

ATTACHMENT B

California Environmental Protection Agency
AIR RESOURCES BOARD

PROPOSED 15-DAY MODIFICATIONS

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2018 AND SUBSEQUENT MODEL ZERO-EMISSION VEHICLES AND HYBRID ELECTRIC VEHICLES, IN THE PASSENGER CAR, LIGHT-DUTY TRUCK AND MEDIUM-DUTY VEHICLE CLASSES

Amended: March 22, 2012
Amended: December 6, 2012
Amended: May 30, 2014
Amended: [insert amendment date]

[NOTE: Set forth below are proposed amendments to California Exhaust Emission Standards and Test Procedures for 2018 and Subsequent Model Zero-Emission Vehicles and Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck, and Medium-Duty Vehicle Classes. Amendments to existing sections proposed and subject to comment in this rulemaking are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions, compared to the preexisting regulatory language. The further proposed amendments subject to comment are shown in double underline to indicate additions and ~~double-strikeout~~ to show deletions. All other portions remain unchanged and are indicated by the symbol “* * * *” for reference.]

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Date of Release: September 2, 2014; 45-day Notice Version
Date of Release: October 14, 2014; Errata
Date of Hearing: October 23-24, 2014
Date of 15-Day notice period: April 20, 2015 – May 5, 2015

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B. Definitions and Terminology.

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1. Definitions.

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In addition to the following, these test procedures incorporate by reference the definitions and abbreviations set forth in the Title 40 Code of Federal Regulations (CFR) §86.1803-01, the definitions and abbreviations set forth in the LDV/MDV TPs, and the definitions set forth in section 1900, title 13, CCR.

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“Automotive-Related Global Revenue” means global net revenues in U.S. dollars derived from the sale of passenger cars, light-duty trucks, and medium-duty vehicles, as reported in the most recently available audited annual consolidated financial statements or reports. If these financial statements or reports are published using a currency other than U.S. dollars, the value of net revenues is to be converted to U.S. dollars using the average foreign exchange (FX) rate during the corresponding fiscal year as reported by USForex.

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“Transitional Zero Emission Vehicle” or “TZEV” means a ~~PZEV~~ vehicle that meets all the criteria of subdivision C.3.2 and qualifies for ~~has~~ an allowance in subdivision C.3.3(a) of 1.0 or greater, and makes use of a ZEV fuel.

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C. Zero-Emission Vehicle Standards.

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2. Percentage ZEV Requirements

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2.1 General Percentage ZEV Requirement.

(a) *Basic Requirement.* The minimum percentage ZEV requirement for each manufacturer is listed in the table below as the percentage of the PCs and LDT1s, and LDT2s to the extent required by subdivision C.2.2(c), produced by the manufacturer and delivered for sale in California that must be ZEVs, subject to the conditions in

subdivision C.2.2. The ZEV requirement will be based on the annual NMOG production report for the appropriate model year.

Model Year	Credit Percentage Requirement
2018	4.5%
2019	7.0%
2020	9.5%
2021	12.0%
2022	14.5%
2023	17.0%
2024	19.5%
2025 and subsequent	22.0%

<u>Model Year</u>	<u>Credit Percentage Requirement</u>	
	<u>LVM</u>	<u>IVM</u>
<u>2018</u>	<u>4.5%</u>	<u>2.9%</u>
<u>2019</u>	<u>7.0%</u>	<u>3.8%</u>
<u>2020</u>	<u>9.5%</u>	<u>4.7%</u>
<u>2021</u>	<u>12.0%</u>	<u>5.6%</u>
<u>2022</u>	<u>14.5%</u>	<u>6.5%</u>
<u>2023</u>	<u>17.0%</u>	<u>7.4%</u>
<u>2024</u>	<u>19.5%</u>	<u>8.3%</u>
<u>2025</u>	<u>22.0%</u>	<u>9.2%</u>
<u>2026 and subsequent</u>	<u>22.0%</u>	<u>22.0%</u>

Model Year	Credit Percentage Requirement
<u>2018</u>	<u>4.5%</u>
<u>2019</u>	<u>7.0%</u>
<u>2020</u>	<u>9.5%</u>
<u>2021</u>	<u>12.0%</u>
<u>2022</u>	<u>14.5%</u>
<u>2023</u>	<u>17.0%</u>
<u>2024</u>	<u>19.5%</u>
<u>2025 and subsequent</u>	<u>22.0%</u>

2.7 Changes in Small Volume, Independent Low Volume, and Intermediate Volume Manufacturer Status in 2018 and subsequent model years.

(a) *Increases in California Production Volume.* ~~In~~ For 2018 and subsequent model years, if a small volume manufacturer's average California production volume exceeds 4,500 units of new PCs, LDTs, and MDVs based on the average number of vehicles produced and delivered for sale for the three previous consecutive model years (i.e., total production volume exceeds 13,500 vehicles in a three-year period), for three consecutive averages, the manufacturer shall no longer be treated as a small volume manufacturer, and must comply with the ZEV requirements for intermediate volume manufacturers beginning with the next model year after the last model year of the third consecutive average. For example, if (a small volume) Manufacturer A exceeds 4,500 PCs, LDTs, and MDVs for their 2018 – 2020, 2019 – 2021, and 2020 – 2022 model year averages, Manufacturer A would be subject to intermediate volume requirements starting in 2023 model year.

~~For 2018 and subsequent model years, if~~ an intermediate volume manufacturer's average California production volume exceeds 20,000 units of new PCs, LDTs, and MDVs in five consecutive a given model years based on the average number of vehicles produced and delivered for sale for in the three five previous consecutive associated sets of three model years year averages immediately prior to that model year that begin no sooner than the 2018 model year associated with the 2015 through 2017 three-year average (i.e., total production volume exceeds 60,000 vehicles in a each of five consecutive three-year periods), for ~~three consecutive averages~~, the manufacturer shall no longer be treated as an intermediate volume manufacturer and shall comply with the ZEV requirements for large volume manufacturers beginning with the next model year after the ~~last~~ model year ~~of~~ corresponding to the third fifth consecutive three-year average. For example, if (an intermediate volume) Manufacturer B exceeds 20,000 PCs, LDTs, and MDVs for its 2016 - 2018, 2017 - 2019, 2018 – 2020, 2019 – 2021, and 2020 – 2022 averages, as evidenced by its 2019 through 2023 model year reports, Manufacturer B would be subject to large volume manufacturer requirements starting in the 2023/2024 model year.

~~If, in the 2018, 2019, or 2020 fiscal years, an intermediate volume manufacturer would otherwise be subject to the requirements for a large volume manufacturer based on California production volume, and if the intermediate volume manufacturer's average annual automotive-related global revenues for that the 2018, 2019, or 2020 fiscal year, based upon the immediately prior and consecutive three fiscal years, is no greater than 40 billion dollars, then that manufacturer will continue to be considered an intermediate volume manufacturer the three-model-year production volume average corresponding to that fiscal year will not apply to the five consecutive three-model-year production volume averages necessary for transition to large volume manufacturer requirements conditional upon the manufacturer submitting to the Executive Officer, in writing, a report that demonstrates the types and numbers of ZEVs and TZEVs the manufacturer will deliver to California subsequent to the 2020 fiscal year to meet the requirements specified in subdivision C 2.1(a). For example, assuming the~~

production volumes described for Manufacturer B at the end of the preceding paragraph, and assuming Manufacturer B had automotive-related global revenue of 39 billion dollars in fiscal year 2019 and 41 billion dollars in fiscal year 2020, the 2016-2018 production volume average associated with fiscal year 2019 would not apply, but the 2017-2019 production volume average associated with fiscal year 2020 would apply. Thus, Manufacturer B would be subject to large volume manufacturer requirements starting in the 2025 model year.

Any new requirement described in ~~the~~ this subdivision will begin with the next model year after the last model year of the third or fifth consecutive three-year average when a manufacturer ceases to be a small or intermediate volume manufacturer respectively in 2018 or subsequent years due to the aggregation requirements in majority ownership situations. The first of the consecutive three-year averages shall not precede the 2015 through 2017 three-year average.

3. Transitional Zero Emission Vehicles (TZEV).

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3.3 Allowances for TZEVs.

(a) *Zero Emission Vehicle Miles Traveled TZEV Allowance Calculation.* A vehicle that meets the requirements of subdivision C.3.2 and has zero-emission vehicle miles traveled (VMT), as defined by and calculated by this test procedure and measured as equivalent all electric range (EAER) capability will generate allowance according to the following equation:

<i>UDDS Test Cycle Range (AER)</i>	<i>Allowance</i>
<10 all electric miles	0.00
≥10 miles range	TZEV Credit = [(0.01) * EAER + 0.30]
>80 miles (credit cap)	1.10

(1) Allowance for US06 Capability. TZEVs with US06 all electric range capability (AER) of at least 10 miles shall earn an additional 0.2 allowance. US06 test cycle range capability shall be determined in accordance with section G.7.53 of these test procedures.

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4. Qualification for ZEV Multipliers and Credits.

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4.5 Credits for 2018 and Subsequent Model Years.

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(42) *Optional Section 177 State Compliance Path.*

(A) *Additional ZEV Requirements for Intermediate Volume Manufacturers.* Intermediate volume manufacturers that elect the optional Section 177 state compliance path must generate additional 2012 and subsequent model year ZEV credits, including no more than 50% Type 1.5x and Type IIx vehicle credits and excluding all TZEV, NEV, Type 0 ZEV credits, and transportation system credits, in each Section 177 state to fulfill the following percentage requirements of their sales volume determined under subdivision C.2.1(b):

<u>Intermediate Volume Manufacturers</u>	
<u>Model Years</u>	<u>Additional Section 177 State ZEV Requirements</u>
<u>Two model years prior to compliance with LVM requirements</u>	<u>0.75%</u>
<u>One model year prior to compliance with LVM requirements</u>	<u>1.50%</u>

Subdivision C.4.5(e)(1) shall not apply to any ZEV credits used to meet an intermediate volume manufacturer's additional ZEV requirements for the appropriate model years as described in the table above under this subdivision C.4.5(e)(2)(A).

Intermediate volume manufacturers that choose to elect the optional Section 177 state compliance path must notify the Executive officer and each Section 177 state in writing no later than September 1, 2016.

(B) *ZEV and TZEV Percentages for Intermediate Volume Manufacturers.* Intermediate volume manufacturers that have fully complied with the optional Section 177 state compliance path requirements in ~~subdivision 1962.1(d)(5)(E)3~~ or intend to comply or have fully complied with requirements in subdivision C.4.5(e)(2)(A) are allowed to meet their total ZEV percentage requirements specified in subdivision C.2 in each section 177 state by utilizing subdivisions C.4.5(e)(2)(A) ~~(B)~~ i. and ii., below.

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7. Generation and Use of ZEV Credits; Calculation of Penalties

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7.7 Requirement to Make Up a ZEV Deficit.

(a) *General.* ~~A manufacturer that produces and delivers for sale in California fewer ZEVs than required to meet their ZEV credit obligation, in a given model year shall submit a plan to the Executive Officer demonstrating how the manufacturer will make up the deficit by the next model year by submitting to the Executive Officer with a commensurate amount of ZEV credits. The Executive Officer will approve a plan allowing up to three model years to make up the deficit. In the case where no ZEV was produced and delivered for sale in California in the model year, the Executive Officer will approve no more than one year to make up the deficit. A manufacturer that produces and delivers for sale in California fewer ZEVs or TZEVs than required to meet its ZEV credit obligation in a given model year must make up the deficit by the next model year by submitting a commensurate amount of ZEV credits to the Executive Officer. An intermediate volume manufacturer may request, and the Executive Officer may grant, up to three consecutive model years to make up a credit deficit for a given model year provided that: (1) it has delivered for sale in California ZEVs or TZEVs within that model year, and (2) it submits a plan to the Executive Officer, as part of the request, demonstrating how it will make up the credit deficit within the requested time period.~~ The amount of ZEV credits required to be submitted shall be calculated by [i] adding the number of credits from ZEVs produced and delivered for sale in California by the manufacturer for the model year to the number of credits from TZEVs produced and delivered for sale in California by the manufacturer for the model year (for a LVM, not to exceed that permitted under subdivision C.2.2), and [ii] subtracting that total from the number of credits required to be produced and delivered for sale in California by the manufacturer for the model year. BEVx, TZEV, NEV, or converted AT PZEV and PZEV credits are not allowed to be used to fulfill a manufacturer's ZEV deficit; only credits from ZEVs may be used to fulfill a large volume manufacturer's ZEV deficit. Intermediate volume manufacturers may only use ZEV and TZEV credits to fulfill a manufacturer's ZEV deficit.

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Note: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43104 and 43105, Health and Safety Code. Reference: Sections 38562, 39002, 39003, 39667, 43000, 43009.5, 43013, 43018, 43018.5, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43204 and 43205.5, Health and Safety Code.