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## **RENEWABLES AND THEIR DEVELOPMENT IN UKRAINE**

In Ukraine, the development of alternative energy is one of the important issues due to the lack of traditional energy resources. All sorts of experts have long and often say that our country needs to pay more attention to alternative and renewable energy sources.

The picture for Ukraine is not yet very favorable. We buy more than 50 billion cubic meters of gas. So, imports account for more than 70 percent of our country's gas balance. A good prospect is the search and development of its own

gas fields, but this resource is very limited, and some of them are simply unprofitable to develop.

For this reason, many experts and scientists advise to turn to other forms of energy. Moreover, Ukraine has a very large potential for their development, as well as for their economy.

For example, the country has been operating a "green tariff" for 9 years, at which the state buys electricity from enterprises using renewable energy sources - the sun, wind, biomass, and water. This law stimulates the development of new types of energy resources, as well as attracting investments in renewable energy technologies. In Ukraine, "green tariffs" were adopted at the legislative level in 2009 and are valid until 2030. This law on the use of solar panels in homes has become really profitable and justified, it became possible not only to save money, but also to receive real money for solar and wind energy.

After the events of 2014, when sources of traditional energy resources were lost, the authorities actively began to develop alternative energy.

Since 2011, a 742 MW SES was built and commissioned in our mechanical system. According to the SE "Energy Market", the sun already accounts for 0.53%, while in 2016 it was 0.36%. These are still small numbers. The share of SES is growing the fastest.

In October 2015, installed wind power amounted to 509 MW. By 2020, Ukraine intends to increase this figure to 2.28 GW. Favorable conditions for this in areas where the wind speed is equal to or exceeds 5 meters per second: on the Azov-Black Sea coast, in Odessa, Kherson, Zaporizhzhya and Nikolaev regions and in the Carpathian region.

At the beginning of the 21st century, hydroelectric power plants rank third after nuclear and thermal power plants in the energy complex of Ukraine. The economic and technical possibilities of using Ukrainian hydro resources are about 20 billion kWh. But today they are used by no more than 50%.

The main problem of the development of "green" energy is traditionally the lack of sources of funding. There is money for energy development. Over these years, more than 400 million euros have been invested in the development of green energy. Also, business projects were implemented for the creation of heat generation with a capacity of 1.8 GW worth 440 million euros. The plans of the authorities by 2020 to bring the share of alternative energy to 11% of the total electricity consumption in the country, and by 2035 - up to 25%. This requires an investment of at least 10 billion euros.

According to forecasts, every year the alternative energy in Ukraine will dynamically develop and attract new investments in this industry.