

## **State Regulation of the Development of innovative Activities in the Energy Sphere of Ukraine in the Digital Era**

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Sustainable and affordable energy is the main requirement for the development and reconstruction of Ukraine in the post-war period. Therefore, one of the tasks of the state administration is to ensure the prerequisites for the reconstruction of the energy sector on an innovative basis. Unfortunately, in the conditions of the war, the energy infrastructure of Ukraine is practically destroyed, therefore it is necessary not only to rebuild and develop the Ukrainian energy system on the basis of innovation but also to take into account the strategy of integrating the Ukrainian energy system into the EU energy sector. Increasing geopolitical conflicts and environmental crises make energy supplies unstable around the world. Therefore, in order to overcome the dependence of Ukraine and the EU on fossil fuels and reduce the consequences of the climate crisis, the energy system needs a deep transformation based on innovation and GRID, in which digitalization will play a central role. State regulation plays one of the key roles in the development and restoration of the energy sector, the main directions of which should be: investments, infrastructure development, and institutional support. Only a comprehensive, holistic approach to the regulation of these areas should ensure energy independence.

The main tools and tasks of the state regulation of the development of the energy sector of Ukraine based on innovation are defined. It is noted that the combination of the green economy and digitalisation implies the emergence of entirely new characteristics of the economy, which must be considered when developing state policy. The leading countries of the EU were studied according to indicators of renewable energy, climate policy, and institutions for the development of innovations. The main problems and risks of digitisation of the energy sector are highlighted: depletion of limited and rare resources; creation of electronic waste; the impossibility of processing some materials; deepening of asymmetric development due to uneven application of technologies and information; unequal access to data; data security, the vulnerability of critical infrastructure. Difficult trade-offs must be recognised between efficiency, which tends to require increasing international coordination and the equitable distribution of benefits and costs. The digital economy radically changes the relationship between people and the environment through changing business paradigms.

Thus, the development of a system of state regulation of the energy sector based on innovation is the most effective long-term solution for the rapid growth of the economy of Ukraine.