



TOYOTA

Your Guide to Battery Electric Vehicles (BEVs)



What is a Battery Electric Vehicle (BEV)?

A vehicle that runs entirely on electricity and produces zero emissions. It's powered by a large battery that plugs into a household outlet or a public charging station to recharge.

How is it different from a Plug-in Hybrid Electric Vehicle (PHEV) and a Hybrid Electric Vehicle (HEV)?

A BEV runs only on electricity with no gas engine, a PHEV offers customers an EV range and automatically switches to gas for additional mileage, and a HEV mostly runs on gas but uses an electric battery to improve fuel efficiency.

How often should you charge a BEV?

We recommend plugging it in at the end of each day to start your day with an EV charge for your daily commute. Aiming to maintain a charge between 10% (low battery light) and 80% will optimize battery life.

Charging your Battery Electric Vehicle:



LEVEL 1: Standard

120-Volt AC outlet

At home

Charge anywhere with a common household 3-prong outlet

RECOMMENDED



LEVEL 2: Faster

240-Volt AC outlet

At home and public

The best setup for faster charging at home once installed by a licensed electrician¹



LEVEL 3:* Fastest**

480-Volt DC

Public

Only available at select public charging stations[†]



Learn more about charging

TIP: Toyota BEVs include a charging cable. For faster charging at home, you may want to purchase and install a **ChargePoint Level 2 Home Charger** from your local Toyota Dealer.¹



The benefits of going fully electric:



You may be able to **save on energy costs** by charging at off-peak hours, which can be set up to occur automatically. Check with your energy company for available off-peak hour programs and rates



Instant torque, smooth acceleration and **quieter motors**



Easy to maintain – BEVs follow the same maintenance intervals as gas vehicles and can have **lower maintenance costs** due to fewer mechanical parts



Tailpipe **emissions-free driving** reduces environmental impact



Things to consider before purchasing a BEV:



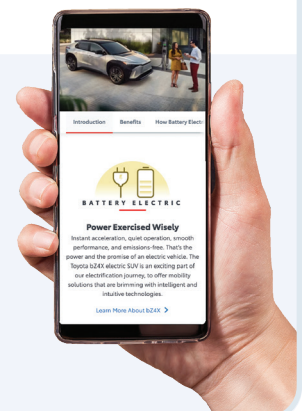
Understanding the practical aspects of owning, driving and charging a BEV can help you determine if it's a good fit for your lifestyle. Here are some important questions to consider before you buy:

- ▶ Will your BEV be your primary vehicle?
- ▶ How far is your daily commute, and what's your typical total mileage per week?
- ▶ Will you have access to Level 1 or 2 charging at home or Level 3 public charging?
 - ▶ Will you consider purchasing and installing a Level 2 home charger for faster EV charging at home?
 - ▶ Speak with a licensed, insured electrician to determine what it would take to install a home charger.

Speak with a Toyota Dealer or check out these additional resources to see if a Battery Electric Vehicle is right for you.



Explore
BEV FAQs



The advantages of choosing a Toyota BEV



Proven Track Record

With over 25 years of electrified vehicle technology in Canada, Toyota is committed to delivering on the quality and performance of BEVs.



Designed to go the Distance

Every Toyota battery goes through an extensive testing process, and is selected to ensure optimal performance specific to your Toyota model.



Impressive Coverage

On top of the basic Toyota warranty, BEVs come with additional Limited Warranty coverage:

8-YEAR

or

160,000 KM[‡]

Battery Electric Vehicle
Components Coverage

8-YEAR

or

160,000 KM[‡]

Electric Vehicle
Battery Warranty

Plus, Toyota Roadside Assistance (TRA) is available 24/7, 365 days a year.

‡Whichever comes first. See Owner's Manual Supplement or ask your Dealer for details.



Environmental Commitment

Enjoy greater peace of mind knowing you've purchased from a company with a robust battery recycling program and a vision to become carbon neutral by 2050 as part of the Toyota Environmental Challenge 2050.

Learn more about Battery Electric Vehicles



Visit our
Battery Electric
Vehicle page



Watch this
video about
BEV Basics of
Electricity



Common BEV charging systems and connectors

Currently, most BEVs use a standard SAE J1772 connector, which combines AC and DC inlets for charging at Level 1 or 2. Toyota's incorporation of the North American Charging Standard (NACS) port in certain vehicles offers convenient charging access at over 12,000 public superchargers across North America.



Wall outlet for Level 1 charging



Wall outlet for Level 2 charging



Connect directly to an electrician-installed home charging system for Level 2 charging



SAE J1772 AC | Level 1, 2



CCS1 DC | Level 3



NACS AC and DC Levels 1, 2 & 3

Ways to charge your BEV at home

Types of BEV charging connectors

Key BEV terms and concepts

Alternating Current (AC): Electricity that alternates direction as it flows, commonly used in most homes and for Level 1 and 2 charging.

Amps: A measure of the amount of electric current flowing through a circuit. Together with volts, amps determine overall BEV charging power.

Direct Current (DC): Electricity that flows in one direction. Used in Level 3 fast charging for quicker battery charging than AC.

kWh: A measure of a BEV's battery capacity. This rating determines driving range and can be thought of as the estimated electric equivalent of a gas tank capacity.

State of Charge (SOC): The percentage of the battery's energy that's currently available. Similar to a fuel gauge in a gas car, BEV drivers monitor SOC to avoid running out of power.

Volts: A measure of the pressure that pushes electric current through a circuit. Charging at Level 2 or 3 is faster than Level 1 because of a higher voltage.

Watts: A measure of the total power being delivered, calculated as volts multiplied by amps. Charging speed is often expressed in kilowatts (kW), with higher wattage enabling faster charging.



Want to learn more?

Register for email updates on Battery Electric Vehicles from Toyota Canada

¹ To reduce risk of fire, injury, or property damage, only (i) purchase/install a safety certified EV charger with voltage/current that is vehicle compatible (ii) use a licensed insured electrical professional to install charger (iii) install and operate in accordance with charger manufacturer's instructions/warnings and applicable laws.

[†] Public charging experience can vary based on charger level and other vehicle and environmental conditions. Level 3 charging may not be possible below 0 degrees Celsius.

*Level 3: DC Fast Charging: Under ideal conditions (external air temperature of 25 degrees Celsius with 150kW or above Level 3 DC Fast Charger), you can charge from 10% (Low Battery Light) to 80% in as quickly as 30 minutes (FWD) or 35 minutes (AWD) although a number of variables will result in significantly longer charge times. Level 3 DC Fast Charging currently only available at public charging stations.

**Charge times are estimates only and can vary significantly based on numerous factors including external air temperatures (colder temperatures or extreme heat), charger type/condition, accessory use, and battery level and condition. DC charging times should be limited to three sessions per day, regardless of external air temperatures). After three 10-80% charge sessions, DC Fast Charging over the next 24-hr period may take longer and be less effective. Public charging experience will vary based on charger type and charger specifications (Level 2 or DC Fast Charger with 150 kW or above) and other factors including vehicle and environmental conditions. Charging times can also vary depending on the actual charging rate realized by the charging station, which can be highly variable and often below the maximum stated rate of charge. Toyota does not own or operate public charging stations and is not responsible for their availability or performance. Always plug-in/charge vehicle in accordance with Owner's Manual.