




LBE Quick Guide to Electric Vehicles

Technologies, incentive programs, and procurement

Types of EVs

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:

Zero emission vehicles (ZEVs)*		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 Program Information for State Entities

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

*First come, first serve incentive for public entities to buy or lease EVs; maximum funding amounts depend on vehicle type and means of acquisition. *Smaller incentive for motorcycles.*

Eligible applicants: Municipalities, state agencies, public colleges and universities.

Eligible vehicles: Light-duty battery electric and plug-in hybrid electric vehicles.

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 a maximum limit of 25 EV incentives per applicant.

MOR-EV Trucks Program: \$7,500-\$90,000

Incentive values will vary by gross vehicle weight rating, and rebates are assigned by blocks with values that will decline over time.

Eligible applicants: Private, commercial, and public fleets.

Eligible vehicles: Medium- and heavy-duty battery electric or fuel-cell electric vehicles (including trucks, vans, and buses) over 8,500 pounds GVWR with a sales price of \$50,000+

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

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

Procurement Resources






Eligible public entities can work with vendors on the current Massachusetts statewide contract *VEH98: Purchase of Vehicles* to procure EVs. The [VEH98 contract user guide](#) includes a link to the list of currently available models (with pricing information) that can be filtered for EVs and other specs. Non-Executive Branch entities may elect to pursue purchase or leasing options outside of statewide contract.

	Technology	Make / Model	Vehicle Type	Electric Range	Options
EV Models Currently on VEH98	BEV	Nissan Leaf	Passenger Car	150 or 226 miles	Various ranges
		Chevy Bolt	Passenger Car	238 or 259 miles	Cargo upfit; various ranges
		Hyundai Kona	SUV	258 miles	Various trims
		Ford Mustang Mach-E	SUV	230 or 300 miles	AWD or RWD; various ranges
PHEV		Toyota Prius Prime	Passenger Car	25 miles	-
		Honda Clarity	Passenger Car	48 miles	Various trims
		Ford Escape	SUV	37 miles	Various trims
		Chrysler Pacifica	Minivan	32 miles	-

Highlight: A Call to Action for State Fleet EV Acquisitions in 2021

MassEVolves and LBE have partnered to issue a special 2021 Electric Vehicle Purchase Challenge; this voluntary initiative spotlights BEV and PHEV acquisitions, offers a unique opportunity to demonstrate leadership, and helps state entities gain additional recognition for their on-the-ground efforts to reduce environmental impacts. Learn more [here!](#)

MassEVIP Program Matrix

MassEVIP Program	Deadline	Equipment	Incentive Amounts	Applicant Eligibility
 Direct Current (DC) Fast Charging	3/19/21	DC fast chargers	Up to 80% of hardware and installation (up to 100% for public facilities and up to 60% for educational campuses). Maximum of \$50,000 per station.	Property owners with publicly accessible parking; educational campuses with 15+ students.
 Public Access Charging	Rolling	Level 1 + 2 chargers	Up to 80% of hardware and installation (100% for public facilities). Maximum of \$50,000 per street address.	Property owners or managers with publicly accessible parking; public must have access for a minimum of 12 hours per day, 7 days a week.
 Workplace and Fleet Charging	Rolling	Level 1 + 2 chargers	Up to 60% of hardware and installation. Maximum of \$50,000 per street address.	Employers and fleet operators with 15+ employees in non-residential places of business.
 Multi-Unit Dwelling and Campus Charging	Rolling	Level 1 + 2 chargers	Up to 60% of hardware and installation. Maximum of \$50,000 per street address.	Multi-unit dwellings with five or more residential units and educational campuses with 15+ students.
 Fleet EV Incentives	Rolling	BEV, PHEV, and ZEM (motorcycles)	BEV: \$7,500 PHEV: \$5,000 ZEM: \$750	Municipalities, state agencies, and public colleges and universities; no EV charging stations required.