

UDC 621.311.243

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ALTERNATIVE ENERGY DEVELOPMENT IN UKRAINE

It is widely recognized that the main factor determining the development of material culture of people is the creation and use of energy sources. Obtaining, transforming and conserving energy are fundamental processes studied in physics. The basic pattern established by physics is the law of conservation and transformation of energy.

The law provides for a global energy crisis. Now peat, coal, oil and natural gas are used as the main energy resources. At the current rate of use, these resources will suffice for humanity for 50 years. In this regard, EU countries are actively promoting the introduction of alternative energy sources. By 2020, their share in the structure of electricity production should be up to 20 %, and in 2030 it should already be 50 %. Ukraine's plans are much more modest: according to the Energy Strategy for the period until 2035, the share of renewable sources in electricity generation in 2020 should be 7 %, and in 2025 - more than 13 %.

Now the dynamics of the introduction of new renewable energy capacity in Ukraine from year to year remains positive. In the first 6 months of 2019, renewable energy sources (solar, wind and other power plants) generated 2.37 billion kilowatt hours of electricity in Ukraine. This is 1.9 times more than in the first half of 2018.

Ukraine's energy independence is not only about rational energy consumption but also about the development of energy as a whole. Today, this development is about investing in renewable energy. Moreover, it is cheaper to build solar power plants than coal or thermal power plants. The development and creation of thermal and power plants operating on renewable energy is the basis, safe and environmentally friendly. In the hands of mankind there are several perspective sources of energy: solar, hydrogen, thermonuclear. The use of these energy sources is related to high-tech technologies based on current scientific knowledge. To bring

the use of these energy sources to the industrial level it is necessary to solve many problems in which the crucial role will be given to scientific researches and, above all, in the field of physics. Therefore, energy of the future is a modern problem of physics.