

Technology V12/S6: Electric Vehicles

Electric vehicles are increasing in popularity in response to rising fuel prices, global warming, and fossil fuel productions. The average car uses gasoline to power its engine and project forward. Gasoline is made of crude oil and other petroleum liquids. It is made from fossil fuels that take thousands of years to form naturally under intense heat and pressure.

Electric cars run on electricity stored in a lithium-ion battery pack that sends power to the motor which powers the wheels. Electric vehicles are charged at stations called charging points. Electricity is then taken from the already existing grid. If the car runs out of power while driving, it will automatically stop. The electricity used to run electric vehicles is measured in Kilowatts, and gasoline used in gas powered cars is measured in gallons.

There are many advantages to using electric cars. Electric cars emit fewer pollutants and have reduced CO₂ emissions by more than 177,758,804 kg. The average car emits around 4.6 metric tons of CO₂ every year. Electric car drivers pay less to keep the car running. Electric vehicles can save the driver over \$700 in fuel costs. One kW is \$0.10 while one gallon of gasoline can cost anywhere between \$4.00-\$6.00. The batteries and motors of electric cars are also more efficient, meaning that the driver will spend less time repairing the car.

There are also disadvantages that come with owning and operating an electric vehicle. Electric vehicles can be expensive to purchase, and the parts are difficult to maintain. A replacement charging cord could cost anywhere from \$200-\$800. There are also not many places for drivers to charge their vehicles. Gas stations are common but electric charging stations are not. Charging electric vehicles is time consuming. Gas vehicles take minutes to fill up while charging a car could take hours. Older, and even current, models do not drive very far before needing to be charged again. New models will most likely be designed to solve these problems and make owning an electric vehicle more convenient.