



## **Technology Inquiry Form: Hybrid, Near-Zero and Zero-Emission for Cargo-Handling Equipment**

(Revised 6/7/2016)

## TECHNOLOGY INQUIRY FORM – CARGO-HANDLING EQUIPMENT

### Introduction

The Port of Long Beach and the Port of Los Angeles (Ports) are soliciting information about hybrid, near-zero and zero-emission cargo handling equipment (CHE) technologies to prepare for grant funding opportunities anticipated over the 2016-2017 fiscal year. The State of California has budgeted more than \$500 million for zero- and near-zero emission equipment deployment and advanced technology demonstrations over the next year, and this funding will be disbursed largely through competitive grant solicitations. Nearly \$25 million has been identified for off-road equipment, including port terminal cargo-handling equipment, which is the focus of this Technology Inquiry (Inquiry).

The Ports intend to apply for these grants as appropriate, working with technology manufacturers and terminal operators as partners. In order to identify potential technology partners, the Ports are collecting information about applicable technologies and the associated technology company experience. This information may also be used to connect interested terminal operators to technology companies for future demonstrations. The goal is for the Ports to maintain up-to-date information on potential demonstration partners so that as new grant funding programs are released the Ports will be able to respond effectively and in a timely manner.

### About This Inquiry

The purpose of this inquiry is to collect basic, high-level information about potential zero-emission, near-zero emission or hybrid cargo-handling equipment technologies that are likely to be eligible for funding in upcoming grant solicitations. When a grant solicitation is released, the Ports will review the solicitation requirements and refer back to these Inquiry responses to identify the most competitive technologies and/or partners for that particular funding opportunity. At that time, those manufacturers will be asked to submit more detailed information about their technology and their proposed contribution to the grant project.

In evaluating potential grant partners, the Ports consider the following criteria:

- The readiness of a particular technology and how closely this readiness aligns to the requirements of a particular grant solicitation
- Company's experience on past demonstration projects and grants
- Company financial contribution on past grants (i.e. in-kind match funding, direct match funding)
- Company's contribution to the upcoming grant project, for example, by bringing additional partners to the table, helping to write the grant application, etc.
- Interest in the technology by terminal operators that will be demonstrating the equipment.

In general, the Ports are looking for grant partners, who have the appropriate technology for a given solicitation; who are willing to provide ample match funding, application assistance, and project management support; and who have equipment readily accepted by terminal operators. The terminal operators typically make the final decision on demonstration partnerships since they are ultimately the end-users after the project is complete.

In addition, the Ports intend to use this Inquiry to educate terminal operators on various clean-equipment technologies in order to establish potential demonstration partnerships in advance of a grant solicitation. If you would like to be part of this education effort, at the conclusion of this form please indicate your willingness to provide equipment demonstrations, briefings, and/or workshops to terminal operators.

**This Inquiry is focused only on cargo-handling equipment.** Inquiries for other types of equipment may be issued as the need arises.

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### Deadline

This Inquiry will remain open; however, the State of California's fiscal year begins on July 1<sup>st</sup>, which is when the Ports expect future grant solicitations will begin to be released. Forms not received by July 1<sup>st</sup> may miss the opportunity to be considered for Port grant partnerships.

### Submission & Questions

Please email the completed form to Lauren Dunlap, Starcrest Consulting Group, at [ldunlap@starcrestllc.com](mailto:ldunlap@starcrestllc.com). You may also contact her for any questions via email or by phone at (562) 260-6384.

### Disclaimer

Technology manufacturers are discouraged from including proprietary or confidential information in the submitted forms. Information provided becomes the property of the Ports, which as public agencies, are subject to the California Public Records Act.

# TECHNOLOGY INQUIRY FORM – CARGO-HANDLING EQUIPMENT

## Technology Inquiry Form

**Instructions:** Please complete the following sections of this Technology Inquiry Form to the best of your ability. Information must be kept at a high level. The Ports will contact you for further information, if needed. If you have additional technologies, demonstrations and/or grant experiences, extra forms to complete Sections 2, 3 and/or 4 are attached to this Inquiry Form (please see Section 6). If a particular question is not applicable to your technology, please indicate “n/a.”

Section 1 - Company Information		
Company Name:		Year Established:
Address:		
City:	State:	ZIP Code:
Point of Contact:		
Phone Number:		Email:

Section 2 – Technology Overview
Technology: <ul style="list-style-type: none"> <li>• Prototype Available? Please indicate “yes” or “no” (if no, describe Prototype Status):</li>   <li>• Projected Availability of Prototype:</li> </ul>
Target CHE(s):
Primary Source of Energy or Fuel:
Engine Type:
Battery Type:
Battery Storage (in kW-hr):
Emission Benefits (DPM, NO <sub>x</sub> , SO <sub>x</sub> , GHGs):
Current Cost:
Projected Cost (Once Commercialized):
Infrastructure/CHE Charging Station Status:
CARB Approval Status:

Section 3 - Demonstration Experience
<b>Past Demonstrations</b>
Project Title:

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Brief Description:		
Demo Start Date:		Demo End Date:
Was this a Grant-Funded Project? Please indicate “yes” or “no” (and complete “Past Contributions” in Section 4):		
Company Using Prototype CHE(s):		
Address:		
City:	State:	ZIP Code:
Point of Contact:		
Phone Number:		Email:
Service(s) Provided by Prototype CHE:		
Area/Location of Prototype CHE(s):		
Frequency of Use:		
Miles/Energy Logged (in mi/kW-hr):		
Service Start Date:		Service End Date:
Current Status:		
Final Report Available? Please indicate “yes” or “no”:		
<b>Current Demonstrations</b>		
Project Title:		
Brief Description:		
Demo Start Date:		Demo End Date:
Is this a Grant-Funded Project? Please indicate “yes” or “no” (and complete “Current Contributions” in Section 4):		
Company Using Prototype CHE(s):		
Address:		
City:	State:	ZIP Code:
Point of Contact:		
Phone Number:		Email:
Service Provided by Prototype CHE:		

## TECHNOLOGY INQUIRY FORM – CARGO-HANDLING EQUIPMENT

Area/Location of Prototype CHE(s):		
Frequency of Use:		
Miles/Energy Logged (in mi/kW-hr):		
Service Start Date:	Service End Date:	
Current Status:		
<b>Pending Demonstrations (for Future Projects/Awaiting Announcement of Award)</b>		
Project Title:		
Brief Description:		
Anticipated Award Date (please complete "Pending Contributions" in Section 4):		
Projected Demo Start Date:	Projected Demo End Date:	
Company Using Prototype CHE(s):		
Address:		
City:	State:	ZIP Code:
Point of Contact:		
Phone Number:	Email:	
Service Provided by Prototype CHE:		
Area/Location of Prototype CHE(s):		
Expected Frequency of Use:		
Expected Miles/Energy Logged (in mi/kW-hr):		
Projected Service Start Date:	Projected Service End Date:	

<b>Section 4 – Grant Contributions (for Port, Local, State, and Federal grants)</b>		
<b>Past Contributions</b>		
Project Title:		
Granting Agency:	Award Date:	
Funds Received (\$):		
Total Grant (\$):	Direct Cost (\$):	Match (\$):
Please describe your company's match contribution. If none, state "none":		

## TECHNOLOGY INQUIRY FORM – CARGO-HANDLING EQUIPMENT

Project Partners:	Combined Direct Cost (\$): Combined In-Kind (describe):
Co-Funding Partners:	Combined Direct Cost (\$): Combined In-Kind (describe):
<b>Current Contributions</b>	
Project Title:	
Granting Agency:	Award Date:
Funds Received (\$):	
Total Grant (\$):	Direct Cost (\$):
Match (\$):	
Please describe your company's match contribution. If none, state "none":	
Project Partners:	Combined Direct Cost (\$): Combined In-Kind (describe):
Co-Funding Partners:	Combined Direct Cost (\$): Combined In-Kind (describe):
<b>Pending Contributions (for future projects/awaiting announcement of award)</b>	
Project Title:	
Granting Agency:	Award Date:
Funds Received (\$):	
Total Grant (\$):	Direct Cost (\$):
Match (\$):	
Please describe your company's match contribution. If none, state "none":	
Project Partners:	Combined Direct Cost (\$): Combined In-Kind (describe):
Co-Funding Partners:	Combined Direct Cost (\$): Combined In-Kind (describe):

### Section 5 – Tenant Education

- Are you willing to provide equipment demonstrations, briefings, and/or workshops on your technology for terminal operators? Please indicate "yes" or "no":

### Section 6 – Attachment

- Additional Forms for Section 2, 3 and 4