

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement ARV-16-024 (To be completed by CGL Office)

600 Fuels and Transportation Division		Sam Lerman	27	916-654-4649
City of Long Beach Harbor Department				95-6000733
Port of Long Beach Zero-Emissions Terminal Equipment Transition Project				
	6 / 30 / 2017	04 / 30 / 2021	\$ 9,755,000	
<input type="checkbox"/> ARFVTP agreements \$75K and under delegated to Executive Director.				
Proposed Business Meeting Date	05 / 10 / 2017	<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)				
<b>Agenda Item Subject and Description</b>				
Proposed resolution approving Agreement ARV-16-024 with the City of Long Beach Harbor Department for a \$9,755,000 grant to conduct a field demonstration project of zero- and near-zero emissions advanced technology vehicles. The demonstration will occur at the Port of Long Beach and will benefit disadvantaged communities. (ARFVTP funding) Contact: Sam Lerman (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: §15301 – "Existing Facilities"  
§15303 – "New Construction or Conversion of Small Structures"  
§15304 – "Minor Alterations to Land"

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

Explain reason why Agreement is exempt under the above section:  
 Cal. Code Regs., tit. 14, sec. 15301 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). The proposed project includes installation of approximately 14 electric vehicle charging stations at existing facilities, and in already paved areas, at the Port of Long Beach. The project will occur on land that is not environmentally sensitive, will not result in any scenic disturbance, and will not increase traffic to the site. Therefore, this project will have no significant effect on the environment and falls within section 15301.

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. In this case, the electric vehicle charging stations are approximately the size of a gas station pump. In addition, twelve battery electric yard tractors, nine battery electric rubber-tired gantry cranes, and four plug-in hybrid drayage trucks will be built and demonstrated at Port facilities. Both the small new equipment and charging stations to operate the new equipment will have no significant impact on the environment and therefore this project falls within section 15303.

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. Minor trenching and repaving will be needed to connect the charging infrastructure to existing electrical panels. Trenching will take place on currently paved ground, will not involve the removal of any trees, and the surface will be restored. Therefore, this project will have no significant effect on the environment and falls within section 15304.

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

Legal Company Name:	Budget
See attached	\$
	\$
	\$

Legal Company Name:  
 International Transportation Services, Long Beach Container Terminal, IBEW, Clean Energy Fuels

# GRANT REQUEST FORM (GRF)



Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
ARFVTP	16/17	601.118I	\$9,755,000
Funding Source			\$
R&D Program Area:	Select Program Area		\$9,755,000
Explanation for "Other" selection			
Reimbursement Contract #:		Federal Agreement #:	

Name:	Rose Siengsubcharti	Name:	Same
Address:	4801 Airport Plaza Drive	Address:	
City, State, Zip:	Long Beach,, CA 90815	City, State, Zip:	
Phone:	562-283-7100	Fax:	562-283-7148
Phone:	- -	Fax:	- -
E-Mail:	rose.sieng@polb.com	E-Mail:	

<input checked="" type="checkbox"/> Competitive Solicitation <input type="checkbox"/> First Come First Served Solicitation	Solicitation #: GFO-16-604
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1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/> Attached
2. Exhibit B, Budget Detail	<input checked="" type="checkbox"/> Attached
3. CEC 105, Questionnaire for Identifying Conflicts	<input checked="" type="checkbox"/> Attached
4. Recipient Resolution	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Attached
5. CEQA Documentation	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Attached

Agreement Manager \_\_\_\_\_ Date \_\_\_\_\_ Office Manager \_\_\_\_\_ Date \_\_\_\_\_ Deputy Director \_\_\_\_\_ Date \_\_\_\_\_

Port of Long Beach (ARV-16-024) - List of Known Subcontractors

	<u>CEC funds</u>	<u>Match funds</u>
Total Transportation Services, Inc. (TTSI)	\$ -	\$ 280,000
US Hybrid	\$ 1,320,000	\$ -
SSA Marine	\$ 4,860,000	\$ 2,040,339
Cavotec Inet US Inc.	\$ 2,523,596	\$ 400,377
BYD Co Ltd	\$ 3,430,000	\$ -
Long Beach Community College	\$ 50,000	\$ 15,000
Pacific Gateway Workforce	\$ -	\$ 15,000
Center for International Trade and Transportation		\$ 18,000
Media 360		\$ 16,000
Harbor Breeze		\$ 124,200

## Exhibit A SCOPE OF WORK

### TECHNICAL TASK LIST

Task #	CPR	Task Name
1		Administration
2	X	Plan, Design, and Build Demonstration Vehicles
3		Training and Public Outreach Campaign
4		Operations, Data Collection, and Analysis

### KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Rose Siengsubcharti—POLB; Renee Moilanen—POLB		
2	Rose Siengsubcharti, Renee Moilanen, Ben Chavdarian—POLB; Arturo Di Pietro—Cavotec; Abas Goodarzi—US Hybrid; Andy Swanton—BYD; Paul Gagnon—SSA Marine; Kevin Hayes—LBCT; Eric Bayani—ITS; Tony Williamson—TTSI	Cavotec US Hybrid BYD	SSA Marine Long Beach Container Terminal (LBCT) International Transportation Service Total Transportation Services, Inc. (TTSI)
3	Rose Siengsubcharti, Renee Moilanen—POLB; Tommy Faavae—IBEW; Melissa Infusino--LBCC		International Brotherhood of Electrical Workers (IBEW) Long Beach City College (LBCC)
4	Rose Siengsubcharti, Renee Moilanen, Ben Chavdarian—POLB; Arturo Di Pietro—Cavotec; Abas Goodarzi—US	Cavotec US Hybrid BYD	SSA Marine Long Beach Container Terminal (LBCT) International Transportation Service

## Exhibit A SCOPE OF WORK

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
	Hybrid; Andy Swanton—BYD; Paul Gagnon—SSA Marine; Kevin Hayes—LBCT; Eric Bayani—ITS; Tony Williamson—TTSI		Total Transportation Services, Inc. (TTSI)

### 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
BEV	Battery Electric Vehicle
CAM	Commission Agreement Manager
CHE	Cargo Handling Equipment
CPR	Critical Project Review
DAC	Disadvantaged Community
RTG	Electric Rubber Tire Gantries
FTD	Fuels and Transportation Division
GHG	Greenhouse Gas
IBEW	International Brotherhood of Electrical Workers
LBCC	Long Beach City College
LNG	Liquefied Natural Gas
MHD	Medium- and heavy-duty
MT	Metric tons
NO <sub>x</sub>	Nitrogen oxides
PHET	Plug-in hybrid-electric trucks
PHEV	Plug-in hybrid-electric vehicle
PM	Particulate matter
POLB or Port	Port of Long Beach
Recipient	City of Long Beach Harbor Department

## Exhibit A SCOPE OF WORK

Term/ Acronym	Definition
RTG	Rubber-Tired Gantry

### 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 #01 which was proposed for funding in the Energy Commission’s Notice of Proposed Awards on February 21, 2017. GFO-16-604 and Recipient’s Application #01 are hereby incorporated by reference into this Agreement in their entirety.

## **Exhibit A SCOPE OF WORK**

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 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) and class 8 trucking at the Port of Long Beach (POLB). At POLB alone, diesel-powered rubber tire gantries (RTG) comprise only five percent of the Port's equipment fleet, but generate 20 percent of all Port equipment emissions. Other cargo handling equipment, such as yard tractors and top handlers, accounts for nearly 60 percent of the Port's equipment inventory and a significant percentage of overall Port emissions. Additionally, these equipment types consume tremendous quantities of petroleum. To make matters worse, the emissions and petroleum consumption have a disproportionate impact on disadvantaged communities, which, because they surround the Port, bear the brunt of the environmental impacts associated with heavy diesel equipment operation.

Today, many technology providers have begun to develop innovative zero-emissions solutions capable of eliminating petroleum consumption, GHG emissions, and criteria air pollutant emissions without sacrificing the performance associated with conventional CHE. Unfortunately, many potential end users, including port terminal operators and logistics companies, are reluctant to adopt these new technologies, fearing that they will prove too costly, too complicated, or, as has been the case with some earlier-generation alternative-fueled technologies, unable to meet the rigorous demands of their respective duty-cycles.

### **Goals of the Agreement:**

The goals of this agreement are to enhance market acceptance of advanced vehicle yard tractor, drayage truck, and RTG 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 field demonstrate a minimum 9 battery electric RTGs, 12 battery electric yard tractors, and 4 PHEV drayage trucks, and verify performance of and collect performance data on all vehicles; and
- Displace petroleum fuel, reduce GHG emissions, and support jobs in the port area and in disadvantaged communities.

# **Exhibit A SCOPE OF WORK**

## **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

# **Exhibit A SCOPE OF WORK**

## **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.

## **Exhibit A SCOPE OF WORK**

### **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.

## **Exhibit A SCOPE OF WORK**

### **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.

## **Exhibit A SCOPE OF WORK**

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.

## **Exhibit A SCOPE OF WORK**

### **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)

## **Exhibit A SCOPE OF WORK**

- 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.

## **Exhibit A SCOPE OF WORK**

### **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, AND BUILD DEMONSTRATION VEHICLES**

The goals of this task are to plan, design, build, and deliver into service a minimum of 12 BEV yard tractors, 4 PHEV drayage trucks, and 9 electric RTG demonstration vehicles.

## **Exhibit A SCOPE OF WORK**

### **The Recipient shall:**

- Review and plan functional requirements, duty cycle and drive schedules, and power/energy calculations.
- Develop product design adjustments to vehicles platform, product integration design documentation, bill of materials (BOM) list, and final vehicle performance targets.
- Review plan(s) and documents for final design, testing and validation, and vehicle build.
- Manufacture, assemble, integrate, and build the demonstration vehicles including propulsion systems, major systems, components, and subsystems.
- Conduct tests, certifications, and validations for vehicle, systems/subsystems, and safety elements.
- Commission the demonstration vehicles and deliver to fleet partners.
- Complete site planning and engineering regarding necessary infrastructure upgrades for the full operation of all demonstration vehicles.
- Install the required number of charging stations for yard tractor and drayage vehicles to ensure their full operation over the demonstration period.
- Complete cable trenching for grid connected operation of RTG vehicles.
- Assemble battery container for off grid operation of RTG vehicles.
- Prepare a Summary Report with Photographs containing information from the items listed above.

### **Products:**

- Summary Report with Photographs

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

## **Exhibit A SCOPE OF WORK**

### **TASK 3 TRAINING AND PUBLIC OUTREACH CAMPAIGN**

The goal of this task is to develop recommendations on how to augment existing training programs to ensure a sustainable workforce to support the electrification of the Port of Long Beach, and to build public awareness in disadvantaged communities and consumer confidence in the types of technologies deployed.

- Convene a Zero-Emission Port Equipment Training Development Group consisting of the Port, terminal operators, and other stakeholders to evaluate relevant training programs in the Long Beach area and determine:
  - The extent to which they support POLB's proposed goal of transitioning all port equipment to be zero-emissions by 2030
  - Skills of the existing area workforce.
  - Skill gaps in the existing area workforce, as well as in existing area workforce development and training programs.
- Provide direct on-the-job training for high school interns through the Port of Long Beach High School Internship Program which is aimed at developing skills necessary for a career in zero-emission vehicle technology.
- Provide training for local high school and college teachers to develop lesson plans and curriculum for in classroom trainings on zero-emission vehicle technologies.
- Develop recommendations for augmenting existing training programs to better support the Port's zero-emission goals and produce an area workforce with the requisite skills to operate and maintain zero-emission port equipment.
- Develop press releases, program website, promotional videos, and conduct tours for and related outreach to disadvantaged communities and members of the public to build awareness of project benefits and gain consumer confidence in deployed technologies. CAM must approve any press material prior to release to the general public.
- Produce a Workforce Training and Public Outreach summary reports containing information from the items listed above.

#### **Products:**

- Workforce Training Summary Report
- Press and Media Releases
- Public Outreach Summary Report

# Exhibit A SCOPE OF WORK

## TASK 4 OPERATIONS, DATA COLLECTION AND ANALYSIS

The goals of this task are to operate the proposed demonstration vehicles for 12 months, collect operational data from the project, analyze that data for economic and environmental impacts, and to prepare all relevant POLB and terminal staff for long-term, post-grant operations and maintenance. POLB will include all data and analysis in the Final Report.

### The Recipient shall:

- Provide training and support to demonstrators, maintenance and operations staff, data collectors, and key project participants.
- Develop Data Collection Test Plan. This plan will include data collection methods, analysis and assessment procedures, and development of recommendations of next steps on pathway to full electrification of port CHE. This plan will be submitted for CAM prior to commencement of the 12 month demonstration.
- Operate all demonstration cargo handling equipment and on-road vehicles for the 12-month demonstration period.
- Troubleshoot any issues identified.
- Collect 6 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.
- Identify any current and planned use of renewable energy at the facilities.
- Provide information, costs of construction and operation, challenges, and barriers with the installation and operation of the infrastructure necessary to carry out the demonstrations.

## **Exhibit A SCOPE OF WORK**

- Identify the source of the alternative fuels used in vehicles funded by this project.
- Describe any energy efficiency measures used in the facilities 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 the Energy Commission with actual project performance and accomplishments.
- Prepare recommendations of next steps on pathway to full electrification of port CHE.
- 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 LONG BEACH 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-16-024 from GFO-16-604 with the City of Long Beach Harbor Department for a \$9,755,000 grant to conduct a field demonstration of zero- and near-zero emissions advanced technology vehicles. The demonstration will occur at the Port of Long Beach 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]

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Cody Goldthrite,  
Secretariat