

HOPE Programme Poland 2023





Who are we?



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Where have we been in Poland?



Copernicus Hospital Gdansk



University Hospital Opole



Source: www.freeworldmaps.net



The Polish approach to climate change



Source: rawpixel.com on Freepik.com; Najgłębszy odwiert w Polsce/Grzegorz Momot /PAP



We have seen different approaches to energy saving in the hospitals in Gdansk and Opole

**Decrease the demand of energy
of the buildings**

Use more efficient equipment

**Use of renewable sources of
energy**



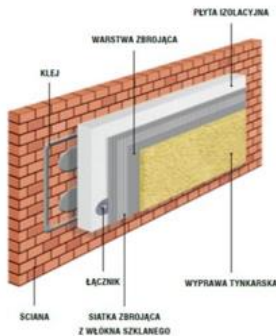
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- Presence detectors to turn lights on/off
- Switch off lights in areas that are not in use
- Replace old windows with new triple glazing windows
- **Thermal isolation of walls**
-

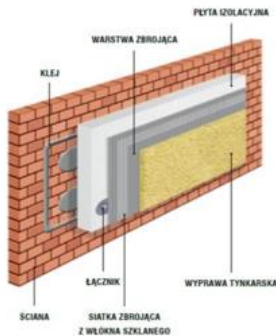




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Use more efficient equipment

- Use of LED Lighting
- Aerators in faucets
- **Plan to use cogeneration installations (CHP)**
- **Use of central data process Center**
- ...

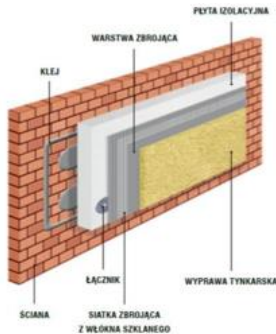


Use of renewable sources of energy

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Use of renewable sources of energy

- Use of Solarheating for warm water
- Use of photovoltaic as source of energy
- Plan to use Biogas energy in the future
- ...



I) Insulation modernisation (1)

Division of buildings:

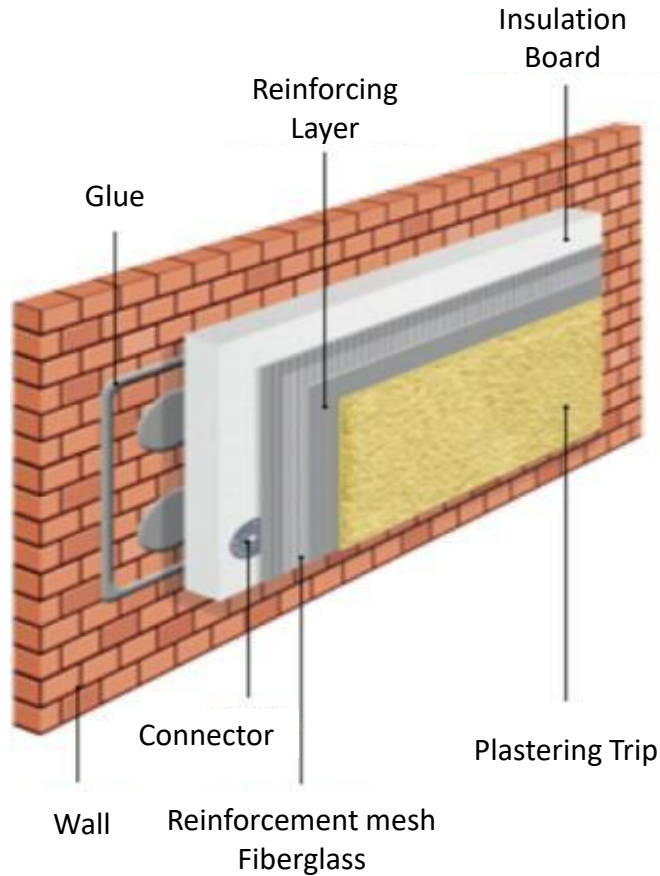
- Main complex of hospital buildings
- Complex of Medical Facilities buildings
- Building of the Research and Development Center, **a building adapted from a former laundry**
- Complex of technical buildings
- A complex of administrative and residential buildings.



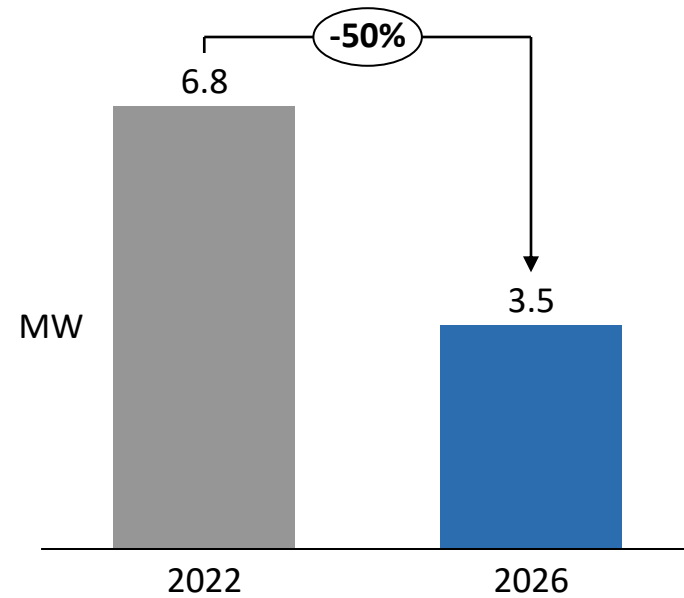
Source: Opolo University Hospital



I) Insulation modernisation (2)



After completion of thermomodernization works, the demand for heat will decrease by **50%**



By courtesy of Prof. Zbyszek Plutecki's permission, University of Opole



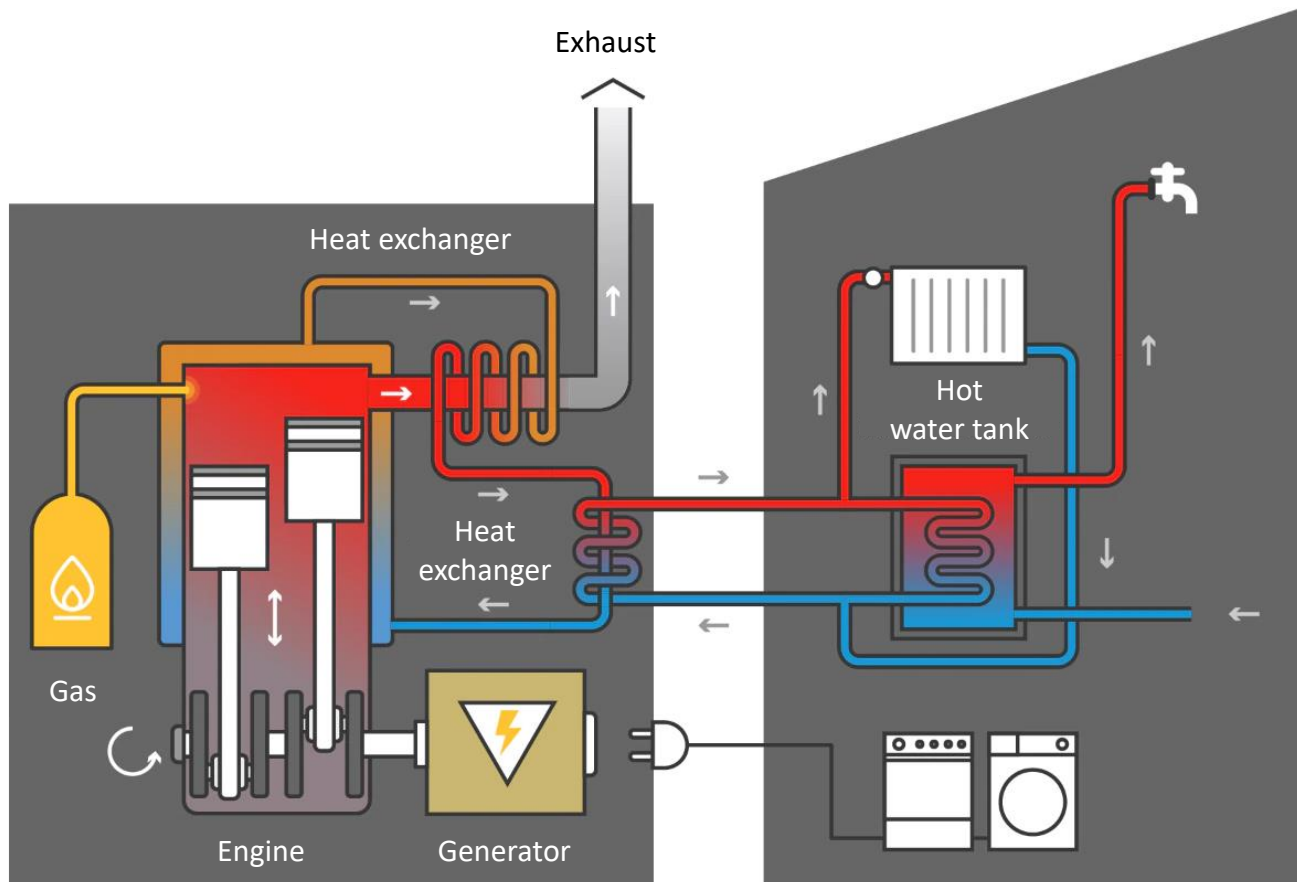
II) Cogeneration installations (1)

Until 2021 Opole University Hospital used to run its own coal-fired power plant



Source: Opole University Hospital

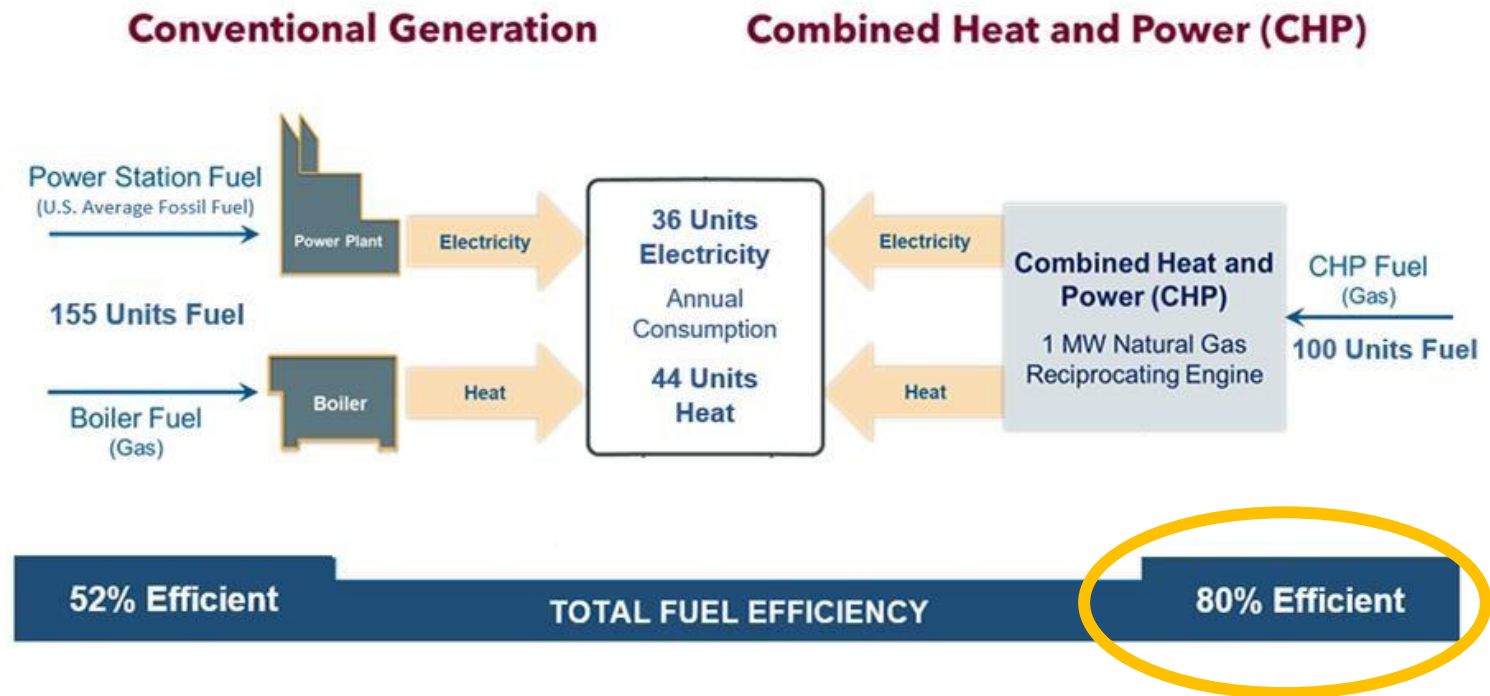
II) Cogeneration installations (2)



Source: heizung.de



II) Cogeneration installations (3)



By courtesy of Prof. Zbyszek Plutecki's permission, University of Opole

III) Centralization of data process center (1)

So far Copernicus Hospital is running several data centers in the hospital building that are cooled by split climatization systems

- Use of own servers
- Unefficient split cooling system
- No recuperation of heat

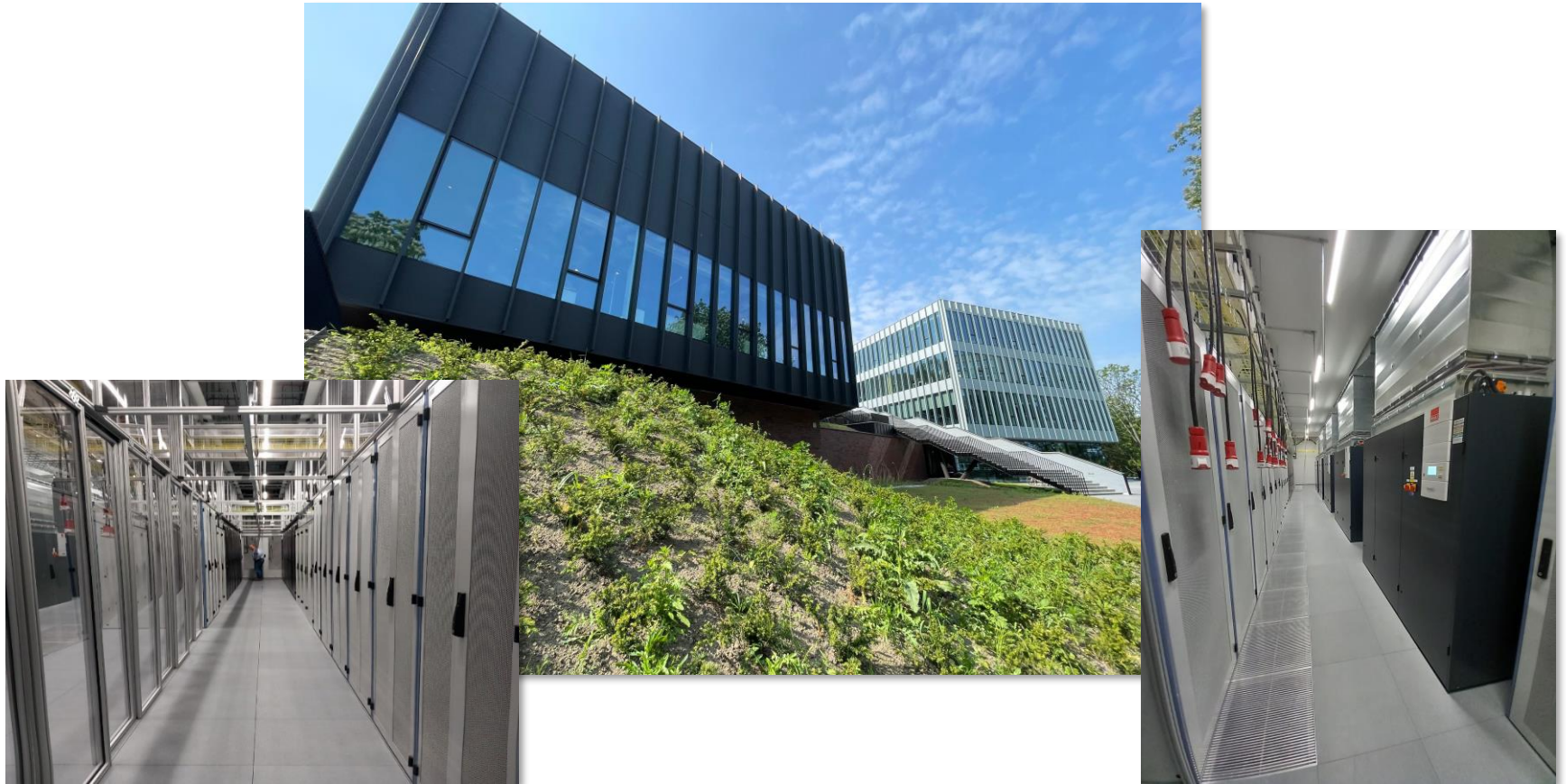


Source: Unsplash Massimo Botturi wildmax; Picture Tassilo Bauer



III) Centralization of data process center (2)

Copernicus Hospital is step by step transferring the servers to the regional data processing center that works in a highly energy saving context / efficient



Source: Picture Tassilo Bauer

III) Centralization of data process center (3)



More Energy efficient cooling system:



~ 25% less energy for the same cooling power

Source: Picture Tassilo Bauer



III) Centralization of data process center (4)



More Energy efficient cooling system:

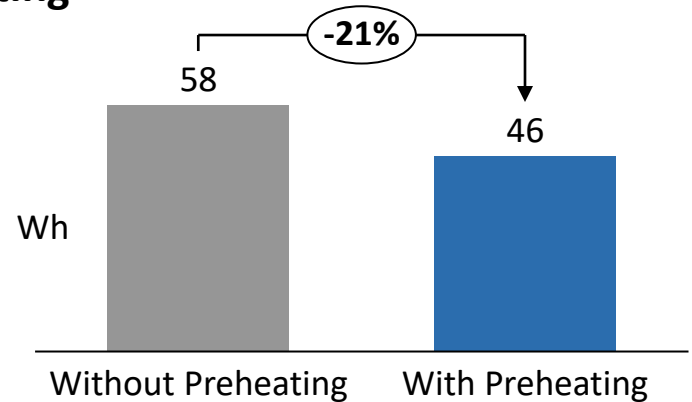


~ 25% less energy for the same cooling power



Recovery of heat from cooling system for warm water and heating

Energy consumption to heat 1 Liter of water up to 60°C



Source: Picture Tassilo Bauer



Thank you to all our national / local coordinators in Poland!

