

State of California  
AIR RESOURCES BOARD

**Notice of Public Availability of Modified Text**

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE PUBLIC TRANSIT BUS  
FLEET RULE AND EMISSION STANDARDS FOR NEW URBAN BUSES

First Public Hearing Date: October 24, 2002  
Public Availability Date: March 28, 2003  
Deadline for Public Comment: April 14, 2003

**The Board's Action**

At its October 24, 2002 public hearing, the Air Resources Board (Board or ARB) considered amendments to the public transit bus fleet regulations sections 1956.1, 1956.2, 1956.4, 1956.8, and 2112, title 13, California Code of Regulations (CCR). The Board adopted Resolution 02-30 (appended to this notice as Attachment I) approving amendments modifying the current, model year based and PM retrofit requirements to establish a total PM reduction requirement (Table 1); allowing transit agencies in the South Coast Air Quality Management District (SCAQMD) that have elected to follow the "diesel" path a one time option of changing to the "alternative fuel" path; modifying the alternative fuel provision for transit agencies on the diesel fuel path; authorizing the Executive Officer to grant small transit agencies a delay in implementation of the regulation; modifying and including additional definitions for clarification of the urban transit bus fleet rule; repealing the current certification procedure for particulate matter (PM) retrofit devices adopted November 2000 and substituting the Board adopted "Verification Procedures, Warranty, and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines," and providing interim procedures for certification of hybrid-electric urban transit buses.

**Table 1**

<b>Proposed Compliance Schedule for Total Diesel PM Emissions</b>		
<b>Compliance Year (as of January 1<sup>st</sup>)</b>	<b>Diesel Fuel Path Percent Reduction</b>	<b>Alternative Fuel Path Percent Reduction</b>
2004	40	20
2005	60	40
2007	85	60
2009	85	85

At the hearing, the Board also directed the Executive Officer to incorporate the approved modifications into the regulatory text, along with such conforming modifications as may be appropriate, and to make such modifications available for a supplemental comment period of at least 15 days.

### **Summary of Proposed Modifications**

The Board approved the staff proposal with the modifications presented at the October hearing, with minor changes. These changes were made in response to comments received subsequent to the publication of the staff report. The following text describes the modifications approved by the Board at the October hearing.

#### **Title 13, California Code of Regulations**

##### **Section 1956.1(b) Certification Requirements for Heavy-duty Pilot Ignition Engine**

The Board agreed that transit buses using Heavy-duty Pilot Ignition (HDPI) Engines should be treated as alternate fuel engines. To allow for HDPI use as an alternative fuel engine, staff added certification requirements for HDPI engines in section 1956.1(b) as follows:

A bi-fuel engine meeting the definition of a heavy-duty pilot ignition engine set forth in section 1956.2(b)(4) may be certified to the standards in section 1956.1(a)(8) and (a)(10), provided that the engine is certified to an optional PM standard of 0.03, 0.02, or 0.01 g/bhp-hr.

##### **Section 1956.2(b)(1): Definition of Alternative Fuel**

Commentors requested that the alternative fuel definition in section 1956.2(b)(1) not be modified to allow use of HDPI. The language modifying the definition has been removed.

In addition, the comments received requested clarification on the use of hydrogen and gasoline as used in hybrid electric buses as alternative fuels. Text was added to section 1956.2(b)(1) to include the use of these fuels. Alternative fuel is now defined as:

“Alternative fuel” means natural gas, propane, ethanol, methanol, gasoline (when used in hybrid electric buses only), hydrogen, electricity, fuel cells, or advanced technologies that do not rely on diesel fuel. Alternative fuel also means any of these fuels used in combination with each other or in combination with other non-diesel fuels.

**Section 1956.2(b)(4): Definition of Heavy-duty Pilot Ignition Engine**

As previously stated, as the result of public comments, the original text including HDPI in the alternative fuel definition has been removed. To allow for HDPI use as an alternative fuel engine, staff added the following definition to section 1956.2(b)(4):

“Heavy-duty pilot ignition engine” means an engine designed to operate using an alternative fuel, except that diesel fuel is used for pilot ignition at an average ratio of no more than 1 part diesel fuel to 10 parts total fuel on an energy equivalent basis. An engine that can operate or idle solely on diesel fuel at any time does not meet this definition.

**Section 1956.2(c)(1): HDPI Purchase by Transit Agencies on Alternative-fuel Path**

Staff added the following language to section 1956.2(c)(1) to allow transit agencies to include buses using HDPI engines in the alternative-fuel bus purchase calculation.

Upon approval of the regulation, and through Model Year 2015, at least 85 percent of all urban buses purchased or leased each year must be alternative-fuel buses or buses with engines purchased under section 1956.2(c)(9).

**Section 1956.2(c)(9): HDPI Purchase by Transit Agencies on Alternative-fuel Path**

Staff added the following language to section 1956.2(c)(9) to allow transit agencies on the alternative-fuel path to purchase buses with HDPI engines:

A transit agency on the alternative-fuel path may purchase a bus operated with a heavy-duty pilot ignition engine provided the engine meets the standards set forth in subdivision (b) of section 1956.1.

**Section 1956.2(d)(8): HDPI Purchase by Transit Agencies on Diesel-fuel Path**

Staff added the following language to section 1956.2(d)(8) to allow transit agencies on the diesel-fuel path to purchase buses with HDPI engines:

A transit agency on the diesel-fuel path may purchase a bus operated with a heavy-duty pilot ignition engine provided the engine meets the standards set forth in subdivision (b) of section 1956.1.

In addition, staff made minor modifications to the text of sections 1956.1(a)(7-9), 1956.1(a)(11), 1956.2(c)(5), 1956.2(d)(4), 1956.2(f), and 1956.4(d)(1)(A) to exclude HDPI from diesel fueled engine and PM reporting requirements along with minor text changes to correct references throughout sections 1956.1 and 1956.2 of title 13.

## **Availability of Modified Text**

Attachment 1 (Board Resolution 02-30) and Attachment 2 (text of the modified language) are available on line at the ARB's Internet site for regulatory documents in this rulemaking:

<http://www.arb.ca.gov/regact/bus02/bus02.htm>

Attachment 2 contains the text of the regulations affected by the modifications being proposed with this notice. Paragraphs within these sections that are not proposed for amendment in this rulemaking are indicated by "[No Change]". The proposed regulatory amendments adopted by the Board on October 24, 2002 are shown in underline to indicate additions to the text and ~~striketrough~~ to indicate deletions. The modifications to the original proposal are shown in double underline to indicate additions and ~~double striketrough~~ to indicate deletions. Adopted amendments in a separate rulemaking, "Public Hearing to Adopt the Incorporation of Federal Exhaust Emission Standards for 2008 and Later Model-Year Heavy-Duty Gasoline Engines and the Adoption of Minor Amendments to the Low-Emission Vehicle Regulations" considered by the Board at the December 12, 2002 hearing, are shown in dotted underline and ***~~bold italic striketrough~~*** to indicate additions and deletions, respectively and are included for information only.

Printed copies may be obtained by contacting Neidy Pinuelas, Heavy-Duty Diesel In-Use Strategies Branch secretary at 626-350-6454 or by e-mail at [npinuela@arb.ca.gov](mailto:npinuela@arb.ca.gov), or by faxing or mailing the request form attached to the end of the notice to the address or number detailed on the form.

## **Comments and Subsequent Action**

In accordance with section 11346.8(c) of the Government Code, the Board directed the Executive Officer to make the modified amendments and any conforming modifications to the public transit bus fleet regulations sections 1956.1, 1956.2, 1956.4, 1956.8, and 2112, title 13, CCR and make them available to the public for comment for a period of 15 days. The Board further provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such 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, 23<sup>rd</sup> Floor  
Sacramento, California 95814

Electronic mail must be sent to: [bus02@listserv.arb.ca.gov](mailto:bus02@listserv.arb.ca.gov)

Facsimile submissions must be transmitted to the Clerk of the Board at:  
(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 shall be considered by the Executive Officer.

If you have special accommodation or language needs, please contact Neidy Pinuelas, Heavy-Duty Diesel In-Use Strategies Branch secretary at 626-350-6454 or by e-mail at [npinuela@arb.ca.gov](mailto:npinuela@arb.ca.gov) as soon as possible. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

Robert H. Cross, Chief  
Mobile Source Control Division

Attachments