

Update on Efforts To Provide Further Locomotive and Railyard Emission Reductions



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California Environmental Protection Agency



Air Resources Board

Recent Major Activities

- Completed implementation of 2005 Agreement
 - Idle reduction devices on intrastate locomotives
 - Clean diesel fuel
 - 18 railyard health risk assessments
 - 18 draft railyard mitigation plans
 - 20% overall reduction in diesel PM
- Drafted report on options to further reduce emissions from locomotives and railyards

Air Quality Impacts

- Significant diesel PM risks near most railyards
- Measures already underway will significantly reduce emissions from 2005 to 2015
 - Railyards: 50% reduction in diesel PM
 - Locomotives: 25% reduction in NO_x and 15% reduction in PM
- Further reductions needed to reduce local risk and meet SIP commitments in South Coast and San Joaquin Valley

Further Emission Reduction Options

- To address need, staff initiated effort to evaluate options for further reductions
- Draft report released in December 2008
 - Identified 37 options
 - Solicited public comments
 - Incorporated modifications
- Analysis focused only on technical analysis; no recommendations on best options
- Final technical options document in July

Options Assessment

- Options identified for:
 - Locomotives
 - Non-locomotives
 - Advanced systems
 - Individual railyard measures
- Following criteria used:
 - Potential emissions reductions
 - Technical feasibility
 - Costs and cost-effectiveness

General Findings

- Several options identified as high priority
 - Switch locomotive repower and retrofit
 - Medium horsepower repower and retrofit
- Technically feasible within near to mid-term
- Very high capital cost, but cost-effective
- Full implementation can meet SIP commitments and achieve significant local emissions and risk reduction
- Long term option is replacement of line-haul locomotives

Next Steps

- Based on options, staff now developing draft recommendations for further reducing emissions
- Mechanisms under consideration
 - Incentive funding
 - Regulatory measures
 - Enforceable agreements
 - Voluntary actions
- Release draft report in July
- Meet with stakeholders
- Present draft recommendations to Board in September

Summary

- Further reductions needed to reduce localized impacts and meet SIP commitments
- Analysis of options indicates there are technically feasible and cost-effective options available, though high priority options have high capital cost
- Staff developing draft recommendations and will present to the Board in September