ADVANTAGES AND DISADVANTAGES OF WIND POWER PLANTS AND WIND ENERGY

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Due to the long-term use of traditional energy sources, 2 big problems have arisen. The first problem is global warming, as a result of which glaciers began to melt and the level of the world's oceans rose and changes in seasonal events. And the second problem is the depletion of mineral deposits. Because of this, people have started looking for new alternative energy sources such as solar, wind, geothermal and other types of energy.

Wind energy is one of the most common types of alternative energy on the world market. Wind energy arises due to the activity of the Sun. Due to uneven heating by the Sun of the Earth's surface and the lower layers of the atmosphere at an altitude of up to 12 km, large masses of air arise and move, the wind arises, which carries a huge amount of energy that we use in our needs.

In addition to its inexhaustibility, wind energy has many other advantages:

During the operation of wind power plants, there are practically no emissions of harmful substances and greenhouse gases, which ensures environmental cleanliness;

Wind stations do not need water, like thermal or nuclear ones;

The wind generator is located very high above the ground, and the mast on which the wind generator is mounted occupies a very small area, so the surrounding space can be used for other purposes;

The energy source does not need to be somehow transported to the place of consumption, since the wind is always nearby, so wind energy is used in hard-to-reach (steppe, arctic, mountain, etc.) areas;

Requires minimal maintenance during operation.

But, despite all these advantages, wind energy has certain disadvantages:

The biggest disadvantage of wind energy is the inconstancy of speed, and therefore of energy over time. Also, the wind can change its activity during the day and for short periods of time, so it is necessary to develop a system for storing electricity;

To build a wind turbine, you need to invest a lot of money, which often scares people away, because they fear that the wind turbine simply will not pay off;

Also, wind generators are capable of creating aerodynamic noise that can harm animals and people, so in some European countries a law has been introduced, according to which the distance between the wind generator and the house must be at least 300 meters.

Despite all these disadvantages, wind farms bring great benefits to the environment. Because according to the experiments of scientists, it was proven that

the operation of a wind generator with a capacity of 1 MW saves up to 29 thousand tons of coal or 92 thousand barrels of oil in 20 years. And every year, scientists and engineers work on improving wind power plants, thanks to which the number of defects decreases.

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