

APPENDIX A
PROPOSED REGULATION ORDER

FINAL REGULATION ORDER

Amend the following sections of title 13, California Code of Regulations, to read as set forth in the following pages:

Section 1956.1	Exhaust Emission Standards and Test Procedures – 1985 and Subsequent Model Heavy Duty Urban Bus Engines and Vehicles.
Section 1956.2	Fleet Rule for Transit Agencies
Section 1956.3	Zero-Emission Bus Requirements
Section 1956.4	Reporting Requirements for all Urban Bus Transit Agencies

- Notes:
- a) Paragraphs within these sections that are not proposed for amendment in this rulemaking are indicated by "[No Change]".
 - b) The proposed regulatory amendments are shown in underline to indicate additions to the text and ~~strikeout~~ to indicate deletions.

Amend section 1956.1 to read as follows:

1956.1 Exhaust Emission Standards and Test Procedures - 1985 and Subsequent Model Heavy Duty Urban Bus Engines and Vehicles

- (a) [No Change]
 - (1) [No Change]
 - (2) [No Change]
 - (3) [No Change]
 - (4) [No Change]
 - (5) [No Change]
 - (6) [No Change]
 - (7) [No Change]
 - (8) [No Change]
 - (9) [No Change]
 - (10) [No Change]
 - (11) 2004-2006 – For diesel-fueled, or dual-fuel, and bi-fuel urban bus engines except for heavy-duty pilot ignition engines, the standards are 0.5 g/bhp-hr NO_x, 0.01 g/bhp-hr PM, 0.05 g/bhp-hr NMHC, 5.0 g/bhp-hr CO, and 0.01 g/bhp-hr formaldehyde. As an option, manufacturers may choose to meet the NO_x and PM standards with a base engine that is certified to the standards in paragraph (10) above, equipped with an aftertreatment system that reduces NO_x to 0.5 g/bhp-hr and PM to 0.01 g/bhp-hr standards. The NMHC, CO, and formaldehyde standards in this paragraph (11) shall still apply. Manufacturers shall be responsible for full certification, durability, testing, and warranty and other requirements for the base engine. For the aftertreatment system, manufacturers shall not be subject to the certification durability requirements, or in-use recall and enforcement provisions, but are subject to warranty provisions for functionality.
 - (A) ~~In addition,~~ Engine manufacturers may sell diesel-fueled, dual-fuel, or bi-fuel engines to any transit fleet exempted by the Executive Officer under paragraphs (c)(8) and (d)(7) of section 1956.2, Title 13, CCR, from the requirements of paragraphs

(c)(5) and (d)(4) of section 1956.2, certified to the standards in either paragraphs (9) or (10) above, provided that engines certified to the standards in paragraph (10) must be certified to a 0.01 g/bhp-hr PM standard.

(B) Manufacturers may sell diesel-fueled hybrid-electric buses that are certified to a 1.8 g/bhp-hr NOx and 0.01 g/bhp-hr PM standard to any transit agency that has received written authorization from the Executive Officer pursuant to paragraph (d)(9) of section 1956.2, title 13, CCR.

(12) 2007 and subsequent – 0.2 g/bhp-hr NOx, 0.01 g/bhp-hr PM, 0.05 g/bhp-hr NMHC, 5.0 g/bhp-hr CO, and 0.01 g/bhp-hr formaldehyde.

(b) [No Change]

(c) The test procedures for determining compliance with standards applicable to 1985 and subsequent heavy-duty diesel cycle urban bus engines and vehicles and the requirements for participation in the averaging, banking and trading programs, are set forth in the "California Exhaust Emission Standards and Test Procedures for ~~1985~~ 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," adopted December 12, 2002 ~~April 8, 1985, as last amended November 22, 2000~~, and the "California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes", adopted October 24, 2002, which are incorporated by reference herein.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43100, 43101, 43104, and 43806, Health and Safety Code, and section 28114, Vehicle Code

Reference: Sections 39002, 39003, 39017, 39033, 39500, 39650, 39657, 39667, 39701, 40000, 43000, 43000.5, 43009, 43013, 43018, 43102, and 43806, Health and Safety Code, and section 28114, Vehicle Code.

SECTION 1956.2, TITLE 13, CCR

1956.2 Fleet Rule for Transit Agencies

- (a) [No Change]
- (b) For purposes of the fleet rule specified in this section, the following definitions apply:
 - (1) [No Change]
 - (2) [No Change]
 - (3) [No Change]
 - (4) [No Change]
 - (5) “Hybrid-electric bus” means an urban bus equipped with at least two sources of energy on board; this energy is converted to motive power using electric drive motors and an auxiliary power unit, which converts consumable fuel energy into mechanical or electrical energy. The electric drive motors must be used partially or fully to drive the vehicle’s wheels.
 - ~~(5)(6)~~ [No Change]
 - ~~(6)(7)~~ [No Change]
 - ~~(7)(8)~~ [No Change]
- (c) [No Change]
- (d) Transit agencies on the diesel path shall meet the following requirements:
 - (1) [No Change]
 - (2) [No Change]
 - (3) Zero-emission bus demonstration ~~in 2003-2004~~, as required in subdivision (b) of section 1956.3, title 13, CCR.
 - (4) [No Change]
 - (5) [No Change]
 - (6) [No Change]
 - (7) [No Change]
 - (8) [No Change]

(9) The Executive Officer shall authorize, in writing, a transit agency on the diesel path to purchase one or more diesel-fueled hybrid-electric bus certified under title 13, CCR, section 1956.1 (a)(11)(B) provided that:

(A) The transit agency shall submit a mitigation plan and letter requesting approval by January 1, 2005, to the Executive Officer that demonstrates that the transit agency will provide surplus emission reductions from urban buses in its fleet that will offset the NOx emission difference between the certified NOx emission standard of the hybrid-electric bus and 0.5 g/bhp-hr. The transit agency may not use NOx emission reductions that are otherwise required by any statute, regulation, or order or the emission reductions that will accrue from the retirement of an urban bus to be replaced by a hybrid-electric bus for the offset;

(B) The transit agency shall complete implementation of all mitigation measures set forth in the approved plan to offset NOx emissions prior to the receipt of the last diesel-fueled hybrid-electric bus; and

(C) The transit agency shall submit the reports required by section 1956.4 (h).

(e) [No Change]

(f) [No Change]

(g) [No Change]

NOTE: Authority cited: Sections 39600, 39601, 39667, 43013, 43018, and 43701(b), Health and Safety Code. Reference: Sections 39002, 39003, 39017, 39500, 39650, 39667, 40000, 43000, 43000.5, 43013, 43018, 43701(b), 43801, and 43806, Health and Safety Code, and sections 233 and 28114, Vehicle Code.

SECTION 1956.3, TITLE 13, CCR

1956.3 Zero-emission Bus Requirements

- (a) [No Change]
- (b) Zero-emission Bus Demonstration Project – except as provided in (3) below, the owner or operator of an urban bus fleet on the diesel path in accordance with the provisions of section 1956.2, with more than 200 urban transit buses in its active fleet on January 31, 2001, shall implement a demonstration project. The owner or operator shall evaluate the operation of zero-emission buses in revenue service, and prepare and submit a report on the demonstration project to the Executive Officer for inclusion in a future review of zero-emission technology.
 - (1) [No Change]
 - (2) When planning and implementing the demonstration project, the operator or owner shall meet the following milestones:
 - (A) [No Change]
 - (B) no later than ~~July 1, 2003~~ February 28, 2006, place at least three zero-emission buses in ~~revenue service~~ operation, and
 - (C) no later than July 31, 2005, submit a preliminary report on the demonstration project to the Executive Officer, in accordance with paragraph (e)(3) of section 1956.3, title 13, CCR and,
 - ~~(C)D~~ no later than January 31, 2005 July 31, 2007, submit a report on the demonstration project to the Executive Officer, in accordance with paragraph (e)(3) of section 1956.4, title 13, CCR.
 - (3) Multiple transit agencies within the same air basin may, on a case-by-case basis, petition the Executive Officer to implement a joint zero-emission bus demonstration project. Electric trolley buses shall not qualify as zero-emission buses for purposes of this joint demonstration project. No more than three transit agencies can participate in any one joint project. Transit agencies that are participating in a joint demonstration project shall:
 - (A) designate the agency hosting the onsite demonstration,
 - (B) jointly fund the demonstration project, and
 - (C) place a minimum of three zero-emission buses per participating transit agency demonstration project in revenue service.

(c) [No Change]

(d) [No Change]

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43100, 43101, 43104, and 43806, Health and Safety Code. Reference: Sections 39002, 39003, 39017, 39018, 39500, 39701, 40000, 43000, 43000.5, 43009, 43013, 43018, 43102, 43801, and 43806, Health and Safety Code, and section 28114 Vehicle Code.

SECTION 1956.4, TITLE 13, CCR

1956.4 Reporting Requirements for all Urban Bus Transit Agencies

- (a) [No Change]
- (b) [No Change]
- (c) [No Change]
- (d) [No Change]
- (e) The following reports on the zero-emission bus demonstration program shall be submitted by those transit agencies required to conduct such demonstrations, as described below:
 - (1) [No Change]
 - (2) [No Change]
 - (3) A preliminary report shall be submitted by July 31, 2005 and contain, at a minimum, the following information:
 - (A) a brief description of the zero-emission technology utilized, identification of the bus manufacturer, and the product specifications;
 - (B) miles driven per bus in revenue and non-revenue service, safety incidents, and maintenance (both scheduled and unscheduled);
 - (C) qualitative transit personnel and passenger experience; and
 - (D) a financial summary of the capital costs of bus purchases and/or leases and fueling infrastructure.
 - ~~(3)~~(4) A final report shall be submitted by ~~January 31, 2005~~ July 31, 2007, and contain, at a minimum, the following information:
 - (A) a brief description of the zero-emission technology utilized, identification of bus manufacturer and product specifications,
 - (B) miles driven per bus in revenue service, bus down time (scheduled and unscheduled), safety incidents, driver and

mechanic training conducted, and maintenance (both scheduled and unscheduled),

- (C) qualitative transit personnel and passenger experience, and
- (D) a financial summary of capital costs of demonstration program, including bus purchases and/or leases, fueling infrastructure, any new facilities or modifications, and annual operating costs.

(f) [No Change]

(g) [No Change]

(h) A transit agency requesting approval for the purchase of diesel-fueled hybrid-electric buses pursuant to paragraph (d)(9), section 1956.2, title 13, CCR, shall:

- (1) submit an application for approval that meets the requirements of paragraphs (d)(9)(A) and (d)(9)(B), section 1956.2, title 13, CCR;
- (2) include in the application all of the following: the number, manufacturer, make and model year of diesel-fueled hybrid-electric buses to be purchased; the schedule for the purchase and delivery of the buses; a detailed description of all measures that will be used to offset the excess NOx emissions including identification of the specific buses to which the measures will be applied, and the schedule for implementing those measures; and
- (3) submit a final report to the Executive Officer within 30 days of receipt of the last diesel-fueled hybrid-electric bus that documents the schedule of delivery of the diesel-fueled hybrid-electric buses, timing, and completion of all measures to achieve the NOx offset.

NOTE: Authority cited: Sections 39600, 39601, 39659, 39667, 39701, 43018, and 41511, Health and Safety Code. Reference: Sections 39667, 39700, 39701, 41510, 41511, 43000, 43000.5, 43013, 43018, 43801, and 43806, Health and Safety Code.