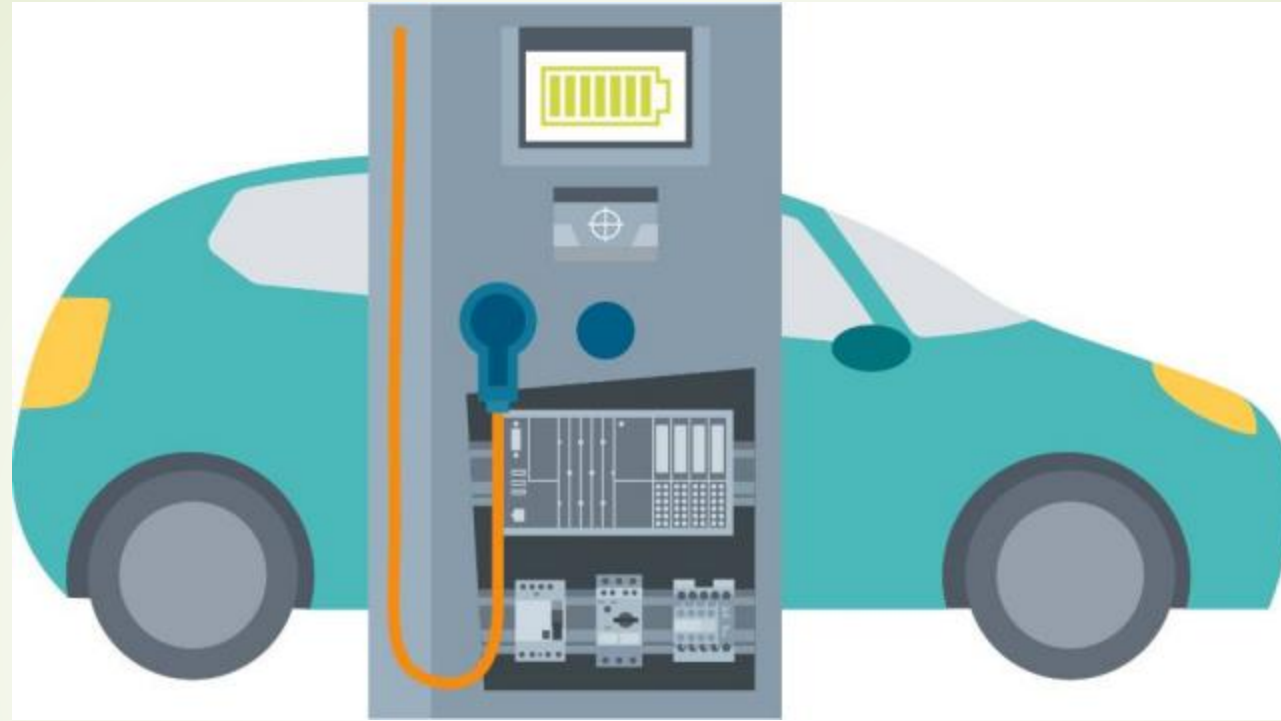


Maximizing EV battery Lifespan

Public chargers are not dangerous to EV Battery Lifespan

Presented by Olumide
Ogunleye



Since a decade the use of EV has been greatly increased in our society as technology improves, because it's climate friendly and financially supportive, it has been proved, that more people will switch from gasoline car to electric car before 2030, but one of the biggest challenge is EV battery lifespan.

Many people believed that Electric Vehicles battery lifespan could not be managed or maximized, in this short speech I will like to talk about how we could manage EV battery for longer period of time.

- How does EV Battery function?
- Types Of EV Charger and Charging Station
- Misconception of public chargers on EV Battery
- How to maximize EV battery Lifespan

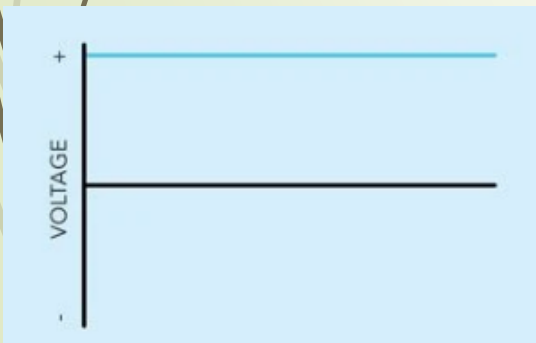
► How does EV battery functions?

EV battery is a battery pack that mostly located at bottom center of the car, a DC current flow from the battery through inverter and converted to AC current to power electric motor that move the car wheels.

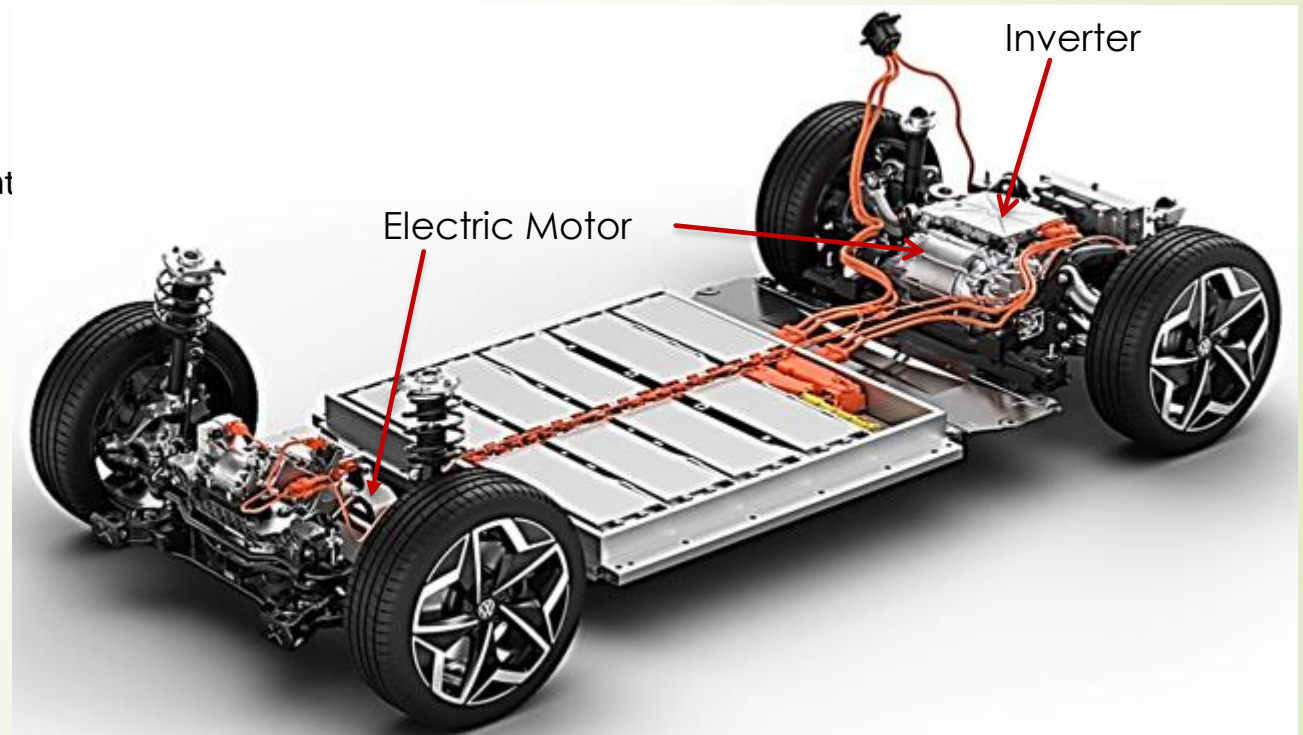
► EV charging, it is the process of charging EV battery through charging station and it could be an AC charger or a DC charger.



AC (alternating current)



DC (direct current)



► Types of EV charger and charging Station

EV charging stations are Level 1 charging stations, Level 2 charging stations and Level 3 charging stations (also known as DC Fast Chargers).

► Level 1 EV charging stations

► Level 1 chargers use a 120-volt (V) AC plug and could be at home by plugging it into a standard outlet. It is mainly for domestic purpose. It delivers a maximum power rating of 2.3 KW



Not exactly as shown.

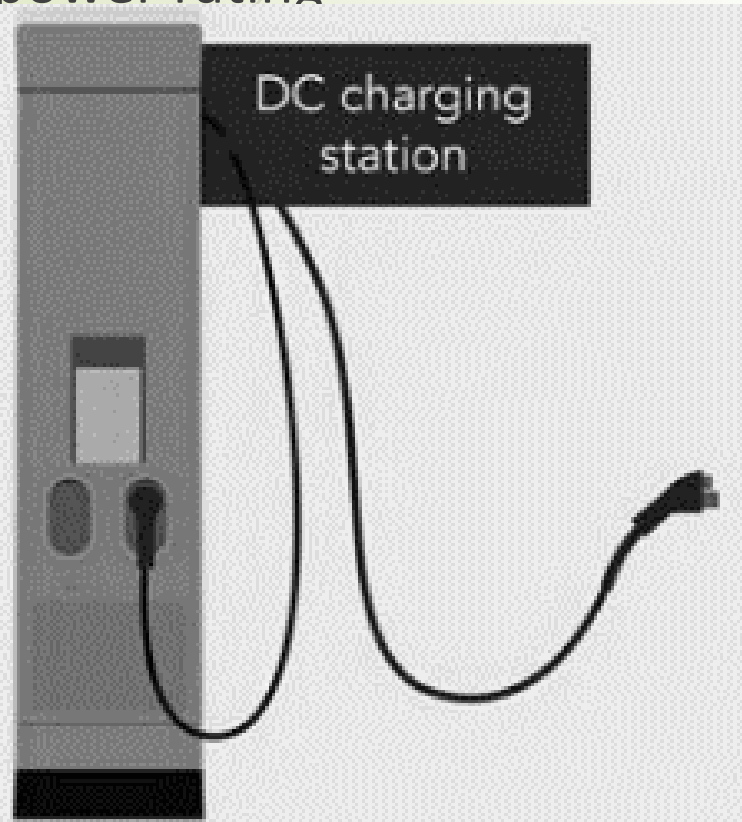
➤ Level 2 EV charging stations

Level 2 chargers are used for both residential and commercial charging stations. They use a 240 V AC (for residential) or 3 phase 400 V AC (for commercial), they could only be installed by a professional electrician by mounting it to the wall. Level 2 home EV chargers can also be installed to connect to a solar panel system. It charges 16 to 80 kilometers of range per hour, so you can charge much more quickly than with a Level 1 charger. It delivers between the range of 3.4 KW – 22 KW power rating.



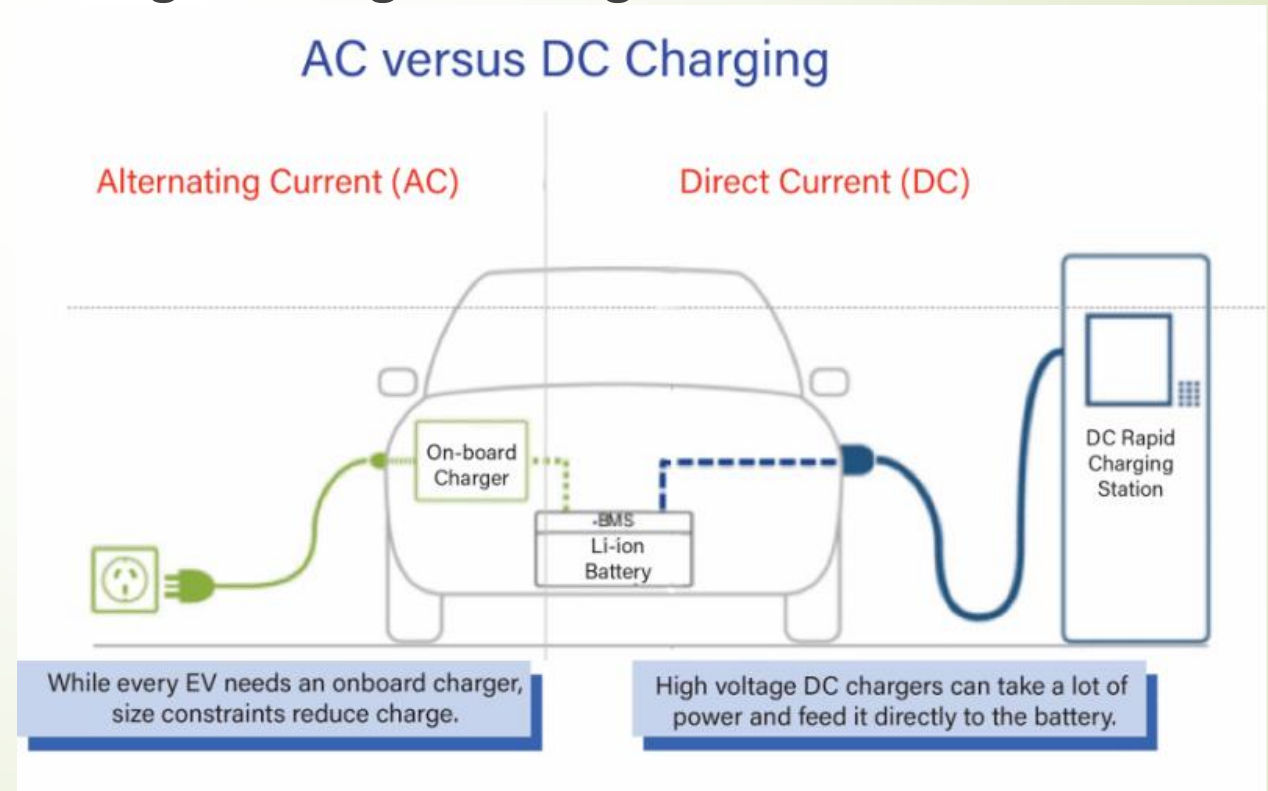
➤ Level 3 EV charging stations a.k.a. DC Fast Chargers.

DC Fast Chargers, also known as Level 3, Combined Charging System (CCS), or CHAdeMO (“CHARge de MOve”) charging stations, can add 96 to 128 kilometers of range to your EV’s battery in just 20 minutes. It delivers between 50 KW to 360 KW power rating



➤ Misconception of public charger.

There are misconceptions and conspiracies about public charge DC (Level 3) chargers, that it's degrading the EV battery capacity, no this is not true, even from research it is been proved that DC charge improves EV battery lifespan, because it charges the battery directly without the helps of inverter. It is a direct current and battery produce direct current. Sometimes it generate heat during charging, but this could be properly control and manage through cooling device.



➤ How to maximize EV battery lifespan

100% Calculative method it is one of the ways to keep EV battery lifespan longer by charging the battery to 80% and not use it below 20%, or charging up to 85% and not use below 15%. But it should be charged 100% when needed to travel a long distance.

➤ **Temperature-differential** EV car shouldn't be parked under the sun above 38 °C too long mostly in tropical geographical region.

➤ **Intelligent-machine (Charger)**, These are type of charger that control heat and hinder it from been transferred into the EV battery to avoid cells damage and also give appropriate heat in winter to avoid humidity.

➤ **Avoid multiples charging per day** EV charging is more way differ from phone charging or any other electrical/electronics device that uses battery, if EV battery undergoes numbers of charging per day it will lead to battery cells digression.



THANKS FOR LISTENING AND GET FOR
YOURSELF EV CAR AND SAVE MORE MONEY.

