

## **ATOMIC ENERGY IS THE ENERGY OF THE FUTURE OR THE PAST?**

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At the time of the active introduction of alternative energy sources, nuclear power is still one of the largest sectors of electricity production, not only in Ukraine,

where NPPs produce about half of the total electricity, but also globally.

Atomic energy, although it conceals a great danger, however, at the same time, cheapness and the absence of hazardous emissions in electricity production contribute to the fact that many countries of the world continue to build new stations and modernize existing ones to eliminate the risk of such accidents as the Chernobyl catastrophe.

That is why the atomic energy of the transformation can be considered energy of the future, because technical progress is not in place, thus the construction of fast neutron reactors has begun, successfully solving the energy problem for many decades.

Recently, it's possible to hear from the mouths of nuclear energy specialists about so-called modular reactors that would allow them to be located in those areas where the construction of such power stations was still impossible.

This stage of the development of nuclear energy, even now, remains only in theory, but already striking its advantages.

In addition, a remarkable know-how in the field of nuclear energy is the test of a thermonuclear reactor such as a solar collector. Scientists hope to obtain in the future due to this reactor virtually inexhaustible sources of clean energy.

This is another indication (evidence) that the world's nuclear energy has made a new step in the development of not only energy, but also of the life of all mankind.

However, in the future we continue to pursue the problem of processing radioactive waste, but again, scientists calm us. Nuclear power plants are known to all nuclear reactors where water surrounds fuel rods, thereby slowing down neutrons and sustaining a stable nuclear reaction. However, this system is inefficient, since only 5% of the uranium atoms in the rods is used until the end of their use.

Therefore, in the future it is planned to introduce the technology of fast reactors, where the rod is immersed not in water, but in liquid sodium, which will enable the use of 95% of uranium, and most importantly, it will solve the problem of radioactive waste.

It would be appropriate to mention the situation in our country, because of the

unfortunate events in the east, all the coal necessary for Ukrainian energy is in the occupied territories of the Donbas, which threatens the possibility of our normal functioning, because its absence automatically stops the work of the TPP and CHP.

In addition, coal is a non-renewable (exhaustive) source of energy, and renewable sources in turn have many disadvantages.

So, summing up the mentioned above, one can see how much we are dependent on atomic energy and, with proper planning, with the support of new world technologies, the future is precisely for atomic energy. Our goal is to master quickly and qualitatively the knowledge that is available to us and to contribute to the development of this industry.

## **REFERENCES**

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