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Electric Car

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An electric car is a type of alternative fuel car that utilizes electric motors and motor controllers instead of an internal combustion engine. The electric power is usually derived from battery packs in the vehicle.

The electric car is a relatively new concept in the world of the automotive industry. Although some companies have based their entire model of cars around being proactive and using electricity, some also offer hybrid vehicles that work off both electricity and gas.

The electric motor has many advantages:

It is safe to drive

It does not pollute the air

It has low maintenance

It can be fueled at very cheap prices

And many others

But not everything is as perfect as it seems. There are also many shortcomings in these cars like:

Recharge Points

Electricity isn't Free

Short Driving Range and Speed

Battery Replacement (3-10 years)

Not Suitable for Cities Facing Shortage of Power

Let's turn to the history. The electric car was successful in the early 1900s. Women liked electric cars because they were quiet and, what was more important, they did not pollute the air. Electric cars were also easier to start than gasoline-

powered ones. But the latter was faster, and in the 1920s they became much more popular. The electric car was not used until the 1970s, when there were serious problems with the availability of oil. The General Motors Co. had plans to develop an electric car by 1980. However, soon oil became available again, and this car was never produced [1].

The future for electric cars looks to be a bright one. This is because of California's zero-emissions policy, which has been adopted by several other states. The nations electric vehicle population is due to explode by the end of the decade. According to a study by the coalition, 65,364 new electric vehicles were available for sale in 2000 in California, Maine, Maryland, Massachusetts, New Jersey, and New York. The annual total of new electronics in those states is scheduled to rise to 700 000 in the year 2016 and to 1, 2 million in 2017.

Also experts are looking for alternative sources for batteries. Some experts feel hydrogen fuel cells will be the dominant motor vehicle power source. The fuels cells convert hydrogen (an element in virtually limitless supply) directly into electricity without burning it to produce heat. Vehicles that are powered by hydrogen will be 3 times as energy-efficient as compared with gasoline-burning internal combustion engines. These cars will also be *squeaky-clean* because hydrogen powered vehicles only emit water vapor as exhaust [2].

Another alternative source for batteries contains thin sheets of plastic called proton-exchange membranes (PEMs). These separate hydrogen ions from electrons during operation. This type of battery seems to be the best suited for motor vehicle travel. This battery could yield a fuel cell that is light, compact and inexpensive to produce on a mass basis. Sam Romano, project manager of the fuel-cell program at Georgetown says PEM technology is «perhaps 10 to 12 years away from broad commercial application» [2].

In all the motor vehicle market of the future is likely to feature several different fueling systems. There's going to be a role for all of the technologies. Electric vehicles, in terms of light-duty trucks, cars and vans, make a great deal of sense. But for heavy-duty trucks, the battery technology just isn't there at all. Consequently, despite the environmental advantages of electric vehicles, other alternative fuel technologies will remain on the scene – and even dominate certain vehicle markets [2].



References:

1. Mode of access: https://studopedia.su/13_174330_To-be-read-after-Lesson-.html. – Date of access: 01.04.2018.
2. Mode of access: <http://www.bestreferat.ru/referat-292463.html>. – Date of access: 04.04.2018.