



STATE OF CALIFORNIA

GRANT REQUEST FORM (GRF)

CEC-270 (Revised 12/2019)

CALIFORNIA ENERGY COMMISSION

A) New Agreement # ARV-21-060 (to be completed by CGL office)

B) Division	Agreement Manager:	MS-	Phone
600 Fuels and Transportation Division	Larry Rillera	06	916-903-4295

C) Recipient's Legal Name	Federal ID #
California State University Long Beach Research Foundation	95-6106694

D) Title of Project
ZEV Training Program

E) Term and Amount

Start Date	End Date	Amount
05/11/2022	3/30/2026	\$499,908

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: Larry Rillera Time Needed: 5 minutes

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

Agenda Item Subject and Description:

CALIFORNIA STATE UNIVERSITY LONG BEACH RESEARCH FOUNDATION. Proposed resolution approving Agreement ARV-21-060 with California State University Long Beach Research Foundation for a \$499,908 grant to develop zero-emission vehicle (ZEV) engineering curricula and conduct instruction and lab training for students, and adopting staff's determination that this action is exempt from CEQA. (Clean Transportation Program funding.) Contact: Larry Rillera. (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":

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: 14 CCR section 15306 – Information Collection and 14 CCR section 15322 Training Programs. Cal. Code Regs, tit. 14, §15306, Information Collection, provides that projects which consist of basic data collection, research and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource are categorically exempt from the provisions of CEQA. This project consists of research, planning, outreach, training, and job placement in the ZEV and electric vehicle charging infrastructure (EVCI) industry. Cal. Code Regs, tit. 14, §15322



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Training Programs Involving No Physical Changes, provides that projects which consist of the development of or changes in curriculum or training methods which do not result in a serious or major disturbance to an environmental resource are categorically exempt from the provisions of CEQA. This project involves the development of curriculum, education, and training programs. The project will not cause direct physical changes to the environment, and there will be no physical construction. Therefore, the proposed project will have no significant effect on the environment and is categorically exempt under sections 15306 and 15322.

- ☐ Common Sense Exemption.
- ☐ 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

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

Legal Company Name:
Evoelectric, Inc.

J) Budget Information

Funding Source	Funding Year of Appropriation	Budget List Number	Amount
ARFVTP	FY 18/19	601.118K	\$399,908
ARFVTP	FY 20/21	601.118M	\$100,000
Funding Source			\$
Funding Source			\$
Funding Source			\$

R&D Program Area: Select Program Area TOTAL: \$499,908

Explanation for "Other" selection

Reimbursement Contract #:

Federal Agreement #:

K) Recipient's Contact Information

1. Recipient's Administrator/Officer

Name: Maria Reyes



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CSULB Research Foundation
Address: 6300 State University
Drive
City, State, Zip: Long Beach, CA
92815
Phone: (562) 9858051
E-Mail: Maria.Reyes@csulb.edu

CALIFORNIA ENERGY COMMISSION

Electrical Engineering Department
Address: 1250 Bellflower Blvd.
City, State, Zip: Long Beach, CA
90840
Phone: (562) 985-4899
E-Mail: henry.yeh@csulb.edu

2. Recipient's Project Manager

Name: Dr. Henry Yeh

L) Selection Process Used

- ☒ Competitive Solicitation Solicitation #: GFO-21-602
☐ 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 checked="" type="checkbox"/> N/A | <input type="checkbox"/> 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		Material, Tools, and Equipment Procurement
3		ZEV Curricula
4	X	Instruction and Training
5		Outreach
6		Data Collection and Analysis
7		Project Fact Sheet

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Hen-Geul Yeh; Gina Decker		
2	Hen-Geul Yeh		
3	Hen-Geul Yeh; Yu Yang		Evoelectric, Inc.
4	Hen-Geul Yeh; Yu Yang		Evoelectric, Inc.
5	Hen-Geul Yeh, Gina Decker		
6	Hen-Geul Yeh		
7	Hen-Geul Yeh		

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
CSULB	California State University, Long Beach

FTD	Fuels and Transportation Division
EV	Electric Vehicle
ZEV	Zero-Emission Vehicle
EVCI	Electric Vehicle Charging Infrastructure
EVSE	Electric Vehicle Supply Equipment
Recipient	California State University, Long Beach

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 October 1, 2021, the CEC released a Grant Funding Opportunity entitled "IDEAL ZEV Workforce Pilot." This competitive grant solicitation was to support training in ZEV industries and in priority communities. In response to GFO-21-602, the Recipient submitted application #12 which was proposed for funding in the CEC's Notice of Proposed Awards on February 22, 2022. GFO-21-602 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:

With continued growth of electrical vehicle (EV) adoption in California, the EV-related job market will significantly expand. EV manufacturers need more system designers, and the Ports of Long Beach and Los Angeles need more technicians to support their fleet electrification. Designing an EV system requires multidisciplinary knowledge in electrical, chemical, and computer

engineering, and the current curriculum at CSU Long Beach (CSULB) is not well-designed to train students with this full skillset. The primary obstacle to meeting the large workforce demand anticipated by the EV industry is the lack of specific equipment and teaching materials.

Goal of the Agreement:

The goal of this Agreement is to provide highly qualified engineers and technicians for the ZEV industry while decreasing unemployment.

Objectives of the Agreement:

The objectives of this Agreement are to establish the ZEV Training Program (Program) at CSULB with the latest technology and curriculum, and to conduct two years of training for university and community college students, priority communities, and industry technicians.

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)
 - 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.

In addition to any other applicable requirements, the Final Report must comply with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101 et seq.), which prohibits discrimination 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 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 MATERIAL, TOOLS, AND EQUIPMENT

The goal of this task is to procure Program materials, tools, and equipment.

The Recipient shall:

- Prepare and issue bid/specification(s) documents, select vendors, procure the approved items, and provide a report on all such Bid Information, also including a list of all bid responses in Quarterly Progress Reports.
- Immediately notify the CAM if assets in Equipment, Materials/Miscellaneous, or in subrecipient budgets require long lead times, if items may not arrive in time for training/instruction, if items are out of stock, if there are supply chain issues, or if installation will take longer than planned or scheduled. Failure to immediately notify the CAM of issues may cause the risk of nonattainment of Program goals and objectives.
- Secure CEC approval for the use of the CEC logo on all draft and final Program materials.

Products:

- Bid information / list of responses
- Notification of Delay(s)
- CEC approval for the use of CEC logo
- Quarterly Progress Reports

TASK 3 ZEV CURRICULUM

The goal of this task is to design and develop a ZEV-training curriculum and seek CAM approval for the courses and training comprising the curriculum.

The Recipient shall:

- Work with Program partners, subject matter experts (SMEs), and industry to develop a *draft and final outline of the curriculum*, *draft and final versions of the curriculum itself*, and training for the following six ZEV courses comprising the curriculum, and provide to the CAM for review and approval:
 - ZEV 250: Introduction to Zero Emission Vehicles
 - ZEV 350: Energy Conversion and Storage
 - ZEV 450: Motors and Controllers in Electric Vehicles
 - ZEV 451: Electric Vehicle Technology
 - ZEV 456: Machine Learning for Zero Emission Vehicles
 - ZEV 448: Vehicular Networks for Zero Emission Vehicles
- Document the approval path for the courses in the Program, the requisite approvals, and the timeline for receipt of approvals from appropriate CSULB authorities.
- Create webpage for the six ZEV courses on CSULB's College of Engineering website. Provide webpage link to CAM.
- Design and produce, for each ZEV course: *Instructional and Laboratory Materials*, including, but not limited to, lecture slides, laboratory manual, homework, and examinations for in-person and online lectures and in-person laboratory sessions, and provide all such materials with the Quarterly Progress Reports.

Products:

- Draft Outline of the Curriculum
- Final Outline of the Curriculum
- Draft Curriculum
- Final Curriculum
- Webpage for ZEV courses
- Instructional and Laboratory Materials for each ZEV course, to be provided with the Quarterly Progress Reports

TASK 4 INSTRUCTION AND TRAINING

The goal of this task is to provide instruction and training for the six ZEV courses identified in Task 3.

The Recipient shall:

- Provide training to six trainers/instructors to teach the ZEV courses.
- Provide instruction for five approved ZEV courses within the first year to certify at least 20 students as follows:
 - Fall Semester: ZEV 250 and ZEV 350
 - Spring Semester: ZEV 450 and ZEV 451
 - Summer Semester: ZEV 456

- Provide instruction for five approved ZEV courses within the second year to certify at least 40 students as follows:
 - Fall Semester: ZEV 250 and ZEV 350
 - Spring Semester: ZEV 450 and ZEV 451
 - Summer Semester: ZEV 448
- Provide 1-hour of lecture and 3-hours of lab per week for each course for 15 weeks each year.
- Require that each student enrolled in the Program must pass all five courses within one year to obtain a certificate of completion.
- Provide laboratory training in-person and abide by all applicable public health mandates.
- Provide tuition assistance, scholarships, or financial support for students from low-income and disadvantaged communities (LIC/DAC) or that demonstrate financial need, and a statement of *Recommendations for Tuition Assistance*. The Recipient shall provide a *List of students with justification and supporting documentation* to the CAM for review and approval.
- Develop and award *Certificates of Completion* for successful participants and provide with Quarterly Progress Reports.
- Develop *Performance Metrics* and discuss results in the Final Report.

Products:

- Recommendations for Tuition Assistance, with a list of eligible students and justification/supporting documentation
- Certificates of Completion
- Quarterly Progress Reports
- Performance Metrics to be discussed in the Final Report

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

TASK 5 OUTREACH

The goal of this task is to recruit students and engage with the community, colleges, industry, and businesses.

The Recipient shall:

- Support and advocate the Program, experience of participants, and results.
- Arrange field trips to, K-12 school information sessions about, and lab tours of the Program, with a focus on LIC/DAC.
- Develop and establish partnerships with ZEV and ZEV-related manufacturers and ZEV stakeholders to grow and sustain the Program.
- Develop and establish partnerships with workforce training and development entities to support job placement for trainees.
- Develop and establish partnerships with the Ports of Long Beach and Los Angeles (POLB/LA) and the transportation, distribution, logistics (TDL) industry to

increase trainees' high quality job placement opportunities and to speed up electrification at the ports.

- Organize the Institute of Electrical and Electronics Engineers (IEEE) Green Energy and Smart Systems Conference to connect with ZEV industry, EV trainees, and EV trainers and provide results in the Quarterly Progress Reports.
- Develop and collect *Feedback, Surveys, and Evaluations* from outreach meetings and participants and discuss results in the Final Report.
- Conduct outreach activities through various platforms including, but not limited to, social media, college newsletters, local television/radio public service announcements, and partner websites to inform the public about the ZEV Program and how to enroll in a training.
- *Develop Registration/Enrollment Materials* either online via weblinks, or via physical hard copies, or both.
- Distribute *Informational Material* to workforce stakeholders in the region including, but not limited to, employers, non-profits, community-based organizations, and job/career centers especially in LIC/DAC in the region.
- Collect *Data on the Effectiveness and Results of the Outreach and engagement Activities* and provide said data in the Final Report.

Products:

- Feedback/Surveys/Evaluations from outreach meetings/participants
- Develop Registration/Enrollment Materials (online, physical hard copy, or both)
- Informational Material for workforce stakeholders
- Data on Effectiveness and Results of Outreach / Engagement Activities
- Quarterly Progress Reports
- Final Report

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 in the Final Report.

The Recipient shall:

- Collect and provide at least 12 months of throughput, usage, and operations data from the project including, but not limited to:
 - *Draft and Final Data Collection Plan Outlines.*
 - *Performance Metrics* including, but not limited to, course baseline data, attendance, training agenda, total time trained, training topics, duration of training sessions, tests and exams, surveys, job placement, outreach objectives and outcomes, completion rates, participation rates, and certificates of completion.
 - Qualitative and quantitative information including, but not limited to, photographs, testimonials, videos, spreadsheets, data, and modeling.
 - Key workforce and training issues encountered and describe the resolution of the issues.

- Trainee, participant, and attendee demographic and ethnicity information.
- Jobs, employment, and economic impact as a direct result of the project.
- Trainee occupations, skills, and wage rates.
- Job market(s) that support ZEV technologies. Compare the job market and status from the time of the original project proposal to the time of the project's completion.
- Course baseline data, including, but not limited to registration, attendance, performance, and results.
- Job placement.
- *List* of SMEs, industry partners, project partners, key stakeholders, and other project collaborators.
- DAC/LIC participation and results.
- Collect data, information, and analysis described above and include in the Final Report.
- Compare any project performance and expectations provided in the proposal to CEC with actual project performance and accomplishments.
- Discuss recommendations.

Products:

- Draft Data Collection Plan Outline
- Final Data Collection Plan Outline
- Performance Metrics
- List of SMEs etc.
- Data collection information and analysis of all items listed above will be included in the Final Report

TASK 7 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: CALIFORNIA STATE UNIVERSITY LONG BEACH RESEARCH
FOUNDATION

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-21-060 with California State University Long Beach Research Foundation for a \$499,908 grant to develop ZEV engineering curricula and conduct instruction and lab training for students; 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