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# €30bn – power construction opportunities in Poland

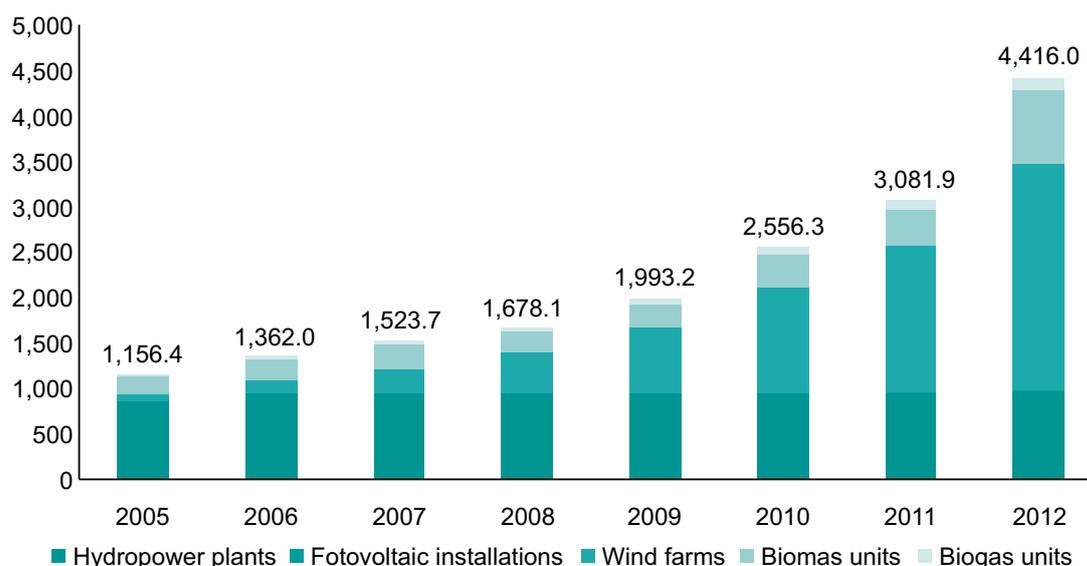


One of the most important facts about Poland's power sector is the structure of its energy production, which is dominated by hard coal and lignite. Poland's great natural resources in terms of these fuels determined the path of development for the power sector many years ago. Nowadays, this sector remains quite stable. The production of energy from coal reaches 85% of the total production, while the rest is fairly divided between renewable sources and the category that includes natural gas, liquid gas, fuel oils and so on. Any changes in that area have been very slow, though recently the pace has increased. The main factor that determines changes is the decision to accept the European Commission's climate policies concerning the climate (see "20-20-20" targets in the EU "The Climate and Energy Package").

## Renewable Sources Energy Generation

The share of renewable sources in the Polish energy mix is rather low – about 8% – but it is growing quite rapidly mainly due to relevant regulations in Polish law that support companies wanting to invest in the power sector based on renewable sources. Poland has good geographical conditions for the development of many different types of ecological power generating systems; over the years, however, entities specialising in wind energy have been especially active.

### Increase of renewable source power generation units in Poland, 2005-2012

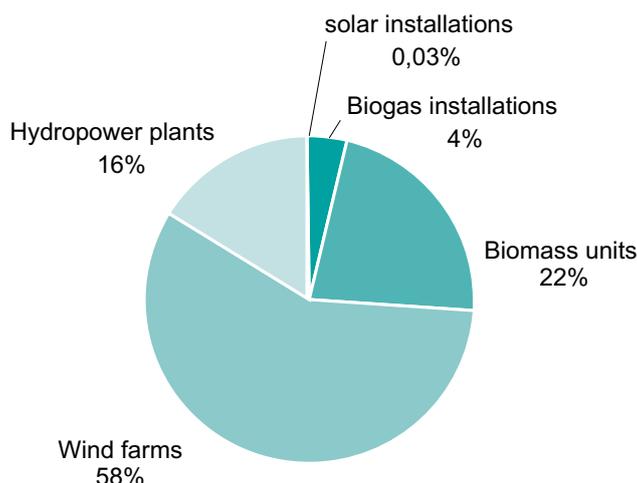


Source: Energy Regulatory Office in Poland, 2013



Average yearly growth for wind energy, calculated for the last 6 years, has reached greater than 63%, while for the overall category of renewable sources it has been more than two times lower. Changes in the category of the biomass unit are just slightly below the average. The installed capacity has been rising at a pace of 27% year to year. Only in 2012 did it double its total capacity, as compared to 2011. The slowest pace of changes is noted in the hydropower sector. In Poland, there are more than 760 hydropower plants; however, this counts for only about 12% of potential resources in the country.

## Structure of renewable source power generation units in Poland, 2013



Source: The Energy Market Agency in Poland, 2013

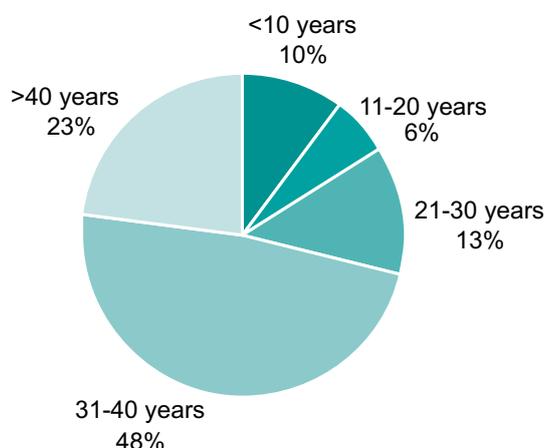


At the end of 2012, the total capacity of these installations was 4.4 GW, of which more than half was allocated to wind farms. The estimated number of working turbines reaches 650 units. Second place, with a 22% share, was held by biomass installations. This does not include co-combustion of biomass, as it was impossible to determine its influence on the total biomass capacity.

## Age structure of power infrastructure in Poland

The main reason for the changes in the energy sector in Poland, apart from the climate-related requirements of the European Union, is the age of the power generation infrastructure. About 70% of working units are more than 30 years old. Only about 10% of them are less than a decade old. Due to this unfavourable age structure, many of the units will have to be shut down in the near future. The reasons include inefficiency and failure to comply with emissions standards for greenhouse gasses and CO<sub>2</sub> (carbon dioxide).

### Age structure of power infrastructure in Poland, 2013



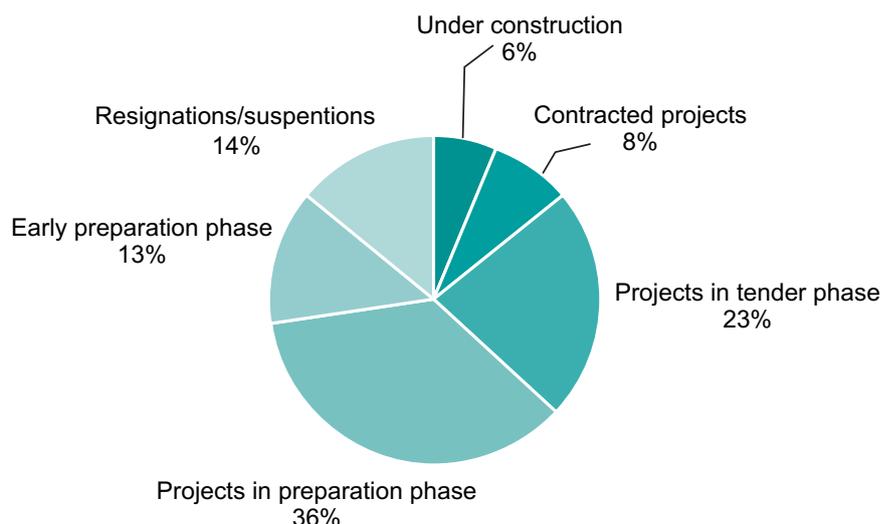
Source: PMR, 2013



## Planned investments worth about €30bn

Because of this situation, many investors are planning to renew their assets by means of modernisation or by building new units. The number of investments is rather high: they are valued in total at about €30bn. Right now, projects worth around €2bn euros are under construction. Further projects worth €2.6bn euros are waiting for the beginning of construction. This represents about 6% of all projects that companies have stated they will build, including the nuclear power plant.

### Power generation construction projects in Poland by the stage of execution, 2013



Source: PMR, 2013



Half of those projects are in more or less advanced stages of preparation. Investors are conducting analyses of their plans in an attempt to estimate their costs and net economic gain/loss. This is not easy, especially as Poland is on the eve of legal changes. Furthermore, energy investment depends on the long-term price prognosis of fuel, green certificates, and, of course, the price of construction.

*The following article is based on the PMR report "[Renewable energy construction in Poland 2013. Development forecasts and planned investments](#)".*

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