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## **Why Poland?**

Polish heating systems have the largest number of households connected to the system in the EU. Approximately 50% of the Polish population is connected to district heating network. In terms of the volume of heat supplied to customers, Poland is the third in Europe and the second in the EU after Germany. The heat production is based on coal in 62%. There are about 389 DH companies in Poland licensed by the Energy Regulatory Office (ERO).

The biggest number of these companies are in small and medium cities in Poland up to 60,000 inhabitants.

The majority of DH companies are SMEs and are owned by municipalities. The big district heating companies are located in the big cities and are owned by the state owned players: PGE, Orlen, Tauron, and private as Veolia, Fortum Power.

83% of all heating systems in Poland do not meet the criteria of "energy efficient system"

The total length of the heating network in Poland is 21,701 km. The actual annual heat losses in transmission, production of heat may vary between 10-20%, exceeding 40% in the summer.

The district heating network parameters are adjusted to feed water temperature above 100%, the lowering of temperature will be the key factor for implementing RES solutions.

The district heating market will undergo the process of transformation resulting from FIT for 55 package and Polish Energy Strategy 2040 policy. According to the targets the level of RES in district heating will amount to 28% in 2030. The energy efficiency of primary energy is set to 23% to 2030. The transformation of district heating systems assumes development of high-efficiency cogeneration, heating power plants, increasing the use of renewable energy and waste in district heating, modernization and expansion of heat and cooling distribution systems, and popularization of heat storage and smart district heating networks. The required solutions are the flag products of district heating industry in Denmark and can be implemented on the Polish market.

The most important government document guiding the development of the district heating sector is the Strategy for District Heating to 2030 with an Outlook to 2040 to be released in the 1Q of 2025. It follows the strategy of the National Energy and Climate Plan (KPEIK). The district heating strategy aims to identify actions that will meet EU targets and ensure a secure supply of affordable heat to end users. The development strategy documents assume an increase in the share of RES in the heating sector to 35.4%. Biomass accounts for the largest share of RES, while heat pumps (e.g. wastewater heat recovery systems) are becoming increasingly popular.

To meet all the challenges facing the sector, the need for the following units was estimated:

- construction of new cogeneration sources 5,100 MWe;
- modernisation of existing CHP sources - approx. 5 000 MWe;
- construction of heat sources using renewable energy - approx. 8 000 MWt.
- Other heat production technologies, such as heat recovery, heat storage, waste management approx. 1,500 MWt.

Currently, the EU has made funds available under the Modernisation Fund, of which about 34% has been allocated to Poland. This is an amount of around EUR 14 billion in the 2021-2030 perspective.