

# California Air Resources Board

## 2013 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 2013 vehicle manufacturers subject to the ZEV requirements.

Large Volume Status		
Chrysler Group	Ford	GM
Honda	Nissan	Toyota

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

### Manufacturer Sales in California

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The table below displays the 2013 California vehicle production of large volume and intermediate volume manufacturers. A vehicle manufacturer's 2013 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 and LDT
BMW	87,255
Chrysler Group	125,542
Ford	215,277
FUJI Heavy Industries / Subaru	36,167
GM	175,583
Honda	234,349
Hyundai	120,599
Jaguar Land Rover	11,477
KIA	72,664
Mazda	30,719
Mercedes	68,717
Nissan	143,535
Toyota	368,909
Volkswagen	96,405
<b>Total</b>	<b>1,787,198</b>

\*Production does not include ZEVs.

## 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, 2014 generated since the start of the ZEV Regulation in 1990. The credits are in units of grams per mile Non-Methane Organic Gases (g/mi NMOG).

Manufacturer	ZEV (excludes NEVs)	NEV	TZEV	AT PZEV	PZEV
BMW	24.325	0.000	0.000	0.000	0.000
Chrysler Group	527.951	52.270	0.000	0.000	0.000
CODA	0.000	0.000	0.000	0.000	0.000
Ford	197.953	816.687	363.714	431.310	619.515
FUJI Heavy Industries / Subaru	107.695	41.199	0.000	0.000	168.463
GM	612.580	502.225	1,043.231	639.523	7.932
Honda	1,076.696	637.258	0.000	463.493	770.520
Hyundai	31.360	0.000	0.000	138.889	440.216
Jaguar Land Rover	74.795	0.000	0.000	0.000	0.000
KIA	8.543	0.000	0.000	104.335	161.833
Mazda	0.000	0.000	0.000	0.000	133.183
Mercedes Benz	140.030	43.142	0.000	1.944	530.806
Mitsubishi	1.855	0.000	0.000	0.000	51.395
Nissan	1,382.434	0.000	55.493	0.000	383.970
Polaris	0.000	0.000	0.000	0.000	0.000
Tesla	221.550	0.000	0.000	0.000	0.000
Toyota	855.554	0.000	114.304	7,796.114	0.000
Volkswagen	41.960	0.000	0.105	16.882	135.624
Volvo	0.000	0.000	0.000	0.000	127.941
Zipcar	0.000	0.000	0.000	21.438	17.083
<b>Total</b>	<b>5,305.746</b>	<b>2,092.781</b>	<b>1,576.848</b>	<b>9,613.928</b>	<b>3,548.481</b>

\*The manufacturer credit balances table excludes all inactive manufacturers with zero credit balances.

### 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 September 1, 2013 and August 31, 2014.

Transferor	Vehicle Type	Total Credits
CODA	ZEV	5.530
Fiat	ZEV	235.200
Ford	PZEV	38.738
Mitsubishi	ZEV	1.033
Nissan	PZEV	663.600
Polaris	ZEV	2.604
Tesla	ZEV	650.195
	<b>Total</b>	<b>1,596.900</b>
Transferee	Vehicle Type	Total Credits
Chrysler	ZEV	237.804
Fuji/Subaru	ZEV	107.695
GM	ZEV	4.498
Honda	ZEV	542.500
Jaguar Land Rover	PZEV	38.738
Mercedes Benz	PZEV	663.600
Volkswagen	ZEV	2.065
	<b>Total</b>	<b>1,596.900</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 2013, representing a total of 3.5 million vehicles including over 500 fuel cell vehicles, 38,000 battery electrics, 29,300 NEVs, 30,000 clean plug-in hybrids, 570,000 clean hybrids, and 3 million clean gasoline vehicles. As of September 2014, more than 100,000 ZEVs and plug-in hybrids are on California roads.

**What do these credit balances mean?** All vehicle manufacturers subject to the ZEV Regulation are in compliance through model year 2013. 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.

### **Why are credit balances in units of grams/mile Non-Methane Organic Gases (g/mile NMOG)?**

When credits are earned they are multiplied by the g/mile NMOG fleet average requirement for the appropriate model year. Please note that in the ZEV Regulation g/mi NMOG is used only as an index (which decreases 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.

## 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 2011-02](#): Zero Emission Vehicle (ZEV) Credit Reporting and Tracking System
- NMOG table from California Code of Regulations, Title 13, Section 1961(b)(1)(A)

Fleet Average Non-Methane Organic Gas Exhaust Mass Emission Requirements for Light-duty Vehicle Weight Classes  
(50,000 Mile Durability Vehicle Basis)

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.