

KfW partnership with the Ukrainian energy grid operator Ukrenergo

Date: December 2024

Repair, energy efficient reconstruction, EU integration and protection of Ukrainian electricity grid

Partner	Ukrenergo								
Description	The cooperation with Ukrenergo includes the repair, protection and energy-efficient reconstruction of the energy infrastructure damaged by the Russian war of aggression, as well as its integration into the EU transmission network. This increases the security of energy supply for the Ukrainian population and economy.								
Sell-to	Federal Ministry for Economic Cooperation and Development (BMZ), European Union (EU)								
project volume	<table border="0"> <tr> <td>BMZ</td> <td>approx. EUR 249 million</td> </tr> <tr> <td>EU</td> <td>approx. EUR 127 million</td> </tr> <tr> <td>KfW</td> <td>approx. EUR 74 million</td> </tr> <tr> <td>Total</td> <td>approx. EUR 450 million</td> </tr> </table>	BMZ	approx. EUR 249 million	EU	approx. EUR 127 million	KfW	approx. EUR 74 million	Total	approx. EUR 450 million
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Background

Since the start of Russia’s war of aggression against Ukraine in 2022, the Ukrainian energy infrastructure has been a deliberate target of military attacks. Since August 2024, attacks have further intensified. As a result, millions of households are increasingly affected by power cuts.¹ Particularly in view of the winter, this represents a major challenge for the population, the provision of basic services and for the Ukrainian economy, especially since heating systems are dependent on electricity supply.

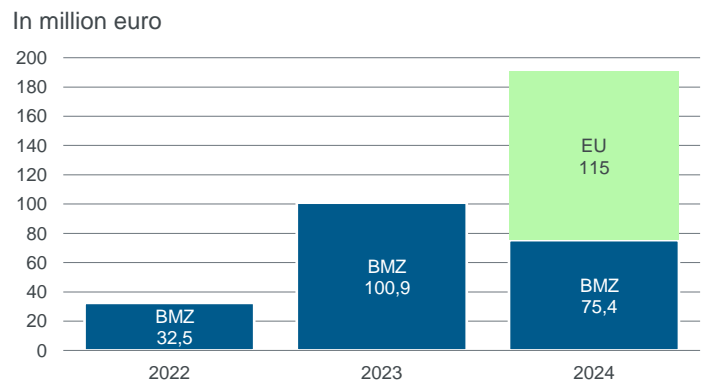
An additional challenge is that Ukraine's electricity transmission system is outdated and in poor condition which leads to low energy efficiency. The network needs to align with European standards and become more energy efficient, not least to enable sustainable interconnectivity and energy exchange with the EU.

Cooperation with Ukrenergo

KfW has been cooperating with the state-owned Ukrainian energy grid operator Ukrenergo since 2006. Cooperation with Ukrenergo has intensified since the start of the full-scale war.

Ukrenergo is one of the main operators of the energy grid system in Ukraine and is the sole operator of high voltage lines. According to Ukrenergo, 70 mobile teams and about 1,500 specialists are on duty to repair transmission network damage as quickly as possible after attacks to maintain the power supply despite the ongoing Russian attacks.

Volume of contracts concluded between KfW and Ukrenergo on behalf of BMZ and the EU since the beginning of the war in 2022



Approaches

KfW’s current portfolio with Ukrenergo amounts to around EUR 450 million. KfW has concluded contracts with Ukrenergo for around EUR 209 million on behalf of the Federal Government (represented by BMZ) and EUR 115 million on behalf of the EU since the start of the war in 2022.

The portfolio addresses both short-term needs directly resulting from the war as well as medium- and long-term objectives:

¹ Source: [International Energy Agency \(IEA\), September 2024](#)

1. **Short-term repair and maintenance as well as protection:** Urgently needed goods and equipment are procured for the short-term repair of relevant energy infrastructure components that have been damaged, such as transformers (see picture). In addition, selected energy infrastructure components are physically protected against attacks. This applies in particular to auto transformers which are essential for operation, since these are very complex and difficult to procure, and their repair and replacement are particularly time-consuming and cost-intensive. At the first level of protection, the auto transformers are protected using gabions, while the second level of protection comprises the construction of concrete enclosures. This is financed in cooperation with other multilateral development banks.
2. **Energy-efficient reconstruction and new construction measures:** To improve energy efficiency, destroyed or outdated substations and transmission lines will be rebuilt or rehabilitated according to modern standards and following the "Build Back Better" approach. Here, KfW supports numerous substations on the territory currently under the control of the Ukrainian government.
3. **Integration into the EU energy network:** In Western Ukraine, substations and new transmission lines are rebuilt to EU standards. The country is a member of the European Energy Community and strives for the permanent synchronisation of its transmission network with the European interconnected grid CESA.

that the limited energy supply can be used with lower losses due to efficient substations and transmission lines. This allowed people in Ukraine to heat their homes, and businesses to continue production.

With the current support, Ukrenergo is able to repair more than 20 substations and procure around 50 parts of critical equipment such as auto transformers. Transformers are crucial for improving national grid integration. This allows consumers to be supplied with energy from remote power generation even when local critical electricity infrastructure is under massive attacks. This ensures the energy supply of approximately 3.4 million households.

In addition, 206 km of overhead transmission lines are being built or upgraded, including across the border with the EU. In order to reduce the risk of war damage, a large number of substations are being protected from attacks through physical protection measures.



Employees of Ukrenergo in front of a transformer hit by a drone in central Ukraine. Image source: KfW Bildarchiv / Jonas Wresch.

In view of the current situation, the programme has been designed with an open approach. This not only allows Ukrenergo to select investment and procurement measures according to the greatest needs and systemic relevance as well as the chance for rapid implementation, but also provides flexibility, which is extremely important given the constantly changing and growing challenges and needs. Ukrenergo is supported by an international team of consultants to implement the measures approved by KfW as quickly as possible.

Results of the cooperation

Cooperation with Ukrenergo has helped to largely maintain the electricity supply in winter 2023/2024 through repair and reconstruction measures. The energy-efficient approach ensures

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