




LBE Quick Guide to Electric Vehicles

Types of EV Technologies

Over their useful lifetime, electric vehicles (EVs) may result in total cost of ownership as much as 50% lower than their gasoline-only counterparts. There are three primary types of EVs that use some form of battery power, and each contributes to higher fuel efficiency and lower emissions:

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|  | Battery Electric Vehicles (BEVs) | BEVs, also called fully electric vehicles, have batteries that are charged by plugging the vehicle into appropriate outlets or charging equipment. BEVs always operate in all-electric mode and do not have an internal combustion engine, fuel tank or exhaust pipe. They store electricity onboard with high-capacity battery packs and newer models have typical driving ranges from 150 to 300 miles although some models can add battery capacity to increase range. |
|  | Plug-in Hybrid Vehicles (PHEVs) | PHEVs are powered by an internal combustion engine and an electric motor that uses energy stored in a battery. PHEVs can operate in all-electric (or charge-depleting) mode. To support a driver's typical daily travel needs, most PHEVs can travel between 20 and 40 miles on electricity alone and when the battery has been depleted, the gasoline engine turns on and the vehicle operates as a hybrid electric vehicle instead. |
|  | Hybrid Electric Vehicles (HEVs) | HEVs are powered by an internal combustion engine and a small electric motor that uses energy stored in a battery. Under light load, for instance during initial acceleration, only electricity is consumed. The vehicle is fueled primarily with gasoline to operate the internal combustion engine, and the battery is charged through regenerative braking, not by plugging in. |

*ZEVs also include fuel-cell electric vehicles, which run on compressed liquid hydrogen. Sources: [US Department of Energy](#) and [EVgo](#)

EV Incentive Information for State Entities

MassEVIP Fleets Incentive: \$3,000-\$7,500

Funding amounts depend on vehicle type and type of acquisition. MassEVIP cannot be bundled with MOR-EV.

Eligible vehicles: Fleet BEVs and PHEVs up to 8,500 pounds gross vehicle weight rating (GVWR).

Acquisition type: Purchase or lease (minimum 3-year lease).

To note: If purchasing through statewide contract, MassDEP will pay the incentive directly to the vendor; there is also a maximum limit of 25 EV incentives per applicant.



MOR-EV Truck Rebates: \$7,500-\$90,000

Rebate values vary by gross vehicle weight rating.

Eligible vehicles: BEV pickup trucks between 6,000-10,000 pounds GVWR; all other medium- and heavy-duty BEVs (including trucks, vans, and buses) over 8,500 pounds GVWR are eligible for rebates up to \$90,000.

Acquisition type: Purchase or lease (minimum 3-year lease).

To note: Vehicles over 10,000 pounds that operate >50% of the time in Environmental Justice Communities are eligible for an incentive adder.



Federal Direct Pay

The Inflation Reduction Act offers a [Commercial Clean Vehicle Credit](#) through which tax-exempt entities can now receive tax credits through direct pay for electric vehicles purchased. The credit will amount to the lesser of either 15%-30% of the basis of an eligible vehicle or its incremental cost. The maximum credit is up to **\$7,500** for vehicles less than 14,000 pounds GVWR and up to **\$40,000** for vehicles greater than 14,000 pounds GVWR. Eligible vehicles must be made by a [qualified manufacturer](#) and must meet the applicable battery capacity (minimum 7-15 kWh depending on GVWR) or [fuel cell EV requirements](#).

Procurement & Other Resources

Eligible public entities can procure EVs through statewide contract VEH110: Light and Medium-Duty Vehicles. All sedans, minivans, and SUVs offered on VEH110 are hybrid, plug-in hybrid, or battery-electric models. See the [VEH110 Contract User Guide](#) for information. Non-Executive Branch entities may elect to procure EVs outside of statewide contract.

The LBE Clean Transportation Page includes additional resources intended to support state entities with their fleet electrification efforts, including information on new and upcoming EV models, a total-cost of ownership calculator, EV charging guidance, and more.