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Alternative energy in the Republic of Belarus

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Alternative (non-traditional) energy is energy based on the use of renewable energy sources [1].

The development of alternative energy is due to a reduction in reserves of hydrocarbon raw materials (oil, gas, coal) and the need to reduce carbon dioxide emissions into the atmosphere from power plants operating on these raw materials.

Renewable energy sources are conventionally divided into three groups: sources of mechanical energy (wind turbines, hydraulic turbines, wave and tidal stations); sources of thermal energy (solar radiation, biofuels); energy sources using photosynthesis and photoelectric phenomena [2].

The positive aspects of renewable energy sources are their inexhaustibility and the reduction of negative impacts on the environment and human health. The disadvantages are low energy flux density, uneven energy production volumes and high equipment costs.

Currently, there are 481 alternative energy installations operating in the Republic of Belarus. Renewable energy sources primarily solve local energy supply problems and are a necessary complement to traditional fossil fuels and nuclear energy.

The ideal ratio of electricity sources, calculated by international experts, is as follows: nuclear power plants – 25%, natural gas – 25%, waste recycling – 25%, renewable sources – 25%. Countries that achieve this balance will fully ensure their energy security.

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