

**GRANT REQUEST FORM (GRF)**



New Agreement ARV-17-049 (To be completed by CGL Office)

600 Fuels and Transportation Division	Sam Lerman	27	916-654-4649
---------------------------------------	------------	----	--------------

City of Los Angeles Harbor Department (Port of Los Angeles)	95-6000735
---	------------

Zero Emission Freight Vehicle Advanced Infrastructure Demonstration

6 / 15 / 2018	3 / 31 / 2022	\$ 7,842,270
---------------	---------------	--------------

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

Proposed Business Meeting Date	5 / 9 / 2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
--------------------------------	--------------	----------------------------------	--

Business Meeting Presenter	Sam Lerman	Time Needed:	5 minutes
----------------------------	------------	--------------	-----------

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

**Agenda Item Subject and Description**

CITY OF LOS ANGELES HARBOR DEPARTMENT. Proposed resolution approving Agreement ARV-17-049 with the City of Los Angeles Harbor Department for a \$7,842,270 grant to install advanced battery-electric charging technology for a zero emission yard tractor fleet to reduce petroleum consumption, exhaust, and GHG emissions. The demonstration will occur at the Port of Los Angeles and will benefit disadvantaged communities (ARFVTP funding) Contact: Sam Lerman. (Staff presentation: 5 minutes)

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. (Attach draft NOE)  
 Statutory Exemption. List PRC and/or CCR section number:  
 Categorical Exemption. List CCR Cal. Code Regs., tit. 14, § 15303 section number:  
 Common Sense Exemption. 14 CCR 15061 (b) (3)  
 Explain reason why Agreement is exempt under the above section:  
 Cal. Code Regs., tit. 14, sec. 15303 provides that projects which consist of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure, are categorically exempt from the provisions of CEQA. This project involves the demonstration of ten all-electric yard tractors as well as as the installation of charging infrastructure for these vehicles at an existing facility: the Port of Los Angeles. All activities will be conducted at the Port. Twelve separate charging pads will likely be installed along with a small battery storage system. These pads will be installed on existing paved ground and will require electrical wiring to be routed to the stations. Minor trenching and repaving will be needed to install the charging infrastructure. The trenching will take place on currently paved ground, will not involve the removal of any trees, and the surface will be restored. The yard tractors will not be built on-site. Project activities will occur on land that is not environmentally sensitive, will not result in a scenic disturbance, will not increase traffic to the site, will not require additional permits and does not involve an expansion of any existing uses of the site. Therefore, this project falls within sections 15303 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  Environmental Impact Report  
 Negative Declaration  Statement of Overriding Considerations  
 Mitigated Negative Declaration

**GRANT REQUEST FORM (GRF)**



Legal Company Name:	Budget
WAVE, Inc	\$ 3,045,320
BYD Motors, Inc	\$ 900,000
	\$

Legal Company Name:
South Coast Air Quality Management District

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTP	16/17	601.118I	\$6,362,799
ARFVTP	17/18	601.118J	\$1,479,471
Funding Source			\$
Funding Source			\$
Funding Source			\$
R&D Program Area:	Select Program Area		\$7,842,270
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Christopher Cannon	Name:	Jacob Goldberg
Address:	425 S. Palos Verdes Street	Address:	425 S. Palos Verdes Street
City, State, Zip:	San Pedro, CA 90731	City, State, Zip:	San Pedro, CA 90731
Phone:	310-732-7649	Fax:	310-547-4643
Phone:	310-732-2675	Fax:	310-547-4643
E-Mail:	ccannon@portla.org	E-Mail:	jgoldberg@portla.org

<input checked="" type="checkbox"/> Competitive Solicitation <input type="checkbox"/> First Come First Served Solicitation	Solicitation #: GFO-17-603
---	----------------------------

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 type="checkbox"/> N/A <input checked="" type="checkbox"/> Attached
5. CEQA Documentation	<input type="checkbox"/> N/A <input checked="" 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	X	Design and Development
3	X	Build, Install and Commission
4		Demonstration, Data Collection and Analysis

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Jacob Goldberg (POLA)		
2	Jacob Goldberg (POLA) Shaouki Aboulhosn (POLA)	WBCT WAVE BYD	
3	Jacob Goldberg (POLA) Shaouki Aboulhosn (POLA)	WBCT WAVE BYD	
4	Jacob Goldberg (POLA) Shaouki Aboulhosn (POLA)	WBCT WAVE BYD	SCAQMD

### GLOSSARY

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

Term/ Acronym	Definition
AID	Zero Emission Freight Vehicle Advanced Infrastructure Demonstration (AID)
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
BOM	Bill of Materials
CAM	Commission Agreement Manager
CO2	Carbon Dioxide
CPR	Critical Project Review
CHE	Cargo handling equipment
DAC	Disadvantaged Communities

<b>Term/ Acronym</b>	<b>Definition</b>
EV	Electric Vehicle
FTD	Fuels and Transportation Division
MHD	Medium- and Heavy-Duty
NOx	Oxides of Nitrogen
POLA	Port of Los Angeles
Recipient	Port of Los Angeles
WBCT	West Basin Container Terminal

**BACKGROUND**

Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007), created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). The statute authorizes the California Energy Commission (Energy Commission) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state’s climate change policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024, and specifies that the Energy Commission allocate up to \$20 million per year (or up to 20 percent of each fiscal year’s funds) in funding for hydrogen station development until at least 100 stations are operational. The ARFVTP 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.

The Energy Commission issued GFO-17-603 entitled “Advanced Freight Vehicle Infrastructure Deployment” under the ARFVT Program on December 19, 2017. This competitive grant solicitation was an offer to fund projects that will support infrastructure deployment for Advanced Freight Vehicles. To be eligible for funding under GFO-17-603, the projects must also be consistent with the Energy Commission’s ARFVTP Investment Plan updated annually. In response to GFO-17-603, the Recipient submitted

application #3 which was proposed for funding in the Energy Commission's Notice of Proposed Awards on April 5, 2018. GFO-17-603 is hereby incorporated by reference into this Agreement in its 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 Energy Commission's Award, the Energy 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:**

The principal problem addressed by the proposed project is the significant emission of greenhouse gas (GHG) and criteria air pollutants associated with cargo handling equipment (CHE) at the Port of Los Angeles (POLA). POLA is committed to ambitious goals that were adopted together with the Port of Long Beach under the 2017 Clean Air Action Plan, including the replacement of diesel-powered cargo handling equipment (CHE) with zero-emission alternatives no later than 2030. The adoption of these technologies will require major infrastructure installations to support their operations, and terminal operators will be weighing all potential options to find the most efficient and cost-effective system to power their equipment. This project is a critical and informative step towards transitioning the ports to zero emission equipment, and importantly, reducing criteria pollutants and greenhouse gases in our shared air basin, while accommodating an increasing volume of goods moving through the Port. Local communities are negatively affected by air quality impacts of conventional propulsion systems. The Port equipment operates adjacent to disadvantaged communities (DACs) that experience a majority of the adverse environmental impacts from port operations. A secondary problem addressed by this project is the large amount of petroleum fuel consumption required to operate port equipment.

**Goals of the Agreement:**

The goals of this agreement are to enhance market acceptance of advanced vehicle yard tractor applications that will reduce greenhouse gas emissions, reduce petroleum use, improve energy cost savings, improve air quality and benefit disadvantaged communities (DAC).

**Objectives of the Agreement:**

The objectives of this Agreement are to:

- Design and install wireless inductive charging infrastructure, including ten base chargers and two opportunity chargers, to support the demonstration of 10 battery electric yard tractors at the Port of Los Angeles.
- Displace petroleum fuel, reduce GHG emissions, and support jobs in the port area and in disadvantaged communities.

## **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 DESIGN AND DEVELOPMENT**

The goal of this task is to conduct preliminary design work that will prepare for the installation of advanced inductive charging infrastructure and battery storage for demonstration at the Port of Los Angeles' West Basin Container Terminal.

### **The Recipient shall:**

- Review available power specifications and functional requirements.
- Finalize engineering bill of materials (BOM) and order components for the WAVE prototype and systems.
- Execute a Battery Energy Storage System Technical Agreement that outlines specifications for the battery storage system
- Design, fabricate, and build components, systems, and subsystems.

- Prepare and provide an Invitation for Bid for an installation contractor, which includes design calculations, drawings, plans and specifications to advertise the project for procurement of materials, equipment and required labor for construction to support installation of the charging systems.
- Select construction contractor and finalize scope of work.
- Conduct tests, certifications, quality checks, and validations for WAVE and BYD components, prototype, systems, subsystems, and safety elements, as applicable, and summarize results in a System Test Report

**Products:**

- Invitation for Bid
- Executed Battery Energy Storage System Technical Agreement
- System Test Report

**[CPR WILL BE HELD IN TASK 3. See Task 1.2 for details]**

**TASK 3 BUILD, INSTALL AND COMMISSION**

The goal of this task is to install infrastructure for twelve charging stations, including ten base chargers and two opportunity chargers, to power ten battery-electric yard tractors for demonstration at the Port of Los Angeles' West Basin Container Terminal.

**The Recipient shall:**

- Complete construction and install the charging equipment and battery energy storage system.
- Conduct safety and operational testing of the charging equipment and battery energy storage system for final commissioning.
- Accept delivery of ten battery-electric yard tractors to be placed into demonstration service.
- Prepare a Task 3 Summary Report containing photos of installed charging equipment, battery energy storage system, and deployed yard tractors, and include results of safety and operational testing for system commissioning.

**Products:**

- Task 3 Summary Report

**[CPR WILL BE HELD IN TASK 3. See Task 1.2 for details]**

#### **Task 4 DEMONSTRATION, 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 Data Collection Test Plan.
- Troubleshoot any issues identified.
- Collect 12 months of usage and operations data from the project including, but not limited to:
  - Maximum capacity of each of the new charging systems
  - Gallons of diesel fuel displaced (with associated hours of operation)
  - Expected air emissions reductions including but not limited to:
    - Oxides of nitrogen
    - Particulate Matter
  - Duty cycle of the current fleet and the expected duty cycle of future vehicle acquisitions
  - Specific jobs and economic development resulting from this project
- Identify any current and planned use of renewable energy at the facility.
- Identify the source of the alternative renewable energy.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.
- Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- Provide a quantified estimate of the project's carbon intensity values for life-cycle greenhouse gas emissions.
- Compare 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 Test Plan
- Data collection information and analysis will be included in the Final Report

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CITY OF LOS ANGELES HARBOR DEPARTMENT

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

**RESOLVED**, that the Energy Commission approves Agreement ARV-17-049 with the City of Los Angeles Harbor Department for a \$7,842,270 grant to install advanced battery-electric charging technology for a zero emission yard tractor fleet to reduce petroleum consumption, exhaust, and GHG emissions. The demonstration will occur at the Port of Los Angeles and will benefit disadvantaged communities; and

**FURTHER BE IT RESOLVED**, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

**CERTIFICATION**

The undersigned Secretariat to the Commission 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 California Energy Commission held on May 9, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

---

Cody Goldthrite,  
Secretariat