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Air Resources Board

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Edmund G. Brown Jr.
Governor

July 16, 2012

TO: California Commercial Fleet Owner Mail-Out #MSC 12-12

SUBJECT: REQUEST FOR VOLUNTARY PARTICIPATION IN CALIFORNIA AIR RESOURCES BOARD FUNDED RESEARCH ON DRIVE CYCLE AND EXHAUST EMISSIONS OF HYBRID TRUCKS

The Air Resources Board (ARB) is conducting a research program to determine typical usage patterns (drive cycle) and to compare the exhaust emissions performance of commercial hybrid and similar non-hybrid vehicles. To carry out this important research, ARB is seeking voluntary participation from selected hybrid truck fleet owners. ARB has contracted with the National Renewable Energy Laboratory (NREL) to perform the work described below in further detail.

All of us in California will benefit from the results of this study by improving the performance of commercial hybrid vehicles and estimating the real world benefits of advanced hybrid truck technology in California. This study will allow ARB to strategically match advanced propulsion systems to duty cycles to optimize for fuel economy, emissions reductions, and return on grant funding or fleet capital investment.

Specific project objectives are:

- Characterize in-use drive-cycles of various vocations from vehicles in normal commercial service.
- Conduct laboratory emissions testing on a sampling of vehicles to allow an accurate estimation of vocational emissions inventories and fuel consumption metrics.
- Validate the laboratory testing with fuel economy and exhaust emissions data collected from a sampling of the vehicles in-use and in real-world operation.
- Develop a methodology which will estimate fuel economy values based on specific vocational duty cycles. This will provide additional estimation capabilities for future deployments.
- Collect data to supplement an existing, non-fleet specific database for storing known and specific characteristics of vocational duty cycles that will allow for improved assessment of power train tradeoffs (e.g. energy storage capacity, component sizing).

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

California Commercial Fleet Owner
July 16, 2012
Page 2

Data collected by NREL will be made available to the participating fleets. ARB and NREL are only interested in the usage pattern and the performance of selected vehicles, ARB is not interested in individual vehicle identities; fleet identity will remain private. Data collected as part of this study will not be used by ARB for enforcement activities. More information may be found at: www.arb.ca.gov/msprog/aqip/aqip.htm .

Your vehicles are possible candidates for this important program. If you agree to voluntarily participate and your vehicles are selected, NREL will install a data logger in each vehicle which will automatically log GPS-based location data and basic vehicle and hybrid system operating parameters, such as engine speed and load, whenever the vehicle is in operation. Once installed, logger operation will be completely transparent to the driver and will not interfere with normal operations in any way. In addition, a small subset of vehicles will be also be tested for exhaust emissions in the laboratory or while the vehicle is in normal operation. If any of your vehicles are selected for this part of the study, and you agree to participate, your vehicle will be tested at the University of California, Riverside emissions laboratory, or while operating on-road with special test equipment installed by NREL. All testing will be conducted by professional engineers and technicians and at no charge to your fleet.

If you have any questions, you may contact Ms. Johanna Levine, Air Pollution Specialist, at (916) 324-6971 or email at jlevine@arb.ca.gov . Thank you for considering participation in this program.

Sincerely,

/s/

Robert H. Cross, M.S.M.E, P.E.
Chief, Mobile Source Control Division

cc: Ms. Johanna Levine
Air Pollution Specialist
Innovative Strategies Branch