RELEVANCE OF WIND ENERGY DEVELOPMENT IN THE WORLD AND IN UKRAINE

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Usually, wind energy refers to the operation of wind turbines to generate energy. This branch of energy is currently very popular, since no harmful substances are produced during the operation of wind turbines, and today when people begin to care more and more about the ecology, these green energy generating machines are becoming more relevant than ever.

The objective of this paper is to investigate the present-day situation and future prospects of wind energy development in the world around as well as to highlight the importance of accelerating this industry progress in Ukraine

Even though wind energy production has been increased tremendously over the last decades, some more effort is required to needed to increase their number and improve their capacity, making the energy supply more sustainable.

As one knows, onshore wind is a technology with an extensive global supply chain. In 2019 the amount of electricity generated worldwide by wind farms located on land increased by 12%. Offshore wind is also expected to develop rapidly because winds over shallow open water is much stronger and, usually in the ocean, can last much longer than onshore winds. Besides, fewer turbines are needed for sea-based wind farms, and these are more durable, so that offshore wind energy has an enormous potential for being a source of reliable power generation (Brunel, 2022).

Interestingly, in 2021 the percentage of total wind energy production increased by 17%, which is 55% more than it was achievable in 2020. In fact, this is the highest indicator among all types of renewable energy technologies, and it is only due to this progress that a rapid development of all renewables has become possible. According to the official figures, the capacity of renewable power generation reached 113 GW in 2020 while in 2019 it was only of 59 GW.

In all probability, in the next decades wind energy industry will be growing even faster than in the previous years. The thing is that onshore wind additions, which reached a record level of nearly 110 GW in 2020, are now made to go up to 25% higher by 2026. This is significantly influenced by the wind energy acceleration in China, where project developers would like to complete the current wind turbine design initiatives before the engineering company subsidies go out of business (IEA, 2022, May 25).

Currently, the installed capacity of Ukraine's wind power plants is 1.3 GW, and earlier it was expected that wind energy industry would enter a new stage of progress, favoured by competitive market conditions (UkraineInvest, 2020, October 30). However, the development and construction of new wind farms has slowed down in the past 2 years due to the government that delayed the auctions it had promised. Also, the market sentiment was as undermined with long disputes over wind energy tariffs for the turbines that are in operation. Still, we can expect that, if

the right policies are implemented, Ukraine will be able to get about 3 GW of installed capacity by 2025, because it has a large wind energy potential. With the help of wind energy, the power supply in Ukraine can be made more ecological. It can also significantly contribute to the economic growth of the country since every new wind turbine will add 10 million euros to the economy. This industry accounts for 37 billion euros in Europe's GDP, and if everything is planned correctly, Ukraine can also get some part of it.

However, it is important to implement the latest policy changes for faster growth of wind energy industry in Ukraine. The best option would be if the government initiated arranging auctions. They say that in 2019, the basics of holding auctions were already in use, but unfortunately later they never took place again (Wind Europe, 2021).

Since Ukraine is one of the key countries connecting the energy of the European Union and Russia, it ensures the safety of electric routes. In this situation, the threat to energy is colossal. This is what makes us change and move away from energy-dependent relations with the aggressor country. Now Ukraine is actively working on restoring the supply of energy not only to enterprises but also to civilian infrastructure. Based on the above, the topic of developing wind energy in Ukraine will be relevant in the coming decades.

References:

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