San Pedro Bay Ports
2016 Air Emissions Results

Diesel Particulate Matter: DOWN
87%

Nitrogen Oxides: DOWN
56%

Sulfur Oxides: DOWN
97%

Greenhouse Gases Equivalent: DOWN
18%

10% TEUs UP
Outreach To Date

- Community
- Environmental Organizations
- Railroads
- Marine Terminal Operators
- Environmental Regulatory Agencies
- Trucking Industry
- Shipping Lines
- Greater Los Angeles Business Community
Goals:

- Revise CAAP strategies based on comments from stakeholders, input from staff and legislative/regulatory updates
- Provide additional information in support of proposed strategies
Recurring Themes

- Accountability
- Feasibility assessments
- Infrastructure
- More time to plan
- Technology
- More detail
- Regulatory coordination
- Costs
- Zero-emissions
- Interim targets
- Stakeholder process
- Community health
- Economic competitiveness
- Transparency
- Emission reductions
No Substantial Changes

- Modify Vessel Speed Reduction Program to incentivize only 40 nm participation
- Incentivize energy-efficiency improvements on ships
- Impose differential rate system to incentivize newer vessels
- Incentivize harbor craft repowers to Tier 3 and Tier 4
- Establish a terminal equipment idling reduction program
No Substantial Changes

- Expand use of on-dock rail
- Develop charging standards for cargo-handling equipment
- Develop a Green Terminal Program
- Identify and implement supply chain efficiency incentives
- Develop infrastructure plans
- Develop and implement energy strategies
## Cargo Handling Equipment

<table>
<thead>
<tr>
<th>Original</th>
<th>New Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Require ZE terminal equipment by 2030 (includes feasibility assessments every five years).</td>
<td>Participate in development of CARB’s regulation to achieve up to 100% ZE for CHE by 2030, and accelerate where feasible (includes feasibility assessments every three years).</td>
</tr>
</tbody>
</table>
### At-Berth Emission Reduction Strategy

<table>
<thead>
<tr>
<th>Original</th>
<th>New Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentivize at-berth emission reduction technologies for non-regulated ships.</td>
<td>Incentivize at-berth emission reduction technologies and participate in CARB’s regulation to achieve up to 100% reductions in at-berth emissions by 2030, and accelerate where feasible.</td>
</tr>
<tr>
<td>Original</td>
<td>New Proposed</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2018: Fee on trucks 10 years old or older</td>
<td>2018: New trucks entering service must be MY 2014+</td>
</tr>
<tr>
<td>2020: Trucks must be MY 2010+</td>
<td>2023: New trucks entering service must be NZE; Initiate rate structure with exemptions for NZE and ZE trucks (contingent on establishment of NZE engine standard)</td>
</tr>
<tr>
<td>2023: New trucks entering service must be NZE (contingent on establishment of NZE engine standard)</td>
<td></td>
</tr>
<tr>
<td>2035: Trucks to be zero emissions</td>
<td>2035: Goal for all trucks to be ZE; modify rate structure to exempt only ZE trucks</td>
</tr>
</tbody>
</table>

Clean Trucks Program
Clean Trucks Program

- Feasibility assessments every 3 years beginning in 2018
- Waive registration fee for ZE trucks
- By 2020, in partnership with the State and trucking industry, launch a pilot smog check program for heavy-duty trucks in San Pedro Bay to identify and eliminate gross polluters
- ZE truck pilot deployment at scale (e.g. 50-100 trucks)
- Starting immediately, secure incentive funding to accelerate introduction of NZE and ZE trucks
Universal Truck Appointment System

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Work with terminal operators to give preferential access to zero- and near-zero-emission trucks.</td>
<td>By 2020, adopt a universal appointment system to improve overall efficiency and minimize truck turn times.</td>
</tr>
</tbody>
</table>
Supporting Materials and Analyses

- Framework for Feasibility Assessments
- Preliminary Cost Estimates for Select CAAP Strategies
- Economic and Workforce Considerations
- Potential Emission Reductions from Select CAAP Strategies
- Bay-Wide Ocean Going Vessel Tier Forecast
### Incremental Cost Estimates

<table>
<thead>
<tr>
<th>Category</th>
<th>Low End</th>
<th>High End</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trucks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near-Zero Emissions</td>
<td>$1,002,000,000</td>
<td>$1,026,000,000</td>
</tr>
<tr>
<td>Zero-Emissions</td>
<td>$2,927,000,000</td>
<td>$8,289,000,000</td>
</tr>
<tr>
<td><strong>Cargo-Handling Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>$914,000,000</td>
<td>$2,105,000,000</td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td>$2,166,000,000</td>
</tr>
<tr>
<td>At-Berth Emission Reduction Technologies</td>
<td></td>
<td>$138,000,000</td>
</tr>
<tr>
<td>Incentive Programs for Ships</td>
<td></td>
<td>$137,000,000</td>
</tr>
<tr>
<td>Technology Demonstration &amp; Development</td>
<td></td>
<td>$22,000,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$7,306,000,000</td>
<td>$13,888,000,000</td>
</tr>
</tbody>
</table>
Schedule

**Draft Discussion Document Released**
11/17/16
- Public Review and Comment Period through February 17, 2017

**Stakeholder Meetings**
Ongoing Meetings & Public Workshop 1/24/17
- Continue to receive public comments – Verbal & Written

**Draft CAAP 2017**
Released 7/19/17
- Responding to comments and preparing supporting documents

**Public Comment**
Through 9/18/17 & Public Workshop 8/30/17
- Receive public comments – Verbal & Written

**Final CAAP 2017**
Joint Board Meeting 11/2/17
- Joint Boards of Harbor Commissioners to consider approval

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*Extended*
Draft CAAP 2017 available at:

www.cleanairactionplan.org

Please provide comments:

caap@cleanairactionplan.org