

## **ADVANCEMENT IN ELECTRIC TRANSPORT DEVELOPMENT**

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Cars are undeniably one of the most popular and comfortable options for traveling. However, despite their many advantages, they also come with a number of significant disadvantages, with the most serious one being the detrimental impact they have on the environment. Additionally, cars have become increasingly expensive over the past decade due to the rising costs of petroleum products. These issues have prompted developed countries to focus on developing and producing more affordable and environmentally friendly vehicles, which are gradually forming a sustainable transportation system [1].

Currently, electric transport stands out as one of the most promising sectors within the automotive industry. With the growing interest in eco-friendly solutions and the escalating environmental concerns, electric vehicles are gaining popularity at an impressive rate. In this article, we will explore the current technologies in the field of electric transport, examining the latest developments and discussing the prospects for its future growth and advancement. With each passing day, electric transport is becoming more common in our country. This is due to its many advantages, but at the same time we should not forget about its disadvantages. Also, one of the decisive factors for buying an electric car is its ease of bringing it to our country due to the fact that China has started making electric cars in huge quantities.

Let us now consider some of the advantages of electric transport that make it promising for further development:

- One of the main advantages of electric transport is its environmental friendliness. Electric cars and other modes of transport run on electric energy, which is produced in most cases without emitting harmful substances into the atmosphere. Thus, the use of electric transport helps to

reduce pollution and meets global requirements for reducing greenhouse gas emissions.

- Lower operating and maintenance costs are another advantage of electric vehicles. An electric motor does not require as many spare parts as a conventional internal combustion engine and does not need regular oil changes, filters and other consumables.

- Comfort is another advantage of using electric vehicles. Electric vehicles run smoother and quieter than internal combustion engine vehicles. Most electric cars are equipped with modern safety and control systems, which increase the comfort and convenience of driving.

- The final benefit that can affect the development of the country as a whole is new opportunities for the economy: the opening of electric vehicle manufacturing plants contributes to the development of the country and the creation of new jobs [2].

Electric cars are the most common type of electric transport. Examples of models include Tesla Model X, Mercedes-Benz EQS and others.

The peculiarity of electric cars is the absence of harmful emissions and higher economy compared to cars with internal combustion engines. At the same time, the limited range of travelling on a single charge is the main disadvantage of electric vehicles.

Electric buses are also a promising mode of transport. They can operate in urban environments without emitting harmful emissions, helping to reduce pollution and improve the quality of life for city dwellers. Examples of models include the BYD K9, MAZ 303E10 and others [3].

A well-developed charging infrastructure is necessary for the efficient use of electric vehicles. There are several types of chargers, such as conventional socket, fast charging and supercharging. Each type of charger has different characteristics and charging time. Charging infrastructure can be installed in car parks, petrol stations, city streets and other places. However, not all countries have sufficiently developed charging infrastructure for efficient use of electric vehicles [4].

At the moment, charging infrastructure is being developed in Belarus, but we should not forget about electric vehicle batteries, which have not yet been safely recycled.

Intensive research into new battery and charger technologies is currently taking place. New technologies should improve charging efficiency and extend the range of journeys on a single charge.

States and companies are also actively supporting the development of charging infrastructure. Some countries provide government support for the installation of charging stations and the development of electric transport. Electric transport can also be introduced in various areas such as freight transport, taxis and even aviation. This opens up new perspectives for the use of environmentally friendly transport [5].

Electric vehicles have many advantages such as environmental friendliness, economy and comfort. However, the limitations of electric vehicles, such as their limited range and underdeveloped charging infrastructure, do not allow them to fully replace internal combustion engine vehicles.

However, despite all these advantages and disadvantages, it should be pointed out that the main advantage of owning an electric car: the government provides benefits and subsidies for the purchase and operation of electric cars, making them more affordable for the population.

Overall, the transition to electric transport is an important step towards greener and more sustainable mobility, but a full transition to electric vehicles will not happen soon enough because many people are not ready for change.

## References

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