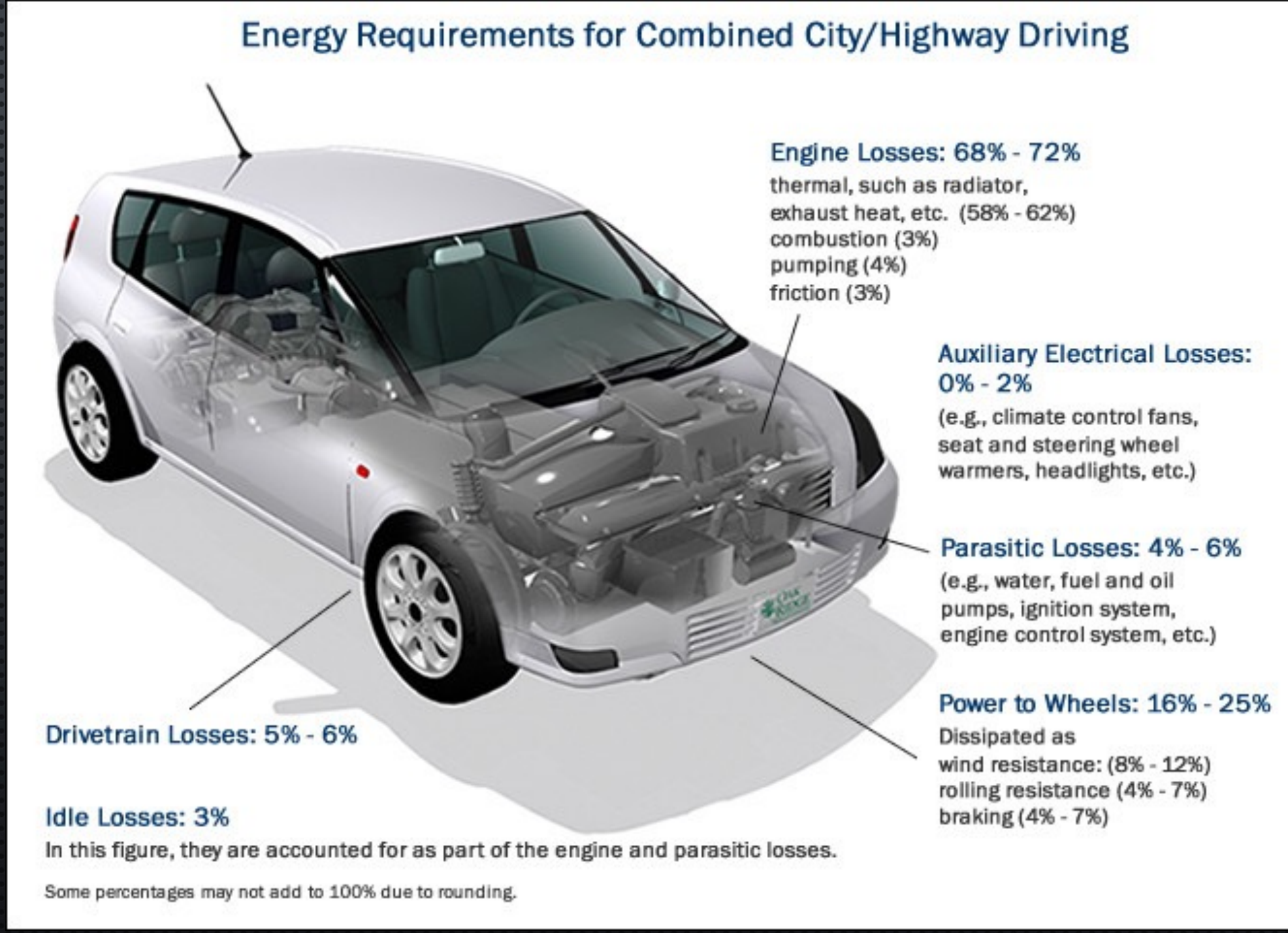
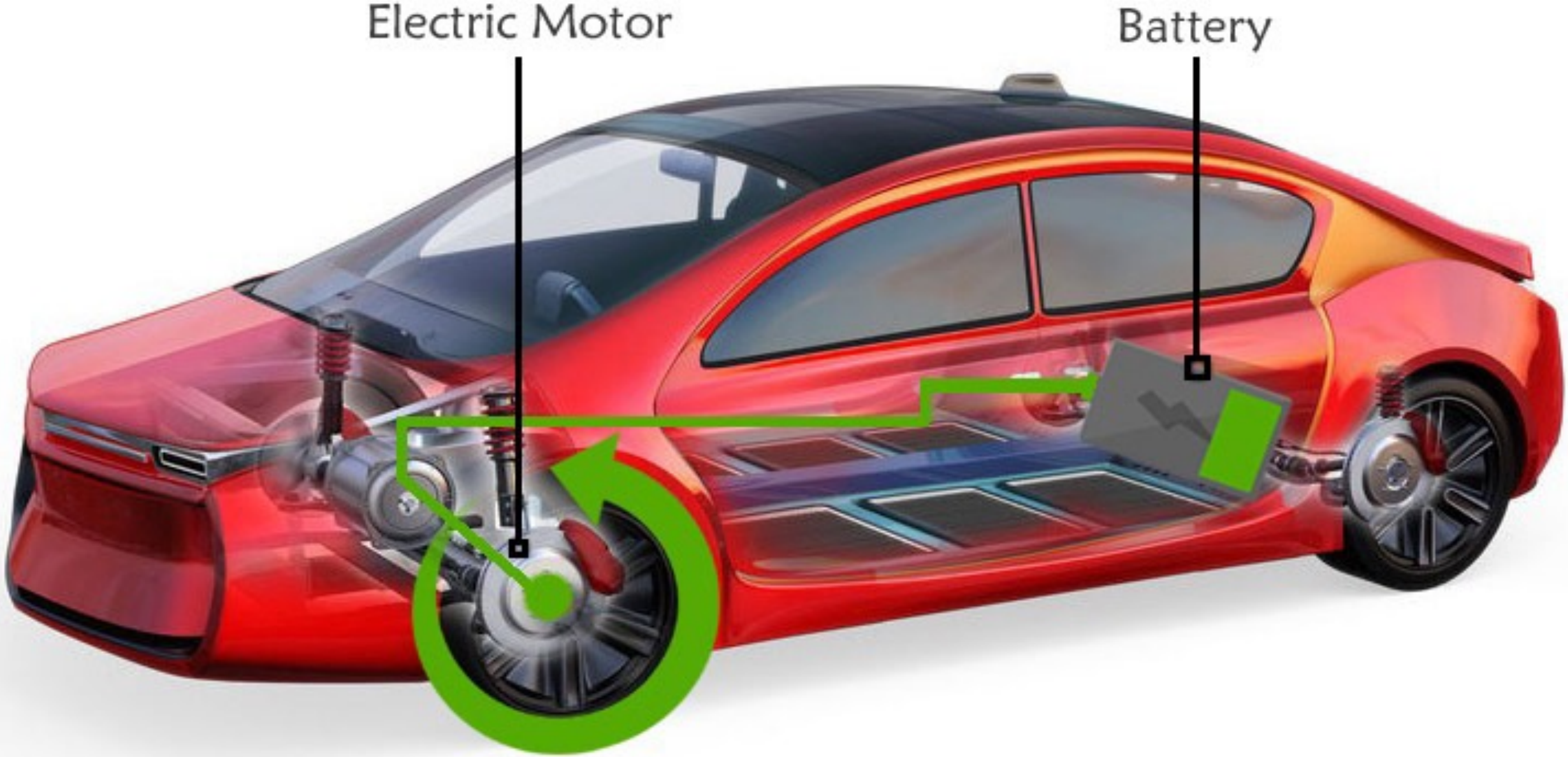
EV EXTRAVAGANZA

- ***PLACER EARTH CARE ACTION***
- ***May 7, 2022***

The average American drives 33 miles per day





Regenerative Braking

Californians spend about $60 billion on gasoline each year; most of which goes to out-of-state or out-of-country companies.

By transitioning to more electric vehicles powered by clean energy, consumers save money and spend those savings in the economy, multiplying the benefit economy-wide to provide a significant boost to service industry spending.

A new study finds electric vehicle adoption could create more than half a million jobs and over $300 billion in new real income by 2030 here in our state!

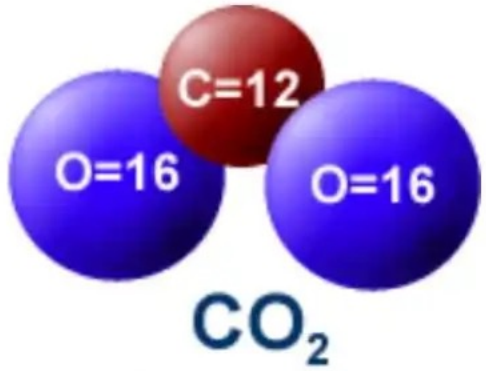
"When it is asked how much it will cost to protect the environment, one more question should be asked: how much will it cost our civilization if we do not?"
—Gaylord Nelson, founder of Earth Day

How can a gallon of gasoline produce 20 pounds of carbon dioxide?

It seems impossible that a gallon of gasoline, which weighs about 6.3 pounds, could produce 20 pounds of carbon dioxide (CO_2) when burned. However, most of the weight of the CO_2 doesn't come from the gasoline itself, but the oxygen in the air.

When gasoline burns, the carbon and hydrogen separate. The hydrogen combines with oxygen to form water (H_2O), and carbon combines with oxygen to form carbon dioxide (CO_2).

A carbon atom has a weight of 12, and each oxygen atom has a weight of 16, giving each single molecule of CO_2 an atomic weight of 44 (12 from carbon and 32 from oxygen).



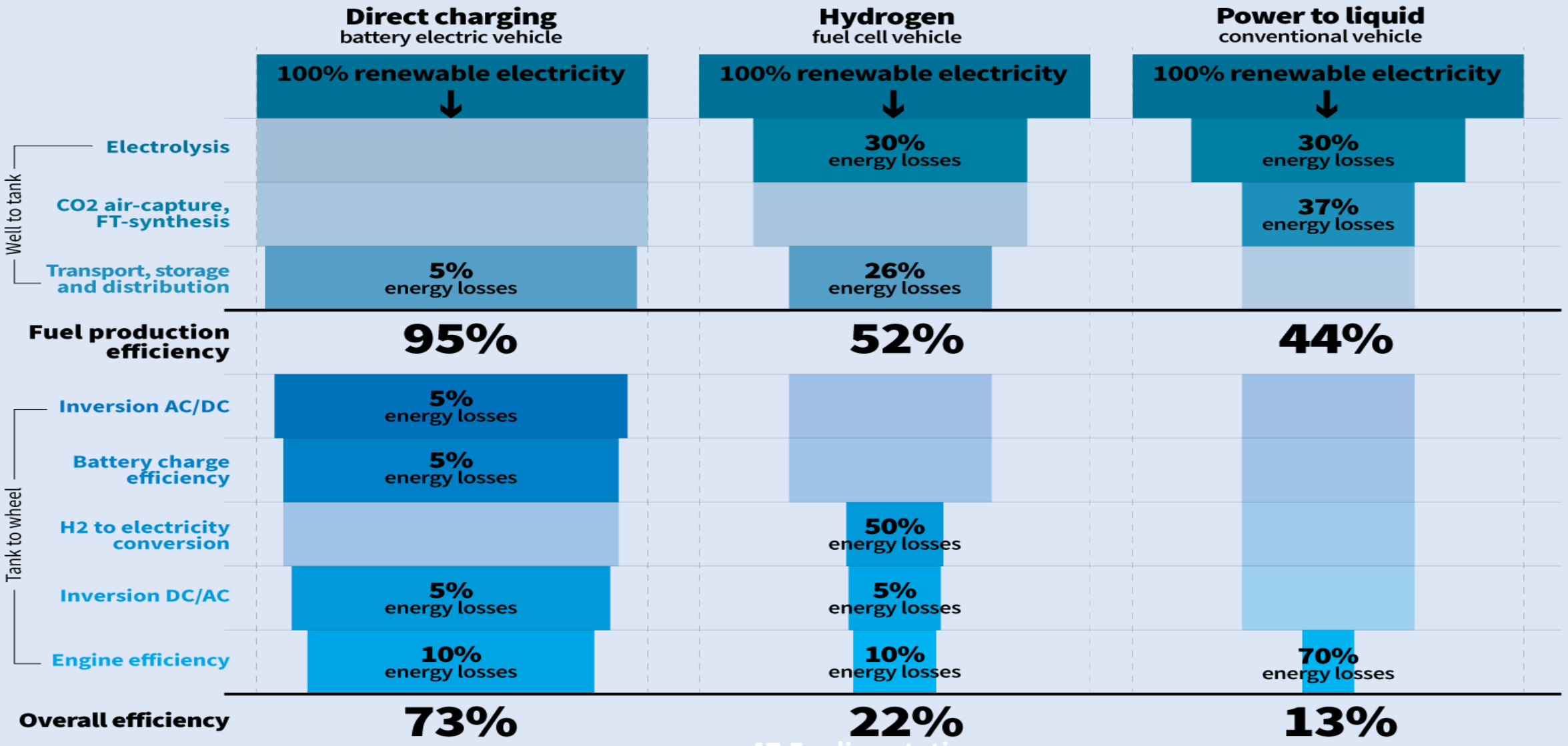
Therefore, to calculate the amount of CO_2 produced from a gallon of gasoline, the weight of the carbon in the gasoline is multiplied by 44/12 or 3.7.

Since gasoline is about 87% carbon and 13% hydrogen by weight, the carbon in a gallon of gasoline weighs 5.5 pounds (6.3 lbs. x .87).

We can then multiply the weight of the carbon (5.5 pounds) by 3.7, which equals 20 pounds of CO_2!

The CO2 released from burning one gallon of gasoline will trap over a century 120 times the amount of energy expended to propel a car 20 miles (20 mpg)

Cars: Battery electric most efficient by far



47 Fueling stations in 2021

TRANSPORT & ENVIRONMENT @transenv @transenv transportenvironment.org

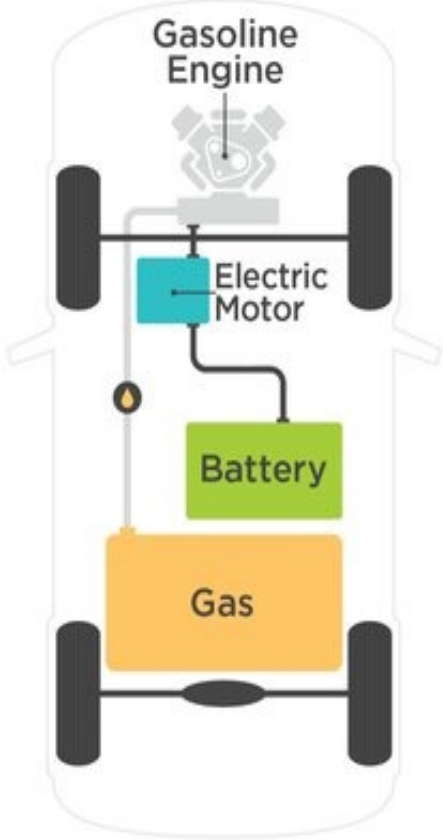
Source: WTT (LBST, IEA, World bank), TTW, T&E calculations

Types of Electric Vehicles

If you're looking to purchase an electric vehicle, use this cheat sheet to help you determine the various options. Drivers can choose between three types of electric vehicles (EVs). EVs are classed by the amount of electricity that is used as their energy source.

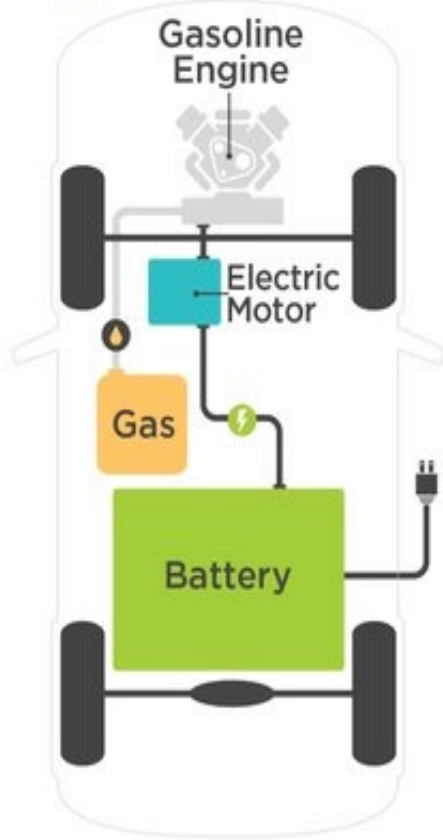
Source: Electric Power Research Institute

Fuel: Gasoline



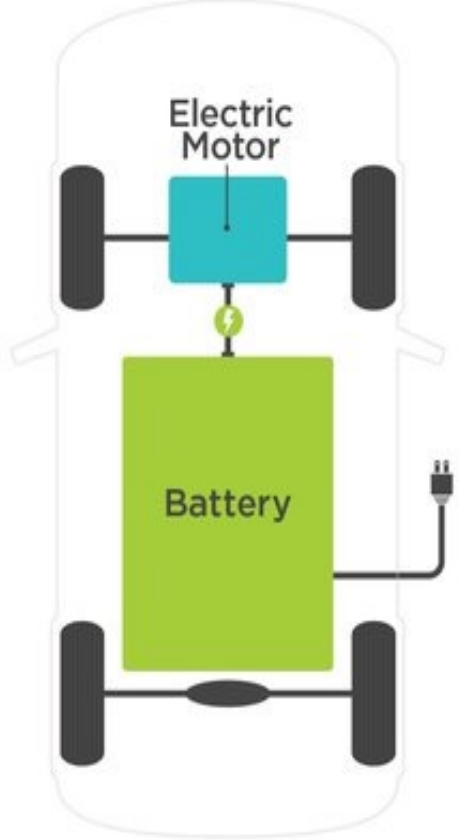
HEV
HYBRID ELECTRIC VEHICLE

Fuel: Gasoline and/or electricity from grid



PHEV
PLUG-IN HYBRID ELECTRIC VEHICLE

Fuel: 100% electricity from grid

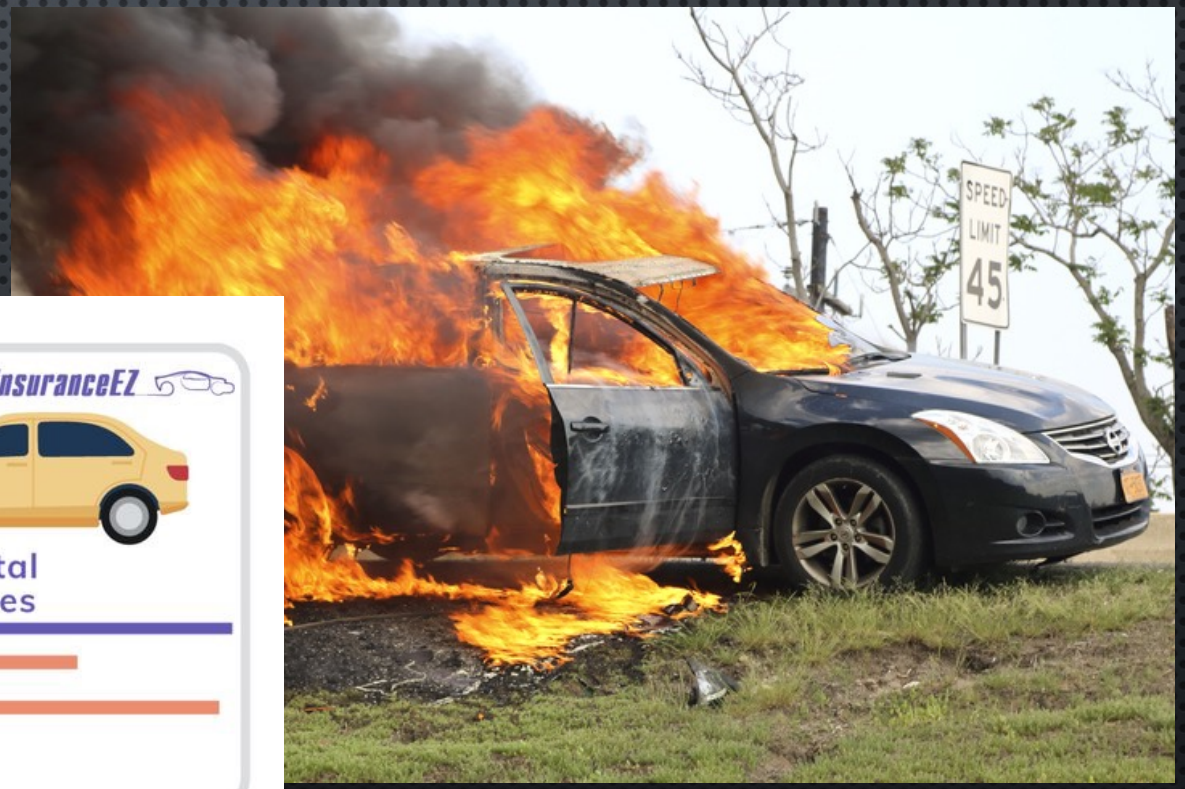


BEV
BATTERY ELECTRIC VEHICLE

Your risk of a fire is far greater in a gas powered car.

Electric: 25/100,000

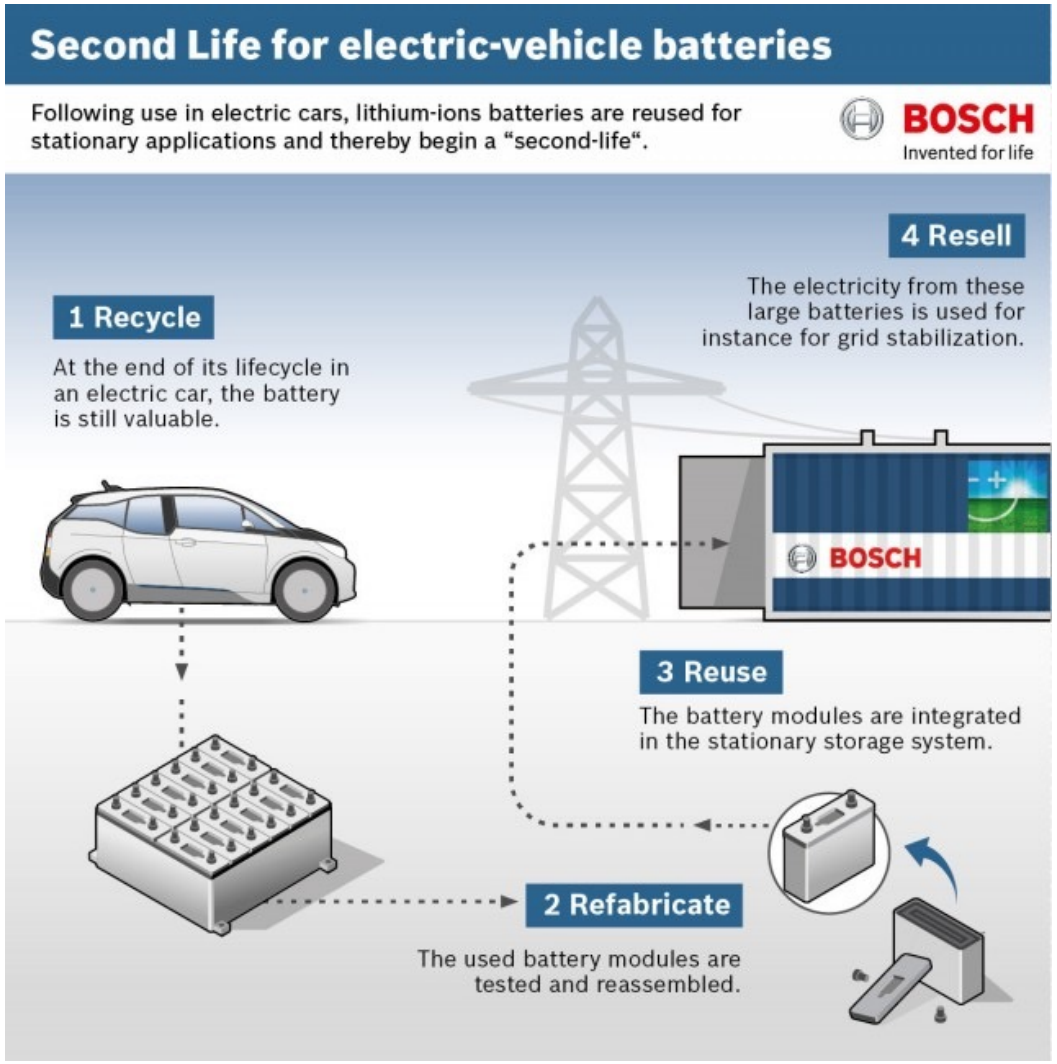
Gas: 1500/100,000



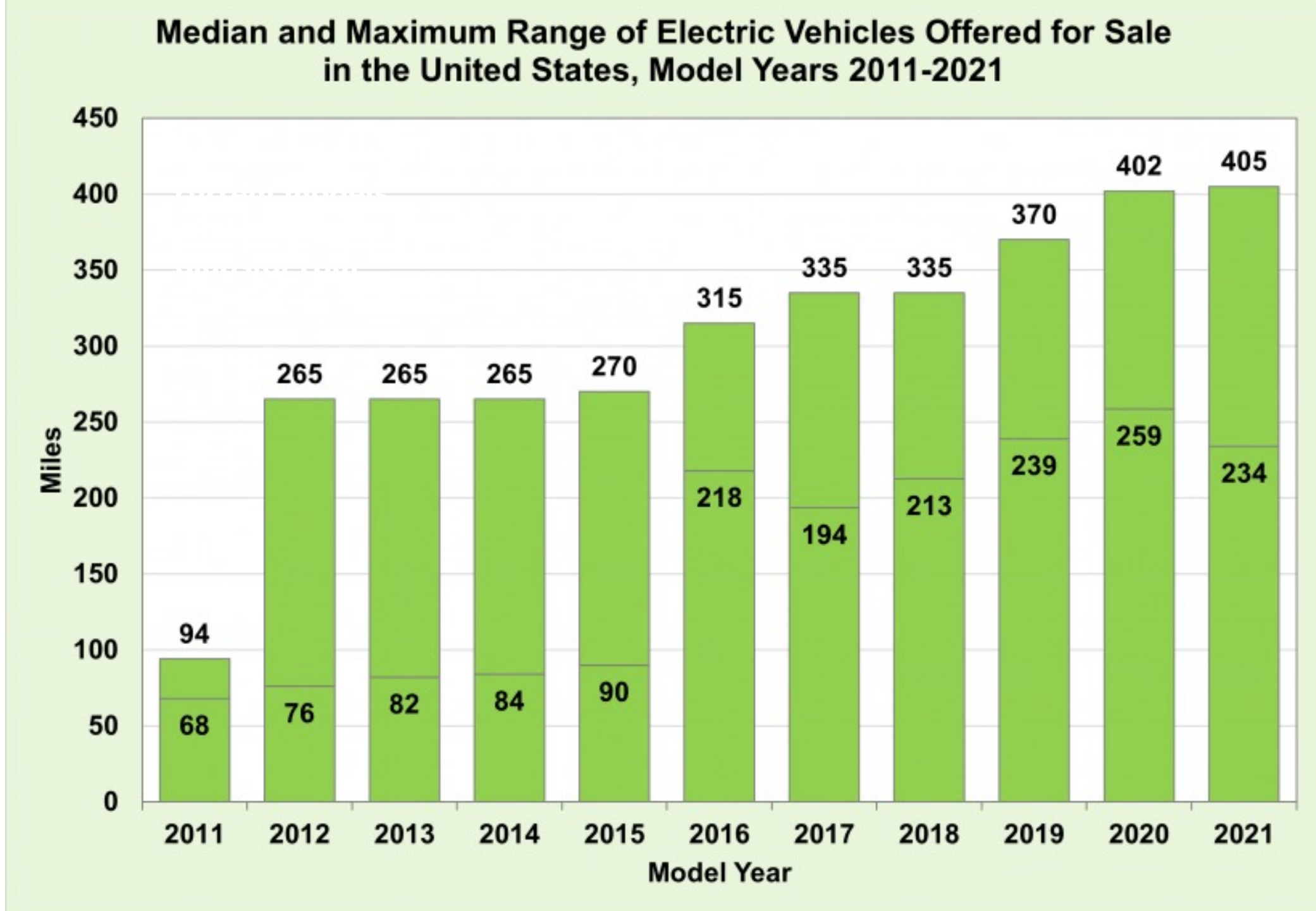
CAR FIRES BY VEHICLE TYPE

Rank and Fuel Type	Fires (per 100k Sales)	Total Fires
1 Hybrid	3,474.5	16,051
2 Gas	1,529.9	199,533
3 Electric	25.1	52

90 to 95% of the minerals in EV batteries can be recycled at the end of their life



VW opened what it calls a pilot battery-recycling plant in Salzgitter, Germany, earlier this year, and hopes to open similar plants around the world. The plant can recover up to 95% of raw materials from a battery pack for potential reuse, including lithium, nickel, cobalt, and manganese, in a closed loop.


Median and Maximum Range of Electric Vehicles Offered for Sale in the United States, Model Years 2011-2021
Miles
450
400
350
300
250
200
150
100
50
0
94
68
265
76
265
82
265
84
270
90
315
218
335
194
335
213
370
239
402
259
405
234
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Model Year

RANGE

MPGe

COST NEW?

NEW OR USED?

COMFORT

DRIVING ENJOYMENT

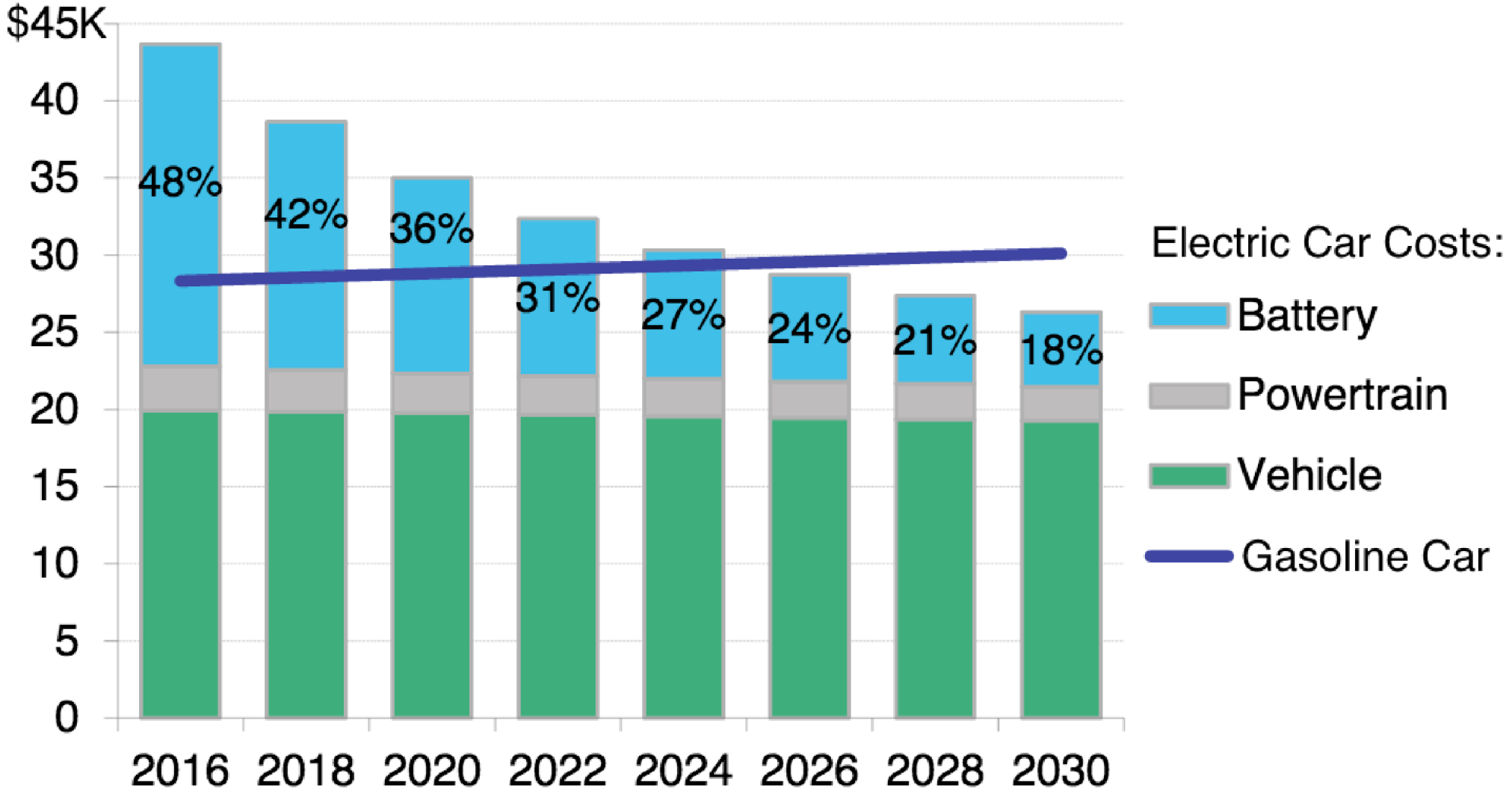
OWNERSHIP COST?
(Repairs/Maintenance)

FAVORITE FEATURE

WOULD YOU BUY ANOTHER?

Electric Cars Will Win on Price

Falling battery prices undercut gasoline cars by mid-2020s



THE FUTURE IS ELECTRIC