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# The future of urban heating services

District heating has a long history in Ukraine. A nationwide reform is set to lead the sector into the future

## The challenge: district heating must be climate-friendly

Since the Soviet era, district heating has been the main source of heat for private households, municipalities and industrial enterprises in Ukraine's cities. In 2021, some 250 district heating utilities provided services to around 26 million people – close to 60 per cent of the Ukrainian population. Gas is used almost exclusively as the primary energy source: in 2018 the district heating sector accounted for around 18 per cent of total gas consumption in Ukraine.

However, the country's district heating infrastructure is facing considerable challenges and will need to be modernised if it is to meet current energy and environmental policy requirements. With gas combustion responsible for almost 12 million tonnes of carbon emissions, district heating is one of the country's main causes of greenhouse gases. By 2050, the sector aims to become carbon neutral in line with EU regulations while at the same time achieving enormous gains in energy efficiency in a bid to become a low-cost option in the long run. However, many municipal district heating utilities are heavily indebted and thus unable to modernise their systems.



High carbon emissions: district heating in Ukraine is almost entirely dependent on gas.



**Project title:** "Reforming the District Heating Sector of Ukraine" (ReWarm)

**Commissioned by:** German Federal Ministry for Economic Affairs and Climate Action (BMWK) with funds from the International Climate Initiative (IKI)

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**Contact:** Dr. Winfried Damm, winfried.damm@giz.de

Furthermore, Ukraine's energy infrastructure has been severely damaged or destroyed as a result of Russia's war of aggression. Targeted attacks on infrastructure and power shortages pose major challenges to the supply of energy services to the population. Ukraine must therefore step up its search for permanent alternatives to ensure that its cities have a reliable supply of district heating.

## Our approach: rethink the district heating sector

With the "Reforming the District Heating Sector of Ukraine" (ReWarm) project, GIZ is supporting the Ukrainian government in developing a national district heating strategy. The project was commissioned by the German Federal Ministry for Economic Affairs and Climate Action (BMWK).

The long-term district heating plans are intended to provide impetus for specific investments and map out the course for carbon-free district heating. At the same time, we are aiming to achieve considerable energy savings. This will not only reduce the financial losses of the municipalities but also boost resilience, make service delivery more customer friendly and at the same time secure local jobs.

At the moment, district heating is in danger of being replaced by decentral gas and electric heating systems, which would make local heating providers obsolete, a situation comparable to developments in East Germany after 1990.

In addition to strategy development, we are also advising the Ministry for Communities and Territories Development of Ukraine on adapting the legal framework for the reform of the district heating sector.

Together with the selected municipalities, we are drawing up long-term heating strategies and supporting their implementation while observing EU directives. We expect a sharp reduction in demand for heating together with considerable efforts to optimise district heating networks and adapt heat generation processes. A mix of waste heat recovery, solar heating, biomass and large-scale heat pumps could offer an alternative to gas – depending on the region.



*Worn-out infrastructure in Zviahel: pipes for transporting heat to homes. Modernisation is urgently needed.*



*Best wishes for successful cooperation: Kyiv Mayor Vitalii Klychko and GIZ project manager Dr. Winfried Damm at the signing of the cooperation agreement in July 2024.*



## **‘An important step on the path towards energy independence’**

**Vitalii Klychko**, Mayor of Kyiv

## **Our results: reform is ready to go**

- Since the start of the project in 2023, we have evaluated the current state of the Ukrainian district heating sector.
- Agreements have been concluded with the pilot municipalities Zviahel, Cherkasy, Chernihiv, Odesa and Kyiv, and corresponding work groups have been established. ReWarm cooperates with Kryvyi Rih in the field of heat supply.
- We have set the stage for regular exchanges between the Ukrainian Ministry and relevant German energy associations as well as international actors. This will enable Ukraine to benefit from valuable lessons learned, for example with regard to EU requirements and the transformation of the district heating sector in East Germany.
- In numerous public presentations, we have raised awareness among Ukrainian heating utilities of the need for root and branch change, among other things as a result of EU requirements. We will be happy to provide interested parties with copies of the presentations on request.

*‘The signing of the Memorandum of Cooperation between the Kyiv city administration and GIZ is an important step on the path towards Kyiv’s energy independence – especially considering the current energy shortages and the constant attacks on critical infrastructure.’*

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**GIZ Ukraine**  
“Reforming the District Heating Sector of Ukraine”  
(ReWarm)  
16b, Antonovycha St.  
01004 Kyiv, Ukraine  
I [www.giz.de/ukraine](http://www.giz.de/ukraine)

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**Text:** Jörn Leonhardt

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