

# Chapter 1:

## EV Terms Cheat Sheet



Term	Definition	Additional notes
<b>Battery capacity</b>	The amount of energy a battery can store.	Think of it like the gallons of fuel a gas tank can hold. Most batteries are between 60 and 130 kWh.
<b>Watt-hour (wH)</b>	A measurement of how much energy is used over a period of time.	Just a smaller unit compared to kWh.
<b>Kilowatt-hour (kWh)</b>	A measurement of how much energy is used over a period of time. A kWh is 1000 watt-hours (wH).	Think of it like a gallon of gas. You'll put around 60 to 100 kWh in your battery when you charge.
<b>Kilowatt (kW)</b>	A unit of energy to determine the total amount of energy available.	For example: A 350-kW charger can deliver a maximum of 350 kW at one time.
<b>Consumption</b>	How quickly you use the energy from your battery.	Shown as miles per kilowatt (mi/kWh) or watt-hours per mile (wH/mi).
<b>mi/kWh</b>	Miles per kilowatt-hour, or how many miles you can travel on 1 kWh of energy.	Think of it as your mpg; instead of how many miles you can go on a gallon of gas, it's how many miles you can go on a kilowatt-hour.
<b>wH/mi</b>	Watt-hours per mile, or how many watt-hours it takes to go 1 mile.	Some brands' preferred method for showing consumption instead of mi/kWh.
<b>Range</b>	How far you can travel in your EV, determined by battery capacity and consumption.	$mi/kWh \times \text{battery capacity} = \text{max. range}$
<b>Level 1 charging</b>	Slow charging speeds. You typically gain 3 to 5 miles per hour of charging.	Think of a regular wall outlet.
<b>Level 2 charging</b>	Moderate charging speeds. Typically 12 to 80 miles gained per hour of charging depending on your power source.	Think of a 50-amp outlet.

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<b>Level 3 charging</b>	Fast charging. Typically 20 to 30 miles gained per minute of charging. Level 3 chargers range from 15 kW to 350 kW, meaning there's a wide range in charging speeds.	DC fast charging with specialty equipment.
<b>Travel charger</b>	The portable cord and plug that comes with your EV so you can charge your vehicle anywhere there's an outlet.	Some vehicles don't come with a travel charger, but you can purchase one.
<b>Destination charger</b>	Typically a Level 1 or 2 charger located at places such as restaurants, hotels, and stores. These often offer complementary charging.	Can be a J-1772 or Tesla connector. All vehicles can use either connector with an adapter.
<b>DC fast charger</b>	High speed, Level 3 charging. DC fast chargers convert AC power to DC power and deliver the power directly to the battery, which is why they deliver power faster than other types of chargers.	Tesla and CCS both have their own DC fast charger connectors and networks.
<b>CCS</b>	Short for Combined Charging System; the charging system used for nearly all non-Tesla electric vehicles.	Teslas can use CCS chargers with an adapter.
<b>J-1772</b>	The standard charging connector for non-Tesla electric vehicles.	J-1772 isn't fast charging.
<b>Supercharger</b>	Tesla's version of a Level 3 DC fast charger. Only Teslas can use a Tesla Supercharger.	Even with an adapter, non-Teslas can't charge on a Tesla Supercharger.

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<b>CHAdeMo</b>	A fast charging system (like CCS or Tesla). This is an older technology that's being phased out, but is found in some older EVs as their only system of charging.	CHAdeMo chargers can be used by any vehicle with an adapter.
<b>Battery degradation</b>	Loss in the amount of energy your battery can store over time.	Typically minimal and can be slowed with good battery practices.
<b>Range anxiety</b>	The fear that you won't make it to your destination because you don't have enough range in your battery.	Normal for new EV drivers; it lessens as you get to know your vehicle.

