

District Heating in Poland

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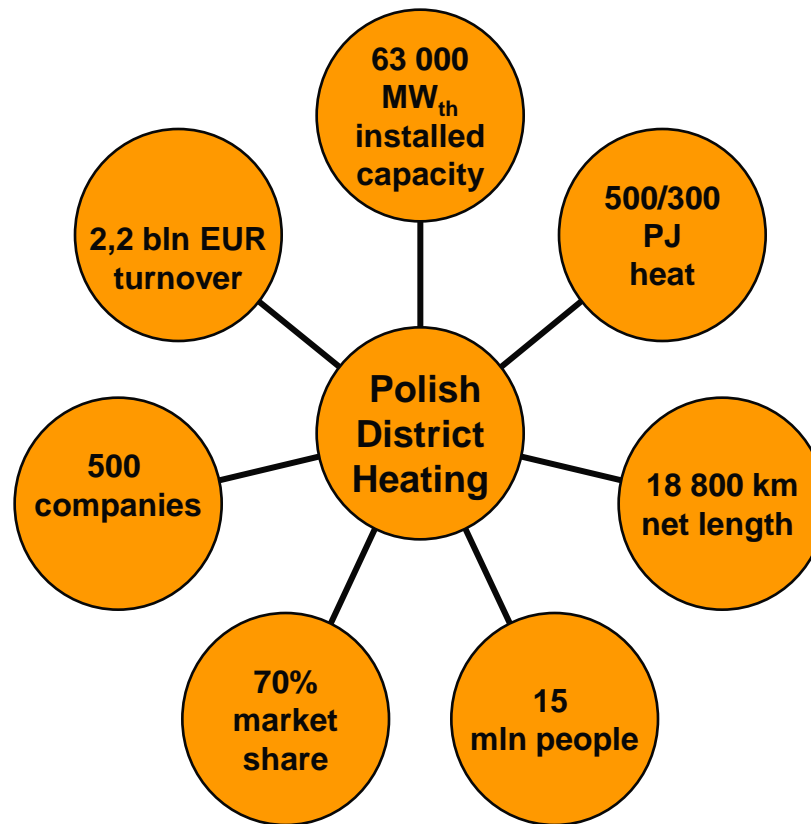
The 34th Congress of Euroheat & Power, Venice, 25-26 May 2009

Poland

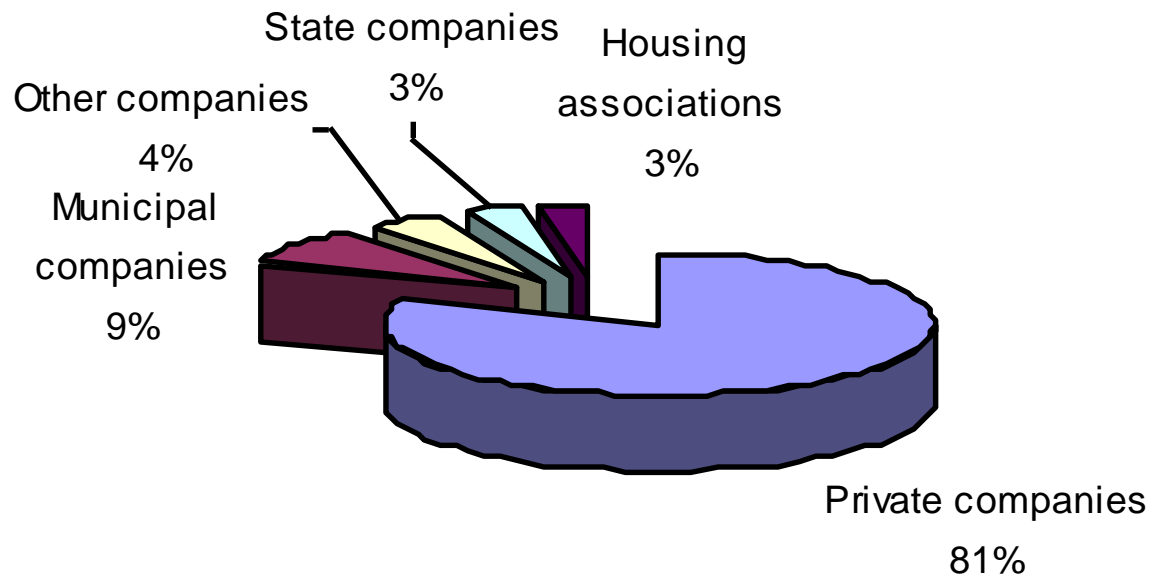


Population	38,1 mln
Moderation climate zone	5 zones
Average air temperature	7 °C
GDP	13 800 USD per capita

District heating sector

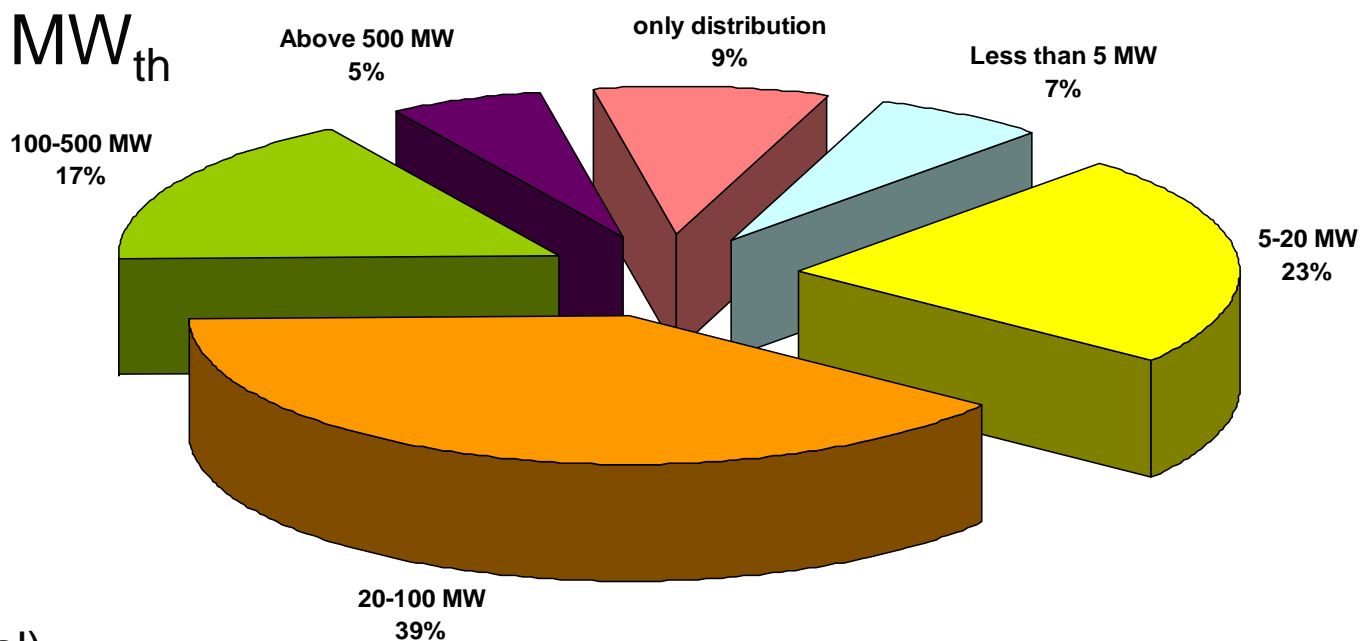


Ownership structure



Structure of heat enterprises/networks

- 62 750 MW_{th}



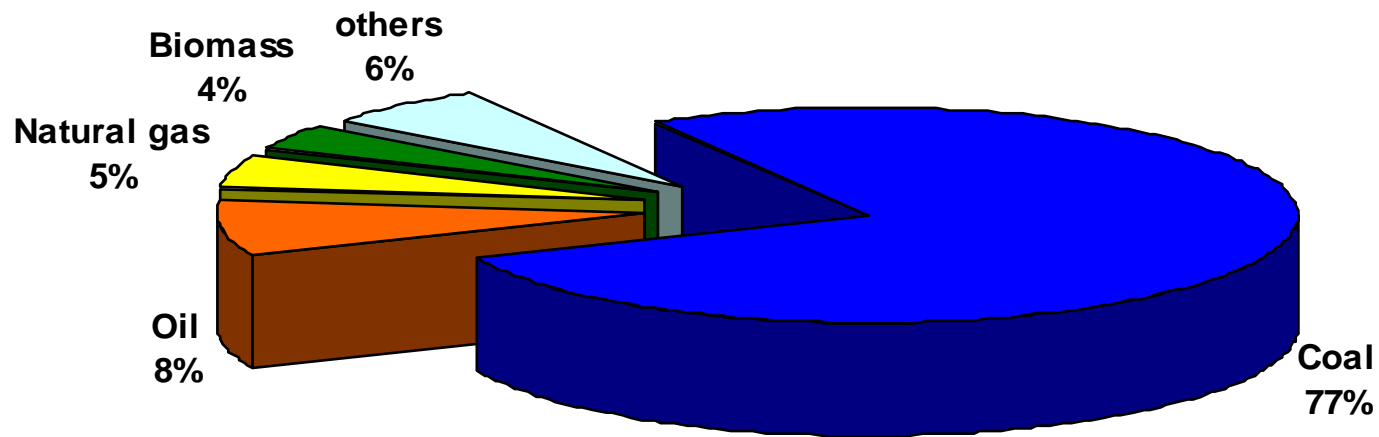
30% of heat generation is produced in Mazovia (capital) and Silesia (industrial) region

- 18 800 km

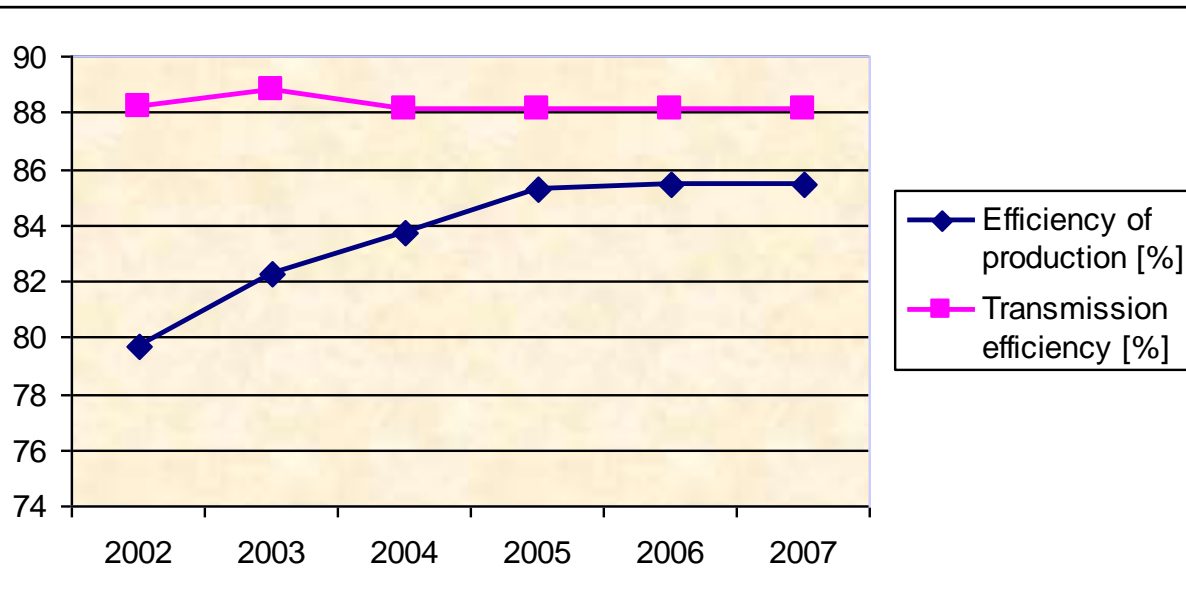
Year	2000	2002	2004	2005	2006	2007
Heat delivered to networks, TJ	360 000	336 050	345 600	334 800	321 070	306 200

Fuel structure

- 25 mln t. of coal



Technical modernization

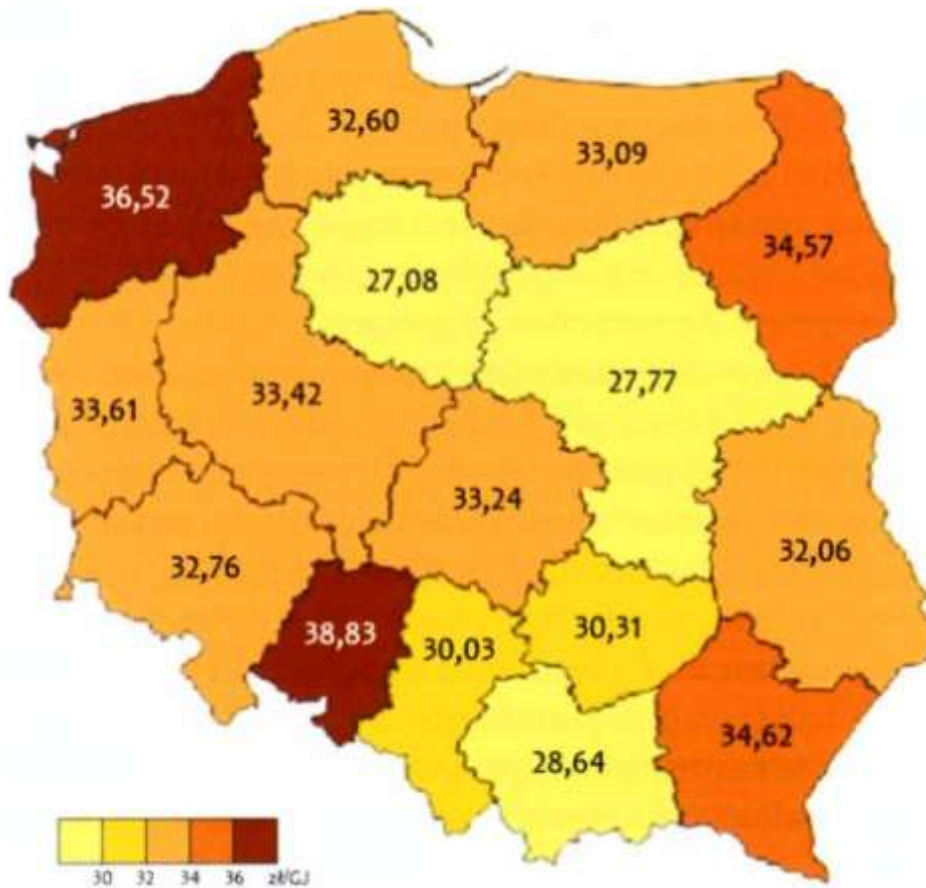


Efficiency of production increased about 7%

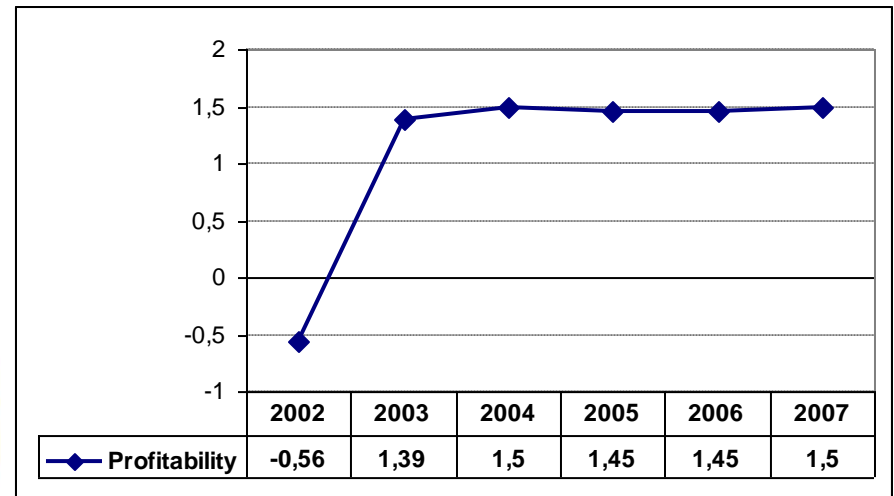


Efficiency of transmission stays on the unchanged level

Heat prices

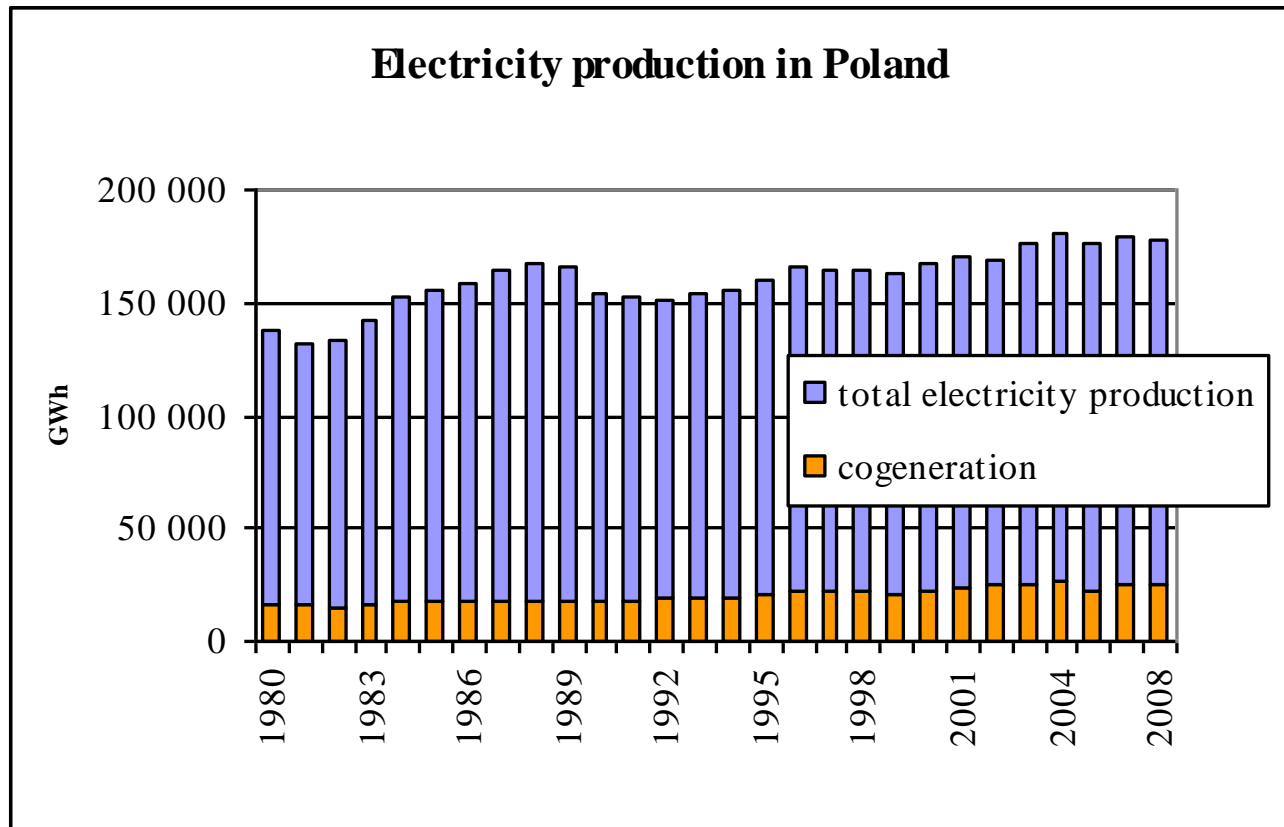


1 zł = 0,22 EUR



CHP

- 21 TWh from CHP



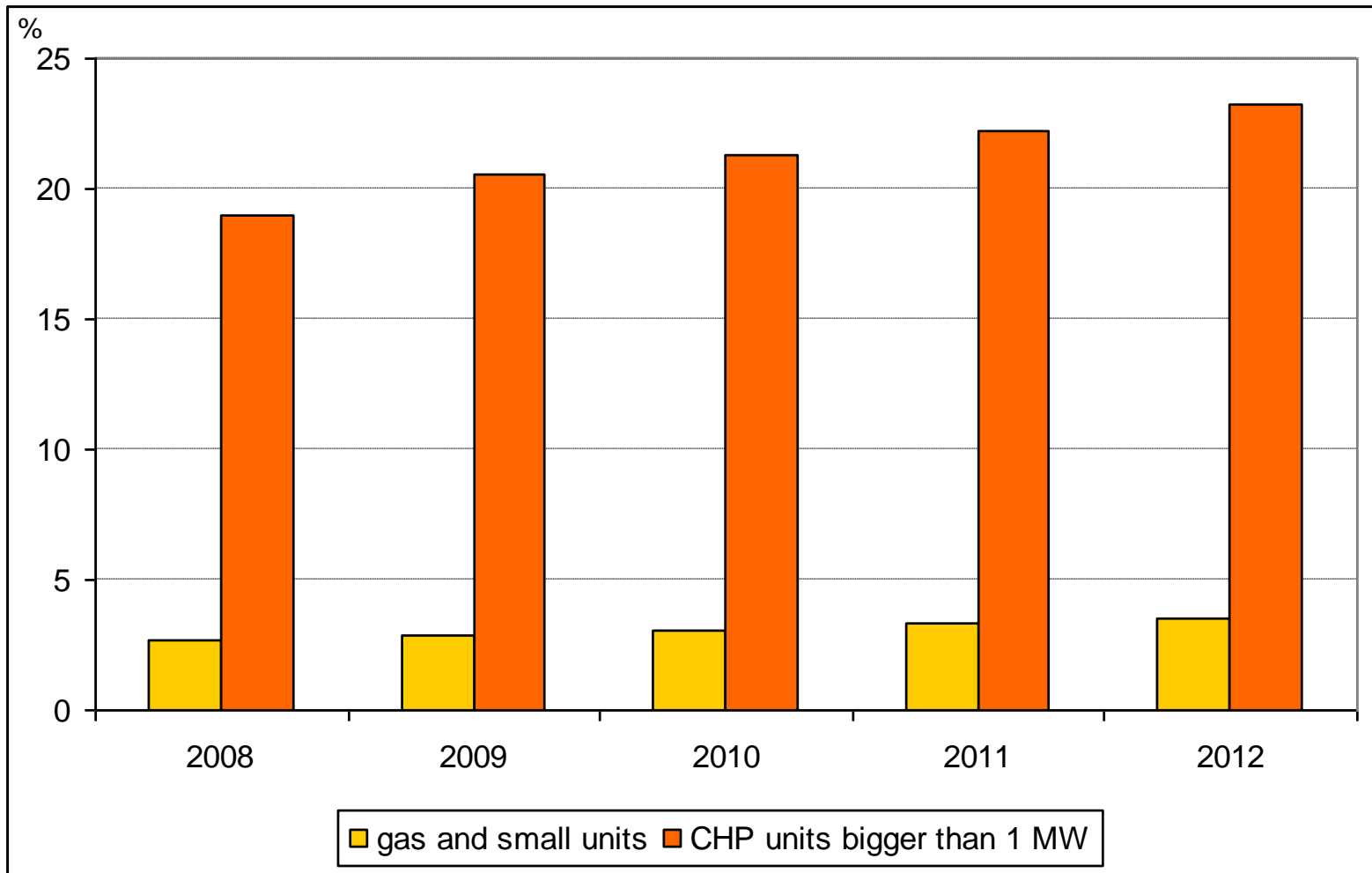
Commercial CHP

- 190 boilers with capacity of 18 000 MW
- 140 turbines with capacity of 5 300 MW

Industrial CHP

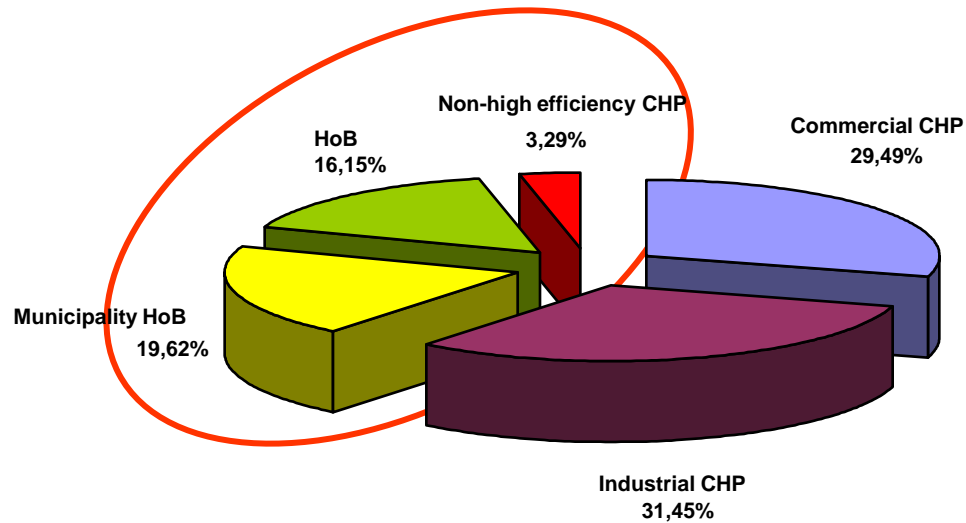
- 180 boilers with capacity of 5 800 MW
- 115 turbines with capacity of 1 750 MW

Quota obligations



CHP development

Huge production capacity located in heat-only boilers instead of CHPs



The largest DH system in Poland – Warsaw

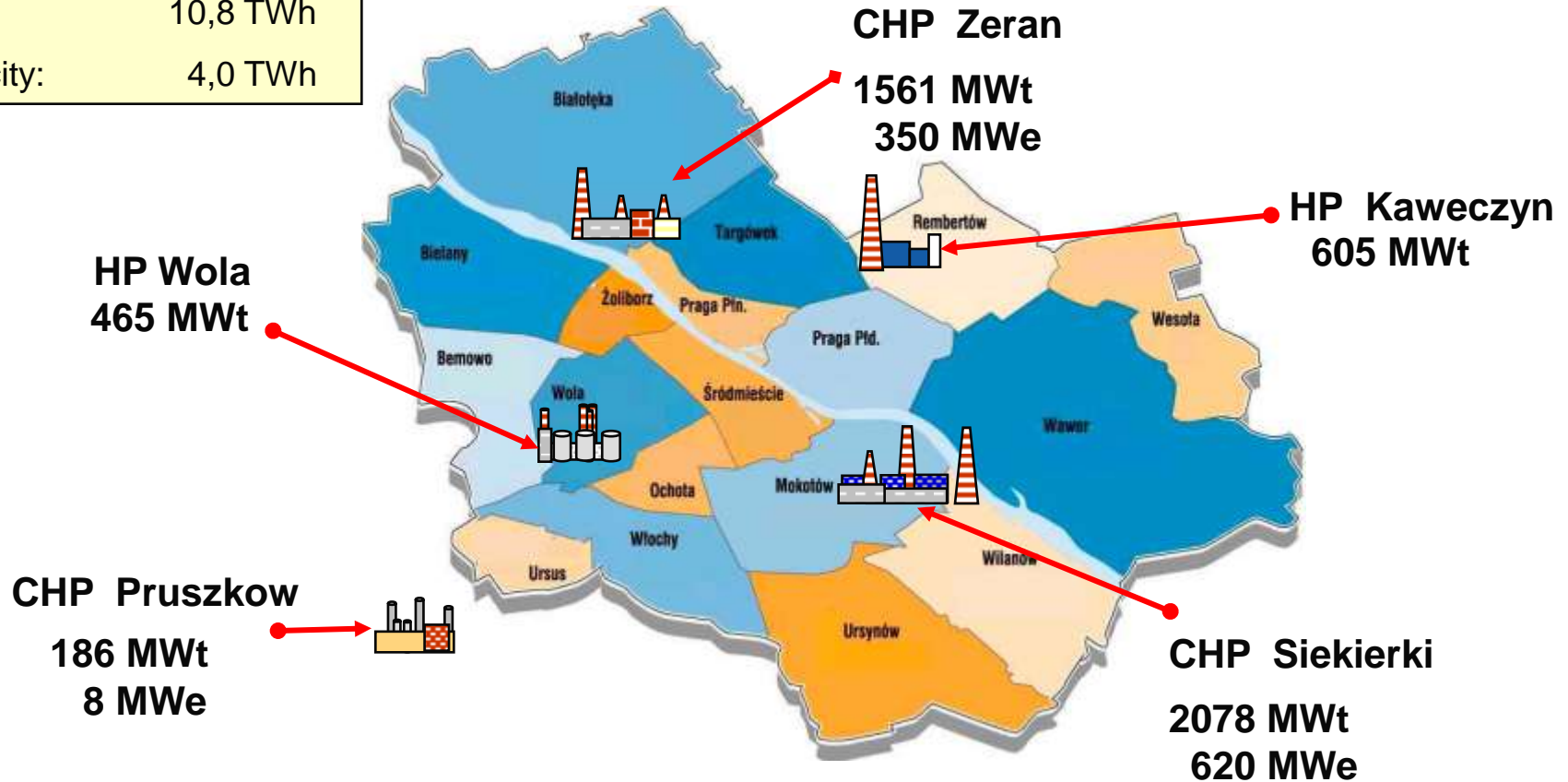


DH delivered, GJ/year	38 000 000
Total length of pipeline network (in km)	1 600
Flow of heat	50 000 m³/h
Residents receiving heat from DH	over 1 mln citizens 19 000 buildings

The largest DH system in Poland – Warsaw

Production in 2008:

- heat: 10,8 TWh
- electricity: 4,0 TWh



Polish Energy Policy

Energy Policy for Poland until 2030

- Energy efficiency improvement
- Energy security
- Diversification
- RES development
- Increase market competition
- Minimizing environmental effects

Double electricity production in
cogeneration till 2020



Challenges for Polish DH market

- Influence of ETS and IPPC Directives will force modernization of DH of the sector
- Necessary a new price creating scheme
- New support scheme after 2012 for CHP
- Development of renewable energy sources
- Energy efficiency improvement
- Closer cooperation with final customers
 - temperature comfort
 - complement services





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