



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # ARV - 21 - 065 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
Fuels and Transportation Division	David Wensil	27	916-776-0756

C) Recipient's Legal Name	Federal ID #
TeraWatt Infrastructure, Inc.	86-2260511

D) Title of Project
SNAREV - Santa Ana Airport Ridehail Electric Vehicle Charging Depot

E) Term and Amount

Start Date	End Date	Amount
05 / 11 / 2022	07 / 31 / 2024	\$ 1,996,481

F) Business Meeting Information

☐ ARFVTP agreements \$75K and under delegated to Executive Director
Proposed Business Meeting Date 05 / 11 / 2022 ☐ Consent ☒ Discussion
Business Meeting Presenter: David Wensil Time Needed: 5 minutes
Please select one list serve. Altfuels (AB118-ARFVTP)

Agenda Item Subject and Description:

TeraWatt Infrastructure, Inc. Proposed resolution approving Agreement ARV-21- 065 with TeraWatt Infrastructure, Inc. for a \$1,996,481 grant to install EV charging infrastructure for ride-hailing fleets in Santa Ana, California, and adopting staff's determination that this action is exempt from CEQA. The proposed project will install seven direct current fast chargers and 12 dual-port Level 2, 48A chargers.

G) California Environmental Quality Act (CEQA) Compliance

1. Is Agreement considered a "Project" under CEQA?

☒ Yes (skip to question 2) ☐ No (complete the following (PRC 21065 and 14 CCR 15378)):

Explain why Agreement is not considered a "Project":

2. If Agreement is considered a "Project" under CEQA:

a) ☒ Agreement **IS** exempt.

☐ Statutory Exemption. List PRC and/or CCR section number:

☒ Categorical Exemption. List CCR section number:

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

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beyond that existing at the time of the lead agency's determination, are categorically exempt from the provisions of the California Environmental Quality Act. This project involves installation of electric vehicle charging stations, including at an existing parking facility. The electric vehicle charging station will be installed on an existing paved parking lot, connect to existing electrical panels, 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. Specifically, the fast-charging equipment to be installed is approximately the size of a pay phone and the level two charging equipment is the size of a parking meter. 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, minor trenching may be necessary to lay two-inch conduit from the existing electrical panel to the charging equipment, totaling approximately 2 cubic feet per foot of distance from the electrical panel, to connect the proposed new electric vehicle charging station equipment to an existing electrical supply panel. 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.

☐ Common Sense Exemption. 14 CCR 15061 (b) (3) Explain reason why Agreement is exempt under the above section:

- b) ☐ Agreement **IS NOT** exempt. (consult with the legal office to determine next steps)

Check all that apply

- ☐ Initial Study
☐ Negative Declaration
☐ Mitigated Negative Declaration
☐ Environmental Impact Report
☐ Statement of Overriding Considerations

H) List all subcontractors (major and minor) and equipment vendors, including those listed in the grant application: (attach additional sheets as necessary)



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Legal Company Name:	Budget
In-Charge Energy	\$ 1,996,481
Starwest	\$ 53,600

I) List all key partners, including those listed in the grant application: (attach additional sheets as necessary)

Legal Company Name:

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTP	FY 20/21	601.118M	\$ 1,996,481

R&D Program Area: N/A TOTAL: \$

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

K) Recipient's Contact Information**1. Recipient's Administrator/Officer**

Name: David Schlosberg
Address: 235 Pine St
City, State, Zip: San Francisco, CA, 94104
Phone: 415-300-0619
E-Mail: david@terawattinfrastructure.com

2. Recipient's Project Manager

Name: David Schlosberg
Address: 235 Pine St
City, State, Zip: San Francisco, CA, 94104
Phone: 415-300-0619
E-Mail: david@terawattinfrastructure.com

L) Selection Process Used

- ☒ Competitive Solicitation Solicitation #: GFO-21-601
☐ First Come First Served Solicitation Solicitation #: - -

M) The following items should be attached to this GRF

- | | |
|---|--|
| 1. Exhibit A, Scope of Work | <input checked="" type="checkbox"/> Attached |
| 2. Exhibit B, Budget Detail | <input checked="" type="checkbox"/> Attached |
| 3. CEC 105, Questionnaire for Identifying Conflicts | <input checked="" type="checkbox"/> Attached |
| 4. Recipient Resolution | <input checked="" type="checkbox"/> N/A |
| 5. CEQA Documentation | <input checked="" type="checkbox"/> Attached |

David Wensil
Agreement Manager

3/21/2022

Date

3/25/22



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Office Manager

Melanie Vail

Deputy Director

Date

4/1/2022

Date

CALIFORNIA ENERGY COMMISSION

SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Design & Engineering
3	X	Construction and Commissioning
4		Recruit and Train Drivers
5		Data Collection and Analysis
6		Project Fact Sheet

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	David Schlosberg	In-Charge, Kaptyn	
2	David Felix	In-Charge,	
3	David Felix	In-Charge,	
4	David Schlosberg	Kaptyn	
5	Danielle Lee	In-Charge, Kaptyn	
6	Danielle Lee	Kaptyn	

GLOSSARY

Term/ Acronym	Definition
BESS	Battery Energy Storage System
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CTP	Clean Transportation Program
CPR	Critical Project Review
EVSE	Electric Vehicle Supply Equipment
FTD	Fuels and Transportation Division
Recipient	TeraWatt Infrastructure, Inc.
AHJ	Authorities Having Jurisdiction
GHG	Greenhouse Gases

Term/ Acronym	Definition
IPC	Integrated Power Center
ICE	Internal Combustion Engine
DCFC	Direct Current Fast Charger
EV	Electric Vehicle
DAC	Disadvantaged Community
VMT	Vehicle Miles Traveled
eVMT	Electric Vehicle Miles Traveled
MPG	Miles Per Gallon
MPGe	Miles Per Gallon equivalent
SCE	Southern California Edison
SoC	State of Charge
TNC	Transportation Network Company
LI/LMI	Low Income/ Low-Middle Income
EPA	Environmental Protection Agency
PO	Purchase Order

Background

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program. The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the Clean Transportation Program through January 1, 2024. The Clean Transportation Program has an annual budget of approximately \$100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance and market viability of alternative light-, medium- and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

On August 31, 2021, the CEC released a Grant Funding Opportunity entitled "Charging Access for Reliable On-Demand Transportation Services (CARTS)." This competitive grant solicitation was to support electric vehicle (EV) charging infrastructure for high mileage on-demand transportation services including services such as ride-hailing, taxis, and meal and grocery delivery. In response to GFO-21-601, the Recipient submitted application #19 which was proposed for funding in the CEC's Notice of Proposed Awards on February 14, 2022. GFO-21-601 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 CEC's Award, CEC's Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient's Application, the terms of this Agreement shall control.

Problem Statement:

Unlike traditional ride-hailing companies that use independent contractors who use their own vehicles, Kaptyn owns its electric vehicles and employs its drivers. But unlike traditional taxi companies, Kaptyn relies on software algorithms to match riders to drivers, which optimizes route scheduling and charging. While Kaptyn's hybrid business model maximizes electric vehicle miles traveled (eVMT) and is better for drivers, it is not feasible to operate an owned EV

fleet on the public charging network. This is due to many challenges including: selecting a site that is suitably located to support charging infrastructure, securing capital for infrastructure and facility upgrades, streamlining implementation with the utility provider, mitigating stranded asset risks, and avoiding costly demand charges. This agreement aims to address these barriers by providing funding for the design and engineering, as well as construction and commissioning, of electric vehicle supply equipment (EVSE).

Goal of the Agreement:

The goal of this Agreement is to provide charging for a 200 EV ride-hailing taxi fleet.

Objectives of the Agreement:

The objective of this Agreement is to install a charging hub to support EV ride-hailing taxi service.

TASK 1 ADMINISTRATION

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)
- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.6)

Recipient Products:

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

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 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 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, 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 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 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 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>.

Products:

- 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. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, 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, Final Reports must comply with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of 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, if requested by the CAM.
- Prepare a 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 one bound copy of the Final Report with the final invoice.

Products:

- Outline of the Final Report, if requested
- 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 shall be spent concurrently or in advance of CEC funds for each task during the term of this Agreement. 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 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. 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 to 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 subcontractor activities.
- 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 the executed subaward.
- If Recipient intends to add new subcontractors, then the Recipient shall notify the CAM.

Products:

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

TECHNICAL TASKS

TASK 2 DESIGN & ENGINEERING

The goal of this task is to produce construction documents and calculations needed for a multi-charger station hub incorporating direct current fast chargers (DCFCs) and Level 2 chargers with a battery energy storage system (BESS) and an integrated power center (IPC).

The Recipient shall:

- Perform required analysis for a multi-charger station hub incorporating 7 dual-port 120 kW DCFC and 12 Level 2 48A chargers, a 400 kWh BESS, and up to 3MW IPC.
- Perform site visit to finalize location of EV charging infrastructure, determine construction needs for mounting EVSE, look for potential hazards such as flooding, and ensure design compliance with the Americans with Disabilities Act (ADA).
- Determine the location of above and below-ground utility infrastructure by identifying the power source on the site and mapping any pathways between the utility's existing infrastructure and newly needed systems, such as the Grid-on-a-Skid.
- Identify the location of proposed electrification infrastructure and verify the site's electrical capacity, making note of the most resource-minimized pathway to help bring electricity from the utility to the proposed chargers and EVSE infrastructure.
- Survey and test the feasibility of any previously installed utility hardware, such as power poles, transformers, or laid conduit, noting any absent yet required equipment for the proposed charging stations and EVSE infrastructure.
- Provide a copy of the above-described *Site Survey* to Southern California Edison (SCE) to identify electrical infrastructure in the area, customer requirements, and the best approach for the project
- Determine the availability of medium voltage power in the SCE vault to power the Grid-on-a-Skid container and map out boring from the vault.
- Perform preliminary engineering work to identify the loads and service voltage, in order to coordinate the requirements for the new service required by the proposed project.
- Complete a *Detailed Engineering Design, with Standard Summary Drawings*. Both the design and the accompanying drawings shall include, but are not limited to:
 - Technical specifications for the chargers, IPC and BESS
 - Location of chargers, IPC and BESS
 - Wiring and conduit
 - Signage including labels for arc flash hazard as required by the National Electric Code (NEC) and Occupational Safety and Health Administration (OSHA) (but not a requirement for plan check)
 - Power capacity and any additional power requirements that necessitate an upgrade
 - Single line drawings (including existing site voltage and amperage)
 - Load calculations (existing + new = total load)
 - Power system study to determine the short circuit values, equipment interrupt ratings, and feeder voltage drops
 - Structural Calculations including potential for foundation and equipment anchoring drawings prepared by a civil engineer
- Develop and submit a *Summary Report of Engineering Design*.
- Submit *Plan Check Drawings* to the local authority having jurisdiction (AHJ) for review and approval.

Products:

- Site Survey
- Detailed Engineering Design with Standard Summary Drawings
- Summary Report of Engineering Design
- Plan Check Drawings

TASK 3 CONSTRUCTION & COMMISSIONING

The goal of this task is to construct, commission, and open an eMobility charging hub in Santa Ana, CA, close to John Wayne Airport (SNA).

The Recipient shall:

- Perform all construction and commissioning work required for the eMobility charging station hub. This work shall be done in accordance with all the design and engineering specifications and materials produced pursuant to Task 2 above, after the AHJ has approved the same. Work will include, but is not limited to:
 - Laying out charging stalls for approximately 30 EVs.
 - Secure conduit for charging infrastructure around the periphery of the property.
 - Directionally boring from the SCE power vault to the location of the Grid-on-a-Skid.
 - Laying and pulling conduit and wiring.
 - Pouring concrete footings for the chargers, IPC and BESS.
 - Installing and connecting chargers, IPC and BESS.
 - Coordinating service connections with utility companies.
- 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.
- Submit *Electric Vehicle Infrastructure Training Program (EVITP) Certification Numbers* of each EVITP 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.
- Startup and troubleshoot electrical distribution equipment to place equipment into service.
- Perform a *Coordination Study* with SCE to determine when protective device settings on Grid-on-a-Skid are fully operational, conduct proper settings in accordance with the coordination study and submit a copy of the coordination study to the CAM.
- Commission and test system communication and functionality.
- Coordinate service energizing with utility companies.
- Facilitate inspection process with AHJs to closeout project permits.
- Install signage at specified locations on the property.
- Train staff on equipment operations.
- Prepare and submit a *Summary Report*, including photos, on the installation, testing, commissioning, and operation of the charging station hub.

Products:

- AB 841 Certification
- EVITP Certification Numbers
- Coordination Study
- Summary Report

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

TASK 4 RECRUIT AND TRAIN DRIVERS

The goal of this task is to recruit members from disadvantaged communities (DACs) and train drivers on the essential equipment required to operate the EV as a ride hailing taxi vehicle.

The Recipient shall:

- Create and Implement a *Recruitment Plan*, including but not limited to:
 - Content Creation:
 - Printed materials
 - Videos
 - Graphics for social media
 - Plan Implementation
 - Market open positions through employment offices in DACs
 - Run paid social media ads in DAC zip codes
 - Participate in job fairs in DACs
- Provide a *Training Manual* to hire and train employee drivers on subjects including, but not limited to:
 - How to use Kaptyn's route queuing application
 - How to drive an EV safely and efficiently
 - How to charge vehicles safely
 - What do to in the event of an accident
 - The location and proper operation of onboard safety equipment
- Operate EV ride hailing fleet in Los Angeles and Orange counties.
- Monitor driving and charging patterns.
- Perform scheduled and as needed maintenance on vehicles and chargers.
- Create and place *Marketing, Education and Outreach Materials* at key Kaptyn destinations, including, but not limited to, airports and hotels.

Products:

- Recruitment Plan
- Training Manual
- Marketing, Education and Outreach Materials

TASK 5 DATA COLLECTION AND ANALYSIS

The goal of this task is to collect operational data from the project, to analyze that data for economic and environmental impacts, and to include the data and analysis in the Final Report and in the monthly progress reports for the final 12 months of the data collection period.

The Recipient shall:

- Collect and provide a minimum of 12 months of data on deployed charging equipment, submitted electronically each month in a *Monthly Data Collection Progress Report*. Data on charging events for deployed infrastructure shall include, but is not limited to:
 - Number of charging or refueling sessions
 - Average charger or refueling station 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 or kg dispensed
 - Types of vehicles using the charging equipment
 - Applicable price to the driver or user for charging
 - Payment method for public charging
 - Energy delivered back to grid or facility if a bidirectional charging use case (kWh)
 - Normal operating hours, up time, downtime, and explanations of variations
- Perform *Data Collection and Information Analysis*: collect and provide the following data/information to be included and analyzed in the Final Report:
 - Number, type, date and location of chargers or hydrogen refueling stations installed.
 - Nameplate capacity of the installed equipment, in kW for chargers and kg/day for hydrogen.
 - Number and type of outlets per charger.
 - Location type, such as street, parking lot, hotel, restaurant or multi-unit housing.
 - Total cost per charger or refueling station, the subsidy from the CEC per charger or refueling station, federal subsidy per charger or refueling station, utility subsidy per charger or refueling station, and privately funded share per charger or refueling station.
 - 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
 - Identify any current and planned use of renewable energy at the facility.
 - 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 as a result 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.

Products:

- Monthly Data Collection Progress Reports
- Data Collection and Information Analysis will be included in the Final Report

TASK 6 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 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

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION: TERAWATT INFRASTRUCTURE, INC.

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 ARV-21-065 with TeraWatt Infrastructure, Inc. for a \$1,996,481 grant to install EV charging infrastructure for ride-hailing fleets in Santa Ana, California. The proposed project will install seven direct current fast chargers and 12 dual-port Level 2, 48A chargers; 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 May 11, 2022.

AYE:

NAY:

ABSENT:

ABSTAIN:

Liza Lopez
Secretariat