



(This is a Request for Information only - Complete Pages 1 and 2 for each initiative)

Title of Proposed Initiative: Energy Savings and Emissions Reductions for California Ports

Investment Areas (Check one or more) – *For definitions, see First Triennial Investment Plan, page 12:*

- Applied Research and Development
 Technology Demonstration and Deployment
 Market Facilitation

Electricity System Value Chain (Check only one): See CPUC Decision 12-05-037, Ordering Paragraph 12.a. http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF.

- Grid operations/market design
 Generation
 Transmission
 Distribution
 Demand-side management

California Energy Commission

DOCKETED

12-EPIC-01

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Issues and Barriers:

The current technologies and fuels utilized in the goods movement sector at California ports are associated with the production and release of exhaust with serious human health impacts, including increased risk for cancer, premature mortality, and other disease burdens. Direct emission of diesel PM have been linked to increased health risks for communities surrounding ports and can reach communities substantially downwind during regional transport events. Additionally, the goods movement sector has been explicitly linked to deleterious human health effects in study regions, including exacerbation of respiratory disease in children. The current importance of minimizing impacts to the State's GHG and regional AQ burdens from major shipping ports will be enhanced in coming years due to expected growth in demand for the transport of goods. For example, it is projected that activity at California ports will grow dramatically in coming years and in the absence of mitigation port-related emissions are also projected to increase.

Initiative Description and Purpose:

The identification and characterization of alternative energy strategies for technologies and fuels supporting activity at ports will assist CA in meeting growing demand for goods transport while minimizing the environmental impacts of associated emissions. Strategies that can reduce emissions can offer important direct health benefits to heavily impacted communities surrounding major ports, as well as improving pollutant levels in areas of the State currently plagued by poor air quality, i.e., South Coast Air Basin. The nature of port-related emissions is complex, and includes impacts from mobile (i.e., ships, heavy duty trucks, rail, cargo handling equipment) and stationary sources. Thus, assessment of emission impacts from alternative energy strategies will assist in identifying opportunities to achieve maximum benefits while minimizing costs. In addition, various plans have been developed by CA to address port-related emissions (i.e., the Goods Movement Emissions Reduction Plan) and obtained information can contribute to assessing developed strategies, including the effectiveness of proposed measures.

Recommended minimum funding level = \$300,000/project; Recommended maximum funding level = \$1,500,000.

Stakeholders:

California Air Resources Board; University of California – all campuses; U.S. Environmental Protection Agency; Air Pollution Control Districts and Air Quality Management Districts

Background and the State-of-the-Art:

- California Air Resources Board – Goods Movement Emission Reduction Program (Proposition 1B)
- U.S. EPA – Air Quality Impacts of Greenhouse Gas Mitigation Strategies in the Power Generation and Transportation Sectors

Justification:

Ratepayer benefits from the proposed measure will include:

- Delineation of strategies that can reduce emissions of GHGs and pollutants from port sources that will assist the State in implementing regulatory efforts seeking:
 - Improvements in regional AQ, including potential reductions in ozone and particulate matter
 - Reduced exposure to particulate matter with human health benefits for communities adjacent to locations of major ports

Ratepayer Benefits (Check one or more):

- Promote greater reliability
- Potential energy and cost savings
- Increased safety
- Societal benefits
- Environmental benefits – GHG emissions reduction, Air Quality
- GHG emissions mitigation/adaptation in the electricity sector at the lowest possible cost
- Low emission vehicles/transportation
- Waste reduction
- Economic development

Benefits of the proposed initiative include delineation of strategies that could assist the State in mitigation harmful air quality impacts of port-related emissions with resulting human health benefits.

Public Utilities Code Sections 740.1 and 8360:

The proposed research initiative is in alignment with section (e) (1) of CPUC Code Section 740.1 by supporting environmental improvement associated with the State’s climate change and air quality goals. Additionally, the proposed research meets the criteria of these public utilities code sections by (a) providing benefits to ratepayers and (d) as no similar research is currently being undertaken.