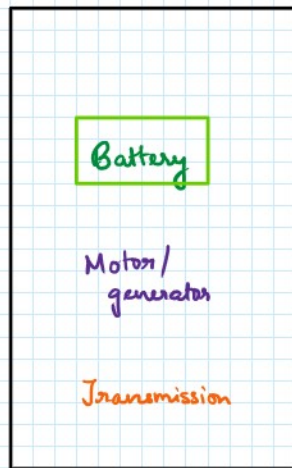


### 3. EVs

15 February 2024 09:27

## ELECTRIC & HYBRID VEHICLES



## MAJOR COMPONENTS

### Motor

- Converts energy from power pack to mechanical energy

### Power pack (battery)

Charger

Controller

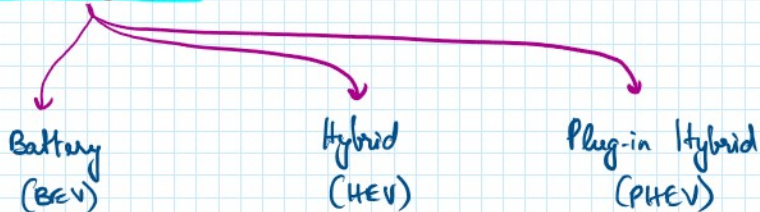
Regulates flow of energy from power pack to motor in relation with pressure on accelerator

DC/DC converter

Changes the level of voltage

Energy Management System

## CLASSIFICATION

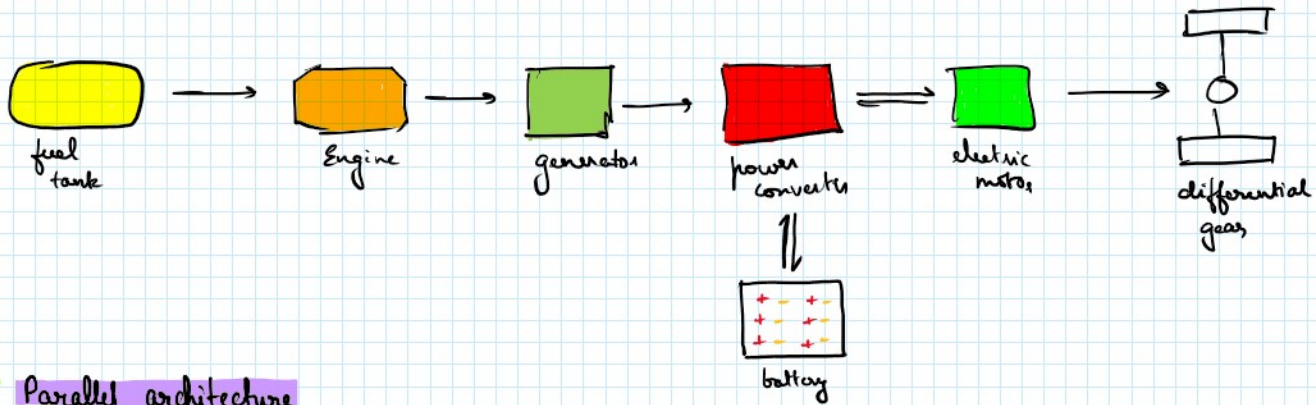


## HYBRID ELECTRIC VEHICLE

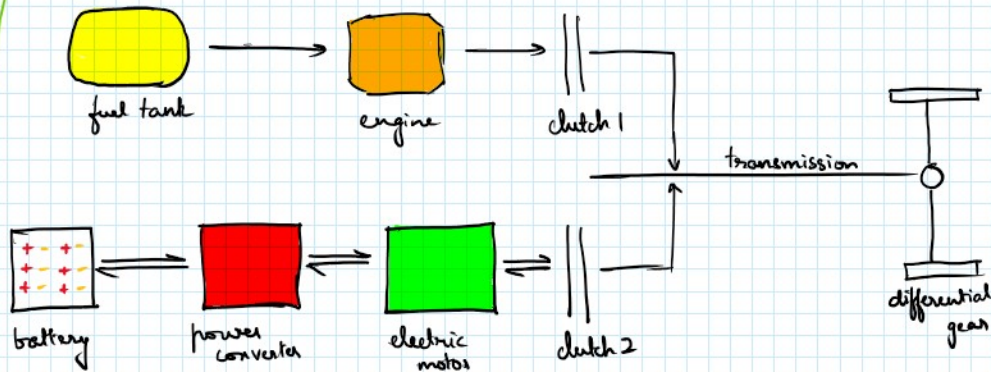


- Two drive systems : electric motor, IC engine
- Based on arrangement of drive system

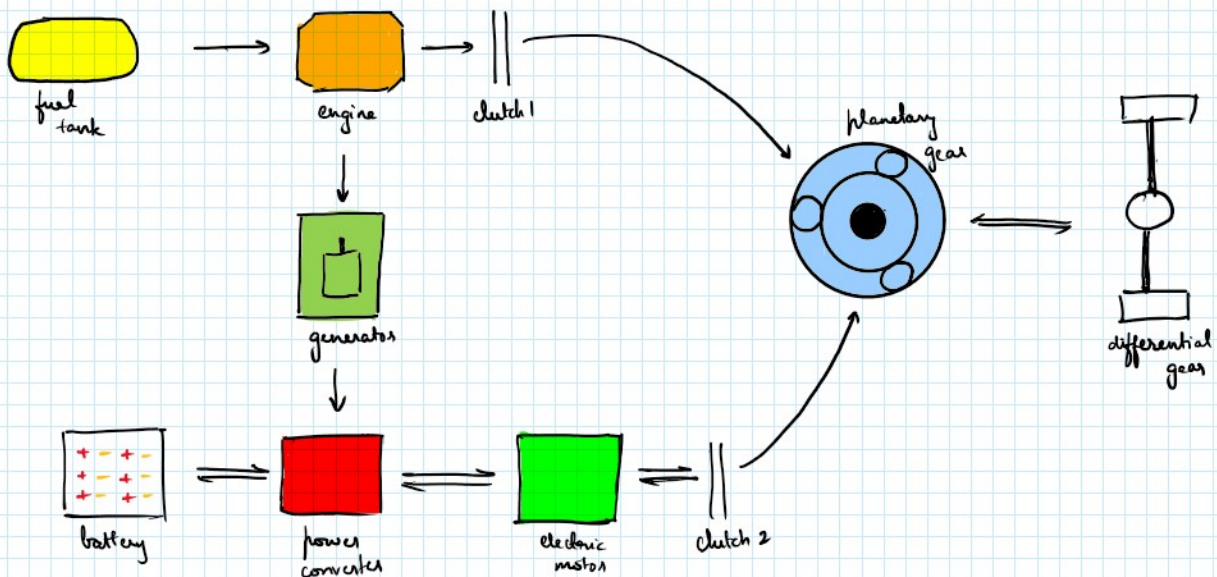
### Series architecture



### Parallel architecture



### Series and parallel architecture



PLUG IN HYBRID ELECTRIC VEHICLE



Battery can be plugged in to the power grid to recharge the battery

### ADVANTAGES OF EVs

- Maintenance cost is less
- Reduced emissions
- Reduced noise
- Safer to drive

### DISADVANTAGES OF EVs

- Priced higher
- Not enough charging systems
- Recharging takes longer than refueling
- Shorter travelling distance