

Achieving energy security through greater energy efficiency

Ukraine's energy supply is on the brink of collapse due to the war, a situation that can be eased by increasing energy efficiency.

The challenge: securing energy supply against the backdrop of war

In Ukraine, energy security is not just a technical and economic issue. It also has humanitarian and security policy implications. Maintaining a reliable supply of electricity and heat is of the utmost importance for the country and its people. To secure its energy supply in the long term, Ukraine also needs to increase energy efficiency.

Ukraine faces major challenges in securing stable energy supply and introducing vital reforms in the energy sector. The goal is to achieve a reliable, socially equitable, competitive and climate-neutral supply by 2050. As a candidate for accession to the EU, Ukraine is also targeting full integration into the European electricity and natural gas grid and the adoption of EU energy directives. In this regard, it plans to further reduce energy consumption by 2030.

This transition is taking place against the backdrop of the ongoing war with Russia, which has purposefully targeted Ukraine's energy infrastructure since the beginning of the invasion.



Project name:	Promotion of Energy Efficiency and Implementation of the EU Energy Efficiency Directive in Ukraine
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Implemented by:	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
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Contact:	Gregor Brömling, gregor.broemling@giz.de

These attacks almost completely wiped out the energy supply in 2022–2023 with more than twelve million people affected by power, heating and water outages. Since the beginning of 2024, power-generating facilities specifically have suffered the most damage requiring not only rapid repairs but also the simultaneous replacement of outdated infrastructure. These efforts have great potential to improve energy efficiency.

Our approach: increasing energy efficiency across the board

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Swiss State Secretariat for Economic Affairs (SECO), the GIZ-implemented project Promotion of Energy Efficiency and Implementation of the EU Energy Efficiency Directive in Ukraine supports the country in its transition towards an environmentally friendly and efficient energy supply. In doing so, we are contributing to energy security and the long-term decarbonisation goals of the EU and the Paris Agreement.



Build back better: Vocational school students in Kharkiv learn how to install energy-efficient windows in the war-damaged school building.

For example, we advise the Ukrainian Government on the implementation of European Directives 2012/27/EU and 2010/31/EU and support the development of the Ukrainian legal framework. We facilitate the implementation of energy efficiency measures in municipalities and anchor the topic of energy efficiency in vocational education and training in companies. We also offer energy management training for local government staff and support the introduction of energy management systems and the development of municipal energy plans.

In the Sumy and Chernihiv regions, we advise companies that have been destroyed or damaged by the Russian war of aggression on damage assessment, technical analysis and modern and energy-efficient reconstruction. We focus in particular on the initial and further training of vocational school students, on making technical careers in the engineering sector more attractive and on promoting gender equality in the energy sector.



Energy security: Thanks to the photovoltaic system on the roof, a children's hospital close to the front line can look after its patients even during power cuts.



‘Help for the entire region’

Olha Zaika owns ‘Bakery No. 2’ in Chernihiv. The project funded a new electric oven that enables the bakery to operate independently of gas, saving 205 megawatt hours of energy and 45 tonnes of CO₂ per year.

Our results: comprehensive support for energy efficiency initiatives

- 14 laws and regulations on energy efficiency have been passed, including seven during the war.
- €315,000 has been provided for a pilot project on increasing the energy efficiency in the building of the Ministry of Finance of Ukraine.
- 25 municipalities have set up an energy management system and continue to receive support and advice on how to manage energy in fragile situations.
- 24 Ukrainian municipalities have received grants of €100,000 to implement energy efficiency and critical infrastructure projects.
- The city of Kyiv received a grant of €500,000 to install solar PV systems on three hospitals with the capacity of 60, 100 and 120 kilowatts. In conjunction with energy storage systems, these installations ensure uninterrupted medical care even during power outages and permit 24-7 operations.
- 18 nursery schools will receive solar thermal systems to ensure an uninterrupted supply of hot water.
- 10 companies affected by the hostilities in the Sumy, Kharkiv and Chernihiv regions have received grants totalling €250,000 euros and invested in equipment and materials to boost their energy efficiency.
- 25 private and municipal companies that were relocated or damaged as a result of the war have received training on how to become more energy efficient. 15 companies have each received a grant of €10,000 and implemented energy efficiency measures.
- More than 3,570 students have completed professional courses through the project, while more than 640 teachers have taken part in training events.
- 250 media representatives have joined a recently established journalists’ network on energy efficiency.

‘We have decided to stay and continue working because we know that many people need our products. We supply the entire Chernihiv region with our baked goods. We are truly grateful for the support. The help we’ve received benefits not just us, but the entire region.’

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GIZ Ukraine
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16b, Antonovycha St.
01004 Kyiv, Ukraine
I www.giz.de/ukraine

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