

European Energy Market 2

Polish power system

**Studia niestacjonarne II stopnia
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Władysław Mielczarski

Instytut Elektroenergetyki, Politechnika Łódzka

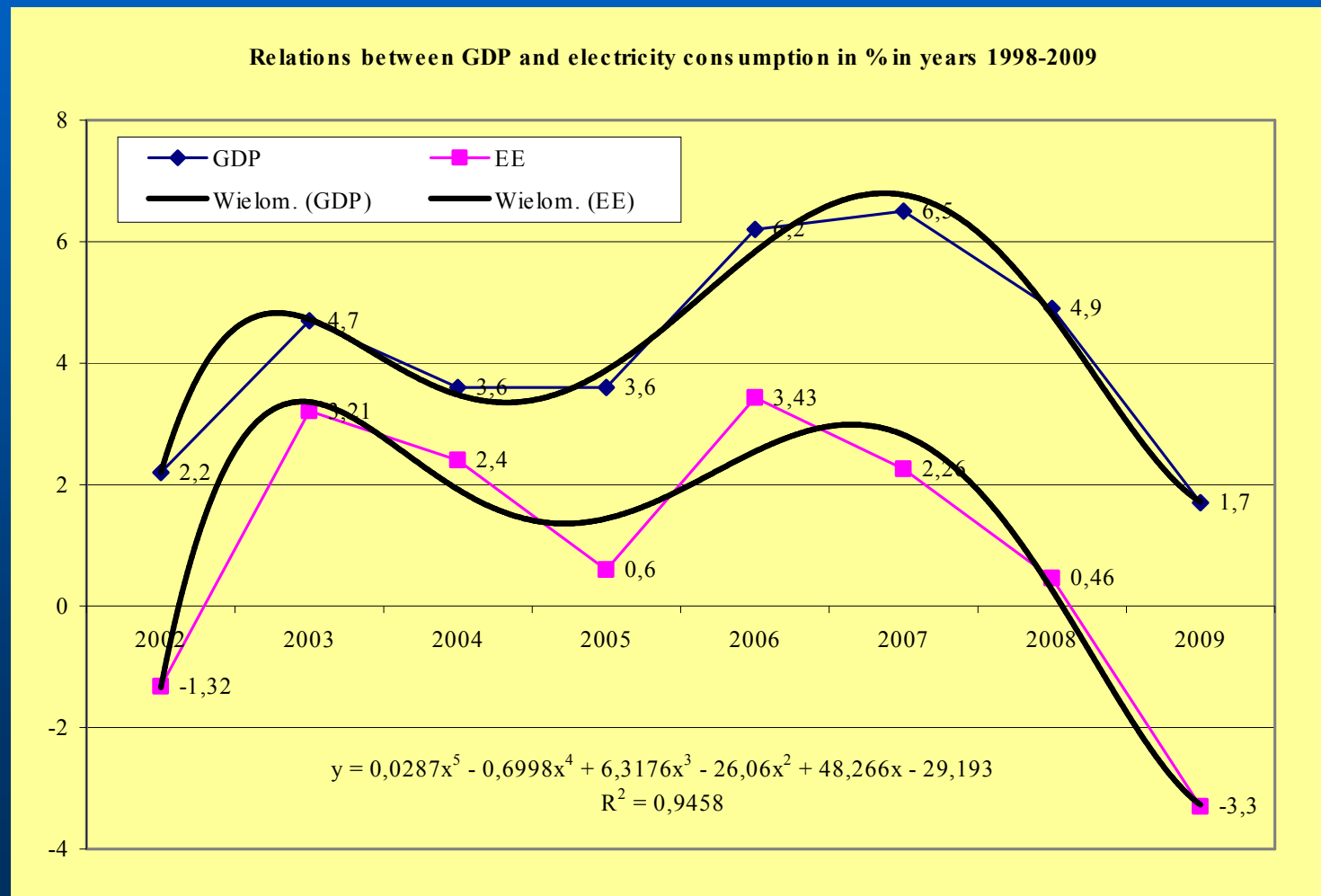
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Lp	List of lectures
1	European Energy Markets
2	Polish Power System
3	Main Market Rules - Balancing
4	Electricity Trade - Power Exchange
5	Customers - TPA
6	Subsidized Markets
7	Cost of Electricity
8	Energy Mix
9	EU Emission Trade System
10	Cross border trading

Topics

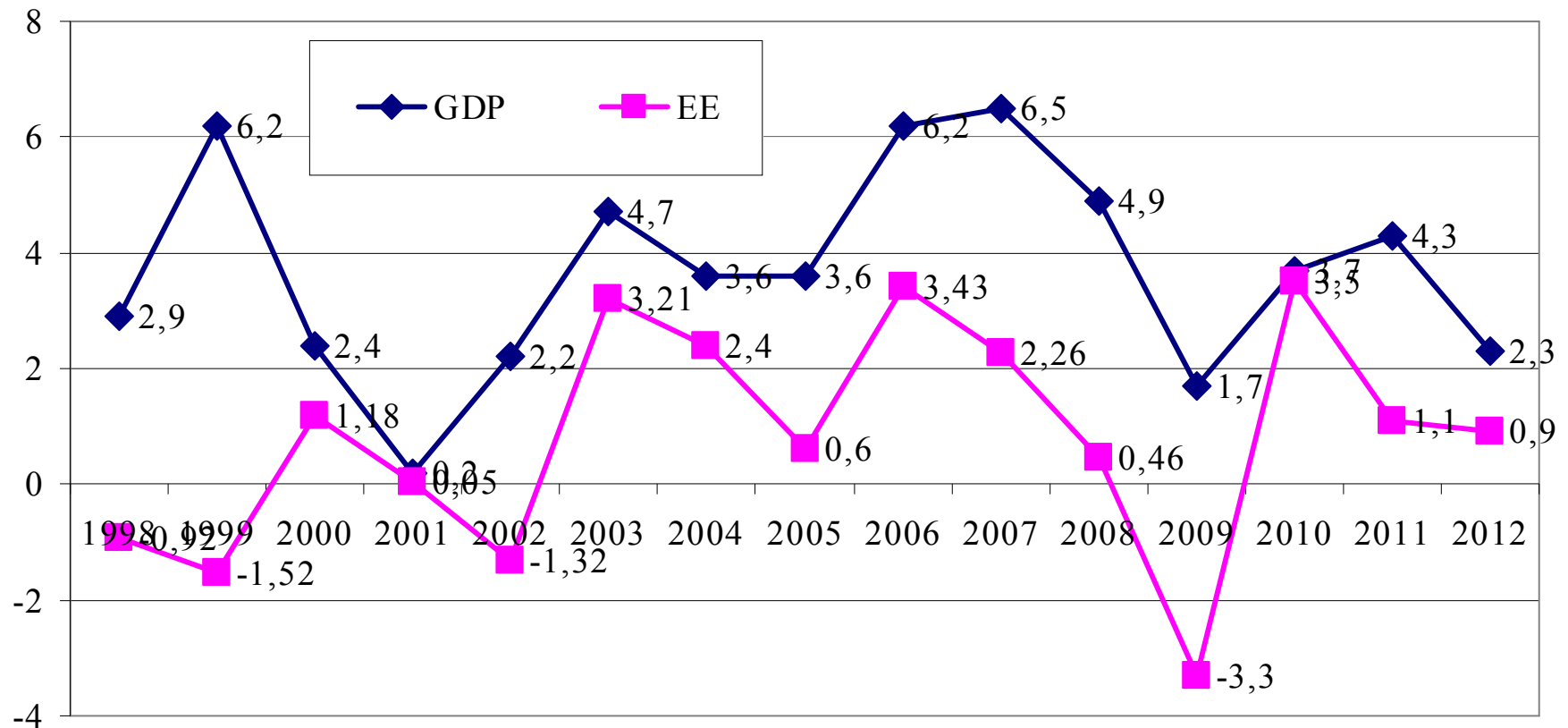
- Demand for electricity
- Power generating industry
- Production and consumption of electricity
- Market power of vertically integrated companies
- Transmission networks and cross border power lines
- Electricity prices

Relation between demand and the economic growth

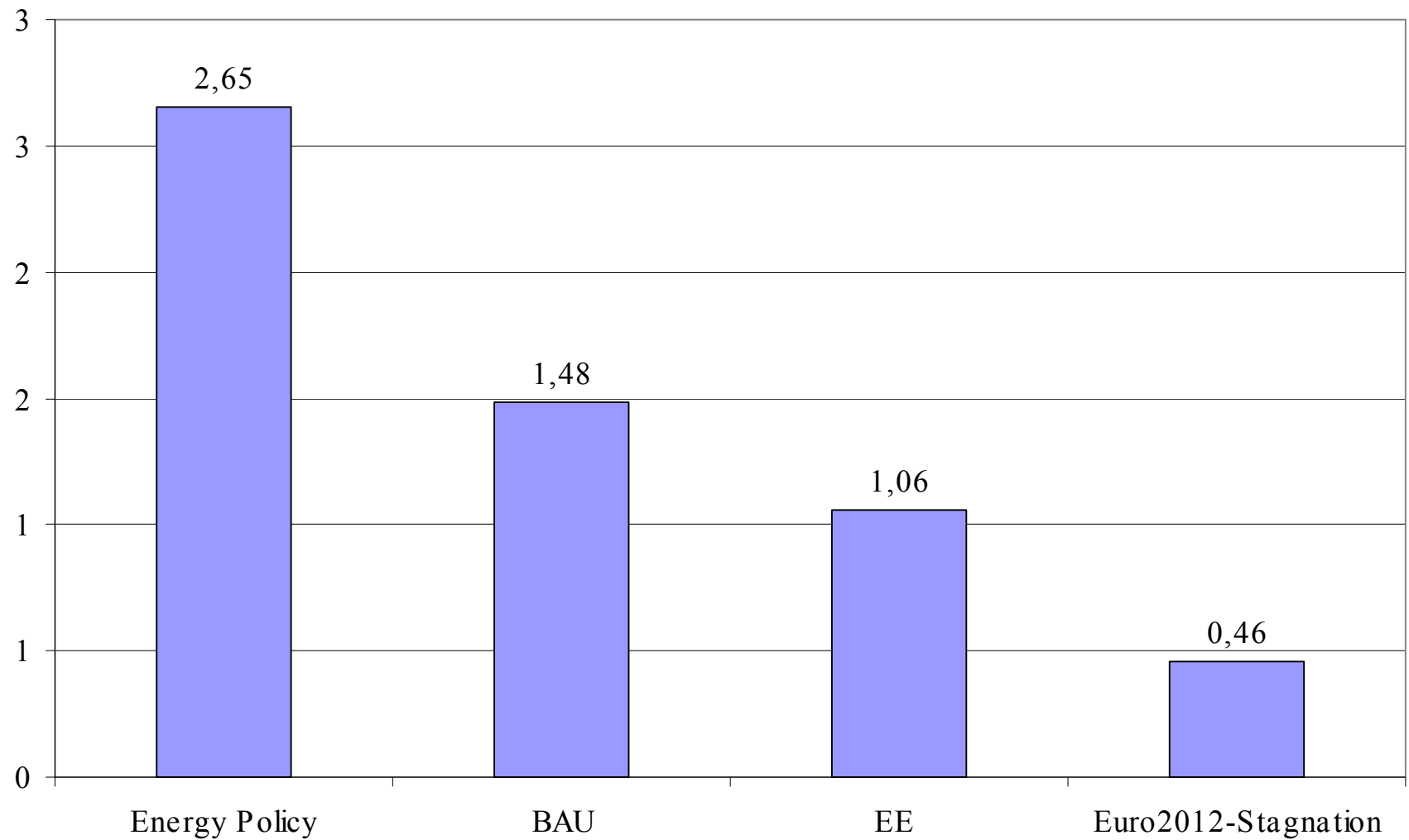


Relation between GDP and demand for electricity

Correlation between growth of GDP and electricity consumption



Average increase of electricity consumption in %per year



Power stations in Poland



Source: PSE-Operator

Production of electricity in Poland

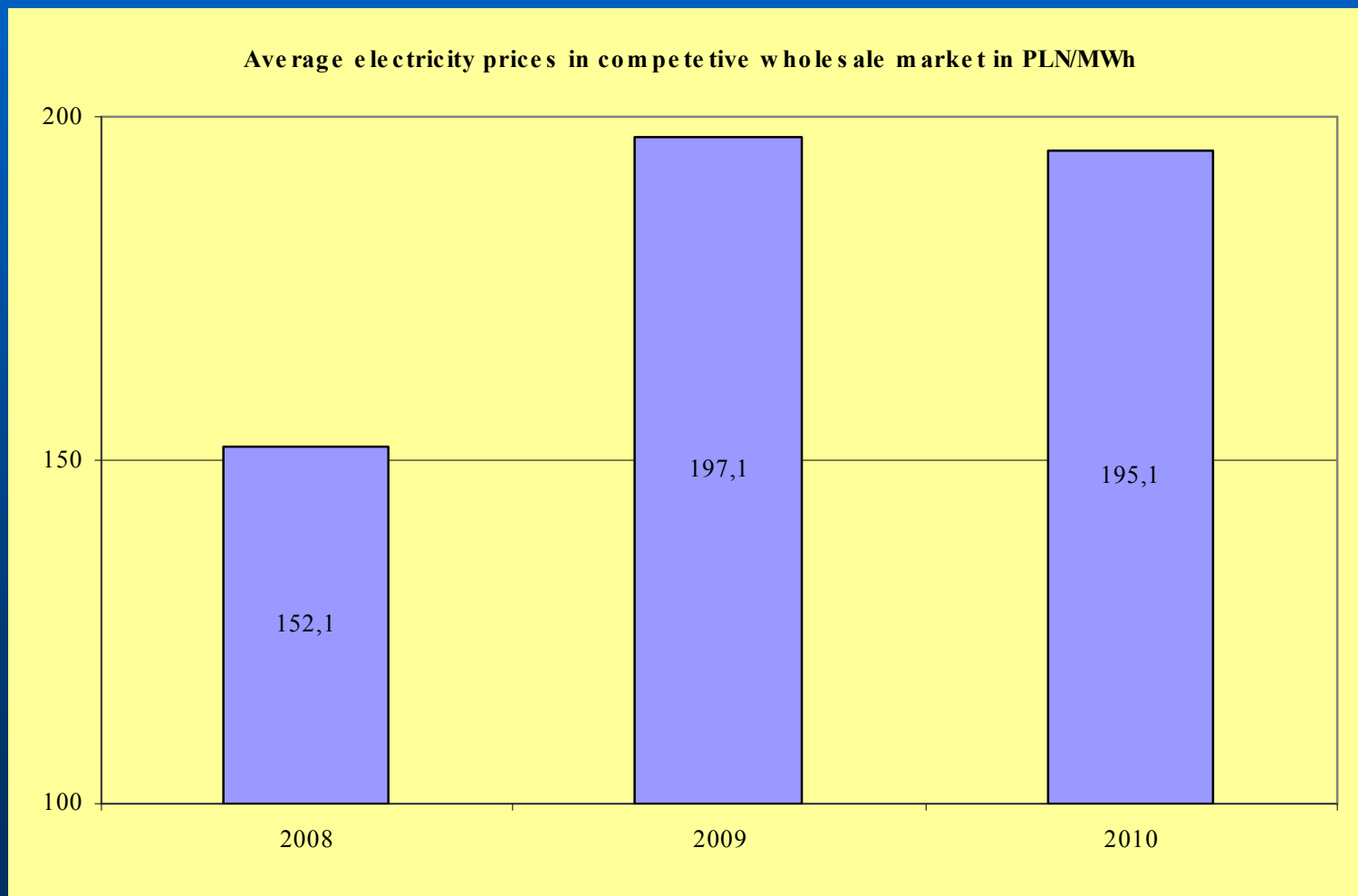
Year	2005	2008	2009	2010
Power installed in [MW]	35 404	35 599	35 762	36 059
Power available [MW]	34 857	35 326	35 714	36 058
Maximum demand [MW]	23 477	25 121	24 594	25 422
Electricity production [TWh]	156,9	155,3	151,7	157,7

Year	2008	2009	2010
Total	141,05	136,74	140,70
Hard Coal	86,60	85,20	90,30
Lignite	53,70	50,90	49,70
Gas	0,75	0,64	0,70

Ownership of the Polish power stations

Power Station	Installed power [MW]	Ownership
Bełchatów	5170	PGE S.A.
Opole	1490	PGE S.A.
Turów	1703	PGE S.A.
Dolna Odra	1782	PGE S.A.
PKE (Łagisza, Łaziska, Jaworzno, Siersza, Stalowa Wola)	4105	TAURON S.A.
Kozienice	2750	ENEA S.A.
Ostrołęka	600	ENERGA S.A.
PAK	2040	Polsat
Rybnik	1720	EdF
Połaniec	1800	Electrabel
Skawina	440	CEZ
Total	23600	

Electricity prices at wholesale market

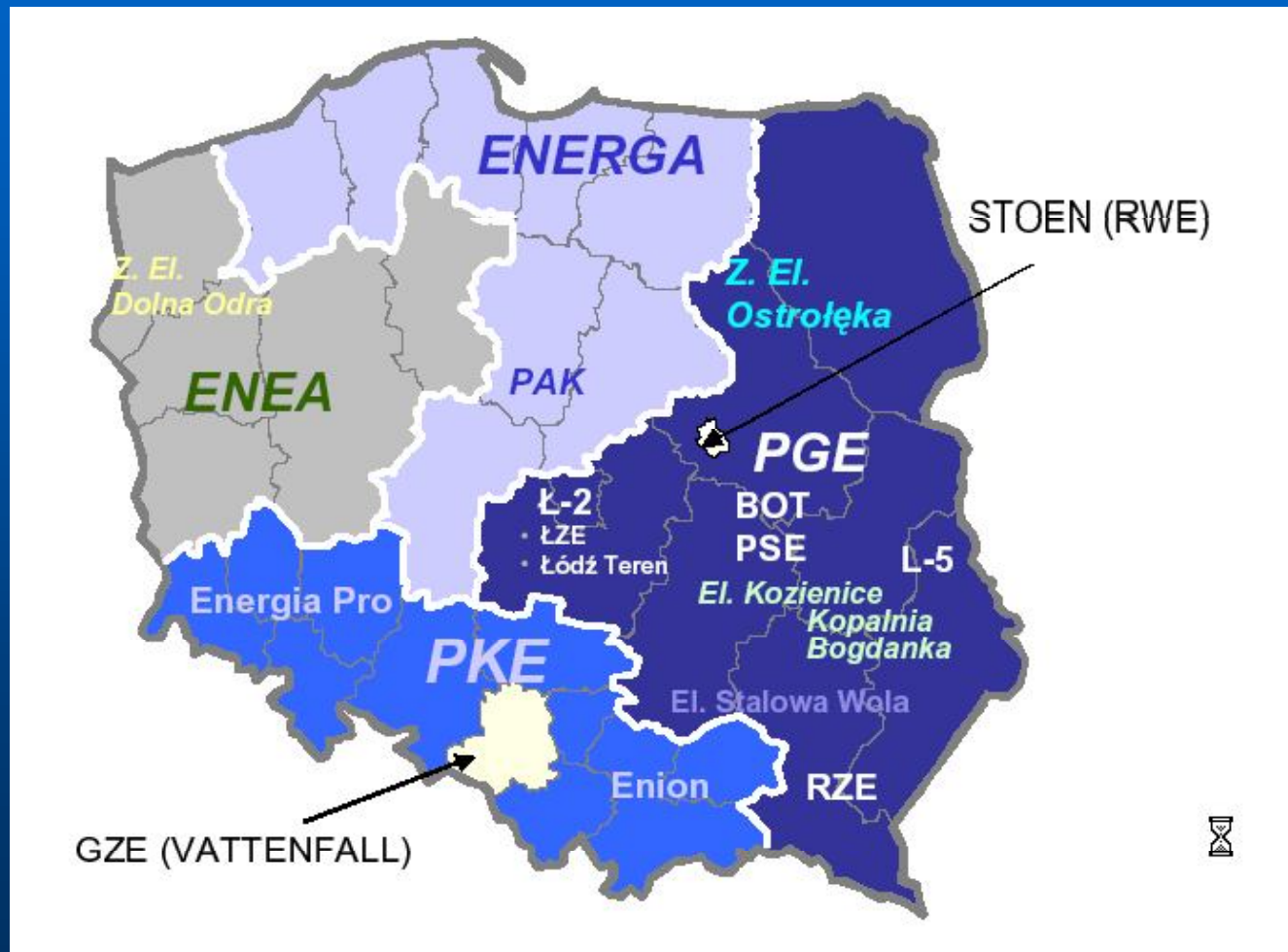


Distribution companies in Poland



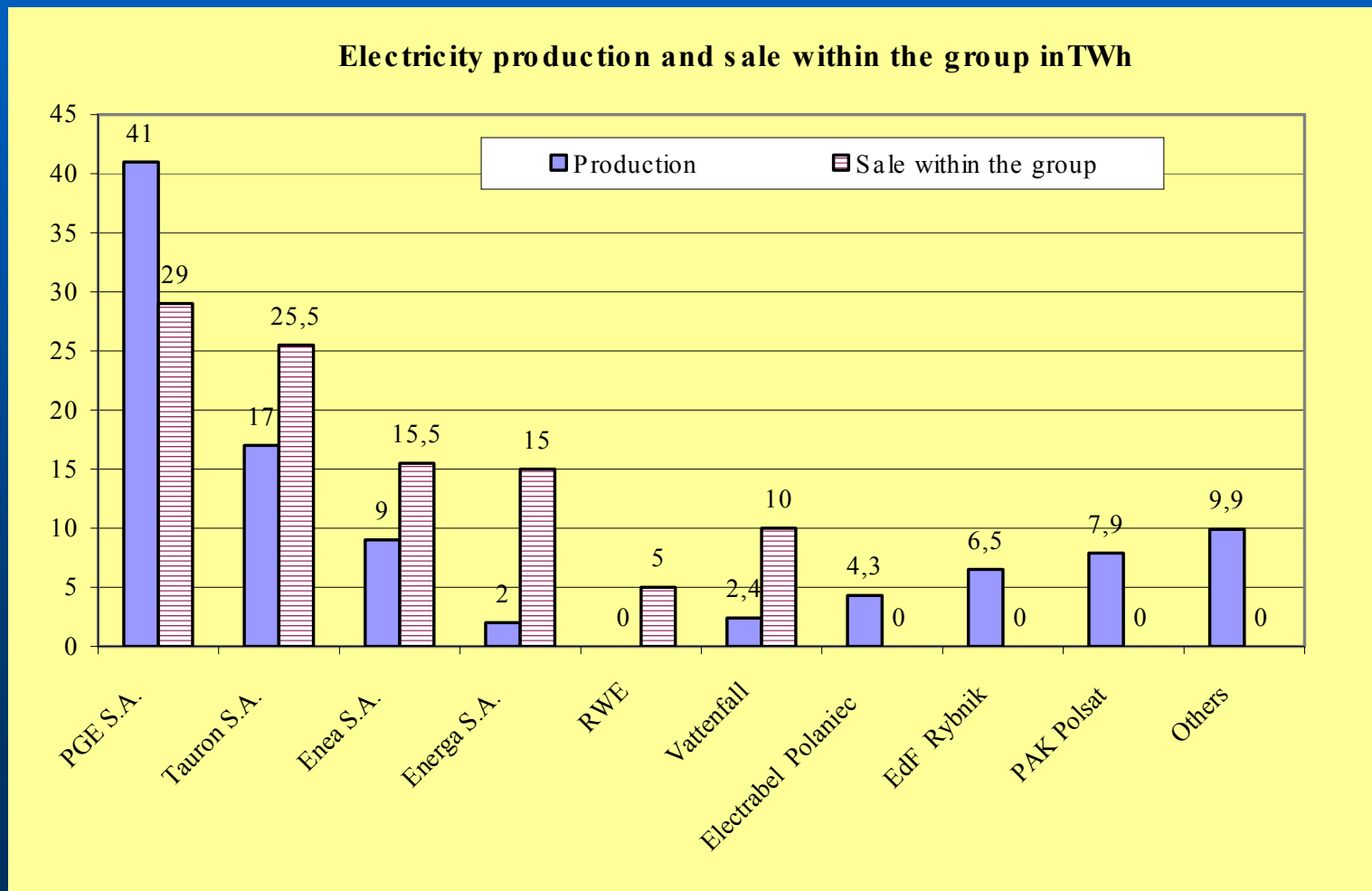
Source: PTPIREE

Polish power industry after consolidation in 2006

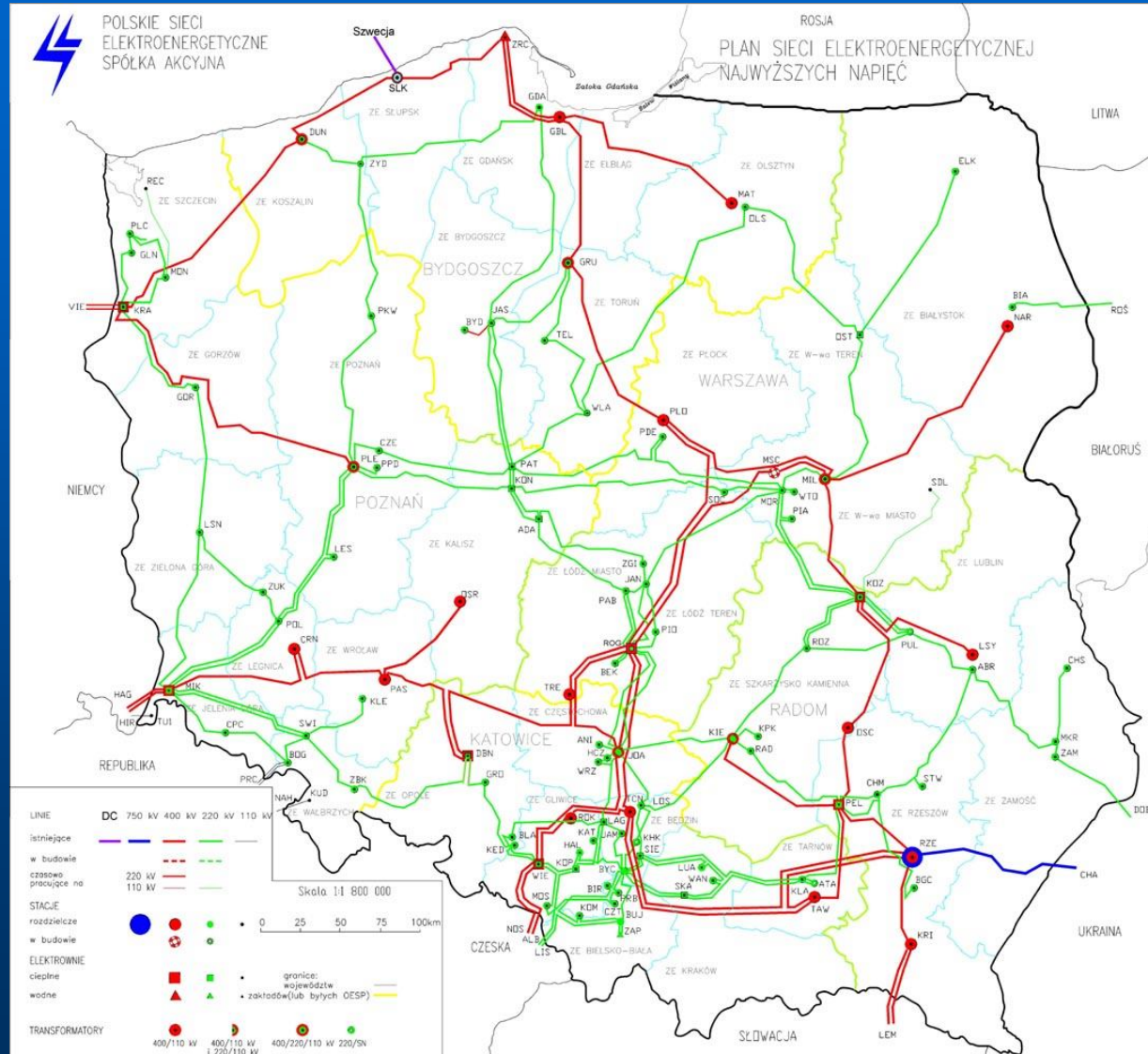


Source: Ministerstwo Gospodarki

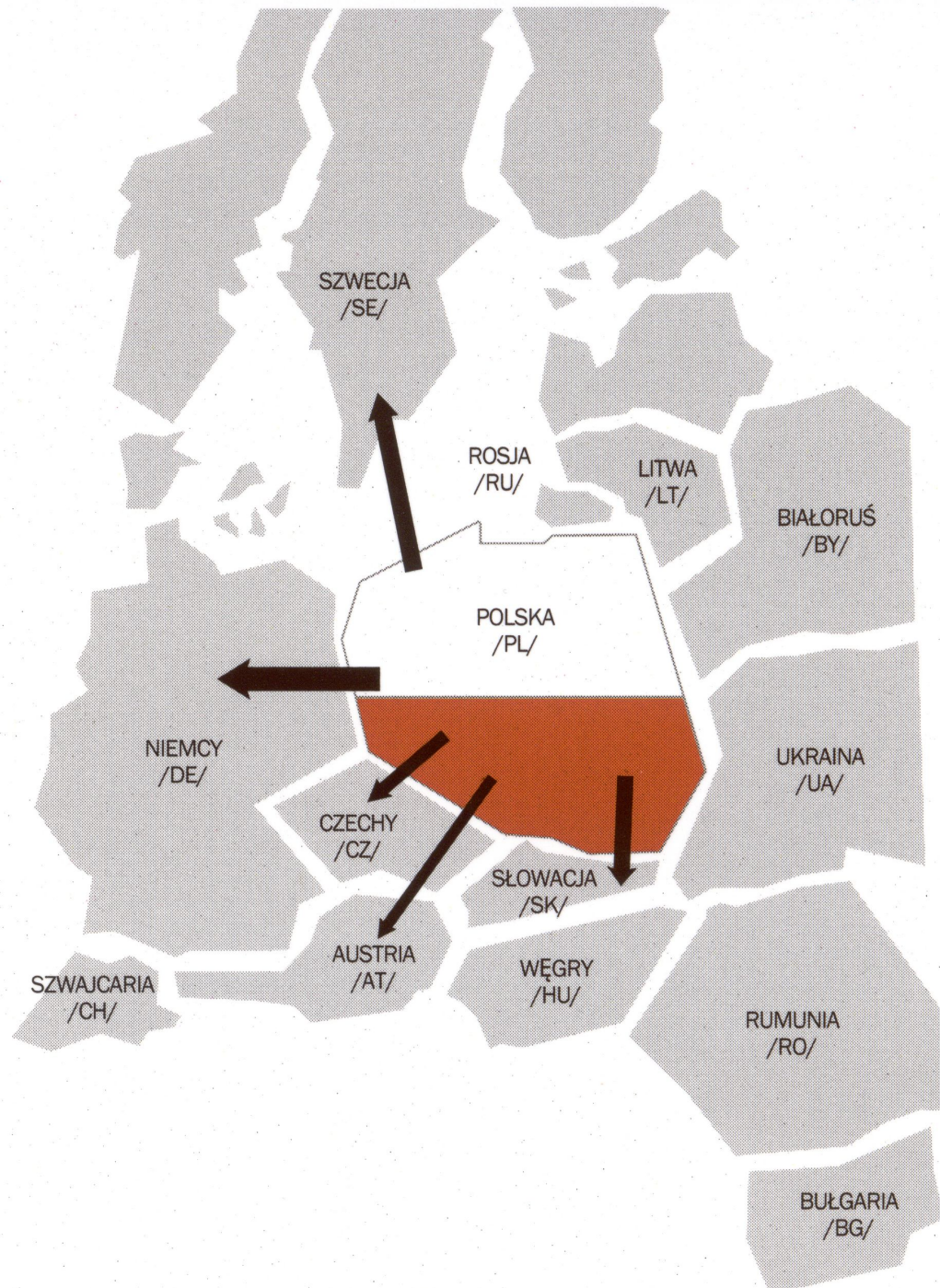
Balance in vertically integrated power companies



Polish transmission system



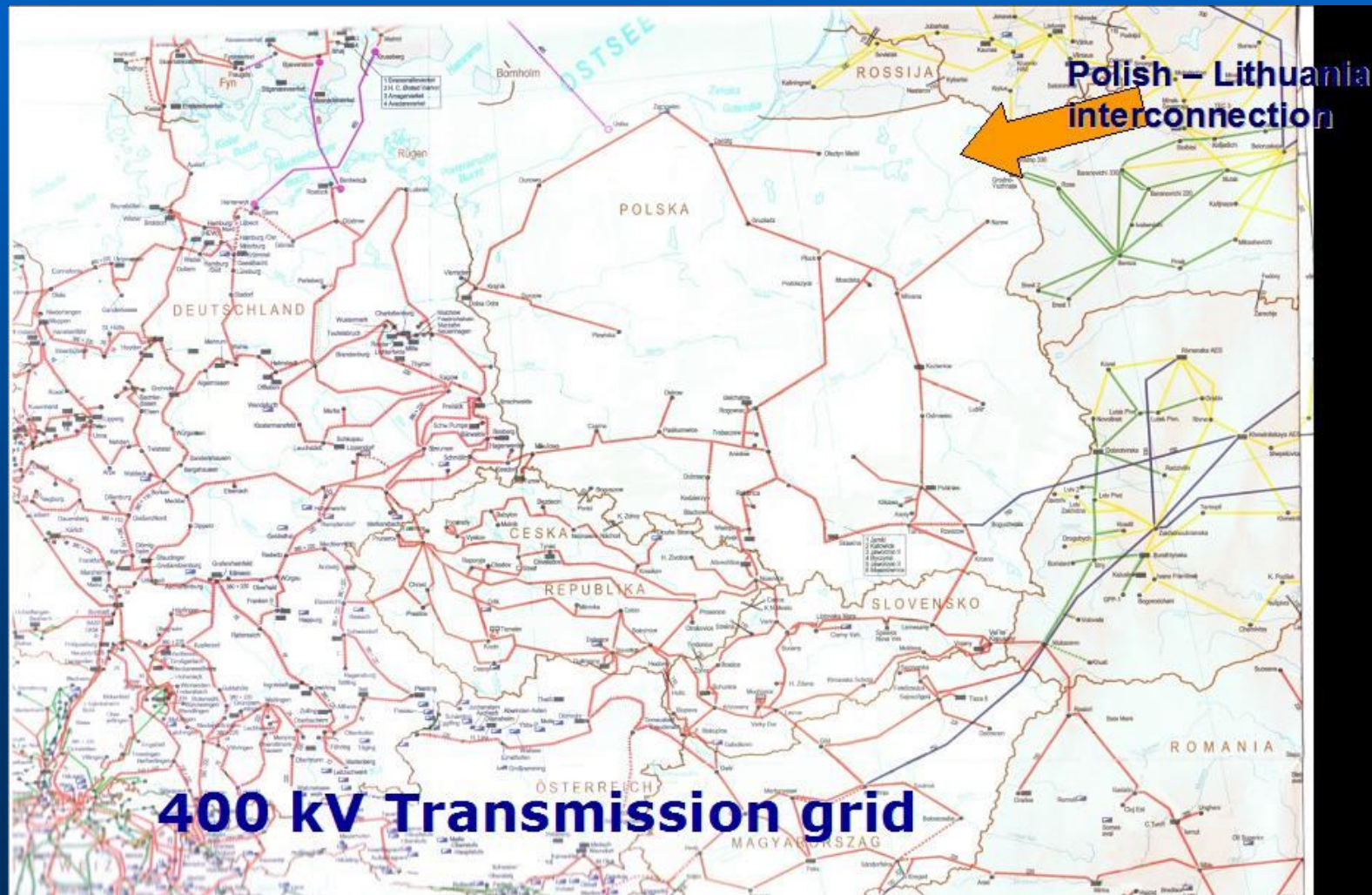
Source: PSE-Operator



Cross border power lines

Source: PSE-Operator

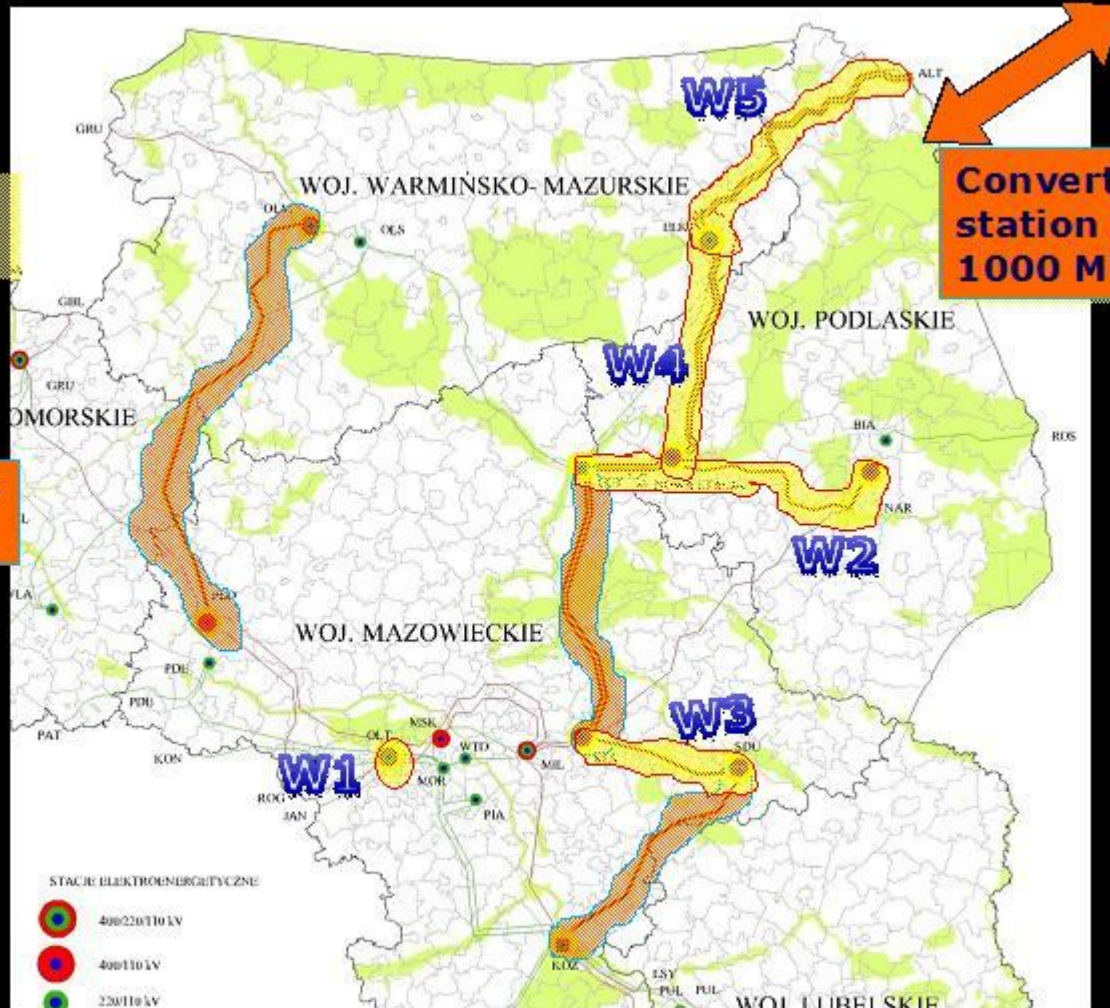
Central European Transmission System



Power line: Poland-Lithuania

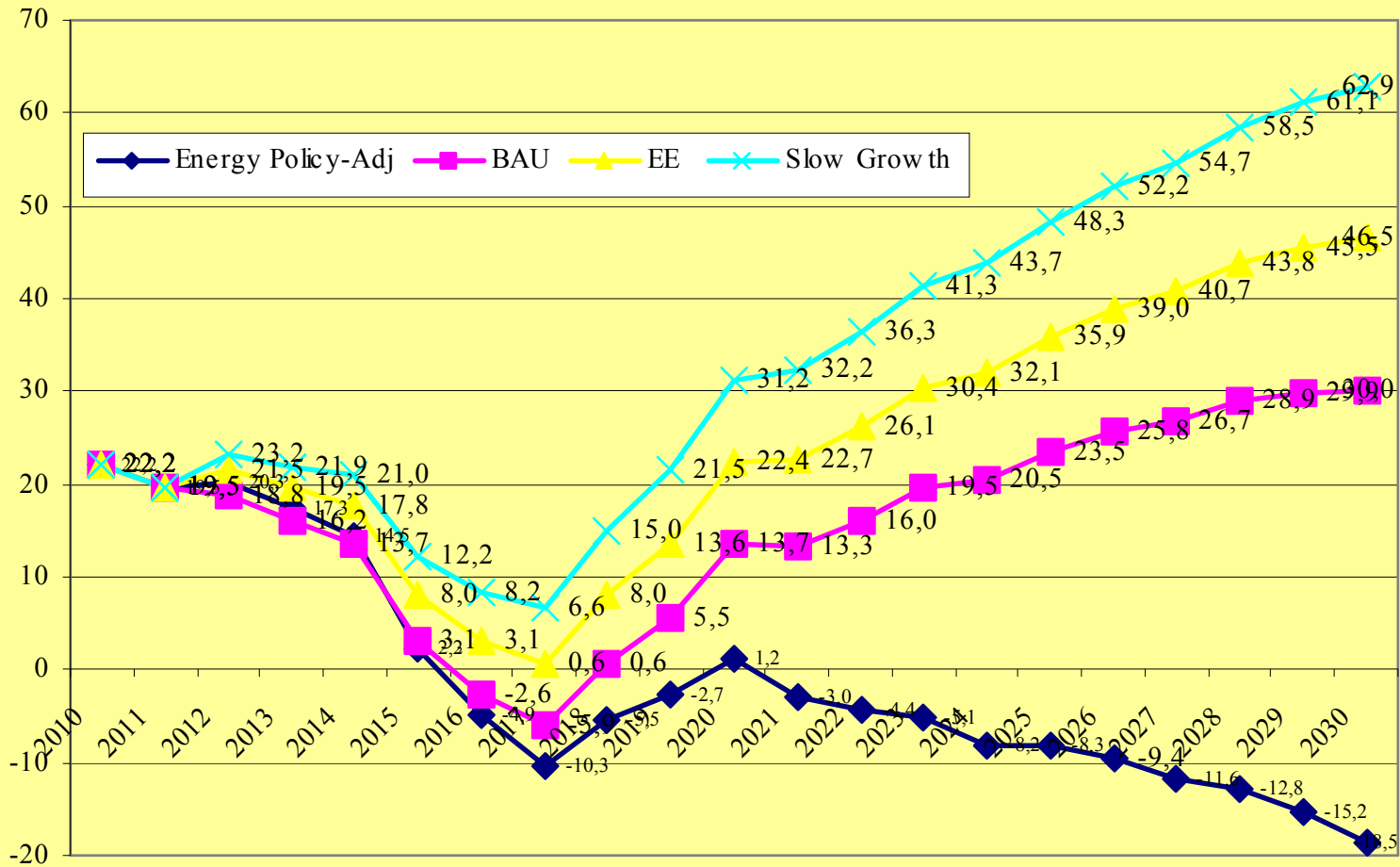
Investments
to 2015

Investments
to 2020



Domestic balance of power

Balance of domestic production and demand in TWh



Forecast of electricity prices

Possible electricity prices in the wholesale electricity market in
zł/MWh

