

PROJECT FACT SHEET

Modernisation of the district heating system in Horishni Plavni, Ukraine

The Ukrainian economy is energy intensive with inefficient energy use and the District Heating system, in particular, is in urgent need of modernisation. Currently some 7.5 million people in Ukraine are connected to the district heating networks, which accounts for 43% of all households in the country. Of the centralised heat supply, 73% is based on natural gas. Modernisation of the district heating systems in Ukraine could lead to some 40% in energy savings.

The City of Horishni Plavni in Central Ukraine is located 100 km south-west of Poltava and has 52,000 inhabitants. The city was built in 1960 as a residential area for the Poltava mining company, now owned by Ukraine's most important iron ore-mining company Ferrexpo Poltava Mining. Today there are two gigantic open pit mines and several spoil tips in the city, north-east and south of the residential area.

Teploenergo is the supplier of centralised heating and hot water in Horishni Plavni and operates four boiler houses. The main boiler plant, established in 1963, supplies 84% of the total heat demand and 90% of all households in the city with heating energy.

Scope of project

The aim of the project is to introduce renewable fuels and energy-efficiency measures in the district heating system in the city of Horishni Plavni.

The existing main production facility will be modernised and upgraded with new biofuel boilers designed to use sunflower husk as the primary fuel.

Measures to be installed: two new boilers for renewable fuels with a total capacity of approx. 8 MW; new gas-fired boilers in reserve and to be operated in peak seasons; a system for remote control and management of the district heating in real time; and some 500 meters of the main district heating pipelines to be replaced.

Expected savings:

- Gas consumption to be reduced by approx. 32%, which equivalents to 7.85 million m³ / year.
- Electricity consumption to be reduced by 10%, which equates to 800 MWh / year.
- CO₂ emission to be reduced by 17,000 tonnes / year.
- Cost savings of EUR 1.5 million / year

Expected benefits in numbers

	Gas 1000 m ³ /year	Electricity MWh/ year	CO ₂ Tonnes/ year
Biofuel boilers x 2	6,534	0	13,394
Gas boilers x 2	609	290	1,579
Auxiliary equipment	307	439	1,132
DH pipeline replacement	152	0	313
SCADA surveillance system	243	78	588
TOTAL	7,845	807	17,006

Expected benefits

- Reduced energy and maintenance costs for district heating services in Horishni Plavni
- Improved management of energy use
- Demonstration of district heating operation based on renewable fuels – in line with industry best practices

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Financing

The total investment for the project is EUR 8.25 million. In addition to NEFCO, the Eastern Europe Energy Efficiency and Environment Partnership (E5P) will support the project with EUR 1.5 million in grant funding, and the municipal enterprise Teploenergo will contribute with EUR 1.2 million. Technical Assistance for preparation and implementation of the project has been financed by Sweden.

About NEFCO

The Nordic Environment Finance Corporation (NEFCO) is an international financial institution (IFI) established by the Nordic countries in 1990.

All of NEFCO's activities focus on generating positive environmental impact. NEFCO finances and implements projects related to climate change prevention and green growth investments across the world.

Over the years, NEFCO has financed more than 1000 small and medium-sized, private and public sector projects across different sectors in 60 countries, with a strong emphasis on Eastern Europe, the Baltic Sea, and the Arctic and Barents regions. NEFCO's headquarters is located in Helsinki, Finland, and it also has an office in Kiev, Ukraine.

Read more at www.nefco.org

NEFCO	EUR 5.0 million
E5P	EUR 1.5 million
Municipal company Teploenergo	EUR 1.2 million
Sweden, Technical Assistance	EUR 0.55 million
TOTAL	EUR 8.25 million

About E5P

The Eastern Europe Energy Efficiency and Environment Partnership (E5P) is a €180 million multi-donor fund managed by the EBRD and designed to promote energy efficiency investments in Ukraine and other eastern European countries. The fund was established under an initiative of the Swedish government during its presidency of the European Union (EU) in 2009.

E5P complements energy efficiency loans provided by financial institutions including the European Bank for Reconstruction and Development, the European Investment Bank, KfW, NEFCO and the World Bank Group. Contributors to E5P are the EU and the US, as well as Denmark, Estonia, Finland, Germany, Iceland, Ireland, Latvia, Lithuania, Norway, Poland, Slovak Republic, Sweden, Switzerland and Ukraine.

Read more at e5p.eu

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