

State of California
AIR RESOURCES BOARD

Notice of Public Availability of Modified Text

**PUBLIC HEARING TO CONSIDER ADOPTION OF REGULATIONS TO CONTROL
GREENHOUSE GAS EMISSIONS FROM MOTOR VEHICLES**

Public Hearing Date: September 23-24, 2004

Public Availability Date: October 19, 2004

Deadline for Public Comment: November 5, 2004

At a public hearing held September 23-24, 2004, the Air Resources Board (the Board or ARB) approved a new section 1961.1, title 13, California Code of Regulations (CCR), and approved amendments to sections 1900 and 1961, title 13, CCR and amendments to the "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" incorporated by reference in section 1961, title 13, CCR. These new regulations and amendments will establish requirements to control greenhouse gas emissions from motor vehicles, pursuant to Assembly Bill (AB) 1493.

The Board's action. At the conclusion of the hearing, the Board adopted Resolution 04-28, in which it approved the original proposal with modifications in four areas. The first modification, which specifies that the regulation may not take effect before January 1, 2006, was added by staff prior to the hearing to address the requirements of Health and Safety Code section 43018.5(b)(1). The text of this modification was contained in a document titled "Staff's Proposed Modifications to the Proposed Regulation Order, presented at the Board's September 23-24, 2004 hearing," which was distributed at the hearing and was Attachment C to the Resolution. Three additional modifications were suggested by staff in response to public comments made to staff after issuance of the original proposal. The Resolution directed the Executive Officer to incorporate the approved modifications into the proposed regulatory text, with such other conforming modifications as may be appropriate, and to make the modified text available for a supplemental comment period.

The approved modifications include specifying that the regulation may not take effect before January 1, 2006; allowing the Executive Officer to approve the use of lower upstream adjustment factors for hydrogen vehicles and electric vehicles, based on the increased use of cleaner sources of hydrogen or electricity production; and providing credit for plug-in hybrid electric vehicles in the first year of production.

In addition, in response to comments, staff is proposing to extend the life of credits earned to five years and increase the number of years manufacturers are given to make

up emission debits also to five years. These additional modifications will provide additional compliance flexibility to manufacturers while maintaining the overall stringency of the Board-approved proposal.

Also in response to comments, staff is proposing two modifications to the calculation of indirect emissions allowances for air conditioning systems. First, an adjustment factor is being proposed that will apply to systems equipped with CO₂ as the refrigerant. The adjustment factor offsets an inadvertent penalty that results when significant compressor downsizing occurs, which is only expected for CO₂-based air conditioning systems. Second, the inclusion of an adjustment factor magnifies the incentive to use a larger than necessary compressor in order to obtain a larger allowance. To minimize the incentive, an upper limit on the indirect emission allowances is being proposed.

A minor correction is also being proposed to an indirect emissions factor that is used for calculating the upstream greenhouse gas emission adjustment for alternative fuel vehicles. In reviewing the emissions factor, it was noted that an adjustment in the modeling exercise was not carried through. The proposed revision corrects this oversight.

Finally, a comment was made at the hearing that the lifetime vehicle miles traveled (VMT) used in staff's analysis was too high, thus overstating operating cost savings. Staff has revisited this issue and has determined that there is no need to revise the lifetime VMT used in the analysis. Additional explanation is available online at the ARB's Internet site for this rulemaking – <http://www.arb.ca.gov/regact/grnhsgas/grnhsgas.htm>

Modified text being made available. Section 44(a), title 1, California Code of Regulations required the ARB to mail the modifications to the originally proposed regulatory text, except changes that are nonsubstantial, to all persons who commented on the greenhouse gas proposal during the public comment period. Because of the large number of persons who must be notified, nonessential material has been eliminated from this mailing. Resolution 04-28 and its Attachment C, "Staff's Proposed Modifications to the Proposed Regulation Order, presented at the Board's September 23-24, 2004 hearing," are not attached to this notice, but are available online at the ARB's Internet site for this rulemaking identified in the preceding paragraph.

Attachment I to this notice contains the text of all of the proposed modifications to section 1961.1, title 13, CCR, and the modified portions of the "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," incorporated by reference in section 1961(d), title 13, CCR, along with explanations of the modifications. Only those portions of the text being modified are shown. The ARB's Internet site for this rulemaking identified above also contains the *complete* proposed texts of all of the

modified proposed regulations and incorporated documents, with all of the modifications clearly indicated. Printed copies are available from Ms. Adriann Medina, Mobile Source Control Division, telephone (626) 459-4405 or fax (626) 575-7012.

Additional supporting documents and information being made available. In accordance with Government Code section 11347.1, the staff has added to the rulemaking record the additional documents identified in Attachment II, which also describes how the public may inspect the documents. The most significant additional document is the “Addendum Presenting and Describing Revisions to: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider Adoption of Regulations to Control Greenhouse Gas Emissions from Motor Vehicles,” which was posted on the ARB’s Internet site for this rulemaking on September 10, 2004.

Comments and subsequent action. In accordance with section 11346.8 of the Government Code, the Board’s Resolution directed the Executive Officer to amend section 1961.1, title 13, CCR and the incorporated “California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles,” after making the text of the modifications available to the public for comment for a period of at least 15 days. The Board further provided that the Executive Officer shall consider such written comments regarding the modified text that may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if warranted.

Written comments on the proposed modifications may be submitted by postal mail, electronic mail, or facsimile as follows:

Postal mail is to be sent to:

Clerk of the Board
Air Resources Board
1001 I Street, 23rd Floor
Sacramento, California 95814

Electronic mail is to be sent to: grnhsgas@listserv.arb.ca.gov.

Facsimile submissions are to be transmitted to: (916) 322-3928.

In order to be considered by the Executive Officer, comments must be directed to the ARB in one of the three forms described above and received by the ARB by 5:00 p.m. on the last day for supplemental comment listed at the beginning of this notice. Only comments relating to the modifications to the text of the regulations or incorporated Test

Procedure document, or to the additional supporting documents and information, will be considered by the Executive Officer.

A handwritten signature in black ink, appearing to read "Bob Cross", with a long horizontal flourish extending to the right.

Robert H. Cross, Chief
Mobile Source Control Division

- Attachment I: *Proposed Modified Text of the Regulations to Control Greenhouse Gas Emissions from Motor Vehicles*
- Attachment II: *Additional Supporting Documents and Information*

ADDITIONAL SUPPORTING DOCUMENTS AND INFORMATION

The following additional supporting documents and information are available for public comment during the supplemental public comment period in the 2004 rulemaking adopting regulations to control greenhouse gas emissions from motor vehicles.

1. California Air Resources Board, *Addendum Presenting and Describing Revisions to: Initial Statement of Reasons For Proposed Rulemaking, Public Hearing to Consider Adoption Of Regulations to Control Greenhouse Gas Emissions From Motor Vehicles*, September 10, 2004
2. Hayhoe, K., Kalkstein, L., Moser, S., Miller, N., *Rising Heat and Risks to Human Health: Technical Appendix*, Union of Concerned Scientists, September 2004
3. *Our Changing Planet, The U.S. Climate Change Science Program for Fiscal Years 2004 and 2005*, A Report by the Climate Change Science Program and the Subcommittee on Global Change Research, A Supplement to the President's Fiscal Year 2004 and 2005 Budgets (PDF)
4. Email from Stephen Brueckner, AVL, to Steve Albu, CARB, October 6, 2004
5. Air Resources Board, *Upstream Criteria Pollutant Emission Reductions, 2020 and 2030*, October 6, 2004
6. Fiore, A.M., Jacob, D.J., and Field, B.D., *Linking Ozone Pollution and Climate Change: The Case for Controlling Methane*, Geophysical Research Letters, 29 (19), 25:1-4, 2002
7. Mayer, M., Wang, C., Webster, M., and Prinn, R., *Linking Local Air Pollution to Global Chemistry and Climate*, Geophysical Research Letters, 105 (D18), 22,869-22,896, 2000
8. United States Environmental Protection Agency, *Guidelines for Preparing Economic Analyses*, EPA 240-R-00-003, September 2000
9. Ebi, K.L., *Climate Change and Human Health*, presentation given by K. Ebi with Exponent Consulting to the California Air Resources Board at its July 22, 2004 Board Hearing
10. Cayan D., *Climate Change in California: a threat to be contended with*, presentation given by Dr. Cayan with Scripps Institution of Oceanography to the California Air Resources Board at its July 22, 2004 Board Hearing
11. Sperling, D., et. al., *Analysis of Auto Industry and Consumer Response to Regulations and Technological Change, and Customization of Consumer Response Models in Support of AB 1493 Rulemaking*, prepared by the Institute of Transportation Studies, University of California, Davis, Contract 02-310, June 2004

12. Burke, A., Abeles, E., and Chen, B., *The Response of the Auto Industry and Consumers to Changes in the Exhaust Emission and Fuel Economy Standards (1975-2003): A Historical Review of Changes in Technology, Prices, and Sales of Various Classes of Vehicles*, prepared by the Institute of Transportation Studies, University of California, Davis, Contract 02-310, June 2004
13. Kurani, K.S., and Turrentine, T., *Analysis of Consumer Response to Automobile Regulation and Technology Change in Support of California Climate Change Rulemaking*, prepared by the Institute of Transportation Studies, University of California, Davis, Contract 02-310, June 2004
14. Chen, B., and Sperling, D., *Analysis of Auto Industry and Consumer Response to Regulations and Technological Change, and Customization of Consumer Response Models in Support of AB 1493 Rulemaking: Case Study of Light Duty Diesel Vehicles in Europe*, prepared by the Institute of Transportation Studies, University of California, Davis, Contract 02-310, June 2004
15. Chen, B., Abeles, E., Burke, A., and Sperling, D., *Analysis of Auto Industry and Consumer Response to Regulations and Technological Change, and Customization of Consumer Response Models in Support of AB 1493 Rulemaking: Effect of Emission Regulation on Vehicle Attributes, Cost, and Price*, prepared by the Institute of Transportation Studies, University of California, Davis, Contract 02-310, June 2004
16. Abeles, E., Burke, A., Chen, B., and Sperling, D., *Automaker Response to Passive Restraint Regulation with Respect to Actions, Economics, Technology and Marketing: Airbag Case Study for the Analysis of Auto Industry and Consumer Response to Regulations and Technological Change in Support of AB 1493 Rulemaking*, prepared by the Institute of Transportation Studies, University of California, Davis, Contract 02-310, March 2004
17. Bunch, D.S., *California Air Resources Board-Institute of Transportation Studies (CARBITS) Vehicle Market Microsimulation Model for California: Documentation*, prepared by the Institute of Transportation Studies and the Graduate School of Management, University of California, Davis, Contract 02-310, June 2004
18. Wenzel, T. and Ross, M., *The Effects of Vehicle Model and Driver Behavior on Risk*, draft accepted for publication in Accident Analysis and Prevention
19. Shulock, Chuck, personal communication with Dr. Andy Frank, U.C. Davis, October 5, 2004
20. California Energy Commission, *Renewables Portfolio Standard Eligibility Guidebook*, August 2004

21. State of California, Consumer Power and Conservation Financing Authority, Energy Resources Conservation and Development Commission, Public Utilities Commission, *Energy Action Plan*, 2003
22. Huron, G., *Emissions Testing of Ten Vehicles Using the FTP Driving Cycle*, Southwest Research Institute, November 3, 2003
23. Norbeck, J., Durbin, T. and Truex, T., *Measurement of Primary Particulate Matter Emissions from Light-Duty Motor Vehicles*, Center for Environmental Research and Technology, University of California, Riverside, December 1998
24. Knutson, T. and Tuleya, R., *Impact of CO₂-Induced Warming on Simulated Hurricane Intensity and Precipitation: Sensitivity to the Choice of Climate Model and Convective Parameterization*, *Journal of Climate*, 15 September 2004
25. Air Resources Board and Department of Consumer Affairs/Bureau of Automotive Repair, *Evaluation of the California Enhanced Vehicle Inspection and Maintenance (Smog Check) Program, Draft Report to the Inspection and Maintenance Review Committee*, April 2004
26. Air Resources Board, *Estimation of Average Lifetime Vehicle Miles of Travel*, October 2004
27. *Impressive 2004 Lineup Validates GM Powertrain's Strategy of Fast, Cost-Effective Responses to Changing Market Trends*, 2004 Product Information, GM Media website,
http://www.media.gm.com:8221/division/2004_proinfo/powertrain/powertrain_overview.html

All of these documents are available for inspection during normal business hours at the Air Resources Board offices, 1001 I Street, Sacramento CA 95812; contact either Ms. Amy Whiting at (916)-322-6533 or Ms. Alexa Malik at (916) 322-4011.