

Electric Vehicle Myths & Facts

<https://www.epa.gov/greenvehicles/electric-vehicle-myths>

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Myth #1: Electric vehicles are worse for the climate than gasoline cars because of the power plant emissions.

FACT: Electric vehicles typically have a smaller carbon footprint than gasoline cars, even when accounting for the electricity used for charging.

Myth #2: Electric vehicles are worse for the climate than gasoline cars because of battery manufacturing.

FACT: The greenhouse gas emissions associated with an electric vehicle over its lifetime are typically lower than those from an average gasoline-powered vehicle, even when accounting for manufacturing.

Myth #3: There is nowhere to charge.

FACT: Electric vehicles can be plugged into the same type of outlet as your toaster! When you need to charge while on the road, you'll find over 51,000 stations in the U.S. available to the public.

Myth #4: Electric vehicles don't have enough range to handle daily travel demands.

FACT: Electric vehicle range is more than enough for typical daily use in the US, with several BEVs now reaching 350 to 420 miles of range.

Myth #5: Electric vehicles only come as sedans.

FACT: Electric vehicles now come in a variety of shapes and sizes.

Myth #6: EVs won't be practical to own without a fully established infrastructure of public charging stations.

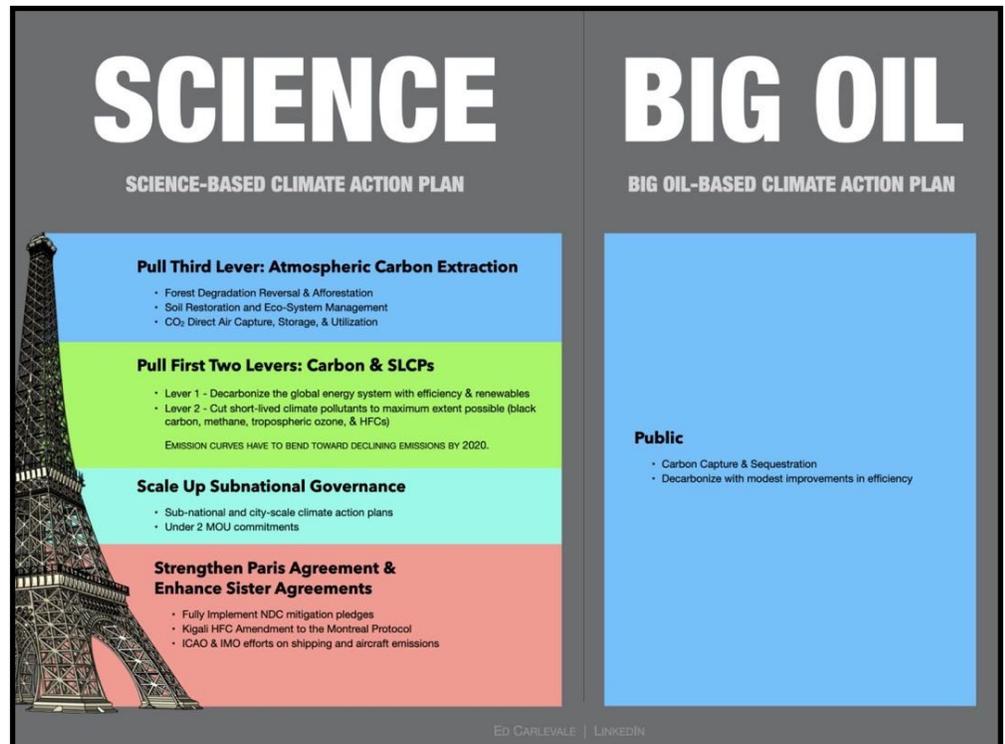
FACT: Over 90% of electric vehicle charging is done at home or at work. There's currently about 160,000 charging stations (37,000 DC fast charge) up and running in the U.S. and you'll find them at retail parking lots, public parking garages, Libraries, parks, movie theaters, along interstate highways, and new-car dealerships in areas where EVs are most prevalent.

Myth #7: EVs are as slow as golf carts.

FACT: Electric vehicles are, in fact, generally quicker than their gasoline-powered counterparts. That's because an electric motor generates 100% of its available torque instantly. A few BEVs now achieve 0-60 in less than 2 seconds.

Myth #8: Electric Vehicles are too expensive.

FACT: While many EVs have been more expensive than comparable ICEs, there are now several BEVs, when applying the Federal and State incentives, can be purchase for \$19,000 to \$35,000, with ranges of 140 to 280 miles.



Myth #9: Electric vehicles are not as safe as comparable gasoline vehicles.

FACT: Electric vehicles are usually safer than ICEs and must meet the same safety standards as conventional vehicles. As for concerns over EV batteries catching fire, perhaps even exploding in a collision, they appear to be exaggerated, though news media likes to emphasize them.

Myth #10: Electric vehicles are not any greener than gas-powered autos.

FACT: Electric vehicles convert 75% of chemical energy from the batteries to power the wheels. ICEs only convert 20% of energy stored in gasoline. EVs emit no direct tailpipe pollutants. While power plants that produce electricity may be a source of pollution, even in a 100% coal generated electricity location, a BEV is equivalent to a 55mpg hybrid, which is definitely much greener than non-hybrids.

Myth #11: Driving an EV won't save any money on operating costs, based on today's gas prices.

FACT: The Hyundai Ioniq Electric will cost an owner \$500 a year to traverse 15,000 miles, based on average electricity rate, approximately \$5,000 less than a comparable gasoline-powered vehicle.

Myth #12: EV batteries don't last long and will eventually wind up in landfills.

FACT: Electric vehicles are federally mandated to carry warranties for their battery packs for 8+ years or 100,000+ miles. Once depleted, EV batteries, can be reused to store solar and wind energy, or recycled for their valuable elements.

Myth #13: The power grid won't be able to handle the hundreds of thousands of EVs expected down the road.

FACT: According to a report conducted by Navigant Research, the nation can add millions of electric cars to the current power system without having to build any new power plants.

Myth #14: EVs are ill Equipped to Handle a Winter Stranding

FACT: A 2019 Tesla Model 3 consumes energy at a rate of 1.6 kW to maintain 65 degrees inside with an average outside temperature of 15 degrees F. and can heat the cabin for 31.25 hours, almost identical to a gasoline car, and without polluting.

