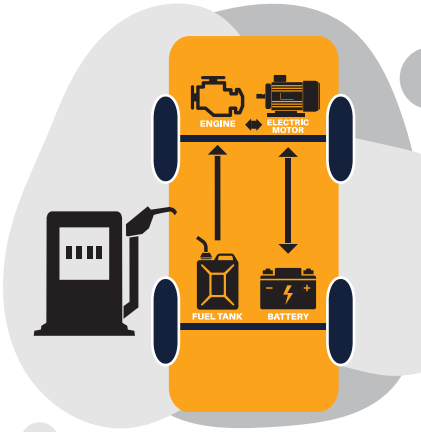
The Different Types of Electric Vehicles

HEV
Hybrid Electric Vehicle



HEVs are typically referred to as “hybrids”. Hybrids do not have the ability to plug in and recharge from the grid. They have both an engine and electric motor. The engine gets energy from fuel, and the motor gets electricity from batteries. The transmission is rotated simultaneously by both the engine and the electric motor.

Hybrid vehicles have better fuel economy and a lower total cost of ownership when compared to similar conventional cars. They typically will have a higher purchase price, but the difference is less every year.

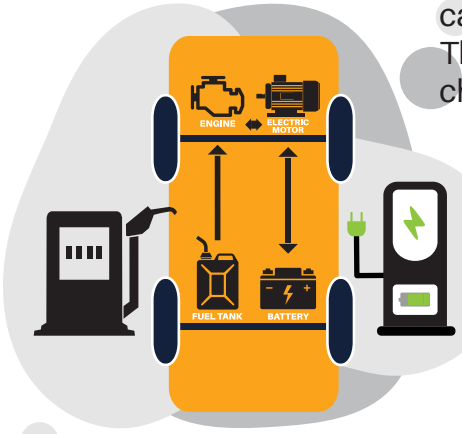
Example:

2023 Toyota Corolla LE
$21,550 Starting MSRP
32/41 Est. MPG

VS

2023 Toyota Corolla Hybrid SE
$26,660 Starting MSRP
47/41 Est. MPG

PHEV
Plug-in Hybrid Electric Vehicle



The biggest difference between a regular hybrid and a plug-in hybrid is that the plug-ins have larger batteries and can be plugged in to charge the batteries. They typically have larger electric motors as well.

While HEVs can travel 1-2 miles before the gasoline engine turns on, PHEVs can go 10-40 miles before their gas engines need to provide assistance. They all are able to charge with a L2 charger, but most will not support fast charging.

PHEVs are a good choice if you need additional range with the flexibility of being able to fill up with gas in areas where charging stations may not be available.

Example:

HEV - Range 655 miles
2023 Kia Sorento Hybrid EX
$36,590 Starting MSRP
34 MPGe Combined

VS

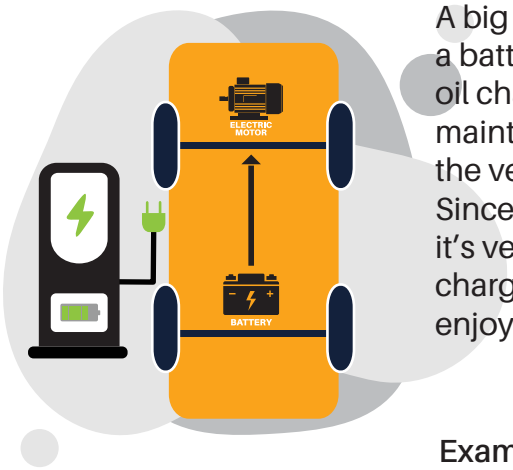
PHEV - Range 460 miles
2023 Kia Sorento Plug-in Hybrid
$49,890 Starting MSRP
79 MPGe Combined

Energy Options
EV Charging, Electrical Generation, and Storage

BEV

Battery Electric Vehicle

BEVs are also known as All-Electric Vehicles (AEV) or just electric vehicles. They are powered solely by an electric battery, with no gas engine parts. Most BEVs are capable of fast charging and L2 charging. Zero emissions.



A big advantage of BEVs is their simplicity. There are so few moving parts in a battery electric vehicle that very little maintenance is required. There's no oil changes or tune-ups needed, and the savings from not having these maintenance expenses can add up to significant savings over the lifetime of the vehicle. You do however need to be aware of the battery's lifespan. Since BEVs rely solely on the amount of stored electricity in their batteries, it's very important to be able to recharge them quickly. Choosing a home charging solution that can fully recharge your vehicle will allow you to enjoy it to the fullest.

Example:

2023 Tesla Model Y
Range 330 miles
Level 2, 3, & Supercharge
50 to 82 kWh
$65,990 Starting MSRP

VS

2023 BMW i4 M50
Range 227-271 miles
Level 2 & Fast Charging
81 kWh battery
$67,300 Starting MSRP

As with everything else in life, there are pros and cons to all 3 types of electric vehicles. The key is to define what your needs are for your lifestyle and then decide which type would be the best fit.

Ask yourself:

What kind of range do I need?
How available are charging stations where I travel and live?
What can I afford?