Alternative kinds of energy in Ukraine and their using

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Inroduction. Now, we have a lot of environmental problems in Ukraine. One of the biggest problems is the energy problem.

Results and discussion. To my mind, one of the best ways to solve this problem is to use an alternative kind of energy. We can use solar, hydro, and wind energy. Currently, there is limited use of solar power in Ukraine. However, the country's above-average annual amount of solar irradiation (more than Germany's, the industry leader) makes Ukraine an exceedingly attractive producer of solar energy, particularly for existing industrial facilities and the growing agribusiness sector. Based on current studies, the government estimates that there is a 4 GW potential for annual solar energy production in Ukraine. In response, the government has recently announced plans to attract solar energy producers to certain areas of the country and specifically the Chornobyl exclusion zone. The zone has the advantage of very low land prices and existing infrastructure (roads and transmission lines) that are still in place from the time of the Chornobyl plant's operations. At present, ten companies from seven countries have expressed interest in developing multi-billion-dollar solar power projects in this area. Production of solar electricity in Ukraine generally takes place in the southern regions of the country, mainly in Crimea. The largest solar power plants Perovo (100 MW), Okhotnikove (80 MW), Dzherelne (7.5 MW), which can supply more than 15% of the total power demand of the region, are located there. Ukraine has a long tradition of respecting and harnessing its abundant natural resources. This 100-year-old windmill in Ukraine is picturesque today but is also an essential reminder of the country's historical legacy for recognizing and utilizing its bountiful assets. Today, wind power in Ukraine is in the early stage of re-development and modernization. Industry experts have identified promising regions of sparsely populated southern Ukraine as ideally suited for wind power development owing to above-average annual wind speeds, which makes production economically viable. Major wind power plant facilities are located in Mykolayiv and Donetsk regions and Crimea.

Ukraine has great potential for the development of small hydropower plants, but it requires some investments in this sector. The total length of Ukrainian rivers is about 136 thousand km. For the construction of power plants, even tiny rivers — up to 10 km (which are the majority in Ukraine) — can be used. On such rivers, micro hydropower stations with a capacity of up to 5 MW and small hydropower stations with a capacity of up to 5-25 MW can be constructed. According to the calculations of the "Ukrhydroenergo" Association, the technically feasible potential of small hydropower plants in Ukraine amounts to about 8.4 billion kWh or about 4.5% of total electricity consumption in 2010.

Conclusions. Using the alternative energy, allows us to save a lot of energy and save our planet from overuse of resources.

References

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