Energy Policy Implementation and WtE:

What does it mean for District Heating?

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Chamber of Commerce
Polish District Heating

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IGCP as a representative of the sector

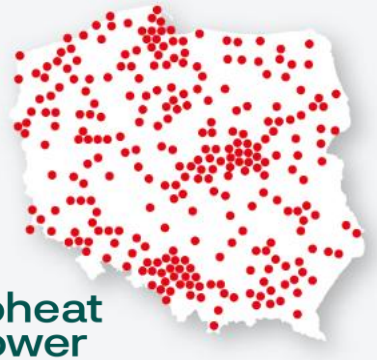
Chamber of Commerce Polish District Heating (IGCP)

The Chamber unites **250** members of different ownership structure and diversified sales volume of heat from below 100 thousand GJ to 40 million GJ per year.

Core activities of the Chamber:

- evaluation of projects and substantive amendments to existing legislation;
- analysis of possible regulatory changes;
- representing economic interests of members to the state authorities, local governments, society, as well as scientific and economic institutions;
- educational and training activities (including the pioneer nationwide system heat promotion programme).

Izba Gospodarcza Ciepłownictwo Polskie



member of Euroheat & Power

250

IGCP members

1994

Year of establishment

District heating sector in Poland is well-developed

Key numbers

398 licensed heating companies

22 837 length of heating networks (km)

335 430 total heat sales (TJ)

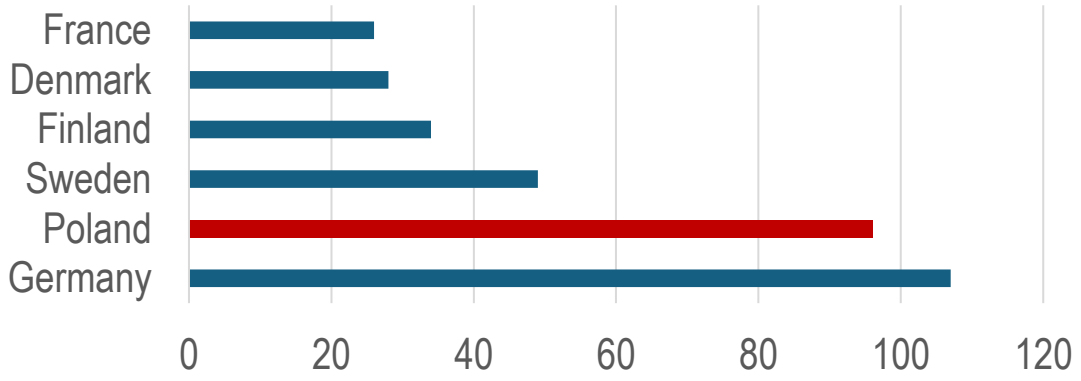
62% share of heat from CHP

34 667 heating power ordered by customers (MW)

15 milion

district heating customers in Poland

District heating sales in selected European countries (in GWh)



Source: Euroheat&Power, 2024; Energy Regulatory Office of Poland

The heating industry is in the process of decarbonisation

Energy sources in Polish (2003; 2023) and EU (2022) district heating

	Poland 2003	Poland 2024	EU 2022
Coal, oil & peat	86,9%	**67,4%**	24,3%
Natural gas	4%	**13%**	26,4%
Waste	0%	**2,1%**	1,8%
Bioenergy	0,2%	**14,4%**	34,4%
Geothermal	n/a	**n/a**	2,5%
Heat pumps & e-boilers			1,9%
Waste heat			8,2%
Solar thermal			0,2%

The main challenge is to **reduce our reliance on fossil fuels** and at the same time, provide heat that is **affordable and local**

Source: Eurohear&Power, 2024; Energy Regulatory Office of Poland.

Waste-to-Energy sector in Poland

Key data

- There are **11 WtE plants** in operation in Poland.
- Municipal waste accounts for only **2% share** in heat generation in Poland.
- According to national regulations, **42% of municipal waste is considered a biogenic part of waste**.

Waste-to-Energy plants in Poland

Source: Own elaboration based on Stowarzyszenie Producentów Energii z Odpadów and Energy Regulatory Office of Poland

**WtE in Warsaw is at the final stage of modernisation and extension*

Heat from WtE is affordable and decreases fuel dependency

Key data

The price of heat generated from municipal solid waste in Poland in the last three years was one of the lowest per GJ and **significantly lower than the average for different types of fuels**.

25 milion

tonnes of **coal** used in Poland annually for heat generation

4,5 milion

tonnes of **non-recyclable municipal waste** produced in Poland annually

WtE contributes to reducing our fuel dependency and decreasing the price of heat for final customers.

WtE operators take responsibility for the fractions of waste

WtE contributes to reaching the goals of waste management

Waste-to-Energy treats the non-recyclable residual waste that would otherwise **be landfilled**.

According to national statistics, about **38%** of the waste collected in Poland **ended up in landfills** in 2022.

We still need WtE plants in Poland.

As an example of sector coupling, they are beneficial for both the heating sector and the waste management.

Efficient district heating and cooling (EED)

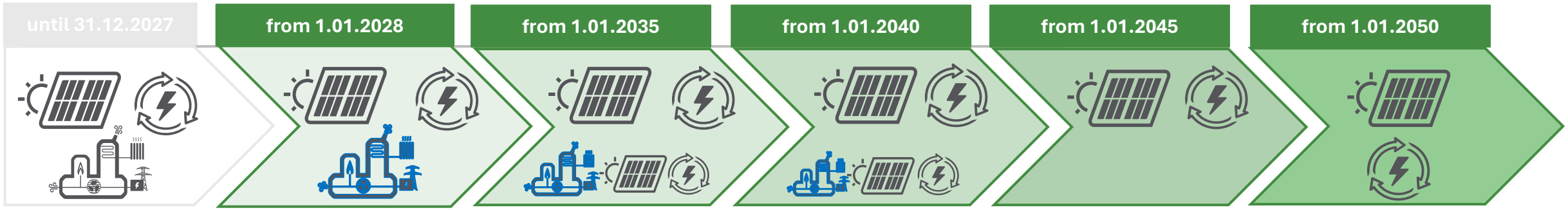


Chart legend

- heat from renewables
- waste heat
- heat from high-efficiency cogeneration
- heat from cogeneration

Gradually changing definition of efficient district heating and cooling systems is our decarbonisation pathway.

In Poland, many efficient DH systems have their status thanks to cogeneration units. However, this will become insufficient within a few years. Fuel mix used in heating sector in Poland must be therefore changed completely.

Defining waste heat is key

Heat recovered from WtE plants should be considered waste heat

Warsaw Metro

Waste heat and cold:

unavoidable heat or cold generated as by-product in industrial or power generation installations, or in the tertiary sector, which would be dissipated unused in air or water without access to a district heating or cooling system, where a cogeneration process has been used or will be used or where cogeneration is not feasible

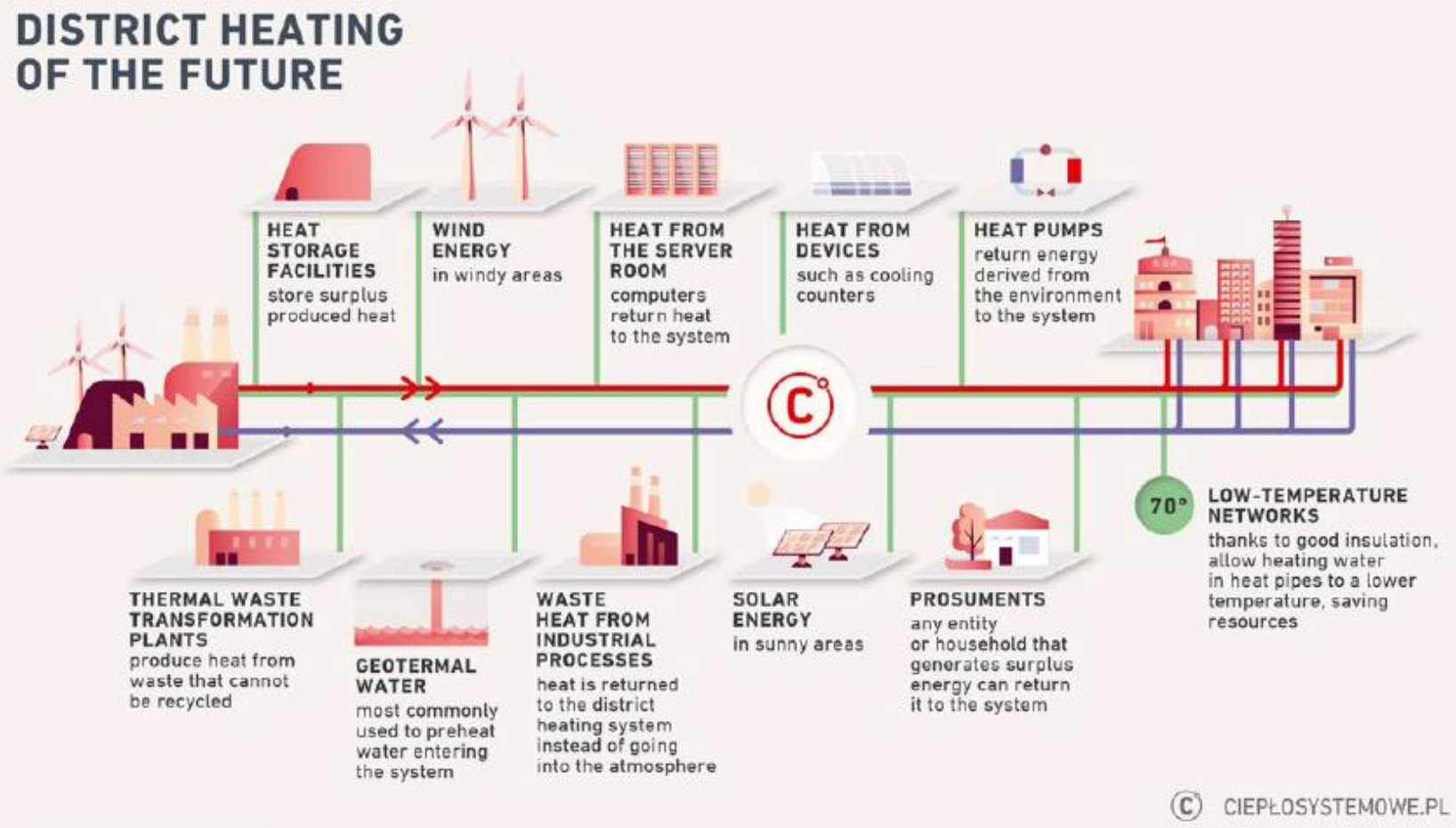
Data centre / Beyond.pl

Waste heat in industry processes

WtE plant, Łódź (under development)

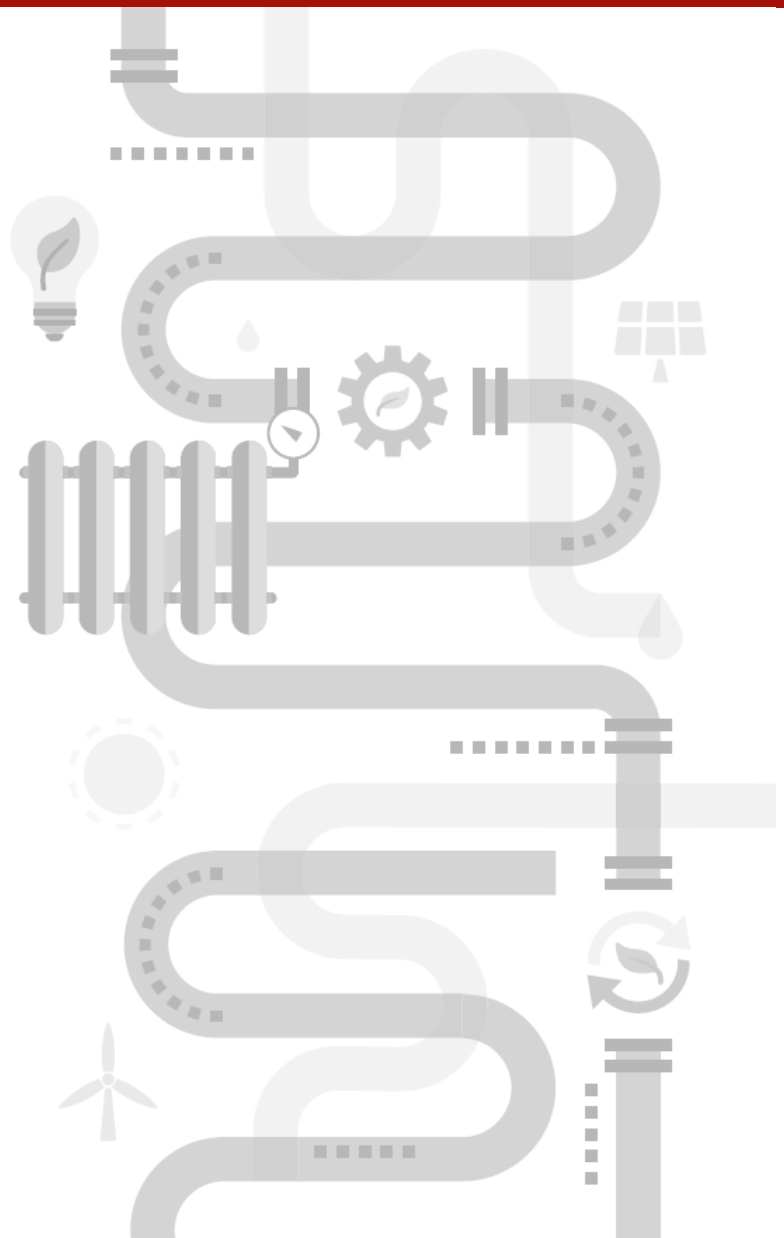
WtE plants can contribute to the district heating of the future

Energy mix in the DHS will be diversified and green



There is no single solution to the energy transition needs of district heating.
Our approach should be technology-neutral.

Summary: main benefits of WtE for district heating



Responsible approach to circular economy

Non-recyclable municipal waste should not be sent to landfills, but rather processed for energy recovery.

Sector coupling is a future

As an important element of waste management system, WtE plants divert waste from landfilling. At the same time, they generate heat needed for DHS.

Affordability

WtE plants are a source of affordable heat generated from fuel available locally, not imported.

Thank you for your attention!

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