

Comparison of Emissions Benefits of CARB Diesel vs Federal Diesel

February 26, 2008

California Environmental Protection Agency



Air Resources Board

Agenda

- Introduction
- Background
 - AB679 (Calderon)
 - Legislative Intent
- Test Schedule
- Funding
- Future Discussion Topics
 - Candidate Fuel Selection
 - Determining Test Matrix
- Next Meeting

- Assembly Bill 679 (Calderon)
 - Requires ARB to convene a technical advisory panel to develop a test protocol
 - Test program shall measure the emissions benefits of CARB diesel fuel
 - Conduct test program
 - Report the results to the Senate Committee on Environmental Quality, the Senate Committee on Transportation and Housing, and the Assembly Committee on Transportation

- Legislative Intent
 - Federal ultralow may produce emissions benefits closer to those of CARB diesel
 - Thought to be especially significant for HD diesel engines employing new technology (e.g. EGR)
 - Higher cost of CARB diesel is a competitive disadvantage for CA trucking industry
 - Develop and implement test protocol to measure differences in NO_x & PM emissions between CARB diesel and Federal ultralow diesel

Test Schedule-Test Plan

- Emissions Testing – Scheduled to begin in Fall 2008
 - Test protocol development
 - Technical advisory panel, stakeholders
 - Currently soliciting input
 - Draft test protocol available for review at next meeting

Proposal Received from University of California, Riverside

“Assessment of the Emissions from the Use of California Air Resources Board Qualified Diesel Fuels in Comparison with Federal Diesel Fuels”

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University California Riverside-CE-CERT

Funding

- Test program currently funded for \$1M
 - Proposed scope:
 - Engine dyno – 3 test engines, multiple test cycles
 - Chassis dyno – 12 to 15 test vehicles, multiple test cycles
 - Fuels – 1 ‘representative’ CARB diesel, 2 Federal diesel ‘blends’
 - Emissions measurements – THC, NMHC, CO, CO₂, NO_x, PM
- Additional funding needed to expand scope
 - Additional test engines/vehicles, gas-phase toxic HC's, carbonyl compounds, polycyclic aromatic hydrocarbons, elemental and organic carbon and size-resolved PM

Currently Seeking In Kind Contributions

- Fuels
 - US EPA diesel fuel
- Test Engines
- Test Vehicles
- Other

Future Discussion Topics

- Range of fuel properties from commercially available Federal ultralow diesel fuel
- Determining vehicle/engine matrix for emissions testing
- Test cycle(s)

Next Meeting

- Tentatively scheduled for March, 2008

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