

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-16-026 (To be completed by CGL Office)

600 Fuels and Transportation Division		Andre Freeman	27	916-654-4162
City of Los Angeles Harbor Department (Port of Los Angeles)				95-6000735
Port of Los Angeles' Everport Advanced Cargo Handling Demonstration Project				
	6 / 15 / 2017	12 / 31 / 2020	\$ 4,524,000	
<input type="checkbox"/> ARFVTP agreements \$75K and under delegated to Executive Director.				
Proposed Business Meeting Date	5 / 10 / 2017	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion	
Business Meeting Presenter	Larry Rillera	Time Needed: 5 minutes		
Please select one list serve. Altfuels (AB118- ARFVTP)				
<b>Agenda Item Subject and Description</b>				
CITY OF LOS ANGELES HARBOR DEPARTMENT. Proposed resolution approving Agreement ARV-16-026 with the City of Los Angeles Harbor Department for a \$4,524,000 grant to conduct a field demonstration of zero-emission vehicles, freight handling equipment and related charging infrastructure. The demonstration will occur at the Port of Los Angeles and will benefit disadvantaged communities. (ARFVTP funding) Contact: Larry Rillera. (Staff presentation: 5 minutes)				



**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. (Attach draft NOE)  
 Statutory Exemption. List PRC and/or CCR section number: \_\_\_\_\_

Categorical Exemption. List CCR section number: \_\_\_\_\_ Cal. Code Regs., tit. 14, §§15301, 15302, 15303, 15304

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

Explain reason why Agreement is exempt under the above section:  
 Cal. Code Regs., tit. 14, sec. 15301 provides that projects which consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, and which involve negligible or no expansion of use beyond are categorically exempt from the provisions of the California Environmental Quality Act (CEQA).  
 Cal. Code Regs., tit. 14, sec.15302 provides that projects which consist of the replacement or reconstruction of existing structures or facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced are categorically exempt from the provision of CEQA.  
 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.  
 Cal. Code Regs., tit. 14, sect. 15304 provides that projects which consist of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes are categorically exempt from the provisions of CEQA  
 This project involves the building and demonstration of two zero-emission battery electric top handlers and three zero-emission battery electric yard tractors as well as the installation of charging infrastructure for these vehicles at an existing facility- the Port of Los Angeles' Everport Terminal. All activities will be conducted at the Port. Two separate charging stations will likely be installed. These stations 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 top handlers and yard tractors will be built at the Port using some components from existing vehicles. 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 15301, 15302, 15303 and 15304 and will not have a significant effect on the environment.

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

- Check all that apply
- Initial Study
  - Negative Declaration
  - Mitigated Negative Declaration
  - Environmental Impact Report
  - Statement of Overriding Considerations

Legal Company Name:	Budget
BYD Motors, Inc.	\$ 870,000
Taylor Machine Works, Inc.	\$ 3,654,000
	\$ 0

Legal Company Name: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**GRANT REQUEST FORM (GRF)**



Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTP	16/17	601.118I	\$4,524,000
Funding Source			\$
R&D Program Area:	Select Program Area		\$4,524,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Chris Cannon	Name:	Carter Atkins
Address:	425 S. Palos Verdes St.	Address:	425 S. Palos Verdes St.
City, State, Zip:	San Pedro, CA, 90731	City, State, Zip:	San Pedro, CA, 90731
Phone:	310-732-7649	Fax:	310-547-4643
Phone:	310-732-7649	Fax:	310-547-4643
E-Mail:	ccannon@portla.org	E-Mail:	catkins@portla.org

<input checked="" type="checkbox"/> Competitive Solicitation	Solicitation #: GFO-16-604
<input type="checkbox"/> First Come First Served Solicitation	

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 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	Plan, Design, Build and Demonstrate Five Advanced Cargo Handling Equipment, Including Zero-Emission Top Handlers and Yard Tractors
3	X	Plan, Design and Construct Charging Infrastructure
4		Data Collection and Analysis

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Carter Atkins (POLA)		
2	Carter Atkins (POLA) Ron Neal (Everport)	Everport Terminal Services Taylor Machine Works, Inc. BYD Motors, Inc.	
3	Carter Atkins (POLA) Vahik Haddadian (POLA)	TBD	
4	Carter Atkins (POLA)	Everport Terminal Services	

### GLOSSARY

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

Term/ Acronym	Definition
ARFVTP	Alternative and Renewable Fuel and Vehicle Technology Program
ASCS	Automatic SmartCharging System
BOM	Bill of Materials
CAM	Commission Agreement Manager
CHE	Cargo handling equipment
CO2	Carbon Dioxide

CPR	Critical Project Review
DAC	Disadvantaged Communities
EV	Electric Vehicle
FTD	Fuels and Transportation Division
GGRF	Greenhouse Gas Reduction Fund
GHG	Greenhouse Gases
MHD	Medium- and Heavy-Duty
NOx	Oxides of Nitrogen
PM10	Particulate Matter less than 10 microns
POLA	Port of Los Angeles
POLA Project	The Port of Los Angeles Everport Advanced Cargo Handling Demonstration Project
Recipient	City of Los Angeles Harbor Department or Port of Los Angeles or the Port

## 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, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the ARFVTP through January 1, 2024. 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 Solicitation GFO-16-604 entitled “Sustainable Freight Transportation Projects” under the ARFVTP on November 29, 2016. This competitive grant solicitation was an offer to cost share the development of medium-and heavy-duty (MHD) advanced technology vehicle demonstrations. To be eligible for funding under GFO-16-604, the projects must also be consistent with the Energy Commission’s ARFVTP Investment Plan as updated annually. In response to GFO-16-604, the Recipient submitted Application #06 which was proposed for funding in the Energy Commission’s Notice of Proposed Awards on February 22, 2017. GFO-16-604 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 the 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 Port of Los Angeles (POLA) experiences high greenhouse gas (GHG) and criteria pollutant emissions from on- and off-road vehicles that operate in and around the port. In addition to the use of conventional diesel-fueled internal combustion engines in medium and heavy-duty (MHD) vehicles and equipment that move goods, the increasing volume of goods moving through the Port, the emergence of larger ships, and the evolving supply chain management practices of end-customers have increased the demands and pressure placed on the port complex. Local communities are negatively impacted by air quality impacts of conventional propulsion systems. The Port equipment and vehicles operate adjacent to disadvantaged communities 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.

The proposed Port of Los Angeles’ Everport Advanced Cargo Handling Demonstration Project addresses these problems by applying advanced battery-electric technology in MHD equipment to eliminate petroleum consumption and exhaust emissions. Specifically, the project will demonstrate 2 battery-electric top handlers and 3 next generation electric yard tractors and associated charging infrastructure. As an additional component of the project, the Port of Los Angeles will demonstrate a SmartCharging system which is an automatic vehicle charging system that would automatically connect to, and disconnect from, electric battery-powered yard tractors, eliminating the need for manual connections. The proposed demonstration of zero-emission cargo handling

equipment (CHE) will provide a critical link in a zero emissions goods movement pathway that does not rely on automated transport vehicles (i.e., driverless equipment), preserving important port jobs while maximizing air quality improvement.

### **Goal of the Agreement**

The goal of this project is to enhance market acceptance of advanced vehicle technology in top handler and yard tractor cargo handling equipment applications by means of the successful demonstration of advanced battery-electric technology in 2 top handlers and 3 next generation yard tractors using the Port's Automated SmartCharging System concept. These technologies will be used in equipment that transports freight in the Port of Los Angeles at the Everport Terminal. A comprehensive 12-month demonstration will be conducted to collect and analyze real-world operating data to assess effectiveness and lifecycle cost of the technologies in freight transportation applications. This data will document operation costs as well as project benefits including GHG and criteria pollutant emission reductions and reduced petroleum use. These improvements are expected to provide a direct benefit to the local disadvantaged communities surrounding the Port.

### **Objectives of the Agreement**

The objectives of this Agreement are to support accelerated market acceptance of zero emission technology while achieving measurable reductions in port cargo handling equipment petroleum consumption and emissions in accordance with the broader objectives of reducing port impacts on local disadvantaged communities (DACs) and the Alternative and Renewable Fuels and Vehicle Technology Program. Specific measurable objectives are:

- Design and build 5 zero-emission cargo handling equipment (2 top handlers and 3 yard tractors) for field demonstration in order to verify operational performance and to collect in-use performance data.
- Design and build charging infrastructure to support the zero-emission top handler daily power requirements.
- Design and build an Automatic SmartCharger System, which is an automatic vehicle charging system that would automatically connect to, and disconnect from, electric battery-powered yard tractors, eliminating the need for manual connections.
- Document significant reduction in GHG and criteria pollutant emissions compared with conventional diesel cargo handling equipment performing similar work at the terminal.
- Document energy cost savings and the reduction in petroleum fuel consumption, compared to cost and fuel used in comparable diesel powered equipment in operation at the terminal.

## **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 Agreement Officer, and the Commission Agreement Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be 2 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 Commission Agreement 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 PLAN, DESIGN, BUILD AND DEMONSTRATE FIVE ADVANCED CARGO HANDLING EQUIPMENT, INCLUDING ZERO-EMISSION TOP HANDLERS AND YARD TRACTORS**

The goal of this task is to plan, design, build and demonstrate 2 zero-emission top handlers and 3 zero-emission yard tractors for demonstration at Port of Los Angeles' Evergreen Terminal.

### **The Recipient shall:**

- Review vehicle build specifications and functional requirements.
- Finalize engineering bill of materials (BOM) and order components for each vehicle.
- Design, fabricate, and build vehicle, components, systems, and subsystems.
- Conduct tests, certifications, quality checks, and validations for vehicle components, systems, subsystems, and safety elements.
- Conduct drivability testing, visual quality assurance, final road or

operational test, and pre-delivery test.

- Obtain sign-off authorization to release truck, commission the demonstration vehicles, and deliver vehicles to the demonstrator.
- Prepare and submit to CAM an Equipment Summary Report with photographs as well as a summary of data, information and analysis from the items listed above for each demonstration vehicle.
- Commission the vehicles and conduct in-use technology demonstration activities, for a minimum of 12 months. The length of demonstration can be changed with prior CAM written approval.

**Products:**

- Equipment Summary Report

**[CPR WILL BE HELD IN TASK 2. See Task 1.2 for details]**

**TASK 3 PLAN, DESIGN AND CONSTRUCT CHARGING INFRASTRUCTURE**

The goal of this task is to plan, design and construct charging infrastructure and an Automatic SmartCharger System to power the 2 zero-emission top handlers and 3 zero-emission yard tractors for demonstration at Port of Los Angeles' Everport Terminal.

**The Recipient shall:**

- Review equipment power requirements and charging specifications for both the top handlers and yard tractors.
- Prepare and provide design calculations, drawings, plans and specifications to advertise the project for procurement of materials, equipment and required labor to install, test and commission the charging systems as per the bid drawings and specifications.
- Complete installation of the charging equipment.
- Conduct safety and operational testing of the charging equipment for final commissioning.
- Prepare and submit to CAM a Construction Summary Report with photographs as well as a summary of data, information and analysis from the items listed above.

**Products:**

- Construction Summary Report

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

## TASK 4 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 throughput, usage, and operations data from the project including, but not limited to:
  - Maximum capacity of the new fueling system
  - Gallons of gasoline and/or diesel fuel displaced (with associated mileage information)
  - Expected air emissions reduction, for example:
    - Non-methane hydrocarbons
    - Oxides of nitrogen
    - Non-methane hydrocarbons plus oxides of nitrogen
    - Particulate Matter
    - Formaldehyde
  - Duty cycle of the current fleet and the expected duty cycle of future vehicle acquisitions
  - Specific jobs and economic development resulting from this project
  - Energy cost savings compared to diesel powered equipment in operation at the Port
- Identify any current and planned use of renewable energy at the facility.
- Identify the source of the alternative fuel.
- Describe any energy efficiency measures used in the facility that may exceed Title 24 standards in Part 6 of the California Code Regulations.
- Provide data on potential job creation, economic development, and increased state revenue as a result of expected future expansion.
- Provide a quantified estimate of the project's carbon intensity values for life-cycle greenhouse gas emissions.
- Compare any project performance and expectations provided in the proposal to Energy Commission with actual project performance and accomplishments.

- Collect data, information, and analysis described above and include in the Final Report.

**Products:**

- 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-16-026 from GFO-16-604 with the City of Los Angeles Harbor Department for a \$4,524,000 grant to conduct a field demonstration of zero-emission vehicles, freight handling equipment and related charging infrastructure. 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 10, 2017.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

---

Cody Goldthrite,  
Secretariat