

# California Air Resources Board

## 2014 Zero Emission Vehicle Credits

The data below provide greater transparency of compliance with the Zero Emission Vehicle (ZEV) regulation per California Code of Regulations title 17 section 1962.2(l) Public Disclosure.

### Manufacturer Volume Status

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The ZEV Regulation requires large volume and intermediate volume vehicle manufacturers to bring to and operate in California a certain percent of ZEVs (such as battery electric and fuel cell vehicles), clean plug-in hybrids, clean hybrids and clean gasoline vehicles with near-zero tail pipe emissions. The table below lists the 2014 vehicle manufacturers subject to the ZEV requirements.

Large Volume Status		
Fiat Chrysler	Ford	GM
Honda	Nissan	Toyota

Intermediate Volume Status	
BMW	Hyundai
KIA	Jaguar Land Rover
Mazda	Mercedes Benz
Subaru	Volkswagen

### Manufacturer Sales in California

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The table below displays the 2014 California vehicle production of large volume and intermediate volume manufacturers. A vehicle manufacturer's 2014 ZEV requirement is based on a percentage of all passenger cars and light-duty trucks (LDT) from 0 to 8,500 pounds (lbs.), delivered for sale in California.

Manufacturer	Passenger Cars & LDT1
BMW	87,465
Fiat Chrysler	152,064
Ford	209,072
FUJI Heavy Industries / Subaru	44,522
GM	199,563
Honda	224,135
Hyundai	61,396
Jaguar Land Rover	11,512
Mazda	42,583
Kia	58,412
Mercedes Benz	84,555
Nissan	146,490
Toyota	358,614
Volkswagen	98,109
<b>Total</b>	<b>1,778,492</b>

## Manufacturer Credit Balances

In complying with the ZEV Regulation, manufacturers operate vehicles in California, which generate varying credits based on vehicle type. There are also other parties generating credits that do not have ZEV requirements. The table below lists the credit balances as of September 30, 2015 generated since the start of the ZEV Regulation in 1990.

For reporting year 2014 only, the balances are displayed in both units of grams/mile Non-Methane Organic Gases (g/mile NMOG) and ZEV credits to provide a transition to units of ZEV credits. Through reporting year 2014 credits earned have been multiplied by the g/mile NMOG fleet average requirement for the appropriate model year. The g/mi NMOG is used only as an index (which decreased over time)—it is the “currency” that credits are stored in and does not represent actual values of g/mi NMOG. The intent of this multiplier was to reward early production of vehicles. For 2015 reporting year onward credits will be expressed in ZEV credits. The purpose of this change is to simplify credit calculations. Current balances are divided by .035 to convert g/mile NMOG credits to ZEV credits.

Manufacturer	Units	ZEV (excludes NEVs)	BEVx	NEV	TZEV	AT PZEV	PZEV
BMW	g/mi NMOG credits	141.522	190.789	0.000	0.000	0.000	0.000
BMW	ZEV credits	4,043.49	5,451.11	0.00	0.00	0.00	0.00
Fiat Chrysler	g/mi NMOG credits	422.244	0.000	0.001	0.000	615.637	0.000
Fiat Chrysler	ZEV credits	12,064.11	0.00	0.03	0.00	17,589.63	0.00
Ford	g/mi NMOG credits	986.181	0.000	706.323	912.652	367.435	605.614
Ford	ZEV credits	28,176.60	0.00	20,180.66	26,075.76	10,498.14	17,303.26
FUJI Heavy Industries / Subaru	g/mi NMOG credits	854.000	0.000	41.199	0.000	19.385	236.313
FUJI Heavy Industries / Subaru	ZEV credits	24,400.00	0.00	1,177.11	0.00	553.85	6,751.80
GM	g/mi NMOG credits	731.594	0.000	440.212	1,958.215	373.776	0.000
GM	ZEV credits	20,902.69	0.00	12,577.49	55,949.00	10,679.31	0.00
Honda	g/mi NMOG credits	1,052.000	0.000	569.758	0.000	391.286	1,222.734
Honda	ZEV credits	30,057.06	0.00	16,278.80	0.00	11,179.59	34,935.26
Hyundai	g/mi NMOG credits	31.360	0.000	0.000	0.000	168.900	380.197
Hyundai	ZEV credits	896.00	0.00	0.00	0.00	4,825.71	10,862.77
Jaguar Land Rover	g/mi NMOG credits	*74.795	0.000	0.000	0.000	0.000	0.000
Jaguar Land Rover	ZEV credits	2,137.00	0.00	0.00	0.00	0.00	0.00
KIA	g/mi NMOG credits	8.543	0.000	0.000	0.000	133.229	204.575
KIA	ZEV credits	244.09	0.00	0.00	0.00	3,806.55	5,845.00

Manufacturer	Units	ZEV (excludes NEVs)	BEVx	NEV	TZEV	AT PZEV	PZEV
Mazda	g/mi NMOG credits	0.000	0.000	0.000	0.000	0.000	45.393
Mazda	ZEV credits	0.00	0.00	0.00	0.00	0.00	1,296.94
Mercedes Benz	g/mi NMOG credits	527.918	0.000	43.143	0.000	3.384	512.456
Mercedes Benz	ZEV credits	15,083.37	0.00	1,232.63	0.00	96.68	14,641.60
Mitsubishi	g/mi NMOG credits	2.363	0.000	0.000	0.000	0.000	51.395
Mitsubishi	ZEV credits	67.50	0.00	0.00	0.00	0.00	1,468.43
Nissan	g/mi NMOG credits	1,608.039	0.000	0.000	0.000	0.000	148.106
Nissan	ZEV credits	45,943.97	0.00	0.00	0.00	0.00	4,231.60
Polaris	g/mi NMOG credits	0.000	0.000	1.155	0.000	0.000	0.000
Polaris	ZEV credits	0.00	0.00	33.00	0.00	0.00	0.000
Tesla	g/mi NMOG credits	174.580	0.000	0.000	0.000	0.000	0.000
Tesla	ZEV credits	4,988.00	0.00	0.00	0.00	0.00	0.00
Toyota	g/mi NMOG credits	1,790.770	0.000	0.000	420.863	6,936.775	0.000
Toyota	ZEV credits	51,164.71	0.00	0.00	12,024.66	198,193.57	0.00
Volkswagen	g/mi NMOG credits	43.465	0.000	0.000	0.000	24.447	120.112
Volkswagen	ZEV credits	1,241.86	0.00	0.00	0.00	698.49	3,431.77
Volvo	g/mi NMOG credits	0.000	0.000	0.000	0.000	0.000	130.930
Volvo	ZEV credits	0.00	0.00	0.00	0.00	0.00	3,740.86
Zipcar	g/mi NMOG credits	0.000	0.000	0.000	0.000	21.438	17.083
Zipcar	ZEV credits	0.00	0.00	0.00	0.00	612.51	488.09
<b>Total</b>	g/mi NMOG credits	<b>8,466.448</b>	<b>190.789</b>	<b>1,801.790</b>	<b>3,291.729</b>	<b>9,055.691</b>	<b>3,674.908</b>
<b>Total</b>	ZEV credits	<b>241,410.44</b>	<b>5,451.11</b>	<b>51,479.71</b>	<b>94,049.41</b>	<b>258,734.04</b>	<b>104,997.37</b>

The manufacturer credit balances table excludes all inactive manufacturers with zero credit balances. In addition, Jaguar Land Rover balance does not include an outstanding ZEV obligation of 27,248 grams per mile NMOG credits. A manufacturer has two additional model years to fulfill the obligation with credits from ZEVs before they will be out of compliance.

Description of Credit Balances:

- ZEV = Zero Emission Vehicle
- NEV = Neighborhood Electric Vehicle
- TZEV = Transitional Zero Emission Vehicle (plug-in hybrids)
- AT PZEV = Advanced Technology Partial Zero Emission Vehicle (clean hybrids)
- PZEV = Partial Zero Emission Vehicle (clean gasoline)

## Manufacturer Transfers

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Manufacturers may transfer credits with other manufacturers. Below are the ZEV credit transfers recorded between October 1, 2014 and September 30, 2015.

Transferor	Vehicle Type	Total Credits
CODA	ZEV	1.400
FCA	ZEV	370.335
FCA	NEV	49.665
Ford	PZEV	1.435
Mitsubishi	ZEV	3.745
Nissan	ZEV	381.500
Tesla	ZEV	1,554.805
Toyota	AT PZEV	851.434
	<b>Total</b>	<b>3,214.319</b>

Transferee	Vehicle Type	Total Credits
FCA	AT PZEV	851.434
Ford	ZEV	665.000
Fuji	ZEV	746.305
GM	ZEV	3.745
Jaguar Land Rover	PZEV	1.435
Toyota	ZEV	895.335
Toyota	NEV	49.665
Volkswagen	ZEV	1.400
	<b>Total</b>	<b>3,214.319</b>

## Frequently Asked Questions

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**How many vehicles have been brought to and operated in California as a result of the ZEV Regulation?**

These credit balances reflect ZEV regulation compliance through model year 2014, representing a total of over 4 million vehicles including approximately 500 fuel cell vehicles, 60,000 battery electrics, 29,400 NEVs, 620,000 clean hybrids, and over 3 million clean gasoline vehicles.

**What do these credit balances mean?** All vehicle manufacturers subject to the ZEV Regulation are in compliance through model year 2014. Positive credit balances represent a successful over compliance with the ZEV Regulation. Manufacturers can use these balances to provide flexibility in the timing and production of bringing new clean cars to the market to meet the ZEV requirements in coming years.

**How far into the future do these credit balances cover the manufacturers' ZEV requirement?**

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 which limit how credits are spent. These balances will be taken into account in future amendments to the regulation.

**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**

- [ZEV Regulation](#)
- [ZEV Tutorial](#)
- [ZEV Credit Archive](#)
- [MAC 2014-02](#): Zero Emission Vehicle (ZEV) Credit Reporting and Tracking System

Fleet Average Non-Methane Organic Gas Exhaust Mass Emission Requirements for Light-duty Vehicle Weight Classes (50,000 Mile Durability Vehicle Basis) table from California Code of Regulations, Title 13, Section 1961(b)(1)(A)

Model Year	All PCs; LDTs 0-3,750 lbs. LVW	LDTs 3,751 lbs. LVW to 8,500 lbs. GVW
2001	0.070	0.098
2002	0.068	0.095
2003	0.062	0.093
2004	0.053	0.085
2005	0.049	0.076
2006	0.046	0.062
2007	0.043	0.055
2008	0.040	0.050
2009	0.038	0.047
2010+	0.035	0.043

Fleet Average NMOG in units of grams per mile;

PC = Passenger Car, LDT = Light Duty Truck, LVW = Loaded Vehicle Weight, GVW = Gross Vehicle Weight

**Contact Us**

For more information, please contact the Office of Communications at (916) 322-2990 or (800) 242-4450.