

## JUSTIFICATION OF MEASURES TO INCREASE THE EFFICIENCY OF LRES FUNCTIONING

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*Обґрунтовано заходи щодо побудови комбінованих систем енергопостачання, при яких споживач буде мати позитивний економічний ефект*

Determining the conditions under which the consumer will have a positive economic effect from the use of a local system with renewable energy sources (LRES) in relation to the existing centralized energy supply system is relevant for modern times. The economic feasibility is characterized taking into account ДСТУ 3886 – 99 «Енергозбереження», where the criterion for the effectiveness of energy-saving measures is the net positive economic effect of  $E_i$  for the  $i$ -th year from their implementation, taking into account additional costs:

$$E_i = \Delta P_i - Z_i, \quad (1)$$

where  $\Delta P_i$  – the value of the differential economic indicator, *hrn.*;

$Z_i$  – costs for the implementation and use of LRES for the  $i$ -th year, *hrn.*

The following measure includes organizational, technological and technical measures. Organizational and technological measures include the following possible measures: conducting an energy audit, analyzing the created energy balance to determine the types and volumes of energy produced, losses and costs at each stage of its transformation, coordination of the technological process of energy production and consumption, taking into account the consumer's readiness to accept energy from alternative sources at the time of its appearance.

The technical direction of measures includes the development of new and improvement of existing power plants and devices for converting energy from alternative sources in the direction of reducing the cost of their production.

The proposed measures to increase the effectiveness of the operation of the Ministry of Environmental Protection will provide the consumer with the opportunity to: create a competitive energy supply system; get the predicted economic effect from its use; justify the expediency of building LRES already at the first stages of formalizing the technical task.

### List of references

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