District Heating in Poland

Tomasz Surma

Vattenfall Heat Poland S.A.

Zagreb, 12 November 2009

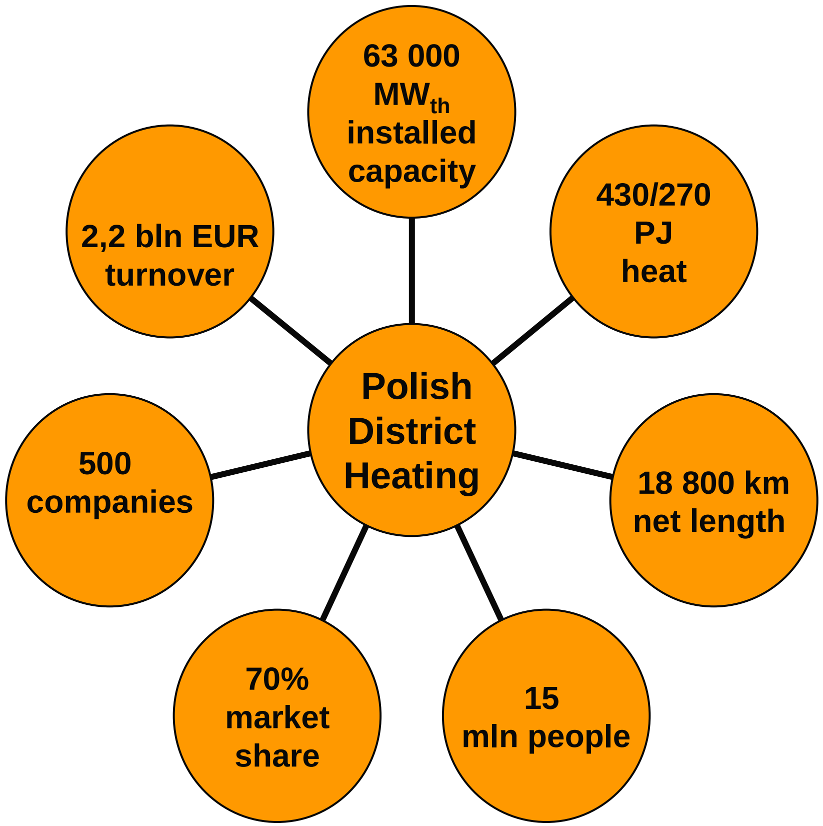
VATTENFALL

Poland

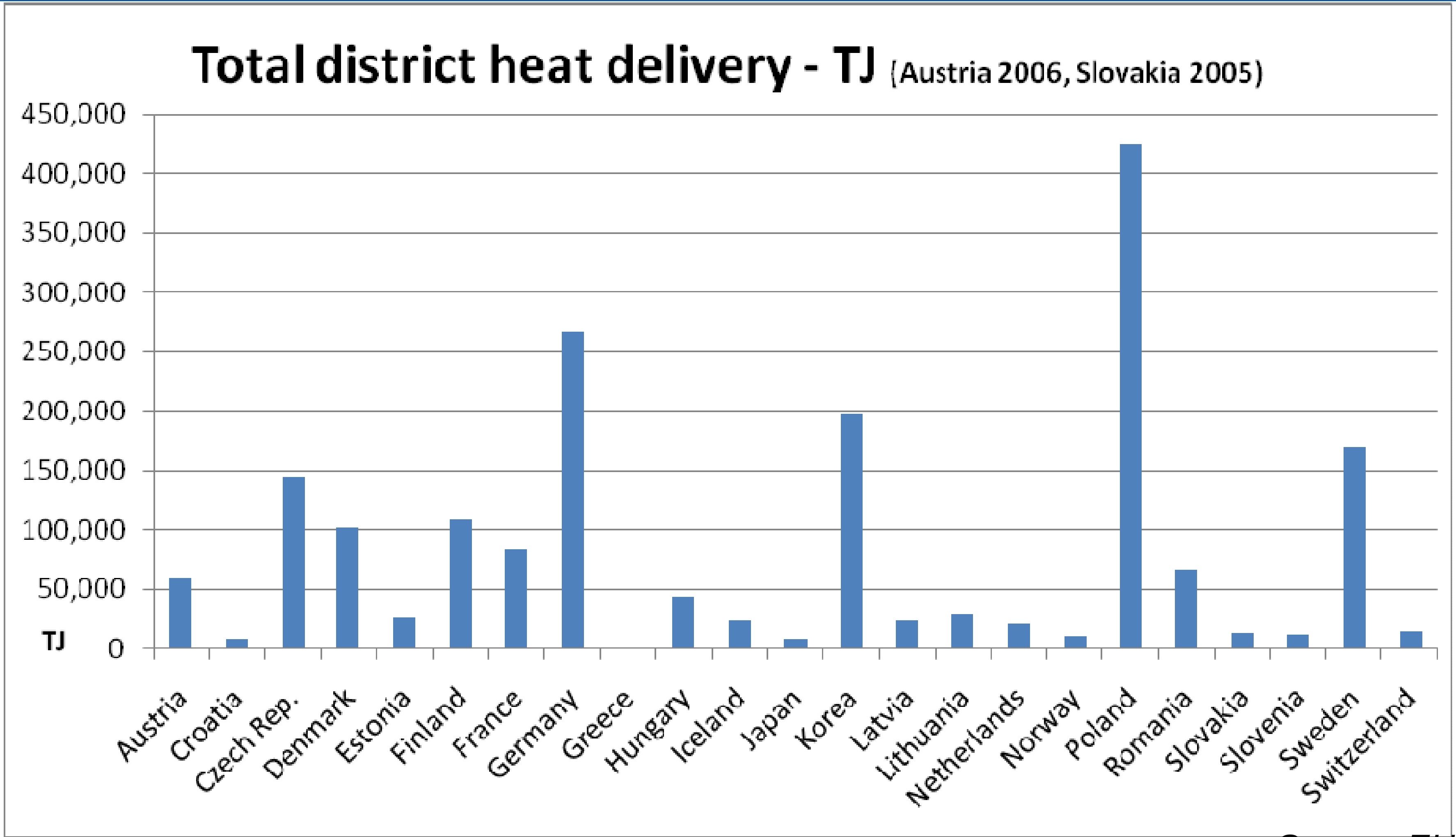
Population	**38,1 mln**
Moderation climate zone	**5 zones**
Average air temperature	**7 ºC**
GDP	**13 800 USD per capita**

VATTENFALL

District heating sector



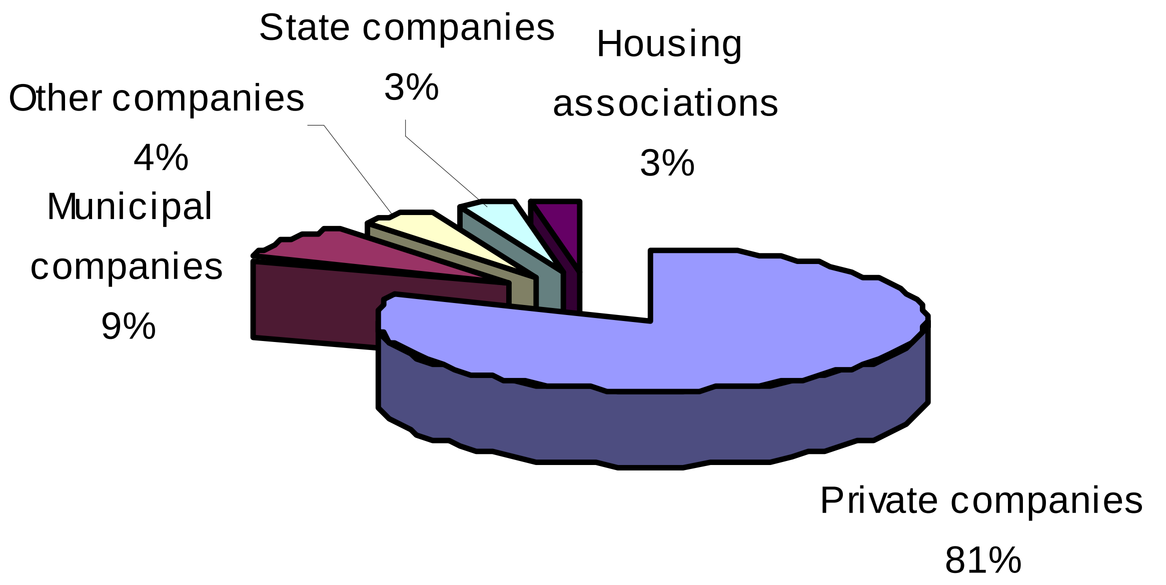
District heating systems in EU



Source: EH&P

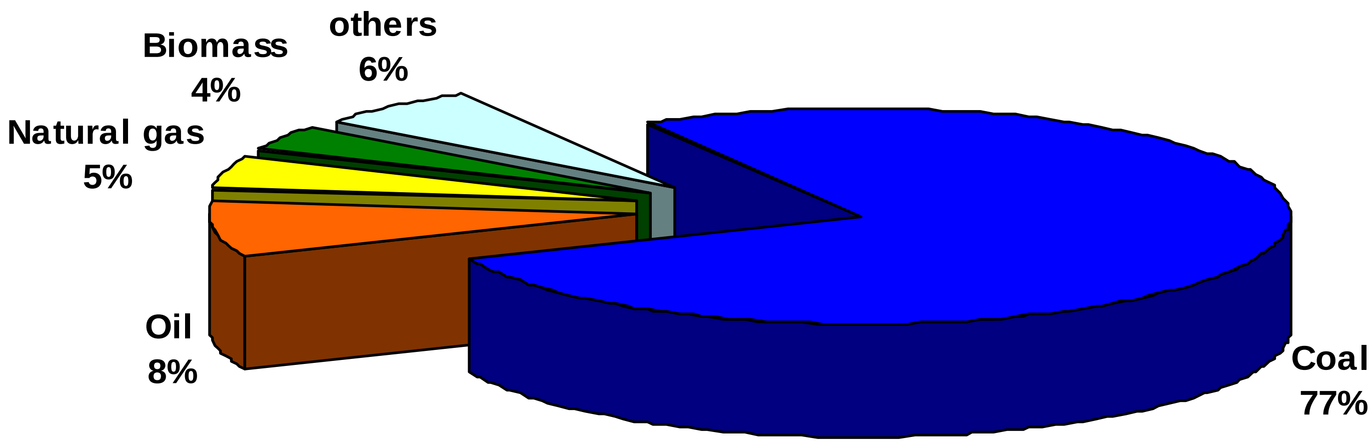
VATTENFALL

Ownership structure

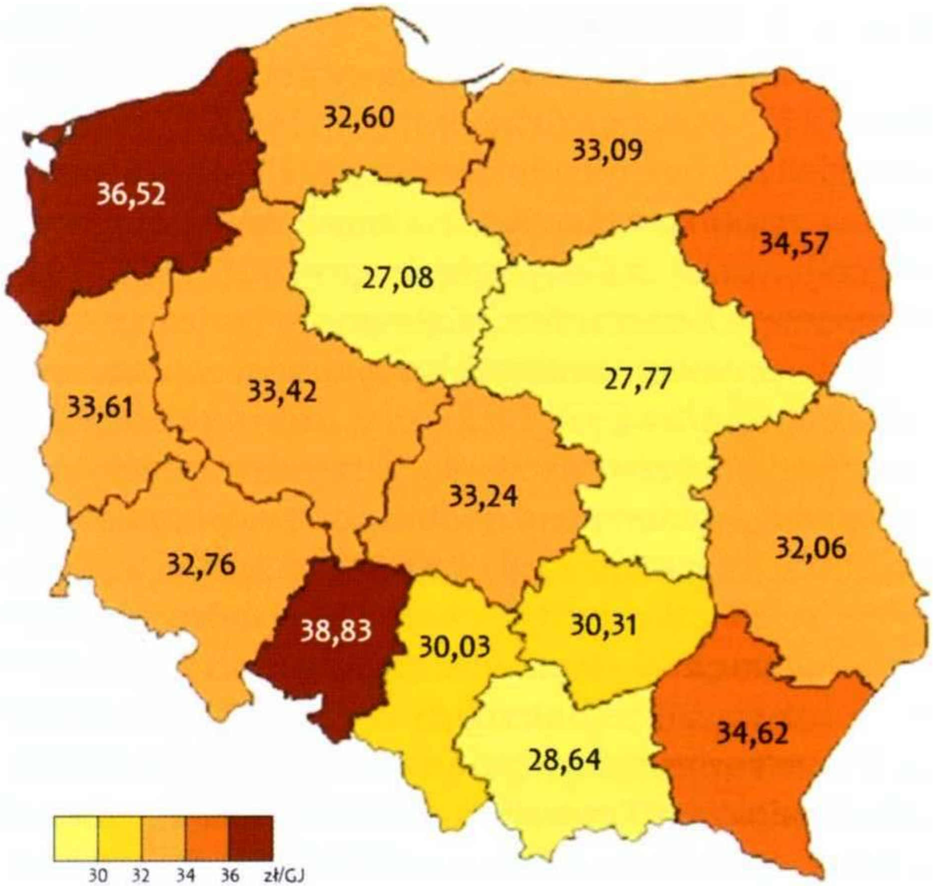


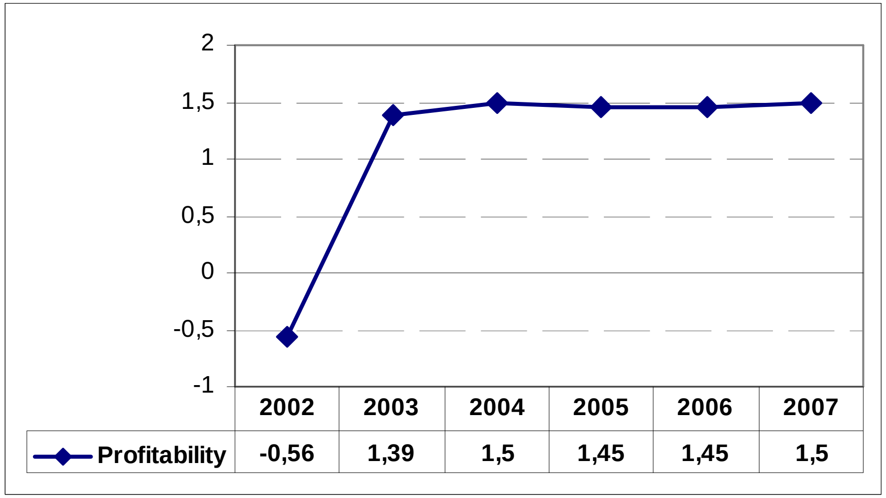
Fuel structure

- 25 mln t. of coal



Heat prices





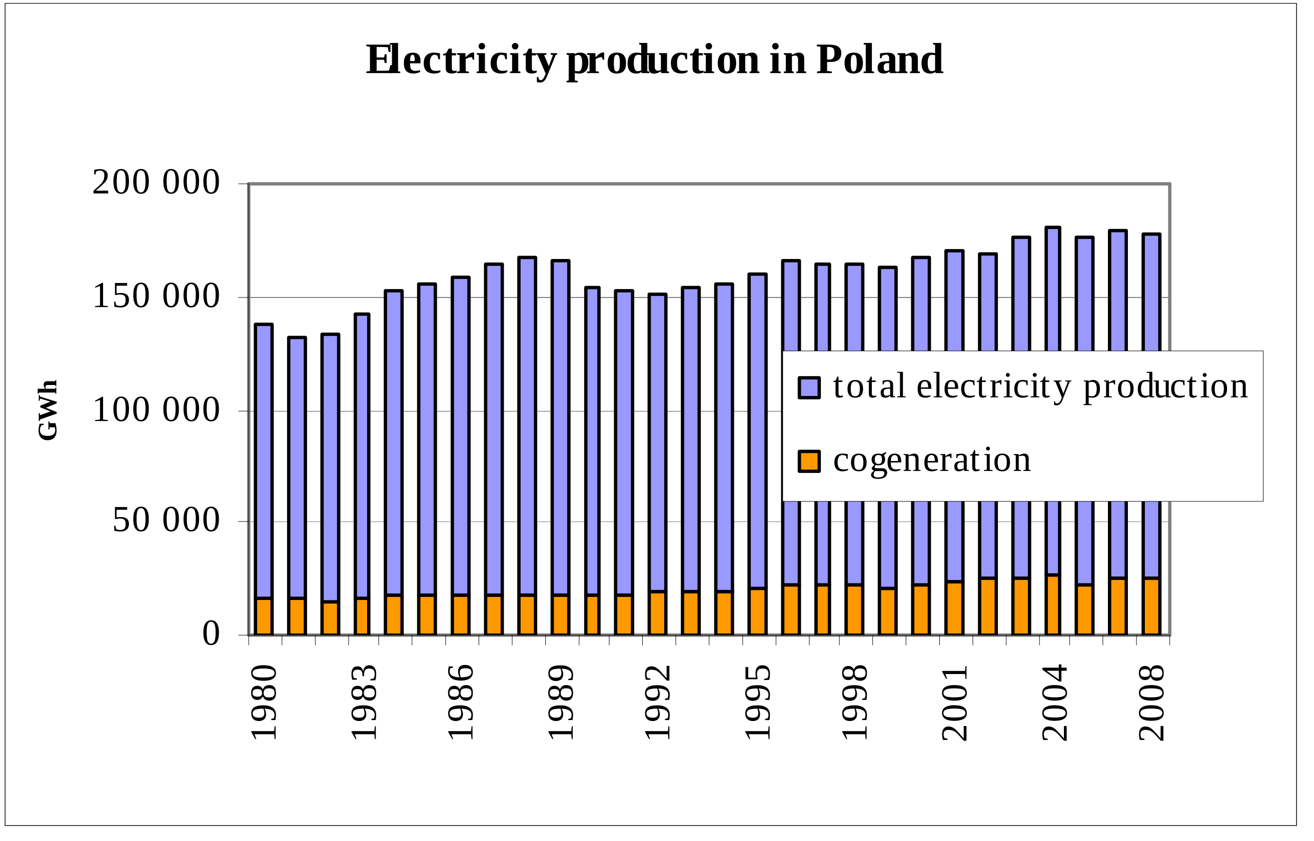
	2002	2003	2004	2005	2006	2007
Profitability	-0,56	1,39	1,5	1,45	1,45	1,5

1 zł = 0,22 EUR

VATTENFALL

CHP

- 21 TWh from CHP



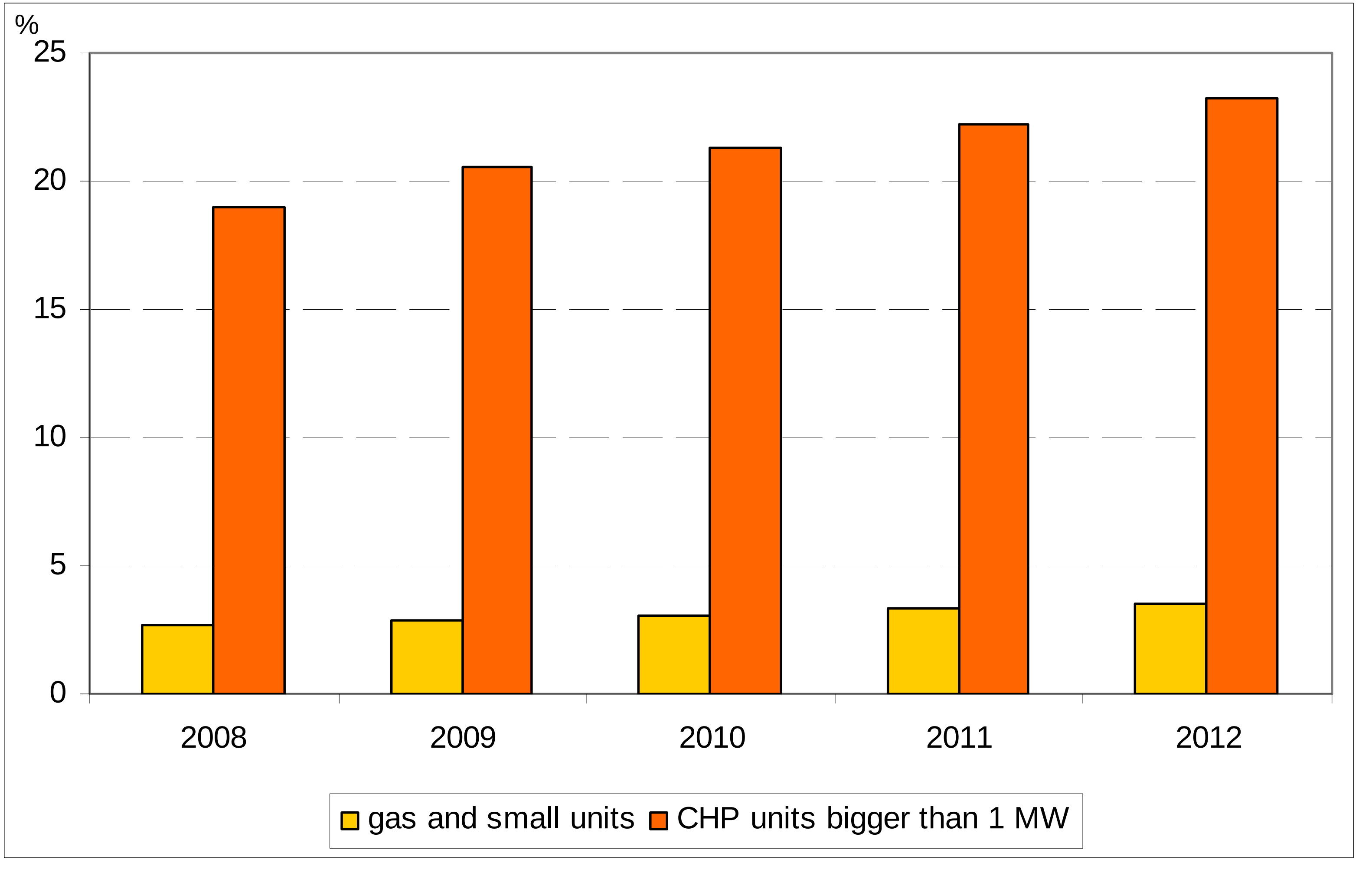
Commercial CHP

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

Industrial CHP

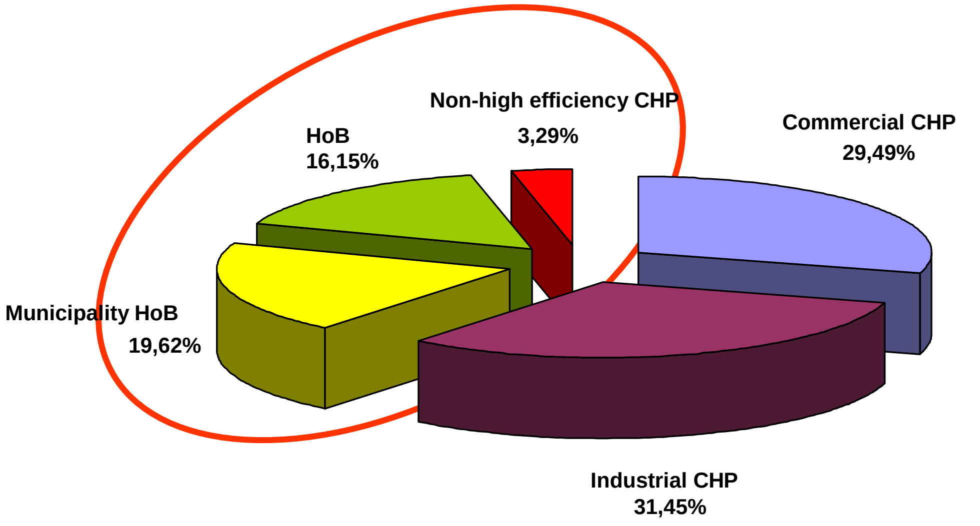
- 180 boilers with capacity of 5 800 MW
- 115 turbines with capacity of 1 750 MW

Quota obligations



CHP development

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



VATTENFALL

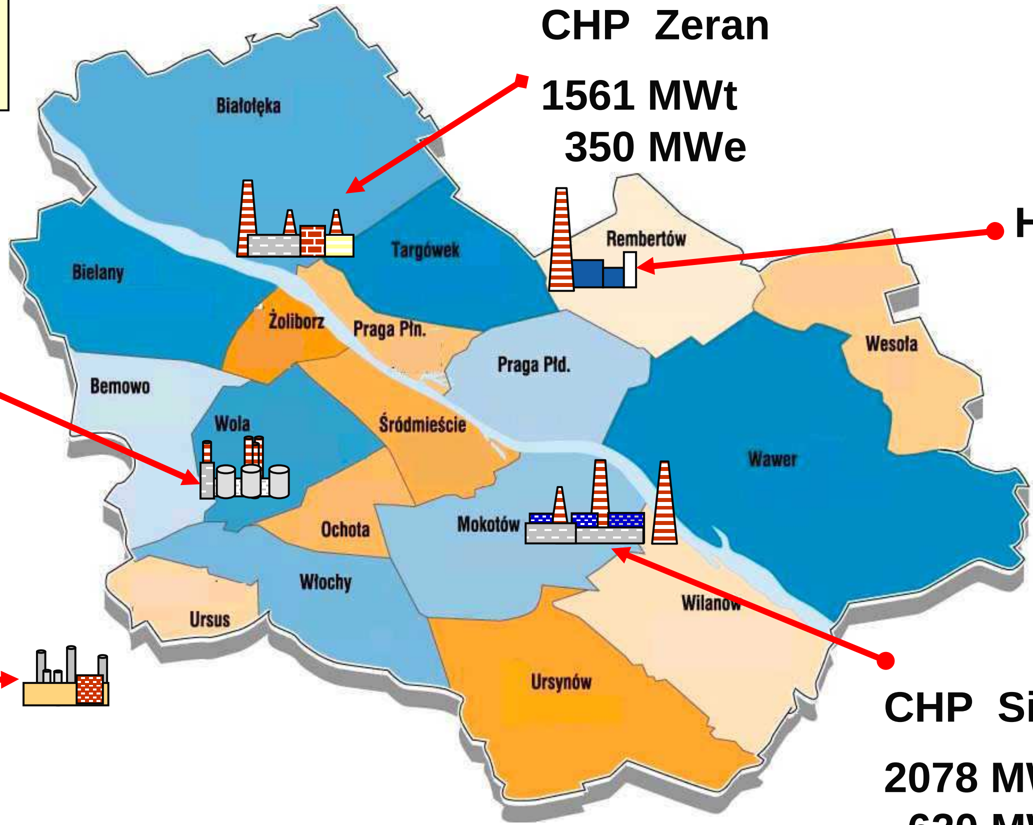
The largest DH system in Poland and in EU – Warsaw

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 and in EU – Warsaw

Production in 2008:

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



CHP Zeran

1561 MWt
350 MWe

HP Kaweczyn
605 MWt

HP Wola
465 MWt

CHP Pruszkow

186 MWt
8 MWe

CHP Siekierki

2078 MWt
620 MWe

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 2030

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

Tomasz Surma
Vattenfall Heat Poland S.A.
tel. + 48 22 587 45 28
E-mail: tomasz.surma@vattenfall.pl

VATTENFALL