

Why Electric Vehicles Are the Future

HNP Essay, by Evan He

The world is constantly changing. Wars break out, the tide rises, the dollar falls, and humanity's issues only seem to worsen. However, no matter how bad things may seem, humanity has proven time and time again that there is a solution to any problem—innovation, and in recent years, one such invention has appeared—the electric car. Designed to make up for the shortcomings of diesel-powered cars, electric cars are undoubtedly the future in the way that they are less environmentally damaging than modern cars, are significantly cheaper to maintain and fuel, and are far safer than the gas-guzzling cars of today.

With 16.4% of the US's greenhouse emissions coming from passenger vehicles, it is imperative that we make the switch to something greener and more sustainable—case in point, the electric car. Running off electricity, electric cars have been found to have carbon emissions 17–30% lower than gas-powered cars, along with the ability to use renewable energy like hydroelectric and solar. Furthermore, electric cars have the ability to more efficiently use this energy, with 60% of the harnessed electricity being used to power the car, as opposed to 17%–21% for diesel and petrol-powered cars. Finally, although one can argue that the manufacturing of such electric cars produces many emissions, emissions produced during the manufacturing process only account for $\frac{1}{3}$ of all the emissions an electric car produces throughout its lifetime. As such, electric cars are objectively more green than conventional cars, and in a climate change-ridden world, they are undoubtedly the future.

With inflation rising and a possible recession looming, saving money has never been more important. As a result, electric vehicles are becoming more appealing. Although the upfront cost of an electric car may be higher than the average gas guzzler, it is significantly cheaper to own an electric car in the long run. One case study found that, aside from one exception, electric cars come out to be much cheaper than their gasoline counterparts over an eight-year lifetime. A prime example of this lies in the Hyundai Kona, Canada's second best-selling electric vehicle in 2021. The Hyundai Kona, compared to its much cheaper gasoline-powered counterpart, actually comes out to be cheaper over its eight-year lifetime at \$49,700 compared to its counterpart's \$60,200 total cost. Factoring in the fact that it is cheaper to maintain electric vehicles as they have few parts that wear down and no oil or engine to manage, the total cost of owning an electric car can come out to be considerably less than many contemporary vehicles. Considering rising gas prices, tensions between major oil producers like Saudi Arabia and Russia, as well as rebate incentives for electric vehicle owners, it can already be said that electric vehicles are a great alternative for consumers looking to save money and will only get cheaper with new innovations.

Finally, the most important reason why electric vehicles will become more popular in the future is that they are simply safer than gasoline-powered vehicles. With 19,937 car crashes happening every day in just the US, cars are responsible for over 1.3 million deaths a year worldwide. As such, considering how the batteries in electric cars are less prone to combustion

and less dangerous, as well as being located low in the vehicle, making the car more stable, and more resistant to rollovers and hard turns, it's no secret that electric cars are significantly safer than conventional cars, as proven by their 40% lower injury rate than their contemporary counterparts. Furthermore, due to the fact that the internal systems of an electric vehicle take up very little space as compared to gas guzzlers, it gives way to a myriad of possibilities in building a safer vehicle. One such example of this is how most electric vehicles have a stronger front, giving them the ability to transmit kinetic energy to the back of the vehicle in the event of a crash.

Since the dawn of the industrial revolution, cars have been an integral part of our lives, and yet they are flawed in many ways that an electric car has been built to fix. Not only are electric cars better for the environment in the way that they use energy more efficiently and can run off of renewable sources, but they are also much cheaper to power and maintain, as well as being far safer than gasoline-powered cars. As such, I believe electric cars are undeniably the future, and although they may have some issues—namely, a low driving range and a high initial cost—their benefits far outweigh the negatives, and in time, the world will switch over to electric vehicles.

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