

International Practices Overview: Project and Program List

Some programs and projects aimed at modernisation of the district heating in Ukraine have already been implemented or are currently ongoing. They are managed by other international institutions, such as Nefco, GIZ, and have been chosen here because they can be considered as good examples of district heating programming. In addition, the implementing organisations can be considered as potential partners in future projects and programs.

The information in this document was gathered by the means of attended conferences, presentations, consultations, and communications with stakeholders, as well as through open-source materials. The collected data is actual as of July 1st, 2023.

Information on the projects is structured in the way to answer following questions:

1. **What is being done**
2. **Location**
3. **Who is implementing (+subcontracting)**
4. **Who is financing**
5. **Form and amount of financing**

Implemented projects

CHPs in Zhytomyr №1

1. CHP - 1.2 MW electric and 7.1 MW of heat
2. Zhytomyr
3. GIZ
4. Switzerland + local budget
5. EUR 10 in total (7.5 million EUR by Switzerland)

Ongoing projects

Lutsk District Heating

1. 5MW biomass boiler and 314 IHSs (Individual Heating Substations)
2. Lutsk (Volyn region)
3. Italian contractor Amarc DHS SRL
4. ESP
5. EUR 4 million grant initially, 0.4 million grant top-up approved later

Chernivtsi District Heating

1. 269 IHSs
2. Chernivtsi
3. Egis (France)
4. ESP
5. EUR 3.52 million grant

Lviv District Heating

Prepared by Mariana Varkaliene and Dalia Krapavickaitė in the framework of [Create Lithuania project](#).

1. Replacement of DH networks, installation of SCADA system, construction of a new biomass-fired CHP + 409 IHSs
2. Lviv
3. Contractor Axis Industries
4. E5P
5. EUR 20 million loan + EUR 10 million grant

Ternopil District Heating

1. Supply and installation of IHSs, co-financing the new biomass boiler + replacement of DH pipelines, reconstruction of boiler houses replacement of large distribution pumps and co-financing of the new biomass boiler
2. Ternopil
3. AMARC
4. E5P
5. EUR 5 million grant + EUR 10 million loan

Zhytomyr District Heating

1. 76 IHSs and replacement of circulation pumps, installation of biomass-fired CHP
2. Zhytomyr
3. Contractor Polytechnik, Austria
4. E5P
5. Grant¹

Likely the DH Company will launch a re-tender for the CHP part.

Horishni Plavni District Heating

1. Substituting a part of current DH production based on gas to renewable fuels, primarily sunflower husk: installation of 7 MW biofuel boiler in the main boiler house
2. Horishni Plavni
3. Nefco
4. E5P grant, Sweden grant, Nefco loan
5. Up to EUR 1.5 million, EUR 0.2 million, up to EUR 5 million

CHPs in Zhytomyr №2

To be implemented in Q4 2023 within the same cooperation as **CHPs in Zhytomyr №1**

Programs

DemoUkrainaDH² (established by Nefco with financial support from Sweden and the Eastern Europe Energy Efficiency and Environment Partnership (E5P) fund) **programme has financed a total of 13 demonstration**

¹ Presumed form of financing

² Source: <https://demo-dh.org.ua/index.php>

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projects. 3 of them included biomass boilers. Priorities are efficiency and steadiness of the DH network operation, as well as decreasing energy consumption.

Projects have been fully implemented in 10 cities: Berdychiv, Chernivtsi, Ivano-Frankivsk, Kamyanets-Podilskyi, Myrhorod, Oleksandria, Poltava, Ternopil, Vinnytsia and Zhytomyr.

Projects in three cities, Mykolaiv, Poltava and Uman, were supposed to be implemented during 2022.

Energy Efficiency in Public Buildings in Lutsk by NEFCO

A significant investment fund project that was approved for financing in 2017 and co-financed by the Eastern European Energy Efficiency and Environment Partnership (E5P), which concerns the renovation and implementation of energy-efficiency measures in 40 public buildings, mainly schools and daycare centers in the city of Lutsk in Ukraine (NEFCO, Annual Review 2017).

As an extension of DemoUkrainaDH, **Sweden-Ukraine DH (SUDH)**³ was established. Includes 20-21 solutions, some waste to heating projects, was disrupted by war, now rescheduled and reshaped. Nefco prefers working through grant support.

Main wartime programming of Nefco is dedicated to **critical infrastructure**. Dedicated to northern Kyiv oblast, deoccupied territories, focuses on water and DH. Modernisation or replacement of boiler plants, using biomass and gas, small or medium heat generation projects; first tenders are launched, more are underway. Focus on energy efficiency and biofuel, lots of biogas developments.

KeepWarm⁴ is an EU-funded project whose objective is to accelerate cost-effective investments in the modernisation of District Heating Systems (DHS). Improvements in order of importance:

1. Retrofitting of the existing distribution system, particularly grid efficiency;
2. Increasing the use of renewable energy sources, including waste-to-energy;
3. Re-use of excess heat from industry;
4. Introduction of ICT technologies for heat distribution management.

³ Source: <https://dh-ukraine.nefco.int/sweden-ukraine-dh/>

⁴ Source: <https://keepwarmeurope.eu/countries-in-focus/ukraine/english/>