

California Air Resources Board

2009 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

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 2009 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
Volvo	

Manufacturer Sales in California

The table below displays the 2009 California vehicle production of large volume and intermediate volume manufacturers. A vehicle manufacturer's 2009 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 and LDT1	LDT2
BMW	40,036	5,784
Chrysler Group	26,709	23,139
Ford	48,133	25,338
FUJI Heavy Industries/Subaru	10,447	3,180
General Motors	70,189	55,585
Honda	124,609	25,602
Hyundai	26,883	3,552
KIA	16,828	4,290
Land Rover	0	2,864
Mazda	14,515	2,551
Mercedes Benz	34,333	7,306
Mitsubishi	7,859	210
Nissan	83,147	26,228
Toyota	204,392	59,309
Volkswagen	43,923	3,281
Volvo	4,835	1,037
Subtotal	756,838	249,256
Total		1,006,094

*Production does not include ZEVs; LDT1 = Light Duty Truck 0 to 3,750 lbs., LDT2 = Light Duty Truck 3,751 to 8,500 lbs.

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, 2010 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	ZEVs (excluding NEVs)	NEVs	AT PZEVs	PZEVs
American Custom Golf Cars	0.000	0.228	0.000	0.000
BMW	106.000	0.000	0.000	285.480
Chrysler Group	113.319	816.071	0.000	0.000
Ford	329.486	1,123.891	510.473	1,293.674
FUJI Heavy Industries/Subaru	0.000	0.000	0.000	32.246
General Motors	449.515	869.883	495.711	174.480
Honda	375.205	804.666	998.462	192.069
Hyundai	31.360	0.000	0.000	1.567
KIA	23.320	0.000	0.000	15.512
Land Rover	0.000	0.000	0.000	12.020
Mazda	0.000	0.000	0.000	212.381
Mercedes Benz	28.520	193.066	0.000	0.000
Mitsubishi	1.400	0.000	0.000	21.757
Nissan	255.737	0.000	0.000	1,514.684
Tesla	0.000	0.000	0.000	0.000
Toyota	1,344.304	0.000	5,471.827	1,167.800
Volkswagen	35.585	0.000	18.736	8.037
Volvo	0.000	0.000	0.000	85.941
Zipcar	0.000	0.000	0.000	13.718
Total	3,093.751	3,807.805	7,495.210	5,031.368

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)

Frequently Asked Questions

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 2009, representing a total of 1.7 million vehicles including 300 fuel cell vehicles, 5,100 battery electrics, 28,500 NEVs, 300,000 clean hybrids and 1,400,000 clean gasoline vehicles.

What do these credit balances mean? All vehicle manufacturers subject to the ZEV Regulation are in compliance through model year 2009. 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.

Why are transfers not included in this Disclosure? To provide greater transparency to interested stakeholders, the Board requested that production data and credit balances beginning in model year 2009 and credit transfers in 2010 be made publicly available.

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.