



STATE OF CALIFORNIA

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

**A) New Agreement # ARV-21-009 (to be completed by CGL office)**

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation	Shaun Ransom	6	916-891-9144

C) Recipient's Legal Name	Federal ID #
PowerFlex Systems, Inc.	82-3070669

D) Title of Project
EV Driver Response Informed and Validated Ecosystem

**E) Term and Amount**

Start Date	End Date	Amount
7 / 15 / 2021	3 / 31 / 2024	\$ 699,736

**F) Business Meeting Information**

☐ ARFVTP agreements \$75K and under delegated to Executive Director

Proposed Business Meeting Date 7 / 15 / 2021 ☐ Consent ☒ Discussion

Business Meeting Presenter Time Needed: 5 minutes

Please select one list serve. Altfuels (AB118- ARFVTP)

**Agenda Item Subject and Description:**

POWERFLEX SYSTEMS, INC. Proposed resolution approving Agreement ARV-21-009 with PowerFlex Systems, Inc. for a \$699,736 grant to install electric vehicle charging infrastructure that minimizes impacts to the grid through power management and battery storage, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program funding.) Contact: Shaun Ransom. (Staff Presentation: 5 minutes)

**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":

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

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

a) ☐ Agreement **IS** exempt.

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

☒ Categorical Exemption. List CCR section number: 15301 "Existing Facilities", 15303 "New Construction or Conversion of Small Structures", 15304 "Minor Alterations to Land"

☐ Common Sense Exemption. 14 CCR 15061 (b) (3)

Explain reason why Agreement is exempt under the above section: Cal. Code Regs., tit. 14, sec. 15301 exempts 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

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which involve negligible or no expansion of existing or former use. This project involves installation of one electric vehicle direct current fast charger and twelve Level 2 electric vehicle chargers seven existing facilities. Specifically, the fast charging equipment to be installed is approximately the size of a payphone and the Level 2 charging equipment is approximately the size of a parking meter. At all seven existing sites, the electric vehicle charging stations will be installed on existing pavement and connect to existing electrical infrastructure. Therefore, the project falls within section 15301 and will not have a significant effect on the environment.

Cal. Code Regs., tit. 14, sec. 15303 exempts 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. This project consists of installation of new small equipment to the 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. All the equipment will be installed in existing, paved sidewalks. Therefore, the project falls within section 15303 and will not have a significant effect on the environment.

Cal. Code Regs., tit. 14, sect. 15304 exempts 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. In this project, minor trenching may be necessary to lay conduit from the existing electrical infrastructure to the charging equipment, totaling approximately 2 cubic feet per foot of distance from the electrical infrastructure, to the proposed new electric vehicle charging station equipment. 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.

- 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:** (attach additional sheets as necessary)



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CALIFORNIA ENERGY COMMISSION

<b>Legal Company Name:</b>	<b>Budget</b>
The Regents of the University of California; University of California San Diego	\$ 296,272
TBD	\$ 153,500
	\$

**I) List all key partners:** (attach additional sheets as necessary)

<b>Legal Company Name:</b>

**J) Budget Information**

<b>Funding Source</b>	<b>Funding Year of Appropriation</b>	<b>Budget List Number</b>	<b>Amount</b>
ARFVTP	18/19	601.118K	\$699,737
Funding Source			\$
Funding Source			\$
Funding Source			\$
Funding Source			\$

R&amp;D Program Area: N/A TOTAL: \$699,737

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:

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

Name: David Lange

Address: 392 First Street

City, State, Zip: Los Altos, CA  
94022

Phone: 858-337-3618.

E-Mail:

[david.lange@powerflex.com](mailto:david.lange@powerflex.com)**2. Recipient's Project Manager**

Name: David Lange

Address: 392 First Street

City, State, Zip: Los Altos, CA  
94022

Phone: 858-337-3618

E-Mail:

[david.lange@powerflex.com](mailto:david.lange@powerflex.com)**L) Selection Process Used**☒ Competitive Solicitation Solicitation #: GFO-20-605☐ First Come First Served Solicitation Solicitation #: - -**M) The following items should be attached to this GRF**

1. Exhibit A, Scope of Work

2. Exhibit B, Budget Detail

3. CEC 105, Questionnaire for Identifying Conflicts

4. Recipient Resolution

☒ Attached☒ Attached☒ Attached☒ N/A☐ Attached



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5. CEQA Documentation

CALIFORNIA ENERGY COMMISSION

☐ N/A      ☒ Attached

\_\_\_\_\_  
**Agreement Manager**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Office Manager**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Deputy Director**

\_\_\_\_\_  
**Date**

## Exhibit A SCOPE OF WORK

### TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2	X	Site Location and Design for Charging Plaza Prototype
3		Installation and Commissioning
4		Customer Interface
5		Project Fact Sheet
6		Data Collection and Analysis

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	David Lange	N/A	N/A
2	Patrick Kelly	N/A	N/A
3	Patrick Kelly	N/A	Kevin Norris (UCSD)
4	Patrick Kelly	N/A	Byron Washom (UCSD)
5	Patrick Kelly	N/A	N/A
6	Patrick Kelly	N/A	Jan Kleissl (UCSD)

### GLOSSARY

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

Term/ Acronym	Definition
ALM	Adaptive Load Management
BES	Battery Energy Storage
BTM	Behind The Meter
CAM	Commission Agreement Manager
CHAdEMO	Japanese Charging Protocol
CPR	Critical Project Review
DCFC	DC Fast Charger
DER	Distributed Energy Resources
EV	Electric Vehicle
EVDRIVE	EV Driver Response Informed and Validated Ecosystem

EVSE	Electric Vehicle Supply Equipment
FTD	Fuels and Transportation Division
L2	Level 2
NEC	National Electrical Code
Recipient	PowerFlex Systems, Inc.
SAE CCS	Society of Automotive Engineers Combined Charging System
SDG&E	San Diego Gas and Electric
UL	Underwriter Labs
VGI	Vehicle Grid Integration

## Background

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program, formerly known as the Alternative and Renewable Fuel and Vehicle Technology 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.
- Electrify 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 7, 2020, the CEC released a Grant Solicitation and Application Package entitled "BESTFIT Innovative Charging Solutions" under the Clean Transportation Program. This competitive grant solicitation offered to fund projects that demonstrate transformative technology solutions and work to accelerate the successful commercial deployment of electric vehicle (EV) charging for both light-duty (LD) and medium- and heavy-duty (MD/HD) applications. In response to GFO-20-605, the Recipient submitted application #22 which was proposed for funding in the CEC's Notice of Proposed Awards on April 16, 2021. GFO-20-605 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 Commission's Award, the Commission'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:**

Innovative charging solutions and novel technologies and business models are needed to fit local built environment, use case, and vehicle type. DC Fast Chargers (DCFC) are becoming increasingly popular, but – if programmed to always be able to deliver full power – they require significant interconnection costs and can result in high demand charge costs to the site host. Recipient will demonstrate how novel customer and charging interfaces lower electric interconnection costs across San Diego's largest multi-purpose workplace/public DCFC and Level 2 (L2) charging plaza integrated with energy storage system and maximize utility bill savings to the site host through adaptive load management (ALM).

**Goals of the Agreement:**

The goals of this agreement are to create seamless charging experiences for drivers and users; minimize operation, purchase, and installation costs for Electric Vehicle Supply Equipment (EVSE); and increase utilization and demonstrate advancements in customer and charging interface.

**Objectives of the Agreement:**

The objective of this agreement is to create an Electric Vehicle (EV) Driver Response Informed and Validated Ecosystem (EVDRIVE) through a suite of innovative charging solutions.

The project will convert 15 Behind-The-Meter (BTM) parking stalls to create San Diego's largest multi-purpose workplace/public EVSE plaza consisting of six 100 kW DCFC with both CHAdeMO and SAE CCS connectors, nine 6.6 kW Level 2s, and a 250 kW/500 kWh battery energy storage. With Recipient's ALM, while representing 909 kW of additive load, the battery and chargers do not require utility panel or interconnection upgrades. The objective is to demonstrate that Recipient's patented UL 916 and UL 1741 ALM technology can triple the code compliant, nameplate, power capacity for EVSE plazas at 40% of the capital expense of current industry projects by allowing an EVSE installation to dynamically limit its cumulative load to less than its aggregate nameplate capacity.

The project will operate for 48 months at a representative San Diego Gas & Electric (SDG&E) workplace/public site under real world conditions. The project shall deploy a shared benefits business model to create a complete EVSE system that combines ALM and battery electric storage technology to dramatically reduce the total cost of ownership. The Project will be replicable and ubiquitously applicable to multiple, light-duty, unified EV drivers and EVSP groups.

**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 Energy Commission 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.
- Discuss the following administrative and technical aspects of this Agreement:
  - Agreement Terms and Conditions
  - Critical Project Review (Task 1.2)
  - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
  - Permit documentation (Task 1.7)
  - Subcontracts needed to carry out project (Task 1.8)
  - The CAM’s expectations for accomplishing tasks described in the Scope of Work
  - An updated Schedule of Products and Due Dates
  - Monthly Progress Reports (Task 1.4)
  - Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
  - Final Report (Task 1.5)

**Recipient Products:**

- 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 Energy Commission and the Recipient. The goal of this task is to determine if the project should continue to receive Energy Commission 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 Commission Agreement Officer, the Fuels and Transportation Division (FTD) program lead, other Energy Commission staff and Management as well as other individuals selected by the CAM to provide support to the Energy Commission.



**The CAM shall:**

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, but they may take place at another location.
- 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 Energy Commission 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, the Commission Grants Office Officer, and the Commission Agreement Manager. 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 Commission Agreement Manager.

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 Commission Agreement Manager will determine the appropriate meeting participants.

The administrative portion of the meeting shall be a discussion with the Commission Agreement Manager and the Grants Officer about the following Agreement closeout items:

- What to do with any equipment purchased with Energy Commission funds (Options)
- Energy Commission's 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 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 Monthly 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. Each progress report is due to the Commission Agreement Manager within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.

- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

**Product:**

- Monthly Progress Reports

**Task 1.5 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 Energy Commission 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.

**The Recipient shall:**

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report 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 1.6 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 Energy Commission 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 Energy Commission 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 Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the Energy Commission 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 Energy Commission 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 Commission Agreement Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Agreement Manager 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 1.7 Identify and Obtain Required Permits**

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the Energy Commission budget for this task will be zero dollars, the Recipient shall 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 Commission Agreement Manager 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 Commission Agreement Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Agreement Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Agreement Manager 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 1.8 Obtain and Execute Subcontracts**

The goal of this task is to ensure quality products and to procure subcontractors 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. It will also provide the Energy Commission an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

#### **The Recipient shall:**

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the Commission Agreement Manager for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

#### **Products:**

- Letter describing the subcontracts needed, or stating that no subcontracts are required
- Draft subcontracts
- Final subcontracts

## **TECHNICAL TASKS**

### **TASK 2 SITE LOCATION AND DESIGN FOR CHARGING PLAZA PROTOTYPE**

The goal of this task is to design the charging plaza configuration that can meet the objective of tripling the code compliant, nameplate, power capacity for EVSE plazas at 40% of the capital expense of current industry projects.

#### **The Recipient shall:**

- Evaluate appropriate workplace/public sites in SDG&E's service territory. Requirements for appropriate charging plaza site include:
  - Availability of at least 15 BTM parking stalls, located behind an SDG&E meter without any utility interconnection upgrades required,
  - Ability to install six (6) 100 kW dual port DCFC (12 ports total), with both CHAdeMO and CCS compliant connectors, and ten (10) 6.6 kW Level II chargers.
  - Ability to integrate combined EVSE switchboard and battery electric energy storage system pad fed by a single 400A/480B circuit to the building's main service panel.
  - Ability to integrate 250 kW/500 kWh battery electric storage system using a load-side tap at the pad switchboard to increase the localized capacity of the chargers.

- Ability to integrate a building energy management system.
- Be equipped with communications able to receive and respond to multiple dynamic market price and grid signals.
- Be integrated with NEC 626 and UL 916 code compliant ALM technology for maximum Vehicle Grid Integration (VGI) capability.
- Ability to be installed at lower cost than comparable-sized installations.
- Ability to be operated for a minimum of 48 months.
- Design and prepare construction drawings for the optimum site for the charging plaza, incorporating all identified requirements.
- Create construction drawings consisting of electrical, mechanical, and structural design drawings for the EVSE plaza.
- Prepare and submit a Summary Report documenting the evaluation process, the site chosen, and the creation of the construction drawings.

**Products:**

- Summary Report

**[A CPR meeting is scheduled to be held during Task 2 and additional CPR meetings may be scheduled by the CAM, as needed]**

**TASK 3 INSTALLATION AND COMMISSIONING**

The goal of this task is to procure and schedule for delivery the required EV charging equipment, prepare the installation site, and to complete the installation of the EV charging station equipment at the site.

**The Recipient shall:**

- Conduct all work necessary to prepare the fast charging plaza for installation of EV charging equipment including, but not limited to, installing fencing, trench wire and conduit and ordering materials and equipment
- Construct six dual-port 100 kW DCFC with both CHAdeMO and SAE CCS connectors, nine 6.6 kW Level 2s, and a 250 kW/500 kWh of battery energy storage (BES).
- Submit an AB 841 Certification that certifies the project has complied with all AB 841 (Ting, Chapter 372, Statutes of 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.
- Develop and submit a Commissioning Plan.

- Commission the EV charging plaza according to the Commissioning Plan.
- Document the commissioning result in a Commissioning Report, including photographs, and submit.
- Prepare and submit a descriptive summary including photographs of the completion of the installation of charging stations.

**Products:**

- Commissioning Plan
- Commissioning Report
- Descriptive summary and photographs
- AB 841 Certification signed by Recipient's authorized representative
- EVITP Certification Numbers of each EVITP certified electrician

**TASK 4 CUSTOMER INTERFACE**

The goal of this task is to create customer and charging interfaces that facilitate the adoption of EVs by engaging and educating users at the charger and making the charging experience seamless for drivers and users.

**The Recipient shall:**

- Implement ALM across the EV and DER portfolio at the site. Simplify the exposure of the driver to different ALM strategies through background optimization of economic, environmental, and grid benefits.
- Develop and submit a Customer Interface Design that collects customer preferences and shows customer rewards. At a minimum the interface should (a) explain in plain language to drivers why shifting peak charging is so important; and (b) provide a simple adjustable block tariff to create the incentive in terms of cents per kilowatt hour reduction.
- Conduct randomized trials to verify customer preferences and impact of customer rewards. Randomized trials will include issuing a series of surveys including:
  - Baseline Survey: Gather customers (EV drivers) understanding of the environmental and grid impacts of charging EVs and their charging behaviors
  - Implementation Engagement: Engage customers through surveys, in-app messaging, and social media messaging to increase education/awareness of how charging behaviors impact the environment and the grid. Measure engagement through views, open rates, posts and change in behavior (measured against historical charging behavior). Provide incentives (discounted charging, greenhouse gas reduction awards or other non-monetary incentives) to influence charging behavior to be more aligned with maximum grid/environmental benefit.



- Program Survey: Issue survey to baseline group to measure their understanding and change in behavior after participating in the program. Survey issued to all drivers (not only baseline survey participants) to solicit feedback on messaging, app experience, tools and general program for the purpose of improvement.
- Prepare and submit a Customer Interface Report that analyzes survey results, customer response to incentives, opportunities for shared revenue, and best practices.

**Products:**

- Customer Interface Design
- Customer Interface Report

**TASK 5 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 and submit 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 and submit 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) from the project.

**Products:**

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

**Task 6 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 regular progress reports and the Final Report.

**The Recipient shall:**

- Develop data collection test plan for deployed charging equipment.
- Troubleshoot any issues identified.
- Collect a minimum of 12 months of data on charging events for the deployed infrastructure including, but not limited to:
  - Charge and session duration

- Energy delivered (kWh)
  - Peak power delivered (kW)
  - Applicable price for charging, including but not limited to: electric utility tariff, EVSP service contract, or public charger price
  - Payment method
  - Types of vehicles using the charging equipment
  - Number of unique vehicles and frequency of “repeat vehicles”
  - Energy delivered back to grid or facility if a bidirectional charging use case (kWh)
- Submit the data described above electronically in a monthly progress report throughout the duration of the data collection period.
- Develop a plan to provide other relevant data and information throughout the duration of the funding agreement including, but not limited to:
  - Lessons learned
  - Best practices (e.g., permitting and installation processes)
  - Job creation
  - Economic development
  - Increased state revenue
- Submit the data described above electronically in a quarterly progress report throughout the duration of the agreement.
- Identify any planned use of renewable energy in the project.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.
- Collect data, information, and analysis described above and include in the Final Report.

**Products:**

- Data collection on charging events will be submitted electronically in a monthly progress report.
- Data collection on other relevant data and information described above will be submitted electronically in a quarterly progress report.
- Data collection information and analysis will be included in the Final Report.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: POWERFLEX SYSTEMS, 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-21-009 with PowerFlex Systems, Inc. for a \$699,736 grant to install EV charging infrastructure that minimizes impacts to the grid through power management and battery storage; and

**FURTHER BE IT RESOLVED**, that the Executive Director or his/her 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 July 15, 2021.

AYE:

NAY:

ABSENT:

ABSTAIN:

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Liza Lopez  
Secretariat