Zero Emissions Technology Demonstrations

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2017 CAAP Update

Zero Emissions Goals
Terminal Equipment by 2030
On-Road Trucks by 2035
Real-World Demonstrations
Technology Advancement
Accelerate verification and commercial availability
Middle Harbor

World’s Most Advanced Technologies

Electrified Terminal Operations
World’s Most Advanced Technologies
Middle Harbor
Electrified Terminal Operations
Challenges
Emerging technologies under tough operating conditions with limited infrastructure and high cost
Strengths

Established goals, increasing incentive dollars and interest, plus strong partnerships
Feasibility Assessments

• Trucks
• Terminal Equipment
Purpose

• Assess feasibility of near-zero and zero-emissions
• Evaluate progress toward CAAP goals
• Identify actions to overcome challenges
• Determine if timelines need to be adjusted
Scope

- Technical Viability
- Commercial Availability
- Operational Feasibility
- Infrastructure Availability
- Key Economic Considerations
Technology Development
Zero Emission Technology Demonstrations

- Demonstrations of Zero Emission On-Road Trucks and Development of 50-100 Truck Pilot Deployment
- Switcher Locomotive Demonstration
- Demonstrations of Zero Emission Terminal Equipment
Technology Development

POLB’s Electric Vehicle Blueprint

Map the path to zero emissions evaluating electric infrastructure needs, financing, workforce components and community impacts
Additional Priorities & Next Steps

• Funding Advocacy & Grant Strategy
• CAAP Implementation Stakeholder Advisory Group
• Baseline Greenhouse Gas Emissions Inventory

Technology Development

POLB’s Zero Emission Terminal Equipment Transition Project

- Demonstrate 12 battery-electric yard tractors and charging infrastructure
- Convert 9 RTGs from diesel to electric
- Convert 4 LNG trucks to plug-in hybrid electric
Technology Development

C-PORT: Commercialization of the Port of Long Beach Off Road Technology Demonstration Project

Demonstrate 1 battery-electric top pick, 1 battery-electric yard tractor and 1 fuel cell yard tractor

Demonstrate 2 battery-electric top picks
Technology Development

Port Advanced Vehicle Electrification (PAVE) Project

Install electrical charging infrastructure for nearly 40 piece of terminal equipment, demonstrate DC fast charging and battery storage.
POLB Microgrid – Resilience for Critical Facilities

Install solar panels, battery storage, and microgrid controls to allow JCCC to continue operations during an outage.