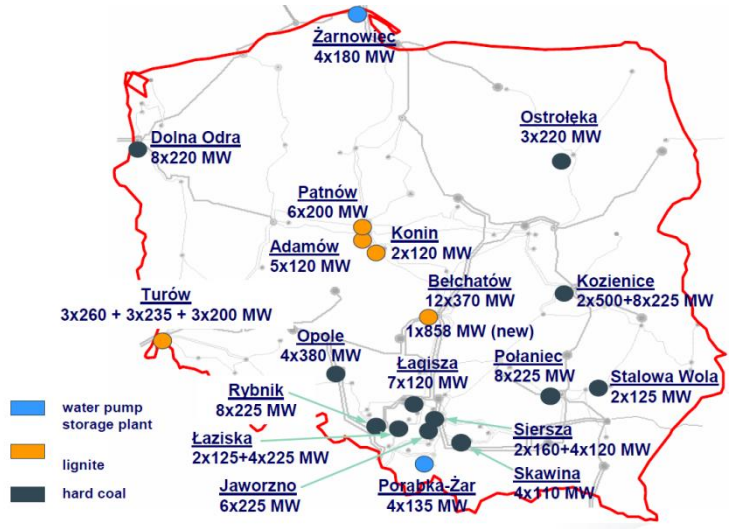

Source: Ministry of Economy, Energy Department.

Figure 1. Major power stations in Poland

Gross electricity generation amounted to 162 139 GWh in 2012, and was ca. 0.6% lower than in 2011, partly as result of financial and economic crisis, the fall of GDP growth which grew by 2% in 2012 (in comparison with 4.3% registered in 2011) and decreasing energy demand.

In 2012 electricity generation from coal power plants amounted to 140 087 GWh (87.6% of total electricity generation), and gas fired generation produced 4 485 GWh (2.8%). Electricity generated from hydro and renewable energy sources amounted to 6 291 GWh, representing 7% of total output. Such coal-based structure of electricity production results from abundance of domestic coal resources located in 3 basins of different size: Upper Silesian, Lower Silesian and Lublin, and advances technologies for its exploitation, preparation and combustion. Coal is the most important primary source of energy and shall maintain its dominance position for next decades.

New source of energy will be nuclear power plant, whose launch is planned for 2022.

It is estimated that ca. 55% of all power plants are over 30 years old. Both the Large Combustion Plants Directive (LCPD) and the Industrial Emissions Directive (IED) will lead to closure of several existing coal power plants, and loss in output which is estimated to be around 5.8 GW by end of 2020; in this ca 4.117 GW by PSE Transmission Operator disposal). Such values are likely to increase to 9.45 GW and 7.41 GW, respectively, by 2028. Such situation can create risk of capacity deficit in the electric market.

Reforms of energy utility market and privatisation processes started since 1998, as well as governmental consolidation policies (occurred in 2000, 2004 and in 2006 - programme for electricity sector) generated the current market situation, with five leading companies operating in the power generation sector.