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ELECTRIC CARS AND THEIR IMPACT ON THE ENVIRONMENT

One of the main tasks of humanity in the modern world is the preservation and protection of the environment. This task is very difficult due to the fact that the ecology is influenced by many factors. One of the major influences is carbon dioxide emissions. In order to reduce the level of the carbon dioxide emissions into the atmosphere, it was proposed to replace cars with internal combustion engines by electric cars. But will this work? At the first glance, the idea seems great: electric cars have zero emissions as opposed to cars with internal combustion engines, so it is a perfect replacement.

Unfortunately, it is not entirely true, because more than 60% of electricity produced in the world is generated by combustion of carbons (coal, gas, etc.), during this process a large amount of the carbon dioxide is released into the environment. So, electricity consumed by electric cars isn't always "clean".

Another disadvantage of electric cars is lithium ion batteries (the total weight of which may exceed 500 kg in one electric cars), because of its direct and indirect

impacts on the environment. Lithium ion batteries contain toxic chemical elements such as cobalt, nickel, production of which is more dangerous in comparison with others power supplies. Also, incorrect recycling of lithium ion batteries leads to the soil and groundwater contamination.

Despite the listed disadvantages, electric cars have some advantages if compared to internal combustion engines. Due to zero emissions as well as complete absence of noise during operation, using of electric cars allows us to reduce volume of CO₂ and noise pollution in cities, where road traffic is heavy (power plants, where carbons are combusted are located outside the city).

In conclusion, it should be noted that in general an electric car is more environmentally friendly, than cars with internal combustion engines. But for this, it is necessary to use “green” electric power for charging of electric cars. Also, development of the electric vehicle industry is directly depends on development of the portable energy sources (increasing of capacity and reducing of the amount of toxic elements in its composition). Therefore, the more environmentally friendly the electric energy source is, the more environmentally friendly an electric vehicle becomes.