

# California Clean Energy Future Metrics

---

## Plug-In Electric Vehicle Metric

### The Zero Emission Vehicle (ZEV) Program

The ZEV program will play a critical role in meeting California's air quality and greenhouse gas reduction goals for 2020 and beyond. In the near term, the program requires the placement of thousands of ZEVs in order to meet emission reduction goals. In the long term, the ZEV program requires the placement of tens of thousands of ZEVs and near zero-emission vehicles (such as plug-in electric and conventional hybrids, compressed natural gas and clean gasoline vehicles) in California.

Plug-in electric vehicles (PEVs), which draw electricity from the grid, are expected to comprise a significant component of the overall ZEV program. PEVs currently consist of two vehicle types--battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

Approximately 2,300 BEVs are operating in California today. A few hundred BEVs date from sales and lease purchases in the early 2000s following manufacturer demonstration programs. Several hundred Tesla Roadsters have been sold or leased since their introduction in 2008. Since December 2010, over 1,500 Nissan Leafs have been delivered to California customers.

Since almost all PEVs will be used to meet ZEV regulatory requirements, actual sales will be monitored through yearly auto manufacturer reporting, as required under the ZEV regulation. All dealer sales and leases of vehicles in California are tracked by the manufacturer. ARB will rely upon aggregated data reported by the manufacturers to produce annual reports of ZEV compliance progress.

### California Clean Energy Future Goal

The CCEF calls for the development of infrastructure and operational capabilities to absorb a targeted one million PEVs by 2020. .

The following graph illustrates actual sales, and an anticipated sales scenario, of PEVs in California under the ZEV program, and the potential sales goal of one million PEVs under the CCEF metric. For the ZEV program, the graph shows anticipated cumulative sales for both BEVs and PHEVs. The near-term values (through 2014) are based on sales expected to exceed ZEV regulatory requirements; the longer-term values (2015+) reflect manufacturer requirements for meeting ZEV regulatory requirements with a likely "mix" of vehicle types. The CCEF goal of one million vehicles also reflects BEVs and PHEVs. For the 2009 *Integrated Energy Policy Report*, the Energy Commission staff forecasted the number of FEVs and PHEVs to reach nearly 3 million by 2030 (<http://www.energy.ca.gov/2010publications/CEC-600-2010-002/CEC-600-2010-002-SF.PDF>, page 126).

Figure 1: Cumulative Plug-In Electric Vehicle Scenarios

