



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # ARV-21-049 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation	Jeffrey Lu		- -

C) Recipient's Legal Name	
DEKRA Certification, Inc.	23-2689662

D) Title of Project
Vehicle-Grid Innovation Lab (ViGIL)

E) Term and Amount

02 / 16 / 2022	03 / 22 / 2026	\$ 1,970,459

F) Business Meeting Information

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

Proposed Business Meeting Date 02 / 16 / 2022 ☐ Consent ☒ Discussion

Business Meeting Presenter Jeffrey Lu Time Needed: 5 minutes

Please select one list serve. Altfuels

Agenda Item Subject and Description:

DEKRA CERTIFICATION, INC. Proposed resolution approving agreement ARV-21-049 with DEKRA Certification, Inc. for a \$1,970,459 grant to establish an interoperability and conformance testing laboratory for electric vehicle charging equipment based on industry standards, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program Funding) Contact: Jeffrey Lu. (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

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

14 CCR § 15301 outlines provisions for "the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use." This project will reconfigure an existing facility for testing of electric vehicle supply equipment and will include



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commissioning of new test equipment. This project will not require major alternations to the existing building and no construction will take place. For these reasons, this project will have no significant impact on the environment and is categorically exempt under 14 CCR § 15301.

- 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)

Legal Company Name:	Budget
N/A	\$ 0.00
	\$ 0.00
	\$ 0.00

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

Legal Company Name:
N/A

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTF	FY 18/19	601.118K	\$1,500,000
ARFVTF	FY 19/20	601.118L	\$470,459
Funding Source			\$
Funding Source			\$
Funding Source			\$

R&D Program Area: Select Program Area TOTAL: \$

Explanation for "Other" selection

Reimbursement Contract #: Federal Agreement #:

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

Name: Bryan Mikesh

Address: 405 Glenn Drive Suite 12

City, State, Zip: Sterling, VA 20164

Phone: (703) 657-2022

E-Mail: bryan.mikesh@dekra.com



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2. Recipient's Project Manager

Name: Sai Sushma Mallela

Address: 405 Glenn. Dr. Suite #12

City, State, Zip: Sterling, VA 20164

Phone: 703-657-2046

E-Mail: saisushma.mallela@dekra.com

L) Selection Process Used

☒ Competitive Solicitation Solicitation #: GFO-20-610

☐ 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 | <input type="checkbox"/> Attached |
| 5. CEQA Documentation | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> Attached |

Agreement Manager

January 7, 2022

Date

Office Manager

1/7/2022

Date

Deputy Director

1/7/2022

Date

Exhibit A SCOPE OF WORK

TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2		Facility Preparation, Installation and Setup
3	X	Training, Pre-Trial and Ready-to-Market Preparation
4	X	Phase 2 Extension
5	X	Phase 3 Extension
6		Project Fact Sheet
7		Data Collection and Analysis

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Bryan Mikesh	n/a	n/a
2	Sai Sushma Mallela	n/a	n/a
3	Beat Kreuter	n/a	n/a
4	Beat Kreuter	n/a	n/a
5	Beat Kreuter	n/a	n/a
6	Fernando Rodriguez	n/a	n/a
7	Fernando Rodriguez	n/a	n/a

GLOSSARY

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

Term/ Acronym	Definition
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CEC	California Energy Commission
CTP	Clean Transportation Program
CPR	Critical Project Review
FTD	Fuels and Transportation Division
Recipient	The grant awardee, DEKRA Certification, Inc.
ViGIL	Vehicle Grid Innovation Lab

Term/ Acronym	Definition
EVSE	Electric vehicle supply equipment
SECC	Supply equipment communication controller
EV	Electric vehicle
EVCC	Electric vehicle communication controller
CPO	Charge point operator
OCA	Open Charge Alliance (www.openchargealliance.org)
OCPP	Open Charge Point Protocol (for example, V1.6, V2.0.1)
CCS	Combined Charging System
CharIN	Charging Initiative Association (www.charin.global)
FDIS	Final draft international standard
CDFA	California Department of Food and Agriculture
PIXIT	Protocol Implementation eXtra Information for Testing
PICS	Protocol Implementation Conformance Statements
ISO 15118	International Organization for Standardization 15118

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 May 21, 2021, the CEC released Grant Funding Opportunity, entitled "Vehicle-Grid Innovation Lab (ViGIL)." This competitive grant solicitation was to increase the capacity and

throughput of electric vehicle supply equipment (EVSE) standards testing at a laboratory in California. In response to GFO-20-610, the Recipient submitted application #2 which was proposed for funding in the CEC's Notice of Proposed Awards on October 14, 2021. GFO-20-610 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:

Charging large numbers of electric vehicles (EVs) simultaneously will introduce significant load onto the electric grid. However, coordinating vehicle charging to occur at off-peak times or periods of surplus renewable generation can mitigate grid impacts and enable grid decarbonization. At present, the market for grid integration and charging connectors is fragmented with a mixture of proprietary and open solutions. Smart charging and bi-directional charging have been identified by the EV industry as necessary features for future charging infrastructure. Currently, the majority of alternating current (AC) chargers use only low-level communication and do not readily support vehicle-grid integration, and the majority of direct current (DC) chargers use a legacy communication protocol which lacks support for bi-directional charging.

The EV industry has identified International Organization for Standardization (ISO) 15118 and Open Charge Point Protocol (OCPP) as promising standards to support vehicle-grid integration, enable smart charging, and facilitate bi-directional charging. Wider use of these standards can help support grid reliability, promote energy resilience, and drastically improve the charging experience, especially when EVs and electric vehicle supply equipment (EVSE) support features like Plug and Charge. However, the lack of comprehensive testing resources and experience exchange hampers the adoption of these standards by the EV industry.

Goals of the Agreement:

The goal of this Agreement is to provide a state-of-the-art interoperability and conformance testing lab – the Vehicle-Grid Innovation Lab, or ViGIL – for the EV industry that will ensure that EVSEs are tested and released as per EV industry standards. ViGIL will provide access to a standardized conformance test case library and market-derived interoperability test case scenarios (for example, CharIN implementation guides) for a highly dynamic market. Additionally, ViGIL will support increased capacity and throughput of EVSE testing, and standards adoption.

Objectives of the Agreement:

The objective of this Agreement is to setup and operate ViGIL, which will provide testing services for charging standards as specified by the CEC in the original solicitation manual. ViGIL will consist of:

- A test bench for ISO 15118 interoperability and conformance testing of the communication between EV and EVSE. In phase 2, the test bench will be extended to a fully integrated solution supporting EV, EVSE and back-office communication (ISO 15118 and OCPP 2.0.1). In phase 3, the test bench will be extended to support bi-directional charging applications, pending publication of the ISO 15118-20 final draft international standard (FDIS) version.
- A test bench for OCPP 1.6 interoperability and conformance testing, to be extended in phase 2 with a separate test bench for OCPP 2.0.1. ViGIL will seek official certification for OCPP testing from the Open Charge Alliance (OCA).
- A test bench for testing Section 3.40 of the National Institute of Standards and Technology (NIST) 2020 Handbook 44 (Electrical Vehicle Fueling) sections S.2.4.3 (Selection of unit price), S3.1 (Protection of metrological components), and S4.2 (Directional control to support the reversal of energy flow).

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.
- 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 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>.

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. 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.

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 1.7 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 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 subrecipient 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 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 subcontracts (if requested)
- Final subcontracts (if requested)

TECHNICAL TASKS

TASK 2 FACILITY PREPARATION, INSTALLATION AND SETUP

The goal of this task is to evaluate, procure and commission appropriate hardware and software equipment to upgrade the existing laboratory for testing EVSE equipment based on ISO 15118, OCPP 2.0.1, and NIST 2020 Handbook 44. This will be considered "phase 1" of the project.

The Recipient shall:

- Prepare an itemized test equipment list for the lab including price quotes from vendors.
- Prepare facility design, engineering plans, and specifications and cost estimates for the facility expansion to accommodate the test lab.
- Prepare organizational documents, including but not limited to operational procedures, guidelines, and work instructions for the test engineers.
- Procure equipment for test benches.
- Ensure readiness for lab testing (electrical, test equipment setup, etc.).

Products:

- Itemized test equipment list including price quotes obtained from vendors
- Final facility design, engineering plans, and specifications
- Operational document and process documentation
- Documentation of a fully functional ViGIL

TASK 3 TRAINING, PRE-TRIAL AND READY-TO-MARKET PREPARATIONS

The goal of this task is to train engineering personnel and prepare to market the lab to potential EVSE testing customers.

The Recipient shall:

- Arrange appropriate training on ISO 15118 and OCPP, including the operation of ViGIL test benches.
- Arrange for pre-trial testing of at least 4 EVSE products obtained from the market against the relevant ISO 15118 and OCPP and Section 3.40 of the NIST 2020 Handbook 44.
- Prepare application forms, Protocol Implementation eXtra Information for Testing (PIXIT) and Protocol Implementation Conformance Statements (PICS) declarations templates, test plan, and test report templates for reporting the outcome of testing against ISO 15118, OCPP, and Section 3.40 of the NIST 2020 Handbook 44.
- Prepare process and guidelines, including a quality assurance process, for the testing and assessment against ISO 15118, OCPP, and Section 3.40 of the NIST 2020 Handbook 44.
- Confirm assessment against Section 3.40 of the NIST 2020 Handbook 44 with the with CDFA – DMS.
- Prepare and arrange for OCA recognition of DEKRA ViGIL as a certified OCPP test laboratory.
- Prepare marketing and educational materials (for example, PowerPoint, webinars, etc.) for prospective customers and other interested stakeholders.

Products:

- Training certificates for the engineering personnel
- Test reports from the tested EVSE products from the pre-trial
- Downloadable application forms, PIXT and PCIS declarations templates, test plan templates, and test report templates
- Quality assurance process, including guidelines for ISO 15118 and OCPP testing and assessment against Section 3.40 of the NIST 2020 Handbook 44
- CDFA – DMS confirmation of Section 3.40 of the NIST 2020 Handbook 44 assessment
- OCA recognition of DEKRA ViGIL as a certified OCPP test laboratory
- Documentation of marketing and educational materials

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

TASK 4 PHASE 2 EXTENSION

The goal of this task is to upgrade ISO 15118 test bench to include fully integrated end-to-end ISO 15118 – OCPP 2.0.1 automated test software.

The Recipient shall:

- Install and validate the updated test bench for fully integrated end-to-end ISO 15118 – OCPP 2.0.1 communication testing.
- Arrange appropriate training on ISO 15118 and OCPP including the operation of updated ISO 15118 test bench.
- Update marketing and educational materials to reflect new end-to-end ISO 15118 – OCPP 2.0.1 testing capability.

Products:

- Documentation of functional end-to-end test bench for ISO 15118 – OCPP 2.0.1
- Documentation of appropriate training on ISO 15118 and OCPP including the operation of updated ISO 15118 test bench
- Updated marketing and educational materials

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

TASK 5 PHASE 3 EXTENSION

The goal of this task is to complete the ViGIL build by integrating test cases for bi-directional charging based on ISO 15118-20.

The Recipient shall:

- Install and validate the updated test bench for ISO 15118-20.
- Arrange appropriate training on ISO 15118-20 including the operation of updated ISO 15118 test bench.

- Update marketing and educational materials to reflect new ISO 15118-20 bi-directional charging testing capability.

Products:

- Documentation of functional end-to-end test bench for ISO 15118–20 bi-directional charging
- Documentation of appropriate training on ISO 15118-20 including the operation of updated ISO 15118 test bench
- Updated marketing and educational materials

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

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

TASK 7 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.

The Recipient shall:

- Develop a data collection plan for the testing laboratory's capabilities, general operations, client information, and tested product details.
- Collect data on the testing laboratory's capabilities that demonstrate expansion of testing capacity, including, but not limited to:
 - Testing staff (number of staff as well as their roles and capabilities)
 - Number and types of test devices in the laboratory, and what function these hold
 - Number and types of tests offered

- Collect data on general laboratory operations that demonstrate increased throughput of tested products, including, but not limited to:
 - Number of clients that request testing services
 - Number of products tested
 - Number of products in the testing queue
 - Number of products that successfully complete testing
 - Number of products that do not successfully complete testing
- Collect data throughout the duration of the Agreement on the clients who request testing services, including, but not limited to:
 - The client's company' location (which could be aggregated to the region or state level)
 - Number of clients that are disabled veteran-, women-, minority-, and/or LGBT-owned businesses
 - How the client learned about the testing laboratory
 - Why the client chose this testing laboratory over other options
- Collect data throughout the duration of the agreement on each product tested, including, but not limited to:
 - Form factor of product
 - Type of test(s) completed
 - Time between testing request, testing start date, and testing end date
 - Cost of testing
- 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 (for example, streamlining testing processes and services)
 - Job creation
 - Economic development
 - Contribution to a competitive market for EVSE testing and advanced products
- Submit all data described above in a quarterly progress report throughout the duration of the Agreement.
- Discuss data, information, and analysis described above in the Final Report.

Products:

- Data collection on general laboratory operations, client information, and tested product details will be submitted electronically in a quarterly 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: DEKRA CCERTIFICATION, 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 Agreement ARV-21-049 with DEKRA Certification, Inc. for a \$1,970,459 grant to establish an interoperability and conformance testing laboratory for EV charging equipment based on industry standards; and

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

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on February 16, 2022.

AYE:

NAY:

ABSENT:

ABSTAIN:

Liza Lopez
Secretariat