



At Berth Vessel (Shore Power) Regulation

Shore Power Workgroup
Meeting

July 12, 2007

California Environmental Protection Agency



Air Resources Board

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Topics

- ◆ **Goals of regulation**
- ◆ Overview of revisions
- ◆ Regulation discussion

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Goals of Regulation

- ◆ Overall reduction goals
 - 60% reduction of emissions by 2015
 - 80% reduction of emissions by 2020
- ◆ Draft Regulation
 - 60-80 percent for shore power vessel categories
 - 50 percent for non-shore power vessel categories
 - Overall 80 percent reduction in emissions

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Goals of Regulation (Continued)

- ◆ Proposal for container vessels (2015)
 - Vessels (>4000 TEU) and making 5+ visits
 - Vessels (\leq 4000 TEU) and making 12 + visits
- ◆ Reductions (POLA/POLB)
 - 30% of vessels → 40% of visits → 65% of emissions
 - Including growth, affects over 200 vessels

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Goals of Regulation (Continued)

- ◆ Proposal for container vessels (2020)
 - Vessels making 4+ visits
- ◆ Reductions (POLA/POLB)
 - 60% of vessels → 85% of visits → 89% of emissions
 - Including growth, affects another 300 vessels

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Topics

- ◆ Goals of regulation
- ◆ **Overview of Revisions**
- ◆ Regulation Discussion

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Overview of Revisions

- ◆ Requirements for shore power vessel categories
 - Deleted option for clean engines
 - Early compliance option
- ◆ Plan for shore infrastructure
 - Terminal is responsible for coordinating plan
 - Port, utility, and carriers provide assistance

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Overview of Revisions (Continued)

- ◆ Terminal-based requirements for terminals visited by automotive, bulk, and general cargo vessels, and tankers
 - 25% reduction in emissions by 2015
 - 50% reduction in emissions by 2020

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Topics

- ◆ Goals of regulation
- ◆ Overview of Revisions
- ◆ **Regulation Discussion**

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General

- ◆ Applies to:
 - Vessels
 - Tugboats
- ◆ Exemption for government vessels

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Limited Auxiliary Engine Operation

- ◆ Applies to container, passenger, and refrigerated cargo (reefer) vessels
- ◆ Auxiliary engines cannot be operated one hour after vessel initially ties up to a berth
 - “Initially ties up” refers to vessel tied up and cleared by Homeland Security

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Limited Auxiliary Engine Operation (Continued)

- ◆ Requirements significant in 2015 and full implementation by 2020
 - Based on number of visits and size (container vessels only)
 - “Visits” to POLA and POLB treated as visit to one port
 - Container vessels with hotelling times of 10 hours for all visits are exempt

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Limited Auxiliary Engine Operation (Continued)

- ◆ Vessels affected based upon previous year's shipping activity
 - Fleet operator can revise list, but total visits must match
 - A current schedule can be used in lieu of previous year's shipping activity

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Limited Auxiliary Engine Operation (Continued)

- ◆ Auxiliary engines can be operated during "Emergency Event"
- ◆ Emergency Event
 - Affects safety of vessel
 - Utility equipment failure
 - Cal ISO Stage 3 emergency

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Limited Auxiliary Engine Operation (Continued)

- ◆ Grid power or equivalent must be used
- ◆ Vessels with shore power capabilities visiting berths at ports with shore-side power must use shore power

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Limited Auxiliary Engine Operation (Continued)

- ◆ Reports
 - Status report due 2014
 - Annual statement of compliance beginning 2016
 - List incidents where auxiliary engines operated beyond one hour after docking
- ◆ Recordkeeping
 - Logbook
 - Customs form 1300

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Fleet Emissions

- ◆ Fleet's emissions limited (tons per year)
 - Same amount of emissions as if fleet satisfied Limited Auxiliary Engine Operation requirements
- ◆ Procedure outlined for determining NOx and PM emissions
 - Emission and control factors
 - Test methods

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Fleet Emissions (Continued)

- ◆ Container vessel emissions
 - Hotelling load
 - Average reefer load
- ◆ Vessel can be in only one fleet
- ◆ Compliance will be on two month rolling average
 - Records kept at central location

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Fleet Emissions (Continued)

◆ Reports

- Status report due 2014
- Annual statement of compliance beginning 2016
 - Detailed fleet information
 - Documentation of alternative control technologies
 - Listing of emission malfunctions
 - Early reduction credit status reports

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Fleet Emissions (Continued)

◆ Incentive

- Benefit
 - Apply to 2015 and 2020 standards
 - Extend overall deadline to 2025
- Eligible Reductions
 - Must be in effect 1/1/12 (3 years early)
 - Reduction must be in place for ten years
 - Reductions voluntary

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Terminal Infrastructure

- ◆ Terminals must submit plan to Executive Officer
 - Due 1/1/10
 - Required if terminal receives X visits
- ◆ Plan requirements
 - Shore power or non-shore power applications

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Terminal Infrastructure (Continue)

- Discuss overall necessary improvement to utility grid, and port infrastructure
- Schedule for implementation
- ◆ Port can submit plan on behalf of terminal(s)
- ◆ Status reports for plan due in 2013, 2015, 2017, and 2020

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Terminal Reductions

- ◆ Affects Terminals where the following vessel types frequent
 - Dry bulk
 - General Cargo
 - Tankers
 - Vehicle Carriers
- ◆ Terminals with X total visits would be affected

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Terminal Reductions (Continued)

- ◆ Ports affected
 - Benicia
 - Hueneme
 - Humboldt
 - Long Beach
 - Los Angeles
 - Martinez
 - Oakland
 - Redwood City
 - Richmond
 - Sacramento
 - San Diego
 - San Francisco
 - Stockton

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Terminal Reductions (Continued)

- ◆ Affected terminals required to submit plan
- ◆ Plan requirements
 - 25% reduction in 2015
 - 50% reduction in 2020
- ◆ Baseline for calculating reductions
 - Auxiliary engine regulation
 - Considers growth

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Terminal Reductions (Continued)

- ◆ Reductions
 - Can consider reductions beyond regulatory baseline
 - Can consider boiler emissions
- ◆ Schedule
 - Plan due 2010
 - Status reports due 2012, 2015, 2017, and 2020

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Terminal Reductions (Continued)

- ◆ Plan revision necessary if status reports indicates goals of plan not satisfied
- ◆ Recordkeeping
 - Vessels that used controls

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Other Reporting Requirements

- ◆ Ports provide Warfinger data beginning with vessel activity for 2013
- ◆ Utility
 - Power usage
 - Listing of power outage

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Workgroup Schedule

- ◆ Next meeting is August 9 in Sacramento, 10:00 am to 12:30 pm

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Contacts

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