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## ELECTRIC CAR AS A TYPE OF FUTURE TRANSPORT

We all imagine the car of the future differently. For some, it must fly, and for others it should just move. But we all guess that the car of the future will not be an ordinary car in our understanding. They will most likely be replaced by electric motors or new engines on alternative fuels, such as hydrogen. After all, the main sign of the progress of cars is strict environmental regulations [1].

The relevance of the study is to determine the main advantages and disadvantages of electric cars, as well as directions for the wide implementation of electric cars in Ukraine. According to statistical studies, the market of electric cars for 2022 shows high growth, namely - 37 percent. The global fleet of environmentally friendly cars now totals about 9.9 million, while the Ukrainian fleet has only 35,763 electric cars. Therefore, the problem of introducing electric cars in Ukraine arises.

Of course, at the moment, electric cars cause the least damage to the environment. Currently, insufficient attention is paid to electric cars in Ukraine. M. M. Dmitriev, V. V. Kukhtyk, I. O. Kukhtyk emphasize the urgency of introducing electric cars in Ukraine for widespread use. According to the authors, the widespread use of electric vehicles will contribute to solving many environmental issues. The problem for potential buyers of electric cars is the price of the cars themselves, their maintenance and the cost of spare parts. But other ways of switching to the most ecological mode of transport are also possible. Scientists claim that today the most optimal option for minimizing the costs of manufacturing an electric car is the conversion of a serial car. The use of electric cars will also have a significant economic effect for their owners.

Modern trends in the automotive industry in the world are aimed at ensuring economy, environmental friendliness and ease of use of road transport. Today, electric cars are widely purchased in the European Union. They allow the owners to save on fuel, and the state - on compensation for the consequences of environmental pollution. This type of transport appeared relatively recently, but has already managed to prove itself well [1]. In Ukraine, electric cars are just beginning to gain popularity. Drivers are attracted by the lower costs of operating cars. However, the main problems preventing the spread of electric vehicles remain. Among them, the lack of a network of recharging stations and a sufficient number of specialists for their maintenance, the cost of purchasing an electric car, the lack of.

Electric cars have already gained popularity due to the following advantages: their efficiency is up to 95%; an electric car does not need fuel, lubricants and cooling materials, it does not emit harmful CO<sub>2</sub> emissions; the use of an electric motor helps to reduce noise and simplify the design of the car; an electric car is less fire-explosive dangerous; it can be charged from a regular home network.

The electric motor does not emit harmful substances. But here the question arises about the production of this energy. It is desirable that alternative renewable sources be used for this. But it is not yet possible to realize this in full. And this already leads to the disadvantages of electric cars.

According to the Ministry of Infrastructure, as of November 1, 2021, the Ukrainian charging network for electric vehicles included 3,244 stations with 7,661 terminals. Of them, high-speed (power over 22 kW) – 1,835 units, i.e. 24%. Other 5826 units 76 % – ordinary terminals with a capacity of up to 22 kW. Taking into account the number of electric vehicles registered in the country - 31,187 units. as of 01.11.2021 - 4 units for each terminal. The Netherlands boasts the same indicator among European countries, while neighboring Poland has 7 electric cars per terminal.

In addition, the use of electric vehicles has some disadvantages: significant consumption of battery charge at low temperatures; limited speed and range between recharging; significant time spent on fully charging the battery and the problem of disposing of a faulty battery; danger for pedestrians due to the quiet operation of the electric vehicle.

**Conclusions.** Thus, it can be concluded that the production and sale of electric cars is relevant, since there is a potential demand for such products from consumers. This is due to such factors as its economy, environmental friendliness and ease of use. State support for eliminating these mentioned shortcomings and the popularization of electric cars in Ukraine will make this type of transport affordable and convenient to use in the near future.

### Literature

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