

ENERGY SAVING TECHNOLOGIES

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Nowadays, the question of resource preserving and environmental protection is becoming increasingly urgent. The area of motivation for energy saving is widely used, for example, at industrial enterprises in the UK. UK government agencies also pay great attention to promoting achievements in the field of energy saving, publishing and widely disseminating information about examples of best practice in this area.

Germany has made the greatest contribution to the development of energy-saving technologies; in particular, it is a leader in the field of wind energy, with 20,000 wind generators operating in the country with a total capacity of 24 thousand.

Much attention is paid to solar energy in Germany; it is planned to place 100,000 m² of solar panels on the roofs of administrative buildings only in Berlin. Despite the fact that Germany is a country characterized by rather low rates of active sunny days, on June 9 alone the country generated 23.1 GWh of electricity obtained from solar photovoltaic cells, this amounted to half of the total daily energy consumption of the entire country and was a world record.

Germany abandoned nuclear energy. Part of the nuclear power plants was closed immediately. To reduce energy and resource consumption German's government uses energy and resource saving technologies. For example, powerful energy complexes are used to service industrial, building, and agricultural enterprises. Almost 80% of all energy produced in the country is spent in enterprises (Chochlovski, 2019, p. 15-47).

Enterprises imply the improvement of equipment, the use of high-precision instrumentation. Instrumentation and control equipment is always selected taking into account the specifics of an industrial facility. Thus, for enterprises it is used in the

heat power industries, devices with a high degree of protection from external influences.

Many German enterprises use the following engineering activities:

- using facilities with energy-saving technologies;
- growing productivity in the energy manufacture process;
- introducing projects using alternative energy (such as, wind, water, energy);
- monitoring of consumed resources and launching control systems.

Researches claim that 90% of energy losses are associated precisely with irrational consumption, but only up to 10% is lost during transportation and transmission (Yang, 2023). Therefore, the main directions in energy-saving technologies are related specifically to optimizing the use of heat and electricity.

Germany is the country that most actively uses modern energy saving technologies and alternative energy sources. Today, a third of all electricity here comes from wind turbines. Berlin intends to save on energy through alternative energy sources. All pools will be equipped with solar panels. Private investors will have the opportunity to place more than 100,000 m² of solar panels on the roofs of public buildings and feed the resulting energy into the city grid. Since 2007, the Berlin administration can purchase for its needs only cars that consume no more than 6.5 liters of gasoline per 100 km in the urban cycle. Until 2011, the permissible flow limit should be reduced to 5 liters. When purchasing computers and other electronic devices, Berlin authorities will have to use products that consume the least amount of electricity.

The use of energy and resource-saving technologies makes it possible to reduce the costs of production and operation of equipment, increase its service life, reduce the negative impact on the environment and improve the quality of life of people.

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