

Advantages and disadvantages of electric cars



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The electric car has been a hot topic for the last few years. The development of the electric car is everyday news. In every form of media there is a link to the effects of the electric car or its development. But how come the idea of an electrically powered vehicle is at the center of the attention? Indeed the origin of the electric car goes back for centuries.

In the 19th and 20th, century electricity was one of the preferred ways to power an automobile. At that time an electric powered automobile was chosen over a fuel powered automobile, because electric powered automobiles were much easier to handle and much cheaper and easier in maintenance. But why did people still chose for a fuel powered automobile?

The competition between electric vehicles and fuel powered vehicles was killing. During the 20th century the electric car lost popularity. There are a number of reasons to explain the decrease of popularity. The invention of the automatic starter, the growing market of cheap fuel, the mass production and easier and faster fuelling. Soon, the fuel powered cars - using the latest Internal Combustion Engines - had more advantages than the electric car. The electric car slowly disappeared.

Only after decades the electric car was reintroduced when General Motors produced their first electric car. At first sight, the reintroduction of the electric car seemed a great success and late 1990 it even created a real hype. People really believed the electric car could change the world.

Unfortunately the hype was short-lived. Car companies and oil companies started to defend themselves against the change the electric car tried to achieve. Oil companies saw their market slowly fade and car companies feared losing much of their sales. The resistance was extraordinary, even the government was involved trying to stop a successful reintroduction of the electric car. Again, the electric car slowly disappeared..

Today, the competition between electric powered vehicles and fuel powered vehicles strikes again. Who will be the winner now? Will the electric car eventually substitute the regular car?

Advantages, you'll pay the price.

The fact that the electric car was becoming a success in the late 1990 is not a big surprise. People again experienced the advantages of an electric car. People realized they saved lots of money on their fuel costs and produced much less pollution by driving electric cars. They found it an encouraging thought that they contributed to a better climate while they were saving money as well.

Contributing to a better climate is now one of the most important concerns in the world. We can't avoid the fact that the climate is changing. Therefore we need to look for alternatives to fight these environmental problems like air pollution and global warming.

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One of the best alternatives is replacing the old combustion engine vehicles with electric cars. Electric cars produce zero emissions, so they don't contribute to air pollution at all. Besides air pollution, they also make no sound, so they don't contribute to noise pollution either.

Unlike the fuel powered cars, the electric cars have got fewer moving parts. The technical construction of the electric car is much simpler and much more efficient. That makes the electric car more reliable and easier in maintenance.

All the electricity is stored in high-end batteries. These car batteries are used to have a lifespan of 5 years. These rechargeable batteries are fully recyclable, this keeps the old batteries of becoming a disposal problem. It also makes the electric car more durable en cheaper the longer term.

The last few years the prices of oil has risen sharply. Oil is the black gold, but the prices of oil are so high for a reason. Oil is one of the fossil fuels and these fossil fuels are limited. Oil is getting scarcer every day, and you'll pay the price.

Electricity is not a fossil fuel and therefore not limited. This makes electricity much cheaper than fuel. One of the biggest advantages of driving an electric car are the fuel costs.

For example: When you are driving 40 miles a day in an electrically powered car which has got a mileage of 280 watts per hour per mile and a electricity price of \$0. 10 kilowatts per hour, it would cost you \$1. 12.

When you are driving the same 40 miles in a fuel powered car with a mileage of 25 miles per gallon you would need 1.6 gallons of fuel. 1.6 gallons of fuel at a price of \$3 per gallon would cost you \$4.80.

In this case, driving your fuel powered car is 4 times more expensive than travelling the same miles in an electric car.[1]

In fact, traveling in your electric car can even be cheaper. Here is another example of saving more money on your fuel costs. Recharging your electric car during the nighttime when the electricity is cheaper will save you even more money.

Disadvantages, every pot will find its lid.

Earlier on we explained that driving an electric car has many technical, environmental and financial advantages. How come that not everyone has exchanged his regular fueled car for an electric car?

Well, unfortunately there are still some disadvantages about driving and purchasing an electric car.

One of the biggest disadvantages is that the electric car is in a high-dollar prototype stage. Car producing companies have to do many research and many tests to find a way to develop these electric cars. The electric cars also have to meet the safety requirements, just like the regular cars. This requires even more research and more investments from the car companies. To make these investments attractive for the car producing companies, the government provides subsidies. With providing these subsidies, the cost of

an electric car will lower and purchasing one will become accessible for everyone soon.

Besides the purchase of an electric car, there are also some disadvantages in its use.

One of the reasons the combustion engine won the competition a few decades ago, was that it would only take a few minutes to refill your car with gasoline. Refilling an electric car took half a day.

Still, refilling - or recharging - your electric car is one of the disadvantages. It takes 3 to 10 hours to fully recharge a car battery. So when you are running out of fuel, you won't be able to quickly recharge your battery. The only solution is to charge your car battery overnight, just like the way you would recharge your mp3-player.[2]

Most of the electric cars are equipped with the most available and inexpensive car batteries. This means that when your car battery is fully charged the next morning, you will be able to travel a distance of 50 to 120 miles. This mileage is ideal for traveling from your home to your office. So using an electric car with such travel range, should not be a problem when you are commuting.

It will become a problem when you want to go on a vacation. For example, travelling to your holiday destination in the south of France will keep you busy for almost four days. Of course not all the electric cars are equipped with these inexpensive batteries, but the electric cars equipped with more durable car batteries are much more expensive. So if you want to travel

larger distances, you always need to be sure that your electric car is equipped with a better and more expensive battery.[3]

Eventually, with all the new technologies there will be a solution to expand the range of your inexpensive car batteries and speedup its recharge time. But driving an electric car is completely useless if you won't be able to recharge your car batteries.

Unlike the regular combustion engine car you can't stop at the local gas station and quickly fill up your tank. Nowadays, more and more of the gas stations have special charging stations, but in most cities there not enough places where you can simply recharge your electric car. In order to recharge your electric car you are dependent on the few charging stations throughout the city. One of these charging stations is the power supply at your own home.

People who drive an electric car need to purchase a converter in order to connect their electric car to their home power supply. Most of the time, this is not a problem. It will become a problem if 200 people living in apartments want to recharge their electric cars at the same time. Lucky enough, more and more cities and villages adapt themselves to the rising demand for more charge stations.

But, recharging all these electric cars, isn't that damaging to the environment? Earlier we explained that driving an electric car doesn't contribute to the air pollution. In fact, this is actually not true. Driving an electric car produces zero emissions, but in order to recharge your electric

vehicle, you need electricity. This electricity is often generated by burning fossil fuels. So indirectly it still has some environmental costs.

But even if the electricity used to recharge the electric car is generated by burning fossil fuels, it still is less than a half compared to the pollution produced by regular powered cars.

The indirectly produced pollution can even be reduced. In the future the electric cars will no longer use electricity generated by burning fossil fuels, they will get their energy from cleaner forms of electricity. With the use of cleaner forms of energy, like windmills or solar cells we will be able to reduce the pollution to less than one percent.

Besides the air pollution, there is also one disadvantage about the electric car and its noise pollution. Most combustion engine powered cars make a noise which is recognized by children as the sound of an incoming car. The electric car doesn't make any sound at all. This can be very dangerous for the children playing in the streets.

At first sight, this seems not a big problem. But when everyone is driving an electric car, people and especially young children need to adapt themselves to this new and changing environment.

Conclusion

In this essay we discussed all kind of advantages and disadvantages of the electric car. But the question still is, will the electric car eventually substitute the regular car?

The answer to this question is yes! In fact, eventually we have no other choice than to replace the combustion engine powered car with an electric car. Times are changing and so is our climate. The use of limited fossil fuels has changed our environment and we need to search alternatives to generate and use energy.

With the technical development throughout the decades we found lots of suitable alternatives. When coming up with alternatives, it is important that it is not at the expense of the economic growth and the current standard of living. Therefore, one of the best suitable alternatives is the development of the electric car.

The electric car is making its comeback. A few years ago, we chose a combustion engine powered car because of its convenience and because the car producing companies were afraid to lose most of their profits. Let's not make the same wrong choice again and stimulate the technologic development of the electric car.

The age of technology is upon us and we are able to find a solution for every possible disadvantage. Soon we will be able to make an environmental friendly car with the convenience of a combustion engine powered car. Within a few years the use of an electric car is unavoidable, so buy your own electric car tomorrow!