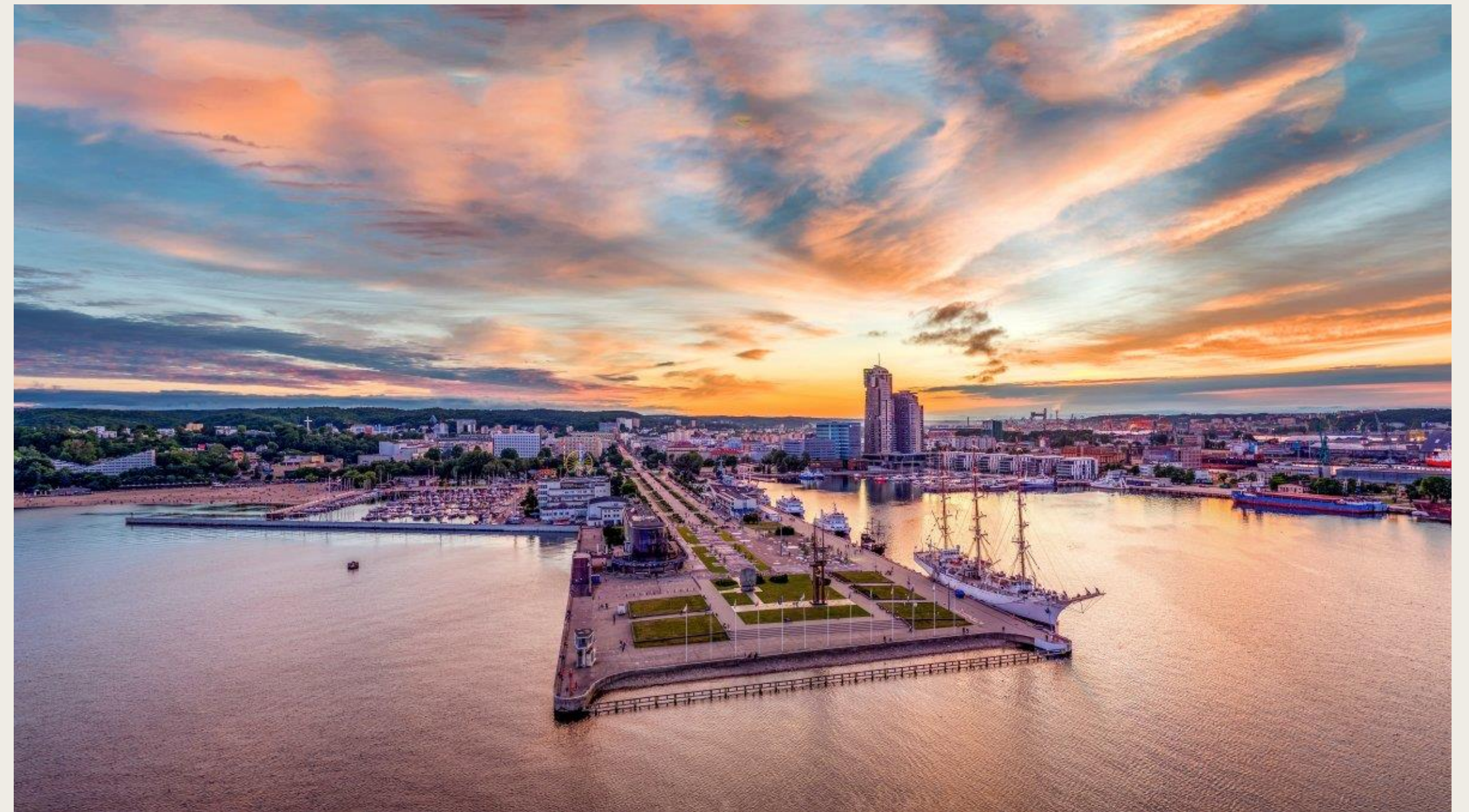


District Heating Enterprise Ltd. (OPEC)

Kamil Roszkowski

18 April 2023



Who we are?

- District Heating Enterprise Ltd. (OPEC) is a municipal company with 100% Polish ownership
- We operate in Pomeranian District (Gdynia, Rumia, Reda, Kosakowo and Wejherowo)
- We have over 60-year-experience in district heating



Gdynia – Rumia - Reda- Kosakowo heating system

Gdynia, Rumia Reda and Kosakowo are supplied with heat produced in the Polish Energy Group power plant. We provide heat to 60% customers in Gdynia and 30% customers in Rumia/Reda.

Heat and power plant in Gdynia:

- Installed thermal power: **462 MWt**
- Installed electric power: **110 MWe**



Wejherowo Power Plant

Wejherowo Town is supplied in 50 % from our heating system (central heat plant and cogeneration power plant powered by natural gas).

Heat and power plant in Wejherowo:

- Net thermal power: **48 MWt**
- Thermal power „Nanice”: 42 MWt
- Thermal power cogeneration: 6,0 MWt
- Electricity power cogeneration: **6,8 MWe**



Cogeneration Rolls-Royce engine in Wejherowo

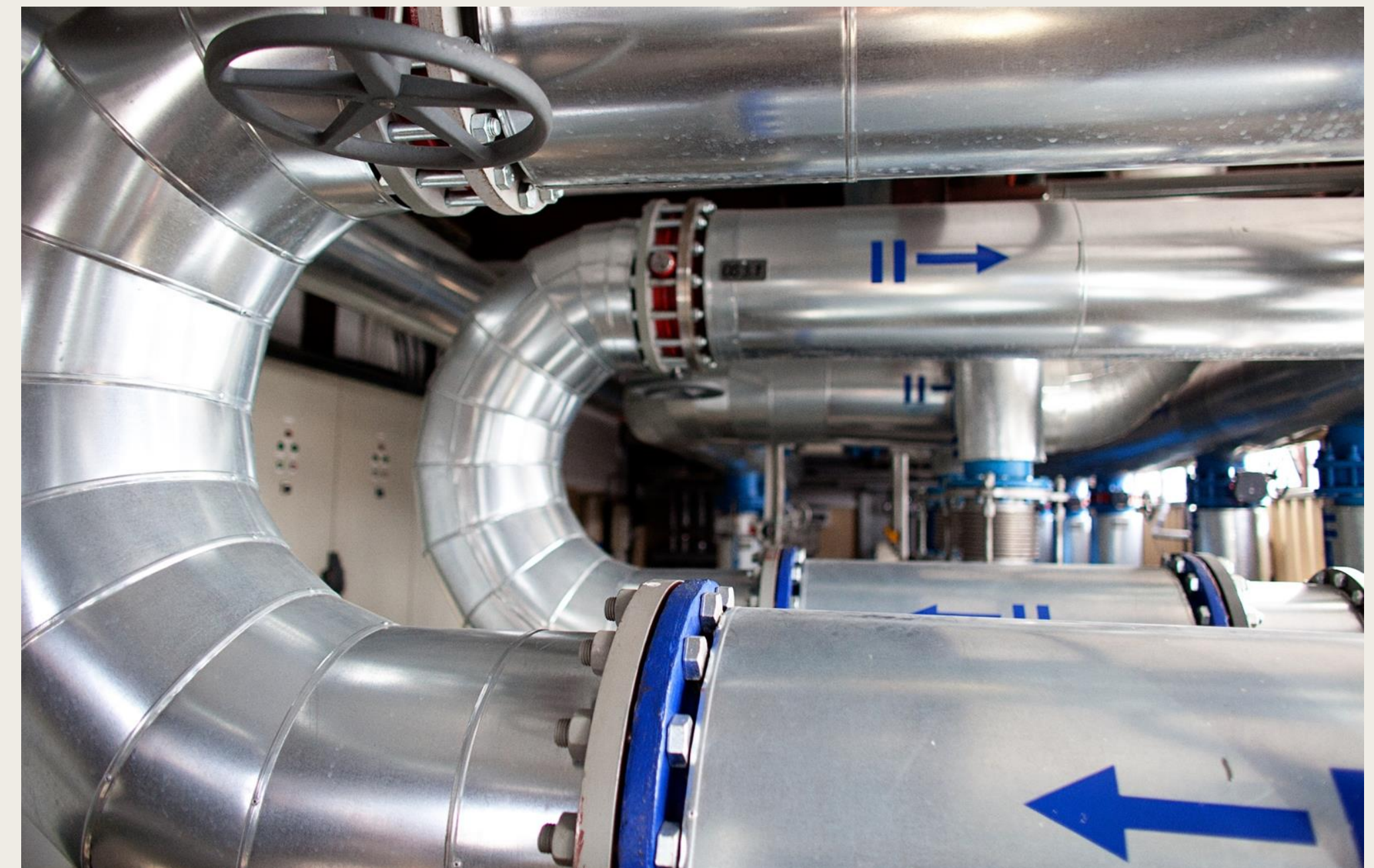
Technical infrastructure

Gdynia – Rumia – Reda - Kosakowo

- Transmission system length: 290 km
- Distribution system length: 120 km
- Group heating substations: 162
- Individual heating substations: 1732
- Gas boiler rooms: 45

Wejherowo

- Transmission system length: 60 km
- Distribution system length: 8 km
- Group heating substations: 19
- Individual heating substations: 409
- Heat plant: 1
- Cogeneration: 1



Planned transformation in OPEC

2023 Carbon technologies

Gas technologies

Green technologies 2040

We develop green transformation strategy for our company

Challenge

- Green Deal strategy, Fit for 55...
- Increase in the cost of energy resources
- Increase in construction costs of new facilities
- Increase in the cost of EU ETS
- The necessity to be an effective system
- No financial support systems
- Uncertain geopolitical situation in Europe



Our pro-ecological activities

- Solar panels on 7 buildings with total power 147 kWp (117.600 kWh)
- AI pilot installation with Grundfos on Karwiny Gdynia (lowering the temperature, IV generation system)
- Heat pumps (example: hest pump in Rumia, 35 kW, efficiency over 120%, LowTEMP Project)
- Implementation termovision and heat loss maps for Gdynia, Rumia, Reda, Wejherowo



BSAM Pilot Case



European
Regional
Development
Fund

- 20 devices have been installed in our network (Wejherowo)
- the data is sent to the application
- we can monitor the condition of our network



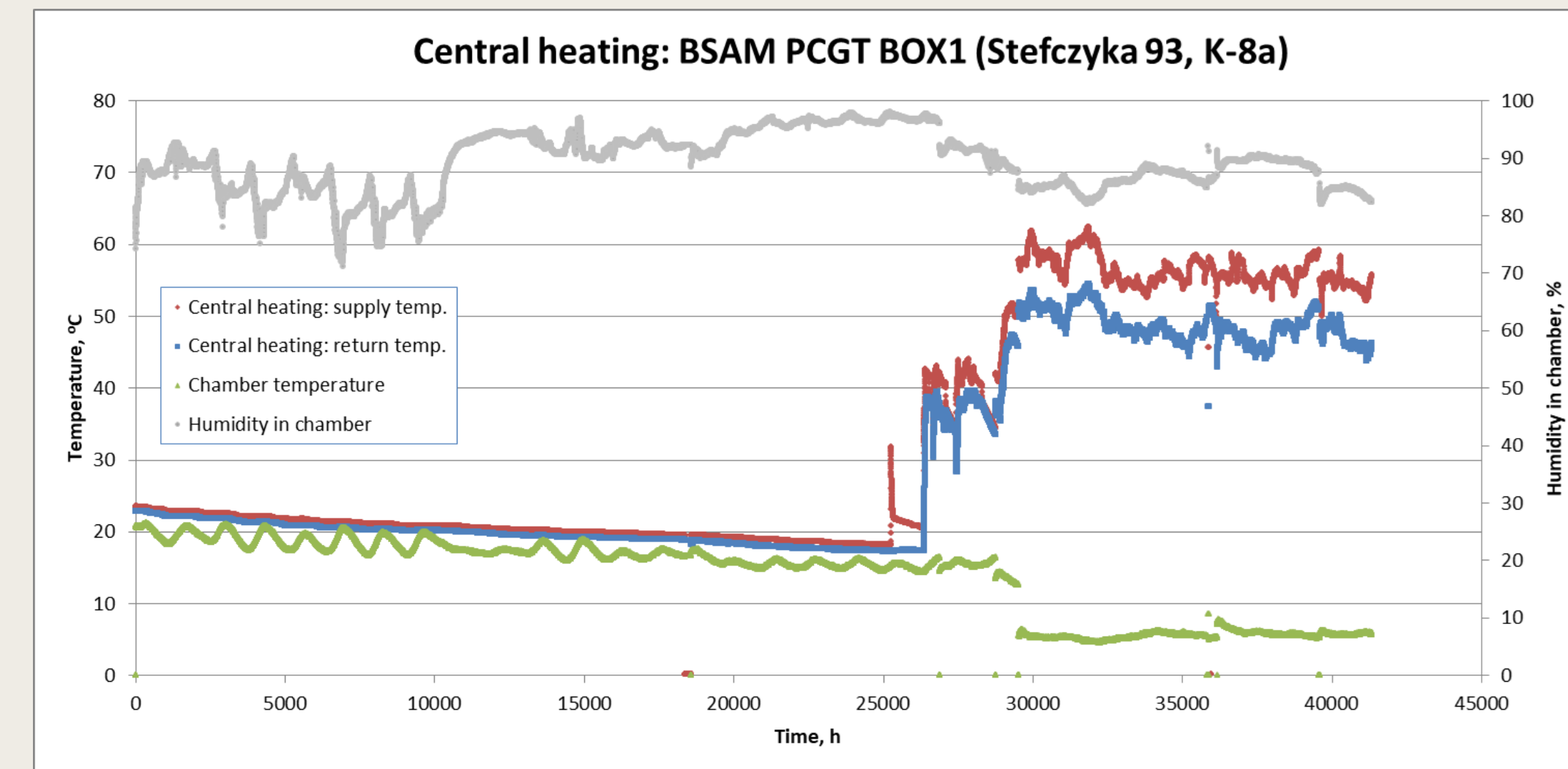
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What we gain thanks to Smart Boxes:

- new network monitoring system (corrosion monitoring)
 - simple, not expensive
- preventing failures
- planning maintenance works (repairing, replacing)





SAFE HEAT FOR YOU

District Heating Enterprise Ltd.

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