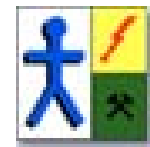




Energy sector overview in Poland

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Electricity balance, TWh

	1996	1998	2000	2003
Production	143.2	142.8	145.2	151.6
Import	4.8	4.6	3.3	4.9
Export	7.9	8.1	9.7	15.1
Domestic consumption	122.0	124.0	124.1	127.1



Energy system in Poland

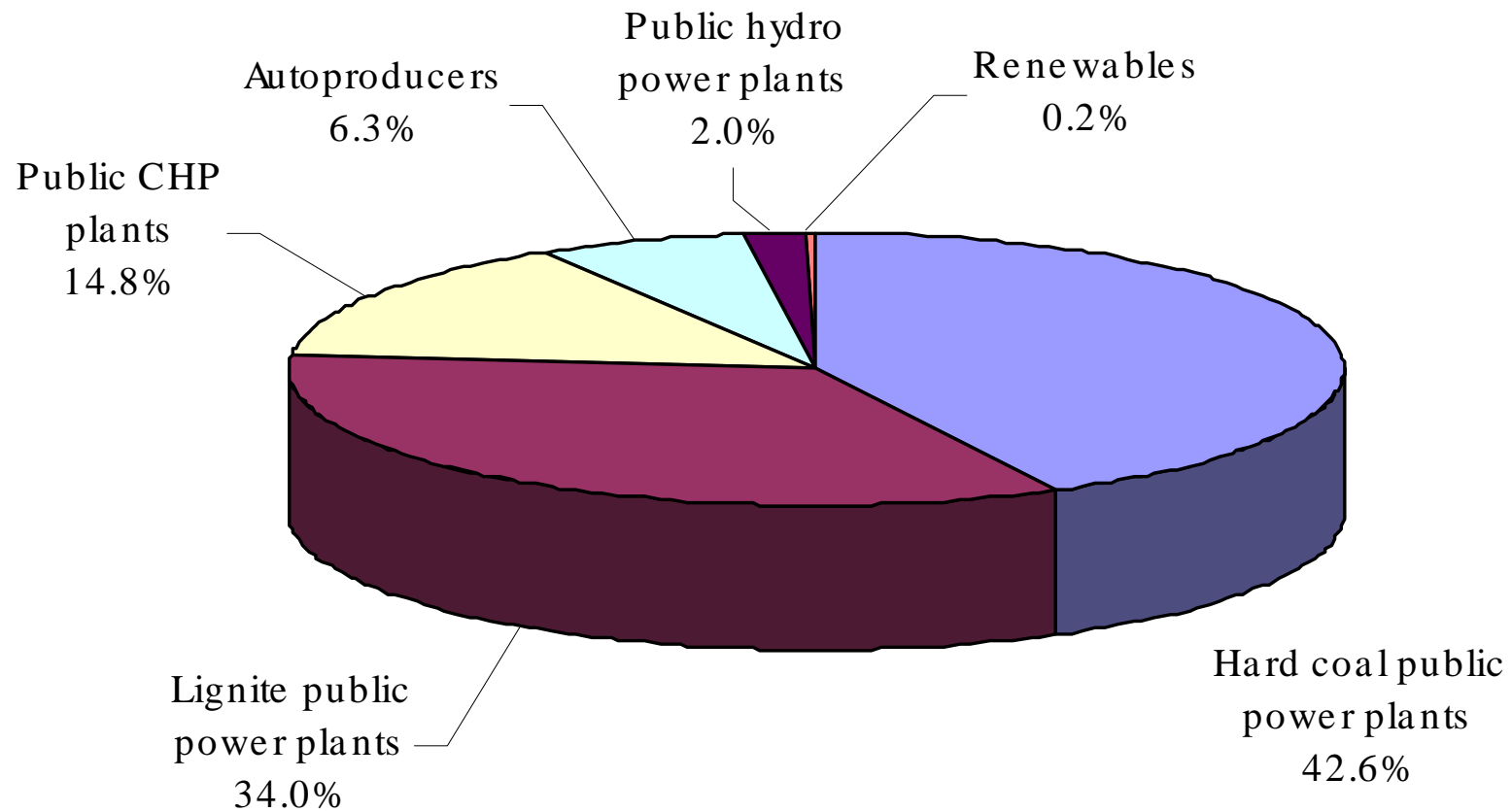
- The Energy Law was introduced in 1997 (the last amendment - 1st January 2005).
- Unbundled:
 - generation,
 - transmission,
 - distribution.
- Regulator – The Energy Regulatory Office set up in 1997.



Generation

- Total installed capacity (35 GW)
- 73 – public thermal plants (30.4 GW)
 - 46 companies
 - 29 hard coal, 3 lignite, 14 natural gas
- 129 – public hydro power plants (2 GW)
 - 8 companies
- 169 – autoproducers (2.6 GW)

The structure of electricity production, 2003





Ongoing processes

- Horizontal consolidation
 - BOT S.A., PKE S.A., PAK S.A.
- Vertical consolidation – power plants with coal companies or distribution companies
- Privatisation



Total emission in the Polish energy sector
(electricity + heat production), thousand tons

Pollutant	2003	2008	2010	2012
SO ₂	695	454	426	358
NO _x	244	254	251	239
CO ₂	149	144	143	143

Source:

- 1) Emissions in energy sector, Energy Market Agency, Warsaw 2003.
- 2) The Accession Treaty with the global limits imposed on all energy producers.
- 3) The National Emissions Reduction Plan prepared for the existing power plants.
- 4) Unpublished data based on Polish Power Grid Company estimations.



Transmission

- Polish Power Grid Company – established on 2nd August 1990 – state owned.
- Polish Power Grid Company „Operator” – 1st July 2004 – dependent company, duties:
 - execution of all the functions of the national and international Transmission System Operator and regional operator for the CENTREL countries
 - providing market players with non-discriminatory rules consistent with market conditions for the trade of electricity



Distribution

- 14 regional distribution companies – local monopolies
- Horizontal consolidation
 - Enea S.A. (5), EnergiaPro S.A. (5),
 - Energa S.A. (8), Enion S.A. (5),
 - RZE S.A., ZKE S.A., ZEORK S.A., Lubzel S.A., ZEWT S.A., ZEB S.A., (L6)
 - ŁZE S.A., ZEŁT S.A.,
 - GZE S.A., Stoen S.A.,
- Privatisation



Case study for NEEDS

- Identification of the relevant factors that are influencing the energy market, environmental quality and possibilities of internalisation of energy externalities will be made.
- The partial equilibrium model, developed in our Institute, will be employed to assess the potential impact of different policy measures on the Polish energy market evolution.
- The results from EcoSense and RiskPoll will be used as the input data. Therefore, it will be possible to assess the impact of internalisation of external costs on the Polish energy market.