**EV Glossary of Terms**

A

* AC (Alternating Current): A charge of electricity that regularly changes direction, which is the kind of power that comes from the power plant to homes and businesses.
* AER (All-Electric Range): The range any EV is able to reach solely using electricity.
* Amp (Ampere): A unit used to measure electric current (how fast an electric current flows), usually used in the context of EV charging (i.e., a 50-amp EV charger).

B

* Battery Composition:
* Battery Cell: The most basic unit of the lithium-ion battery that stores electricity.
* Battery Module: A grouping of battery cells within a structure.
* Battery Pack: The final shape of the battery system in an electric vehicle, composed of modules, a surrounding enclosure, high voltage hardware and protective/structural features.

C

* CHAdeMO: A round four pin plug, this connector is only used for rapid charging points and is typically compatible with EVs manufactured by Asian brands e.g. Mitsubishi and Nissan. Can offer Vehicle to Grid (V2G) but has less power than CCS and requires two separate sockets.
* Combined Charging System (CCS): Standardised by the EU, this connector combines two DC pins arranged below the Type 2 AC connector and uses 3 of the Type 2s pins. Found on most Type 2 BEVs.

D

* DC (Direct Current): A charge of electricity that flows in one direction and is the type of power that comes from a battery.
* DC Fast Charging: The fastest (high powered) way to charge electric vehicles quickly with an electrical output ranging from 50kW – 120kw.This will fully charge an average electric car in 30 to 40 minutes.

E

* EV (Electric Vehicle): A broad category that includes all vehicles that are fully powered by Electricity or an Electric Motor.

K

* kW (Kilowatt): A unit of electric power.
* kWh (Kilowatt-Hour): The basic measurement of an EV’s energy – how much power (kilowatts) it can supply over a period of time (hours).

L

* Level 1 Charging: Charging your EV using a common household outlet up to 120v. Level 1 is the slowest method of charging and can take up to 24 hours or more to full charge your EV.
* Level 2 Charging: Charges your EV at 240v using an installed outlet. Level 2 chargers are the most recommended chargers to EV owners. Depending on your EV model and charger, Level 2 can give you vehicle 5x as quickly as Level 1 which translates to up to 26 miles per hour of charging.
* Level 3 Charging: Also known as DC charging, the fastest method of charging for all EVs. It can fully charge an EV battery in about half an hour. Level three chargers are currently rare as they’re very expensive and require more power.

M

* Mode 3 Charging Cable: The mode 3 charging cable is a connector cable between the charging station and the electric car.

P

* Plug-in hybrid Electric Vehicle (PHEV): A car with a combination of a traditional internal combustion engine and a rechargeable battery, allowing for either pure electric-powered driving or extended range from a combination of the petrol engine and electric motor.

R

* Range-extended EV (REx): An EV that has only an electric drivetrain, but a small petrol generator to charge the battery when range is depleted for longer trips. Often considered a type of PHEV.
* RFID Cards: Using the same technology used in public transport travel cards, these cards are used by many older chargepoints to allow access to EV charging.

T

* Tesla Supercharger: A super-fast charging system that can provide up to 120kW directly to the car’s battery. Currently these systems are only available to Teslas.
* Type 1 Plug: The type 1 plug is a single-phase plug that allows for charging power levels of up to 7.4 kW (230 V, 32 A).
* Type 2 Plug: Triple-phase plug. In private spaces, charging power levels of up to 22 kW are common, while charging power levels of up to 43 kW (400 V, 63 A, AC) can be used at public charging stations. Most public charging stations are equipped with a type 2 socket. All mode 3 charging cables can be used with this, and electric cars can be charged with both type 1 and type 2 plugs. All mode 3 cables on the sides of charging stations have so-called Mennekes plugs (type 2).

U

* Ultra-Low Emission Vehicle (ULEV): A car that has official tailpipe carbon dioxide emissions of less than 75g/km, and is therefore eligible for grants and benefits from the UK government.

V

* Vehicle to Grid (V2G): The concept of using your electric car battery to release power back through the charger either for use in the local building or back into the grid at large during time of high grid demand.

**References**

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