

State of California  
AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking,  
Including Summary of Comments and Agency Responses

PUBLIC HEARING TO CONSIDER THE ADOPTION OF THE PROPOSED  
Modifications to the Fleet Rule for Transit Agencies and New Requirements for Transit Fleet  
Vehicles

Public Hearing Date: February 24, 2005  
Agenda Item No.: 05-2-2

**I. INTRODUCTION**

On January 7, 2005 the Air Resources Board (ARB or the Board) published a Notice of Public Hearing that described the proposed modifications to the regulations described therein and invited public comment on the proposal. The Staff Report: Initial Statement of Reasons for Rulemaking titled "Proposed Modifications to the Fleet Rule for Transit Agencies and New Requirements for Transit Fleet Vehicles," ("Staff Report"), was made available to the public on January 7, 2005. This document included an underline/~~strikeout~~ version of the regulatory text. A complete description of the proposed modifications and their rationale is contained in the Staff Report. This document and the January 7, 2005 Notice are incorporated herein by reference.

At the public hearing held on February 24, 2005, the Board considered the proposed regulations and received written and oral comments on the regulatory proposal. At the conclusion of the hearing, the Board adopted the regulation as initially proposed by staff, and directed the Executive Officer to evaluate whether other changes to the approved amendments and new regulations were appropriate. After evaluating comments, the Executive Officer has determined that no substantive changes were needed.<sup>1</sup>

This Final Statement of Reasons summarizes the Staff Report and regulatory amendments and also includes a summary of the comments the Board received on the proposed modifications during the formal rulemaking process and ARB's responses to those comments.

**Background and Summary**

In February 2000 the Board took steps to reduce emissions from public transportation by establishing a new fleet rule for transit agencies and more stringent emission standards for new urban bus engines and vehicles. The regulations were designed to reduce oxides of nitrogen

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<sup>1</sup> The Final Regulation Order submitted to the Office of Administrative Law as an attachment to the Form 400 reflected a few nonsubstantial corrections to the Proposed Regulation Order adopted by the Board February 24, 2005. All sections affected by this rulemaking are in title 13, California Code of Regulations. The nonsubstantial corrections include revising the lettering in section 2023.1(d)(4) to enhance clarity; adding the Authority and Reference note for new section 2023.2, correcting fonts and formatting, and expanding the explanation of the use of underline and strikeout.

(NO<sub>x</sub>) and particulate matter (PM) emissions from urban buses. The rule also promoted advanced technologies by adopting zero-emission bus demonstration and acquisition requirements for larger transit agencies.

Diversification in public transit services has led to the increased use of buses that are not covered in the 2000 regulation. California transit agencies today operate approximately 10,100 urban buses that are covered by the 2000 regulation. In addition, transit agencies operate approximately 5,400 other buses and trucks not covered by the original rulemaking. These vehicles are fueled by gasoline, diesel and alternative fuels.

**Transit Fleet Vehicle Requirements.** Of the 5,400 buses and trucks not covered by the 2000 regulation, we estimate that 4,100 are fueled by diesel fuel or alternative fuels. The number of buses and trucks not covered by the 2000 regulation are expected to increase as California's population and density increase, thus requiring both smaller and larger heavy-duty buses to meet both neighborhood and commuter service needs. These vehicles are defined in this regulation as "transit fleet vehicles."

The amended Fleet Rule for Transit Agencies requires that transit agencies to reduce diesel PM and NO<sub>x</sub> emissions from their diesel and alternative-fueled transit fleet vehicles on a specified phased-in schedule.

**Commuter Service Bus.** This regulation defines a "commuter service bus," in response to requests from transit agencies for more clarity regarding the status of this type of bus. The new definition of "commuter service bus" codifies existing guidance in place since 2001. A "commuter service bus" is now defined as a "transit fleet vehicle." A bus that does not meet this new definition is classified as an urban bus. The definition does not expand the scope of existing ARB guidance and thus maintains the integrity of previously adopted emission reductions from urban buses.

**Newly Formed Transit Agency.** A newly-formed transit agency is now defined as either "a successor under new ownership of an existing transit agency" or "a new agency providing new service in a new area." The regulation now includes deadlines and criteria for compliance with emission reduction requirements for a new transit agency formed after 2001.

**Urban Bus Requirements for PM Reduction.** This regulation amends the PM reduction requirements adopted in 2002 to allow for fleet growth after 2007 (diesel-path agencies) or 2009 (alternative fuel-path agencies). The final particulate emissions reduction requirement is the particulate standard of 0.01 grams per brake horsepower-hour multiplied by the number of urban buses, or 15 percent of the January 1, 2002 total particulate emissions, whichever is greater.

**2004 to 2006 Diesel Hybrid-Electric Urban Bus Engine Exhaust Emission Standards.** This regulation corrects an error of omission made in the 2004 regulation on diesel hybrid electric bus engine exhaust emissions standards. The 2004 regulation adopted only particulate and NO<sub>x</sub> standards for diesel hybrid electric buses manufactured for the 2004 to 2006 model years. This regulation adds specific engine exhaust emission standards for non-methane hydrocarbon (NMHC) (0.5 g/bhp-hr); for carbon monoxide (CO) (15.5 g/bhp-hr); and removes the formaldehyde requirement.

**Renumbering Sections for the Fleet Rule for Transit Agencies.** The existing Fleet Rule for Transit Agencies is located with engine emission standards in title 13, CCR, sections 1956.2-

1956.4. These sections for the Fleet Rules for Transit Agencies are moved to co-locate them with recently adopted sections for rules controlling diesel emissions from existing in-use engines or fleets. Minor modifications of title 13, CCR, sections 1956.1, 2020, and 2021 were made to correct referencing sections and definitions. Sections 1956.1(a)(11) and 1956.1(b) were corrected after the January 7, 2005 publication for missed referencing language in the original publication.

## **Economic And Fiscal Impacts**

In developing the proposed modifications, ARB staff evaluated the potential economic impacts on private persons and businesses. The Board has determined that the proposed modifications would have little or no impact on the private sector as the direct costs impact only public transit agencies. Some transit agencies have contracts with private companies and nonprofits to provide all or part of their transit services, but the transit agency is the entity responsible for compliance. Any costs to these private companies and nonprofits are expected to be recovered through their contracts.

The Board expects that individuals may incur minimal direct costs as a result of this regulation. Transit fares are set based on a variety of factors, including public price sensitivity as well as transit agency expenditures, so there is not a direct relationship between transit agencies' financial needs and individual fares. Transit agencies have stated to us repeatedly that fares are based on a delicate balance of what riders will pay and what will drive them away. In addition, transit agencies typically offer monthly passes and discounted ticket books as well as individual fares, each of which offers a different price per ride, so it is virtually impossible to predict the proportion that fares may increase in response to a given capital requirement.

No other cost impacts on the private sector are expected. California businesses may be positively affected by slight increases in sales, and California employment may be positively affected by slight increases in demand for mechanics and other trades.

The proposed regulatory modifications would have a fiscal impact on public transit agencies, and on transportation planning agencies and commissions statewide. This regulation does not require a new program or an expanded level of service from existing programs, but simply affects their methods for providing existing services. For the fiscal year 2004, staff expects no impact on local government as the rule will not take effect until FY 2005. Because the earliest effective implementation deadline is December 31, 2007, local transit agencies in California will not have to expend funds during the current fiscal year or the two subsequent fiscal years. While transit agencies will not be required by the implementation schedule to purchase equipment for FY 2004-2006, they may elect to set money aside in advance of expected delivery of new equipment, or to begin implementation in advance of the first deadline of December 31, 2007. Because this regulation sets a performance-based standard, local agencies have the flexibility to develop their annual budgets as best suits them when planning for these regulatory requirements.

The fiscal effect is based on the likelihood that public agencies will have to add equipment to vehicles already in their fleets, and/or that new vehicles, when purchased, may cost more than higher-emitting vehicles. Public agencies should already have plans for replacing vehicles at the end of their useful lives; the fiscal effect of this regulation is the difference (if any) between lower vs. higher-emitting vehicles. The estimated direct costs that will be required to comply and

achieve emissions reductions will be \$12.8 million to \$26.7 million overall, with an average estimate of just under \$19 million (in 2005 dollars) over the lifetime of the regulation.

**Consideration Of Alternatives.** For reasons set forth in the Initial Statement of Reasons, in staff's comments and responses at the hearing, and in this Final Statement of Reasons, the Board has determined that no alternative considered by the agency, or that has otherwise been identified and brought to the attention of the agency, would be more effective in carrying out the purposes for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

## II. SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSES

At the February 24, 2005, hearing, oral testimony was received from:

Joshua Shaw, California Transit Association (Cal Transit)  
Gene Walker, California Transit Association (Cal Transit) and Golden Gate Bridge Highway & Transportation District (GGT)\*  
Henry Hogo, South Coast Air Quality Management District (SCAQMD)  
Peter Spaulding, California Association for Coordinated Transportation (Cal/ACT)\*  
Joseph Kubsh, Manufacturers of Emission Controls Association (MECA)\*  
Bonnie Holmes-Gen, American Lung Association of California (Health and Environment Coalition)\*

The people listed above with asterisks also submitted written comments. In addition, written comments were received by the hearing date from the following persons:

Thomas Webb, BAE Systems (BAE)  
Jerry Roane  
Paul C. Jablonski, San Diego Metropolitan Transit System (SDMTS)  
Keith E. Martin, Yuba-Sutter Transit (YS)  
Dale McKinnon, Manufacturers of Emission Controls Association (MECA)  
Dawn Friest, Engine Manufacturers Association (EMA)  
Harry A. Krug, California Air Pollution Control Officers Association (CAPCOA)  
Steven T. Wallauch, Lynn M. Suter & Associates on behalf of Motor Coach Industries (MCI)  
Diane Bailey, Natural Resources Defense Council (Health and Environment Coalition)  
Bonnie Holmes-Gen, American Lung Association of California (Health and Environment Coalition)  
Todd Campbell, Coalition for Clean Air (Health and Environment Coalition)  
Don Anair, Union of Concerned Scientists (Health and Environment Coalition)  
Kathryn Phillips, California Clean Air for Life Campaign, Environmental Defense (Health and Environment Coalition)  
David Lighthall, Relational Culture Institute (Health and Environment Coalition)  
Karen Brunton, Steven & Michele Kirsch Foundation (Health and Environment Coalition)  
Derek G. Shendell, Community Action to Fight Asthma Initiative (Health and Environment Coalition)  
Kate Lorenzen, Sonoma County Asthma Coalition (Health and Environment Coalition)  
Mary-Michal Rawling, Merced/Mariposa County Asthma Coalition (Health and Environment Coalition)  
Tiffany Schauer, Our Children's Earth (Health and Environment Coalition)  
Anne Kelsey Lamb, Regional Asthma Management and prevention (RAMP) Initiative (Health and Environment Coalition)

Set forth below is a summary of each comment, objection, or recommendation made regarding the specific regulatory action proposed, together with the ARB response to each objection or recommendation, and the reasons for making no change. The comments have been grouped by topic wherever possible. Comments not involving objections or recommendations specifically directed towards the rulemaking or to the procedures followed by ARB in this rulemaking are not summarized below.

## **SUPPORT**

1. **Comment** (BAE, CAPCOA, Health and Environment Coalition, GGT, MECA, MCI, SCAQMD): Staff received several comments in support of all or parts of the proposed regulation.

**Agency Response:** Staff appreciates these comments and looks forward to continuing to work with industry and environmental leaders to promote the overall improvement of air quality in the state of California.

## **AUTHORITY**

2. **Comment** (EMA): The proposed rule is unsound from a legal perspective in that it applies to “new” and “non-new” vehicles. Therefore ARB must provide sufficient lead time and stability for new engine standards and it must obtain a waiver of federal preemption under section 202(a) of the Clean Air Act.

**Agency Response:** Staff disagrees with this comment. Under federal law, states are generally preempted from adopting standards for new motor vehicles and new motor vehicle engines. California enjoys the ability, if needed, to get a waiver from that preemption. However, in this case, the regulations affect in-use, non-new vehicles. There is no federal preemption that would affect ARB's ability to regulate in this area.

## **SCOPE AND APPLICABILITY**

3. **Comment** (Cal/ACT, YS): The applicable gross vehicle weight rating (GVWR) of the transit fleet vehicles should be increased from 8,500 to 14,000 pounds to be consistent with the public fleet and Solid Waste Collection Vehicle rules.

**Agency Response:** Staff disagrees with this comment. Staff analyzed the population of vehicles owned or operated by transit agencies that were not urban buses and determined that approximately 15 percent of the diesel-powered vehicles subject to this rule are between 8,500 and 14,000 pounds GVWR. Staff believes that we need the emission reductions from of the all heavy-duty engines owned or operated by transit agencies to meet our risk reduction plan and clean air goals.

## **COST**

4. **Comment** (SDMTS): SDMTS believes the cost of this rule is too high. They estimated that the potential cost of this regulation is \$5 million based on retrofitting their small to medium-sized buses with particulate traps at \$14,500 per trap and converting to alternative fuel commuter services buses at a \$75,000 to \$100,000 per bus premium over diesel buses. They also evaluated replacing these vehicles with gasoline buses. They estimate that this would have an adverse fuel cost impact of \$400,000 per year.

**Agency Response:** Staff disagrees with the details and overall conclusion of SDMTS's cost analysis and believes that its cost analysis, as found in the Staff Report, is a correct and conservative estimate of the implementation costs for this regulation. For example, staff found that SDMTS overestimated costs of particulate traps. From current surveys, staff estimates that the cost of an installed particulate filter is \$8,500. On the other hand, gasoline vehicles are not regulated by this rule therefore staff did not calculate the cost of

operating gasoline-fuelled vehicles. To help SDMTS to better understand the rule, staff met with SDMTS management to discuss the details of their analysis and to answer their questions. Staff provided SDMTS with the options available through new purchases and extensions. Staff discussed the extensions for low mileage vehicles and unavailable technology. SDMTS had also assumed that they would be required to convert their commuter service buses to alternative fuel, and staff explained that this is not required in this rule.

### **COMMUTER SERVICE BUS DEFINITION**

5. **Comment** (Cal/ACT, YS): Staff should change the definition of commuter service bus so emission requirements are based only on the engine classification and not on an arbitrary number of stops made in a day. At a minimum, the number of stops allowed for a commuter service bus should be ten per schedule, not ten per day. A transit fleet vehicle (urban, non-urban or other) should be based solely on whether it has a heavy, heavy duty engine and not on some arbitrary number of stops that it might make each day.

**Agency Response:** Staff disagrees with this comment. The proposed definition was developed with concurrence of a majority of transit agencies and is a definition that does not compromise air quality by maintaining the limited use of these buses, which have higher engine exhaust emissions than urban buses, within cities.

As staff began implementing the then-newly finalized Fleet Rule for Transit Agencies in 2001, we addressed the question of the definition of an urban bus as it applied to buses used in commuter service. Some transit agencies told ARB that they preferred or needed to use a large bus configured more like a charter bus on commuter service routes and they felt that these buses should not be classified as urban buses. Staff researched the issue and responded with a letter dated December 20, 2001, that set forth guidance to transit agencies. Staff determined that a bus used for commuter service is an urban bus when its duty cycle is similar to that of a typical urban bus for at least that part of its travel within a city or metropolitan area. In other words, if a bus operates with more than a small number of drop-offs and pick-ups in a city or metropolitan area for part of its route, then ARB determined that the bus would be classified as an urban bus.

During the public workshops leading up to this rulemaking, transit agencies came to ARB and asked for a clearer definition for a commuter service bus. After several meetings with transit agencies and our own evaluation of urban buses in commuter service, staff developed the current definition of Commuter Service Bus. The new definition of commuter service bus codifies existing guidance and does not expand the usage of this category of bus. The new definition thus maintains the integrity of previously adopted emission reductions from urban buses.

### **PARTICULATE MATTER REQUIREMENTS**

6. **Comment** (GGT): The regulation needs to provide a mechanism to allow for an increase in the baseline particulate emissions to allow for expansion of bus fleets.

**Agency Response:** Staff agrees with this comment and included in the regulation a mechanism to allow for growth in transit agency fleets. The final particulate emissions reduction requirement for both urban bus and transit fleet vehicle is based on the lowest achievable particulate emission standard (0.01 grams per brake horsepower-hour) multiplied

by the number of urban buses or the final reduction percentages mandated by the rule, whichever is greater. Between the first implementation dates and the final dates, it is true that a transit agency could have difficulty growing its fleet significantly, but staff evaluated the purchase options available for transit agencies and determined that this would not be an issue. If this becomes a problem for a transit agency, it should contact staff immediately.

## **EXEMPTIONS**

7. **Comment** (SDMTS): The regulation should exempt vehicles within three years of retirement, or at a minimum, one year as with the solid waste collection vehicle rule.

**Comment** (YS, Cal/ACT): The regulation should exempt vehicles one year from retirement, as provided in the public and solid waste collection vehicle rules.

**Agency Response:** Staff disagrees with these comments. The Fleet Rule for Transit Agencies is a fleet reduction requirement and is not a vehicle-by-vehicle emission reduction requirement. The Solid Waste Collection Vehicle Rule, in contrast, is a vehicle-by-vehicle rule. It exempts trucks within one year of retirement so that the owner is not required to install equipment on a truck that will be retired after only one year (title 13 CCR section 2021 et seq.). The Public Fleet Rule to which the commenter refers has not been adopted yet. However, the fleet rule for transit agencies is based on an approach that provides the flexibility for each transit agency to design the best approach for its fleet to reduce emissions. Transit agencies generally know their fleet turnover plans years in advance and thus can plan for fleet-wide emission reductions with a greater certainty than can a private company.

Exempting the oldest vehicles, or those vehicles nearest retirement, would reduce much of the benefit from this rule. In addition, staff already took vehicle turnover into account when designing the emission reduction deadlines and found that many old buses have been kept well beyond their useful lives and thus a goal of the rule is to force turnover of these oldest buses.

8. **Comment** (SDMTS): The rule should include an exemption for older vehicles that are used sparingly to meet high demand periods. The urban bus requirements have an exemption for Emergency Contingency Vehicles (ECV), but there is no equivalent for transit fleet vehicles. Limitations could be placed on the annual mileage accumulated by these vehicles, e.g., less than 10,000 miles per year.

**Agency Response:** Staff agrees with this comment to the extent that staff did include a definition and exemption for a "Low Mileage Vehicle" for non-revenue vehicles operating for fewer than 1,000 miles per year (similar to the ECV in the urban bus requirements). Staff disagrees, however, with the general request for a blanket exemption for older buses that are used to meet high demand periods. Buses used during high demand periods make significant contributions to air pollution within our cities and thus need to have their emissions reduced in the mandated overall fleet-wide emissions reductions

9. **Comment** (Cal/ACT, YS): The financial hardship exemption should be allowed for transit agencies of any size fleet (not the current limit of 30 or fewer transit fleet vehicles and urban buses).

**Agency Response:** Staff disagrees with this comment and believes that the financial hardship provision is adequate for the needs of transit agencies. The financial hardship extension was added during the October 2002 modification of the regulation. Since that time, no transit agency has requested a financial hardship exemption or delay. The purpose of the extension is to assist smaller transit agencies that may not have the financial resources or access to federal funding that larger transit agencies in urbanized areas have. In the current regulation, staff increased the fleet size (from 20 to 30) to account for the addition of transit fleet vehicles. Currently, all rural and small community fleets that staff are aware of have access to this exemption.

Transit agencies receive 80 to 83 percent of the funding from federal funds and the rest is made up of local and State funds. Staff will work with transit agencies and if staff finds that many transit agencies are having financial difficulties in complying with the new regulation, we can revisit this exemption in another rulemaking.

10. **Comment** (Cal/ACT): We would like to see more discretion in this regulation for the executive office to grant variances or exemptions on a case-by-case basis.

**Agency Response:** Staff disagrees; staff evaluated the current extensions and available technology. Staff believes that the extensions and exemptions in the rule provide sufficient flexibility and authority for the Executive Officer. In addition, staff provides the Board with frequent updates on the regulation and has amended the regulation when it has been shown to be technically not feasible. For example, the October 2002 modifications changed the particulate matter reduction method from an individual bus to a fleet reduction as the result of no technology available to reduce particulate matter from pre-1994 model year buses.

11. **Comment** (Jerry Roane): Regulation should require that catalytic converters for diesel engines be replaced at 75,000-mile intervals as part of the implementation of this rule.

**Agency Response:** Staff appreciates the Commenter's concerns about durability and effectiveness of certain diesel emission control strategy equipment. However, these concerns are beyond the purview of this regulation. Verification of diesel emission control strategy equipment (which includes durability and warranty requirements) is regulated under title 13 CCR section 2700 and following. In addition, ARB inspects heavy-duty diesel vehicles for excessive smoke and is currently developing an in-use compliance program for heavy-duty diesel vehicles.