

APPENDIX A
PROPOSED REGULATION ORDER

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

Amend:	
Section 1956.1	Exhaust Emission Standards and Test Procedures - 1985 and Subsequent Model Heavy Duty Urban Bus Engines and Vehicles
Section 2020	Purpose and Definitions of Diesel Particulate Matter Control Measures
Section 2021	Solid Waste Collection Vehicles.
Adopt:	
Section 2023	Fleet Rule for Transit Agencies
Section 2023.1 Section 1956.4 renumber as 2023.4	Fleet Rule for Transit Agencies-Urban Bus Requirements
Section 2023.2	Fleet Rule for Transit Agencies-Transit Fleet Vehicle Requirements
Section 2023.3 Section 1956.3 renumber as 2023.3	Zero-Emission Bus Requirements
Section 2023.4 Section 1956.4 renumber as 2023.4	Reporting Requirements for Transit Agencies
Repeal:	
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) Regulatory amendments to existing language are shown in underline to indicate additions to the text and ~~strikeout~~ to indicate deletions.
 - b) Regulatory amendments for new language is shown in double underline to indicate additions and ~~double 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) The exhaust emissions from new 1985 and subsequent model heavy-duty diesel cycle urban bus engines and vehicles fueled by methanol, natural gas, liquefied petroleum gas, and petroleum shall not exceed the following, by model year:
- (1) 1985-1986 - 1.3 grams per brake horsepower-hour (g/bhp-hr) total hydrocarbons (or Organic Material Hydrocarbon Equivalent [OMHCE] for methanol-fueled buses), 15.5 g/bhp-hr carbon monoxide (CO), and 5.1 g/bhp-hr oxides of nitrogen (NO_x).
 - (2) 1987- (a manufacturer may certify to the 1988 emission standards one year early as an option) - 1.3 g/bhp-hr total hydrocarbons (or OMHCE for methanol-fueled buses), 15.5 g/bhp-hr CO, and 5.1 g/bhp-hr NO_x.
 - (3) 1988-1990 - 1.3 g/bhp-hr HC (or OMHCE for methanol-fueled buses), 15.5 g/bhp-hr CO, 6.0 g/bhp-hr NO_x, 0.60 g/bhp-hr particulate matter (PM), and for 1990 only, 1.2 g/bhp-hr optional non-methane hydrocarbons (NMHC).
 - (4) 1991-1993 - 1.3 g/bhp-hr HC (or OMHCE for methanol-fueled buses), 1.2 g/bhp-hr optional NMHC, 15.5 g/bhp-hr CO, 5.0 g/bhp-hr NO_x, and 0.10 g/bhp-hr PM. Emissions from methanol-fueled, natural-gas-fueled and liquefied-petroleum-gas-fueled urban bus engines may be included in the averaging program for petroleum-fueled engines other than urban bus engines.
 - (5) 1994-1995 - 1.3 g/bhp-hr HC (or OMHCE for methanol-fueled buses), 1.2 g/bhp-hr optional NMHC, 15.5 g/bhp-hr CO, 5.0 g/bhp-hr NO_x (or optional 3.5 g/bhp-hr to 0.5 g/bhp-hr NO_x), and 0.07 g/bhp-hr PM. Emissions from methanol-fueled, natural-gas-fueled and liquefied-petroleum-gas-fueled urban bus engines, may be included in the averaging program for petroleum-fueled engines other than urban bus engines.
 - (6) 1996-2003 - 1.3 g/bhp-hr HC or OMHCE, 1.2 g/bhp-hr optional NMHC, 15.5 g/bhp-hr CO, 4.0 g/bhp-hr NO_x, and 0.05 g/bhp-hr PM (0.07 PM g/bhp-hr in-use), except as provided in paragraph (7) below.
 - (A) For 1996 and 1997 only, a manufacturer may apply to the Executive Officer for an exemption from the 4.0 g/bhp-hr NO_x standard, not to exceed 10% of the average of the manufacturer's total urban bus sales in California for the

three preceding model years, upon providing technical justification and sales data for each exemption applied for.

- (B) 1998 through 2003 model year engines may generate averaging, banking, and trading credits in accordance with the requirements for averaging, banking and trading programs set forth in “California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy Duty Diesel Engines and Vehicles” incorporated by reference in subdivision (c) of this section.

Manufacturers may choose to certify 1998 through 2002 model year bus engines produced before October 1, 2002, to an optional NO_x emissions standard between 0.5 g/bhp-hr and 2.5 g/bhp-hr. A manufacturer may certify to any standard between the values of 2.5 g/bhp-hr and 0.5 g/bhp-hr, by 0.5 g/bhp-hr increments. Manufacturers may not use engines certified to this optional NO_x standard for any averaging, banking, or trading program set forth in “California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy Duty Diesel Engines and Vehicles” incorporated by reference in subdivision (c) of this section.

- (7) October 1, 2002, PM standard - For diesel-fueled, dual-fuel, and bi-fuel bus engines except for heavy-duty pilot ignition engines, the PM standard shall be 0.01 g/bhp-hr (0.01 PM g/bhp-hr in-use) for 2002 and subsequent model year engines produced beginning October 1, 2002. Manufacturers may choose to meet this standard with an aftertreatment system that reduces PM to 0.01 g/bhp-hr.
- (8) October 2002-2006 optional standards – Except for diesel-fueled, dual-fuel, and bi-fuel engines but including heavy-duty pilot ignition engines, manufacturers may choose to certify 2002 – 2006 model year bus engines produced beginning October 1, 2002, to an optional 1.8 g/bhp-hr to 0.3 g/bhp-hr NO_x plus NMHC standard, measured as the arithmetic sum of the NO_x and NMHC exhaust component certification values, without restriction on individual component certification values; provided that engines certified to this optional reduced-emission NO_x plus NMHC standard may not participate in any averaging, banking, or trading program set forth in the test procedures document incorporated by reference in subdivision (c) of this section. A manufacturer may certify to any standard between the values of 1.8 g/bhp-hr to 0.3 g/bhp-hr, by 0.3 g/bhp-hr NO_x + NMHC increments. Manufacturers certifying to this

optional standard must also certify to a PM standard of 0.03, 0.02, or 0.01 g/bhp-hr.

- (9) October 2002-2003 optional standards for diesel-fueled, dual-fuel, and bi-fuel engines except for heavy-duty pilot ignition engines -- Manufacturers may choose to certify 2002 – 2003 model year diesel-fueled, dual-fuel, and bi-fuel bus engines produced beginning October 1, 2002, to an optional 1.8 g/bhp-hr to 0.3 g/bhp-hr NO_x plus NMHC standard, measured as the arithmetic sum of the NO_x and NMHC exhaust component certification values, without restriction on individual component certification values; provided that engines certified to this optional reduced-emission NO_x plus NMHC standard may not participate in any averaging, banking, or trading program set forth in the test procedures document incorporated by reference in subdivision (c) of this section. A manufacturer may certify to any standard between the values of 1.8 g/bhp-hr to 0.3 g/bhp-hr, by 0.3 g/bhp-hr NO_x + NMHC increments. Manufacturers certifying to this optional standard must also certify to a PM standard of 0.01 g/bhp-hr.
- (10) 2004 – 2006: Except as provided in paragraph (11), below, the required standard shall be 2.4 g/bhp-hr NO_x + NMHC measured as the arithmetic sum of exhaust component certification values for these pollutants, without restriction on individual component values, 15.5 g/bhp-hr CO, and 0.05 g/bhp-hr PM (0.07 g/bhp-hr PM in-use).
 - (A) Manufacturers may choose to certify to a 2.5 g/bhp-hr optional combined NO_x + NMHC standard, provided that the NMHC exhaust component certification value shall not exceed 0.5 g/bhp-hr.
 - (B) Emissions averaging may be used to meet the combined NO_x + NMHC standard, the optional combined NO_x + NMHC standard set forth in paragraph (A), and the PM standard.
 - (C) The combined NO_x + NMHC standard and the optional combined NO_x + NMHC standard described in paragraph (A) may serve as the certification standard for the higher emitting fueling mode of an engine certified under the dual fueling mode certification process set forth in section 1956.8(a)(4), Title 13, CCR.
- (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) 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 NO_x, ~~and~~ 0.01 g/bhp-hr PM, 0.5 g/bhp-hr NMHC, and 15.5 g/bhp-hr CO 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. The formaldehyde standard set forth in paragraph (11), above, shall not apply to the HEBs sold pursuant to this subparagraph.
- (12) 2007 and subsequent – 0.2 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.
- (b) 2003-2006 – 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.
 - (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 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," adopted December 12, 2002, 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.

Amend Section 2020 to read as follows:

Section 2020. Purpose and Definitions of Diesel Particulate Matter Control Measures

Purpose. Diesel particulate matter was identified in 1998 as a toxic air contaminant. According to California law, an airborne toxic control measure using the best available control technology shall, therefore, be employed to reduce the public's exposure to diesel particulate matter.

Definitions. For the purposes of the rules specified in article 4, the following definitions apply:

"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.

"Commercially available" means available for purchase and installation at a reasonable cost.

"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 one part diesel fuel to ten 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.

"Level" means one of three categories of Air Resources Board-verified diesel emission control strategies: Level 1 means the strategy reduces engine diesel particulate matter emissions by between 25 and 49 percent, Level 2 means the strategy reduces engine diesel particulate matter emissions by between 50 and 84 percent, and Level 3 means the strategy reduces engine diesel particulate matter emissions by 85 percent or greater, or reduces engine emissions to less than or equal to 0.01 grams diesel particulate matter per brake horsepower-hour.

"Municipality" means a city, county, city and county, special district, or a public agency of the United States of America or the State of California, and any department, division, public corporation, or public agency of this State or of the United States, or two or more entities acting jointly, or the duly constituted body of an Indian reservation or rancheria.

"Owner" means the same as in title 13, California Code of Regulations, section 2180.1(a)(21).

~~"Retirement" or "Retire" means an engine or vehicle will be withdrawn from an active fleet in California. The engine may be sold outside of California, scrapped, or used in a backup vehicle.~~

"Transit agency" means a public entity responsible for administering and managing transit services. Public transit agencies can directly operate transit service or contract out for all or part of the total transit service provided.

"Terminal" means any place or places where a vehicle is regularly garaged or maintained, or from which it is operated or dispatched, which may include a private business or residence.

"Verified" means that a diesel emission control strategy or system has received approval from the Executive Officer according to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in title 13, California Code of Regulations, commencing with section 2700, and incorporated by reference.

"Warranty Period" means the same as in title 13, California Code of Regulations, section 2707.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code.

Reference: Sections 39002, 39003, 39650 - 39675, 43000, 43013, 43018, 43101, 43102, 43104, 43105 and 43700, Health and Safety Code.

Amend Section 2021 to read as follows:

Section 2021. Solid Waste Collection Vehicles

- (a) **Scope and Applicability.** Sections 2021 and 2021.1 shall apply to municipalities that have a contract with owners for residential and commercial solid waste collection service. Sections 2021 and 2021.2 shall apply to solid waste collection vehicle owners, both private and government entities. These regulations mandate the reduction of diesel particulate matter emissions from 1960 to 2006 model year engines in on-road diesel-fueled heavy-duty residential and commercial solid waste collection vehicles with a manufacturer's gross vehicle weight rating greater than 14,000 pounds.
- (b) **Definitions.** The definitions in Section 2020 shall apply to sections 2021, 2021.1, and 2021.2. In addition, the following definitions apply only to sections 2021, 2021.1, and 2021.2.

"Active fleet" means the total, by terminal, of an owner's collection vehicles, excluding backup vehicles.

"Backup vehicle" means a collection vehicle that is driven fewer than 1000 miles annually.

"Contract" means an agreement between an owner and a municipality to perform residential or commercial solid waste collection services, in which the contractor's compensation for providing services, or a formula for determining compensation, is specified.

"Contractor" means an owner with a contract as defined in this section.

"Residential and commercial solid waste" means all putrescible and nonputrescible solid, and semisolid wastes, including garbage, trash, refuse, rubbish, ashes, yard waste, recyclable materials, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes originating from single-family or multiple family dwellings, stores, offices, and other commercial sources, and construction and demolition projects in residential and commercial zones, not including hazardous, radioactive, or medical waste.

"Retirement" or "Retire" means an engine or vehicle will be withdrawn from an active fleet in California. The engine may be sold outside of California, scrapped, or used in a backup vehicle.

"Roll off vehicle" means any heavy-duty vehicle used for transporting waste containers such as open boxes or compactors that may be removed from the tractor.

“Solid waste collection vehicle or collection vehicle” means an on-road heavy-duty vehicle with a manufacturer’s gross vehicle weight rating of greater than 14,000 pounds used for the purpose of collecting residential and commercial solid waste for a fee, including roll off vehicles.

“Total Fleet” means the total of an owner’s collection vehicles, excluding backup vehicles.

NOTE: Authority cited: Sections 39600 and 39601, Health and Safety Code. Reference: Sections 39002, 39003, 39650-39675, 43000, 43013, 43018, 43101, 43102, 43104, 43105, and 43700, Health and Safety Code.

Adopt Section 2023 to read as follows:

(Language previously in section 1956.2 has been moved to section 2023. Below shows the text previously in section 1956.2 with amendments shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. Language shown in double underline indicate addition of new regulatory language.)

~~1956.2~~2023 Fleet Rule for Transit Agencies

(a) ~~—To encourage transit agencies that operate urban bus fleets to purchase or lease lower emission alternative fuel buses, while also providing flexibility to such fleet operators to determine their optimal fleet mix in consideration of such factors as air quality benefits, service availability, cost, efficiency, safety, and convenience, two paths to compliance with this fleet rule are available: the alternative fuel path and the diesel path.~~

(1) ~~—Transit agencies must choose their compliance path, and shall notify ARB of their intent to follow either the diesel or the alternative fuel path, by January 31, 2001. Reporting requirements for that notification are set forth in subdivisions (a) and (b) of section 1956.4, title 13, CCR.~~

(2) ~~—A transit agency within the jurisdiction of the South Coast Air Quality Management District may elect to change its compliance path from the diesel path to the alternative fuel path, provided that the transit agency notifies the Executive Officer of the change by January 31, 2004, and provided that the transit agency is in compliance with all requirements of section 1956.2, including specific requirements of the diesel path, on or before January 1, 2004. Reporting requirements for this notification are set forth in paragraph (b)(3) of section 1956.4, title 13, CCR.~~

(b)(a) The definitions in Section 2020 shall apply to sections 2023, 2023.1, 2023.2, 2023.3 and 2023.4. For purposes of the fleet rule specified in this section the following definitions and apply: In addition, the following definitions apply only to sections 2023, 2023.1, 2023.2, 2023.3 and 2023.4.

(1) ~~—“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.~~

(2)(1) “Active fleet” means the total number of urban buses, including spare buses operated by a transit agency or under contract to a transit agency, but not emergency contingency vehicles or non-revenue producing vehicles.

- (2) "Commuter Service Bus" means a passenger-carrying vehicle powered by a heavy heavy-duty diesel engine or of a type normally powered by a heavy heavy-duty diesel engine that is not otherwise an urban bus and which operates on a fixed route primarily during peak commute hours and that has no more than ten scheduled stops per day, excluding park-and-ride lots. A commuter service bus is a transit fleet vehicle.
- (3) "Diesel PM emission total," for the purposes of sections 2023.1 and 2023.2, means the sum of the particulate matter (PM) value, based on the engine certification standard, of each diesel fuel, dual-fuel, bi-fuel (except for heavy-duty pilot ignition engines), and diesel hybrid-electric engine in a transit agency's active fleet or transit fleet vehicle fleet in g/bhp-hr. For 1987 and earlier engines, the PM exhaust emission value shall be presumed to be 1.0 g/bhp-hr.
- (3)(4) "Emergency contingency vehicle" means an urban bus placed in an inactive contingency fleet for energy or other local emergencies, after the urban bus has reached the end of its normal minimum useful life.
- (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.~~
- (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.
- (6) "Low Usage Vehicle" means a non-revenue-generating transit fleet vehicle that operates for no more than 1000 miles per year.
- (7) "New Transit Agency" means
 (A) for the purposes of section 2023.1, a transit agency formed after January 1, 2002;
 (B) for the purposes of section 2023.2, a transit agency formed after January 1, 2005.
- (8) "NOx Fleet Average" for the purposes of sections 2023.1 and 2023.2 means the average of the oxides of nitrogen (NOx) emissions for all transit fleet vehicles or urban buses, owned, operated, or leased by a transit agency, based on the engine certification standard of each engine. The NOx fleet average is calculated by summing the NOx engine certification standards in g/bhp-hr, of each engine in an active fleet or transit fleet vehicle fleet, and dividing by the total number of vehicles in that fleet.

- ~~(9)~~ “Retirement” or “Retire” means an engine will be withdrawn from a transit vehicle fleet in California. The engine may be sold outside of California, scrapped or used in an emergency contingency vehicle or low usage vehicle.
- ~~(6)~~~~(10)~~ “Spare bus” means an urban bus that is used to accommodate routine maintenance and repair operations, and to replace a bus in scheduled service that breaks down or is involved in an accident.
- ~~(7)~~ “Transit agency” means a public entity responsible for administering and managing transit services. Public transit agencies can directly operate transit service or contract out for all or part of the total transit service provided.
- ~~(11)~~ “Transit Fleet” means a transit agency's urban buses and transit fleet vehicles, excluding emergency contingency vehicles and low usage vehicles.
- ~~(12)~~ “Transit Fleet Vehicle” means an on-road vehicle greater than 8,500 pounds gross vehicle weight rating (GVWR) powered by a heavy-duty engine fueled by diesel or alternative fuel, owned or operated by a transit agency, and which is not an urban bus.
- ~~(8)~~~~(13)~~ “Urban bus” means a passenger-carrying vehicle powered by a heavy heavy-duty diesel engine, or of a type normally powered by a heavy heavy-duty diesel engine, with a load capacity of fifteen (15) or more passengers and intended primarily for intra-city operation, i.e., within the confines of a city or greater metropolitan area. Urban bus operation is characterized by short rides and frequent stops. To facilitate this type of operation, more than one set of quick-operating entrance and exit doors would normally be installed. Since fares are usually paid in cash or token, rather than purchased in advance in the form of tickets, urban buses would normally have equipment installed for the collection of fares. Urban buses are also typically characterized by the absence of equipment and facilities for long distance travel, e.g., restrooms, large luggage compartments, and facilities for stowing carry-on luggage.

(b) A new transit agency shall:

- ~~(1)~~ notify the Executive Officer in writing of its existence and submit reports to the Executive Officer as required in section 2023.4(j);
- ~~(2)~~ choose a compliance path for its active fleet and notify the Executive Officer within 120 days of formation of its intent to follow either the diesel path or alternative path, as described in section 2023.1(a), except that a new transit agency that is a successor to an existing transit agency shall follow the compliance path of the transit agency out of which it has been formed;
- ~~(3)~~ meet the NOx fleet average and the diesel PM total of the urban buses or transit fleet vehicles
- ~~(A)~~ used in the transit operations of the existing transit agency out of which the new transit agency is formed or,

- (B) if not formed from an existing transit agency, meet the requirements set forth in 2023.1(d)(4), 2023.1(e)(5) for urban buses and 2023.2 (a)(1)(B), 2023.2 (a)(2)(B) 2023.2(b)(3) for transit fleet vehicles;and,
- (4) comply with all applicable requirements of section 2023, section 2023.1, 2023.2 and 2023.4,
- (c) Transit agencies on the alternative-fuel path shall meet the following requirements:
- (1) 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 paragraph (c)(9).
 - (2) NOx fleet average requirements as set forth in subdivision (e), below.
 - (3) Beginning October 1, 2002, only engines certified to an optional PM standard of 0.03 g/bhp-hr or lower shall be purchased when making new bus purchases.
 - (4) Total diesel PM emission reduction requirements and use of low-sulfur or other allowed fuel as set forth in subdivision (f), below.
 - (5) Transit agencies on the alternative-fuel path shall not purchase any diesel-fueled, dual-fuel, or bi-fuel buses with 2004 – 2006 model year engines certified to emissions levels in excess of those specified in paragraph (a)(11) of section 1956.1, title 13, CCR, except as provided in paragraph (c)(8) or (c)(9) of this section.
 - (6) Zero-emission bus purchase requirements beginning in model year 2010, in accordance with the requirements set forth in subdivision (c) of section 1956.3, title 13, CCR.
 - (7) Reporting requirements as set forth in section 1956.4, title 13, CCR.
 - (8) The Executive Officer may exempt transit agencies on the alternative-fuel path from the requirements of paragraph (c)(5) of section 1956.2, title 13, CCR, provided that:
 - (A) A transit agency applies to the Executive Officer for such exemption by June 30, 2001;
 - (B) A transit agency demonstrates to the Executive Officer that it will achieve NOx emissions benefits through 2015 greater than what would have been achieved through compliance with paragraph (c)(5); and
 - (C) The Executive Officer finds that transit agencies, after consulting with the Engine Manufacturers Association, have demonstrated, or are contractually committed to demonstrate, advanced NOx aftertreatment technology.
 - (9) 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.

- (d) ~~Transit agencies on the diesel path shall meet the following requirements:~~
- ~~(1) NOx fleet average requirements as set forth in subdivision (e), below.~~
 - ~~(2) Total diesel PM emission reduction requirements and use of low-sulfur or other allowed fuel as set forth in subdivision (f), below.~~
 - ~~(3) Zero-emission bus demonstration as required in subdivision (b) of section 1956.3, title 13, CCR.~~
 - ~~(4) Transit agencies on the diesel path shall not purchase any diesel-fueled, dual-fuel, or bi-fuel buses with 2004–2006 model year engines certified to emissions levels in excess of those specified in paragraph (a)(11) of section 1956.1, title 13, CCR, except as provided in paragraph (d)(7) or (d)(8) of this section. Beginning July 1, 2003, a transit agency may not purchase alternative fuel buses certified to a PM emission level in excess of the optional standard of 0.03 g/bhp-hr when making new bus purchases.~~
 - ~~(5) Zero-emission bus purchase requirements beginning in model year 2008, in accordance with the requirements set forth in subdivision (c) of section 1956.3, title 13, CCR.~~
 - ~~(6) Reporting requirements as set forth in section 1956.4, title 13, CCR.~~
 - ~~(7) The Executive Officer may exempt transit agencies on the diesel path from the requirements of paragraph (d)(4) of section 1956.2, title 13, CCR, provided that:
 - ~~(A) A transit agency applies to the Executive Officer for such exemption by June 30, 2001;~~
 - ~~(B) A transit agency demonstrates to the Executive Officer that it will achieve NOx emissions benefits through 2015 greater than what would have been achieved through compliance with paragraph (d)(4); and~~
 - ~~(C) The Executive Officer finds that transit agencies, after consulting with the Engine Manufacturers Association, have demonstrated, or are contractually committed to demonstrate, advanced NOx aftertreatment technology.~~~~
 - ~~(8) 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.~~
 - ~~(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) Beginning October 1, 2002, no transit agency shall own, operate, or lease an active fleet of urban buses with average NOx emissions in excess of 4.8 g/bhp-hr, based on the engine certification standards of the engines in the active fleet.~~

~~(1) This active fleet average requirement shall be based on urban buses owned, operated, or leased by the transit agency, including diesel buses, alternative-fuel buses, all heavy-duty zero-emission buses, electric trolley buses, and articulated buses, in each transit agency's active fleet. The Executive Officer may allow zero-emission buses that do not meet the definition of an urban bus to be included in the calculation of the fleet average standard upon written request to the ARB by January 31, 2002, and upon approval by the Executive Officer. The request shall include a description of the zero-emission buses, the zero-emission technology utilized, and the number of zero-emission buses to be used in calculating the NOx fleet average standard. Zero-emission buses not meeting the definition of an urban bus may not be used to satisfy the requirements of the Zero-emission Bus Demonstration Project set forth in subdivision (b) of section 1956.3, title 13, CCR.~~

~~(2) Transit agencies may use ARB-certified NOx retrofit systems to comply with the fleet average requirement (in addition to bus purchases, repowerings, and retirements).~~

~~(3) Transit agencies have the option of retiring all 1987 and earlier model year diesel urban buses by October 1, 2002, to comply with the fleet average standard requirement.~~

~~(f) To reduce public exposure to diesel particulate matter, each transit agency shall reduce the total diesel PM emissions of the diesel buses in its active fleet relative to its total diesel PM emissions as of~~

January 1, 2002, according to the schedule below, and shall operate its diesel buses on diesel fuel with a maximum sulfur content of 15 parts per million by weight. A transit agency shall calculate its diesel PM emission total by summing the PM exhaust emission values specified in section 1956.1(a) for each diesel-fueled, dual-fuel, bi-fuel (except for heavy-duty pilot ignition engines), and diesel hybrid-electric engine in its active fleet in grams per brake horsepower-hour (g/bhp-hr). For 1987 and earlier engines, the PM exhaust emission value shall be presumed to be 1.0 g/bhp-hr. Documentation of compliance with these requirements must be provided in accordance with the provisions of subdivision (d) of section 1956.4, title 13, CCR.

(1) ~~No later than January 1, 2004:~~

(A) ~~The diesel PM emission total for a transit agency on the diesel path shall be no more than 60 percent of its diesel PM emission total on January 1, 2002.~~

(B) ~~The diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 80 percent of its diesel PM emission total on January 1, 2002.~~

(2) ~~No later than January 1, 2005:~~

(A) ~~The diesel PM emission total for a transit agency on the diesel path shall be no more than 40 percent of its diesel PM emission total on January 1, 2002.~~

(B) ~~The diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 60 percent of its diesel PM emission total on January 1, 2002.~~

(3) ~~No later than January 1, 2007:~~

(A) ~~The diesel PM emission total for a transit agency on the diesel path shall be no more than 15 percent of its diesel PM emission total on January 1, 2002.~~

(B) ~~The diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 40 percent of its diesel PM fleet average on January 1, 2002.~~

(4) ~~No later than January 1, 2009, the diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 15 percent of its diesel PM emission total on January 1, 2002.~~

~~(c)-(8)~~ A transit agency that installs a diesel emission control strategy to reduce diesel PM shall use a diesel emission control strategy that is verified by the Executive Officer in accordance with section 2700 et

seq., title 13, CCR, or an urban bus retrofit device that has been exempted under Vehicle Code section 27156 as an engine rebuild kit and that reduces PM to 0.10 g/bhp-hr when used on an engine model 6V92TA DDEC for the model years specified for that engine.

~~(d)-(9)~~ A transit agency that installs a diesel emission control strategy on an ~~urban bus~~ engine shall use the following percentage reductions from the engine certification standard value when calculating its total diesel PM emissions: 25 percent for a Level 1, 50 percent for a Level 2, and 85 percent for a Level 3 diesel emission control strategy.

~~(e)-(g)~~ A transit agency with fewer than ~~20-30~~ buses in its ~~active transit~~ fleet may apply for an extension to comply with the provisions of section ~~1956.2~~ 2023.1 and section 2023.2 by submitting documentation of financial hardship to the Executive Officer, in writing, at least ~~thirty~~ (30) days before the requirement becomes applicable for approval by the Executive Officer. Documentation of financial hardship shall include, but is not limited to, an analysis of the cost of compliance, the sources of available funds, and the shortfall between funds available and the cost of compliance. The transit agency must also specify the date and means by which compliance will be achieved in the request for a delay.

~~(f)-(5)~~ A transit agency that is unable to comply with an implementation deadline specified in section 2023.1 paragraph ~~(f)(e)~~(1), (2), (3), or (4) or section 2023.2 (b)(1) or (2) because of the unavailability of technology may apply in writing to the Executive Officer for an extension of the compliance deadline. The application to the Executive Officer must be made in writing and at least to comply no later than ninety (90) days before prior to the applicable implementation deadline. The Executive Officer may grant an extension, for a time of up to, but not to exceed, one year, provided that the applicant:

(1) must demonstrate that the technology is unavailable;

(2) shall explain why the transit agency cannot comply by retiring older buses; and

(3) shall provide a schedule for compliance.

~~(6)~~ ~~Beginning July 1, 2002, a transit agency shall not operate its diesel buses on diesel fuel with a sulfur content in excess of 15 parts per million by weight, except that a transit agency may operate its diesel buses on a fuel that is verified by the Executive Officer as a diesel emission control strategy that reduces PM in accordance with section 2700 et seq., title 13, CCR. A transit agency with fewer than 20 buses in its active fleet, and that operates in a federal one-hour ozone attainment area, is not subject to this low-sulfur fuel requirement until July 1, 2006. In areas redesignated as one-hour ozone non-attainment areas prior to July 1, 2006, a transit agency initially exempt from the low-sulfur fuel requirement shall submit a plan to the~~

~~Executive Officer within 30 days of redesignation for achieving compliance with this requirement.~~

(g)(7)

A transit agency that owns, operates, or leases fewer than 20 diesel-fueled, dual-fuel, bi-fuel, or diesel hybrid-electric buses in its ~~active~~ transit fleet and that operates in a federal one-hour ozone attainment area may delay implementation of the intermediate total diesel PM emission reduction requirements provided the transit agency complies with the implementation deadlines set forth in Section 2023.1 paragraphs (f)(e)(3)(A) or (f)(e)(4) and section 2023.2 paragraph (b)(2).

(h) **Non-Compliance.** Any violations of sections 2023, 2023.1, 2023.2, 2023.3, or 2023.4 may be subject to civil penalties as specified in state law and regulations.

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

Adopt section 2023.1 to read as follows:

(Language previously in sections 1956.2 has been moved to section 2023.1.

Below shows changes in text previously in section 1956.2 in underline to indicate amendments and ~~strikeout~~ to indicate deletions. Language shown in double underline indicates addition of new regulatory language.

2023.1 Fleet Rule for Transit Agencies - Urban Bus Requirements

- (a) To encourage transit agencies that operate urban bus fleets to purchase or lease lower emission alternative-fuel buses, while also providing flexibility to such fleet operators to determine their optimal fleet mix in consideration of such factors as air quality benefits, service availability, cost, efficiency, safety, and convenience, two paths to compliance with this fleet rule are available: the alternative-fuel path and the diesel path.
 - (1) Transit agencies must choose their compliance path, and shall notify ARB of their intent to follow either the diesel or the alternative-fuel path, by January 31, 2001. Reporting requirements for that notification are set forth in subdivisions (a) and (b) of section ~~1956.4~~2023.4, title 13, CCR.
 - (2) A transit agency within the jurisdiction of the South Coast Air Quality Management District may elect to change its compliance path from the diesel path to the alternative-fuel path, provided that the transit agency notifies the Executive Officer of the change by January 31, 2004, and provided that the transit agency is in compliance with all requirements of section ~~1956.2~~2023.1, including specific requirements of the diesel path, on or before January 1, 2004. Reporting requirements for this notification are set forth in paragraph (b)(3) of section ~~1956.4~~2023.4, title 13, CCR.
 - (3) A new transit agency that is a successor to an existing transit agency or that has been created from a merger of two or more transit agencies or parts of two or more transit agencies must have the same compliance path as the transit agency or agencies out of which it is formed.
- ~~(e)~~(b) Transit agencies on the alternative-fuel path shall meet the following requirements:
 - (1) 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 paragraph ~~(e)~~(b)(9).
 - (2) NOx fleet average requirements as set forth in subdivision ~~(e)~~(d), below.

- (3) Beginning October 1, 2002, only engines certified to an optional PM standard of 0.03 g/bhp-hr or lower shall be purchased when making new bus purchases.
- (4) Total diesel PM emission reduction requirements and use of low-sulfur or other allowed fuel as set forth in subdivision ~~(f)~~(e), below.
- (5) Transit agencies on the alternative-fuel path shall not purchase any diesel-fueled, dual-fuel, or bi-fuel buses with 2004 - 2006 model year engines certified to emissions levels in excess of those specified in paragraph (a)(11) of section 1956.1, title 13, CCR, -except as provided in paragraph ~~(e)~~(b)(8) or ~~(e)~~(b)(9) of this section.
- (6) Zero-emission bus purchase requirements beginning in model year 2010, in accordance with the requirements set forth in subdivision (c) of section ~~1956.3~~2023.3, title 13, CCR.
- (7) Reporting requirements as set forth in section ~~1956.4~~2023.4, title 13, CCR.
- (8) The Executive Officer may exempt transit agencies on the alternative-fuel path from the requirements of paragraph ~~(e)~~(b)(5) of section ~~1956.2~~2023.1, title 13, CCR, provided that:
 - (A) A transit agency applies to the Executive Officer for such exemption by June 30, 2001;
 - (B) A transit agency demonstrates to the Executive Officer that it will achieve NOx emissions benefits through 2015 greater than what would have been achieved through compliance with paragraph ~~(e)~~(b)(5); and
 - (C) The Executive Officer finds that transit agencies, after consulting with the Engine Manufacturers Association, have demonstrated, or are contractually committed to demonstrate, advanced NOx aftertreatment technology.
- (9) 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, title 13, CCR.

~~(d)~~(c) Transit agencies on the diesel path shall meet the following requirements:

- (1) NOx fleet average requirements as set forth in subdivision ~~(e)~~(d), below.
- (2) Total diesel PM emission reduction requirements and use of low-sulfur or other allowed fuel as set forth in subdivision ~~(f)~~(e), below.
- (3) Zero-emission bus demonstration as required in subdivision (b) of section ~~1956.3~~2023.3, title 13, CCR.
- (4) Transit agencies on the diesel path shall not purchase any diesel-fueled, dual-fuel, or bi-fuel buses with 2004 - 2006 model year engines certified to emissions levels in excess of those specified in

paragraph (a)(11) of section 1956.1, title 13, CCR, except as provided in paragraph ~~(d)(c)(7)~~ or ~~(d)(c)(8)~~ of this section. Beginning July 1, 2003, a transit agency may not purchase alternative fuel buses certified to a PM emission level in excess of the optional standard of 0.03 g/bhp-hr when making new bus purchases.

- (5) Zero-emission bus purchase requirements beginning in model year 2008, in accordance with the requirements set forth in subdivision (c) of section ~~1956.3~~2023.3, title 13, CCR.
- (6) Reporting requirements as set forth in section ~~1956.4~~2023.4, title 13, CCR.
- (7) The Executive Officer may exempt transit agencies on the diesel path from the requirements of paragraph ~~(d)(c)(4)~~ of section ~~1956.2~~2023.1, title 13, CCR, provided that:
 - (A) A transit agency applies to the Executive Officer for such exemption by June 30, 2001;
 - (B) A transit agency demonstrates to the Executive Officer that it will achieve NOx emissions benefits through 2015 greater than what would have been achieved through compliance with paragraph ~~(d)(c)(4)~~; and
 - (C) The Executive Officer finds that transit agencies, after consulting with the Engine Manufacturers Association, have demonstrated, or are contractually committed to demonstrate, advanced NOx aftertreatment technology.
- (8) 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.
- (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 31, 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)~~2023.4(g).

~~(e)~~(d) Beginning October 1, 2002, no transit agency shall own, operate, or lease an active fleet of urban buses with average NOx emissions in excess of 4.8 g/bhp-hr, based on the engine certification standards of the engines in the active fleet.

- (1) This active fleet average requirement shall be based on urban buses owned, operated, or leased by the transit agency, including diesel buses, alternative-fuel buses, all heavy-duty zero-emission buses, electric trolley buses, and articulated buses, in each transit agency's active fleet. The Executive Officer may allow zero-emission buses that do not meet the definition of an urban bus to be included in the calculation of the fleet average standard upon written request to the ARB by January 31, 2002, and upon approval by the Executive Officer. The request shall include a description of the zero-emission buses, the zero-emission technology utilized, and the number of zero-emission buses to be used in calculating the NOx fleet average standard. Zero-emission buses not meeting the definition of an urban bus may not be used to satisfy the requirements of the Zero-emission Bus Demonstration Project set forth in subdivision (b) of section ~~1956.3~~2023.3, title 13, CCR.
- (2) Transit agencies may use ARB-certified NOx retrofit systems to comply with the fleet average requirement (in addition to bus purchases, repowerings, and retirements).
- (3) Transit agencies have the option of retiring all 1987 and earlier model year diesel urban buses by October 1, 2002, to comply with the fleet average standard requirement.
- (4) *A transit agency established after January 1, 2005, shall not operate an active fleet of urban buses with an average NOx emission in excess of 4.0 g/bhp-hr or*
(A) the NOx average of the active fleet of the transit agency from which it was formed, whichever is lower, or
(B) in the case of a merger of two or more transit agencies or parts of two or more transit agencies, the average of the NOx fleet averages, whichever is lower.

~~(f)~~(e) To reduce public exposure to diesel particulate matter, each transit agency shall reduce the ~~total~~ diesel PM emissions total of the diesel buses in its active fleet relative to its ~~total~~ diesel PM emissions total as of January 1, 2002, according to the schedule below, and shall operate its diesel buses on diesel fuel with a maximum sulfur content of 15 parts per million by weight. A

~~transit agency shall calculate its diesel PM emission total by summing the PM exhaust emission values specified in section 1956.1(a) for each diesel-fueled, dual-fuel, bi-fuel (except for heavy-duty pilot ignition engines), and diesel hybrid-electric engine in its active fleet in grams per brake horsepower-hour (g/bhp-hr). For 1987 and earlier engines, the PM exhaust emission value shall be presumed to be 1.0 g/bhp-hr. Documentation of compliance with these requirements must be provided in accordance with the provisions of subdivision (d) of section 1956.4~~2023.4, title 13, CCR.

- (1) No later than January 1, 2004:
 - (A) The diesel PM emission total for a transit agency on the diesel path shall be no more than 60 percent of its diesel PM emission total on January 1, 2002.
 - (B) The diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 80 percent of its diesel PM emission total on January 1, 2002.
- (2) No later than January 1, 2005:
 - (A) The diesel PM emission total for a transit agency on the diesel path shall be no more than 40 percent of its diesel PM emission total on January 1, 2002.
 - (B) The diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 60 percent of its diesel PM emission total on January 1, 2002.
- (3) No later than January 1, 2007:
 - (A) The diesel PM emission total for a transit agency on the diesel path shall be no more than 15 percent of its diesel PM emission total on January 1, 2002 or equal to 0.01 g/bhp-hr times the total number of current diesel-fueled active fleet buses, whichever is greater.
 - (B) The diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 40 percent of its diesel PM fleet average on January 1, 2002.
- (4) No later than January 1, 2009, the diesel PM emission total for a transit agency on the alternative fuel path shall be no more than 15 percent of its diesel PM emission total on January 1, 2002 or equal to 0.01 g/bhp-hr times the total number of current diesel-fueled active fleet buses, whichever is greater.
- (5) Beginning on January 1, 2005, a new transit agency may not have a diesel PM emission total exceeding the following values:

- (1) As of January 1, 2005 through December 31, 2009, 0.05g/bhp-hr (exhaust emission value) times the total number of diesel-fueled buses in the active fleet;
- (2) As of January 1, 2010, 0.01 g/bhp-hr (exhaust emission value) times the total number of diesel-fueled buses in the active fleet.

- (6) Beginning July 1, 2002, a transit agency shall not operate its diesel urban buses on diesel fuel with a sulfur content in excess of 15 parts per million by weight, except that a transit agency may operate its diesel buses on a fuel that is verified by the Executive Officer as a diesel emission control strategy that reduces PM in accordance with section 2700 et seq., title 13, CCR. A transit agency with fewer than 20 buses in its active fleet, and that operates in a federal one-hour ozone attainment areas, is not subject to this low-sulfur fuel requirement until July 1, 2006. In areas redesignated as one-hour ozone non-attainment areas prior to July 1, 2006, a transit agency initially exempt from the low-sulfur fuel requirement shall submit a plan to the Executive Officer within 30 days of redesignation for achieving compliance with this requirement.

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

**Adopt Section 2023.2 to read as follows:
(All of section 2023.2 is new language)**

Section 2023.2 Fleet Rule for Transit Agencies – Transit Fleet Vehicle Requirements

- (a) A transit agency shall not operate transit fleet vehicles with a NOx fleet average exceeding the following values as of the specified dates. A transit agency shall provide documentation of compliance with the requirements in accordance with the provisions of subdivision (e)(2) of section 2023.4, title 13, CCR.
- (1) Beginning December 31, 2007 through December 30, 2010, 3.2 g/bhp-hr:
- (A) A transit agency may retire all 1997 and earlier model year engines in transit fleet vehicles by December 31, 2007, to comply with the NOx fleet average requirement.
- (B) For a new transit agency established after December 31, 2007 and through December 31, 2009, either 3.2 g/bhp-hr or no higher than the NOx average of the transit fleet vehicles of the transit agency from which the new transit agency has been formed, whichever is lower.
- (2) Beginning December 31, 2010, 2.4 g/bhp-hr:
- (A) A transit agency may retire all 2001 and earlier model year engines in transit fleet vehicles by December 31, 2010, to comply with the NOx fleet average requirement.
- (B) For a new transit agency established after December 31, 2010, either 2.4 g/bhp-hr or no higher than the NOx average of the transit fleet vehicles of the transit agency from which the new transit agency has been formed, whichever is lower.
- (3) Zero-emission buses used to satisfy the requirements set forth in subdivision (d) of section 2023.1 may not be used to meet the requirements of this subdivision.
- (4) A transit agency may claim NOx reductions by application of a system that has been verified by the Executive Officer in accordance with section 2700 et seq., title 13, CCR to comply with the fleet average requirement, in addition to transit fleet vehicle purchases, retirements, or engine repowering.
- (b) A transit agency shall reduce the total diesel particulate matter (PM) emissions of its diesel transit fleet vehicles relative to its total diesel PM emissions from diesel transit fleet vehicles as of January 1, 2005, according to the schedule below. "Diesel PM emission total" and how it is calculated are defined in 2023(a)(3). A transit agency shall provide documentation of

compliance with these requirements in accordance with the provisions of subdivision (e)(3) of section 2023.4, title 13, CCR.

- (1) No later than December 31, 2007, the diesel PM emission total for a transit agency's transit fleet vehicle fleet shall be no more than 60 percent of its diesel PM emission total on January 1, 2005.
- (2) No later than December 31, 2010, the diesel PM emission total for a transit agency's transit fleet vehicle fleet shall be no more than 20 percent of its diesel PM emission total on January 1, 2005, or equal to 0.01 g/bhp-hr times the total number of transit fleet vehicles in the current fleet, whichever is greater.
- (3) A new transit agency established after January 1, 2005, may not have a diesel PM emission total exceeding the following values:
 - (A) For a new transit agency established January 1, 2005 through December 31, 2006, 0.1 g/bhp/hr (exhaust emission value) times the number of diesel-fueled transit fleet vehicles in its fleet. This value will serve as the transit agency's PM baseline. The transit agency must meet the requirements set forth in section 2023.2(b)(1) and (2).
 - (B) For a new transit agency established January 1, 2007 through December 31, 2009, 0.1 g/bhp/hr (exhaust emission value) times the number of diesel-fueled transit fleet vehicles in its fleet. This value will serve as the transit agency's PM baseline and shall be reduced by 50 percent of its PM baseline value by December 31, 2010, and 80 percent by December 31, 2012.
 - (C) For a new transit agency established January 1, 2010 or later, 0.01 g/bhp-hr (exhaust emission value) times the total number of diesel transit fleet vehicles in its fleet.

(c) A transit agency may apply to the Executive Officer for a delay in meeting the provisions of section 2023.2(a) and 2023.2(b) for up to one year to allow for the termination of a vehicle lease, maintenance/lease, turnkey or vehicle/service contract as defined by the Federal Transit Administration (FTA). The transit agency shall apply to the Executive Officer no later than 90 days prior to the applicable deadlines and shall include a description of the reason the delay is required, the reason the contractor cannot provide a newer vehicle to replace an existing vehicle within the terms of the contract, and provide a schedule for compliance by the end of the compliance extension.

Adopt Section 2023.3 to read as follows:

(Language previously in section 1956.3 has been moved to section 2023.3. Below shows changes to the text previously in section 1956.3 in underline to indicate amendments and ~~strikeout~~ to indicate deletions.)

Section 2023.3 Zero-emission Bus Requirements

- (a) "Zero-emission bus" means an Executive Officer certified urban bus that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) under any and all possible operational modes and conditions.
 - (1) A hydrogen-fuel cell bus shall qualify as a zero-emission bus.
 - (2) An electric trolley bus with overhead twin-wire power supply shall qualify as a zero-emission bus.
 - (3) A battery electric bus shall qualify as a zero-emission bus.
 - (4) Incorporation of a fuel-fired heater shall not preclude an urban bus from being certified as a zero-emission bus, provided the fuel-fired heater cannot be operated at ambient temperatures above 40^BF and the heater is demonstrated to have zero evaporative emissions under any and all possible operational modes and conditions.

- (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~~2023.1, 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) This demonstration project shall meet all of the following specifications and requirements:
 - (A) utilize a minimum of three zero-emission buses,
 - (B) include any necessary site improvements,
 - (C) locate fueling infrastructure onsite,
 - (D) provide appropriate maintenance and storage facilities,
 - (E) train bus operators and maintenance personnel,
 - (F) place the buses in revenue service for a minimum duration of 12 calendar months,
 - (G) retain operation and maintenance records, and
 - (H) report on the demonstration program as set forth in subdivision ~~(e)~~(f) of section ~~1956.4~~2023.4, Title 13, CCR.

- (2) When planning and implementing the demonstration project, the operator or owner shall meet the following milestones:
 - (A) no later than January 1, 2002, prepare and solicit bid proposals for materials and services necessary to implement the demonstration project, including but not limited to the zero-emission buses and the associated infrastructure
 - (B) no later than February 28, 2006, place at least three zero-emission buses in 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)~~(f)(3) of section ~~1956.4~~2023.4, title 13, CCR and,
 - (D) no later than July 31, 2007, submit a report on the demonstration project to the Executive Officer, in accordance with paragraph ~~(e)~~(f)(4) of section ~~1956.4~~2023.4 title 13, CCR.

- (2) 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 demonstration project in revenue service.

- (c) Purchase Requirement for Zero-emission Buses - The owner or operator of a transit agency with more than 200 urban buses in active service on January 1, 2007, for transit agencies on the diesel path, and January 1, 2009, for transit agencies on the alternative-fuel path, shall purchase and/or lease zero-emission buses, in accordance with the following:
 - (1) For transit agencies on the diesel path, in accordance with the requirements in section ~~1956.2~~2023.1, a minimum 15 percent of purchase and lease agreements, when aggregated annually, for model year 2008 through model year 2015 urban buses shall be zero-emission buses.
 - (2) For transit agencies on the alternative-fuel path, in accordance with the requirements in section ~~1956.2~~2023.1, a minimum 15 percent of purchase and lease agreements, when aggregated annually, for

model year 2010 through model year 2015 urban buses shall be zero-emission buses.

(3) The provisions of paragraphs (1) and (2) shall not apply if the operator's urban bus fleet is composed of 15 percent or more zero-emission buses on January 1, 2008, for transit agencies on the diesel path, and on January 1, 2010, for transit agencies on the alternative-fuel path, or at any time thereafter.

(4)(A) Transit agencies on either the diesel path or alternative-fuel path may earn credits for use in meeting the purchase requirements for zero-emission buses specified in paragraphs (c)(1) and (c)(2) by placing zero-emission buses in service prior to the dates specified in paragraphs (c)(1) and (c)(2). For each zero-emission bus placed into early service, credits shall be accrued according to the following table. Each earned credit is equivalent to one zero-emission bus.

Path	Credits per Year Placed					
	2000-2003	2004-2005	2006	2007	2008	2009
Diesel	3	2.5	2	1.5	-	-
Alternative-fuel	3	2.5	2	1.5	1.5	1

(B) Zero-emission buses placed in service to meet the zero-emission bus demonstration projects as specified in subdivision (b) are not permitted to accrue credits towards the zero-emission bus purchase requirements.

(d) The Air Resources Board shall review zero-emission bus technology and the feasibility of implementing the requirements of subdivision (c) above no later than January 2006. Based on that assessment, the Board shall decide whether to proceed with the implementation of subdivision (c) requirements.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43100, 43101, 43104, 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.

Adopt section 2023.4 to read as follows:

(Language previously in sections 1956.4 has been moved to section 2023.4.

Below shows changes in text previously in section 1956.2 in underline to indicate amendments and ~~strikeout~~ to indicate deletions. Language shown in double underline indicates addition of new regulatory language.

2023.4 Reporting Requirements for ~~all Urban Bus~~ Transit Agencies

- (a) The following reports on new urban bus purchases and/or leases by transit ~~operators~~agencies on the alternative-fuel path shall be submitted as described below:
- (1) The initial report shall be submitted by January 31, 2001, and shall state the transit agency's intent to follow the alternative-fuel path.
 - (2) Any requests for deviation from the requirement that 85 percent of buses purchased per year must be alternative-fuel buses must be submitted in writing and approved by the Executive Officer of the Air Resources Board 90 days prior to purchase. The written request must include the reason for requesting the deviation from the 85 percent annual purchase requirement and the transit agency's future planned alternative-fuel bus purchases.
 - (3) Each transit agency shall submit an annual report containing: the number, manufacturer, make, and model year of engines, and fuel used for each ~~transit~~ urban bus it currently owns or operates, urban bus purchases and/or leases beginning January 1, 2000, and annual average percentage of total urban bus purchases and/or leases that were alternative-fuel buses. The first report shall be submitted by January 31, 2001. Subsequent reports shall be submitted annually by January 31 through the year 2016.
- (b) The following reports on new urban bus purchases and/or leases by transit ~~operators~~agencies on the diesel path shall be submitted as described below:
- (1) The initial report shall be submitted by January 31, 2001, and shall state the transit agency's intent to follow the diesel path.
 - (2) Each transit agency shall submit an annual report containing the number, manufacturer, make, and model year of engines, and fuel used for each ~~transit~~ urban bus it currently owns or operates, and urban bus purchases and/or leases beginning January 1, 2000. The first report shall be submitted by January 31, 2001. Subsequent reports shall be submitted annually by January 31 through the year 2016.
 - (3) A transit agency within the jurisdiction of the South Coast Air Quality Management District that chooses to change from the diesel path to the alternative fuel path in accordance with paragraph (a)(2) of section

~~1956.2-2023.1~~, title 13, CCR, must submit to the Executive Officer a letter of intent to follow the alternative fuel path no later than January 31, 2004. The letter of intent shall contain a statement certifying that the transit agency is in compliance with all provisions of the fleet rule for transit agencies on or before January 1, 2004.

(c) Each transit agency shall submit the following reports on the urban bus NOx fleet average requirement:

- (1) Initial documentation shall be submitted by January 31, 2001, and contain, at a minimum, the active urban bus fleet NOx emission average, and if that number exceeds the average required in subdivision ~~(e)~~(d), section ~~1956.2-2023.1~~, title 13, CCR, a schedule of actions planned to achieve that average by October 1, 2002, including numbers and model years of bus purchases, retirements, retrofits, and/or repowerings, or shall indicate the intent of the transit agency to retire all model year 1987 and earlier buses in its active fleet by October 1, 2002.
- (2) A final report shall be submitted by January 31, 2003, detailing the active urban bus fleet NOx emission average as of October 1, 2002, and actions, if any were needed, taken to achieve that standard, including numbers and model years of bus purchases, retirements, retrofits, and/or repowerings, or documenting the retirement of all model year 1987 and earlier buses.

(d) Each transit agency shall submit the following reports on the total diesel PM emission reduction requirements for urban buses:

- (1) An initial annual report shall be submitted by January 31, 2003 and shall contain, at a minimum, the following information:
 - (A) number, manufacturer, make, and model year of diesel-fueled, dual-fuel, bi-fuel (except for heavy-duty pilot ignition engines), and diesel hybrid-electric engines in urban buses in the active fleet; the PM engine certification value of each of those bus engines; the diesel PM emission total for the diesel buses in the active fleet; and the diesel PM emission total for the baseline date of January 1, 2002.
 - (B) For each urban bus for which a diesel emission control strategy has been applied, the device's product serial number; its Diesel Emission Control Strategy Family Name in accordance with the requirements of section 2705 (g)(2), title 13, CCR; and the date of installation.

- (2) Annual reports shall be submitted each year beginning January 31, 2004 and each January 31 thereafter, through 2009, and shall contain the information required in paragraphs (d)(1)(A) and (B) above plus the total percentage reduction of PM achieved from the baseline diesel PM emission total as of January 1 of each applicable year.

(e) Each transit agency shall submit the following reports for its transit fleet vehicles:

- (1) An annual report of the number, manufacturer, make, and model year of engines and fuel used for each transit fleet vehicle it currently owns, leases, or operates as of January 1st of each year, beginning in 2006. The first report shall be submitted by January 31, 2006, and subsequent reports shall be submitted annually by January 31st through the year 2016.

- (2) For the NOx fleet average reduction requirements set forth in section 2023.2 (a):

(A) A report submitted by January 31, 2006, must contain at a minimum, the transit vehicle fleet NOx emission average. If that number exceeds the average required in section 2023.2(a)(1), the report must include a schedule of actions planned to achieve compliance by December 31, 2007.

(i) If a change to the compliance schedule occurs that results in noncompliance, the transit agency must notify the Executive Officer within 30 days.

(ii) Notification to the Executive Officer must include a revised schedule showing how the agency will be in compliance within 90 days of the schedule change that caused noncompliance.

(B) A report submitted by January 31, 2008, must contain, details of the transit fleet vehicle fleet NOx emission average as of December 31, 2007, or must document the retirement of all model year 1997 and earlier transit fleet vehicle engines by December 31, 2007.

(C) A report submitted by January 31, 2009, must contain at a minimum, the transit vehicle fleet NOx emission average. If that number exceeds the average required in section 2023.2(a)(1), the report must include a schedule of actions planned to achieve compliance by December 31, 2007.

(i) If a change to the compliance schedule occurs that results in noncompliance, the transit agency must notify the Executive Officer within 30 days.

(ii) Notification to the Executive Officer must include a revised schedule showing how the agency will be in

compliance within 90 days of the schedule change that caused noncompliance.

(D) A final report submitted by January 31, 2011 must contain details the transit fleet vehicle fleet NOx emission average as of December 31, 2010, or must document the retirement of all model year 2001 and earlier transit fleet vehicle engines by December 31, 2010.

(3) For the total diesel PM reduction requirements set forth in section 2023.2 (b):

(A) An initial report submitted by January 31, 2006, must contain the PM engine certification value of each transit fleet vehicle engine and the transit fleet vehicle diesel PM total as of January 1, 2005.

(B) A report submitted by January 31, 2008, must contain the transit fleet vehicle diesel PM total as of December 31, 2007, and the percentage diesel PM reduced, documenting compliance with the requirement in section 2023.2 (b)(1).

(C) A final report submitted by January 31, 2011, of the transit fleet vehicle diesel PM total as of December 31, 2010, and the percentage diesel PM reduced, documenting compliance with the requirement in section 2023.2 (b)(2).

(D) For each transit fleet vehicle for which a diesel emission control strategy has been applied, each report specified above must include the strategy's product serial number; its Diesel Emission Control Strategy Family Name in accordance with the requirements of section 2705 (g)(2), title 13, CCR; and the date of installation correlated to a specific transit fleet vehicle engine.

~~(e)~~(f) 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) Initial documentation shall be submitted by January 31, 2003, and contain, at a minimum, the bus order and delivery schedule, fuel type, type of refueling station, any planned facility modifications, and a revenue service demonstration plan;

(2) A financial plan shall be submitted by January 31, 2003, and contain, at a minimum, projected expenditures for capital costs for purchasing and/or leasing buses, refueling stations, any facility modifications, and projected annual operating costs;

- (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.

- (4) A final report shall be submitted by 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 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)~~(g) The following reports on new zero-emission bus purchases and/or leases shall be submitted by transit agencies required to purchase zero-emission buses as described below:

- (1) Initial report shall be submitted by January 1, 2007 for transit agencies on the diesel path, and by January 1, 2009, for transit agencies on the alternative-fuel path. The initial report shall contain, at a minimum, the following information:
 - (A) a brief description of the zero-emission technology to be utilized and a plan for the implementation of the requirement,

- (B) for an exemption from the purchase requirement, documentation that 15 percent or more of the transit agency's active urban bus fleet is composed of zero-emission buses.
- (2) Any requests for deviation from the requirement that 15 percent of buses purchased per year must be zero-emission buses must be submitted in writing and approved by the Executive Officer of the Air Resources Board 90 days prior to a transit agency submitting a purchase order(s) reflecting the purchase deviation. The written request shall include the reason for requesting the deviation and the transit agency's future planned zero-emission bus purchases.
 - (3) Transit agencies on the diesel path shall include in the annual reports required in paragraph (b)(2): zero-emission bus purchases and/or leases beginning with model year 2008 and through model year 2015, and the annual average percentage of total bus purchases and/or leases that were zero-emission buses.
 - (4) Transit agencies on the alternative-fuel path shall include in the annual reports required in paragraph (a)(3): zero-emission bus purchases and/or leases beginning with model year 2010 and through model year 2015, and the annual average percentage of total bus purchases and/or leases that were zero-emission buses.
- ~~(g)~~(h) Transit agencies exempted from the requirements of paragraphs ~~(e)~~(b)(5) and ~~(d)~~(c)(4), section ~~4956.2~~2023.1, title 13, CCR, shall submit annual reports demonstrating that they are achieving NOx emission benefits required in paragraphs ~~(e)~~(b)(8)(B) and ~~(d)~~(c)(7)(B), section ~~4956.2~~2023.1, title 13, CCR. The first report shall be submitted by January 31, 2005. Subsequent reports shall be submitted annually by January 31 through the year 2016.
- ~~(h)~~(i) A transit agency requesting approval for the purchase of diesel-fueled hybrid-electric buses pursuant to paragraph ~~(d)~~(c)(9), section ~~4956.2~~2023.1, title 13, CCR, shall:
- (1) submit an application for approval that meets the requirements of paragraphs ~~(d)~~(c)(9)(A) and ~~(d)~~(c)(9)(B), section ~~4956.2~~2023.1, 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.

(j) A new transit agency shall submit the following information to the Executive Officer:

- (1) within 60 days of formation, the name of the new transit agency, its mailing address, name of a contact person and that person's e-mail address and phone number; a description of the service area and proposed routes; and the planned number of urban buses and transit fleet vehicles, including model years of engines;
- (2) within 120 days of formation, its NOx fleet average for its active fleet and, separately, its transit fleet vehicles, and its diesel PM emission total for its active fleet and, separately, its diesel PM emission total for its transit fleet vehicles.

- (k) (1) A transit agency that fails to submit a complete report in accordance with this section is subject to civil penalties of not less than \$100 per day for every day past January 31 of each reporting year through 2016.
- (2) A new transit agency that fails to submit its report or required information in accordance with this section is subject to civil penalties of not less than \$100 per day for every day past the required reporting dates in section 2023.4(j).
- (3) A report that does not contain all required information will not be considered complete. A report will be considered to be complete as of the date that all required information is submitted.

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