

Hybrid Hydrogen Fuel Cell Top Handler SSA Marine



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Board Action

Approval of a Technology Advancement Program (TAP) Cost Share Agreement between POLA and Port of Long Beach (POLB) to fund two hybrid hydrogen fuel cell (HFC) top handlers to be tested at SSA terminal in POLB

SSA team share	\$4,291,000
POLA share	\$1,095,500
POLB share	<u>\$1,095,500</u>
Total Project Cost	\$6,482,295



Clean Air Action Plan Overview

- First comprehensive joint port emission reduction plan
- Focuses on DPM, NO_x, SO_x health risk & GHG reductions
- Coordinated with regulatory agencies & stakeholders
- Sets future emission & health risk reduction goals
- Consists of a series of source category measures & air pollution reduction strategies including technology advancement
- Progress is tracked through activity-based annual inventories



Technology Advancement Program (TAP)



The TAP is a key component of the CAAP

A joint Ports incentive program designed to meet the following goals:

- Encourage technology innovation
- Demonstrate effectiveness of new technologies
- Accelerate commercial availability of new technologies
- Improve emissions reductions
- Provide more options for meeting the goals of the CAAP

Demonstration Projects



Toyota Tsusho - Hydrogen Fuel cell repower at Fenix



Taylor - Battery Electric New Build with plug-in charging at EverPort



Hyster - Battery Electric with Hydrogen Range Extender New Build with inductive charging at Fenix

TAP Project Description

- Project Lead: Port of Long Beach
- Location: SSA Terminal at Pier C - Port of Long Beach.
- Demonstrate two Taylor zero-emission top handlers utilizing hydrogen fuel cells to recharge the batteries
- Project Term: 3 years
- Estimated Total Project Cost: \$6,482,295



Cost Share Agreement

- Project was approved by both Ports under the TAP
 - Includes TAP Advisory Committee review and approval
 - U.S. Environmental Protection Agency, California Air Resources Board, California Energy Commission, and South Coast Air Quality Management District
- POLA and POLB will split the cost under a standing TAP cost share agreement
 - POLB is the lead and contracted with SSA
- POLB will advance the full \$2,191,000 TAP contribution to SSA based on program milestones
 - POLA will reimburse POLB for half - \$1,095,500

Staff Recommendation



Staff recommends that the Board:

- Approve the Cost Share Agreement between the City of Los Angeles Harbor Department and the Port of Long Beach for the reimbursement of \$1,095,500 for the SSA HFC Top Handlers Project