Final Regulation Order – Part 3

ZERO-EMISSION VEHICLE STANDARDS FOR 2018 AND SUBSEQUENT MODEL YEAR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES

Note: Set forth below are the 2012 amendments to the California zero emission vehicle (ZEV) regulation. This is a newly adopted regulation, shown without underline as permitted by California Code of Regulations, title 1, section 8.

Adopt Title 13, Motor Vehicles, Division 3, Air Resources Board, Chapter 1, Motor Vehicle Pollution Control Devices, Article 2, Approval of Motor Vehicle Pollution Control Devices (New Vehicles), § 1962.2, Zero-Emission Vehicle Standards for 2018 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles. to read:

§ 1962.2 Zero-Emission Vehicle Standards for 2018 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.

(a) ***ZEV Emission Standard.*** The Executive Officer shall certify new 2018 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles as ZEVs, vehicles that produce zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.

(b) ***Percentage ZEV Requirements.***

(1) ***General ZEV Credit Percentage Requirement.***

(A) ***Basic Requirement.*** The minimum ZEV credit percentage requirement for each manufacturer is listed in the table below as the percentage of the PCs and LDTs, produced by the manufacturer and delivered for sale in California that must be ZEVs, subject to the conditions in this subdivision 1962.2(b). 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%

(B) ***Calculating the Number of Vehicles to Which the Percentage ZEV Requirement is Applied.*** For 2018 and subsequent model years, a manufacturer's production volume for the given model year will be based on the three-year average of the manufacturer's volume of PCs and LDTs, produced and delivered for sale in California in the prior second, third, and fourth model year [for example, 2019 model year ZEV requirements will be based on California production volume average of PCs and LDTs for the 2015 to 2017 model years]. This production averaging is used to determine ZEV requirements only, and has no effect on a manufacturer's size determination (eg. three-year average calculation method). In applying the ZEV requirement, a PC or LDT, that is produced by one manufacturer (e.g., Manufacturer A), but is marketed in California by another manufacturer (e.g., Manufacturer B) under the other manufacturer's (Manufacturer B) nameplate, shall be treated as having been produced by the marketing manufacturer (i.e., Manufacturer B).

1. ***[Reserved]***

2. ***[Reserved]***

3. A manufacturer may apply to the Executive Officer to be permitted to base its ZEV obligation on the number of PCs and LDTs, produced by the manufacturer and delivered for sale in California that same model year (ie, same model-year calculation method) as an alternative to the three-year averaging of prior year production described above, for up to two model years, total, between model year 2018 and model year 2025. For the same model-year calculation method to be allowed, a manufacturer's application to the Executive Officer must show that their volume of PCs and LDTs produced and delivered for sale in California has decreased by at least 30 percent from the previous year due to circumstances that were unforeseeable and beyond their control.

(C) ***[Reserved]***

(D) ***Exclusion of ZEVs in Determining a Manufacturer's Sales Volume.*** In calculating a manufacturer's applicable sales, using either method described in subdivision 1962.2(b)(1)(B), a manufacturer shall exclude the number of NEVs produced and delivered for sale in California by the manufacturer itself, or by a subsidiary in which the manufacturer has more than 33.4% percent ownership interest.

(2) ***Requirements for Large Volume Manufacturers.***

(A) ***[Reserved]***

(B) ***[Reserved]***

(C) ***[Reserved]***

(D) ***[Reserved]***

(E) ***Requirements for Large Volume Manufacturers in 2018 and through 2025 Model Years.*** LVMs must produce credits from ZEVs equal to minimum ZEV floor percentage requirement, as enumerated below. Manufacturers may fulfill the remaining ZEV requirement with credits from TZEVs, as enumerated below.

Model Years	Total ZEV Percent Requirement	Minimum ZEV floor	TZEVs
2018	4.5%	2.0%	2.5%
2019	7.0%	4.0%	3.0%
2020	9.5%	6.0%	3.5%
2021	12.0%	8.0%	4.0%
2022	14.5%	10.0%	4.5%
2023	17.0%	12.0%	5.0%
2024	19.5%	14.0%	5.5%
2025	22.0%	16.0%	6.0%

(F) ***Requirements for Large Volume Manufacturers in Model Year 2026 and Subsequent.*** In 2026 and subsequent model years, a manufacturer must meet a total ZEV credit percentage of 22%. The maximum portion of a manufacturer's credit percentage requirement that may be satisfied by TZEV credits is limited to 6% of the manufacturer's applicable California PC and LDT production volume. ZEV credits must satisfy the remainder of the manufacturer's requirement.

(3) ***Requirements for Intermediate Volume Manufacturers.*** For 2018 and subsequent model years, an intermediate volume manufacturer may meet all of its ZEV credit percentage requirement, under subdivision 1962.2(b), with credits from TZEV.

(4) ***Requirements for Small Volume Manufacturers.*** A small volume manufacturer is not required to meet the ZEV credit percentage requirements. However, a small volume manufacturer may earn, bank, market, and trade credits for the ZEVs and TZEVs it produces and delivers for sale in California.

(5) ***[Reserved]***

(6) ***[Reserved]***

(7) ***Changes in Small Volume and Intermediate Volume Manufacturer Status.***

(A) ***Increases in California Production Volume.*** In 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.

If an intermediate volume manufacturer's average California production volume exceeds 20,000 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 60,000 vehicles in a three-year period), 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 the third consecutive average. For example, if (an intermediate volume) Manufacturer B exceeds 20,000 PCs, LDTs, and MDVs for its 2018 – 2020, 2019 – 2021, and 2020 – 2022 average, Manufacturer B would be subject to large volume manufacturer requirements starting in 2023 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 consecutive average when a manufacturer ceases to be a small or intermediate volume manufacturer in 2018 or subsequent years due to the aggregation requirements in majority ownership situations.

(B) ***Decreases in California Production Volume.*** If a manufacturer's average California production volume falls below 4,500 or 20,000 units of new PCs, LDT1 and 2s, and MDVs, based on the average number of vehicles produced and delivered for sale for the three previous consecutive model years, for three consecutive averages, the manufacturer shall be treated as a small volume or intermediate volume manufacturer, as applicable, and shall be subject to the requirements for a small volume or intermediate volume manufacturer beginning with the next model year. For example, if Manufacturer C falls below 20,000 PCs, LDTs, and MDVs for its 2019 – 2021, 2020 – 2022, and 2021 – 2023 averages, Manufacturer C would be subject to IVM requirements starting in 2024 model year.

(C) ***Calculating California Production Volume in Change of Ownership Situations.*** Where a manufacturer experiences a change in ownership in a particular model year, the change will affect application of the aggregation requirements on the manufacturer starting with the next model year. When a manufacturer is simultaneously producing two model years of vehicles at the time of a

change of ownership, the basis of determining next model year must be the earlier model year. The manufacturer's small or intermediate volume manufacturer status for the next model year shall be based on the average California production volume in the three previous consecutive model years of those manufacturers whose production volumes must be aggregated for that next model year. For example, where a change of ownership during the 2019 calendar year occurs and the manufacturer is producing both 2019 and 2020 model year vehicles resulting in a requirement that the production volume of Manufacturer A be aggregated with the production volume of Manufacturer B, Manufacturer A's status for the 2020 model year will be based on the production volumes of Manufacturers A and B in the 2017 – 2019 model years. Where the production volume of Manufacturer A must be aggregated with the production volumes of Manufacturers B and C for the 2019 model year, and during that model year a change in ownership eliminates the requirement that Manufacturer B's production volume be aggregated with Manufacturer A's, Manufacturer A's status for the 2020 model year will be based on the production volumes of Manufacturers A and C in the 2017 – 2019 model years. In either case, the lead time provisions in subdivisions 1962.2(b)(7)(A) and (B) will apply.

(c) Transitional Zero Emission Vehicles (TZEV).

(1) ***Introduction.*** This subdivision 1962.2(c) sets forth the criteria for identifying vehicles delivered for sale in California as TZEVs.

(2) ***TZEV Requirements.*** In order for a vehicle to be eligible to receive a ZEV allowance, the manufacturer must demonstrate compliance with all of the following requirements:

(A) ***SULEV Standards.*** Certify the vehicle to the 150,000-mile SULEV 20 or 30 exhaust emission standards for PCs and LDTs in subdivision 1961.2(a)(1). Bi-fuel, fuel flexible and dual-fuel vehicles must certify to the applicable 150,000-mile SULEV 20 or 30 exhaust emission standards when operating on both fuels. Manufacturers may certify 2018 and 2019 TZEVs to the 150,000-mile SULEV exhaust emission standards for PCs and LDTs in subdivision 1961(a)(1);

(B) ***Evaporative Emissions.*** Certify the vehicle to the evaporative emission standards in subdivision 1976(b)(1)(G). Manufacturers may certify 2018 and 2019 TZEVs to the evaporative standards for PCs and LDTs in subdivision 1976(b)(1)(E);

(C) ***OBD.*** Certify that the vehicle will meet the applicable on-board diagnostic requirements in sections 1968.1 or 1968.2, as applicable, for 150,000 miles; and

(D) ***Extended Warranty.*** Extend the performance and defects warranty period set forth in subdivisions 2037(b)(2) and 2038(b)(2) to 15 years or 150,000 miles, whichever occurs first except that the time period is to be 10 years for a

zero-emission energy storage device used for traction power (such as a battery, ultracapacitor, or other electric storage device).

(3) ***Allowances for TZEVs***

(A) ***Zero Emission Vehicle Miles Traveled TZEV Allowance Calculation.*** A vehicle that meets the requirements of subdivision 1962.2(c)(2) and has zero-emission vehicle miles traveled (VMT), as defined by and calculated by the "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," adopted March 22, 2012, which is incorporated herein by reference, and measured as equivalent all electric range (EAER) capability will generate an allowance according to the following equation:

UDDS Test Cycle Range (EAER)	*Allowance*
<10 all electric miles	0.00
≥10 all electric miles	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 E.8 of the "California Exhaust Emission Standards and Test Procedures for the 2018 and Subsequent Model Zero-Emission Vehicles, and Hybrid Electric Vehicles in the Passenger Car, Light-Duty Truck, and Medium Duty Vehicle Classes," adopted March 22, 2012, which is incorporated herein by reference.

(B) ***[Reserved]***

(C) ***[Reserved]***

(D) ***[Reserved]***

(E) ***Credit for Hydrogen Internal Combustion Engine Vehicles.*** A hydrogen internal combustion engine vehicle that meets the requirements of subdivision 1962.2(c)(2) and has a total range of at least 250 UDDS miles will earn an allowance of 0.75, which may be in addition to allowances earned in subdivision 1962.2(c)(3)(A), and subject to an overall credit cap of 1.25

(d) ***Qualification for Credits From ZEVs.***

(1) ***[Reserved]***

(2) ***[Reserved]***

(3) ***[Reserved]***

(4) ***[Reserved]***

(5) ***Credits for 2018 and Subsequent Model Year ZEVs.***

(A) ***ZEV Credit Calculations.*** Credits from a ZEV delivered for sale are based on the ZEV's UDDS all electric range, determined in accordance with the "California Exhaust Emission Standards and Test Procedures for the 2018 and Subsequent Model Zero-Emission Vehicles, and Hybrid Electric Vehicles in the Passenger Car, Light-Duty Truck, and Medium Duty Vehicle Classes," adopted March 22, 2012, which is incorporated herein by reference, using the following equation:

ZEV Credit = (0.01) * (UDDS range) + 0.50

1. A ZEV with less than 50 miles UDDS range will receive zero credits.

2. Credits earned under this provision 1962.2(d)(5)(A) are be capped at 4 credits per ZEV.

(B) ***[Reserved]***

(C) ***[Reserved]***

(D) ***[Reserved]***

(E) ***Counting Specified ZEVs Placed in Service in a Section 177 State and in California.*** Large volume manufacturers and intermediate volume manufacturers with credits earned from hydrogen fuel cell vehicles that are certified to the California ZEV standards applicable for the ZEV's model year, delivered for sale and placed in service in California or in a section 177 state, may be counted towards compliance in California and in all section 177 states with the percentage ZEV requirements in subdivision 1962.2(b). The credits earned are multiplied by the ratio of a manufacturer's applicable production volume for a model year, as specified in subdivision 1962.2(b)(1)(B), in the state receiving credit to the manufacturer's applicable production volume as specified in subdivision 1962.2(b)(1)(B), for the same model year in California(hereafter, "proportional value"). Credits generated from ZEV placement in a section 177 state will be earned at the proportional value in the section 177 state, and earned in California at the full value specified in subdivision 1962.2(d)(5)(A).

1. ***Optional Section 177 State Compliance Path.***

a. *Reduced ZEV and TZEV Percentages.* Large volume manufacturers and intermediate volume manufacturers that have fully complied with the optional section 177 state compliance path requirements in subdivision 1962.1(d)(5)(E)3. are allowed to meet ZEV percentage requirements and optional TZEV percentages reduced from the minimum ZEV floor percentages and TZEV percentages in subdivision 1962.2(b)(2)(E) in each section 177 state equal to the following percentages of their sales volume determined under subdivision 1962.2(b)(1)(B):

ZEVs

Model Year	2018	2019	2020	2021
Existing Minimum ZEV Floor	2.00%	4.00%	6.00%	8.00%
Section 177 State Adjustment for Optional Compliance Path	62.5%	75%	87.5%	100%
Minimum Section 177 State ZEV Requirement	1.25%	3.00%	5.25%	8.00%

TZEVs

Model Year	2018	2019	2020	2021
Existing TZEV Percentage	2.50%	3.00%	3.50%	4.00%
Section 177 State Adjustment for Optional Compliance Path	90.00%	100%	100%	100%
New Section 177 State TZEV Percentage	2.25%	3.00%	3.50%	4.00%

Total Percent Requirement

Model Year	2018	2019	2020	2021
New Total Section 177 State Optional Requirements	3.50%	6.00%	8.75%	12.00%

i. Trading and Transferring ZEV and TZEV Credits within West Region Pool and East Region Pool. Manufacturers that have fully complied with the optional section 177 state compliance path requirements in subdivision 1962.1(d)(5)(E)3. may trade or transfer specified model year ZEV and TZEV credits within the West Region pool to meet the same model year requirements in subdivision 1962.2(d)(5)(E)2.a, and will incur no premium on their credit values. For example, for a manufacturer to make up a 2019 model year shortfall of 100 credits in State X, the manufacturer may transfer 100 (2019 model year) ZEV credits from State Y, within the West Region pool. Manufacturers that have fully complied with the optional section 177 state compliance path requirements in subdivision 1962.1(d)(5)(E)3. may trade or transfer specified model year ZEV and TZEV credits within the East Region pool to meet the same model year requirements in subdivision

1962.2(d)(5)(E)2.a, and will incur no premium on their credit values. For example, for a manufacturer to make up a 2019 model year shortfall of 100 credits in State W, the manufacturer may transfer 100 (2019 model year) ZEV credits from State Z, within the East Region pool.

ii. Trading and Transferring ZEV and TZEV Credits between the West Region Pool and East Region Pool. Manufacturers that have fully complied with the optional section 177 state compliance path requirements in subdivision 1962.1(d)(5)(E)3. may trade or transfer specified model year ZEV and TZEV credits to meet the same model year requirements in subdivision 1962.2(d)(5)(E)2.a. between the West Region pool and the East Region pool; however, any credits traded will incur a premium of 30% of their value. For example, in order for a manufacturer to make up a 2019 model year shortfall of 100 credits in the West Region Pool, the manufacturer may transfer 130 (2019 model year) credits from the East Region Pool. No credits may be traded or transferred to the East Region pool or West Region pool from a manufacturer's California ZEV bank, or from the East Region pool or West Region pool to a manufacturer's California ZEV bank.

b. ***Reporting Requirements.*** On an annual basis, by May 1st of the calendar year following the close of a model year, each manufacturer that elects the optional section 177 state compliance path under subdivision 1962.1(d)(5)(E)3, shall submit, in writing, to the Executive Officer and each section 177 state a report, including an itemized list, that indicates where vehicles have been placed within the East Region pool and within the West Region pool. The itemized list shall include the following:

i. The manufacturer's total applicable volume of PCs and LDTs delivered for sale in each section 177 state within the regional pool, as determined under subdivision 1962.2(b)(1)(B).

ii. Make, model, vehicle identification number, credit earned, and section 177 state where delivery for sale of each TZEV and ZEV occurred and to meet manufacturer's requirements under subdivision 1962.2(d)(5)(E)2.a.

c. ***Failure to Meet Optional Section 177 State Compliance Path Requirements.*** A manufacturer that elects the optional section 177 state compliance path under subdivision 1962.1(d)(5)(E)3, and does not meet the modified percentages in subdivision 1962.2(d)(5)(E)2.a. in a model year or make up their deficit within the specified time and with the specified credits allowed by subdivision 1962.2(g)(7)(A) in all section 177 states of the applicable pool, shall be treated as subject to the total ZEV percentage requirements in section 1962.2(b) for the 2018 through 2021 model years in

each section 177 state, and the pooling provisions in subdivision 1962.2(d)(5)(E)2.a. shall not apply. Any transfers of ZEV or TZEV credits between section 177 states will be null and void if a manufacturer fails to comply, and ZEV or TZEV credits will return to the section 177 state in which the credits were earned. Penalties shall be calculated separately by each section 177 state where a manufacturer fails to make up the ZEV deficits by the end of the 2018 model year.

d. The provisions of section 1962.2 shall apply to a manufacturer electing the optional section 177 state compliance path, except as specifically modified by this subdivision 1962.2(d)(5)(E)2.

(F) ***NEVs.*** NEVs must meet the following to be eligible for 0.15 credits:

1. ***Specifications.*** A NEV earns credit when it meets all the following specifications:

a. ***Acceleration.*** The vehicle has a 0-20 mph acceleration of 6.0 seconds or less when operating with a payload of at least 332 pounds and starting with the battery at a 50% state of charge.

b. ***Top Speed.*** The vehicle has a minimum top speed of 20 mph when operating with a payload of at least 332 pounds and starting with the battery at a 50% state of charge. The vehicle's top speed shall not exceed 25 mph when tested in accordance with 49 CFR 571.500 (68 FR 43972, July 25, 2003).

c. ***Constant Speed Range.*** The vehicle has a minimum 25-mile range when operating at constant top speed with a payload of least 332 pounds and starting with the battery at 100% state of charge.

2. ***Battery Requirement.*** A NEV must be equipped with one or more sealed, maintenance-free batteries.

3. ***Warranty Requirement.*** A NEV drive train, including battery packs, must be covered for a period of at least 24 months. The first 6 months of the NEV warranty period must be covered by a full warranty; the remaining warranty period may be optional extended warranties (available for purchase) and may be prorated. If the extended warranty is prorated, the percentage of the battery pack's original value to be covered or refunded must be at least as high as the percentage of the prorated coverage period still remaining. For the purpose of this computation, the age of the battery pack must be expressed in intervals no larger than three months. Alternatively, a manufacturer may cover 50 percent of the original value of the battery pack for the full period of the extended warranty.

Prior to credit approval, the Executive Officer may request that the manufacturer provide copies of representative vehicle and battery warranties.

4. ***NEV Charging Requirements.*** A NEV must meet charging requirements specific in subdivision 1962.3(c)(2).

(G) ***BEVx.*** A BEVx must meet the following in order to receive credit, based on its all electric UDDS Range, through subdivision 1962.2(d)(5)(A):

1. ***Emissions Requirements.*** BEVxs must meet all TZEV requirements, specified in subdivision 1962.2(c)(2)(A) through (D).

2. ***APU Operation.*** The vehicle's UDDS range after the APU first starts and enters "charge sustaining hybrid operation" must be less than or equal to the vehicle's UDDS all-electric test range prior to APU start. The vehicle's APU cannot start under any user-selectable driving mode unless the energy storage system used for traction power is fully depleted.

3. ***Minimum Zero Emission Range Requirements.*** BEVxs must have a minimum of 75 miles UDDS all electric range.

(e) ***[Reserved]***

(f) ***[Reserved]***

(g) ***Generation and Use of Credits; Calculation of Penalties***

(1) ***Introduction.*** A manufacturer that produces and delivers for sale in California ZEVs or TZEVs in a given model year exceeding the manufacturer's ZEV requirement set forth in subdivision 1962.2(b) shall earn ZEV credits in accordance with this subdivision 1962.2(g).

(2) ***ZEV Credit Calculations.***

(A) ***Credits from ZEVs.*** The amount of credits earned by a manufacturer in a given model year from ZEVs shall be expressed in units of credits, and shall be equal to the number of credits from ZEVs produced and delivered for sale in California that the manufacturer applies towards meeting the ZEV requirements, or, if applicable, requirements specified under subdivision 1962.2(d)(5)(E)2.a. for the model year subtracted from the number of ZEVs produced and delivered for sale in California by the manufacturer in the model year.

(B) ***Credits from TZEVs.*** The amount of credits earned by a manufacturer in a given model year from TZEVs shall be expressed in units of credits, and shall be equal to the total number of TZEVs produced and delivered for sale in California that the manufacturer applies towards meeting its ZEV requirement, or, if applicable, requirements specified under subdivision 1962.2(d)(5)(E)2.a. for the model year subtracted from the total number of ZEV allowances from TZEVs produced and delivered for sale in California by the manufacturer in the model year.

(C) ***Separate Credit Accounts.*** Credits from a manufacturer's ZEVs, BEVxs, TZEVs, and NEVs shall each be maintained in separate accounts.

(D) **Rounding Credits.** ZEV credits and debits shall be rounded to the nearest 1/100th only on the final credit and debit totals using the conventional rounding method.

(3) ***ZEV Credits for MDVs.*** Credits from ZEVs and TZEVs classified as MDVs, may be counted toward the ZEV requirement for PCs and LDTs, and included in the calculation of ZEV credits as specified in this subdivision 1962.2(g) if the manufacturer so specifies.

(4) ***ZEV Credits for Advanced Technology Demonstration Programs.***

(A) ***[Reserved]***

(B) ***ZEVs.*** ZEVs, including BEVxs, excluding NEVs, placed in a small or intermediate volume manufacturer's California advanced technology demonstration program for a period of two or more years, may earn ZEV credits even if the vehicle is not "delivered for sale" or registered with the California DMV. To earn such credits, the manufacturer must demonstrate to the reasonable satisfaction of the Executive Officer that the vehicles will be regularly used in applications appropriate to evaluate issues related to safety, infrastructure, fuel specifications or public education, and that for 50 percent or more of the first two years of placement the vehicle will be operated in California. Such a vehicle is eligible to receive the same credit that it would have earned if delivered for sale, and for fuel cell vehicles, placed in service. To determine vehicle credit, the model year designation for a demonstration vehicle shall be consistent with the model year designation for conventional vehicles placed in the same timeframe. Manufacturers may earn credit for up to 25 vehicles per model, per section 177 state, per year under this subdivision1962.2(g)(4). A manufacturer's vehicles in excess of the 25-vehicle cap will not be eligible for advanced technology demonstration program credits.

(5) ***ZEV Credits for Transportation Systems.***

(A) ***[Reserved]***

(B) ***[Reserved]***

(C) ***Cap on Use of Transportation System Credits.***

1. ***ZEVs.*** Transportation system credits earned or allocated by ZEVs or BEVxs pursuant to subdivision 1962.1 (g)(5), not including any credits earned by the vehicle itself, may be used to satisfy up to one-tenth of a manufacturer's ZEV obligation in any given model year, and may be used to satisfy up to one-tenth of a

manufacturer's ZEV obligation which must be met with ZEVs, as specified in subdivision 1962.2(b)(2)(E) or, if applicable, requirements specified under subdivision 1962.2(d)(5)(E)2.a..

2. ***TZEVs.*** Transportation system credits earned or allocated by TZEVs pursuant to subdivision 1962.1(g)(5), not including all credits earned by the vehicle itself, may be used to satisfy up to one-tenth of the portion of a manufacturer's ZEV obligation that may be met with TZEVs, or, if applicable, the portion of a manufacturer's obligation that may be met with TZEVs specified under subdivision 1962.2(d)(5)(E)2.a. in any given model year, but may only be used in the same manner as other credits earned by vehicles of that category.

(6) ***Use of ZEV Credits.*** A manufacturer may meet the ZEV requirements in a given model year by submitting to the Executive Officer a commensurate amount of ZEV credits, consistent with subdivision 1962.2(b). Credits in each of the categories may be used to meet the requirement for that category as well as the requirements for lesser credit earning ZEV categories, but shall not be used to meet the requirement for a greater credit earning ZEV category, except for discounted PZEV and AT PZEV credits. For example, credits produced from TZEVs may be used to comply with the portion of the requirement that may be met with credits from TZEV, but not with the portion that must be satisfied with credits from ZEVs. These credits may be earned previously by the manufacturer or acquired from another party.

(A) ***Use of Discounted PZEV and AT PZEV Credits and NEV Credits.*** For model years 2018 through 2025, discounted PZEV and AT PZEV credits, and NEV credits may be used to satisfy up to one-quarter of the portion of a manufacturer's requirement that can be met with credits from TZEVs, or, if applicable, the portion of a manufacturer's obligation that may be met with TZEVs specified under subdivision 1962.2(d)(5)(E)2.a.. Intermediate volume manufacturers may fulfill their entire requirement with discounted PZEV and AT PZEV credits, and NEV credits in model years 2018 and 2019. These credits may be earned previously by the manufacturer or acquired from another party. Discounted PZEV and AT PZEV credits may no longer be used after model year 2025 compliance.

(B) ***Use of BEVx Credits.*** BEVx credits may be used to satisfy up to 50% of the portion of a manufacturer's requirement that must be met with ZEV credits.

~~**(C)** ***GHG-ZEV Over Compliance Credits.***~~

~~**1.** **Application.** Manufacturers may apply to the Executive Officer, no later than December 31, 2016, to be eligible for this subdivision 1962.2(g)(6)(C), based on the following qualifications:~~

~~**a.** A manufacturer must have no model year 2017 compliance debits and no outstanding debits from all previous model year compliance with sections 1961.1 and 1961.3, and~~

b. A manufacturer must have no model year 2017 compliance debits and no outstanding debits from all previous model year compliance with section 1962.1, and

c. A manufacturer must submit documentation of its projected product plans to show over compliance with the manufacturer's section 1961.3 requirements by at least 2.0 gCO_2/mile in each model year through the entire 2018 through 2021 model year period, and its commitment to do so in each year.

2. Credit Generation and Calculation. Manufacturers must calculate their over compliance with section 1961.3 requirements for model years 2018 through 2021 based on compliance with the previous model year standard. For example, to generate credits for this subdivision 1962.2(g)(6)(C) for model year 2018, manufacturers would calculate credits based on model year 2017 compliance with section 1961.3.

a. At least 2.0 gCO_2/mile over compliance with section 1961.3 is required in each year and the following equation must be used to calculate the amount of ZEV credits earned for purposes of this subdivision 1962.2(g)(6)(C), and:

[(Manufacturer US PC and LDT Sales) x (gCO_2/mile below manufacturer GHG standard for a given model year)] / (Manufacturer GHG standard for a given model year)

b. Credits earned under section 1961.3(a)(9) may not be included in the calculation of gCO_2/mile credits for use in the above equation in subdivision a.

c. Banked gCO_2/mile credits earned under sections 1961.1 and 1961.3 from previous model years or from other manufacturers may not be included in the calculation of gCO_2/mile credits for use in the above equation in subdivision a.

3. Use of GHG-ZEV Over Compliance Credits. A manufacturer may use no more than the percentage enumerated in the table below to meet either the total ZEV requirement nor the portion of their ZEV requirement that must be met with ZEV credits, with credits earned under this subdivision 1962.2(g)(6)(C).

2018	2019	2020	2021
50%	50%	40%	30%

Credits earned in any given model year under this subdivision 1962.2(g)(6)(C) may only be used in the applicable model year and may not be used in any other model year.

~~gCO_2/mile credits used to calculate GHG-ZEV over compliance credits under this~~ provision must also be removed from the manufacturer's GHG compliance bank, and cannot be banked for future compliance toward 1961.3.

4. Reporting Requirements. Annually, manufacturers are required to submit calculations of credits for this subdivision 1962.2(g)(6)(C) for the model year, any remaining credits/debits from previous model years under 1961.3, and projected credits/debits for future years through 2021 under 1961.3 and this subdivision 1962.2(g)(6)(C).

If a manufacturer, who has been granted the ability to generate credits under this subdivision 1962.2(g)(6)(C), fails to over comply by at least 2.0 gCO_2/mile in any one year, the manufacturer will be subject to the full ZEV requirements for the model year and future model years, and will not be able to earn credits for any other model year under this subdivision 1962.2(g)(6)(C).

5. If the Executive Officer does not make a determination that a Federal greenhouse gas fleet standard is functionally equivalent to subdivision 1961.3, than this ~~subdivision 1962.2(g)(6)(C) 1. through 4. is unavailable for use by any manufacturer.~~

(7) ***Requirement to Make Up a ZEV Deficit.***

(A) ***General.*** A manufacturer that produces and delivers for sale in California fewer ZEVs than required in a given model year shall make up the deficit by the next model year by submitting to the Executive Officer a commensurate amount of ZEV credits. 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 1962.2(b)(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 manufacturer's ZEV deficit.

(8) ***Penalty for Failure to Meet ZEV Requirements.*** Any manufacturer that fails to produce and deliver for sale in California the required number of ZEVs and submit an appropriate amount of credits and does not make up ZEV deficits within the specified time allowed by subdivision 1962.2(g)(7)(A) shall be subject to the Health and Safety Code section 43211 civil penalty applicable to a manufacturer that sells a new motor vehicle that does not meet the applicable emission standards adopted by the state board. The cause of action shall be deemed to accrue when the ZEV deficit is not balanced by the end of the specified time allowed by subdivision 1962.2(g)(7)(A). For the purposes of Health and Safety Code section 43211, the number of vehicles not

meeting the state board's standards shall be equal to the manufacturer's credit deficit, rounded to the nearest 1/100th, calculated according to the following equation, provided that the percentage of a manufacturer's ZEV requirement for a given model year that may be satisfied with TZEVs or credit from such vehicles may not exceed the percentages permitted under subdivision 1962.2(b)(2):

(No. of ZEV credits required to be generated for the model year) – (Amount of credits submitted for compliance for the model year)

(h) ***Test Procedures.***

(1) ***Determining Compliance.*** The certification requirements and test procedures for determining compliance with this section 1962.2 are set forth in "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," adopted March 22, 2012, which is incorporated herein by reference.

(2) ***NEV Compliance.*** The test procedures for determining compliance with subdivision 1962.1(d)(5)(F)1. are set forth in ETA-NTP002 (revision 3) "Implementation of SAE Standard J1666 May 93: Electric Vehicle Acceleration, Gradeability, and Deceleration Test Procedure" (December 1, 2004), and ETA-NTP004 (revision 3) "Electric Vehicle Constant Speed Range Tests" (February 1, 2008), both of which are incorporated by reference herein.

(i) ***ZEV-Specific Definitions.*** The following definitions apply to this section 1962.2.

(1) "Auxiliary power unit" or "APU" means any device that provides electrical or mechanical energy, meeting the requirements of subdivision 1962.2(c)(2), to a BEVx, after the zero emission range has been fully depleted. A fuel fired heater does not qualify under this definition for an APU.

(2) "Charge depletion range actual" or "R_{cda}" means the distance achieved by a hybrid electric vehicle on the urban driving cycle at the point when the zero-emission energy storage device is depleted of off-vehicle charge and regenerative braking derived energy.

(3) "Conventional rounding method" means to increase the last digit to be retained when the following digit is five or greater. Retain the last digit as is when the following digit is four or less.

(4) "Discounted PZEV and AT PZEV credits" means credits earned under section 1962 and 1962.1 by delivery for sale of PZEVs and AT PZEVs, discounted according to subdivision 1962.1(g)(2)(F).

(5) "East Region pool" means the combination of Section 177 states east of the Mississippi River.

(6) "Energy storage device" means a storage device able to provide the minimum power and energy storage capability to enable engine stop/start capability, traction boost, regenerative braking, and (nominal) charge sustaining mode driving capability. In the case of TZEVs, a minimum range threshold relative to certified, new-vehicle range capability is not specified or required.

(7) "Hydrogen fuel cell vehicle" means a ZEV that is fueled primarily by hydrogen, but may also have off-vehicle charge capability.

(8) "Hydrogen internal combustion engine vehicle" means a TZEV that is fueled exclusively by hydrogen.

(9) "Majority ownership situations" means when one manufacturer owns another manufacturer more than 33.4%, for determination of size under CCR Section 1900.

(10) "Manufacturer US PC and LDT Sales" means a manufacturer's total passenger car and light duty truck (up to 8,500 pounds loaded vehicle weight) sales sold in the United States of America in a given model year.

(11) "Neighborhood electric vehicle" or "NEV" means a motor vehicle that meets the definition of Low-Speed Vehicle either in section 385.5 of the Vehicle Code or in 49 CFR 571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

(12) "Placed in service" means having been sold or leased to an end-user and not to a dealer or other distribution chain entity, and having been individually registered for on-road use by the California DMV.

(13) "Proportional value" means the ratio of a manufacturer's California applicable sales volume to the manufacturer's Section 177 state applicable sales volume. In any given model year, the same applicable sales volume calculation method must be used to calculate proportional value.

(14) "Range Extended Battery Electric Vehicle" or "BEVx" means a vehicle powered predominantly by a zero emission energy storage device, able to drive the vehicle for more than 75 all-electric miles, and also equipped with a backup APU, which does not operate until the energy storage device is fully depleted, and meeting requirements in subdivision 1962.2(d)(5)(G).

(15) "Section 177 state" means a state that is administering the California ZEV requirements pursuant to section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

(16) "Transitional zero emission vehicle" or "TZEV" means a vehicle that meet the all criteria of subdivision 1962.2(c)(2) and qualifies for an allowance in subdivision 1962.2(c)(3)(D) or (E).

(17) "West Region pool" means the combination of Section 177 states west of the Mississippi River.

(18) "Zero emission vehicle" or "ZEV" means a vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions.

(19) "Zero emission vehicle fuel" means a fuel that provides traction energy in on-road ZEVs. Examples of current technology ZEV fuels include electricity, hydrogen, and compressed air.

(j) ***Abbreviations.*** The following abbreviations are used in this section 1962.2:

"AER" means all-electric range.
"APU" means auxiliary power unit.
"AT PZEV" means advanced technology partial zero-emission vehicle.
"BEVx" means range extended battery electric vehicle.
"CFR" means Code of Federal Regulations.
"CO_2" means carbon dioxide.
"DMV" means the California Department of Motor Vehicles.
"EAER" means equivalent all-electric range.
"FR" means Federal Register.
"g" means grams.
"HEV" means hybrid-electric vehicle.
"LDT" means light-duty truck.
"LDT1" means a light-truck with a loaded vehicle weight of 0-3750 pounds.
"LDT2" means a "LEV II" light-duty truck with a loaded vehicle weight of 3751 pounds to a gross vehicle weight of 8500 pounds, or a "LEV I" light-duty truck with a loaded vehicle weight of 3751-5750 pounds.
"LVM" means large volume manufacturer.
"MDV" means medium-duty vehicle.
"NMOG" means non-methane organic gases, or the total mass of oxygenated and non-oxygenated hydrocarbon emissions.
"NEV" means neighborhood electric vehicle.
"NOx" means oxides of nitrogen.
"PC" means passenger car.
"PZEV" means partial allowance zero-emission vehicle
"SAE" means Society of Automotive Engineers.
"SULEV" means super-ultra-low-emission-vehicle.
"TZEV" means transitional zero emission vehicle.
"UDDS" means urban dynamometer driving cycle.

"US" means United States of America.
"US06" means the US06 Supplemental Federal Test Procedure
"VMT" means vehicle miles traveled.
"ZEV" means zero-emission vehicle.

(k) ***Severability.*** Each provision of this section is severable, and in the event that any provision of this section is held to be invalid, the remainder of this article remains in full force and effect.

(l) ***Public Disclosure.*** Records in the Board's possession for the vehicles subject to the requirements of section 1962.2 shall be subject to disclosure as public records as follows:

(1) Each manufacturer's annual production data and the corresponding credits per vehicle earned for ZEVs and TZEVs for the 2018 and subsequent model years; and

(2) Each manufacturer's annual credit balances for 2018 and subsequent years for:

(A) Each type of vehicle: ZEV (minus NEV), BEVx, NEV, TZEV, and discounted PZEV and AT PZEV credits; and

(B) Advanced technology demonstration programs; and

(C) Transportation systems; and

(D) Credits earned under section 1962.2(d)(5)(A), including credits acquired from, or transferred to another party, and the parties themselves.

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.