

SCAQMD's Perspective on Cold Ironing

CARB Public Consultation Meeting to Discuss the Feasibility
of Shore-based Electrical Power to Ships

November 9, 2004

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Background

- Feasibility Study for Proposed Rule 1165 – Emissions of Oxides of Nitrogen from Ships at Berth (Cold Ironing) in 1987
- Rule 1632 - Pilot Credit Generation Program for Hotelling Operations (2001)
- 2003 AQMP Commitment to Conduct Feasibility Study on Cold Ironing for Ships at Berth

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Feasibility Study for Proposed Rule 1165

- Major Concerns Raised
 - High Cost and Long-term Effort to Retrofit and Expand Utility Lines, Substations, and Ships
 - Safety and Fire Danger while Ships are Connected and Disconnected from Shore-side Power
 - Authority over Ships
- Proposed Rule 1165 Never Adopted Due to Concerns

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Rule 1632 - Pilot Credit Generation Program for Hotelling Operations

- Rule 1632 Provides Voluntary Opportunities to Generate NOx Credits for RECLAIM by Supplying Electric Power to Ships while at Berth through the use of a Fuel Cell Substation.
- The Period for Submittal of Proposals Ended on January 1, 2004
- No Proposals for Credit Generation Ever Submitted

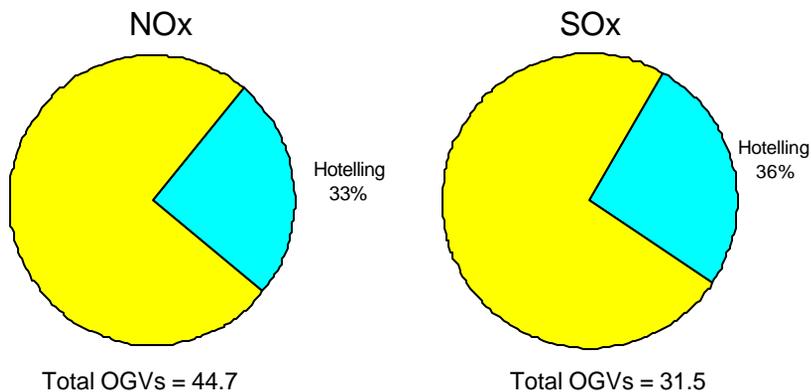
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2003 AQMP Feasibility Studies on Cold Ironing for Ships at Berth

- AQMD Committed to Conduct Feasibility Study on Cold Ironing (2003 AQMP Adoption Resolution)
 - Completion by 2004; Rule Adoption by 2005 (if feasible)
- CARB Commitment to Evaluate Cold Ironing for Ships that Frequently Visit South Coast Ports
- In lieu of Conducting a Separate Study, AQMD will Work Collaboratively with CARB to Develop a Statewide Feasibility Study

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Contribution of Hotelling Emissions (2010)



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AQMD Staff's View on Cold Ironing

- Technology is Currently Available
- Safety Concerns can be Addressed Through Proper Design
- Cost-effective for Frequent Callers or Ships with High Power Demands During Hotelling (e.g., Container Ships with 10 or More Calls per Year, Tankers, and Cruise Ships)

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AQMD Staff's View on Cold Ironing (cont.)

- Tremendous Opportunity for Significant Reductions from Ocean Going Vessels through Regulatory Mechanism
- Potential for Incentive Programs (e.g., Credit Programs)
 - Cold Ironing Credit Rule in 2005 (in Conjunction with CARB's Statewide Rule)

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Factors Affecting Cold Ironing Feasibility

- Frequency of Calls
- Type of Vessels
- Hotelling Times
- Power Demand
- Ports Funding for On-Shore Infrastructure