

SPATIAL MODELLING OF RENEWABLE ENERGY USAGE ON POLLUTED AREAS OF UKRAINE

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ABSTRACT

The paper represents the methodic and results of Ukraine territory assessment for renewable energies development accounting natural resources and environmental situation preconditions. There is also described author's idea of usage of renewable energy sources in territories with difficult environmental situations where significant and poorly compensated changes of landscapes, fast increase of threat of exhaustion or losses of natural resources, unique natural objects, worsening of residing conditions of population are typical. In result of reduction or termination of impact the normalization of environmental conditions and regeneration of landscapes takes place. In Ukraine territory in the majority of cases (except Chernobyl zone) the difficult environmental situations inherent to the territories with high concentration of industrial activity and neighbour regions. On the other hand, main features of environmental impact of renewable power engineering are absence of chemical pollution of atmospheric air, natural waters, soils; serious physical impact, significant land demand of renewable energy sources; absence of wastes; large territorial and time non-uniformity of operation that makes environmental impact more discrete; low specific density of energy. Therefore, in a case of allocation of renewable energy installations in territories with difficult environmental situations, we obtain a territory characterized by the reduction of chemical pollution; reduction of wastes due to ecosystems self-regeneration; replacement of continual environmental impacts by discrete ones; decrease of specific density of energy production in the area; complex usage of land; use of the computer control systems, reduction of influence on human health.