

# FINAL REGULATION ORDER

## AMENDMENTS TO THE ZERO-EMISSION BUS REGULATION

*NOTE:* This document is printed in a style to indicate the amendments to the preexisting provisions in title 13, California Code of Regulations, sections 2023.1, 2023.3, and 2023.4. All preexisting language is indicated by plain type. All additions to language are indicated by underlined text. All deletions to language are indicated by ~~strikeout~~. Only those portions containing the amendments to the preexisting provisions are included. All other portions remain unchanged and their omission from this document is indicated by the symbol “ \* \* \* \* \* ” or by [No Change]. Subsection headings are shown in italics and are to be italicized in Barclays California Code of Regulations.

Amend title 13, California Code of Regulations, sections 2023.1, Fleet Rules for Transit Agencies – Urban Bus Requirements, 2023.3, Zero-Emission Bus Requirements, and 2023.4, Reporting Requirements for Transit Agencies, to read as follows.

### **§ 2023.1 Fleet Rule for Transit Agencies – Urban Bus Requirements.**

\* \* \* \* \*

- (b) Transit agencies on the alternative-fuel path shall meet the following requirements:
  - (1) – (5) [No Change]
  - (6) Zero-emission bus purchase requirements beginning in model year ~~2010~~2012, in accordance with the requirements set forth in subdivision (c) of section 2023.3, title 13, CCR.
  - (7) – (9) [No Change]
- (c) Transit agencies on the diesel path shall meet the following requirements:
  - (1) – (4) [No Change]
  - (5) Zero-emission bus purchase requirements beginning in model year ~~2008~~2011, in accordance with the requirements set forth in subdivision (c) of section 2023.3, title 13, CCR.
  - (6) – (9) [No Change]

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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.

### § 2023.3 Zero-Emission Bus Requirements.

(a) [No Change]

(1) – (4) [No Change]

(b) ~~Zero-emission Bus Demonstration Project~~ Zero-Emission Bus Demonstration Projects. – 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 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) Initial Demonstration Project.

(A) Except as provided in (D) below, the owner or operator of an urban bus fleet on the diesel path in accordance with the provisions of section 2023.1, with more than 200 urban transit buses in its active fleet on January 31, 2001, shall implement an Initial Demonstration Project in accordance with this subsection (b)(1). 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.

(B) (1) This Initial Demonstration Project shall meet all of the following specifications and requirements:

- (A) 1. utilize a minimum of three zero-emission buses,
- (B) 2. include any necessary site improvements,
- (C) 3. locate fueling infrastructure onsite,
- (D) 4. provide appropriate maintenance and storage facilities,
- (E) 5. train bus operators and maintenance personnel,
- (F) 6. place the buses in revenue service for a minimum duration of 12 calendar months,

- ~~(G)~~7. retain operation and maintenance records, and
- ~~(H)~~8. report on the demonstration program as set forth in subdivision (f) of section 2023.4, title 13, CCR.

~~(C)~~~~(2)~~ When planning and implementing the Initial Demonstration Project, the operator or owner shall meet the following milestones:

- ~~(A)~~1. 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)~~2. no later than February 28, 2006, place at least three zero-emission buses in operation; ~~and~~
- ~~(C)~~3. no later than July 31, 2005, submit a preliminary report on the demonstration project to the Executive Officer, in accordance with paragraph (f)(3) of section 2023.4, title 13, CCR; ~~and~~
- ~~(D)~~4. no later than July 31, 2007, submit a report on the demonstration project to the Executive Officer, in accordance with paragraph (f)(4) of section 2023.4 ~~¶~~title 13, CCR; ~~and~~
- 5. no later than January 31, 2003, initial documentation shall be submitted in accordance with paragraph (f)(1) of section 2023.4, title 13, CCR; and
- 6. no later than January 31, 2003, a financial plan shall be submitted in accordance with paragraph (f)(2) of section 2023.4, title 13, CCR.

~~(D)~~ ~~(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)~~1. designate the agency hosting the onsite demonstration,
- ~~(B)~~2. jointly fund the demonstration project, and
- ~~(C)~~3. place a minimum of three zero-emission buses per demonstration project in revenue service.

(2) Advanced Demonstration Project.

(A) Except as provided in (E) below, the owner or operator of an urban bus fleet in accordance with the provisions of section 2023.1, with more than 200 urban buses in active service on January 1, 2007, for transit agencies on the diesel path shall implement an Advanced 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.

- (B) Diesel fuel path transit agencies may choose to follow the single or joint path demonstration as described in 2023.3 (b)(2)(D) or 2023.3 (b)(2)(E).
- (C) When planning and implementing the Advanced Demonstration Project for transit agencies on the diesel path, the operator or owner shall meet the following milestones:
1. No later than January 1, 2009, place all required zero-emission buses in operation,
  2. No later than May 1, 2009, submit a preliminary report on the demonstration project to the Executive Officer, in accordance with paragraph (f)(3) of section 2023.4, title 13, CCR, and
  3. No later than May 1, 2010, submit a final report on the demonstration project to the Executive Officer, in accordance with paragraph (f)(4) of section 2023.4, title 13, CCR.
- (D) Transit agencies choosing to participate in a single transit agency Advanced Demonstration Project shall meet all of the following specifications and requirements:
1. Utilize a minimum of six zero-emission buses,
  2. Provide appropriate maintenance and storage facilities,
  3. Train bus operators and maintenance personnel,
  4. Place the buses in revenue service for a minimum duration of 12 calendar months after delivery of all demonstration buses,
  5. Retain operation and maintenance records, and
  6. Report on the demonstration program as set forth in subdivision (f) of section 2023.4, title 13, CCR.
- (E) Multiple transit agencies may, on a case-by-case basis, petition the Executive Officer to implement a joint zero-emission bus demonstration project. Transit agencies that are participating in a joint demonstration project shall:
1. Jointly fund the demonstration project.
  2. Utilize a minimum of 12 zero-emission buses in revenue service.
  3. Operate the demonstration at a transit agency affected by the zero-emission bus regulation.
  4. Purchase and put in revenue service a minimum of three zero-emission buses per transit agency.
  5. Place the buses in revenue service for a minimum duration of 12 calendar months after delivery of all demonstration buses.
  6. Provide appropriate maintenance and storage facilities.

7. Train bus operators and maintenance personnel from each participating transit agency.

(F) Zero-emission buses placed in service to meet the zero-emission bus initial demonstration projects as specified in subdivision (b)(1) are not permitted to count towards the advanced demonstration requirements, unless upgraded with technology advancements to make the bus comparable to vehicles available for the advanced demonstration. One credit shall be earned for each bus.

(c) ~~Purchase Requirement for Zero-emission Buses~~– Purchase Requirement for Zero-Emission Buses. The number of urban buses in each transit agency's active urban bus fleet shall be reviewed annually, as described in sections 2023.4(a)(3) and (b)(2). 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 paragraphs. In addition, the owner or operator of diesel path transit agencies whose active urban bus fleet initially exceeds 200 urban buses after January 1, 2007 shall have three years to comply with the Zero-Emission Bus Purchase Requirement starting January 1, of the year they exceed 200 urban buses through 2026. The owner or operator of alternative fuel path transit agencies whose active urban bus fleet initially exceeds 200 urban buses after January 1, 2009, shall have three years to comply with the Zero-Emission Bus Purchase Requirement starting January 1, of the year they exceed 200 urban buses through 2026.

(1) For transit agencies on the diesel path, in accordance with the requirements in section 2023.1, a minimum 15 percent of purchase and lease agreements, when aggregated annually, for model year ~~2008~~ 2011, or from the start model year of Zero-Emission Bus purchases, through model year ~~2015~~ 2026 urban buses shall be zero-emission buses.

(2) For transit agencies on the alternative-fuel path, in accordance with the requirements in section 2023.1, a minimum 15 percent of purchase and lease agreements, when aggregated annually, for model year ~~2010~~ 2012, or from the start model year of Zero-Emission Bus purchases, through model year ~~2015~~ 2026 urban buses shall be zero-emission buses.

(3) [No Change]

(4) Earning Credits.

(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 and above what is required by section 2023.3 in paragraphs (b)(2), (c)(1) and (c)(2), credits shall be accrued according to the following table. Each earned credit is equivalent to one zero-emission bus.

Path	<i>Credits per Year Placed</i>					
	<u>2000-2003</u> <u>7</u>	<u>2004-2005</u> <u>8</u>	<u>2006</u> <u>9</u>	<u>2007</u> <u>10</u>	<u>2008</u> <u>11</u>	<u>2009</u>
Diesel	<u>3</u> <u>2.5</u>	<u>2</u> <u>.5</u> <u>2</u>	<u>2</u> <u>1.5</u>	1.5	-	-
Alternative-fuel	<u>3</u> <u>2.5</u>	<u>2</u> <u>.5</u> <u>2</u>	2	1.5	1.5	4

- (B) Zero-emission buses placed in service to meet the zero-emission bus initial demonstration projects as specified in subdivision (b)(1) are not permitted to accrue credits towards the zero-emission bus purchase requirements, unless upgraded with technology advancements to make them comparable to vehicles available for the advanced demonstration. One credit shall be earned for each bus.
- (C) Zero-emission buses placed in service to meet the advanced demonstration projects as specified in subdivision (b)(2) can accrue purchase credit towards the zero-emission purchase requirements. For each zero-emission bus required by the advanced demonstration, credit shall be accrued according to the following table. Each earned credit is equivalent to one zero-emission bus.

Path	<i>Credits per Year Placed for Advanced Demonstration Zero-Emission Buses</i>		
	<u>2007</u>	<u>2008</u>	<u>2009</u>
Diesel	<u>2</u>	<u>1.5</u>	<u>1</u>

- (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 2006July 2009. Based on that assessment, the Board shall decide whether to proceed with the implementation of subdivision (c) or adjust the requirements.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43100, 43101, 43104 and 43806, Health and Safety Code. Reference: Sections 39002, 39003, 39017,

39018, 39500, 40000, 43000, 43000.5, 43009, 43013, 43018, 43102, 43801 and 43806 Health and Safety Code; and section 28114, Vehicle Code.

**§ 2023.4 Reporting Requirements for Transit Agencies.**

(a) The following reports on new urban bus purchases and/or leases by transit agencies on the alternative-fuel path shall be submitted as described below:

(1) [No Change]

(2) [No Change]

(3) Each transit agency shall submit an annual report containing: the number, manufacturer, make, and model year of engines, and fuel used for each 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. For transit agencies operating 150 or more urban buses, reports shall be submitted annually by January 31 through the year 2027.

(b) The following reports on new urban bus purchases and/or leases by transit agencies on the diesel path shall be submitted as described below:

(1) [No Change]

(2) Each transit agency shall submit an annual report containing the number, manufacturer, make, and model year of engines, and fuel used for each 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. For transit agencies operating 150 or more urban buses, reports shall be submitted annually by January 31 through the year 2027.

(3) [No Change]

(4) [No Change]

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(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) [No Change]
  - (B) a comparison with conventional buses on the following parameters: miles driven per bus in revenue and non-revenue service, miles between propulsion related road calls, miles between road calls, availability of bus for pull out, fuel economy, fueling costs, infrastructure costs, initial cost of bus, maintenance costs of propulsion related components, warranty of fuel cell and propulsion related components, safety incidents, and maintenance (both scheduled and unscheduled);
  - (C) – (D) [No Change]
- (4) A final report shall ~~be submitted by July 31, 2007, and~~ contain, at a minimum, the following information:
  - (A) [No Change]
  - (B) a comparison with conventional buses on the following parameters: miles driven per bus in revenue service, miles between propulsion related road calls, miles between road calls, availability of bus for pull out, fuel economy, fueling costs, infrastructure costs, initial cost of bus, maintenance costs of propulsion related components, warranty of fuel cell and propulsion related components, bus down time (scheduled and unscheduled), safety incidents, driver and mechanic training conducted, and maintenance (both scheduled and unscheduled),
  - (C) – (D) [No Change]
- (5) Beginning 1 month after the start of a demonstration and monthly thereafter, an update on the demonstration shall be provided to Air Resources Board staff. These updates shall provide staff with zero-

emission bus qualitative data on the following parameters: brief description of each bus's operation, number of days in operation (in-service and testing), bus down time (scheduled and unscheduled), reason for bus down time, outreach events, and requests for future participation in outreach events.

- (6) Beginning 2 months after the delivery of the first bus and quarterly thereafter, an update on the demonstration shall be provided to Air Resources Board staff. These updates shall provide staff with zero-emission and conventional bus quantitative data on the following parameters: reliability (defined as miles between propulsion related road calls), operating and maintenance costs, maintenance conducted, warranty issues, availability of bus for pull out, fuel economy, technology performance, bus downtime (scheduled and unscheduled), safety incidents, issues with fueling equipment, outreach efforts, and driver and mechanic training conducted.
- (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) [No Change]
- (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~~2026, 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~~2008 and through model year ~~2015~~2026, and the annual average percentage of total bus purchases and/or leases that were zero-emission buses.

\* \* \* \* \*

(k) Failure to submit complete reports.

- (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. For transit agencies with more than 150 urban buses civil penalties of not less than \$100 per day for every day past January 31 shall continue for each reporting year through 2027.
- (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 and 39667, Health and Safety Code. Reference: Sections 39667, 39700, 43000, 43000.5, 43013, 43018, 43801 and 43806, Health and Safety Code.