California Energy Commission
August 14, 2024 Business Meeting
Backup Materials for SkyChargers, LLC

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

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

[PROPOSED]

RESOLUTION NO: 24-0814-XX

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: SkyChargers, LLC

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

RESOLVED, that the CEC approves agreement ZVI-23-030 with SkyChargers, LLC for a $10,000,000 grant. This agreement will install 23 dual-port EV chargers for overnight truck charging, 12 dual-port direct current fast charging EV chargers for opportunity charging, and a 1.7 MW solar-powered microgrid and 1 MW battery energy storage system for reliability and resiliency at the Port of San Diego. This agreement will support an innovative "trucking-as-a-service" business model, which will provide independent owner-operators and small trucking drayage businesses with Class 8 battery-electric truck leasing; and

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

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the CEC held on August 14, 2024.

AYE:
NAY:
ABSENT:
ABSTAIN:

Dated:

_____
Kristine Banaag
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-23-030

B. Division Information

1. Division Name: Fuels and Transportation
2. Agreement Manager: Daniel Siu
3. MS-:27
4. Phone Number: 916-908-7483

C. Recipient's Information

1. Recipient's Legal Name: SkyChargers, LLC
2. Federal ID Number: 46-3416117

D. Title of Project

Title of project: Trucking-As-A-Service - Port of San Diego Drayage EV DCFC Charging Hub

E. Term and Amount

1. Start Date: 8/15/2024
2. End Date: 3/29/2027
3. Amount: $10,000,000

F. Business Meeting Information

1. Are the ARFVTP agreements $75K and under delegated to Executive Director? No
2. The Proposed Business Meeting Date: 8/14/2024
3. Consent or Discussion? Discussion
4. Business Meeting Presenter Name: Marc Perry
5. Time Needed for Business Meeting: 0 minutes.
6. The email subscription topic is: Clean Transportation Program

Agenda Item Subject and Description:

SkyChargers, LLC. Proposed resolution approving agreement ZVI-23-030 with SkyChargers, LLC for a $10,000,000 grant, and adopting staff's determination that this action is exempt from CEQA. This agreement will install 23 dual-port EV chargers for overnight truck charging, 12 dual-port direct current fast charging EV chargers for opportunity charging, and a 1.7 MW solar-powered microgrid and 1 MW battery energy storage system for reliability and resiliency at the Port of San Diego. This agreement will support an innovative "trucking-as-a-service" business model, which will provide independent owner-operators and small trucking drayage businesses with Class 8 battery-electric truck leasing.

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: If Agreement is considered a "Project" under CEQA skip to question 2. Otherwise, provide explanation.

2. **If Agreement is considered a "Project" under CEQA answer the following questions.**
   a) Agreement **IS** exempt?

   Yes

   Statutory Exemption?

   None

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

   PRC section number: None

   CCR section number: None

   Categorical Exemption?

   Yes

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

   CCR section number: Cal. Code Regs., tit. 14, sec. 15301, 15303, 15304

   Cal. Code Regs., tit. 14, sec. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond that existing at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act (CEQA). This project will install electrical infrastructure and electric vehicle charging stations in an existing parking facility, which will require foundation and electrical upgrades. Construction activities will include minimal grading, trenching from the electrical panel to the charger locations, and new pipelines for electrical and plumbing. The electrical vehicle charging station will be installed on an existing parking lot and will involve negligible or no expansion of use. Therefore, the project falls within section 15301 and will not have a significant effect on the environment.

   Cal. Code Regs., tit. 14, sec. 15303 provides that projects which consist of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor

modifications are made in the exterior of the structure, are categorically exempt from the provisions of CEQA. This project consists of installation of new small equipment to an existing site. There will be 23 overnight chargers, 12 opportunity chargers, a solar canopy, and a battery energy storage system installed at a parking lot in the Port of San Diego. The dimensions of the chargers are 7'11" H x 2'5" W x 11" D, with a footprint of 3'2" x 2'1". The equipment will be installed in an existing, paved parking lot. Therefore, the project falls within section 15303 and will not have a significant effect on the environment.

Cal. Code Regs., tit. 14, sect. 15304 provides that projects which consist of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes are categorically exempt from the provisions of CEQA. In this project, trenching will be necessary to bury conduit from the electrical panel to the charging stations. The trenching will take place on currently paved ground, will not involve the removal of any trees, and surface will be restored. Therefore, the project falls within section 15304 and will not have a significant effect on the environment.

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

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

No

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

Not applicable

b) Agreement **IS NOT** exempt.

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

No

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

Additional Documents	Applies
Initial Study	No

Negative Declaration	No
Mitigated Negative Declaration	No
Environmental Impact Report	No
Statement of Overriding Considerations	No
None	Yes

H. Is this project considered "Infrastructure"?

Yes

I. Subcontractors

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

Subcontractor Legal Company Name	CEC Funds	Match Funds
Burns & McDonnell Western Enterprises, Inc.	$ 0	**$**2,559,779
Build Momentum	$ 0	**$**250,000

J. Vendors and Sellers for Equipment and Materials/Miscellaneous

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

Vendor/Seller Legal Company Name	CEC Funds	Match Funds
Davis Hill Development. LLC	**$**$4,064,447	**$**$1,955,553
STEM, Inc.	**$** 2,173,294	**$**0
ChargePoint, Inc.	$3,762,259	$1,851,073
San Diego Local Artist - TBD	$0	$25,000
SkyChargers, LLC	$0	$2,371,000
SoyLopez Consulting	$0	$25,000
(TBD) Tesla Mega Pack – O&M	$0	$178,830
(TBD) Tesla Mega Pack - Software	$0	$318,240

K. Key Partners

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

Key Partner Legal Company Name
Macquarie Capital Group
Burns & McDonnell Western Enterprises, Inc.
O'Day Consultants, Inc.
Ursus Victor, LLC
SEPIA Energy
Davis Hill Development, LLC
STEM, Inc.
ChargePoint, Inc.

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	601.129ZEV	$10,000,000

TOTAL Amount: $10,000,000

R&D Program Area: Not applicable

Explanation for "Other" selection Not applicable

Reimbursement Contract #: Not applicable

Federal Agreement #: Not applicable

M. Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Graham Richartz

Address: 801 K Street, Suite 2800

City, State, Zip: Sacramento, CA 95814

Phone: (860) 391-3834

E-Mail: graham.richartz@skyviewventures.com

2. Recipient's Project Manager

Name: Graham Richartz

Address: 801 K Street, Suite 2800

City, State, Zip: Sacramento, CA 95814

Phone: (860) 391-3834

E-Mail: graham.richartz@skyviewventures.com

N. Selection Process Used

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

Selection Process	Additional Information
Competitive Solicitation #	GFO-22-615
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: Daniel Siu

Approval Date: 04-12-24

Office Manager: Elizabeth John

Approval Date: 4/17/2024

Deputy Director: Melanie Vail

Approval Date: 5/2/2024

Exhibit A

SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Community Outreach and Engagement
3	X	Trucking as a Service Program Development
4	X	E-Hub Phase 1 Design, Permitting, and Construction
5		Charging Infrastructure Blueprint
6		Operations and Reliability
7		Semi-Annual Electric Vehicle Charger Inventory Reports
8		Data Collection and Analysis
9		Project Fact Sheet

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Maylanee Archimede	Momentum, Inc.	SkyChargers, LLC
2	Anita Lopez	SoyLopez Consulting	SkyChargers, LLC
3	Graham Richartz, Andy Karetsky, Nick Stoker	SkyChargers, LLC	Macquarie Capital Group
4	Graham Richartz, Andrew Fangman, Matt Wartian, Patrick O'Day	SkyChargers, LLC	Burns & McDonnell Western Enterprises, Inc., O'Day Consulting, Ursus Victor, SEPIA Energy, Davis Hill Development, LLC, STEM, Inc.
5	Maylanee Archimede	Momentum, Inc.	SkyChargers, LLC
6	Andrei Stsiapanau, Andrew Fangman, Matt Wartian, Graham Richartz	ChargePoint, Inc.	Burns & McDonnell Western Enterprises, Inc., SkyChargers, LLC, ChargePoint, Inc.
7	Graham Richartz	ChargePoint, Inc.	SkyChargers, LLC ChargePoint, Inc.

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
8	Graham Richartz, Andrei Stsiapanau	ChargePoint, Inc.	ChargePoint, Inc.
9	Maylanee Archimede	Momentum, Inc.	SkyChargers, LLC

GLOSSARY

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

Term/ Acronym	Definition
AB	Assembly Bill
ACF	Advanced Clean Fleet
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.
BESS	Battery Energy Storage System
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
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.

Term/ Acronym	Definition
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.
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

Term/ Acronym	Definition
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 6.4.
DVBE	Disabled Veteran Business Enterprise
E-hub	Electric truck depot
ETI	Electrical Training Institute
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.
EVSE	Electric vehicle supply equipment. A charger as defined.
Excluded downtime	Downtime that is caused by events pursuant to Task 6.4.
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.
IOOs	Independent Owner Operators

Term/ Acronym	Definition
ISEF	Innovative Small E-Fleets
Maintenance	Any instance in which preventive or corrective maintenance is carried out on equipment.
MCAS	Maritime Clean Air Strategy
MDHD	Medium-Duty and Heavy-Duty
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.
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	SkyChargers, LLC
SBE	Small Business Enterprise
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.

Term/ Acronym	Definition
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.
TaaS	Trucking as a Service
Uptime	The time that a charger is installed during a reporting period excluding downtime pursuant to Task 6.4.
ZEV	Zero-emission vehicle

Background

The Budget Act of 2021 (Assembly Bill (AB) 128, Ting, Chapter 21, Statutes of 2021, as amended by Senate Bill (SB) 129, Skinner, Chapter 69, Statutes of 2021 and SB 170, Skinner, Chapter 240, Statutes of 2021) appropriated $785,000,000 from the General Fund to support infrastructure deployments and manufacturing projects for zero-emission light-duty and medium- and heavy-duty vehicles.

On May 8, 2023, the California Energy Commission (CEC) released a Grant Funding Opportunity (GFO) entitled "Innovative Charging Solutions for Medium- and Heavy-Duty Electric Vehicles." This competitive grant solicitation was to demonstrate innovative charging technologies and/or business models that highlight the unique needs of medium- and heavy-duty (MDHD) vehicles and fleets. In response to GFO-22-615, the Recipient submitted application #8 which was proposed for funding in the CEC's Notice of Proposed Awards on January 19, 2024. GFO-22-615 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.

Problem Statement:

Independent Owner Operators (IOOs) and small fleet truckers are at risk of being left behind or struggling to keep up with new California zero-emission truck regulations, including the new Advanced Clean Fleet (ACF) rule. All new registered drayage trucks serving ports and railyards must be zero-emission vehicles beginning in 2024, and replacement of all drayage trucks must occur by 2035. Drayage truck drivers that cannot meet these regulations could lose their livelihoods, which would have deep economic consequences. According to the California Air Resources Board, approximately 33,500 drayage trucks service California's seaports and railyards

annually, of which approximately 28,700 are trucks that visit California's seaports and intermodal railyards an average of 2 or more times per week or 112 times per year.[1]

To meet ACF regulations, IOOs and small fleets will need access to reliable, affordable charging infrastructure. Few if any IOOs or small fleets have secured their own charging infrastructure, and lack appropriate places to park overnight, much less charge. According to the CEC's Electric Vehicle Charging Infrastructure Assessment, 157,000 chargers are needed to support 180,000 projected MDHD zero-emission vehicles (ZEVs). Today, there are approximately 10,000 direct current fast chargers in California, which are mostly used by light duty vehicles.[2]

Goals of the Agreement:

The goal of this Agreement is to demonstrate an innovative, rapidly deployed Trucking as a Service (TaaS) business model to provide IOOs and small trucking drayage businesses with an equitable, feasible, and financially competitive means of transitioning to zero-emission trucks with reliable access to no/low-cost opportunity and overnight charging at an electric truck depot (E-Hub). SkyCharger's TaaS model will ensure equitable access for the entire ecosystem of diverse and disparate drayage trucking companies that serve ports and intermodal rail yards, particularly IOOs and small fleet owners – those with the least ability to purchase a new electric truck or pay for private electric truck charging infrastructure.

Objectives of the Agreement:

The objectives of this Agreement are to:

- Deploy 12 dual-port, 360 kW dispensers; and 23 dual-port, 160 kW dispensers capable of charging 54 trucks simultaneously at a Clean Air and Community Trucking E-Hub (E-Hub) at the Port of San Diego.
- Construct a 1.7 MW canopy-mounted solar system, paired with a 1 MW/4MWh battery energy storage system (BESS) and microgrid controls to enhance the environmental benefits of expediting the IOO and small trucking fleet transition to battery-electric trucks.
- Generate approximately 50 high-paying construction job opportunities (30 for construction of the charging infrastructure, 20 for construction of the solar canopy and BESS), along with an estimated seven full-time equivalent jobs for ongoing operations and maintenance.
- Engage neighboring communities through at least four community workshops for local organizations, community leaders and residents living in proximity to the E-Hub on ZEVs and related job opportunities.
- Celebrate local community diversity, culture, and food, through an in-kind SkyCharger contribution of $25,000 in stipends to local artists.

TASK 1 ADMINISTRATION

[1] https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-drayage-truck-requirements
[2] https://www.energy.ca.gov/data-reports/reports/electric-vehicle-charging-infrastructure-assessment-ab-2127

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) shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

The Recipient shall:

- Attend a "Kick-Off" meeting with the CAM, 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 project 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.
- Discuss the following administrative and technical aspects of this Agreement:
    - Agreement Terms and Conditions
    - Critical Project Review (Task 1.2)
    - Match fund documentation (Task 1.7) No reimbursable work may be done until this documentation is in place.
    - Permit documentation (Task 1.8)
    - Subawards needed to carry out project (Task 1.9)
    - The CAM'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)
    - Final Report (Task 1.6)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

- Written Statement of Match Share Activities

Commission Agreement Manager 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 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 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 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 the 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:

- 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 close out 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, 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.

  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 will determine the appropriate meeting participants.

  The administrative portion of the meeting shall be a discussion with the CAM 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

- “Surviving” Agreement provisions
- Final invoicing and release of retention

- 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 and Recipient to verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

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

The CAM shall:

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

The Recipient shall:

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

Product:

- Email to CAM concurring with call summary notes.

Task 1.5 Quarterly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made toward 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* that 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 on 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 Final Report

The goal of the Final Report is to assess the project's success in achieving the Agreement's goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document limited to 25 pages. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

In addition to any other applicable requirements, the Final Report must comply with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 et seq.), which prohibits discrimination based on disability; all applicable regulations and guidelines issued pursuant to the ADA; Cal. Gov. Code sects. 7405 and 11135; and Web Content Accessibility Guidelines 2.0, or a subsequent version, as published by the Web Accessibility Initiative of the World Wide Web Consortium at a minimum Level AA success criteria.

The Recipient shall:

- Prepare an *Outline of the Final Report*.
- Prepare a *Draft Final Report* complying with ADA requirements and following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.

- Submit *Final Report* in Microsoft Word format or similar electronic format as approved by the CAM.

Products:

- Outline of the Final Report
- Draft Final Report
- Final Report

Task 1.7 Identify and Obtain Matching 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 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 to the CAM if during the course of the Agreement additional match funds are received.
- Notify the CAM 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)
- Letter that match funds were reduced (if applicable)

Task 1.8 Identify and Obtain Required Permits

The goal of this task is to obtain all permits required for work completed under this Agreement before 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. Although the CEC budget for this task will be zero dollars, the Recipient may budget match funds for any expected expenditures associated with obtaining permits. 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 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.
- As permits are obtained, send a *copy of each approved permit t*o the CAM.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- A copy of each 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)
- A copy of each final approved permit (if applicable)

Task 1.9 Obtain and Execute Subawards

The goal of this task is to ensure quality products and to procure subrecipients required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures.

The Recipient shall:

- Manage and coordinate subrecipient activities.
- Submit a *letter* to the CAM describing the subawards needed or stating that no subawards are required.
- If requested by the CAM, submit a *draft of each subaward* required to conduct the work under this Agreement to the CAM for review.
- If requested by the CAM, submit a *final copy of each executed subaward*.
- If Recipient intends to add new subrecipients or change subrecipients, then the Recipient shall notify the CAM.

Products:

- Letter describing the subawards needed, or stating that no subawards are required
- Draft subaward (if requested)
- Final subaward (if requested)

TECHNICAL TASKS

TASK 2 COMMUNITY OUTREACH AND ENGAGEMENT

Task 2.1 Host Community Workshops

The goal of this task is to educate neighboring community residents about the benefits of the TaaS E-Hub project, including environmental benefits, job opportunities and artist stipends from match funds.

The Recipient shall:

- Develop a *Community outreach & engagement plan* with supporting materials, including outreach materials and a list of community workshop promotional partners.
- Identify 5-10 promotional partners to participate in community workshops, training, and relevant stakeholder meetings.
- Host at least four community workshops on the environmental benefits and job opportunities of TaaS model, ZEVs, renewable energy, BESS, and related benefits of the E-Hub, including artist stipends.
- Support community engagement by providing $25,000 from match funds in stipends to local artists, including high school students, to paint murals on wooden panels that will be installed along the fence surrounding the E-Hub. Additionally, construct an interpretive center kiosk to provide information on the project and the neighboring communities via match funds.
- Provide the CAM with a *Summary of community outreach outcomes,* including attendees, discussion topics, and outcomes.

Products:

- Community outreach & engagement plan
- Summary of community outreach outcomes

Task 2.2 Promote TaaS E-Hub Workforce Development and Job Opportunities

The goal of this task is to promote workforce pathways in truck driving, renewable energy, construction, electrification, and EV charging installation certifications to support the project's local hiring preference.

The Recipient shall:

- Collaborate with a joint team of community partners (e.g., The Urban Collaborative Project-Community Development Corporation, San Diego Air Pollution Control Board, California Eco-Network, etc.) to raise awareness of workforce development and job opportunities connected to the E-Hub.
- Identify apprenticeships, workforce development, and job training programs to help local residents pursue opportunities at the E-Hub.
- Contribute match funding in the amount of $20,000 to fund participation of ten (10) local, licensed electrical contractors in the Electric Vehicle Infrastructure Training Program (EVITP), in partnership with the San Diego Electrical Training Institute (ETI), affiliated with the International Brotherhood of Electrical Workers. This stipend will cover the cost of training and certification.
- Provide CAM with a *Report on workforce development and job opportunities promotion,* including a list of community and workforce development partners. Metrics in the report will include, but are not limited to:
    - Number of permanent jobs
    - Number of EVITP certifications obtained
    - Number of certificates and jobs generated in National City, CA
    - Number of certificates and jobs generated in Disadvantaged and Low-Income communities (Including National City, CA)
    - Number of Women and Minority jobs generated
    - Number of community meetings attended to discuss eHub and workforce development opportunities

Products:

- Report on workforce development and job opportunities promotion

Task 2.3 Form and Convene Advisory Committee to Develop Additional Community Benefit Recommendations

The goal of this task is to convene E-Hub project stakeholders representing community organizations, portside communities, and National City to develop a Phase 1 expenditure plan for community benefits in addition to those described in Tasks 2.1 and 2.2. This task is funded via match funds by Recipient.

The Recipient shall:

- Collaborate with a joint team of municipal, educational, labor and community partners (e.g., National City, high schools near the project site, International Brotherhood of Electrical Workers, The Urban Collaborative Project-Community Development Corporation, San Diego Air Pollution Control Board, California Eco-Network, etc.) to develop an expenditure plan for a $150,000/year community benefit plan (inclusive of benefits contained in Tasks 2.1 and 2.2). Potential plan elements include: scholarships for high school and community college students; additional workforce training opportunities; support for National City programs to potentially include contributions to its electric microtransit program to connect to the E-Hub; job training for solar installers; resiliency programs for portside communities.
- Contribute match funds in the amount of $150,000/year for community benefit plan elements recommended by advisory committee and agreed to by SkyCharger. Submit a *Report on community benefits activities and accomplishments* to the CAM.

Products:

- Report on community benefits activities and accomplishments

TASK 3 TRUCKING AS A SERVICE PROGRAM DEVELOPMENT

Task 3.1: Promote TaaS offering

The goal of this task is to educate and engage end users of the E-Hub, including Independent Owner Operators (IOOs) and small fleet truckers, about the Trucking as a Service (TaaS) lease offering. As an Innovative Small E-Fleets (ISEF) program provider for the California Air Resources Board, SkyCharger will establish a TaaS offering which will include: a 90-day “Try Before You Buy” offer, replacement trucks when E-trucks need maintenance, roadside assistance, a credit backstop, a 5-year or shorter path to ownership, and clear and plain contract language in English, Spanish or any other language. All activities in this task are provided by Recipient match funding.

The Recipient shall:

- Conduct outreach to IOOs and small truck fleets to maximize awareness about the affordable and accessible opportunity being provided to transition from a used diesel to new electric truck through the TaaS offering.
- Provide the CAM with *a Report on TaaS outreach and engagement to IOOs and small fleets*, including number of contacts and participants generated, and outreach materials used.

Products:

- Report on TaaS outreach and engagement to IOOs and small fleets

Task 3.2: Develop and Deploy TaaS offering

The goal of this task is to deploy an innovative TaaS business model to provide SkyCharger's customers (TaaS leaseholders) with a turnkey solution inclusive of Class 8 battery-electric truck leasing and public depot parking stalls for overnight truck charging. All activities in this task are provided by Recipient match funding.

The Recipient shall:

- Develop a TaaS lease offering, including utilization of all available state and federal funding to minimize upfront capital costs. Provide the CAM with a *Copy of TaaS Lease Offering*.
- Recruit 30 Independent Owner Operators (IOOs) and small fleet truckers to sign TaaS leases, with an equitable path to ownership. Provide the CAM with a copy of *Report on TaaS program participants, including number of IOOs and small fleet participants*.
- Provide affordable truck leases to 30 or more independent owner operators (IOOs) and small fleet truckers, to include free/low-cost access to twelve (12) dual-port 360 kW and twenty three (23) dual-port 160 kW public electric truck depot chargers in reserved charging stalls.
- Conduct surveys and interviews with customers. Provide CAM with *Survey and interview results from TaaS leaseholders* regarding experience with the program.

Products:

- Copy of TaaS Lease Offering
- Report on TaaS program participants, including number of IOOs and small fleet participants
- Survey and interview results from TaaS leaseholders

[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details.]

TASK 4 E-HUB PHASE 1 DESIGN, PERMITTING, AND CONSTRUCTION

Task 4.1: Deploy Chargers for Overnight Charging

The goal of this task is to design, permit, and construct twenty-three (23), dual-port, 160 kW chargers to support at least 30 TaaS leaseholders.

The Recipient shall:

- Conduct engineering and design activities.
- Finalize *Site Drawings and Installation Plans*, including but not limited to:
  - Engineering specifications for the twenty-three (23), dual-port, 160 kW overnight charging stations.
  - Complete design and engineering plans for the overnight charging site.
  - Details and timeline of installation activities.

- Provide a copy of *Site Drawings and Installation Plans* to the CAM.
- Oversee acquisition of construction and other permits from local jurisdictions.
- Complete utility interconnect requirements.
- Develop a *Procurement Plan*. This plan will include but is not limited to:
    - Complete list of procurements necessary for the project.
    - Procedures, steps, and timelines that will be followed to acquire them for the project.
- Provide a copy of the *Procurement Plan* to the CAM. CAM written approval to process with procurement is required.
- Utilize Site Drawings and Installation Plans to coordinate installation of charging stations.
- Prepare charging site location by:
    - Preparing and/or upgrading electrical infrastructure
    - Performing any required earthwork/trenching/boring
    - Pouring concrete pads
    - Installing conduit, wiring, lighting, and security features
    - Patching and sealing any concrete, asphalt, or other surfaces impacted by trenching
    - Ensuring site is restored to a condition consistent with or better in appearance than original site
- Schedule delivery and installation of charging systems to the site.
- Install twenty-three (23), dual-port, 160 kW overnight charging stations.
- Prepare *Written Notification of Intent to Operate* and provide a copy to the CAM.
- Provide at least twenty-three (23) *high quality digital photographs of the installed and operational twenty-three (23) overnight charging stations*.
- Submit an *AB 841 Certification* that certifies the project has complied with all AB 841 (2020) requirements or describes why the AB 841 requirements do not apply to the project. The certification shall be signed by Recipient's authorized representative.
- 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.

- Provide the CAM with a *List of subcontractors engaged in the project, including DVBEs, SBEs and/or veteran-owned enterprises, and local jobs created.*

Products:

- Site Drawings and Installation Plans
- Procurement Plan
- Written Notification of Intent to Operate
- High quality digital photographs of the twenty-three (23) overnight charging stations
- AB 841 Certification
- EVITP Certification Numbers
- List of subcontractors engaged in the project, including DVBEs, SBEs and/or veteran-owned enterprises, and local jobs created

Task 4.2: Deploy Chargers for Opportunity Charging

The Recipient shall:

- Design and construct low/no-emission temporary microgrid power solution.
- Conduct engineering and design activities.
- Finalize *Site Drawings and Installation Plans*, including but not limited to:
    - Engineering specifications for the twelve (12), dual-port, 360 kW opportunity charging stations, 1.7 MW solar canopy, and 1 MW/4 MWh BESS.
    - Complete design and engineering plans for the opportunity charging site.
    - Details and timeline of installation activities.
- Provide a copy of *Site Drawings and Installation Plans* to the CAM.
- Oversee acquisition of construction and other permits from local jurisdictions.
- Complete utility interconnect requirements.
- Develop a *Procurement Plan*. This plan will include but is not limited to:
    - Complete list of procurements necessary for the project.
    - Procedures, steps, and timelines that will be followed to acquire them for the project.
- Provide a copy of the *Procurement Plan* to the CAM. CAM written approval to process with procurement is required.

- Utilize Site Drawings and Installation Plans to coordinate installation of charging stations.
- Prepare charging site location by:
    - Preparing and/or upgrading electrical infrastructure
    - Performing any required earthwork/trenching/boring
    - Pouring concrete pads
    - Installing conduit, wiring, lighting, and security features
    - Patching and sealing any concrete, asphalt, or other surfaces impacted by trenching
    - Ensuring site is restored to a condition consistent with or better in appearance than original site
- Schedule delivery and installation of charging systems to the site.
- Install twelve (12), dual-port, 360 kW opportunity charging stations, 1.7 MW solar canopy, and 1 MW/4 MWh BESS.
- Prepare *Written Notification of Intent to Operate* and provide a copy to the CAM.
- Provide at least twelve (12) *high quality digital photographs of the twelve (12) installed and operational opportunity charging stations,* and at least one (1) *high quality digital photograph each of the installed and operational 1.7 MW solar canopy and 1 MW/4 MWh BESS.*
- Submit an *AB 841 Certification* that certifies the project has complied with all AB 841 (2020) requirements or describes why the AB 841 requirements do not apply to the project. The certification shall be signed by Recipient's authorized representative.
- 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.
- Provide the CAM with a *List of subcontractors engaged in the project, including DVBEs, SBEs and/or veteran-owned enterprises, and local jobs created.*

Products:

- Site Drawings and Installation Plans
- Procurement Plan
- Written Notification of Intent to Operate
- High quality digital photographs of the twelve (12) opportunity charging stations, 1.7 MW solar canopy, and 1 MW/4 MWh BESS

- AB 841 Certification
- EVITP Certification Numbers
- List of subcontractors engaged in the project, including DVBEs, SBEs and/or veteran-owned enterprises, and local jobs created

[CPR WILL BE HELD IN THIS TASK. See Task 1.2 for details.]

TASK 5 CHARGING INFRASTRUCTURE BLUEPRINT

The goal of this task is to complete a charging infrastructure blueprint of the Trucking as a Service E-Hub project.

The Recipient shall:

- Develop a charging infrastructure blueprint of the Trucking as a Service E-Hub project. The Blueprint for replicated expansion of the deployed innovative technology should be structured as follows:
    - Identify the actions and milestones needed for installation and deployment of MDHD charging infrastructure.
        - Identify optimal locations for charging infrastructure deployment and the rationale for being considered optimal.
        - MDHD ZEV usage and driving patterns in order to maximize and optimize the type and placement of charging infrastructure to support the ZEVs and the grid.
    - Minimize the risks and uncertainties surrounding the design, permitting, planning, and financing of charging infrastructure network through engagement.
        - Engage utilities to support grid delivery, reliability, and resiliency.
        - Address impacts of increased charging on utility rates.
        - Engage local jurisdictions and planning organizations to ensure they are involved in the planning and permitting of the infrastructure.
        - Engage regional community-based organizations, community leaders, California Native American Tribes, and potentially affected local residents in the planning process and education on the benefits of ZEV transportation. With regional organizations, determine if a community needs assessment is warranted and develop an appropriate scope.
        - Engage financial institutions to ensure they are educated, involved, and committed to participate in the implementation of a large-scale replicated expansion of the innovative charging infrastructure blueprint.

- Analyze the combination of technologies and systems that offer the best mix of economic, environmental, and technical performance specific to the project/region.
  - Explore innovative charging infrastructure options to address potential infrastructure barriers.
  - Include appropriate Vehicle-Grid Integration (VGI) standards and open standards-based network communications.
  - Include the ability to support emerging connectors and/or interfaces for heavy-duty vehicles, open standards-based network communications, the inclusion of appropriate VGI standards, and/or other methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.
  - Include the use of interoperable MDHD charging connectors and/or charging interfaces compatible with MDHD vehicles sold by multiple original automotive equipment manufacturers for widespread use across California and North America.
  - Include other methods for enhancing grid-reliability by providing data to utilities to predict charging behavior and associated impacts on the grid.
- Identify analytical tools, software applications, and data needed to improve future charging infrastructure planning activities.
- Identify each task or area of responsibility required of the project partners and stakeholder groups to develop a replicable approach for other fleets transitioning to zero-emission charging infrastructure.
- Describe the outreach strategy necessary for local communities, supported by education and outreach materials appropriate for potentially affected residents, in the languages needed for those communities.
- Describe collaboration with community colleges, community-based organizations and community leaders to develop workforce development strategies that enable training, education, and readiness for the local community workforce to obtain the requisite knowledge, skills, and ability to develop, support, and maintain the MDHD ZEV fleets.
- Summarize the types of jobs that could be created for the local community.
- Identify goals to reduce greenhouse gas (GHG) emissions, criteria air pollutants, and toxic air contaminants for the region, and the emitters at the local level that would need to be targeted.

- Identify the benefits that would accrue to High Fire-Threat Districts, disadvantaged communities (DACs), low-income communities, priority populations, and/or tribal lands to the maximum extent possible. Address health and safety, access and education, financial benefits, economic development, and consumer protection.

- Prepare *Draft Charging Infrastructure Blueprint* and provide a copy to the CAM.
- Incorporate CAM feedback from the Draft Charging Infrastructure Blueprint into the *Final Charging Infrastructure Blueprint* and provide a copy to the CAM.

Products:

- Draft Charging Infrastructure Blueprint
- Final Charging Infrastructure Blueprint

TASK 6 OPERATIONS AND RELIABILITY

Recipients shall comply with the reliability performance standards, recordkeeping, reporting, and maintenance requirements (Requirements) for EV chargers installed as part of this Agreement. In the event the CEC adopts regulations that include Requirements, for example as required by AB 2061 (Ting, Chapter 345, Statutes of 2022) and/or AB 126 (Reyes, 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 6.1 Operations

The Recipient shall:

- Operate the installed charging ports during the term of this agreement.
- 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.

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 6.2 Recordkeeping

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

For networked chargers, the Recipient shall collect and retain the maintenance records specified in this section. The Recipient shall retain the services of a charging

network provider that meets the criteria in 1. through 4. to record, retain, and transmit the remote monitoring data for networked chargers specified in this section.

1. 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.
2. 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.
3. **For networked chargers**, 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.
4. **For networked chargers,** 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:
    a. HeartbeatRequest shall be transmitted to the Central Management System by the charger on a set interval.
    b. HeartbeatResponse shall be transmitted to the charger by the Central Management System in response to any received HeartbeatResponse.
    c. 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.
    d. BootNotificationRequest shall be transmitted by the charger to the Central Management System any time the charger is powered on.
    e. BootNotificationResponse shall be transmitted by the Central Management System to the charger in response to any received BootNotificationRequest.

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.
- **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.

1. Provide digital records in a comma separated values file unless another file format is approved by the CEC for the request.
2. Provide a clear and understandable *data dictionary* that describes each data element and any associated units with all digital records.

- **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.

Remote Monitoring Data for Networked Chargers

1. All instances of the following Protocol Data Units, specified in OCPP 2.0.1, that are transmitted between the charger and the central system.
    a. HeartbeatResponse
    b. StatusNotificationRequest
    c. BootNotificationRequest
2. The total number of charge attempts for the reporting period.
3. The total number of successful charging sessions for the reporting period.
4. The total number of failed charging sessions for the reporting period.
5. The percentage of successful charging sessions for the reporting period relative to the total number of charge attempts for the reporting period.

Maintenance Records

1. **For all chargers,** reports of inoperative charging ports or charging port failures resulting in inability to charge, such as a customer complaint, internal diagnostics, or inspection.
2. **For all chargers,** records of any maintenance conducted on charging ports installed and operated as part of the agreement. Records should specify the following:
    a. Date and time of the maintenance event
    b. Whether maintenance was corrective or preventive in nature
    c. Whether and for how long the charging port was in an inoperative state prior to maintenance.
    d. Whether the charging port was in an operative state following maintenance

Products:

- Remote Monitoring Records
- Maintenance Records

- Data Dictionary

Task 6.3 Maintenance Requirements

The goal of this task is to increase reliability through timely and effective preventive and corrective maintenance. The Recipient shall conduct maintenance on each charger installed and operated as part of the Agreement as specified in this section.

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.
- *Report on preventive and corrective maintenance in each Quarterly Report on Charger and Charging Port Reliability and Maintenance* described in Task 6.4.

Products:

- Maintenance section of Quarterly Report on Charger and Charging Port Reliability and Maintenance described in Task 6.4

Task 6.4 Reporting

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

The Recipient shall:

- Prepare and submit to the CEC *Quarterly Reports on Charger and Charging Port Reliability and Maintenance*. Each report shall 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:
    1. **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.
    2. **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.

3. **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.

- Prepare 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 and include in each Quarterly Report on Charger and Charging Port Reliability and Maintenance. 'Excluded Downtime' includes:
    1. **Before Initial Installation:** Downtime before the charging port was initially installed.
    2. **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.
    3. **Vehicle Fault:** Any failure to charge or failure to meet the EV charging customer's expectation for power delivery due to the fault of the vehicle.
    4. **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.
    5. **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.
    6. **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.

7. **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.
8. **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.

- **For all charging ports,** prepare a summary and calculation of uptime and include in each Quarterly Report on Charger and Charging Port Reliability and Maintenance. 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:

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

U = Charging Port Uptime

T =

1. Q1 reporting period = 129,600 minutes, except for a leap year, which is 131,040 minutes.
2. Q2 reporting period = 131,040 minutes.
3. 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**, prepare a summary of charge data and include in each Quarterly Report on Charger and Charging Port Reliability. The data will include:
    a. Total number of charge attempts in the reporting period
    b. Total number of successful charge attempts in the reporting period
    c. Total number of failed charges in the reporting period
    d. The percentage of successful charging sessions for the reporting period relative to the total number of charge attempts for the reporting period
    e. A description of steps taken to reduce the number of failed charge attempts, and the success rate of those steps
- **For all chargers,** prepare 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.

Products:

- Quarterly Report on Charger and Charging Port Reliability and Maintenance, submitted in a manner specified by the CEC

TASK 7 SEMI-ANNUAL ELECTRIC VEHICLE CHARGER INVENTORY REPORTS

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.

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 8 DATA COLLECTION AND ANALYSIS

The goal of this task is to collect operational data from the project and to analyze that data for economic and environmental impacts.

The Recipient shall:

- For all electric vehicle chargers and charging stations installed on or after January 1, 2024:
    - Comply with recordkeeping and reporting standards as described in CEC's regulations. These requirements are not applicable to those electric vehicle chargers and charging stations installed at residential real property containing four or fewer dwelling units.
    - Comply with all industry best practices and charger technology capabilities that are demonstrated to increase reliability, as described in CEC's regulations.
    - Without limitation to other requirements in this grant agreement, Recipient shall comply with any other regulatory requirements, including but not limited to uptime requirements and operation and reliability requirements. Such regulatory requirements may, but will not necessarily, be enacted after execution of this grant agreement. Once regulations are final, they will apply to work under this grant agreement irrespective of when finalized. Any updates to regulations may also be applicable to work under this grant agreement.
    - If the Recipient is an electric vehicle service provider or other third-party entity that is not the site host, the electric vehicle service provider or third-party entity shall provide a disclosure to the site host about the site host's right to designate the service provider or third-party as the entity to report the data on behalf of the site host. The Recipient shall verify receipt by signing the disclosure.
- Collect and report to the CEC:

- For an electric vehicle charging station, the availability of operational charging plugs, whether the station was energized, the volume of electricity in kilowatt-hours used to charge by vehicles, the number of vehicles charged by a station, and any other data deemed necessary by the CEC to monitor reliability and accessibility of the charging infrastructure. This data shall be measured no less frequently than on a daily basis and reported electronically to the CEC no less frequently than quarterly in *AB 126 Data Reports* submitted with the quarterly reports described in Task 1.5.
- For an electric vehicle charging station, 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 annually in a *AB 126 Data Report* specified by the CAM.

- Collect and provide the following data:
  - Number, type, date, and location of chargers installed.
  - Nameplate capacity of the installed equipment, in kW for chargers.
  - Number and type of outlets per charger.
  - Location type, such as street, parking lot, hotel, restaurant, or multi-unit housing.
  - Total cost per charger, the subsidy from the CEC per charger, federal subsidy per charger, utility subsidy per charger, and privately funded share per charger.
- Collect and provide 12 months of throughput, usage, and operations data from the project including, but not limited to:
  - Number of charging sessions
  - Average charger downtime
  - Peak power delivered (kW)
  - Duration of active charging, hourly
  - Duration of charging session, hourly (e.g., vehicle parked but not actively charging)
  - Average session duration
  - Energy delivered (kWh)
  - Average kWh dispensed
  - Types of vehicles using the charging equipment
  - Applicable price for charging, including but not limited to: electric utility tariff, EVSP service contract, or public charger price.

- Payment method for public charging
- Energy delivered back to grid or facility if a bidirectional charging use case (kWh)
- Gallons of gasoline and/or diesel fuel displaced (with associated mileage information)
- Expected air emissions reduction, for example:
  - Non-methane hydrocarbons
  - Oxides of nitrogen
  - Particulate Matter
  - Formaldehyde
- Duty cycle of the current fleet and the expected duty cycle of future vehicle acquisitions

- Identify any current and planned use of renewable energy at the facility.
- Identify the source of the alternative fuel.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.
- Provide data on potential job creation, economic development, and increased state revenue because of expected future expansion.
- Provide a quantified estimate of the project's carbon intensity values for life-cycle greenhouse gas emissions.
- Compare any project performance and expectations provided in the proposal to CEC with actual project performance and accomplishments.
- Provide a *Data Collection and Information Analysis Report* that lists and analyzes all the data and information described above.

Products:

- AB 126 Data Reports
- Data Collection and Information Analysis Report

TASK 9 PROJECT FACT SHEET

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 the 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 describes the project, the actual benefits resulting from the project, and lessons learned from implementing the project. 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