

State of California
AIR RESOURCES BOARD

Resolution 05-15

February 24, 2005

Agenda Item No.: 05-2-2

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the "Board") to adopt standards, rules, and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in section 43000 of the Health and Safety Code, the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state and, in sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility of systematically addressing the serious air pollution problem caused by motor vehicles;

WHEREAS, sections 43013, 43101, and 43104 of the Health and Safety Code authorize the Board to adopt motor vehicle emission standards, in-use performance standards, and test procedures which it finds to be necessary, cost-effective, and technologically feasible;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reductions possible from motor vehicle sources to accomplish the attainment of state ambient air quality standards by the earliest practicable date;

WHEREAS, section 43806 of the Health and Safety Code directs the Board to adopt emission standards and procedures applicable to new engines used in publicly owned and privately owned public transit buses;

WHEREAS, the United States Environmental Protection Agency has promulgated emission standards and programs to reduce emissions from urban transit buses, and those standards and programs can be found in title 40 of the Code of Federal Regulations, parts 85 and 86;

WHEREAS, section 43701(b) of the Health and Safety Code requires the Board to adopt regulations that require heavy-duty diesel vehicles to utilize emission control equipment and alternative fuels to reduce emissions to the greatest extent feasible;

WHEREAS, section 39667 of the Health and Safety Code directs the Board to achieve the maximum possible reduction in public exposure to toxic air contaminants by establishing emission standards for vehicular sources, including new and in-use motor vehicles and fuels;

WHEREAS, on August 27, 1998, following extensive scientific review and public hearings, and consistent with the conclusions of the Scientific Review Panel and the Office of Environmental Health Hazard Assessment, the Board formally identified particulate matter (PM) emissions from diesel-fueled engines as a toxic air contaminant and on September 28, 2000, approved a plan to reduce risk from diesel pollution by reducing harmful PM emissions from diesel engines;

WHEREAS, the Board, through the adoption of Resolution 98-49 on September 24, 1998, called on state, local, and federal agencies to join together to "clean the fleet," supported immediate and continuing efforts to replace diesel-fueled school and public urban transit buses with low-emission alternative-fuel buses, including the provision of necessary infrastructure and technical training, and directed the staff to distribute this resolution to multiple affected parties;

WHEREAS, at a public hearing on February 24, 2000, the Board adopted Resolution 00-2 to achieve near-term and long-term emission reductions from urban transit buses through a multifaceted fleet rule designed to reduce emissions of oxides of nitrogen (NOx) and diesel PM by mandating a lower fleet average of NOx emissions; by requiring engines to be retrofitted with devices to reduce diesel PM emissions by at least 85 percent; by requiring engine manufacturers to significantly reduce the allowable emissions from certified bus engines; by requiring that transit agencies switch to low sulfur (less than 15 parts per million) diesel fuel; and by requiring transit agencies to purchase specified percentages of zero emission buses;

WHEREAS, the Board, through Resolution 00-2, directed the Executive Officer to work with transit agencies during implementation of the regulations, including provisions of the fleet rule, and to report to the Board regularly on transit agencies' progress in implementing the regulations;

WHEREAS, at a public meeting on September 20, 2001, the Board adopted Resolution 01-31 directing the Executive Officer to continue development of a test procedure for the evaluation of hybrid electric bus emissions and to report back to the Board by late 2002 on progress in this effort;

WHEREAS, at a public hearing on October 24, 2002, the Board adopted Resolution 02-30 revising the diesel PM reduction program to ensure that every transit agency fleet will have significantly lower in-use diesel PM emissions by 2007 or 2009, depending on fuel path; removing the prohibition for transit agencies on the diesel path from purchasing alternative-fueled engines with NOx emissions in excess of 0.5 grams per brake-horsepower hour (g/bhp-hr) to encourage the use of alternative fuel; adopting new interim certification procedures for hybrid-electric vehicles in the urban bus and heavy-duty vehicle classes to account for the emission benefits of the hybrid-electric bus technology; and making other changes as necessary to ensure emission reductions from urban buses operated by transit agencies;

WHEREAS, at a public hearing on June 24, 2004, the Board adopted Resolution 04-19 revising the zero emission bus demonstration project requirements and timetable; and adding provisions that would allow manufacturers to sell diesel hybrid-electric buses certified to a 2004-2006 model year exhaust emission standard of 1.8 g/bhp-hr NOx and 0.01 g/bhp-hr PM and that would allow transit agencies on the diesel path to purchase diesel hybrid electric buses so long as they satisfy requirements to reduce NOx emissions from their other buses;

WHEREAS, the California Environmental Quality Act and Board regulations require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts;

WHEREAS, the Board has considered the impact of this proposed regulatory action on the economy of the state;

WHEREAS, the ARB staff conducted public workshops on April 3, 2003; December 2 and 3, 2003; May 17 and 18, 2004; and October 7 and 8, 2004; as well as public outreach meetings and several focused stakeholder meetings throughout the rulemaking process, in order to include the public and affected stakeholders in the process for regulatory development;

WHEREAS, a staff report and draft regulatory language were published and made available to the public for at least 45 days prior to this Board hearing;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code;

WHEREAS, based on the information in the public record, including the staff report and testimony provided at the hearing, the Board finds that:

1. Diesel heavy-duty vehicles operated by transit agencies, on a per vehicle basis, contribute relatively high emissions of oxides of nitrogen (NOx) and particulate matter (PM) and operate in the more heavily congested areas where air quality is critical and direct exposure to diesel particulates occurs for large numbers of people;
2. Excessive diesel PM emissions are a significant source of toxic air contaminants, comprising approximately 70 percent of all toxic air contaminant emissions in California;
3. There are approximately 4,000 heavy-duty vehicles operated by transit agencies in California that are not currently regulated under the existing Fleet Rule for Transit Agencies which will be included in that regulation by this action;

4. Without these regulation amendments, diesel PM emissions from these transit fleet vehicles operated by transit agencies are expected to be 133 pounds per day in 2010 and 77 pounds per day in 2020; and NOx emissions are expected to be 3.47 tons per day in 2010 and 0.81 tons per day in 2020.
5. As a result of these regulation amendments, diesel PM emissions from these transit fleet vehicles operated by transit agencies are expected to decrease by 43 pounds per day in 2010 and 47 pounds per day in 2020; and NOx emissions are expected to decrease by 380 pounds per day in 2010 and 620 pounds per day in 2020.
6. The adoption of this proposed measure would achieve up to 43 percent reduction in diesel PM emissions and 29 percent reduction in NOx emissions from transit fleet vehicles in 2010, and up to 81 percent reduction in diesel PM emissions and 83 percent reduction in NOx emissions in 2020, relative to the 2000 baseline; which will help California achieve the goals adopted in 2000 to reduce diesel PM emissions;
7. Other pollutants that will be reduced as a result of this regulation include 80 pounds per day of hydrocarbon (HC) emissions and 80 pounds per day of carbon monoxide (CO) in 2010; and 140 pounds per day of HC emissions and 100 pounds per day of CO in 2020;
8. This rule is a cost-effective mechanism of preventing premature deaths: the reduction in ambient NOx and PM levels resulting from this rule will prevent an estimated 11 premature deaths from 2005 through 2020, at a cost per premature death prevented of \$1.5 to \$2 million, as compared to the U.S. EPA's present value of avoiding one death at \$4 to \$6 million;
9. The estimated costs of the proposed regulatory amendments are within the range of recently adopted regulations at \$0.90 to \$1.90 per pound of NOx and \$42 to \$88 per pound for PM; and
10. No alternative considered would be more effective, or equally effective and less costly, in achieving the regulatory objectives sought than the proposed amendments.

WHEREAS, pursuant to the requirements of the California Environmental Quality Act and the Board's regulations, the Board further finds that the amendments will achieve reductions of approximately 620 pounds per day of oxides of nitrogen, 47 pounds per day of diesel PM, 140 pounds per day of hydrocarbon and 100 pounds per day of carbon monoxide emissions in 2020, thereby providing an air quality benefit.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby approves the amendments to sections 1956.1, 1956.2, 1956.3, 1956.4, 2020, and 2021, and the

adoption of sections 2023, 2023.1, 2023.2, 2023.3, and 2023.4, title 13, California Code of Regulations, as set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to evaluate whether modifications to the approved amendments and new regulations are appropriate with respect to (1) the flexibility accorded to the Executive Officer to provide exemptions in the case of financial hardship experienced by transit agencies, particularly those with 30 or more urban buses and transit fleet vehicles, and (2) the impact under the regulations from a transit agency's decision to increase the size of its cutaways to provide better service to its customers.

BE IT FURTHER RESOLVED that, if the Executive Officer determines that modifications to the regulations in the two areas listed above are not appropriate, she is directed to adopt the regulatory text set forth in Attachment A hereto.

BE IT FURTHER RESOLVED that, if the Executive Officer determines that modifications to the regulations in one or both of the two areas listed above are appropriate, the Executive Officer is directed to incorporate the modifications into the approved regulatory text, with such other conforming modifications as may be appropriate, and then to make the modified regulatory language available for supplemental public comment for a period of 15 days or more; after considering any written comments regarding the modified text that are submitted during this period, the Executive Officer shall adopt the modified regulatory text after making further modifications as may be appropriate in light of the comments received, or present the regulations to the Board for further consideration if she determines that this is warranted.

BE IT FURTHER RESOLVED that the Executive Officer is directed to work with interested parties on other issues raised by commenters in this rulemaking, and to report back to the Board on any additional regulatory amendments she deems would be appropriate for a future rulemaking.

BE IT FURTHER RESOLVED that the Board finds that the California emission standards and test procedures as approved herein will not cause the California requirements to be inconsistent with section 202(a) of the Clean Air Act and raise no new issues affecting previous waiver determinations of the Administrator of the Environmental Protection Agency pursuant to section 209(b) of the Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall, upon adoption, forward the amended regulations to the U.S. Environmental Protection Agency with a request either for a waiver of federal preemption pursuant to section 209(b) of the Clean Air Act, or a confirmation that the amendments are within the scope of previous waivers.

I hereby certify that the above is a true and correct copy of Resolution 05-15, as adopted by the Air Resources Board.

Lori Andreoni, Clerk of the Board

Resolution 05-15

February 24, 2005

Identification of Attachment to the Resolution

Attachment A: Proposed Amendments to the Fleet Rule for Transit Agencies, and New Requirements for Transit Fleet Vehicles as included in the Initial Statement of Reasons released January 7, 2005.