shall be set to the default integer, 0 (zero).
  - When the meterValue field is populated, the measurand sub-subfield of the SampledValueType subfield, of the field meterValue shall be populated as specified in OCPP 2.0.1 or a later version.

Without limitation to other rights and remedies which the CEC may have, including but not limited to survival provisions specified in the Terms and Conditions of this agreement, this requirement to ensure operationality for six years after the beginning of operation shall survive the completion or termination date of this Agreement. In addition to other requirements in the Terms and Conditions of this Agreement, all CEC-reimbursable expenditures must be incurred within the agreement term.

Task 8.2 Recordkeeping and Transmittals

The goal of this task is to collect, maintain, and transmit records of charging port operation and reliability to the CEC.

The Recipient shall:

- **For networked chargers,** ensure the charging network provider collects and retains the Remote Monitoring data below from each charging port installed and operated as part of this Agreement.
- **For networked chargers,** ensure the charging network provider automatically transmits the Remote Monitoring data below to the CEC, via API, within 60 minutes of the Remote Monitoring data’s generation. Transmittals must begin within one month of the charger becoming operational.
- **For networked chargers,** ensure the charging network provider retains the Remote Monitoring data below for 2 years from the date of each record’s generation. Provide *Remote Monitoring records* to the CEC within 10 business days of request.
  - Provide digital records in a comma separated values file unless another file format is approved by the CEC for the request.
  - Provide a clear and understandable *Data Dictionary* that describes each data element and any associated units with all digital records.

- **Remote monitoring data for networked chargers,** which will serve as the foundation for the *Remote Monitoring records* that must be submitted include:
  - All instances of the following Protocol Data Units, specified in OCPP 2.0.1, that are transmitted between the charger and the central system.
    1. AuthorizeRequest
    2. AuthorizeReponse
    3. BootNotificationRequest
    4. HeartbeatResponse
    5. RequestStartTransactionRequest
    6. StatusNotificationRequest
    7. TransactionEventRequest

- **For all chargers,** collect and retain the maintenance records specified below for each charging port installed and operated as part of this agreement for 6 years from the date the charging port begins operation. Provide *Maintenance Records* to the CEC within 10 business days of request.
  - **Maintenance Records, for all chargers, Recipient shall collect and retain:**
    - Reports of inoperative charging ports or charging port failures resulting in inability to charge, such as a customer complaint, internal diagnostics, or inspection.
    - Records of any maintenance conducted on charging ports installed and operated as part of the agreement. Records should specify the following:
      1. Date and time of the maintenance event.
      2. Whether maintenance was corrective or preventive in nature.
      3. Whether and for how long the charging port was in an inoperative state prior to maintenance.
      4. Whether the charging port was in an operative state following maintenance.

Products:

- Remote Monitoring Records
- Maintenance Records
- Data Dictionary

Task 8.3 Reporting

The goal of this task is to provide reports on charger reliability and maintenance.

The Recipient shall:

- For **each charger**, after the charger becomes operational**,** prepare and submit to the CEC *Quarterly Reports on Charger and Charging Port Reliability and Maintenance*. This report must conform to a format approved by the CEC and is provided for six years after the charging ports are operational. Each report must include:
    - A summary of charging port downtime, including total downtime and the number and frequency of downtime events, the minimum, median, mean, and maximum duration, and the causes of downtime events. Downtime shall be determined on a per charging port basis by summing the durations of all downtime events during the reporting period. The duration of a downtime event shall be the longest of the following periods:
        - **For networked charging ports,** the time after the charger has transmitted a StatusNotificationRequest indicating that the charging port associated with that charger is in a “faulted” or “unavailable” state until a subsequent StatusNotificationRequest is transmitted by that charger indicating that the charging port has transitioned to an “available,” “occupied,” or “reserved” state. The timestamps in each StatusNotificationRequest shall be used to quantify downtime.
        - **For networked chargers,** the time between a BootNotificationResponse transmitted by the Central Management System and the last HeartbeatResponse transmitted by the Central Management System prior to the BootNotificationResponse. The timestamps in the relevant BootNotificationResponse and HeartbeatResponse shall be used to quantify downtime.
        - **For all charging ports,** the time between the earliest record that a charging port is not capable of successfully dispensing electricity or otherwise not functioning as designed and the time it is available to deliver a charge. First record that a charger is not capable of successfully dispensing electricity or otherwise not functioning as designed includes, but is not limited to, consumer notification, internal diagnostics, or inspection, whichever is earliest.

- A summary of excluded downtime, including total excluded downtime and the number and frequency of excluded downtime events, the minimum, median, mean, and maximum duration, and the causes of excluded downtime events. ‘Excluded Downtime’ includes:
    - **Before Initial Installation:** Downtime before the charging port was initially installed.
    - **Grid Power Loss:** Downtime during which power supplied by a third-party provider is not supplied at levels required for minimum function of the charging port. This may include, but is not limited to, service outages due to utility equipment malfunction or public safety power shutoffs. This does not include power generation or storage equipment installed to serve the charger(s) exclusively. Documentation from power provider detailing outage is required to claim this as excluded downtime.

- **Outage for Preventative Maintenance or Upgrade:** Downtime caused by any preventative maintenance or upgrade work that takes the charging port offline. This must be scheduled at least two weeks in advance of the charger being placed in an inoperative state. The maximum downtime that can be excluded for preventative maintenance or upgrade work is 24 hours for any 12-month period.
- **Vandalism or Theft:** Downtime caused by any physical damage to the charger or station committed by a third party. This may include, but is not limited to, theft of charging cables, damage to connectors from mishandling, or damage to screens. A maximum of 5 days may be claimed as excluded downtime for each Vandalism or Theft event. A police report or similar third-party documentation is required to claim this as excluded time.
- **Natural Disasters:** Downtime caused by any disruption of the charging port due to a natural event such as a flood, earthquake, or wildfire that causes great damage. Third party documentation such as news reporting must be provided along with a narrative of the direct impacts to the chargers(s) to claim this as excluded downtime.
- **Communication Network Outages:** Downtime caused by loss of communication due to cellular or internet service provider system outages. A Communication Network Outage can be claimed as excluded downtime provided the chargers default to a free charge state during communication losses. A free charge state is when the charger is operational and dispenses energy free of charge to any consumer.
- **Operating Hours:** Hours in which the charging port is in an operative state but that are outside of the identified hours of operation of the charging station.

- A summary and calculation of uptime. Each report shall include the uptime percentage of each charging port (Uptime) installed and operated as part of this Agreement for the reporting period. Charging port uptime shall be calculated as:

$$U = \frac{T - D + E}{T} * 100\%$$

U = Charging Port Uptime

T =

Q1 reporting period = 129,600 minutes, except for a leap year, which is 131,040 minutes.

Q2 reporting period = 131,040 minutes.

Q3 and Q4 reporting periods = 132,480 minutes.

D = Total charging port downtime for the reporting period, in minutes.

E = Total charging port excluded downtime in the reporting period, in minutes.

- **For networked charging ports**, a charge attempt summary for each charging port. The charge attempt summary shall include, as defined below, the total number of charge attempts, the total number of successful charge attempts, the total number of failed charge attempts, and the successful charge attempt rate for the reporting period:
    - **Charge Attempt.** A charge attempt occurs upon transmission of one or more of the protocol data units identified in following subsections A. through G. below between the Central Management System and the charger as specified in OCPP Version 2.0.1 or a subsequent version of OCPP. Any number of the Protocol Data Units described in A. through G. of this subsection below timestamped within a three-minute interval shall be counted as one charge attempt. Any number of TransactionEventRequest described in D. through G. of this subsection below transmitted with identical identifier strings in the transactionId subfield of the transaction Info field shall be counted as one charge attempt.
        - An AuthorizeRequest message transmitted by the charger to the Central Management System.

          The AuthorizeRequest message shall not count as a charge attempt if the Central Management System responds with an AuthorizeResponse message with the status subfield of the idTokenInfo field set to any of the following responses:

          - “Blocked”
          - “ConcurrentTx”
          - “Expired”
          - “Invalid”
          - “NoCredit”
          - “NotAllowedTypeEVSE”
          - “NotAtThisLocation”
          - “NotAtThisTime”
          - “Unknown”

            B. A RequestStartTransactionRequest message transmitted by the Central Management System to the charger.

            C. A StatusNotificationRequest message transmitted by the charger to the Central Management System with the connectorStatus field set to “Occupied”.

D. A TransactionEventRequest message transmitted by the charger to the Central Management System with the eventType field set to ”Started”.

E. A TransactionEventRequest message transmitted by the charger to the Central Management System with the triggerReason field set to ”CablePluggedIn”.

F. A TransactionEventRequest message transmitted by the charger to the Central Management System with the chargingState subfield of the transactionInfo field set to “EVConnected”.

G. A TransactionEventRequest message transmitted by the charger to the Central Management System with the chargingState subfield of the transactionInfo field set to “Charging”.

- **Charging Session.** A charging session begins and ends as follows:

  A. A charging session begins when the charger transmits TransactionEventRequest to the Central Management System with the chargingState subfield of the transactionInfo field set to “Charging.”

     - In the event that multiple TransactionEventRequest protocol data units are transmitted with the chargingState subfield of the transactionInfo field set to 'Charging' AND identical identifier strings in the transactionId subfield of the transactionInfo field, the charging session shall begin when the first of those protocol data units are sent. Which protocol data unit was sent first shall be determined based on the lowest value in the seqNo field.

  B. A charging session ends when the charger transmits a subsequent TransactionEventRequest to the Central Management System with the chargingState subfield of the transactionInfo field set to any of the following values:

     - “EVConnected”
     - “SuspendedEV”
     - “SuspendedEVSE”
     - “Idle”

  C. The identifier string contained in the transactionId subfield of the transactionInfo field must be identical in the messages described in A. and B. of this subsection above.

  D. The date and time found in the timestamp field of the messages described in A. and B. of this subsection above shall be used to determine the start and stop time of a charging session.

- **Successful Charge Attempt.** A successful charge attempt is a charge attempt that is followed by either A. or B. of this subsection below prior to another charge attempt.
  A. A charging session that lasts for 5 minutes or longer as determined by the timestamps described above
  B. The stoppedReason subfield of the transactionInfo field of the TransactionEventRequest protocol data unit ending the charging session is set to one of the following:
     - "EnergyLimitReached"
     - "Local"
     - "Remote"
     - "SOCLimitReached"
- **Failed Charge Attempt.** A failed charge attempt is any charge attempt that is not followed by a successful charge attempt prior to a subsequent charge attempt.
- **Successful Charge Attempt Rate.** The successful charge attempt rate for a charging port shall be calculated using the following formula:

$$SCAR = \frac{CA - FCA}{CA} * 100\%$$

Where:

SCAR = Successful Charge Attempt Rate

CA = Total Charge Attempts for the reporting period

FCA = Total failed charge attempts for the reporting period

- **For all chargers,** a summary of the total number of maintenance dispatch events that occurred since the last report, the number of days to complete each maintenance event reported, and a narrative description of significant maintenance issues. Include details of all excluded downtime and a narrative description of events that caused the excluded downtime. Include the summary in each Quarterly Report on Charger and Charging Port Reliability and Maintenance.

Product:

- Quarterly Report on Charger and Charging Port Reliability and Maintenance, submitted in a manner specified by the CEC for six years after charging ports are operational.

TASK 9 SEMI-ANNUAL ELECTRIC VEHICLE CHARGER INVENTORY REPORTS (Match-funded task)

The goal of this task is to provide information on the number of chargers in the Recipient's charging network in California, including both public and shared private, serving all vehicle sectors (light-, medium-, and heavy duty) excluding any charger used solely for private use at a single-family residence or a multifamily housing unit with four or fewer units. In the event the CEC adopts regulations that include Requirements, for example as required by AB 2061 (Chapter 345, Statutes of 2022) and/or AB 126 (Chapter 319, Statutes of 2023), those Requirements shall supersede the Requirements contained in this Scope of Work for this Agreement wherever, as determined by the CAM, they conflict or are redundant.

The Recipient shall:

- Prepare an *Electric Vehicle Charger Inventory Report*, in a template provided by the CAM, that includes:
  - For chargers serving light-duty electric vehicles:
    - Number of public AC charging ports aggregated at the county level by charging network provider
    - Number of shared private AC charging ports aggregated at the county level by charging network provider
    - Number of public DC fast charging ports aggregated at the county level by charging network provider
    - Number of shared private DC fast charging ports aggregated at the county level by charging network provider
  - For chargers serving medium- and/or heavy-duty vehicles:
    - Number of public AC charging ports aggregated at the county level by charging network provider
    - Number of shared private AC charging ports aggregated at the county level by charging network provider
    - Number of public DC fast charging ports aggregated at the county level by charging network provider
    - Number of shared private DC fast charging ports aggregated at the county level by charging network provider
    - Number of other publicly available charging ports at the county level by charging network provider
    - Number of other depot charging ports by power output (less than 50 kilowatts (kW), between 50 – 150 kW, 150 kW – 350 kW, 350 kW and above) at the county level by charging network provider (if applicable)
- Submit the *Electric Vehicle Charger Inventory Report* to the CAM, no later than 30 calendar days after the Agreement is executed and then each calendar half-year thereafter. Reports are due at the end of July and end of January.

Recipient Product:

- Electric Vehicle Charger Inventory Report

TASK 10 OTHER DATA COLLECTION AND ANALYSIS (Match-funded task)

The goal of this task is to collect operational and programmatic data from the project. In the event the CEC adopts regulations that include Requirements, for example as required by AB 2061 (Chapter 345, Statutes of 2022) and/or AB 126 (Chapter 319, Statutes of 2023), those Requirements shall supersede the Requirements contained in this Scope of Work for this Agreement wherever, as determined by the CAM, they conflict or are redundant.

The Recipient shall:

- Prepare and provide a *Program Management Data Report* in a format chosen by the CEC following the first monthly call (Task 1.4) and update during subsequent monthly calls as needed.
- Collect and provide the following programmatic data for all electric vehicle chargers and include in the *Program Management Data Report*. The programmatic data shall include, but not be limited to the following:
  - Electric Vehicle Charger Information:
    - Funding
  - The subsidy from a federal program, utility program, and private funding
    - Vehicles
  - Primary Vehicle Type served such as light duty (GVWR <= 10,000), medium duty (10,000 < GVWR <= 26,000), heavy duty (GVWR > 26,000)
    - Milestone Dates
  - Key milestone dates, such as permit request and received date, charger energization date, charger operational date, and other dates as requested by the CAM
    - Location
  - Primary site access type such as publicly available, shared private, private
  - Location/site use type, such as hotel, restaurant, or multi-unit housing
  - Charger address
  - Parking location type, such as street, parking lot or parking garage
- Other Equipment
  - Battery Energy Storage CEC cost and kWh capacity
  - Non-battery Distributed Generation CEC cost, kW capacity and type
- ZEV Infrastructure Information:
  - Charger Information
  - Charger make and model, serial number, level (Level 2, DCFC, MCS), nameplate capacity (kW), number ports per charger

Product:

- Program Management Data Report

TASK 10.1 Utilization

The Recipient shall:

- Collect and provide to the CAM, at minimum, quarterly utilization data from the project for all installed chargers in an *EV Utilization Data Report*, in the format of the CEC's choosing, for three years after the charging ports are operational, including, but not limited to:
  - EV Charging Port:
    - Charging network provider name
    - Charger site address, city, zip code
    - Charger make, model, and manufacturer serial number
    - EV service equipment charger and charging port ID
    - Peak Power (kW)
    - Charging session start/end date and times
    - Charging session energy consumed (kW)
    - Plug in/un-plugged timestamp Coordinated Universal Time (UTC)
    - Charging interval peak demand
    - Charging interval start/end times
    - Charging interval energy consumed
    - If a bidirectional charger, energy (kWh) discharged back to grid or facility
    - Total transacted amount
    - Payment method
  - Products:
- EV Utilization Data Report provided, at a minimum, quarterly for three years after charging ports are operational.

Task 10.2 GHG Intensity Reporting

The Recipient shall:

- Collect and report the source and greenhouse gas emissions intensity, on an annual basis, of the electricity used and dispensed by the EV charging station(s) at the meter, consistent with the disclosure methodology set forth in Article 14 (commencing with Section 398.1) of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code. Data must be reported to the CEC semiannually in the *GHG Intensity Report* specified by the CAM.

Products:

- GHG Intensity Report

Task 10.3 Data Sharing Agreement

The goal of this subtask is to ensure a data sharing agreement with the parameters outlined below is in place for the purposes of facilitating data collection and reporting on EV charging ports.

The Recipient shall:

- Enter into a data sharing agreement with a charging network provider that shall include the following, and if the Recipient is a charging network provider, the Recipient shall enter into a data sharing agreement with the CEC that shall include the following:
    - The charging network provider fulfills all the data collection and reporting requirements described in Task 8.2 Recordkeeping and Transmittals (excluding Maintenance Records), Task 8.3 Reporting, TASK 9 SEMI-ANNUAL ELECTRIC VEHICLE CHARGER INVENTORY REPORTS, and Task 10.1 Utilization, on behalf of Recipient.
    - The charging network provider's reports adhere to CEC-approved formatting, report templating, and delivery methods.
    - CEC is identified as a third-party beneficiary to the data sharing agreement.
- Be responsible for ensuring the charging network provider fulfills all requirements described in the data-sharing agreement. Retention may be withheld under this Agreement until at least 12 months of data collection is provided by the charging network provider to the CEC.
- Submit the *dually signed data-sharing agreement* to the CEC within 30 calendar days of selecting a charging network provider and no later than when the first charging port under this agreement is energized.
- Notify the CAM in writing within 30 calendar days if Recipient changes its selected charging network provider.
- If a new charging network provider is selected, the new dually signed data-sharing agreement shall be submitted to the CEC within 30 calendar days of the charging network provider's selection.

Product:

- Dually signed data-sharing agreement

TASK 11 PROJECT FACT SHEET (Match-fundedtask)

The goal of this task is to develop an initial and final project fact sheet that describes the CEC-funded project and the benefits resulting from the project for the public and key decision makers.

The Recipient shall:

- Prepare an *Initial Project Fact Sheet* at start of the project that describes the project and the expected benefits. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that includes but is not limited to: a description of the project; the actual benefits resulting from the project; lessons learned from implementing the project; data on potential job creation, economic development, and increased state revenue as a result of expected future expansion; and a comparison of any project performance and expectations provided in the proposal to CEC with actual project performance and accomplishments. Use the format provided by the CAM.
- 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:

- Initial Project Fact Sheet
- Final Project Fact Sheet
- High Quality Digital Photographs

State of California **California Natural Resources Agency**

M e m o r a n d u m

To: **Chair David Hochschild**
Vice-Chair Siva Gunda
Noemi Gallardo
Andrew McAllister
Nancy Skinner

Date: October 31, 2025

Telephone: 279-226-1112

From: **Lauren Jansen**

Subject: **California Environmental Quality Act (CEQA) Analysis for ZVI-25-005, CAT POWER Hub: The California Advanced Technology Off-road Job Site Energy Resource Hub Project**

I am an Air Resources Engineer in the Fuels and Transportation Division of the California Energy Commission and the Commission's Agreement Manager for the proposed grant agreement ZVI-25-005, titled "CAT POWER Hub: The California Advanced Technology Off-road Job Site Energy Resource Hub."

The proposed grant agreement project will develop and demonstrate an off-road, off-grid operations hub in Sacramento for mobile, machine charging, and battery energy storage systems (BESS) to support electric machines and equipment operating at two job sites. The project will install a minimum of 56 electric vehicle (EV) charging ports (Level 2 EV chargers, EV direct current fast chargers, and mobile EV chargers), 12 acres of solar photovoltaic, and eight megawatt hours of BESS to support zero-emission construction vehicles across both job sites. The proposed grant agreement is in coordination with a California Air Resources Board grant for zero-emission vehicles.

The potential environmental impacts of the grant agreement project were considered and approved by the lead agency County of Sacramento, as follows. The County of Sacramento prepared, and subsequently certified on April 24, 1996, a Final Environmental Impact Report (EIR) for the Morrison Creek Mining Reach Upstream (North) of Jackson Highway, which included a Mitigation Monitoring and Reporting Program. On January 23, 2018, at the County's Board of Supervisor meeting, the County recognized an Environmental Coordinator Memorandum dated April 10, 2017, and subsequently approved Amended Use Permit PLNP2017-0049 (AUP). The Environmental Coordinator Memorandum determined, pursuant to CEQA Guidelines section 15162, that there are no substantial changes in the project or in the circumstances under which the project is to be undertaken and that the project involves no new significant impacts that were not considered in the previous EIR and Use Permit (Control Number: 89-CZB-UPB-1195). The Memorandum found that the prior EIR remains the appropriate document for the AUP project and the Mitigation Monitoring and Reporting Program remains applicable to the current project. The work to be completed under the proposed grant agreement project is covered in the scope of the AUP and within the activities evaluated in the EIR. The EIR, AUP, and Environmental Coordinator Memorandum are publicly posted alongside this memorandum.

In the EIR and Mitigation Monitoring and Reporting Program, the County specified mitigation measures associated with Surface and Groundwater Hydrology and Quality, Cultural Resources, Air Quality, Geology and Slope Stability, Paleontological Resources, Biological Resources, Traffic and Circulation, Land Use, Noise, Public Safety, Aesthetics and Visual Resources, Public and Private Utilities, and Consistency with Mather Field CLUP. Applicable environmental impacts within these categories and their associated mitigation measures are discussed below.

Pursuant to my work in developing the proposed grant agreement, including the Scope of Work for the agreement, I have reviewed the County's CEQA documents- the EIR, AUP and Environmental Coordinator Memorandum. I am not aware of any evidence which suggests that the County's CEQA documents are inadequate. Based on my review and consideration of the County's CEQA documents, it is my independent and professional opinion that, since the documents have been finalized, there have been no new project changes, and no new, additional, or increased significant environmental impacts have occurred. Furthermore, I have not identified any new information which would change the conclusions of the County's CEQA documents or render those conclusions inadequate. It is also my independent and professional opinion that the work to be performed under the proposed grant agreement falls within the scope of the AUP and within the activities evaluated in the EIR, and that the proposed grant agreement will not result in any new significant environmental impacts. Finally, I have not identified any new mitigation measures, within the California Energy Commission's authority, that would lessen or further mitigate the impacts of the proposed grant agreement. The reasons for my conclusions are as follows:

Air Quality
The project would increase vehicular pollutant emissions temporarily on the roadways that are used to access the project site. The project shall be subject to monitoring by the Sacramento Metropolitan Air Quality Management District Rules (SMAQMD) and shall comply with SMAQMD Rules 402 and 403, which mandates air contaminants and other materials from any source dust control measures during grading and construction phases, among other regulations. Compliance with the Air Quality Attainment Plan, District Rules, Traffic Control Measures, and Indirect Source Rules, as applicable, will be monitored. Both short- term and long-term emissions will be mitigated. After mitigation measures, there will be less than significant impacts on air quality.

Geology and Slope Stability
The project would present a permanent alteration of the project site's landform. The alteration would create slopes that may be subject to slope instability, which may also be induced by earthquakes and/or ground shaking. Additionally, the slopes may erode if they are not constructed adequately and vegetated. Mitigation measures recommended include limiting the planned slopes, this would require a qualified soil engineer to be present throughout project site grading. This also includes vegetating the final slope placement to prevent excessive erosion and enhance the stability, the side slopes will also be revegetated. The revegetation plan will be documented in an Erosion Control Plan, which will be submitted to Sacramento County. The Erosion

Control Plan will include metrics to evaluate success of erosion control and revegetation methods, if the revegetation is unsuccessful, the Plan will also include remedial measures. After mitigation, there will be less than significant impacts on Geology and Slope Stability.

Biological Resources
The project may result in the systemic loss of existing natural vegetation communities on the project site, which may include vernal pools, seasonal swale, riparian woodland, and non-native grassland vegetation. Loss of existing wildlife habitat and individual animals on the site may occur as well. Human presence on the project site may also disrupt wildlife. A variety of sensitive species may also lose their habitats. Mitigation efforts recommended in the EIR include replacement of specific species communities lost on project site, construction of 15 acres of vernal pools in a preserve, 10 acres of vernal pools preserved off-site at a USFWS approved mitigation bank, and a total of 12 acres of vernal pools restored/constructed off-site (which will be approved by the USFWS, CDFG, Corps and the County). After mitigation, there will be less than significant impacts on biological resources.

Cultural Resources
The proposed project may disturb an existing barn, which may be eligible for listing on the National Register of Historic Places. Additionally, excavation activities from this project may affect buried cultural resources. Mitigation measures recommended include proponents providing a photographic record of the structure (existing barn), including maps, elevation drawings, written description and other information. If any archaeological or historical resources are uncovered or discovered during the course of the project, a qualified archaeologist shall be consulted for advice on its significance and provide recommendation on appropriate methods for protection and mitigation. After mitigation, there will be less than significant impacts on Cultural Resources.

Traffic and Circulation
Project-generated truck traffic would impact safety conditions at Bradshaw Road access point. Truck traffic will also create additional deterioration of pavement at project site entrances. If any damages occur, the project team shall agree to repair any damage to structural paving material on roadways where trucks are routed. After mitigation, there will be less than significant impacts on Traffic and Circulation.

Public Safety
Heavy equipment will be utilized for the proposed project, which may create hazardous conditions if members of the general public inadvertently enter the project site. Perimeter fencing will be retained on the project site until post-reclamation development occurs. After mitigation, there will be less than significant impacts on public safety.

In addition to the above-described environmental factors, I agree with the County of Sacramento's findings that the proposed project would have no impacts or less-than-significant environmental impacts for all other environmental factors listed in the EIR.

Lead Agency County of Sacramento California Environmental Quality Act Documents

To access the lead agency's Final Environmental Impact Report (EIR) for the Morrison Creek Mining Reach Upstream (North) of Jackson Highway, Amended Use Permit PLNP2017-0049 dated February 16, 2018, and Environmental Coordinator Memorandum dated April 10, 2017, cut and paste the link below into a web browser.

Link to Lead Agency County of Sacramento California Environmental Quality Act Documents