

Incentive Programs

Alternative Diesel Fuels Symposium

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Air Resources Board

Purpose of Carl Moyer Program

- 1994 Ozone State Implementation Plan (SIP)
- Obtain real, **quantifiable**, enforceable and **surplus** NOx benefits from existing engines
- Speed introduction of new technology
- Funds for incremental capital cost of cleaner than required heavy-duty vehicles or equipment
- Funds for alternative fuels infrastructure and incremental fuel costs

History of the Carl Moyer Program

- 1998 - 2002
 - Total of \$114 million in one-time annual allocations
 - ARB approved the first Carl Moyer Guidelines
 - ARB-approved guidelines included incremental cost of “Clean Fuels”
- 2003 - 2004
 - Total of \$50 million over two years through Proposition 40

State/Local Partnership

- California Air Resources Board
 - Oversees statewide program
 - Develops guidelines
 - Allocates funding to local air districts
- California Energy Commission
 - Infrastructure and advanced technology development
- Local Air Districts (APCDs, AQMDs)
 - Provide “matching” funds (\$1 for every \$2)
 - Administers local Carl Moyer programs
 - Selects, monitors, and enforces projects

Program Benefits

- Emission reductions (first three years)
 - 14 tons of NOx per day
 - 800 pounds of PM per day
- Average cost-effectiveness below \$5,000/ton
- Greater than 50 % of the funds now allocated in Environmental Justice areas

Project Categories

- On-road Heavy-duty (trucks, buses)
- Off-road Equipment (construction, port)
- Agricultural Irrigation Pumps
- Electric Forklifts
- Ground Support Equipment
- Locomotives
- Marine Vessels
- Auxiliary Power Units
- **Alternative Fuel**
- **Alternative Diesel Fuel**

Types of Projects Funded



Criteria for Alternative Diesel Fuels Projects

- Certified / verified/ “confirmed” technology
- Maximum Cost-effectiveness - \$13,600/ton NO_x
- Incremental cost between alternative diesel and conventional diesel fuel
- Accepted on a case by case basis
- Funded with District’s matching funds

Alternative Diesel Formulations

- “Confirmed”:
 - Purinox™ with diesel oxidation catalyst
 - Minimum 50% PM and 20% NOx benefit
 - Off-Road Engines in Port Applications
- Interim Verification:
 - Purinox™
 - 63% PM and 14% NOx benefit
 - Applicable to On-Road and Off-Road

Other Funding Sources

- AB 2061, Lowenthal
 - \$500,000 to offset incremental operating cost of alternative diesel fuels for years 2000 - 2003
 - Criteria:
 - administered through Districts
 - \$0.25/gal incremental cost of fuel
 - minimum one year contract
 - Type of projects done at ports:
 - locomotive switchers
 - yard hostlers, side handlers, gantry cranes, forklifts

Other Funding Sources (cont'd)

- NOx / PM Emission Reduction Credit Program (Peaker Plants)
 - Approximately \$2,000,000 to offset incremental operating cost of alternative diesel fuels
 - Criteria:
 - 50% in the SCAB and 50% in SJV
 - \$0.25/gal incremental cost of fuel

Cost Effective Projects



New Tier 2?



Other Funding Sources

- AB2766 - DMV / Local District funds
- Port Funding
- U.S. EPA
- Clean Cities (DOE)

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