

California Air Resources Board

2021 Zero-Emission Vehicle Credits

The purpose of this report is to provide data that illustrates the status of each manufacturer's compliance with CARB's Zero-Emission Vehicle (ZEV) Regulation (Cal. Code Regs., tit. 13, § 1962.2). The ZEV Regulation requires certain automobile manufacturers to produce ZEVs for sale in California. As of model year 2021, all manufacturers, individually and collectively, remain in compliance with the regulation. The compliance data submitted by manufacturers pursuant to the regulation demonstrate over-compliance for the 2021 model year, and the extent of over-compliance continues to grow as the technology and market for zero-emission technology matures and in response to supportive policies for ZEVs in California. ZEVs remain a small percentage of the overall fleet, however, highlighting the need for continued policy work to ensure the market for ZEVs continues to grow and ZEVs become available for all.

Model Year 2021 Annual Requirement for Manufacturers

The ZEV Regulation requires large volume and intermediate volume vehicle manufacturers to bring to and/or operate in California a certain proportion of their sales as plug-in hybrid electric vehicles (PHEV) or ZEVs, such as battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV). The requirements are somewhat different for large volume and intermediate volume manufacturers. A small volume manufacturer is not required to meet the ZEV credit percentage requirements. However, a small volume manufacturer may earn, bank, and trade credits for the ZEVs and PHEVs it produces and delivers for sale in California.

Under the ZEV Regulation, a vehicle manufacturer's 2021 ZEV requirement is based on 12.0% of their total average production volume of all passenger cars (PC) and light-duty trucks (LDT) from 0 to 8,500 pounds (lbs.) delivered for sale in California for model years 2017 through 2019. Under special circumstances, the requirement may be based on the production volume for the same model year if the manufacturer's volume of PCs and LDTs produced and delivered for sale in California decreased by at least 30% from the previous year due to circumstances that were unforeseeable and beyond their control.

Large volume manufacturers must produce a minimum percentage of their credits from ZEVs equal to the minimum ZEV floor established in the regulation and can fulfill their remaining requirement with transitional zero emission vehicles (TZEV, also known as PHEVs). The minimum ZEV floor for model year 2021 is 8.0%, and the maximum TZEV allowance is 4.0%. Intermediate volume manufacturers may meet all their 12.0% requirement with credits from TZEVs. To illustrate which manufacturers are subject to which requirements, the table below lists the vehicle manufacturers by volume status that have a ZEV requirement in model year 2021. The table also summarizes the number of new model year 2021 conventional gasoline vehicles, PHEVs, and

ZEVs delivered for sale in California, as well as the 3-year average production volume for model years 2017 through 2019, which is used to calculate manufacturers' annual requirements. Additionally, the table displays the 2021 annual requirements for large and intermediate volume manufacturers based on their production volumes.

Manufacturer	Volume Status	2021 Light-Duty Passenger Cars & Trucks	2017-2019 Average Light-Duty Passenger Cars & Trucks	Minimum ZEV Credits Required, 2021	Maximum TZEZ Optional Credits, 2021	Total Credits Required, 2021
BMW	Large	62,976	80,183.67	6,414.69	3,207.35	9,622.04
Fiat Chrysler (Stellantis)	Large	129,421	168,030.00	13,442.40	6,721.20	20,163.60
Ford	Large	110,325	183,395.33	14,671.63	7,335.81	22,007.44
GM	Large	163,378	219,843.00	17,587.44	8,793.72	26,381.16
Honda	Large	159,182	290,675.67	23,254.05	11,627.03	34,881.08
Hyundai	Large	51,670	87,067.33	6,965.39	3,482.69	10,448.08
Jaguar Land Rover*	Intermediate	14,577	21,834.00	0	1,749.24	1,749.24
KIA	Large	64,808	68,248.00	5,459.84	2,729.92	8,189.76
Mazda	Intermediate	49,869	45,885.33	0	5,506.24	5,506.24
Mercedes	Large	68,085	80,737.00	6,458.96	3,229.48	9,688.44
Nissan	Large	85,794	135,156.33	10,812.51	5,406.25	16,218.76
Subaru	Intermediate	69,855	76,121.67	0	9,134.60	9,134.60
Tesla	Intermediate	97,814	51,125.33	0	6,135.04	6,135.04
Toyota	Large	375,824	385,518.00	30,841.44	15,420.72	46,262.16
Volkswagen	Large	94,559	122,672.00	9,813.76	4,906.88	14,720.64
Volvo	Intermediate	15,578	12,306.67	0	1,476.80	1,476.80
All OEMs	N/A	1,613,715	2,028,799.33	145,722.11	96,862.97	242,585.08

*Same model-year calculation method used to calculate annual requirement. For example, the model year 2021 total annual requirement for Jaguar Land Rover is calculated by $0.12 \times 14,577 = 1,749.24$.

Model Year 2021 Credits Earned for each Manufacturer by Make and Model

In complying with the ZEV Regulation, manufacturers deliver vehicles for sale or place vehicles in California that generate varying credits based on vehicle type. For example, credits from a BEV delivered for sale are based on the BEV's urban dynamometer drive schedule all-electric range (UDDS range) where the BEV Credit = $(0.01) * (\text{UDDS range}) + 0.50$, with a cap of 4 credits per BEV [see Cal. Code Regs., tit. 13, § 1962.2(d)(5)(A)]. These credit values are calculated and displayed in CARB's certification executive orders (<https://ww2.arb.ca.gov/new-vehicle-and-engine-certification-executive-orders-my2021-passenger-cars-light-duty-trucks-and-0>).

The table below displays the credits earned by manufacturers for their model year 2021 makes and models through June 30, 2022. Any additional credits earned after this time for model year 2021 makes and models are not reflected in this table.

Manufacturer	Vehicle Type	Make	Model	Number of Vehicles	Credits Per Vehicle	Credits Earned
BMW	BEV	MINI	Cooper SE Hardtop 2door	405	2.17	878.85
BMW	BEV	BMW	I3 and I3s (120ah)	576	2.88	1,658.88
BMW	BEVx	BMW	I3 (120ah) with Range Extender	69	2.37	163.53
BMW	BEVx	BMW	I3s (120ah) with Range Extender	115	2.38	273.7
BMW	TZEV	BMW	330e and 330e xDrive	2,253	0.59	1,329.27
BMW	TZEV	BMW	530e and 530e xDrive	1,516	0.56	848.96
BMW	TZEV	BMW	X3 xDrive30e	1,758	0.53	931.74
BMW	TZEV	BMW	X5 xDrive45e	2,206	0.72	1,588.32
Fiat Chrysler (Stellantis)	TZEV	Chrysler	Pacifica Plug-In Hybrid	2,383	0.78	1,858.74
Ford	BEV	Ford	Mustang Mach-E AWD	770	3.45	2,656.50
Ford	BEV	Ford	Mustang Mach-E AWD ER	1,435	4.00	5,740.00
Ford	BEV	Ford	Mustang Mach-E GT and PE	865	3.93	3,399.45
Ford	BEV	Ford	Mustang Mach-E RWD	2,163	3.85	8,327.55
Ford	BEV	Ford	Mustang Mach-E RWD ER and Route 101 RWD	2,368	4.00	9,472.00
Ford	TZEV	Lincoln	Aviator AWD PHEV	344	0.55	189.2
Ford	TZEV	Lincoln	Corsair AWD PHEV	67	0.73	48.91
Ford	TZEV	Ford	Escape PHEV FWD	518	0.88	455.84
GM	BEV	Chevrolet	Bolt	5,012	4.00	20,048.00
Honda	FCEV	Honda	Clarity Fuel Cell	406	4.00	1,624.00

Manufacturer	Vehicle Type	Make	Model	Number of Vehicles	Credits Per Vehicle	Credits Earned
Honda	TZEV	Honda	Clarity Plug-In Hybrid	1,096	1.01	1,106.96
Hyundai	BEV	Hyundai	Ioniq Electric	269	3.13	841.97
Hyundai	BEV	Hyundai	Kona Electric	2,022	4.00	8,088.00
Hyundai	FCEV	Hyundai	NEXO	436	4.00	1,744.00
Hyundai	TZEV	Hyundai	Ioniq Plug-In Hybrid	559	0.72	402.48
Jaguar Land Rover	BEV	Jaguar	I-Pace EV400 (Autonomous)	527	2.37	1,248.99
Jaguar Land Rover	TZEV	Land Rover	Range Rover and Range Rover Sport PHEV	293	0.58	169.94
KIA	BEV	KIA	Niro Electric	329	4.00	1,316.00
KIA	TZEV	KIA	Niro Plug-In Hybrid	273	0.70	191.1
Mitsubishi	TZEV	Mitsubishi	Outlander PHEV	101	0.60	60.6
Nissan	BEV	Nissan	Leaf	1,237	2.81	3,475.97
Nissan	BEV	Nissan	Leaf SV / SL	718	3.80	2,728.40
Subaru	TZEV	Subaru	Crosstrek Plug-In Hybrid	1,125	0.57	641.25
Tesla	BEV	Tesla	Model 3 (All Other Trims)	39,687	4.00	158,748.00
Tesla	BEV	Tesla	Model 3 Standard Range Plus RWD (LFP)	2,481	3.97	9,849.57
Tesla	BEV	Tesla	Model S (All Trims)	4,256	4.00	17,024.00
Tesla	BEV	Tesla	Model X (All Trims)	135	4.00	540
Tesla	BEV	Tesla	Model Y (All Trims)	50,867	4.00	203,468.00
Toyota	FCEV	Toyota	Mirai Limited (All Other Trims)	550	4.00	2,200.00
Toyota	FCEV	Toyota	Mirai XLE	2,047	4.00	8,188.00
Toyota	TZEV	Toyota	Prius Prime	11,299	0.88	9,943.12
Toyota	TZEV	Toyota	RAV4 Prime AWD	9,771	1.15	11,236.65
Volkswagen	BEV	Audi	E-Tron 55 Quattro	2,303	3.51	8,083.53
Volkswagen	BEV	Audi	E-Tron 55 Sportback Quattro	658	3.42	2,250.36
Volkswagen	BEV	Volkswagen	ID.4 (All Trims)	6,791	4.00	27,164.00
Volkswagen	BEV	Porsche	Taycan 4 Cross Turismo	61	3.83	233.63
Volkswagen	BEV	Porsche	Taycan 4s Cross Turismo	19	3.77	71.63
Volkswagen	BEV	Porsche	Taycan 4s Performance Battery	281	3.51	986.31
Volkswagen	BEV	Porsche	Taycan 4s Performance Battery Plus	619	3.74	2,315.06
Volkswagen	BEV	Porsche	Taycan Performance Battery	580	3.39	1,966.20

Manufacturer	Vehicle Type	Make	Model	Number of Vehicles	Credits Per Vehicle	Credits Earned
Volkswagen	BEV	Porsche	Taycan Performance Battery Plus	328	3.55	1,164.40
Volkswagen	BEV	Porsche	Taycan Turbo	103	3.59	369.77
Volkswagen	BEV	Porsche	Taycan Turbo Cross Turismo	7	3.63	25.41
Volkswagen	BEV	Porsche	Taycan Turbo S	207	3.48	720.36
Volkswagen	BEV	Porsche	Taycan Turbo S Cross Turismo	12	3.73	44.76
Volkswagen	TZEV	Audi	A7 55 TFSI e	131	0.66	86.46
Volkswagen	TZEV	Audi	Q5 55 TFSI e	2,330	0.63	1,467.90
Volvo	BEV	Polestar	Polestar 2	746	3.96	2,954.16
Volvo	BEV	Volvo	XC40 P8 AWD Recharge	1,214	3.69	4,479.66
Volvo	TZEV	Volvo	S60 T8 AWD	258	0.62	159.96
Volvo	TZEV	Volvo	S90 T8 AWD	6	0.60	3.6
Volvo	TZEV	Volvo	V60 T8 AWD	53	0.62	32.86
Volvo	TZEV	Volvo	XC60 T8 AWD	1,168	0.57	665.76
Volvo	TZEV	Volvo	XC90 T8 AWD	3,394	0.57	1,934.58
			Total	176,576	N/A	561,886.80

Manufacturer Credit Balances

A manufacturer must meet the ZEV requirements in a given model year by submitting the number of ZEV credits commensurate with their annual requirement. Credits earned for a specific vehicle type (e.g., ZEV, TZEZV) may be used to meet the credit requirement for that vehicle type as well as the requirements for lesser credit-earning vehicle types. For example, credits produced from BEVs or FCEVs may be used to comply with the portion of the requirement for ZEVs or for TZEZVs, but credits earned for a TZEZV may not be used to comply with the portion of the requirement for ZEVs. Credits used for compliance could have been earned and banked in a previous model year or acquired from another party [see Cal. Code Regs., tit. 13, § 1962.2(g)(6)]. The table below displays model year 2020 ending credit balances, credits earned in model year 2021, model year 2021 annual requirements, and ending credit balances (in units of ZEV credits) for all manufacturers who have a ZEV requirement. The ending credit balance represents the cumulative balance since the start of the ZEV Regulation and is last updated as of August 31, 2022. Because manufacturers can use credits from one vehicle type to meet a requirement for a different vehicle type, as noted above, the ending credit balances for each manufacturer may not sum within each vehicle type. When considering ending balances, it is important to look at credits across all vehicle types. The crediting rules that apply to different vehicle types are listed below.

Manufacturer	Category	ZEV (BEV & FCEV)	BEVx	TZEZV	NEV+	Discount AT PZEZV and PZEZV
BMW	2020 Balance	15,350.83	32,460.60	948.07	0.00	0.00
	2021 Credits	2,537.73	437.23	4,698.29	0.00	0.00
	2021 Requirement	6,414.69	0.00	3,207.35	0.00	0.00
	2021 Ending Balance	14,681.22	29,690.48	2,439.01	0.00	0.00
Fiat Chrysler (Stellantis)	2020 Balance	83,679.27	0.00	0.00	0.00	0.00
	2021 Credits	0.00	0.00	1,858.74	0.00	0.00
	2021 Requirement	13,442.40	0.00	6,721.20	0.00	0.00
	2021 Ending Balance	65,374.41	0.00	0.00	0.00	0.00
Ford	2020 Balance	45,620.04	0.00	69,721.69	4,777.88	3,451.97
	2021 Credits	29,595.50	0.00	693.95	0.00	0.00
	2021 Requirement	14,671.63	0.00	7,335.81	0.00	0.00
	2021 Ending Balance	60,543.91	0.00	64,913.78	4,777.88	1,618.02
GM	2020 Balance	184,204.56	0.00	123,378.15	1,625.45	0.00
	2021 Credits	20,048.00	0.00	0.00	0.00	0.00
	2021 Requirement	17,587.44	0.00	8,793.72	0.00	0.00
	2021 Ending Balance	186,665.12	0.00	116,209.88	0.00	0.00

Manufacturer	Category	ZEV (BEV & FCEV)	BEVx	TZEV	NEV+	Discount AT PZEV and PZEV
Honda	2020 Balance	41,065.03	0.00	13,135.35	8,274.35	1,020.66
	2021 Credits*	12,092.32	0.00	1,106.96	0.00	0.00
	2021 Requirement	23,254.05	0.00	11,627.03	0.00	0.00
	2021 Ending Balance	26,415.20	0.00	9,010.14	6,388.25	0.00
Hyundai	2020 Balance	13,574.66	0.00	1,347.50	0.00	1,392.67
	2021 Credits	10,673.97	0.00	402.48	0.00	0.00
	2021 Requirement	6,965.39	0.00	3,482.69	0.00	0.00
	2021 Ending Balance	16,421.20	0.00	0.00	0.00	522.00
Jaguar Land Rover	2020 Balance	7,662.11	0.00	364.24	0.00	0.00
	2021 Credits	1,248.99	0.00	169.94	0.00	0.00
	2021 Requirement**	0.00	0.00	1,749.24	0.00	0.00
	2021 Ending Balance	7,526.10	0.00	169.94	0.00	0.00
Kia	2020 Balance	14,778.00	0.00	3,351.29	0.00	3,563.98
	2021 Credits	1,316.00	0.00	191.10	0.00	0.00
	2021 Requirement	5,459.84	0.00	2,729.92	0.00	0.00
	2021 Ending Balance	10,634.16	0.00	1,494.95	0.00	2,881.50
Mazda	2020 Balance	347.00	0.00	0.00	0.00	0.00
	2021 Credits***	10,938.00	0.00	0.00	0.00	0.00
	2021 Requirement	0.00	0.00	5,506.24	0.00	0.00
	2021 Ending Balance	5,778.76	0.00	0.00	0.00	0.00
Mercedes Benz	2020 Balance	16,757.22	0.00	2,393.12	0.00	0.00
	2021 Credits	0.00	0.00	0.00	0.00	0.00
	2021 Requirement	6,458.96	0.00	3,229.48	0.00	0.00
	2021 Ending Balance	9,461.90	0.00	0.00	0.00	0.00
Nissan	2020 Balance	61,208.86	0.00	0.00	0.00	0.00
	2021 Credits	6,204.37	0.00	0.00	0.00	0.00
	2021 Requirement	10,812.51	0.00	5,406.25	0.00	0.00
	2021 Ending Balance	51,194.47	0.00	0.00	0.00	0.00
Subaru	2020 Balance	50,269.74	0.00	0.00	85.67	0.00
	2021 Credits	0.00	0.00	641.25	0.00	0.00
	2021 Requirement	0.00	0.00	9,134.60	0.00	0.00
	2021 Ending Balance	41,862.06	0.00	0.00	0.00	0.00

Manufacturer	Category	ZEV (BEV & FCEV)	BEVx	TZEV	NEV+	Discount AT PZEV and PZEV
Tesla	2020 Balance	752,445.36	0.00	0.00	0.00	0.00
	2021 Credits****	378,691.57	0.00	0.00	0.00	0.00
	2021 Requirement	0.00	0.00	6,135.04	0.00	0.00
	2021 Ending Balance	1,125,001.89	0.00	0.00	0.00	0.00
Toyota	2020 Balance	187,045.55	0.00	27,642.16	0.00	39,742.93
	2021 Credits	10,388.00	0.00	21,179.77	0.00	0.00
	2021 Requirement	30,841.44	0.00	15,420.72	0.00	0.00
	2021 Ending Balance	166,592.11	0.00	37,256.39	0.00	35,887.75
Volkswagen	2020 Balance	54,587.87	0.00	3,294.22	0.00	0.00
	2021 Credits*****	45,448.30	0.00	1,554.36	0.00	0.00
	2021 Requirement	9,813.76	0.00	4,906.88	0.00	0.00
	2021 Ending Balance	88,609.75	0.00	1,554.36	0.00	0.00
Volvo	2020 Balance	0.00	0.00	2,429.60	0.00	1,184.92
	2021 Credits	7,433.82	0.00	2,796.76	0.00	0.00
	2021 Requirement	0.00	0.00	1,476.80	0.00	0.00
	2021 Ending Balance	7,433.82	0.00	4,118.76	0.00	815.72
Total	2020 Balance	1,528,596.10	32,460.60	248,005.39	14,763.35	50,357.13
	2021 Credits	536,616.57	437.23	35,293.60	0.00	0.00
	2021 Requirement	145,722.11	0.00	96,862.97	0.00	0.00
	2021 Ending Balance	1,884,196.08	29,690.48	237,167.21	11,166.13	41,724.99

* Honda earned 10,464.32 GHG-ZEV overcompliance credits during model year 2021, which are displayed as additional model year 2021 ZEV credits earned. GHG-ZEV overcompliance credits can be used to fulfill up to 30% of a manufacturer's model year 2021 ZEV credit requirement and are earned by over-complying with the California GHG tailpipe standard (Cal. Code Regs., tit. 13, §1961.3). These credits earned may only be used in the applicable model year and may not be used in any other model year (i.e., these credits cannot be banked). For additional information see Cal. Code Regs., tit. 13, § 1962.2(g)(6)(C).

** Jaguar Land Rover utilized the same-year calculation method for this reporting year's annual requirements.

*** Mazda received 10,938 BEV credits from Tesla as part of a transfer.

**** Tesla transferred 10,938 BEV credits to Mazda as part of a transfer.

***** Volkswagen reported additional model year 2020 vehicles during the 2021 reporting year. These credits are not included in the model year 2021 Manufacturer Credit Balance table but are reflected in the model year 2021 credits row here and in the manufacturer credit balances.

Manufacturer Ending Balances Through Model Year 2021

The table below lists the credit balances (in units of ZEV credits) as of August 31, 2022 generated since the start of the ZEV Regulation. This table includes other manufacturers generating credits that do not have ZEV requirements. Inactive manufacturers with zero credit balances are not included.

Manufacturer	ZEV	BEVx	TZEV	NEV+	Discount AT PZEV and PZEV
BMW	14,681.22	29,690.48	24,39.01	0	0
Fiat Chrysler (Stellantis)	65,374.41	0	0	0	0
Ford	60,543.91	0	64,913.78	4,777.88	1,618.02
GM	186,665.12	0	116,209.88	0.00	0
Honda	26,415.20	0	9,010.14	6,388.25	0.00
Hyundai	16,421.20	0	0.00	0	522.00
Jaguar Land Rover	7,526.10	0	169.94	0	0
Kia	10,634.16	0	1,494.95	0	2,881.50
Lightning Systems	78.73	0	0	0	0
Mazda	5,778.76	0	0	0	0
Mercedes Benz	9,461.90	0	0.00	0	0
Miles	0	0	0	5.14	0
Mitsubishi	1,439.00	0	1,336.20	0	367.11
Nissan	51,194.47	0	0	0	0
Subaru	41,862.06	0	0	0	0
Tesla	1,125,001.89	0	0	0	0
Toyota	166,592.11	0	37,256.39	0	35,887.75
Volkswagen	88,609.75	0	1,554.36	0	0
Volvo	7,433.82	0	4,118.76	0	815.72
Zenith	62.5	0	0	0	0
Zipcar	0	0	0	0	275.15
Total	1,885,776.31	29,690.48	238,503.41	11,171.27	42,367.25

Description of Credits and Spending Rules:

- ZEV = zero-emission vehicle (fuel cell and battery electric); can be used to fulfill both ZEV and TZEV portions of requirement.
- BEVx = range extended battery electric vehicle; BEVx credits can be used for up to 50% of the manufacturer's ZEV credit requirement. BEVx credits can also be used toward meeting the manufacturer's TZEV requirement.
- TZEV = transitional zero-emission vehicle (plug-in hybrid electric vehicles or PHEVs); can be used for up to 4.0% of a large volume manufacturer's model year 2021 compliance requirement and up to 12% of an intermediate volume manufacturer's 2021 compliance requirement.
- NEV = neighborhood electric vehicle; NEV credits may be used to satisfy up to 25% of the portion of a manufacturer's requirement that can be met with credits from TZEVs.
- Discount AT PZEV and PZEV = conversion of advanced technology partial zero-emission vehicle (clean hybrids) and partial zero-emission vehicle (clean gasoline) credits per 1962.1(g)(2)(f). Discount credits may be used to satisfy up to 25% of the portion of a manufacturer's requirement that can be met with credits from TZEVs. If a manufacturer has both NEV and discount credits, the combined usage of these two types of credit categories toward meeting the manufacturer's TZEV requirement may not exceed 25% (i.e., no stacking).

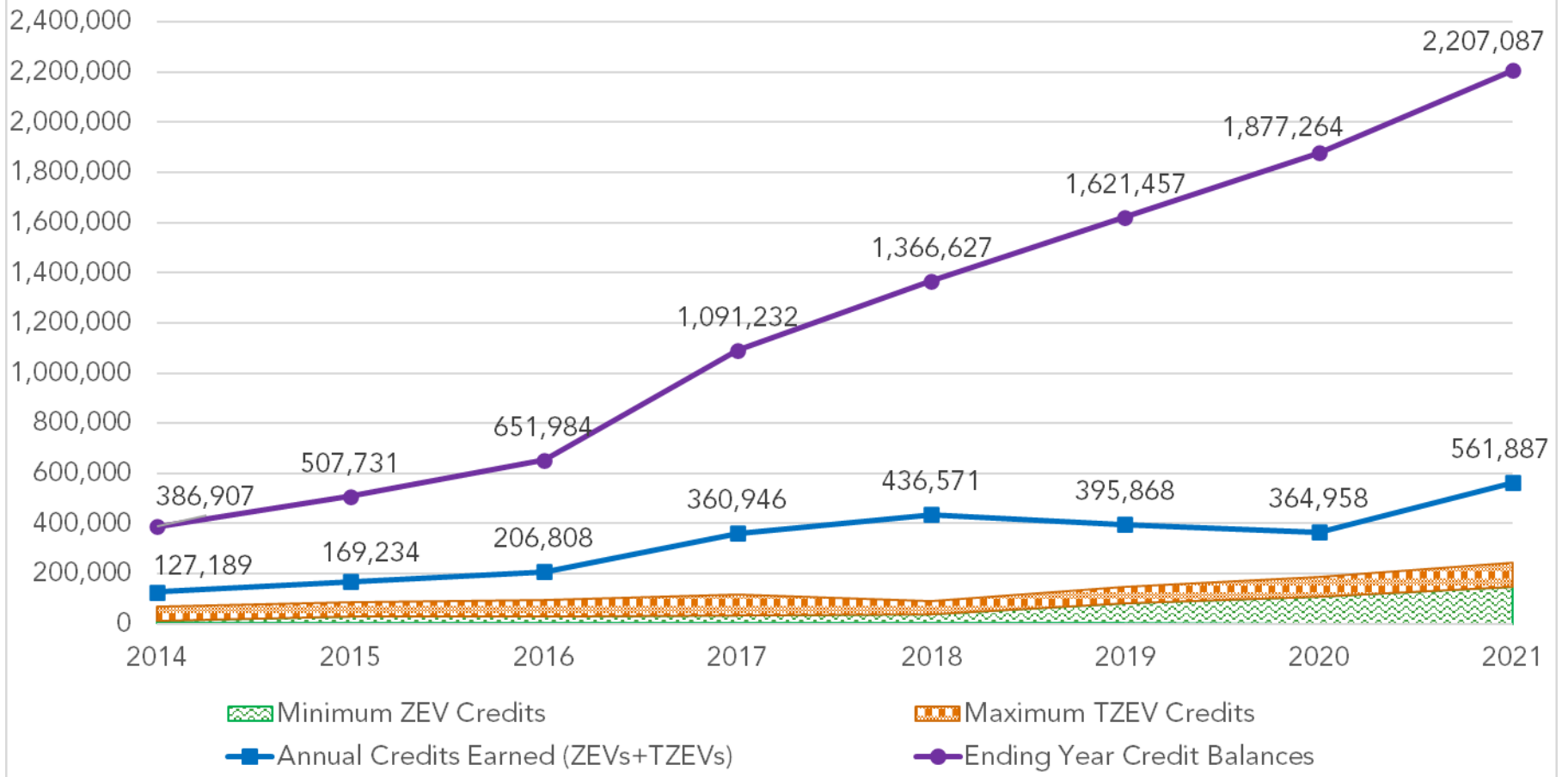
Aggregated ZEV Credit Requirement and Credits Earned from Model Years 2014 Through 2021

The chart below displays the trends associated with manufacturer credit generation, annual requirements, and credit balances from model year 2014 to 2021.

The green patterned area represents the minimum ZEV requirement for large volume manufacturers, while the orange patterned area represents the maximum TZEV credits that can be used for compliance for large volume manufacturers. Intermediate volume manufacturers may meet their compliance obligation exclusively with TZEVs. The total annual requirement for all manufacturers is the sum of the orange and green areas (vertically) for each model year.

The blue line with square markers represents the total credits earned (all ZEVs and TZEVs) during each model year for all manufacturers. The purple line with circular markers represents overall cumulative credit balances for all manufacturers at the end of each reporting year, after considering credits earned and credits used for that year. Since the purple line remains far above zero, the entire industry remains in compliance through model year 2021.

ZEV Regulation Annual Requirements, Annual Credits Earned, and Credit Balances for Model Years 2014-2021*



* Small volume manufacturers' credits are excluded

Manufacturer Transfers

Manufacturers may transfer credits with other manufacturers. Below are the ZEV credit transfers recorded between October 1, 2021 and August 31, 2022.

Transferor	Transferee	Vehicle Type	Total Credits
Tesla	Mazda	BEV	10,938.00
		Total	10,938.00

Summary and Frequently Asked Questions

How many vehicles have been brought to and operated in California as a result of the ZEV Regulation? Credit balances reflect ZEV Regulation compliance through model year 2021, representing a cumulative sales total of approximately 916,000 vehicles including 12,700 FCEVs, 588,200 BEVs and range extended vehicles, and 314,700 clean PHEVs. Total ZEV and PHEV sales estimates based on vehicle registrations, including those not used for ZEV Regulation compliance are available at <https://www.energy.ca.gov/data-reports/energy-insights/zero-emission-vehicle-and-charger-statistics>.

Besides earning credits or transferring credits, what else can contribute to a manufacturer's credit balance? In the ZEV Regulation, FCEV credits earned in one state can be counted as earned in all Section 177 ZEV states. (The full list of S177 states available here: https://ww2.arb.ca.gov/sites/default/files/2022-05/%C2%A7177_states_05132022_NADA_sales_r2_ac.pdf.) This is called the "travel" provision. When credits earned in the other ZEV states are traveled to California, they are traveled on a one-to-one basis. This only applies to FCEVs, as the travel provision no longer applies to BEVs.

What do these credit balances mean? All vehicle manufacturers subject to the ZEV Regulation are in compliance through model year 2021. Positive credit balances represent a successful over-compliance with the ZEV Regulation. Manufacturers can use these balances to meet the ZEV requirements in coming years. This provides flexibility in the timing and production of bringing new clean cars to the market.

How do you calculate a manufacturer's credit balance? The current year compliance balance = previous year compliance balance + all credits earned in current year – all credits used to fulfill the annual ZEV requirement + credits transferred to the manufacturer – credits transferred away to other manufacturers.

How far into the future do these credit balances cover the manufacturers' ZEV requirement? Discount credits will expire after model year 2025 compliance. Each manufacturer is unique in its strategy of compliance with the ZEV Regulation. It is not possible to predict how and when these credit balances will be spent over the coming years due to the complexity and flexibility of the regulation. There are also various mechanisms in the ZEV Regulation that limit how credits are spent.

How do you calculate a manufacturer's requirement? For understanding the calculations involved in the ZEV Regulation, please see the ZEV Tutorial link below.

More Information can be found through these links:

- [ZEV Regulation](#)
- [ZEV Tutorial](#)
- [ZEV Credit Archive](#)

Public Disclosure

This information is subject to public disclosure as provided in the ZEV Regulation. (Cal. Code Regs., tit. 13, § 1962.2(l).)

Contact Us

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