SUSTAINABLE DEVELOPMENT: MODERN THEORIES AND BEST PRACTICES

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The collection consists of materials from the Monthly International Scientific and Practical Conference “Sustainable Development: Modern Theories and Best Practices”. They represent scientific research results in such scientific areas as financial and economic, managerial and legal, social and cultural, ecological and technical, educational and pedagogical issues of sustainable development on local, regional and international levels. It is for scientists, lecturers of higher education institutions, students, graduates, and everybody interested in modern scientific and practical sustainable development problems.

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ELECTRIC CAR MARKET: PROBLEMS AND PROSPECTS OF DEVELOPMENT

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The electric car market in the world is gaining momentum. In the early 2000s, the electric car business was not considered promising. Today we can say with confidence that electrified vehicles have a prominent future. In 2016, the number of electric cars purchased worldwide reached 1 million, while sales increased by 53% compared to 2015. In 2016, investments in electric transport development amounted to more than $2 billion, which is twice as much as in 2015. China, Sweden, France, the USA, Germany, Norway, and the Netherlands are interested in ecological vehicles and encourage their deployment in their countries. Large automakers and technology companies, which rely on state aid, plan to expand and improve their products. Therefore, the prospects for electric vehicles will be broader and more realistic in the near future (BloombergNEF, 2021).

Worldwide, the popularity of electric transport is due to the fact that it has many advantages over cars with internal combustion engines. Among the positive features of electric vehicles are the following (LB.ua, 2017):

- cheap refueling (the most economical electric cars consume 10 kW per 100 km on average) and the opportunity to charge an electric vehicle from the power grid;
- the simple design of the electric car that provides the simplified and most convenient management;
- ease of use and cheap operation (without gearboxes, internal combustion engines, and various types of pumps);
- complete absence of harmful gas emissions;
- environmental safety of the electric transport;
- less noise coming from the electric car because its structure contains much fewer technical parts that can create noise, unlike traditional vehicles;
- energy efficiency (fuel engine efficiency is 16%, and electric motor efficiency is almost 85%).

Despite the significant advantages, electric cars have some drawbacks, such as the following:

- high purchase price;
- limited mileage per charge;
- poorly developed infrastructure that limits the travel supply;

- much longer time for charging the car;
- high price for battery replacement (approximately half the car cost);
- lack of consumer choice (today, the market of electric vehicles is not as diverse as the market of cars with internal combustion engines) (BloombergNEF, 2021; The Verkhovna Rada of Ukraine, 2013).

However, electric transport in the world is developing rapidly due to government incentives, including reduced taxes and benefits, as well as bonuses for buyers of electric vehicles. Countries use different motivational tools to encourage purchases of electric cars. For example, the Chinese buyer of an electric vehicle receives tax benefits such as:

- exemption from the consumer tax;
- the registration fee that is reduced by 50%;
- exemption from import duty (BloombergNEF, 2021).

The Norwegian government has changed some provisions regarding the promotion of electric vehicles, especially from 2018. Car owners must pay 50% of the road tax and can get the subsidy amount reduced from 2020. In the future, the government plans to abolish subsidies completely. Local authorities are considering canceling free parking and reimbursing the tunnel ticket cost (Naftorynok, 2020).

Overall, electric cars have significant prospects for development in the domestic markets. In our opinion, in the near future, the biggest problem will be the rapid adoption of relevant legislative innovations that would stimulate this process. The underdeveloped national infrastructures are also a big problem. The lack of charging stations for electric vehicles and technical maintenance services reduces the population's demand for this type of transport. Therefore, the deployment of urban infrastructure and state support are the main stimulating factors for the development of electric mobility of population and business entities.

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