

## 48. THE IMPACT OF ELECTRIC VEHICLES ON THE ECONOMY

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The paper considers the impact of electric cars on the global economy. The advantages of electric vehicles and the reasons for their increasing demand are discussed. The consequences of transitioning to electric cars are presented. The development of the electric vehicles market in the Republic of Belarus is reviewed.

The use and relevance of electric vehicles are rapidly increasing every year. This is attributed to various factors, ranging from decreasing prices of batteries to the growing trend of environmental consciousness. Furthermore, electric vehicles have numerous advantages, such as silence, absence of exhaust emissions, higher levels of reliability and durability due to simplicity of design, ability to use environmentally friendly and renewable energy sources.

The growth in demand for electric vehicles in the period between 2020 and 2030 is associated with the following reasons. The first reason is the reduction in the cost of electric vehicles, driven by the increased production volume and decreased prices of lithium-ion batteries. The lithium-ion battery is the most expensive component of an electric vehicle, possessing good performance and moderate wear rates. The battery accounts for up to 40 % of the final cost of an electric vehicle. Since 2010, the cost of lithium-ion batteries has decreased by over 85 %. Consequently, it can be inferred that the prices of the vehicles have also significantly dropped [1]. The second aspect to consider is the increase in prices of petroleum products leads to a shift in car buyers' preference from internal combustion engine vehicles towards electric vehicles. On average, electricity prices are lower than petrol prices. The fuel expenses for an electric vehicle can be 3 to 10 times lower [2]. It is also crucial to take into consideration the adoption of decrees encouraging the use of electric vehicles, along with the implementation of laws restricting the use of internal combustion engine cars within city limits to reduce air pollution and noise levels.

Belarus also pursues modern trends and its economy is boldly developing in the field of electric transport. Decree № 92 of March 12, 2020, titled "On Stimulating the Use of Electric Vehicles", was signed which exempts electric vehicle owners from paying fees for issuing permits for road traffic participation and from value-added tax when importing a car for personal use into the country. Another example is the first super-fast charging complex with a total capacity of 700 kW for electric transport within the territory of CIS that was built in Brilevichi district. It is worth mentioning that the Government of the Republic of Belarus has approved a "Comprehensive Program for the Development of Electric Transport" until 2025. It includes research and development activities carried out in accordance with scientific and technical programs. One of the program's focal points is the development of public urban electric transport, including electric buses and trolleybuses with autonomous operation. Such vehicles, as well as traditional trolleybuses that consume electric energy, are used on the streets of our cities, helping to reduce the amount of harmful emissions [3].

The transition to electric vehicles has a significant impact on the economy in various ways. It affects the automotive industry and will stimulate manufacturers to develop new technologies and innovations, such as more efficient batteries, improved charging systems, and autonomous driving. The increase in demand for electric vehicles will lead to a decrease in demand for internal combustion engine cars. This will affect traditional car manufacturers, who will be compelled to reconsider their production strategies. The use of electric vehicles will contribute to a decrease in the consumption of petroleum products, as electricity becomes the primary source of energy. It is important to mention the stimulation of innovations and the development of new technologies. Furthermore, the transition to electric vehicles will have a significant impact on the development of the renewable energy market. Their popularity stimulates growth in investments in renewable energy sources, such as solar and wind installations, contributing to the advancement of technologies and the creation of new jobs.

Indeed, electric vehicles exert a significant and multifaceted impact on the economy, driving innovation, job creation, mitigating environmental impact, and fostering the development of sustainable technologies.

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