

Poland

Key issues

Although important improvements have been made to modernise Polish energy infrastructure, significant investments are still needed to ensure a sustainable supply of energy, reduce the share of carbon-intensive plants and increase the exploitation of renewable energy sources. Despite significant emission reductions realised over the last two decades, Poland is reluctant to support ambitious EU climate policy targets beyond 2020. This seems to be due to its concerns about energy security and its heavy reliance on coal, of which it has the biggest reserves in the EU and which is instrumental for electricity generation.

Poland should step up its efforts and extend the development of the electricity grid. Obstacles in electricity cross border exchange should be eliminated and the problems resulting from unscheduled flows properly addressed.

The gas sector in Poland has yet to complete its liberalisation process. Market conditions have improved. Progress so far includes implementation of the European Network Codes with the introduction of the virtual trading point, pilot projects with bundled capacities, capacity auctioning platform³⁷⁹, market-based balancing, and launching of both virtual and subsequent physical reverse flow on the Yamal pipeline at Mallnow. In addition, a gas exchange (PoIPx) was established and an exchange trade obligation was put in place.

However, these measures which have improved Polish chances to develop a competitive wholesale gas market have proven to be insufficient so far to boost competition on the market and change the current market structure. Although a process has been initiated, Poland still needs to phase out regulated prices in the gas sector, what would help to reinforce competition³⁸⁰. Effort should be made to further accelerate new gas interconnections and expansion of the existing ones with neighbouring countries. Barriers to trade (including the import diversification requirements) should be revised.

Security of gas supply is expected to improve thanks to the country's first LNG terminal to be commissioned in 2015 (to enter into commercial operation mid-2015) as well as development of new infrastructure to support the North-South gas corridor. Poland has improved considerably its interconnections with Germany (Lasow interconnection point and the introduction of physical reverse flow on Yamal at Mallnow).

General overview

Polish national gross final energy consumption in 2012 amounted to 97.97 Mtoe. It was based mostly on fossil fuels: hard coal (41%), oil (26%), gas (13%), and lignite (11%)³⁸¹. In 2012, share of

³⁷⁹ Gaz-System Auctions Platform

³⁸⁰ In some instance, the Regulator has released entities trading in natural gas from the obligation to submit tariffs for his approval.

³⁸¹ Eurostat and Polish Central Statistical Office, *Energy 2013*, 2 September 2013.

renewables in gross final energy consumption amounted to 11%, increasing from 7.8% in 2008. Poland remained above its 2011/2012 interim trajectory and is currently on track to achieve its national binding target for renewables of 15%.

In 2012, total power generation reached 162 TWh with most (88.6%) coming from fossil fuels, principally coal and lignite. Renewables accounted for 10.7%. In 2012, a rise in share of lignite was caused by decreased profitability of hard coal power generation. Poland maintained traditional export of electricity, mainly to the Czech Republic and Slovakia³⁸².

Figure 1: Gross inland consumption mix 2008 – 2012 (source: Eurostat)

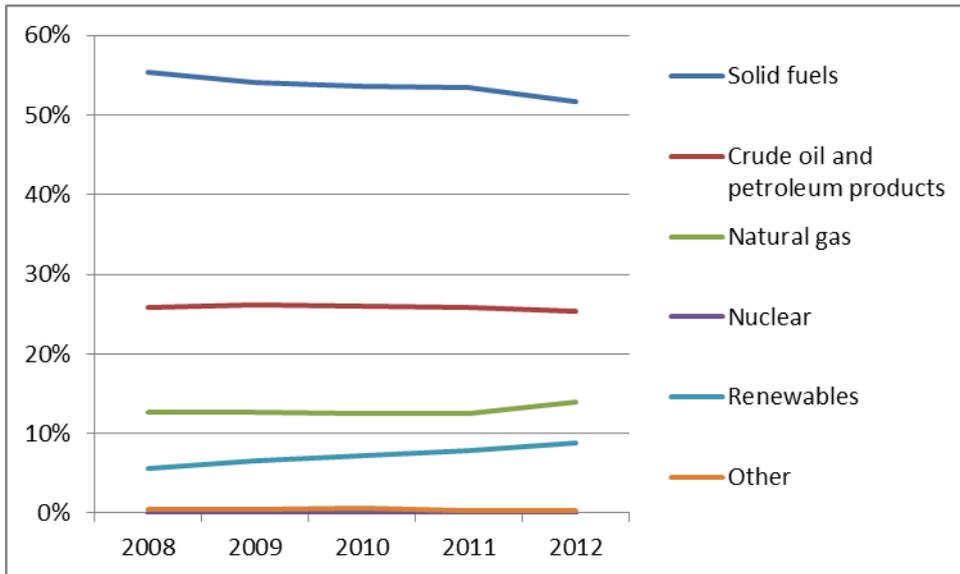
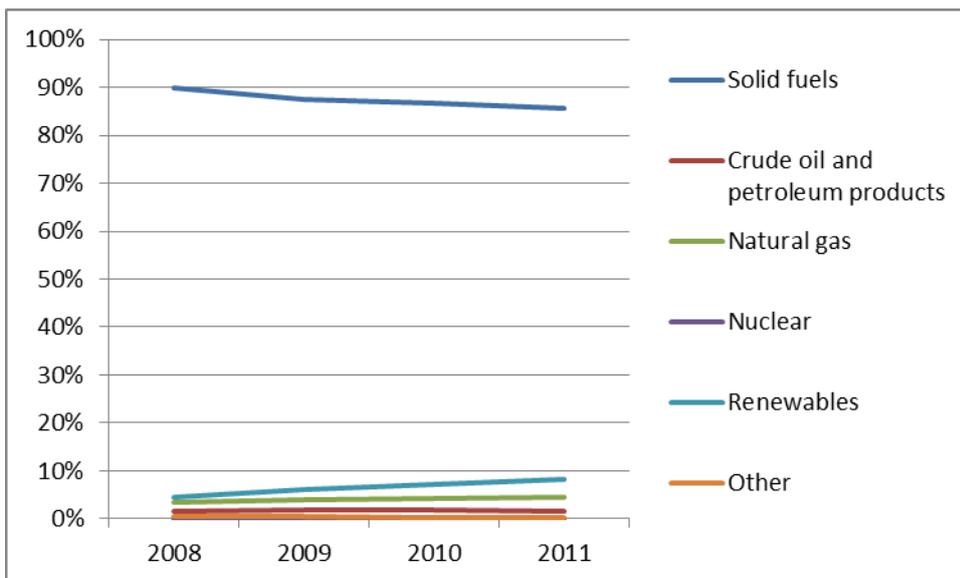


Figure 2: Gross electricity generation mix 2008 – 2011 (source: EU Energy in Figures – Pocketbook 2012 and 2013)



³⁸² Eurostat.

Regulatory framework

General

The Third Package Directives were transposed only in 2013 and their compliance is currently under review. An infringement procedure on regulated gas prices for non-household customers and the Third Energy Package Gas Directive is ongoing before the Court.³⁸³ In March 2013, the European Commission referred Poland to the Court of Justice for non-transposition of the renewables directive³⁸⁴, which has been controversial and hampered for many years. Arguments arise mainly about the design of the support scheme for renewables.

National Energy Regulator

The President of Energy Regulatory Office (URE) is a central body for governmental administration and has been in operation since 1997. In 2012, URE employed about 300 staff. Its annual revenues totalled EUR 23.8 million while expenditures reached EUR 8.8 million³⁸⁵. The surplus of income is part of the government budget. Amendments to Energy Law introduced a 5-year term for President of URE with a possibility of one reappointment.

Unbundling

The TSO in electricity is PSE S.A. and for gas, Gaz-System S.A. Both companies were certified as ownership unbundled TSOs (on the networks they own) in the course of 2014. The rules on certification of independent system operators were only adopted in 2013.

There were 158 electricity DSO's at the end of 2013, but only five serve more than 100,000 customers. Each company within the "big five" is legally unbundled³⁸⁶ and 4 of them are controlled by the Polish State Treasury. In 2013 distribution of gas was performed by 40 system operators including one incumbent system operator³⁸⁷ subject to legal unbundling³⁸⁸.

Wholesale markets

Electricity

The Polish wholesale power generation market still remains rather concentrated. However, initial data for 2013 show that HHI for electricity production dropped to less than 2000, meaning that the market shall no more be considered as highly concentrated. PGE, TAURON, and EDF remained the biggest power generators in 2012 and in 2013. The market concentration HHI index for installed capacity was 1587.9 in 2012. For the amount of power introduced to the grid this index reached 2096. The HHI index decreased further in 2013 based on the recently published data.³⁸⁹

In 2012, the power exchange's role became well established, following the introduction in 2010 of obligation to sell certain percentage of produced electricity by generators through the power

³⁸³ C-36/14, See IP/13/580.

³⁸⁴ C-320/13, See IP/13/259.

³⁸⁵ URE, Annual Report of the President of URE, March 2013.

³⁸⁶ URE, National Report 2013.

³⁸⁷ Mid-2013, six unbundled DSOs merged into one.

³⁸⁸ URE, National Report 2013.

³⁸⁹ URE, National Report, 2014

exchange. Electricity sold through the exchange accounted for 61.8% of electricity sold by generation companies in 2012 (up from 58.8% in 2011). Bilateral contracts represented around 33% of wholesale trade in 2012. It has to be noted that the volumes traded on the exchange decreased in 2013.³⁹⁰

According to the Polish Power Exchange (POLPX), in 2012 the annual average wholesale day-ahead power price was PLN 179.45/MWh, which is a decrease from PLN 205.19/MWh in 2011 (12% decrease). The annual traded volume in day-ahead transactions in 2012 was 19.1 TWh³⁹¹.

Poland participates, currently as an observer, in a five-way market coupling project known as “5M”. Poland intends to join the Czech Republic, Slovakia, and Hungary in the arrangement of capacity allocation on the common borders in implicit auctions later in the context of the CEE FBMC (Central East Europe Flow-Based Market Coupling) initiative³⁹². Poland also participates in the coupling of the North-Western European Market via the SwePol Link.

Gas

Annual natural gas inland consumption in 2012 amounted to approximately 15,9 bcm. The total imports of natural gas to Poland in 2012 amounted to 11,6 bcm, out of which imports from Russia and Central Asian countries were 9,2 bcm, corresponding to 57,6% of gross inland consumption and 79,8% of all imports. Imports from Germany amounted to 1,7 bcm and from Czech Republic 0,55 bcm³⁹³. Domestic gas production in 2012 was 4,46 bcm (in terms of methane-rich natural gas) which accounted for approximately 28% of the annual demanded of all consumers.³⁹⁴

It should be noted that imports from Germany increased thanks to physical connection via Lasow and the reverse flow via Mallnow. However, the import diversification requirement under the Polish law remains an obstacle limiting abilities of gas shippers to use the reverse flow on Yamal.

The wholesale gas market in Poland was still dominated by PGNiG in 2012 (ca 95%). The remaining 5% of total sales were supplied by other traders. Since 2013 the gas exchange obligation has provided grounds for competition in the Polish gas market, but in 2013 PGNiG failed to trade the mandatory 30% share on the exchange as there were too few buyers. The prices available under bilateral agreements were temporarily lower than prices offered on the exchange and the overall demand for gas was insufficient to drive sales up. However, in 2014, the situation changed – the volume of gas traded on the gas exchange is now increasing.

In 2012, as a result of the renegotiation of the long-term supply contract with PGNiG, Gazprom lowered the price of natural gas deliveries to Poland. The agreement ended the price dispute

³⁹⁰ URE, National Report, 2014

³⁹¹ POLPX data – Annual Summary for 2012, <http://www.polpx.pl/pl/27/aktualnosci/307/podsumowanie-roku-2012-na-towarowej-gieldzie-energii>.

³⁹² Memorandum of Understanding w sprawie przyłączenia Polski i Rumunii do zintegrowanego mechanizmu market coupling na rynku dnia następnego, 11 July 2013.

³⁹³ Report on monitoring of security of supply (2012), Ministry of Economy of Poland http://www.mg.gov.pl/files/upload/8356/PL_MG_DRO_Sprawozdanie%20za%202012.pdf

³⁹⁴ Report on the result of monitoring the security of gaseous fuels supply for the period from 01 January 2012 to 31 December 2012

between PGNiG and its Russian partner. Even after the correction, Poland still pays one of the highest prices for Russian gas in the EU.

The latest legal developments are positive for natural gas market liberalisation, including already mentioned amendments of the Energy Law in 2013, an important change concerning the structure of the incumbent and the adoption and the subsequent changes in the Transmission Grid Code. The code includes provisions of the Third Energy Package as well as system operation rules for capacity allocation. The code also introduced a virtual trading point for gas³⁹⁵ and allowed for early introduction of bundled capacity products between Poland and Germany which are tested until September 2014³⁹⁶.³⁹⁷ Subsequent changes, which entered into force in August 2014, implemented Network Code on Congestion Management Procedures (CMP), Capacity Allocation Mechanisms (CAM) and Balancing (BAL), improving the interoperability of Polish gas system with those of neighbouring countries.

Retail markets

Electricity

Poland continues to regulate retail electricity prices for households. The approval of the electricity prices by the President of ERO remains for households. In 2012 the regulation of electricity prices for households applied to all consumers who did not switch to the free market. Similarly to the previous years, “incumbent” suppliers continued to detain the largest share in sale of electricity to the end-users in 2012. In 2012, 82 active suppliers were operating on the electricity market. The total number of entities licensed to trade amounted to around 360, but these were mainly the vertically integrated industrial power companies conducting sale and distribution services. In 2012 the main five retailers, which used to be part of distribution companies before the market opening, covered 80% of the market³⁹⁸.

In 2012 four times more consumers exercised their right to switch supplier than in 2011. In total the number of non-household consumers who switched the supplier increased from 21,716 (cumulative numbers for 2007-2011) at the end of 2011 to 66,019 in 2012³⁹⁹. The number of households supplied under the TPA rule increased from 14,341 to 77,284 consumers⁴⁰⁰. This was partially caused by an increased advertising activity of the suppliers, resulting probably from the decrease in electricity demand in the business consumers segment.

Figure 3: Electricity price change by component 2008 – 2013 (source: Eurostat, energy statistics)

³⁹⁵ Transmission Network Code, President of Energy Regulatory Office Decision DRR-4322-5(9)/2013/JBu from 22 November 2013; Transmission Network Code of Polish Section of the Jamal Pipeline, President of Energy Regulatory Office Decision DRR-4322-6(5)/2-13/2-14/KG01 from 3 February 2014.

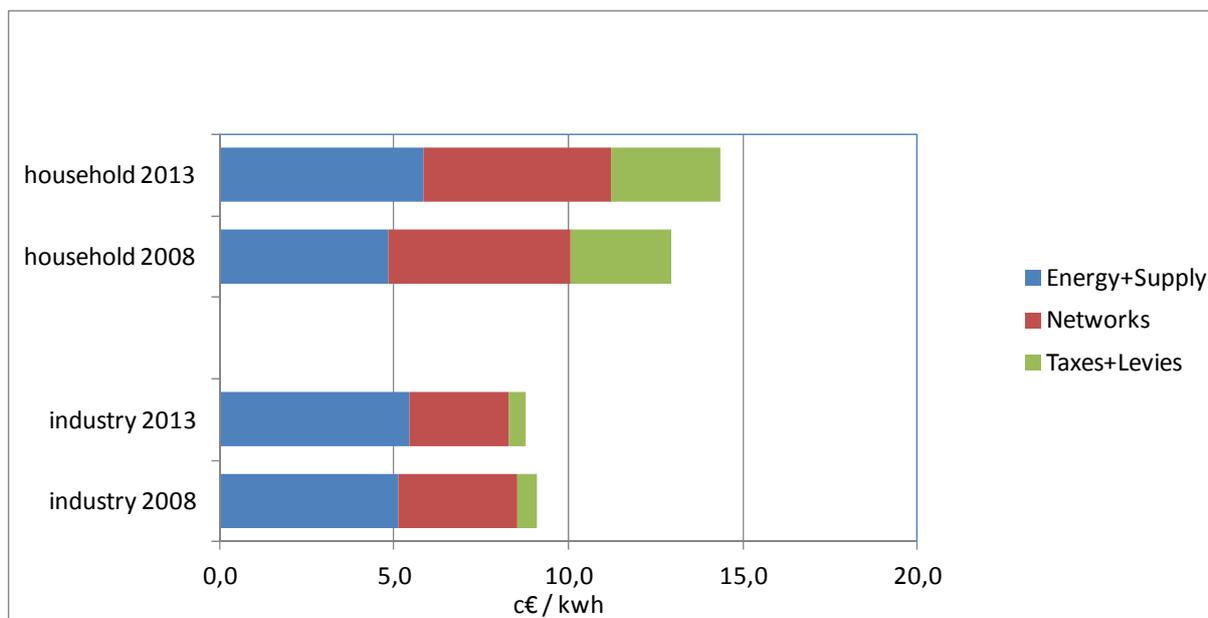
³⁹⁶ Produkt powiązany w Lasowie, <http://www.gaz-system.pl/centrum-prasowe/aktualnosci/informacja/arttykul/201643/>.

³⁹⁷ Transmission Network Code, President of Energy Regulatory Office Decision DRR-4322-5(9)/2013/JBu from 22 November 2013; Transmission Network Code of Polish Section of the Jamal Pipeline, President of Energy Regulatory Office Decision DRR-4322-6(5)/2-13/2-14/KG01 from 3 February 2014.

³⁹⁸ Eurostat.

³⁹⁹ URE, Annual Report of the President of URE, March 2013.

⁴⁰⁰ URE, Annual Report of the President of URE, March 2013.



Gas

In 2012, gas prices for households and industry were regulated. Nevertheless, following Poland's referral to the Court of Justice on regulated gas prices for non-household customers, Poland decided to introduce some changes in the way prices for non-household customers are determined. Prices for households and small commercial consumers are expected to be deregulated at later stage.

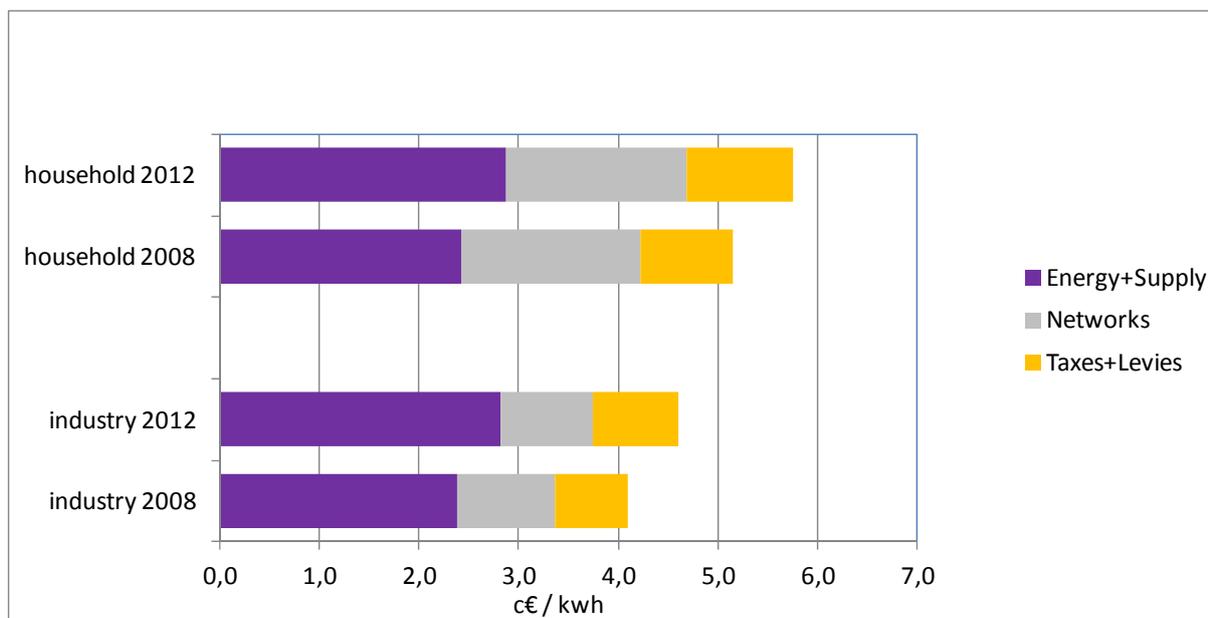
In February 2013, the President of Energy Regulatory Office published the "Roadmap of Natural Gas Prices Liberalisation" making the deregulation of prices for commercial and household consumers a priority⁴⁰¹. This, however, did not translate into the deregulation of gas prices to non-household customers and derogations are still decided by the President of ERO. This is subject to a court case which is now pending before the Court of Justice.

The Polish gas market is still characterized by very high concentration levels with the gas incumbent, PGNiG Capital Group holding 95% of the wholesale and retail markets in 2012 in 2013. The remaining 5% of the gas market is supplied by several dozen of other entities striving for strengthening their position on the market. In 2012, the households constituted the largest group (96.9%) among all PGNiG Capital Group's consumers. The number of gas retailers, independent from PGNiG, is growing, but their market position is highly fragmented. At the end of 2013 there were 120 gas retailers.

In 2012, 99.5% of households were supplied with gas under regulated prices (in 2011 this share was 99.9%). The number of consumers switching gas supplier has increased significantly in the past years but is still relatively low. In 2011, only a few switches were noted. In 2012 there were 210 cases and 402 by the end of September 2013.

Figure 4: Natural gas price change by component 2008 – 2012 (source: EC, EPCR metadata)

⁴⁰¹ URE, MAPA DROGOWA uwolnienia cen gazu ziemnego, Warszawa, January 2013.



Consumers

The Information Point for Electricity and Gas Consumers, established in September 2011, received during its first year of activity first full year of functioning 2.636 questions in total. Almost a half of the cases concerned the supplier switching procedure. In case of gas consumers the most frequent problems were related to the settlements as well as to changes in gaseous fuel prices and invoicing.

To address those issues, the URE organized a nationwide campaign promoting an effective and economical management of electricity. The right to switch the supplier was a leading motive of this campaign. Information on consumers' rights and on how to switch supplier is provided in the regulator's website. There is a special section in place ("You have a choice")⁴⁰². URE also offers an internet tool that compares prices (tariff calculator).

Consumers' overall assessment of retail electricity market is slightly below the EU average (70.6 points compared to 72.0, which corresponds to 19th place EU-wide) and below the average of 31 domestic services markets (24th place). Retail gas market is ranked slightly above the EU average (75.5 points compared to 74.1), ranking 12th EU-wide and among 31 domestic services markets. The market records the 3rd lowest incidence of consumer problems in the EU. Both markets have seen a considerable improvement in overall assessment since 2012, with increases of 4.4 and 2.9 points, respectively (first and second highest increase domestically). This is due to improvements in all the components (except for switching rates), in particular the ease of switching and choice⁴⁰³.

An amendment to the Energy law was adopted in 2013 which provides consumers with new rights. In addition, new energy allowances were introduced for which consumers with financial difficulties may apply.

⁴⁰² <http://www.maszwybor.ure.gov.pl/>.

⁴⁰³ 10th Consumer Markets Scoreboard, http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/10_edition/index_en.htm

Infrastructure

The Polish authorities should ensure a proper and timely adoption of the measures stemming from Regulation 347/2013 on the trans-European energy infrastructure, including the establishment of the one-stop-shop for Projects of Common Interest (due by 16 November 2013), and other measures foreseen for 2014 and 2015, including the publication of the manual on the permit granting process for project promoters, and the adoption of legislative and non-legislative measures streamlining the environmental assessment procedures. However, gas infrastructure projects of major importance are now streamlined by specific a legal act, which purpose is to facilitate process on the administrative level.

Electricity

A large part of Polish energy infrastructure is ageing and in need of replacement. Significant investments in energy sector are in progress, mostly based on fossil fuels, while future investment plans include construction of two nuclear power plants, expected to be commissioned by 2025.

At distribution level, half the extensive grid replacement will take place, with half the financing coming from the EU's Cohesion Fund⁴⁰⁴. 400,000 smart meters have already been installed and are currently tested⁴⁰⁵.

The interconnector between Poland and Lithuania (LitPol link) is expected to be operational in late 2015. It will connect the Baltic countries with the Western European Electricity System and increase energy security in the region.

Gas

The major on-going investment in gas infrastructure is linked to the construction of the LNG terminal in Swinoujście. It will have a 5 bcm capacity and is scheduled to be operational in 2015. In 2012 Poland enhanced its gas interconnection with Germany (in Lasow). In 2014, the investment enabling physical reverse flow at the border with Germany (in Mallnow) was completed. Furthermore, the expansion of the existing UGS facilities (e.g. in Wierzchowice) and the construction of the new UGS facility (Kosakowo) should also be noted.

Construction of the gas interconnector between Poland and Lithuania ("GIPL") that is necessary to end the energy isolation of the Baltic countries should be considered a top priority by Poland. There are also plans to develop import capacity at the southern border with Slovakia and with the Czech Republic (as a part of North-South gas corridor). Moreover, from the security of supply point of view, one of the most significant investments was a modernisation of Polish-German interconnection point at Mallnow. The investment (completed on April 1, 2014) enabled provision of physical reverse flow of gas from Germany to Poland. In February 2014 Polish and German TSOs carried out a pilot auction on a bundled capacity at Mallnow which is the first stage of the procedure of physical reverse allocation.

⁴⁰⁴ <http://www.pgedystrybucja.pl>.

⁴⁰⁵ Energa operator.

Security of supply

Electricity

Polish generation capacity reserves may reach a record low in 2014. According to the Polish TSO, if the peak demand for electricity increases above 26 000 MW (in 2012 the instantaneous peak load was almost 24 000)⁴⁰⁶, the system will fail to deliver without support from neighbouring countries. Therefore, there is a need for enhanced demand side response. The TSO already work with large industrial users to develop system management. Poland is considering developing capacity market measures.

Limited grid connections between the North and South of Germany result in unscheduled flows to Poland limiting cross-border capacity available to market participants very often to zero MW. In 2014, Polish and German TSOs reached an agreement on the operation of phase shifting transformers to better manage the flows⁴⁰⁷, but the issue requires long term solutions.

Gas

In 2013, the Ministry of Economy, responsible for the security of gas supply, adopted the Preventive Action Plan and Emergency Plan meeting the requirement set in the Regulation 994/2010 concerning measures to safeguard security of gas supply⁴⁰⁸.

Heavy dependence on gas imported from Russia is balanced with domestic gas production. Further diversification is expected when the LNG terminal in Świnoujście is commissioned and if shale gas could be exploited on a sufficient scale. The gas import trend is upward, but imports from the East have fallen in favour of purchases from Germany and Czech Republic⁴⁰⁹. In October 2012 the Polish TSO opened up the possibility of transporting gas to Ukraine.

Key indicators

Electricity		Gas	
Number of companies representing at least 95% of net power generation	32	Number of entities bringing natural gas into country	40
Number of main power-generation companies	6	Number of main gas entities	1
Market share of the largest power-generation company	39,3%	Market share of the largest entity bringing natural gas	96,9%
Number of electricity retailers	82	Number of retailers selling natural gas to final customers	120
Number of main electricity retailers	5	Number of main natural gas retailers	1
Switching rates (entire electricity retail market)	0,6% (0,86% for households)	Switching rates for gas (entire retail market)	0,8%
Regulated prices for households – electricity	Yes	Regulated prices for households – gas	Yes

⁴⁰⁶ ENTSO-E, YS&AR Report, 2012.

⁴⁰⁷ PSE operator, press release, <http://www.pse-operator.pl/index.php?dzid=32&did=1669>.

⁴⁰⁸ Ministry of Economy, Plan Działań Zapobiegawczych, Warsaw 2013.

⁴⁰⁹ Ministry of Economy, Report on the results of monitoring the security of gaseous fuel supply for the period from 01 January 2012 to 31 December 2012, Warsaw 2013.

Regulated prices for non-households – electricity	No	Regulated prices for non-households – gas	Yes
HHI in power-generation market by volume of power fed into a grid	2,096	HHI in gas supply market	N/A
HHI in electricity retail market	2,099	HHI in gas retail market	9,073
Electricity market value ⁴¹⁰ (bn€)	9.376	Gas market value ²⁶ (bn€)	3.658
Installed generation capacity (MW, 2011)	34,554		
Peak demand (MW)	23,970		
Number of smart meters installed	400,000		

⁴¹⁰Market value is an estimation of the size of the retail electricity and gas markets. It is calculated using data on electricity and gas consumption in the household and non-household sectors (average bands) and annual average retail prices.