National Report

to the European Commission

The President

of the Energy Regulatory Office

in Poland

2011

July 2011

Table of Contents

Acronyms and Abbreviations

CNG	Compressed Natural Gas
n/d	no data
DSO	Distribution System Operator
EMA SA	Energy Market Agency SA
ENTSO-E	European Network of Transmission System Operators for electricity
ENTSO-G	European Network of Transmission System Operators for gas
ERO	Energy Regulatory Office
ERO President	The President of Energy Regulatory Office
EU	European Union
GK PGNiG SA	Polish Oil and Gas Company SA Capital Group
IRiESD	Distribution Grid Code
IRiESP	Transmission Grid Code
LNG	Liquefied Natural Gas
LT PPAs	Long Term Power Purchase Agreements
NES	National Electricity System
OGP Gaz-System SA	Operator of Gas Transmission Pipelines Gaz-System SA
PGNiG SA	Polish Oil and Gas Company SA
PSE SA	Polish Power Grid Company SA
PSE Operator SA	Polish Power Grid Operator Company SA
RES	Renewable Energy Sources
SSO	Storage System Operator
TSO	Transmission System Operator
TPA	Third Party Access
UCTE	Union for the Co-ordination of Transmission of Electricity
UOKiK	Office of Competition and Consumer Protection (OCCP)

1. FOREWORD

In 2010 another amendment to the Energy Law came into effect. This fact had significant impact on the situation observed in the energy sector, and it resulted in substantial extension of scope of responsibilities assigned to the President of ERO as regards regulation and promotion of the competition. However, new prerogatives of the President of ERO are still inadequate to curb potential anti-competitive behavior in the sector. In consequence, the Regulator has to resort to non-administrative measures. In that context, the President of ERO was involved in 2010 in numerous social campaigns and initiatives focused on the dissemination of knowledge among energy consumers and on promotion of pro-competitive behavior. As a result of all these efforts, there were developments on Polish electricity and gas market in 2010 which not only contributed to greater competition, but also increased country energy security and represented an important milestone towards the integration between Polish and European energy market.

Developments in legal environment observed in 2010 were also related to external factors, such as the need to harmonize Polish law with the EU law. Pursuant to European Union law, all member states are required to implement to their respective national legal frameworks the provisions of the so-called 3rd energy package, which came into effect on March 3, 2011. The process of introduction of new EU regulations has not been completed yet, but their full implementation will facilitate energy market integration and expedite the slow process of competition development on the Polish electricity and gas market.

This Report presents the status of energy market in 2010 according to the best knowledge of the President of ERO. Such knowledge is based on constant monitoring of the sector and its operation, as well as regular collection and processing of information on the state of development of domestic energy markets.

The document presented to the European Commission is the seventh report prepared by the President of Energy Regulatory Office, therefore it meets the obligation specified in the Energy Law and the European Union directives.

2. MAIN DEVELOPMENTS IN ELECTRICITY AND NATURAL GAS MARKETS

In 2010 there were several significant processes which contributed to a gradual increase of competition on the Polish energy market. Nevertheless, electricity and natural gas market in Poland is still characterized by low level of competition. Measures taken by the President of ERO are summarized below and described in greater detail in subsequent chapters.

Wholesale market

Current structure of the power sector and the extent of concentration have been influenced by the process of first horizontal, and then vertical concentration of the enterprises owned by the State. This process results from the implementation of 'Programme for Electric Power Sector', adopted by the Council of Ministers in 2006. The share of individual energy groups, as well as their structure, remained largely unchanged in 2010. The biggest share in generation subsector continues to be held by capital group *PGE Polska Grupa Energetyczna SA,* whereas *Tauron Polska Energia SA* is the leader on end user supply market. Consolidation process, which has not been finalized yet, will exert substantial impact on potential for competition development on the wholesale market.

Electricity generation and trade markets remain highly concentrated due to the presence of vertically consolidated equity groups. Competition development on electricity market is described predominantly by the concentration measures. HHI level, measured according to installed capacity, changed only slightly in 2010 compared to 2009, and the same is the case when gross production of electricity is taken into account. Three leading producers (i.e. those that belong to the following equity groups: *PGE Polska Grupa Energetyczna SA*, *Tauron Polska Energia SA*, *EDF*) had more than half of the total installed capacity, and they accounted for almost 2/3 of the total domestic electricity generation.

Trade on wholesale electricity market was highly concentrated, especially within the vertically consolidated energy groups. As in previous years, bilateral contracts continued to dominate trade on the wholesale electricity market. During 2010, analogically to the previous year, over 90% of electricity sold by generators to trading companies was sold within the framework of bilateral contracts. The remaining portion of sales was carried out on the balancing market (including the need to ensure NES security of supply) and, to a very small extent, on spot markets (power exchange, internet platforms for electricity trading).

In 2010 transaction structure on the wholesale market was quite similar to previous years. Trading companies remained the key recipient of electricity on wholesale energy market. Sale to customers within a group was still dominating. Looking at the structure of electricity sales contracts in 2010, the wholesale electricity market players still treated the power exchange marginally. In contrast, one could observe significant increase in the use of that trading platform in to conclude trade contracts for 2011. In particular, *TGE SA* power exchange experienced dynamic growth in 2010. The main reason of a growing share of sales on the exchange was the fact that on August 9, 2010, Energy Law amendment came into effect. The amendment obliged all generators to sell 15% or 100% (for generators involved in long-term power purchase agreements) of generated energy through the exchange.

Thanks to an increasing trade dynamics on *TGE SA* power exchange, Polish energy market gained sufficient liquidity to make available to third parties the first cross-border connection with a Scandinavian market. This is done through market coupling mechanism, i.e. implicit auctions on day-ahead markets on *Nordpool Spot* and *TGE SA* exchanges. Available capacity on direct current cable connection between Poland and Sweden (*SwePol Link*) is equivalent to 600 MW. Thanks to this project, the participants of *TGE* exchange and Scandinavian *NordPool Spot* exchange have been able to sell generated electricity to other markets, and to purchase cheaper electricity from neighbouring markets.

Yet, insufficient level of transmission capacity on cross-border inter-connectors remains a significant challenge from the standpoint of integration between Polish market and neighbouring countries. Additionally, increasing level of wind generation in Northern Germany made it difficult to

take the best advantage of existing cross-border interconnectors due to growing loop flows through NES[1)], which are hard to forecast. In particular, this applies to the possibility of importing electricity from neighbouring countries, which in turn exerts significant impact on competition development on domestic market. Congestion management on the border between Poland and Germany, Czech Republic and Slovakia is done in a coordinated manner, despite non-implementation of a coordinated cross-border capacity mechanism throughout Central and Eastern Europe region. As a result of TSO cooperation within the framework of ERGEG Regional Initiatives, Auction Rules Project was developed for a fully coordinated congestion mechanism in the entire region, and these rules became effective as of January 1, 2011.

In 2010, analogically to previous years, wholesale trade in natural gas in Poland defined as the sales of gas to the entities that use it for resale purposes, was dominated by *PGNiG SA* and, in fact, it has taken place only and exclusively within *PGNiG SA* capital group (hereinafter: *GK PGNiG SA*). Trading companies outside of *GK PGNiG SA,* in principle, do not get involved in wholesale trade. However, in the case of two entities, there were some small amounts of natural gas purchased for resale, but they did not benefit from TPA principle. This involved the sales of liquefied natural gas – LNG.

In 2010 trade in natural gas continued to be performed only and exclusively within the framework of bilateral contracts. Gas trade on exchanges or through hubs has been non-existent in Poland. Prices of gaseous fuel are not varied depending on whether gas is to be consumed directly by the user or whether it is resaled. Price is determined by capacity ordered, considered separately for each reception point. Sales volume does not act as a direct price differentiator.

However, very important step towards the natural gas market development in Poland, including gas transmission management and implementation, was the appointment of *Gaz System SA* as the operator on the Polish section of Yamal-Europe Natural Gas Pipeline Transit System. Pursuant to the decision dated November 17, 2010, the President of ERO appointed this company as gas transmission system operator on the Polish section of Yamal-Western Europe pipeline for the period until December 31, 2025.

Still, domestic transmission system is not sufficiently integrated with the systems that belong to other countries. At all "entry" points to the Polish transmission system the share of capacity reserved by *PGNiG SA* is equivalent to almost 100%. Based on analysis of information regarding the interconnectors between domestic transmission system and other systems, it is shown that there is physical congestion. In the case of the interconnector between domestic transmission system and gas system of the EU Member States at *Lasów* entry point, physical transmission congestion was observed[2)], whereas in the case of interconnectors with transmission systems supplying gas from the eastern direction, there was full reservation of transmission capacity (these reservations were not long-term in nature).

Retail market

Apart from end users, retail market players include the companies that provide distribution services (distribution system operators/DSOs), and electricity suppliers (trading companies). The biggest share in electricity sales has been achieved by 'incumbent' suppliers who were parties to 'umbrella agreements' (agreements that combine the terms of a buy-sell agreement and distribution agreement with users) after the unbundling of distribution system operators (currently seven entities). They act as default suppliers to those households users who had not decided to switch to a new supplier. There are also other suppliers present on electricity market (about twenty active players), that are not formed from former distribution companies. About 200 other suppliers represent vertically integrated industrial power companies, which also provide distribution services apart from the sales. In total, there are about 300 entities licensed to trade in electricity.

Last year the President of ERO did not decide to exempt suppliers from the obligation to present for approval tariffs for users from Group G, i.e. households. This is the only group in the case of which the President of ERO still exercised control in the form of price regulation.

Market situation is such that consumers continue to remain 'tied' to their past suppliers, and the rate of suppliers' switching is very low, in spite of the fact that, since July 1, 2007, all consumer groups have been entitled to switch their supplier. Nevertheless, notwithstanding the consistently low

[1)] This situation has improved to a certain extent in 2011 after the adoption by Germany of nuclear moratorium.
[2)] In June 2011 the procedure allowing access to additional capacity at *Lasów* entry point was initiated.

number of users who decided to exercise the right to switch supplier, the number of users who did exercise that right was much higher in 2010, compared to 2009. As can be inferred from the analysis following the breakdown into tariff groups, in 2010 there was an increase of more than 300% in the number of users who switched their supplier, in comparison to the number of suppliers' switch cases in 2009. Of that, the number of cases in tariff groups A, B, C (commercial users) went up by about 500%, and in tariff group G (individual users) by about 17%. When looking at those indicators one should keep in mind, however, that to date very few users (only 0.05% of all consumers) have taken advantage of the right to switch supplier.

Between the fourth quarter of 2009 and the fourth quarter of 2010, electricity prices for consumers who did not choose to switch supplier did not exhibit a marked rising trend. In comparison with the period between the fourth quarter of 2008 and the fourth quarter of 2009, when the prices for consumers on average went up by 31.7%, in the period analyzed in this study, prices went down by 0.51%. The biggest decrease was observed in the case of major commercial users (tariff group A) – by 3.94%, and the biggest increase was noted for households (tariff group G) – by 4.51%. As for the consumers who decided to switch the supplier, the price of electricity is determined in bilateral contracts.

In 2010 *GK PGNiG SA* held a dominant position in the gas sector and, consequently, on the market. The group includes, among others, *PGNiG SA*, which is involved in natural gas trade and has the biggest natural gas sales volume, as well as six distribution system operators responsible for transporting gas to household, industrial and wholesale users, and for pipeline operation, renovation and extensions.

High level of concentration on Polish gas market, associated with the dominant position of *GK PGNiG*, has been influencing the structure of retail market and the pace of developments observed on that market for many years. Still nearly 98% of all natural gas sales is carried out by the monopolist, while the remaining 2% is carried out by several dozen entities that seek to develop and strengthen their market position. Vast majority of those enterprises have been selling gas via their own, local distribution networks. In 2010 there was one entity operating on the market without its own network, involved in natural gas sales on the basis of TPA principle. Moreover, there are new entities on the market that sell LNG without using gas network.

Despite TPA principle has been in force since July 1, 2007, in practical terms supplier switching practice on the gas market has not taken place. In order to give users a real opportunity to switch the supplier, the President of ERO has indicated to *OGP Gaz System SA (TSO)* which changes should be taken into account in the Transmission Grid Code (*IRiESP*) prepared for submission for and approval by the President of ERO. It is very important to introduce the principles governing the ordering of contractual capacity in the course of gas year in such a way that the end user is able to switch supplier. Relevant changes in the code were submitted in 2011.

Gas prices for all users are subject to regulation due to lack of competition on natural gas market in Poland. In 2010 gas prices were changed twice – on June 1 and on October 1. The main reason behind high-methane gas price increase as of June 1, 2010, was an increase in the cost of high-methane gas acquired through import purchases, which is affected to the same extent by import prices and by currency exchange rates (USD and EUR). Another price increase for gaseous fuels came into effect as of October 1, 2010; it was caused by an increase in the cost of purchase of high-methane gas from imports in connection with a substantially higher USD exchange rate (USD is the main currency for foreign purchase transactions) than the one adopted for the gas price calculation and applied since June 1, 2010. In turn, pursuant to the decision of the President of ERO as of December 16, 2010, a decrease in the price of gaseous fuels sold by *PGNiG SA* was approved, in effect as of January 1, 2011. It was dictated by the rebate expected in the first quarter of 2011 in the cost of high-methane gas purchase under the main import agreement concluded with *OOO Gazprom Export*, in connection with the addendum, signed in October 2010, to the agreement between *PGNiG SA* and *OOO Gazprom Export*.

Conclusions: general status of markets

Progressive vertical consolidation of the power sector resulted in the establishment of a limited number of energy groups with significant market power. There were no major changes in 2010 as far as the market share and the structure of those entities is concerned. Electric power market in Poland in 2010 can still be described as low liquidity market. Among key determinants that contribute to that situation one can name a high share of bilateral contracts and, despite the progress, still a small share

of exchange market transactions. It should be noted, however, that in 2010 the amendments to the Energy Law came into effect, and they have brought about certain changes on electricity market. Pursuant to the amended law, *inter alia*, a requirement of public sale of electricity by generators has been introduced. These regulations have seriously affected trading on electricity wholesale market, and thanks to increased liquidity of Polish wholesale market it was possible to implement market coupling mechanism on Poland-Sweden direct current interconnector. On the retail market one could observe a significant increase in the dynamics of supplier switching by users, especially in tariff groups A, B and C. G group consumers continue to exercise that right to a very limited extent.

Gas market in Poland is characterized by low competition and high concentration. Due to such an 'established' market structure, efforts aimed at promotion of the competition have faced much greater obstacles than it is the case with the power sector. The concern that under a present-day structure the dominant company may be taking advantage of its position justifies the need to uphold full regulation, concurrently with the actions aimed at gas supply diversification and encouraging market entry. In consequence, this may lead to some positive changes resulting in the gas market development, both in terms of infrastructure and real competition, while at the same time keeping the price level acceptable for both parties, i.e. the consumers and the companies.

Public service obligations and consumer protection issues

In 2010 the President of ERO continued intensive efforts aiming at developing the public awareness of competitive market and consumer rights. The President of ERO does not have an extensive catalogue of prerogatives directly relating to promotion of the competition. However, it should be noted that in 2010 the Regulator rights and obligations in that field were extended, for example by the prerogative to approve compliance programs, or to oversee the above-mentioned requirement of public sale of electricity (obligation to sell on exchange), introduced pursuant to Energy Law amendment. Additionally, it is worth noting that promotion of the competition in the energy sector is no longer based only on purely administrative tools, used by the Regulator for the performance of the basic duties, but also on persuasive actions.

In 2010 one could observe many so-called 'soft' actions, which are not directly required of ERO President by the legislation, but which are regarded necessary by the Regulator in order to promote competition. Those actions include broad information campaigns undertaken by the President of ERO such as, for example, educational campaign with the slogan: 'Electricity is a commodity. Choose where to buy it'. The campaign was designed to raise the awareness of household users as to their rights and to increase their understanding of the market. The purpose of it was to strengthen the demand side of the market, so that the raised expectations of customers would stimulate the development of competition on energy market. On top of that, the President of ERO has monitored, on a regular basis, the extent of the actual use of the right to choose the supplier by eligible consumers.

In connection with the opportunities that became available in consequence of energy market liberalization and which were still not well disseminated among energy consumers, ERO continues to provide ongoing assistance through the operation of the ERO Call Center for Energy Consumers: 'How to Switch Supplier'. In 2010 ERO staff answered more than a thousand queries, giving advice, guidance and explanations on legal procedures and regulations applicable when exercising the right to switch the supplier (twice as many as in 2009); additionally, there were numerous promotional and educational campaigns targeted at end-users.

In 2010 ERO completed the work on the development of 'Good Practices of Electricity Suppliers and Distribution System Operators' and 'Good Practices of Natural Gas Suppliers and Distribution System Operators'. These documents, regulating the issues associated with the reinforcement of end-user position on gas and electricity markets, were published and recommended by the President of ERO for use by energy companies in their own 'Codes of Good Practice'. In 2010 the President of ERO also developed a catalogue of prohibited contractual clauses in contracts concluded between energy companies on the one hand, and electricity and gas consumers on the other. The catalogue has been prepared on the basis of the register of prohibited contractual clauses maintained by President of the Office of Competition and Consumer Protection (OCCP/*UOKiK*).

In 2010 ERO Spokesman for Fuel and Energy Customers received in total 3 264 complaints and inquiries, i.e. 666 cases more than in 2009. The Spokesman resolved 3 045 of those cases, the

remaining ones were forwarded to other organizational units within the ERO or to other agencies, as appropriate from the standpoint of their mandate. As far as the subject matter of complaints against the practices of energy companies reported in the past year is concerned, it has not changed, by and large. The main issues were those connected with the execution of fuel or energy supply contracts, traditionally including those related to billing and customer service quality standards. There were also cases associated with illegal usage, as well as supplier switch and, incidentally, other matters.

Infrastructure

As regards transmission and distribution infrastructure, the DSOs and TSOs are required by law to consult with the President of ERO their network investment development plans. This procedure is closely related to decisions concerning tariff approval in the power and gas sector, and it also allows for the verification of planned investments based on ability to finance them from payments collected from customers (customers' financial potential).

The way the gas tariffs are approved has not changed since the previous year. The proposed tariff is verified as regards its compliance with Energy Law provisions and with secondary legislation to that Law, including, first and foremost, the tariff regulation. In 2010, system regulation was published but the provisions contained therein did not entail any changes with regard to the calculation of tariffs determined for gas sector companies.

In the process of DSO electricity tariff approval in 2010 there was no change in the methodology applied by the President of ERO, i.e. the price cap regulation. Analogically to previous years, the assessment of a justified level of operating costs, network losses and capital expenditures was based on benchmarking analysis. The process of setting tariffs with respect to electricity TSO in 2010 continued to be conducted on the basis of the cost of service type of regulation. Application of benchmarking methods in this case is impossible because there are no other undertakings with similar operational conditions.

Tariff year 2010 was the first year in which the new rules governing the determination of Regulatory Asset Value (RAV) for power network companies were in force. Considering the need to provide distribution companies (DSOs) and the TSO with the return on equity committed to network operation, the President of ERO determines in subsequent tariffs a justified amount of return on the basis of Regulatory Asset Value (RAV) and cost of capital, taking into account estimated investment levels. In 2009 a new method for rewarding network assets was introduced, consistent for 14 (currently 7) biggest power DSOs, based on regulatory efficiency and adequate level of security of energy supply in the National Electricity System criteria. The formula for the calculation of return on equity used by the Regulator is incentive-oriented. In the case when companies carry out investment over and above the pre-determined development plan, financial implications of those investments will be taken into account in subsequent tariffs.

Network investment development plans referred to above represent a basic source of knowledge about investment plans of companies as far as planned investments for new user connections are concerned, as well as about projects indispensable for maintaining an adequate level of reliability and quality of network services.

Transmission system operators (TSOs)

In the case of *PSE Operator* company (electric power transmission system operator), in December 2009 the President of ERO declared as agreed, only for 2010, the development plan for meeting current and future demand for electricity for the years 2010–2025, due to the fact that a detailed schedule of investment implementation was presented only for 2010. In December 2010 the President of ERO declared as agreed, for 2011, an update of development plan for meeting current and future demand for electricity for the years 2010–2025. It was assumed that the approval for the aforementioned update of *PSE Operator* development plan for subsequent years will take place in the first half of 2011, following the submission of 2010 performance report by the company.

Transmission network development directions presented in the update of development plan were in line with the previous edition of development plan. Changes were mostly related to the plans associated with connecting new generation capacity to the grid, both as regards conventional sources

and RES, which resulted from the change of investor plans in respect of the construction of new generation sources.

If it comes to gas TSO Gaz System SA, in 2010 transmission network development plan agreed for the period between May 1, 2010 – April 30, 2014 was in force. The plan had been approved back in 2009. The majority of approved investments are connected with the elimination of the so-called 'bottlenecks' in the transmission system, and the construction of LNG terminal in *Świnoujście*.

Distribution system operators (DSOs)

In December 2010, the President of ERO declared as agreed, for 2011, the development plans for meeting current and future demand for electricity for the years 2011−2015 for seven DSOs which were subject to unbundling as of 1 July, 2007.

Analogically to the status of transmission system operator, approval for the aforementioned development plans for subsequent years is envisaged in the first half of 2011, following the submission of 2010 performance reports by the companies.

With regard to gas DSOs, in 2010 DSO development plans drawn up for the period 2009–2013 were in force, fully agreed in 2009 in terms of their material scope, and in scope of the justified level of capital expenditures only for 2010. Despite the fact that the amount of investments was agreed only for one year, i.e. for 2010, estimations pertaining to the justified level of DSO capital expenditures were made for the period between 2009 and 2013. In early 2011 the justified level of capital expenditures was agreed for the next year, i.e. 2011. In 2010 the President of ERO approved five development plans of gas companies acting as DSOs.

Allocation of transmission capacity

In 2010 there were no developments as far as the number of interconnectors and the nature of their operation is concerned; NES investments carried out last year did not have direct impact on an increase in cross-border transmission capacity. Availability of transmission capacity is administered by *PSE Operator SA.* With regard to cross-border interconnectors with Poland and Germany, Slovakia and the Czech Republic*, PSE Operator* made export transmission capacity available in annual, monthly and daily auctions, whereas import capacity was provided through daily auctions. Allocation of transmission capacity on those interconnectors was performed in the process of coordinated, explicit auctions. In the case of *SwePol Link* cable, connecting Poland with Sweden, market coupling mechanism for congestion management was launched on December 15, 2010, and as a result transmission capacity of that interconnector was made available to all system users on a commercial basis. Transmission capacity is allocated in the process of implicit auctions, which means that market participants purchase both capacity and power, through energy exchange markets operating on both sides of the interconnector.

At all 'entry' points to Polish gas transmission system the share of capacity reserved by *PGNiG SA* is equivalent to almost 100%. The rate of actual consumption of that capacity was varied in 2010, from almost 100% on interconnectors with the German operator to approximately 50% on other interconnectors. The scope and locations of system congestion within the national gas transmission system in 2010 did not change much in comparison to previous years. With the purpose to obtain information on the demand for transmission capacity and, on that basis, the implementation of investments aimed at development of new connections into transmission system, *OGP Gaz System SA* continued in 2010 the work based on the application of Open Season procedure. In 2010 transmission system operator, *Gaz System SA*, announced the termination of available capacity procedure for the interconnector in *Podbeskidzie* region. This procedure involved in, *inter alia*, allocation of transmission capacity including pipeline construction investment project from Polish-Czech border in the vicinity of the town of *Cieszyn*, where a new entry point to transmission system is located. Also the development of *Lasów* cross-border interconnector was initiated in 2010 as well.

Security of electricity and gaseous fuel supplies

Security of fuel and energy supplies is defined in the document entitled: 'Poland's Energy Policy until 2030' as provision of stable fuels and energy supplies at the level that guarantees satisfaction of domestic demand, at prices acceptable to the economy and the society, with the assumption of optimal utilization of domestic energy resources and diversification of sources and supply directions regarding crude oil, liquid fuels and gaseous fuels. Monitoring security of electricity and gas supplies is one of the tasks given to the President of ERO.

The level of energy security depends on many factors. Their significance for the balance between energy and fuel demand and supply depends on internal developments within the country, as well as the situation on global markets. Among those factors one can identify such determinants as diversification of energy carriers that make up country mix, diversification of external supply sources, technical condition and efficiency of fuel and energy transmission and distribution system equipment and installations. Key data on the security of supply is presented below.

In 2010 gross electricity production in Poland was at the level of 156 342 GWh, and it was higher by more than 3% in comparison to the previous year. Domestic electricity consumption was equivalent to 154 988 GWh, and it was higher by more than 4.2% in comparison to consumption reported in 2009. Majority of electricity was generated in utility heat and power plants, including those fired by hard coal and lignite coal. It should be highlighted, however, that electricity generation from renewable sources has been constantly on the rise.

Furthermore, the level of capital expenditures taken into account in the tariffs of the TSO and seven DSOs (electric power sector) which were unbundled as of July 1, 2007, went up by almost 24% compared to 2009. The electricity TSO maintains the assumptions as regards transmission system development which were included in the previous edition of development plan. Changes made to the update of development plan were mostly linked to the plans involving connecting new generation sources to the grid, both conventional ones and RES. By the same token, investment plans of distribution companies in the next couple of years are geared towards dynamic development and modernization of grid infrastructure. The reason behind that is the need to strengthen and develop the grid in order to connect new users and new sources, in particular RES, as well as to modernize existing assets. In this context, it should be underlined that the extent of development plan implementation may give rise to concerns as regards financing capabilities, and formal and legal barriers existing in the area of grid investments. The existence of those barriers was among key reasons behind the preparation of the so-called 'Infrastructure Package', published by the European Commission in November 2010, which in principle should contribute to the increase in the number of grid investments and facilitate the implementation of such investments, especially those that face financing difficulties.

Another important milestone from the standpoint of energy security improvement was the fact that *PSE Operator SA* had been appointed transmission system operator for the Polish section of *SwePol Link* interconnector.

To sum up, achievement of a key priority of 'Poland's Energy Policy until 2030', i.e. improved status of fuel and energy security supply, is to a large extent linked to the implementation of investments in the power sector. In this area, the President of ERO has been recently given additional prerogatives as regards monitoring investment plans and the implementation of those plans, which will facilitate a more detailed assessment of electricity supply security status in the future.

Total natural gas consumption in 2010 in Poland was equivalent to 14 416.8 million m³, of which more than a half (56.88% of total consumption) was consumed by industrial users. Household consumers used 4 095.8 million m^3, which represents 28.41% of total natural gas consumption in 2010.

Demand for gas in 2010 was satisfied with supplies derived from imports as well as from domestic sources. In 2010 domestic extraction amounted to 4.2 billion m³ of gas (about 29 million boe), which represents approximately 30% of its annual consumption. Complementary supplies were carried out by *PGNiG SA* through gas imports in the amount of 10.07 billion m³. On October 29, 2010, Polish-Russian agreement was reached on the supply of natural gas to Poland. Under the agreement, gas supplies will increase from the past volume of 7.45 billion m^3 to about 10 billion m^3 annually, while maintaining the current timeframe of contract execution until 2022. Modification of contracted gas

volume stem from the need to fill in the gap in supplies due to the termination, as of January 1, 2010, of gas supply contract concluded in 2006 by *PGNiG SA* and *RosUkrEnergo*, involving the amount of 2.3 billion m^3 annually.

In 2010 there were many modernization and investment work carried out by gas entities with the purpose to improve system operations and ensure new supply routes. In order to diversify gas imports sources, there is ongoing work in Poland aimed at connecting new, systemic gas sources, such as, for example: construction of LNG terminal for the reception of liquefied natural gas transported by sea, development of transmission system in the north of Poland, construction of a pipeline connecting Polish and Czech gas systems within available capacity procedure in *Podbeskidzie* region, extension of *Lasów* interconnector, and development of underground gas storage facilities. Infrastructure development efforts continued in 2010 should be regarded in a positive light, although – due to the length of investment cycle – none of the investment involving supplies from new directions has been completed yet.

Additionally, in order to improve energy security of the country, there were made a number of investments to increase natural gas extraction in the territory of Poland. Apart from investments related to the maintenance of extraction capacity from domestic conventional sources, preparatory work was carried out in order to extract gas from unconventional sources.

On November 17, 2010, the President of ERO appointed *OGP Gaz-System SA* as gas transmission system operator on the Polish section of Yamal-Western Europe Natural Gas Pipeline Transit System until December 31, 2025. This was, undoubtedly, an important development from the point of view of security and transparency of the gas market.

Regulation and unbundling

Full list of tasks performed by the President of ERO includes competencies ensuing from the Energy Law dated April 10, 1997 (hereinafter referred to as the Energy Law), as well as the competencies set forth in the provisions of five other, separate laws.

The competences of the President of ERO were significantly enhanced in consequence of Energy Law amendment introduced in 2010. Legislative process initiated in 2009 was completed on January 8, 2010, when the 'Law amending the Energy Law and some other laws'[3)] was enacted, coming into effect, in principle, as of March 11, 2010. Under this Law, the President of ERO is responsible for a number of new tasks. Special attention should be paid to the following new powers and competencies of high relevance for regulatory activity:

1) approval for and determination of execution deadline with regard to programmes developed by operators with the purpose to describe the steps that must be taken in order to ensure non-discriminatory treatment of system users, including specific obligations of employees ensuing from these programmes,
2) approval of transmission and distribution grid codes (before the President of ERO was responsible for approving only a part of these codes dedicated to system balancing and congestion management), and the code for combined system operator,
3) defining – upon request from energy company involved in electricity or heat generation – the deadline for fuel reserve replenishment in the circumstances and according to principles set forth in the Law,
4) the issuance and redemption of agricultural biogas certificates of origin and cogeneration certificates of origin for units fired with methane or gas obtained from biomass,
5) presenting to the minister competent for the economy an opinion on the report prepared by the (power transmission system or combined power system) operator regarding the causes of existing threat to the security of electricity supply, and the legitimacy of response measures taken,
6) extending the scope of information which should be included in the report prepared by the President of ERO on the abuse of dominant position by energy companies and their actions violating the principles of competition on electric power market,
7) developing guidelines and recommendations for development plans of energy companies involved in gaseous fuel or energy transmission or distribution,

[3)] Journal of Laws of the Republic of Poland, 2010, no 21, item 104.

8) supervision over the performance of energy companies generating electricity, eligible to receive funds to cover stranded costs, pursuant to the Law of 29 June, 2007; on the principles governing covering of expenses incurred with the manufacturers in connection with early termination of long-term agreements regarding electricity sales or those that are a part of a vertically integrated company; with regard to the obligation to sell the electricity produced in the manner specified in the Energy Law; an exemption from this obligation – under the terms of the Law; publishing an average quarterly price of electricity not subject to the sale obligation referred to above,
9) designating transmission system, distribution system, natural gas storage system, natural gas liquefaction system, or combined system operators, and publishing information on their address data, the area of operation and the period for which the operators of relevant systems were appointed,
10) in connection with the extension of the scope of economic activity for the pursuit of which a licence is required – granting licences and promissory licences for the production of gaseous fuel classified as agricultural biogas,
11) substantial extension of a catalogue of fines that could be imposed by the President of ERO.

Special attention should be given to the new prerogative of the President of ERO to impose fines, based on Article 56, paragraph 1, Energy Law. An extensive catalogue of these fines was substantially enhanced as a result of 2010 amendment to the Energy Law, which enabled the President of ERO to impose 12 new types of financial sanctions. In the process of determination of the level of fine, the President of ERO takes into account the severity of harmful implications of misconduct, the degree of fault, as well as past conduct of the entity and its financial capability (paragraph 6). The President of ERO may waive the sanction if harmful implications were marginal, and the entity stopped violating the law or met the obligation. Taking advantage of prevention and sanction powers set forth in Article 56, the President of ERO imposed 309 monetary fines for the total amount of PLN 30 488 713.20 in 2010.

Within the Energy Law amendment, new wording was given to the provision of Article 9h of the Law, defining the manner of and the criteria for the designation of power and gas system operators. As of September 11, 2010, pursuant to the amended Energy Law, the President of ERO is authorized to appoint transmission system, distribution system, gaseous fuel storage and natural gas liquefaction system operators *ex officio*, for a fixed term. Before the amendment the President of ERO could appoint an operator only based on a request made by a company. With legislative changes introduced under the amendment, Polish law is now harmonized with the EU law, and at the same time it made it possible to appoint transmission system operator on Polish section of Yamal-Europe pipeline. Furthermore, provisions of Article 9d on operators' independence criteria were made more precise, and new provisions imposing information submission obligations on already designated power sector operators were added, with the intention to facilitate ongoing monitoring by the President of ERO of operators' compliance with the above-mentioned independence criteria.

Detailed changes introduced by the new provisions into the legal framework associated with the designation of power and gas system operators can be laid out as follows:

- obligation of the owner of each transmission network, distribution network, storage facility by means of which the energy company performs the relevant type of economic activity under a licence granted by the President of ERO, to put forward a request for the appointment of relevant system operator for the above-mentioned network or facility (Article 9h, paragraph 1), in line with the circumstances and deadlines indicated in Article. 9h, paragraph 6 of the Energy Law;
- possibility to delegate the responsibilities of a network of facility operator to another energy company on the basis of the so-called delegation agreement in the circumstances mentioned in the Law (Article 9h, paragraph 4); at the same time the basic scope of the above agreement has been defined (Article 9h, paragraph 5);
- possibility to designate in the territory of the Republic of Poland only one gas transmission system operator or one combined gas system operator and one power transmission system operator or one combined power system operator (Article 9h, paragraph 2);
- possibility to refuse, by the President of ERO, to appoint system operator in the event when prospective operator fails to meet the conditions and evaluation criteria specified in the Law, taken into account by the President of ERO in its decision, such as: economic efficiency, effectiveness of gas or power system management, security of gaseous fuel or electricity supply, and compliance with the conditions and criteria of independence set out in the Law;

- granting the President of ERO, under Article 9h, paragraph 9, Energy Law, the right to designate energy company equipped with a relevant licence (depending on the type of activity) as default system operator by the way of *ex officio* decision, in the case when:
  1) the owner of the network or facility did not apply for the appointment of gas system operator or power system operator who would be involved in business activity using their network or facility;
  2) ERO President refused to designate the operator who would be involved in business activity with the use of the network or facility indicated in the motion referred to above.

Moreover, the President of ERO is authorized to define in the above-mentioned decision, *inter alia*, the conditions for the implementation of independence criteria necessary to perform the tasks of system operators, to the extent specified in the Law:

- Imposing on the owner of the network or facility, under the provisions of Article 9h, paragraph 11 of the Law, an obligation to make available to the operator, appointed in accordance with paragraph 9, the information and records necessary to perform operator's tasks, and to cooperate with this operator. Non-compliance with the above-mentioned obligation is subject to monetary fine, pursuant to Article 56, paragraph 1, point 26, Energy Law;
- Imposing with the provisions on the energy company designated as power system operator the obligation to submit to the President of ERO the information on a change in the scope of economic activity performed and its equity links, within one month from the date on which such changes were introduced.

In 2010 remained the same power transmission system operator – *PSE Operator SA* – a State Treasury owned joint stock company and the owner of transmission assets. Ownership supervision over power transmission system operator, pursuant to Article 12a of the Energy Law, has been shifted to the minister competent for the economy, who is also responsible for country energy security.

Apart from the performance of TSO tasks on its own transmission grid, where *PSE Operator SA* carries out economic activity in scope of transmission of electricity under the licence issued by the President of ERO, since January 1, 2011, *PSE Operator SA* has also acted as the TSO on the Polish section of Polish-Swedish *Swe-Pol Link* connection. The interconnection is owned by *SwePol Link Poland Sp. z o.o.* energy company which holds electricity transmission licence. The appointment was made pursuant to the decision issued by the President of ERO on December 31, 2010.

As regards the unbundling of gas transmission system operator – *Gaz-System SA* – there were no significant developments. In 2010 State Treasury continued the process of transfer to *Gaz-System SA*, in the form of an in-kind contribution, of subsequent components of leased transmission assets received from *PGNiG SA* as non-monetary dividend. Upon receipt of dividend tranche on October 4, 2010, *Gaz-System SA* own assets represented approximately 98.7% of the value of entire transmission assets managed by the TSO. In 2010 *Gaz-System SA* continued to perform the function of gas system transmission operator, and it was appointed as gas system transmission operator on the Polish section of Yamal-Europe pipeline.

In Poland there is one gaseous fuel storage system operator (SSO), *PGNiG SA*, designated as SSO on December 31, 2008.

The process of restructuring in the power and gas sectors aimed at achieving DSOs' independence in terms of compliance with formal and legal requirements with regard to the operators appointed prior to the above-mentioned Energy Law amendment has been completed.

In the electric power sub-sector there were 22 DSOs, including seven legally unbundled from former distribution companies, and fifteen so-called local operators, under the rule of 100 000 users[4)]. It should be noted that, in connection with horizontal consolidation of electricity distribution area in *GK PGE*, which took place in 2010, the number of legally unbundled DSOs has decreased from fourteen to seven DSOs. Majority of legally unbundled DSOs operate within vertically integrated equity groups which also own leading electricity generators, therefore the idea of operator's independence does not always go hand in hand with the goal of maximising benefits for the group. That is why the process of complete and real independence of DSOs, in contrast to mere compliance with formal and legal requirements, has been rather slow. However, in the opinion of the Regulator, recently there has

[4)] In accordance with Article 15, Directive 2003/54/EC, and Article 13, Directive 2003/55/EC, distribution companies that service less than 100 000 users may be released from the obligation of legal or functional unbundling.

been improvement, as far as equal treatment for all power system users and the implementation of the principle of equal access to the grid for all market participants by DSOs is concerned.

All gas distribution system operators that function within vertically integrated company structures must be independent in terms of their legal and organizational structure as well as in scope of the decision-taking process in the case when they service more than 100 thousand consumers and sell more than 100 million cubic meters of natural gas annually. In formal terms, the process of unbundling of gas DSOs derived from former *GK PGNiG* distribution companies – from the standpoint of their legal and organizational structure – has been completed. Currently, there are six gas distribution system operators legally unbundled from former distribution companies owned by *GK PGNiG SA* and one local DSO, which is exempted from unbundling requirement.

Pursuant to the decision of the President of ERO, all gas DSOs from *GK PGNiG SA* were designated as DSOs until the end of the original validity period of gaseous fuel distribution licence, which – on a case by case basis – expires in 2011 (4 DSOs) and in 2013 (2 DSOs). In 2010, four gas DSOs were granted by the President of ERO an extension of the original validity period of gaseous fuel distribution licence, expiring in May 2011, until the end of 2030. Taking the above into consideration, in 2010, upon request from one of the above-mentioned DSOs, the President of ERO extended the validity period of DSO designation decision until the end of 2030. In the case of the remaining three gas DSOs the above-said decisions were extended until the end of 2030 in May 2011. As for electricity, validity period of the decision regarding the designation of DSO subject to legal unbundling was the same as electricity distribution licence validity period.

Considering the fact that electricity as well as gas DSOs remain within the structures of vertically integrated companies, i.e. within equity groups that carry out the entire chain of activities in energy sector, it is necessary, in the opinion of the Regulator, to ensure constant monitoring of DSO independence. The new provisions gave the President of ERO tools for effective interventions in case DSO independence is jeopardized. The catalogue of infringements subject to financial sanction has been extended. For example the President of ERO can impose fines for non-compliance with conditions and criteria in scope of independence of system operator referred to in Article 9d, paragraphs 1-2 (Article 56, paragraph 1, point 20), or for failure to provide system operator assigned for the relevant grid with independence conditions and criteria referred to in Article 9d, paragraphs 1-2 (Article 56, paragraph 1, point 21).

Conclusions

As a result of the amendment of the law, the President of ERO is now equipped with more prerogatives in scope of, *inter alia*, consumer rights protection and promotion of the competition. The new tasks of the President of ERO were enhanced due to the need to align existing legal regulations applicable to the energy sector to dynamic changes observed in that sector, and to harmonize it with the European Union policy. The process of gradual enhancement of regulatory competencies is a permanent trend, resulting from each subsequent legal change applicable to the energy sector. One must note legislator's obligation to implement the 3rd package provisions into the national legal framework. It should be noted that the Regulator has no legislative powers and participates in the process of implementation of the 3rd package provisions only by the way of consultations. The process of transposition of EU regulations into national legislation is continued. For example, the development of the draft Gas Law which will take gas regulations out of the regime of the existing Energy Law has been advanced. In consequence of that change, relevant amendment to the Energy Law will follow, and work will be carried out on separate draft Law on Renewable Energy Sources.

When reviewing legal status and obligations of the President of ERO which were accumulating in the years 2007–2010, and taking into account the budget available to the Regulator to carry out these tasks, it must be emphasized that both financial and resources situation in ERO is very difficult. Present-day financial position of ERO is a consequence of systematic reduction of ERO budget for the last 8 years. Similarly, in 2010 budget limits for Energy Regulatory Office were reduced once again. As a result, in connection with the enforcement of the Energy Law amendment of the same year the President of ERO initiated the execution of new tasks financing them from the existing budget – reduced in scope of resources for civil service compensation by 11 percent, as compared to 2009. In consequence, the Regulator faces the barrier of insufficient human and financial resources for the execution of statutory obligations and new tasks.

3. REGULATION AND PERFORMANCE OF THE ELECTRICITY MARKET

3.1. Regulatory Issues [Art. 23(1) except 'h']

3.1.1. Interconnector capacity management and allocation, and congestion management mechanisms

Congestion status review

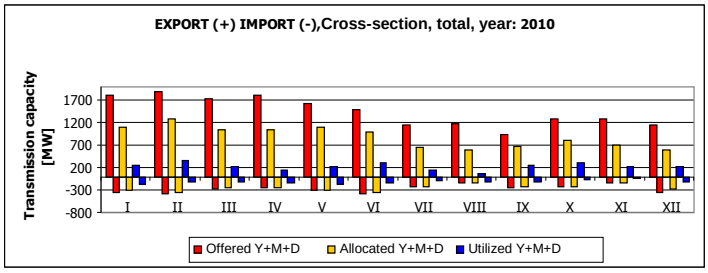
In 2010 there were no significant developments as regards network congestion within the National Electricity System (NES), as compared to 2009.

Network congestion in Polish transmission system is caused by historic factors, such as, for example, the exploitation of some elements of 110 kV network as transmission grid, as well as uneven geographic structure of generation sources (concentration in the southern part of the country, small number of generation sources in the north-east). Congestion is removed by Transmission System Operator (TSO) by re-dispatching of generation units and the use of generators' offer on the basis of free balancing offers or with must run generation price (counter trading). Majority of network congestions consist in congestion that forces the work of generation units or groups of units supplying specific nodes within transmission grid. Some of those limitations are permanent, which means that the work of two power stations is required (must run generation) for those limitations to be removed (*Ostrołęka* and *Dolna Odra).*

There were no developments with regard to cross-border interconnector status in 2010, in comparison to 2009. In particular, the number of NES interconnectors with neighbouring power systems and the mode of operation of existing interconnectors did not change, and NES investments carried out in 2010 had no direct impact on increase of cross-border transmission capacity exchange. Due to high demand for transmission capacity at the National Electricity System synchronous connections, which is greater than the actual technical capacity, the nature of such congestion may be described as structural. By and large, it results from a persistent gap between electricity prices on the Polish market and in neighbouring countries. Transmission congestion at synchronous connections with other EU member states is solved on a market basis approach – by virtue of coordinated auctions. Analogical circumstances in terms of a gap in electricity prices can be observed in the case of Poland and Sweden, connected with SwePol Link direct current underwater cable. Transmission congestion observed on the interconnector since December 15, 2010, has been removed on a market basis – with the use of implicit auctions and market coupling mechanism.

In the case of cross-border interconnectors between Poland and Central and Eastern Europe countries, i.e. Germany, Slovakia and the Czech Republic, access to export transmission capacity was provided by *PSE Operator SA* during annual, monthly and daily auctions, and access to import transmission capacity was provided by *PSE Operator SA* based on daily auctions. With respect to annual auction mode, Operator provided export capacity of 200 MW, under monthly auction mode of up to 500 MW (on average, 158 MW in a year), and under daily auctions of up to 1308 MW (on average, 1106 MW in a year). As far as import under daily auction mode is concerned, capacity of up to 382 MW was provided (on average, 266 MW in a year). In 2010 market players exhibited similar level of interest in export and import auctions, as can be concluded from the level of reserved transmission capacity in both directions, relative to the capacity offered by the Operator, as presented in Fig. 3.1.

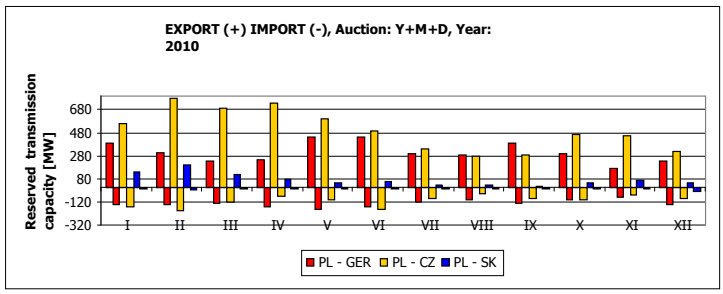
Figure 3.1. Offered, reserved and utilized transmission capacity



Source: ERO, on the basis of data provided by PSE Operator SA.

The biggest amount of transmission capacity was reserved by market participants on the German and Czech border, as presented in Figure 3.2.

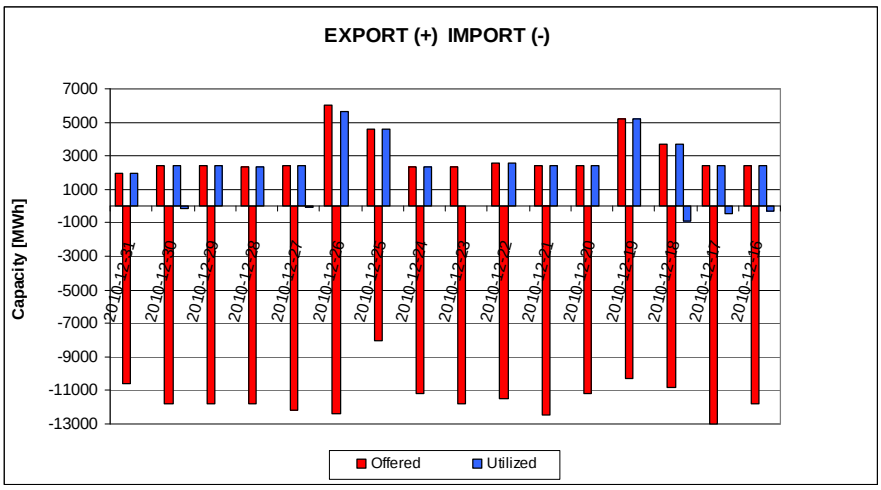
Figure 3.2. Transmission capacity reservation



Source: ERO, on the basis of data provided by PSE Operator SA.

As regards direct current interconnector between Poland and Sweden (SwePol Link), technically available interconnector capacity is equivalent to 600 MW in both directions, at the maximum. At the same time, in the period between December 16–31, 2010, average hourly capacity made available in the export direction (from Poland to Sweden) reached 125.18 MW, and in the import direction (from Sweden to Poland) – 475.76 MW; export capacity was provided by *PSE Operator SA* mostly during off-peak hours, i.e. between 1:00–6:00 a.m. and 11:00–12:00 p.m. Daily data on power transmission capacity is presented in Figure 3.3.

Figure 3.3. Offered and utilized transmission capacity of SwePol Link connection in the period of December 15–31, 2010.



Source: ERO, on the basis of data from TGE SA (Polish Power Exchange).

Limited potential for export capacity provision by *PSE Operator SA* is related to the need to ensure the security of NES electricity supplies, in particular in the northern part of the country. At the same time, almost entire transmission capacity available on Polish-Swedish direction has been utilized by market participants. It was a consequence of price level gap between Polish market (less expensive) and Swedish one (more expensive). Thus, electricity went from a lower price area to higher price area.

In the past year, cross-border trade exchange balance amounted to 1 354 GWh. Analogically to previous years, in 2010 Poland was a net exporter, and the surplus of exports over imports, in relative terms, remained practically unchanged. The highest volume of actual flows was directed from Poland to the Czech Republic and Slovakia, whereas the majority of physical imports of electricity came from Germany.

Table 3.1. Interconnector power exchange*

Specification	2006 [GWh]	2007 [GWh]	2008 [GWh]	2009 [GWh]	2010 [GWh]	2010/2009 dynamics [2009=100]
Trade balance	**11 014**	**5 356**	**688**	**2 199**	**1 354**	**61.6**
Export	13 434	8 497	4 110	5 038	3 097	61.5
Import	2 420	3 140	3 422	2 839	1 743	61.4
Actual flows						
Out of Poland	**16 188**	**13 110**	**9 704**	**9 595**	**7 665**	**79.9**
Of which:						
The Czech Republic	10 183	9 232	6 912	6 870	5 504	80.1
Germany	720	48	95	134	167	124.6
Slovakia	3 373	3 600	2 551	2 337	1 499	64.1
Sweden	1 498	230	146	254	494	194.5
To Poland	**4 774**	**7 752**	**9 020**	**7 400**	**6 310**	**85.3**
Of which:						
Belarus	1 045	0	554	0	0	0.0
The Czech Republic	44	20	28	128	136	106.3
Germany	2 546	4 889	5 576	5 616	5 331	94.9
Slovakia	4	0	31	62	82	132.3
Sweden	264	2 211	2 065	1 394	760	54.5
The Ukraine	870	631	765	199	0	0.0

* Data shown in the table includes interconnector exchange on 110 kV power lines: *Wólka Dobryńska – Brześć, Mnisztwo – Trzyniec – Ustroń, Boguszów – Porici, Kudowa – Nachod, Pogwizdów – Darkov.*

Source: ERO, on the basis of data provided by PSE Operator SA.

Congestion management principles and access to information

Existing interconnector capacity allocation rules between Poland, Germany, the Czech Republic and Slovakia remained unchanged in 2010. Transmission capacity was allocated during coordinated, explicit auctions among five transmission system operators from those countries. Transmission capacity is provided during annual, monthly and daily auctions. Transmission capacity auctions were arranged and carried out by CAO (*Central Allocation Office*), based in Freising (Germany), established by all Central and Eastern Europe transmission system operators. Furthermore, on December 1, 2010, on the borders of Polish, German, Czech and Slovak systems, transmission congestion intra-day management mechanism (intra-day market) was implemented, based on free reservation of transmission capacity with the use of 'First Come, First Served' precedence rule. Capacity reservation office is administered by the Czech transmission system operator. Transmission capacity volumes made available during auctions are calculated independently by transmission system operators from individual countries, and then agreed between them. Polish transmission system operator, *PSE Operator SA*, has been applying interconnector exchange transmission capacity calculation mechanism approved by the President of ERO with the decision of July 23, 2010. The mechanism is based on the methodology developed by ETSO and UCTE (currently, ENTSO-E), which is now applied by all European operators. Technical volumes of transmission capacity are determined separately for electricity imports and exports.

On December 15, 2010, congestion management mechanism (market coupling) was launched on direct current SwePol Link interconnector between Poland and Sweden, as a result of which transmission capacity of that interconnector was made available to all system users on a commercial basis. Transmission capacity is allocated in the process of implicit auctions, which means that market participants purchase both capacity and power, through energy exchange markets operating on both sides of the interconnector, i.e. *Towarowa Giełda Energii SA* (Polish Power Exchange) and *Nord Pool Spot AS*. In 2011 the efforts focused on SwePol Link will be continued due to the need to implement solutions enabling electricity trade on intraday market.

Detailed catalogue of information to be published by transmission system operators is included in congestion management guidelines, attached to the regulation 1228/2003/EC (currently, regulation 714/2009/EC). The President of ERO has monitored compliance with that requirement by participation in ERGEG work on *Compliance Monitoring Report*. Furthermore, within the framework of Central and Eastern European market, in November 2010 the First *Monitoring Report on the Implementation of Transparency Report in Central and Eastern Europe Countries* was prepared. The report contains information on the status of implementation, by national transmission system operators, of principles guiding on access to information for market participants with regard to transmission capacity (demand forecasts, utilization), the grid (network load, grid extensions, supply shortages caused by network-related reasons), balancing and electricity generation. Report findings have shown that the level of implementation of information disclosure rules is high. Network load and balancing information is published, although some information is accessible only in country language. As far as the information pertaining to transmission capacity, the grid and generation is concerned, the situation is slightly less favourable, although the cases of complete lack of published information must be described as exceptional. According to the report, the biggest number of operators fail to publish information on intraday market. This relates to the fact that until the end of November 2010 there were no intraday mechanisms on interconnectors between Poland, Germany, the Czech Republic and Slovakia.

In 2010 the work on *Second Monitoring Report on the Implementation of Transparency Report in the Northern Region* was completed. This report focuses on the analysis of availability and transparency of certain information as regards electricity generation.According to the report, most disclosure requirements have been met, and some transmission system operators have been using common disclosure platforms on *Nord Pool Spot* and *EEX* exchanges. In order to ensure full compliance, regulators will continue monitoring the implementation of the *Northern Region Transparency Report*.

Polish transmission system operator provides information on interconnector exchange on its website (www.PSE-Operator.pl), and on the website of auction office (currently in Freising, www.central-ao.com), with the following information disclosed:
- Principles governing coordinated auctions;
- Calculated volume of annual, monthly and daily total transmission capacity (TTC), net transmission capacity (NTC), and available transmission capacity (ATC);
- Offered and allocated transmission capacity;
- Transmission capacity prices;
- Number of auction participants;
- Number of bids submitted by auction participants in relation to trade profile;
- Price curves for transmission capacity bids submitted in the annual auction.

Moreover, *PSE Operator SA* also publishes information on National Electricity System generation sources:
- Information on planned maintenance or outages of individual generation units,
- Forecasted network congestion, in the form of data on the minimum required capacity (number of generation units) and maximum capacity allowed (number of generation units) in each generation node of the transmission network,
- *Ex post* capacity shortage in individual generation units,
- Balancing offers in terms of prices and energy volumes offered, accepted on balancing market for generation units.

Information on planned investments included in *PSE Operator SA* development plan is published starting from June 2010, once the plan is updated. From 2011 onwards, the information on expected demand and production in intraday mode is also published.

Information regarding NES performance is compiled and published by transmission system operator in the form of Annual Coordination Plans (*PKR*), Monthly Coordination Plans *(PKM*), and Daily Coordination Plans (*BTHD, WPKD, PKD*), as well as the information on projected interconnector exchange on synchronous connections. Then, there are monthly and annual reports on the performance of NES, and daily information on morning and evening peak capacity balance and NES capacity demand, as well as the information on cross-border market exchange with Sweden and actual energy flows on synchronous connections and DC connection with Sweden. Additionally, the TSO publishes information regarding balancing market rules, contract templates, and data on balancing market performance, such as: clearing prices for unbalancing, energy volumes (in daily and hourly cycles), side by side with balancing market costs. Market information is exchanged between the TSO and balancing market participants on the operator's website and by means of WIRE system for energy market information sharing. *SOWE* system (power station cooperation system) is used to exchange technical information with generators in order to enable the operation of national electricity system.

Relationship between congestion management and wholesale market

Cross-border exchange is integrated with the wholesale market through the balancing market (explicit auctions) and through the energy exchange (market coupling).

Until the end of November 2010, in line with the principles governing the execution of cross-border exchange commercial contracts, market participants were obliged to submit their nominations – both in scope of annual auction and monthly ones – by 7:45 a.m. prior to execution day. That way, TSO was able to make a calculation of available transmission capacity and offer it on a daily auction (According to Use It Or Lose It/UIOLI procedure). Information on transmission capacity available in daily auction was published by 9:45 a.m. at the latest, prior to supply delivery date, while auction results were announced after 10:00 a.m. Transmission capacity reservation under daily auction is linked to nomination obligation (utilization notification). Market participants had to notify the transmission system operator about commercial contracts by 1:00 p.m. prior to supply delivery date, i.e. the Gate Closure time on the balancing market. In view of the fact that on Polish electricity market, wholesale trade is carried out mostly under bilateral contracts, cross-border exchange is currently performed on the basis of transmission capacity auctions (explicit auctions). As of December 1, 2010, the rules governing the nomination of interconnector exchange schedules for transmission capacity reservations obtained in the annual, monthly and daily auctions were modified. These modifications are associated with the intended implementation of a coordinated mechanism for transmission capacity congestion in Central and Eastern Europe region, based on Flow-Based Capacity Allocation (FBA) methodology. At present, nomination of transmission capacity from annual and monthly auctions is made between 12:00 noon and 5:00 p.m. two days prior to supply delivery, and from daily auctions - between 10:30 a.m. and 1:30 p.m. one day ahead. Electricity sales contracts are notified on the balancing market between 9:00 a.m. and 2:30 p.m. on the date directly prior to supply delivery. On December 1, 2010, on the borders of Polish, German, Czech and Slovak systems, transmission congestion intraday management mechanism was launched. Reservation of transmission capacity in that mode is equivalent to capacity nomination, sales contracts are reported between 3:30 p.m. on the day directly preceding supply delivery and 10:00 p.m. on contract execution day, and notifications must be made one hour in advance.

SwePol Link interconnector exchange is carried out according to market coupling mechanism. Market participants submit electricity purchase and sale bids on *TGE SA* by 11:30 a.m., and clearing price is published once the price has been determined in cooperation with the Scandinavian energy exchange, *Nord Pool Spot AS*, but in any case not later than prior to Gate Closure for sales contracts on the balancing market. Subsequently, these contracts are notified for execution to the transmission system operator.

Future outlook on congestion management

In 2010, transmission system operators from Central and Eastern Europe Market continued their work on the development and implementation of common methods and procedures for transmission capacity management in the entire region. The work was carried out within the framework of Central and Eastern Europe Congestion Management Implementation Group/IG, involving the representatives of regulators, transmission system operators and market participants. In 2010 there were five IG meetings. The work was overseen by the region's regulators, associated in the Regional Coordination Committee/RCC. In 2010, there were three RCC meetings. Furthermore, in 2010 there was one meeting of the Stakeholder Group/SG.

Ultimately, transmission capacity should be allocated and provided to system users on the basis of the model of actual electricity flows in networks administered by transmission system operators (Flow Based Allocation – FBA). In accordance with the new model, transmission capacity will be allocated and provided irrespective of border sections, i.e. across particular price areas represented by countries from the region, e.g. from Poland to Slovenia (the so-called source-sink bidding). Transmission capacity will be allocated according to social welfare criterion. It should be underlined that the work performed in Central and Eastern Europe Region on the method of transmission capacity allocation on the basis of actual electricity flows is intended to lead to the implementation of principles compliant with the target market model, as described in draft framework guidelines for transmission capacity allocation and congestion management (FG CACM). According to those guidelines, in the areas of the so-called meshed network, i.e. in particular in Central and Eastern Europe as well as Central and Western Europe, transmission capacity allocation methodology should be based on actual energy flows (flow-based methodology).

As a result of work done to date, common coordinated principles governing the allocation of capacity on cross-border lines throughout the entire Central and Eastern Europe Region have been implemented (a document dated November 22, 2010, entitled: 'Rules for Coordinated Auction of Transmission Capacity in CEE-Region'), and published on CAO Central Allocation Office GmbH website. This company runs the auction office responsible for organizing and running transmission capacity auctions. The rules have been in force as of January 1, 2011. Allocation of transmission capacity is performed during explicit, coordinated auctions. Due to technical difficulties related to the implementation of flow-based transmission capacity allocation model, it has now been decided that transitional arrangements must be adopted until FBA methodology is implemented. This solution consists in transmission capacity allocation and provision in Central and Eastern Europe Region according to NTC mechanism (transmission capacity is allocated on the borders). Adopted mechanism is based on the common grid model/CGM, and optimization algorithm is similar to the one applied in FBA method (objective function is to maximize *social welfare*, in consequence leading to a decrease in price gap on the markets, rather than transmission capacity offered, which may remain not utilized). Precise deadline of FBA implementation for daily auction market depends on the results of tests which are now in progress.

There are plans for 2011, within the framework of Central and Eastern Europe Region, for extended cooperation between the CEE region and Central and Western Europe Region (CWE) in scope of harmonization of implemented flow-based transmission capacity allocation methods, as well as the allocation of available transmission capacity based on market coupling procedures. Harmonisation of those principles is intended to enable future merger of the regions. Moreover, there are plans to appoint a new Implementation Group (IG) in the CEE region, with the purpose to deal with the issues of market coupling development and implementation. Thus, it should be emphasized that the efforts go towards the implementation of congestion management principles in line with the target market model.

Moreover, within the framework of the Central and Eastern Europe Market, work was carried out in 2010 on *Congestion Management Monitoring Report*. The report is developed on the basis of information presented by regulators representing countries from the region. Work on the report is still in progress. The report will, *inter alia,* analyse the following data: the volume of provided, allocated and utilised transmission capacity, auction prices, and information on the participation of individual energy companies in auctions. Work performed in 2010 was focused predominantly on determining the objective scope of the report, preparing detailed surveys, and compiling and standardising the data obtained from transmission system operators from the seven countries in the region. *Congestion Management Monitoring Report*, with the focus on unique circumstances of the Central and Eastern Europe market, should be completed in 2011.

Within the framework of Northern Market Regional Initiative, there were three meetings of the Regional Coordination Committee in 2010, as well as one meeting of the Stakeholder Group. Also, the first meeting of regulatory bodies with representatives of member states (1st Northern Governmental Meeting) was held in May, with the purpose to initiate the debate on the need and potential character of cooperation between the stakeholders.

Among the key tasks of the Northern Market in 2010 one must emphasize the work associated with congestion management, first and foremost connecting the Northern Market with the Central-Western Europe Market. Substantial progress was made in that field. Implicit auctions between Germany and Denmark were launched as early as in November 2009. On May 10, 2010, volume market coupling was launched on the German-Swedish connection (Baltic Cable). The next stage as far as connecting regions is concerned was the implementation of Interim Tight Volume Coupling (ITVC) project in November 2010, and getting NorNed cable (between the Netherlands and Norway) included in that project in January 2011. Owing to those initiatives, it will be possible to integrate day-ahead markets in Northern and Central-Western Regions. Next steps include the introduction of price market coupling and coordination of intraday markets, especially between Northern and Central-Western Regions. Furthermore, within the framework of Northern Region Regional Initiative, the work of 'Optimizing the use of the interconnectors – SwePol Link and Baltic Cable' Implementation Group was stepped up in 2010. In March 2010 transmission system operators from Poland and Sweden – *PSE Operator SA* and *Svenska Kraftnät (SvK)* – signed a joint declaration regarding the work needed for the implementation of market mechanisms for the provision of transmission capacity at DC interconnector between Poland and Sweden – SwePol Link. IG was supposed to develop market-based and community law compliant SwePol Link transmission capacity access mechanisms. Last year six meetings were held, involving the representatives of regulators from both countries, side by side with transmission system operators, power exchanges and link owners. As a result of those efforts, in the middle of December 2010, price market coupling at SwePol Link interconnector was launched. In 2011 further work on SwePol Link has been focused on the development and implementation of intraday mechanism on that interconnector, and once that is completed, the regulators are going to initiate a discussion on the allocation of long-term rights. At the same time, it should be noted that SwePol Link is a commercial interconnector, and it is not owned exclusively by transmission system operators. Under the circumstances, additional issues must be resolved, and the regulators intend to choose the solutions corresponding to the target power market model in the EU.

Review of transmission capacity calculations

Within the framework of coordinated congestion management mechanism, *PSE Operator SA* determined transmission capacity in 2010 according to NTC method. Transmission capacity for transmission capacity coordinated auctions (borders with Germany, the Czech Republic and Slovakia) is determined on the basis of technical profile, i.e. as a sum of border profiles of systems managed by operators from Poland as well as Germany, the Czech Republic and Slovakia. Such a solution is an implication of significant loop flows in the National Electricity System, and resulting substantial interdependence of available transmission capacity at each border. The model also helps maximize transmission capacity towards the strongest pricing signals. As regards cross-border exchange at SwePol Link interconnector, transmission capacity is determined independently for that connection. When calculating available transmission capacity, *PSE Operator SA* follows the criterion of system reliability, including „n-1" criterion (switching off one cross-border line, national power line or a neighbouring country power line must not trigger system failure), taking into account forecasted weather conditions, German wind farm generation, 'not agreed' balancing flows, actions taken by market participants, unexpected events, modeling and calculation errors. Available transmission capacity is determined according to annual, monthly, weekly and daily time horizon. Considering the difficulties with forecasting loop flows originating from wind farms in Germany, the majority of transmission capacity provided in explicit auctions was made available in daily auctions, and its maximum part from the standpoint of long-term planning was also provided under annual and monthly auctions.

3.1.2. The regulation of the tasks of transmission and distribution companies

Network tariffs

In comparison to the previous year, there has been no change with regard to the scope of data collected in 2010. Standardised reporting database was used (in the format of uniform DTA(1A) sheets), with the information regarding costs, revenues and financial results of distribution companies, according to types of activities. The data was collected from energy companies in the first and second half of 2010, respectively. Reliability of data was verified mainly from the standpoint of correctness and accuracy against the data presented in general statistical records.

Furthermore, energy companies were submitting monthly reports regarding their costs, revenues and financial results according to types of activity and tariff groups. Monitoring of submitted sheets was applied predominantly to verify the accuracy of assumptions adopted in electricity tariff approval applications, and to perform ongoing assessment of financial conditions.

The Regulator designs methodology to determine the justify level of regulated revenue of energy companies. That methodology provides guidelines for tariff calculation. Energy companies prepare tariffs including, among others, prices and charges, and then submit those tariffs for an approval to the President of Energy Regulatory Office. However, the structure of the tariff prepared by the company depends on the type of company activity, and it is based on relevant legal provisions. In that respect, the role of regulatory body is to make sure that composition of the tariff is compliant with formal requirements.

In 2010 there was a change in power distribution sector structure due to the consolidation of eight distribution companies (the number of DSOs went down from fourteen to seven). Eight branches – the companies which until August 31, 2010, were independent entities of *Białystok, Lublin, Łódź-Miasto, Łódź-Teren, Rzeszów, Skarżysko-Kamienna, Warszawa* and *Zamość* – were incorporated in the company called *PGE Dystrybucja SA*.

There were no modifications as far as the process of approving tariffs for DSOs in 2010 is concerned, with the methodology applied by the President of Energy Regulatory Office based on cap regulation approach. Comparative analysis methods were applied – just like in previous years – for the assessment of a justify level of operating costs, network losses and investment outlays.

With regard to transmission system operator, methodological approach based on cost of service regulation was continued in 2010. Comparative methods could not be used due to the absence of other companies with similar operational conditions (there is only one electricity TSO in Poland). The TSO tariff is approved for a one-year period.

In light of the need to secure the return on capital employed in network operation for distribution companies (DSOs) and the TSO, the President of ERO determines the justified level of such return in subsequent tariffs, on the basis of Regulatory Assets Base and the cost of capital, taking into account estimated investment levels. In 2009, a new method for rewarding network assets was introduced, consistently across all fourteen (currently seven) leading DSOs, based on regulatory efficiency and the need to adequate level of energy security in NES criteria. Tariff year 2010 was the first year when the new Regulatory Assets Base rules was in force.

The formula for rate of return calculation, applied by the Regulator, is incentive-oriented. In the case when companies carry out the investments over and above the pre-determined in the development plan, financial implications of such investments will be taken into account in subsequent tariffs.

In 2010, DSOs were subject to a 3-year regulation period set by the the President of ERO, which came into effect on 1 January, 2008. A justified level of operating costs, network losses and investment levels was specified for that period of time. Benchmarking had been carried out with econometric tools and comparative analyses. Thus, the process of approving tariffs in 2010 was still based on models applied in the evaluation of operational efficiency, justified level of network losses and investment levels. A concise description of the models is contained in 2007 report.

In a document prepared in 2009 and entitled 'Tariff Calculation Rules for 2010' it was indicated that 2010 would be the last year of the three-year regulation period. In other words, it was assumed

that 2011 would be first year of a new regulation period, in which the new model for operating costs and costs of network losses would be applied. Yet, in view of preliminary results obtained from the new model, as well as the lack of possibility to 'clear' DSOs on the performance of previous regulation period (2008–2010), due to absence of information on 2010 performance, it was not feasible to start the new regulation period. Furthermore, as could be inferred from progress in work on the agreement of five-year development plans for distribution system operators, plan agreement in 2010 would probably cover only year 2011, and for the subsequent four years it would be agreed only in the first half of 2011.

Taking those circumstances into account, the President of ERO decided to extend the application of present model by one year, which not only will enable the evaluation of three-year regulation period, but will also allow DSOs to participate (in the form of opinions, comments, presentations) in the preparation and subsequent implementation of the new model.

Moreover, in order to avoid the 'gap' between subsequent regulation periods, the President of ERO intends to extend regulation period up to 4 or 5 years (with the premise that the last year of regulation period will, each time, represent the 'clearing year').

In August 2010 work on a new model for the assessment of DSO efficiency in terms of operating costs and carrying difference was initiated. According to the ERO's assessment of the preliminary report submitted by the authors of the model, it is not possible to apply the model for operating cost calculation in the period 2011–2015. The main reason is too short period of analysis, including performance from just two years: 2008 and 2009.

The model can be used for short-term analyses, while long-term forecasts would be encumbered with high uncertainty associated with forecasting the factors that affect the cost. The model should be updated in subsequent years, in keeping with the influx of new empirical data, which may help define longer term forecasts in the future.

An additional issue that is new compared to the 2007 model is the negative relation between operating costs and energy supplies, obtained as a result of empirical data analysis. It is a consequence of a drop in energy supplies in 2009. For that reason, the model was built on the assumption that the main factor generating operating cost is the number of customers and some selected elements of grid characteristics, rather than the volume of energy supplies. This assumption is derived from empirical data observation, where the number of users exhibits a permanently increasing trend, and it is linked to the premise that the key factor responsible for operating cost is permanent grid characteristics.

Irrespective of the work carried out on the model, domestic DSOs are compared within the framework of DSO international benchmarking, carried out by the Czech regulator. The Czech regulator intended to apply several benchmarking methods. In the opinion of ERO, the outcomes of international benchmarking can be useful in the determination of industry efficiency improvement coefficient for Polish DSOs, and for qualitative benchmarking of efficiency outcomes.

Taking the above into account, in the tariff calculation for 2011 operating costs in the amount determined by means of the existing model were adopted as a reasonable cost, as described in the document entitled 'DSO Tariffs for 2008 (applicable to DSOs unbundled as of July 1, 2007)'.

Another argument in favour to adopt above solution is the already mentioned need to settle efficiency improvements upon the completion of the existing three-year regulation period. Regulatory review, inherent in the regulation approach applied, can only be conducted once there is a complete cost data for the period of 3 years (including the entire 2010).

Revenue accumulated by the transmission system operator through cross-border transmission capacity allocation was spent in accordance with the objectives set forth in Article 6, paragraph 6 of Regulation 1228/2003/EC. In particular, these resources are allocated, first and foremost, to investments in the transmission infrastructure which will increase capacity available for cross-border exchange, and only a small portion was included in the transmission tariff to cover the costs related to the involvement in ITC mechanism and balancing inadverdent cross-border exchange. Pursuant to point 6.5 of the Guidelines for the management and allocation of available interconnector transmission capacity between country systems, being the attachment to the Regulation of the European Parliament and of the Council (EC) No 714/2009 of July 13, 2009, on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003, the report on the disbursement of revenue from the provision of cross-border transmission capacity is published annually by the Regulator on the ERO website.

Energy companies dealing with transmission or distribution services (i.e., power grid companies), must provide customers with electricity supply of appropriate quality and, at the same time, minimize their expenditures and costs. The Regulator's role is to supervise grid companies from the standpoint of compliance with customer service quality standards and, upon consumer's request, to monitor electricity quality parameters[5)].

Qualitative research focused on electricity supply to customers carried out in the area of continuity of electricity supply (parameters) and the impact of extreme weather conditions help to evaluate if the TSO and fourteen major distribution system operators (whose operation jointly covers the entire territory of the country) meet the quality parameters of supplied electricity. Thanks to the focus on quality parameters that are measurable and modifiable by energy companies, the President of ERO will be able to perform more effective annual inspection of quality standards of electricity supplied to electricity consumers by network companies.

Application of benchmarking studies, as a uniform approach to evaluate the level of electricity quality, is meant to enable verification of qualitative data provided by grid companies. At present, the data cannot be compared as they are not consistently uniform. Therefore, the development of applied techniques in line with the best European practice will allow for comparisons with other countries.

A well-defined and well-set quality level may serve as the basis for comparative analyses between grid companies, and it can be used to determine the level of quality of electricity supplies to users in our country as compared to the levels observed in other countries. Moreover, publication of reliable information on electricity supplies to consumers in the area of grid company activity represents one of quality regulation instruments, and it may be the first step towards the application of more sophisticated techniques in that regard.

Currently, pursuant to binding legal regulations, the transmission system operator and major distribution system operators publish on their websites the information on the continuity of supplies on the basis of SAIDI, SAIFI indexes for long lasting planned or unplanned interruptions, including extreme weather conditions, and MAIFI index for short interruptions.

Nevertheless, preliminary verification of information regarding quality of electricity supply published by grid companies indicates that further harmonisation of qualitative data collection approach is required across individual grid companies. Thus, it would definitely be premature at this stage to link quality level with the level of tariffs approved by the Regulator.

In compliance with the Energy Law provisions (Article 47, paragraph 3), the President of ERO publishes approved electricity tariffs in the ERO Bulletin. Tariffs, together with tariff approval decision, are published within 14 days from the tariff approval date. Furthermore, notwithstanding the above, electricity transmission or distribution companies publish on their websites the tariffs approved by the President of ERO.

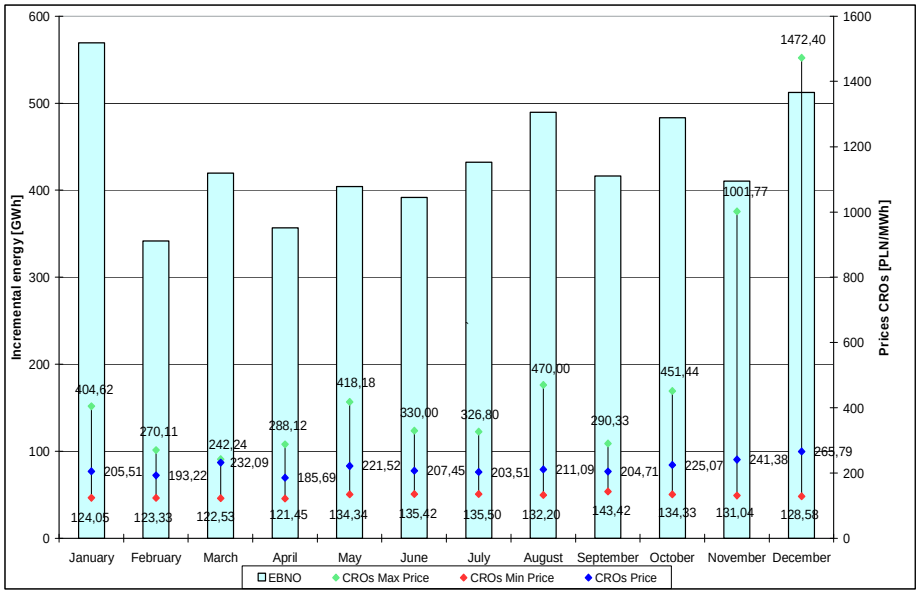
Balancing

Analogically to previous years, *PSE Operator SA* managed transmission system balancing in accordance with the section of the Grid Code (*IRiESP*) devoted to system balancing and congestion management. Compared to 2009, these principles were not modified to a significant extent. Nevertheless, there was a change that involved modifying the schedule for notifying electricity sales contracts on domestic market (Gate closure shifted to 2:30 p.m). and nominations of transmission capacity obtained in annual and monthly auctions. The change was associated with the development of common principles in that area by transmission system operators in Central and Eastern Europe (common scheduling). Furthermore, intraday allocation rules were implemented on the border with Slovakia, the Czech Republic and Germany, enabling notifying electricity sales contracts concluded on that market, and market coupling was launched on SwePol Link interconnector, with resulting alignment of notifying rules regarding sales contracts concluded in accordance with that mechanism.

Information on the volume and prices on the Balancing Market is subject to monitoring by the President of ERO. Relevant data is presented in Figure 3.4.

[5)] Pursuant to Energy Law (Journal of Laws of the Republic of Poland, 2006, no 89, item 625, as amended).

Figure 3.4. 2010 purchase volume (EBNO) and electricity prices on the balancing market (CROs)



Source: ERO, based on the data provided by PSE Operator SA.

In 2010 the volume of electricity purchase on the Balancing Market (EBNO) went up in comparison to 2009 from 4.89 TWh to 5.23 TWh, i.e. by almost 7%. Still, this represents less than 3.4% of domestic consumption of electricity in 2010. The average rate of balancing energy supplied through the Balancing Market went up as well, side by side with the range of price fluctuations, which was the highest in November and December 2010, coming close to the ceiling threshold (PLN 1 500/MWh) of bidding prices allowed on the Balancing Market. In connection with the fact that Balancing Market pricing formula is based on marginal prices from utilized balancing offers submitted by generators, it should be concluded that in some hours capacity reserves available in the system were small, and *PSE Operator SA* had to accept the most expensive bids.

Balancing bids submitted by generators participating in balancing mechanism are submitted individually for particular centrally dispatched generation units (CDGUs). To a certain extent, it prevents excessive concentration in that market segment, although it cannot be guaranteed that dominant market participants would not use their market power, as they operate as vertically integrated companies. Generators with CDGUs are obliged to submit bids. Energy settlement mechanism under must run generation conditions is used to curtail market power. In particular, it is used to prevent very high level of balancing bid prices, which is not justified by market conditions. It is applied when balancing bid cannot be used at a bidding price, provided that the bid is indispensable from the standpoint of reliability and safety of the NES operation.

3.1.3. Effective unbundling

The activity of the President of ERO in appointing system operators in 2010 was determined, first and foremost, by Energy Law amendment introduced with the Law of January 8, 2010, amending the Energy Law and some other laws (Journal of Laws of the Republic of Poland, 2010, No 21, item 104, hereinafter referred to as the 'Amending Law'), which came into effect as of March 11, 2010. Pursuant to new regulations, electricity system operators are appointed by the President of the ERO's decision based on a request made by network or installation owner, or *ex officio* in certain specified cases (Article 9h, paragraph 9 of the Law)[6]. Moreover, according to the new regulations, an owner of each

[6] Pursuant to Article 9h, paragraph 9, Energy Law, the President of ERO has the right to appoint as a system operator, by *ex officio* decision, an energy company with a relevant licence, in a situation when:
1) The owner of the network or installation has failed to file a request for the appointment of an operator, which would be involved in economic activity using the of owner's network or installation;
2) The President of ERO refused to appoint the operator performing economic activity which would involve the use of owner's network or installation, as referred in the request mentioned above.

element of the power system which is used by the energy company to perform economic activity pursuant to the licence issued by the President of ERO, must submit a request to appoint relevant system operator on that network or installation. Article 9h, paragraph 6 of the Energy Law specifies the circumstances and deadlines . Up to date, this requirement was not met, especially in the case of distribution networks of small geographical range, as well as some transmission networks, due to the fact that the owner had not been obliged to request for the appointment of the operator.

In 2010, there was one electricity TSO in Poland – *PSE Operator SA*, which is a company fully owned by the Treasury, and the owner of transmission assets. It performs its duties as regards transmission of electricity pursuant to the licence issued by the President of ERO. As of January 1, 2011, *PSE Operator SA* also performs TSO function at the Polish section of Polish-Swedish SwePol Link interconnector, owned by *SwePol Link Poland Sp. z o.o.* that has electricity transmission licence on this interconnector.

In distribution, there were twenty-two distribution system operators: seven of those had been separated in legal terms from former distribution companies, and fifteen were the so-called local operators, not subject to organizational and legal unbundling. It must be noted that, as a result of horizontal consolidation within *PGE* corporate group, which took place on 2010, the number of legally unbundled DSOs decreased from fourteen to seven DSOs.

Majority of legally unbundled DSOs operate within corporate groups that are vertically integrated energy companies. Ownership supervision over DSOs is performed mostly by the Treasury – indirectly through state-owned holding companies or through parent companies, from which the operator's activity had been separated and transferred to new companies. Only two DSOs are owned by the companies whose major shareholders are entities separate from the Treasury. With regard to fifteen local operators, the rule of 100 000 users has been applied (no unbundling requirement).

Table 3.2. Unbundling description, status as of 31 December 2010

Specification	Quantity
TSO – ownership unbundling	1*
DSO – ownership unbundling	0
TSO – legal unbundling, with assets (grid)	1**
TSO – legal unbundling, no assets (grid)	0
DSO – legal unbundling , with assets (grid)	7***
DSO – legal unbundling, no assets (grid)	0

* From January 1, 2007.
** From January 1, 2008.
*** As of August 31, 2010, in consequence of consolidation in *PGE* capital group, the number of DSOs unbundled from former distribution companies went down from fourteen to seven.

The role of distribution system operator – a natural monopoly in the area defined by the network operated by that operator – is of a upmost importance. Such operator is responsible for market 'infrastructure', which explains why it is so important that the operator is completely independent. Thus is why the European law, and thus the Polish law (the Energy Law), set forth the requirement of legal unbundling between operator's activity and other types of energy activities. It is in the best interest of energy consumers that such independence is not only formal, but actual. Furthermore, strict compliance with the principle of the operator's independence and regulatory supervision (both by sector regulator – President of Energy Regulatory Office, and competition authority – President of Competition and Consumer Protection Office) is especially important when there are strong capital links between DSOs and energy suppliers.

The process leading to full and actual independence of distribution system operators, in contrast to fulfilment of formal and legal unbundling requirements, has been rather slow. One major obstacle to that process is the fact that operators often remain within vertically-integrated groups and well-developed corporate group structures, where operator's independence does not go hand in hand with the objective of maximum benefits for the group. Even though a formal evaluation – based on the assessment of DSO compliance with legal provisions – in most cases leaves no room for reservations, an evaluation of actual DSO independence – for example, based on the attempt to create an individual image – gives rise to some doubts.

Following *PGE* consolidation, there are seven legally unbundled distribution system operators. Five DSOs are involved in economic activity which is not directly linked to operator's functions, such as, for example, street lighting maintenance, leasing or renting real estate property and means of transport.

All those operators present revenue and cost accounting in a way that enables separate treatment of costs not related to their functions as the operator.

As regards independence in terms of assets and decision-taking, it has to be noted that the DSOs decision-making procedures on grid asset management (in particular those related to grid construction, maintenance, renovation or extension) are in majority of cases carried out in accordance with the distribution grid codes, development plans and instructions for investment and maintenance plans. There were no cases reported in any of the seven DSOs that their current operation would be subject to decisions taken by management of a vertically integrated company. Four DSOs have subsidiaries involved in training and recreation, catering and printing business, and various service and maintenance activity. Three operators have shares/stock in other companies.

All companies have systems in place for sensitive data protection. Client personal data is stored on the local network on servers owned by DSOs. Access to such information is restricted for authorized personnel only. Client data is made available in compliance with the principles set forth in information security policy, as defined in relevant company by-laws, security management systems and internal regulations.

In order to ensure equal treatment for all system users it is very important that energy companies change their image, so that the customers no longer perceive distribution system operator and trading company after unbundling as one company. This is important because otherwise customers may consider the unbundled trading company as the only energy supplier in the area of system operator's activity. In order to change that image the premises of both types of companies are separated from one another, and separate customer service centers are established. According to research results, all DSOs have separated system operator's offices from trading company offices.

Three operators have established their own customer service centers. Customer service centers of some DSOs provide comprehensive retail customer service, i.e. both distribution- and sales-related services in connection with trade activity of some selected suppliers. In the case of vertically integrated companies, the establishment of such comprehensive customer service centers is certainly useful from client standpoint and from the standpoint of business economics of these companies, but such centers cannot be based within DSO structures, in view of Energy Law provisions.

With regard to structures established as a result of legal unbundling of DSOs, the optimum solution would be to place broadly defined customer service activities within an entity separate from the DSO and the trading company. Such an arrangement best meets the purpose – in the case of vertically integrated companies – of DSO unbundling, i.e. ensuring effective and non-discriminatory network access under TPA principle. From company standpoint, such an arrangement enables it to achieve, in economically viable way, its objectives. Having said that, the choice of one business model over another, subject to obligations from the Energy Law, is at the discretion of each company's management board.

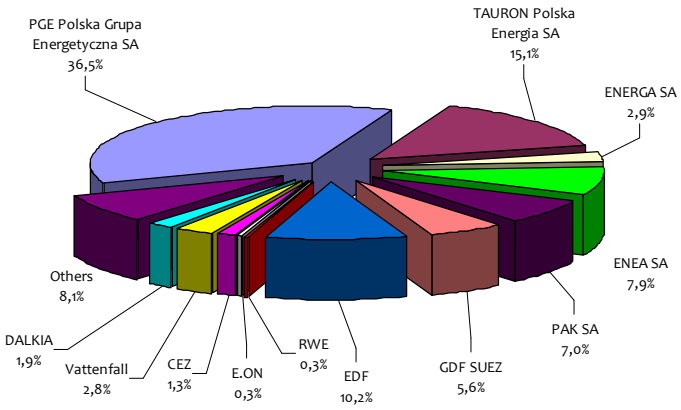
Research findings have shown that most DSOs have been making efforts to achieve effective separation of the operator within corporate group. The Regulator expects that DSOs functioning within corporate groups will be effectively implementing the tasks that lead to equal treatment of all system users and provision of equal access to the network for all market participants.

3.2. Competition Protection and Promotion Issues [Article 23(8) and 23(1)(h)]

3.2.1. Description of the wholesale market

There were no significant developments in 2010 as far as the market share of individual energy groups and their structure is concerned. The biggest share in generation subsector continues to be held by *PGE Polska Grupa Energetyczna SA* corporate group, and in end user trade market – *Tauron Polska Energia SA.*

Figure 3.5. Share of corporate groups in domestic generation of electricity in 2010



Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA) and ERO research (2010).

In the second half of 2010, *PGE Polska Grupa Energetyczna SA* corporate group was consolidated, and its ownership and managerial structure was rearranged. Its structure is now consortium-like, with five key business lines:

- Conventional energy,
- Renewable energy,
- Nuclear energy,
- Electricity distribution,
- Retail trade (retail sales of electricity).

Wholesale trade is within the scope of responsibility of *PGE SA*. *PGE* is made up of the holding company, which represents corporate center (i.e. *PGE SA*) and companies – centers within each business line, with branches formed on the basis of acquired operating companies. In the opinion of *PGE*, the objective of consolidation effort was to gain strong market position and financial standing necessary for, among other things, continued development of the group and building a sustainable competitive advantage on the market.

In the second biggest group, *Tauron Polska Energia SA*, consolidation is planned for early 2011. The merger of two companies – *EnergiaPro* and *Enion* – into one entity is in progress. The merger is a part of holding consolidation strategy, which is intended to improve organizational efficiency and increase *Tauron* brand recognition. This year, within the framework of the same consolidation and structure simplification programme, Tauron Polska Energia plans to merge the companies in the area of electricity generation (*Południowy Koncern Energetyczny, Elektrownia Stalowa Wola, EC Tychy*) and heating (*PEC Katowice, PEC Dąbrowa Górnicza).*

Electricity generation and trade markets remain highly concentrated due to the presence of vertically consolidated corporate groups. The stage of competition on electricity market is illustrated predominantly with the indicators that measure concentration level.

Table 3.3. Concentration status in generation sub-sector*

Year	Number of companies with at least 5% share in installed capacity	Number of companies with at least 5% share in net generation	Installed capacity in three biggest companies [%]	Gross generation in three biggest companies [%]	HHI index [7)]	
					Installed capacity	Gross generation
2009	5	5	59.0	62.2	1 676.4	1 950.0
2010	5	6	58.1	61.9	1 620.4	1 834.8

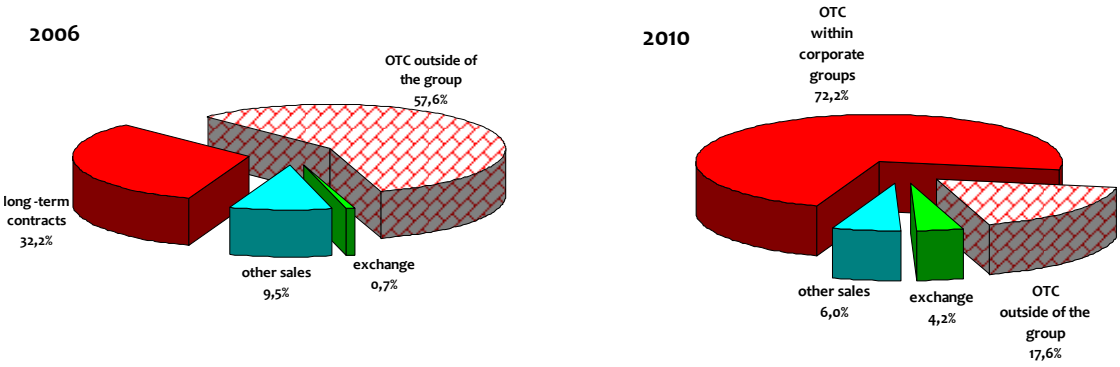
* For all entities operating in generation sector which are subject to statistics data keeping obligation, including installed capacity and output from wind and hydro generation.

Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA).

In 2010, the HHI measured according to installed capacity changed only slightly compared to 2009, and the same is true as far as the measurement according to electricity generation is concerned. Three leading generators (*PGE Polska Grupa Energetyczna SA, Tauron Polska Energia SA, EdF*) held more than half of capacity installed, and were responsible for almost two thirds of power generation in the country.

Electricity trade on the wholesale market was highly concentrated, especially within vertically consolidated energy groups. Analogically to previous years, bilateral contracts remained the key form of wholesale trade in electricity. Just like the year before, in 2010 over 90% of electricity was sold by generators on the basis of such contracts. The remaining sales were carried out on the balancing market (including sales to transmission system operator required in order to ensure NES operation security) and, to a small extent, on spot markets (Power Exchange, Internet Platform for Electricity Trading).

Figure 3.6. Structure of electricity sales by generators in 2010 and in 2006



OTC (Over the Counter) – bilateral contracts concluded by and between companies.

Source: ERO.

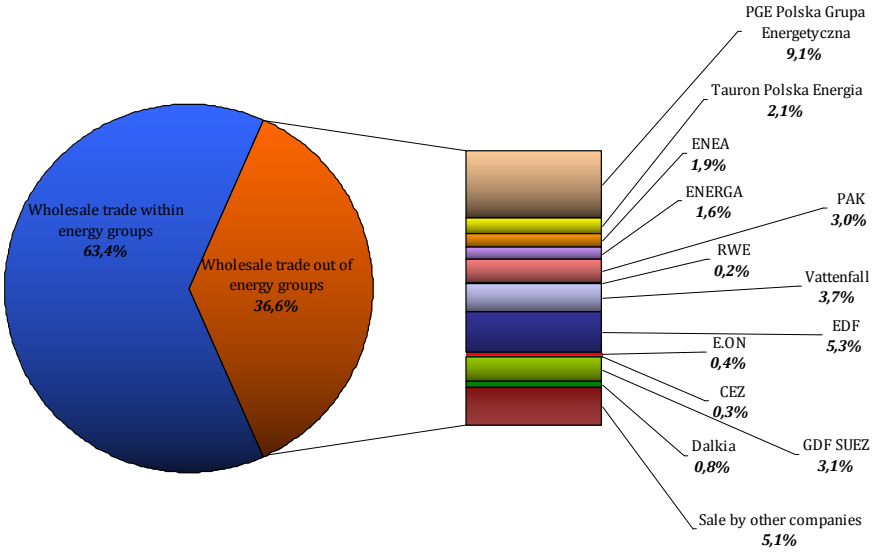
In 2010, analogically to previous year, more than two thirds of electricity produced by generators was sold to trading companies within their corporate groups. There was a clear, favourable change in the share of electricity sold by that sector on the power exchange: an increase by 4 percentage points in 2010, in comparison to 2009. Without a doubt, such development was linked to the introduction of the obligation (pursuant to Article 49a, the Energy Law) that of August 9, 2010 at least 15% of electricity should be sold by public sale by companies involved in electricity generation.

[7)] Herfindahl Hirschmann index (HHI), referred to as a sum square of market share percentages of market shares of all companies that make up the branch: HHI > 5 000 – very high concentration, HHI between 1 800 and 5 000 – high concentration, HHI between 750 and 1 800 – average concentration, HHI below 750 – low concentration (according to the 'Report on electric power and gas internal market development progress status', Brussels, 2005, and J. Kamiński, *Metody szacowania siły rynkowej w sektorze energetycznym*, *Polityka Energetyczna, Tom 12, Zeszyt 2/2, 2009*, 'Market Power Evaluation Methods in the Power Sector').

The figures presented above demonstrate that despite the termination of Long Term Power Purchase Agreements and the introduction of state aid program for stranded costs in 2008, the structure of electricity sales by generators did not change towards effective and pro-competitive electricity market mechanisms. Twelve electricity generators are eligible for such state aid; in 2007 eight of those twelve became members of vertically consolidated energy groups and they trade with their trading companies. This significant change in the market structure, following vertical consolidation, has been the main reason for underdevelopment of competition and it created additional constraints as regards state aid issues. Starting from August 9, 2010, the entities eligible for the aforementioned state aid are obliged to trade 100% of generated electricity on the power exchange, through auctions, or on internet trade platforms operating according to transparent and non-discriminatory rules.

Concentration level on the wholesale market is illustrated in Figure 3.7. Wholesale trade structure includes:
1) Trading within the twelve vertically consolidated corporate groups,
2) Sales from companies that belong to a corporate group outside of that group,
3) Sales by other companies.

Figure 3.7. Electricity wholesale turnover in 2010 (including multiple turnover)



Source: ERO.

In 2010, total turnover within the twelve corporate groups represented 63.4% of the entire wholesale turnover on domestic market. The shares of electricity trading carried out between companies that belong to the same corporate group amounted to, respectively: *PGE Polska Grupa Energetyczna SA* – 35.5%, *Tauron Polska Energia SA* – 15.6%, *ENEA SA* – 2.5%, *ENERGA SA* – 0.8%, *PAK SA* – 0.01%, *RWE Polska* – 0.2%, *VATTENFALL* – 4.0%, *EDF* – 3.9%, *E.ON* – 0.03%, *GDF SUEZ* – 0.5%, *Dalkia Polska SA* – 0.01%. Companies from vertically consolidated groups were also selling electricity outside of their groups. Sales structure in that category is illustrated in Figure 3.6. Sales made by those entities, i.e. trading in competitive conditions, represented 31.5% of the total turnover of the wholesale market. The remaining share of the wholesale market (5.1%) should be attributed to the companies outside of corporate groups.

Wholesale market transaction structure was similar to that observed in previous years (Tables 3.4, 3.5, 3.6). Trading companies remained the key buyer of electricity on the wholesale market. Sale to users within the corporate group was still dominant. Taking into account electricity sales contracts for 2010, power exchange was still perceived as marginal by wholesale electricity trade market players. However, an increase was observed in the use of power exchange in contracting for 2011.

In the case of the generators, there was a visible change in electricity sales structure in the end user segment (sales drop by 0.6 percentage points in 2010, in comparison to 2009), and in the

segment of public form of trading in electricity, i.e. power exchange, auctions etc. (sales increase by 4 percentage points).

Moving on to trading companies, there was a change in the preference for electricity purchase and sales directions. Since 2008, one could observe successive increase in electricity turnover (purchase as well as resale of electricity) realized by those entities on the power exchange.

Table 3.4. Electricity sales directions – generators [TWh]

	End users	Trading companies	Power Exchange	Balancing market	Export	Other sales**	Total
2008	2.6	124.3*	0.3	9.1	0.01	0.7	137.0
2009	3.0	126.1	0.3	8.5	0.01	2.0	139.9
2010	2.1	125.4	6.0	8.5	0.00	0.1	142.1

* Including sales on the basis of long-term contracts in force in the 1st quarter of 2008.
** Other sales include, among others, electricity sold to TSO and DSOs.

Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA) and ERO research (2010).

Table 3.5. Electricity purchase directions – trading companies in the years 2008–2010 [TWh]

	Generators	Trading companies	Power Exchange	Balancing market	Import	Other purchase	Total
2008	122.9	198.1	2.0	3.6	4.3	0.1	330.9
2009	127.0	183.5	3.3	4.4	2.9	0.1	321.2
2010	122.5	187.1	9.6	5.1	1.7	4.3	330.3

Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA) (2008–2009) and ERO research (2010).

Table 3.6. Electricity purchase directions – trading companies in the years 2008–2010 [TWh]

	End users	Trading companies	Power Exchange	Balancing market	Export	Other sales*	Total
2008	119.0	192.1	1.7	2.5	3.5	12.2	331.0
2009	107.9	179.2	3.2	6.3	4.2	19.3	320.1
2010	114.5	185.5	4.0	7.2	2.1	16.6	329.9

* Other sales include, among others, electricity sold to TSO, DSOs and generators.

Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA) (2008–2009) and ERO research (2010).

There is significant diversification in electricity prices. The reasons behind such diversification are as follows: generation technology (especially in terms of the fuel), timeframe of supplies, supply profile, balance between demand and supply.

In 2010, *TGE SA* (Polish Power Exchange) was developing dynamically. Undoubtedly, this is due to such power exchange characteristics as: transparency of rules, easy access for all participants, optimization of searching process for the best electricity sales offers, signals for electricity generators as to price expectations of users.

In 2010, *TGE SA* trading volume reached, in total, 81.7 TWh (including multiple turnover in electricity), compared to 3.07 TWh in 2009, which represented half of domestic electricity production and half of its total consumption in 2010. However, such increase in volume in 2010 was applicable mostly to forwards contracts concluded for 2011. The main reason explaining the growing share of sales on the exchange was the enforcement of provisions amending the Energy Law, as of August 9, 2010, which require that all generators sell at least 15% or even 100% (for generators involved in long term agreements) of generated electricity on the exchange.

TGE SA turnover showed unprecedented growth dynamics in all power exchange markets. The most vigorous development was observed on the Electricity Forward Market, in which trading is carried out in future electricity supplies. Total turnover on that market amounted to 64.7 TWh, which

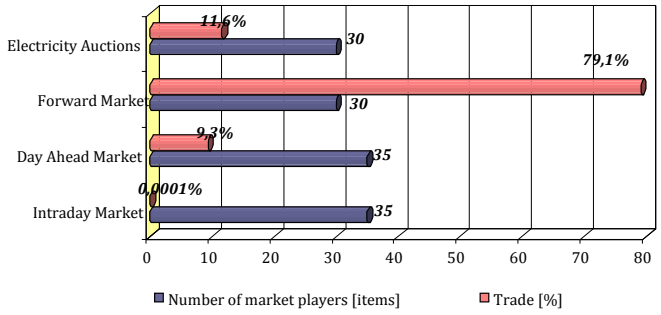
translated into unprecedented growth rate – 9 723%, in comparison to 2009. Average monthly volume in 2010 was at the level of 5.4 TWh. In total, 14 321 contracts were concluded, mostly for 2011. It is worth noting that in 2010 on Electricity Forward Market in 2010 concluded 96% contracts for supply at any time in 2011.

There was also substantial growth dynamics on the Day Ahead Market. Total turnover reached 7.6 TWh and it was higher from last year's level by 147%. Average monthly volume in 2010 was at the level of 631.5 GWh, with the minimum reported in June (less than 60% of average turnover), and the maximum in December (twice the average turnover).

Intraday Market on *TGE SA* was of incomparably smaller significance. Intraday Market turnover amounted to less than 80 MWh.

There was a slight differentiation in average prices of electricity on individual markets of *TGE SA* in 2010, with the following levels: 196.67 PLN/MWh – Intraday Market, 197.39 PLN/MWh – Electricity Forward Market (together with Electricity Auctions), and 201.01 PLN/MWh – Day Ahead Market. The data presented by *TGE SA* shows that exchange market transactional prices were going up at a much faster rate in the last quarter of 2010. *TGE SA* status is illustrated in Figure 3.8.

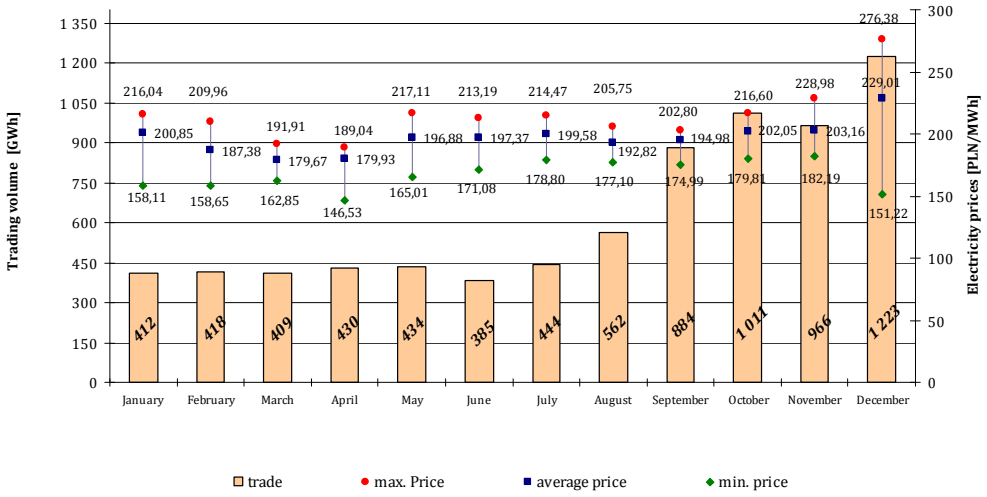
Figure 3.8. Number of participants and turnover on *TGE SA* markets in 2010



Source: ERO on the basis of data from TGE SA (Polish Power Exchange).

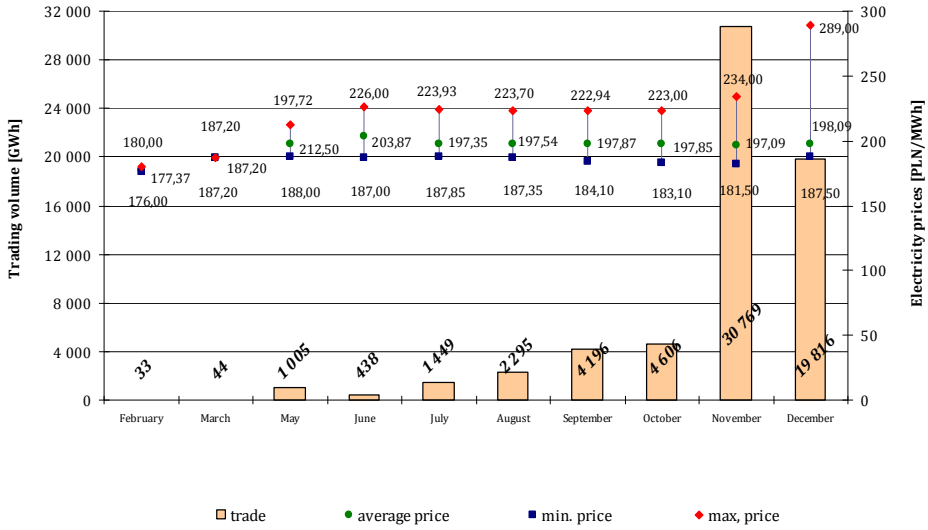
The most active players on *TGE SA* Polish Power Exchange in 2010 include: *PGE Elektra SA, TAURON Polska Energia SA* and *Elektrownia Kozienice SA.*

Figure 3.9. Volume of turnover and electricity prices on *TGE SA* Day Ahead Market in 2010



Source: ERO on the basis of data from TGE SA (Polish Power Exchange).

Figure 3.10. Volume of turnover and electricity prices on *TGE SA* Electricity Forward Market in 2010



Source: ERO on the basis of data from TGE SA (Polish Power Exchange).

Notwithstanding the development of exchange market transactions, electricity sales structure on the wholesale market indicates that the market remains dominated by bilateral contracts. The volume of sales on the spot market, in comparison to the overall volume of electricity sales, went up in 2010, thus contributing to an improvement in wholesale market liquidity, but it still remains relatively small.

The key factor for the integration of the Polish power market with the markets from neighbouring countries is the coordination of cross-border transmission capacity management mechanism, and adequate interconnectors. Transmission congestion management on the borders between Poland and Germany, the Czech Republic and Slovakia is carried out in a coordinated manner, even though a fully coordinated mechanism for the provision of access to cross-border transmission capacity throughout Central Eastern Europe region has not yet been implemented as of 2010. In the course of cooperation between TSOs under the auspices of ERGEG Regional Initiatives, draft Auction Rules were prepared for a fully coordinated congestion management mechanism for the entire region. These rules came into effect on January 1, 2011.

A major limitation for the integration between Polish market and the neighbouring markets is insufficient level of cross-border transmission capacity. Additionally, the increasing level of wind generation in Northern Germany made it difficult to take the best advantages of existing cross-border interconnectors due to increasing loop flows through NES, which are difficult to forecast. This applies in particular to the possibility of electricity imports from neighbouring countries, which in turn exert significant impact on competition development on domestic market. It should be noted that the situation has improved in 2011 as a result of nuclear energy moratorium introduced by Germany, but it is too soon to tell whether such an improvement will be a long-lasting phenomenon.

Considering interconnectors with other member states, it must be noted that SwePol Link interconnector is not owned by *PSE Operator SA* – the only transmission system operator in Poland. Nevertheless, towards the end of 2010, *PSE Operator SA* was appointed as the transmission system operator on that interconnector. In conjunction with administrative procedure regarding the appointment of transmission system operator, there was ongoing work within the framework of ERGEG Northern Europe Regional Initiative, leading to a recommendation that the integration between Polish and Scandinavian markets should be fostered by market coupling mechanism. In consequence of that effort, as of December 15, 2010, market rules governing the access to SwePol Link capacity were introduced, based on market coupling mechanism. Integration between Polish and Scandinavian markets through market coupling mechanism was possible due to increasing turnover dynamics on *TGE SA* Polish Power Exchange, which led to sufficient liquidity to enable third party access to SwePol Link interconnector. It should be underlined that the enforcement of amended Energy Law regulations in March 2010, with the obligation to sell electricity on the exchange or

another organized market (trading platforms) imposed upon certain selected groups of generators, was aimed at, among other things, increasing the liquidity of Polish exchange market. At present, conditions required for continued integration between domestic market and Central Eastern Europe countries within the framework of market coupling mechanism are also met.

Cross-border interconnection with Lithuania is currently in preliminary stage of execution, therefore it is difficult to determine the extent of integration between Polish and Lithuanian market.

Relatively small range of cross-border interconnectors results in limited price correlation between Polish market and markets of other countries. In consequence, information coming from neighbouring markets has no direct impact on electricity market in Poland. In view of the fact that in 2010 the liquidity of exchange market, and in particular the spot market, was still quite limited, the assessment of price correlation on domestic markets is unjustified due to the risk of significant error. Another difficulty in making such comparisons is related to different national currencies and their fluctuating exchange rates.

As a result, Polish wholesale electricity market is still national in scope, from geographical standpoint, in spite of the progress in regional integration made in 2010.

Review of mergers and acquisitions that took place on that market in 2010 is presented in section 3.2.3., where the activities of OCCP and Ministry of State Treasury (MoST) regarding that sector are described.

3.2.2. Description of the retail market

Retail market is defined as the market of end users who purchase fuel and electricity to satisfy their own needs. In 2010 the President of ERO continued monitoring of that market, in line with the adopted programme.

Apart from end users (i.e. households as well as businesses), retail market participants include distribution network operators (DSOs) and electricity suppliers (electricity trade companies). The biggest share in electricity sales is achieved by incumbent suppliers, established on the basis of former distribution companies (currently, seven entities), as parties to common service agreements which combine the provisions of electricity sales contract and electricity distribution contract concluded with users. Incumbent suppliers are default suppliers for those household consumers who did not decide to switch to a new supplier. There are also other suppliers active on the retail market (about twenty active market players) which are not derived from the structure of former distribution companies. About 200 other suppliers are small vertically integrated industrial power sector companies, which provide distribution service side by side with the sales. Overall, there are about 300 entities which hold electricity sale licence.

On the demand side of retail electricity market, there are about 16.5 million end users, of which households make up slightly over 82%. At the same time, the volume of electricity sales for that group is not high and it represent approximately, on aggregate, 24% of the total electricity sales.

Consumers continue to be 'tied' to their suppliers from the past, and the scale of supplier switching is still very small (Table 3.7), despite the fact that TPA rule is applicable to all customers groups as of July 1, 2007. It is true, however, that in spite of a persistently low number of customers who decide to switch the supplier, the number of consumers who took advantage of that right was almost 3.5 times higher in 2010, compared to 2009. It is worth noting that a lion's share of progress in terms of application of TPA rule was observed among users from tariff groups A, B and C (commercial customers). Supplier switch activity among consumers from group G (households) was insignificant.

Table 3.7. Electricity sales to final customers

Consumer groups by consumption volume [MWh]	Total number of consumers in 2010	Total sales volume in 2010 [MWh]*	Number of TPA consumers according to tariff groups		TPA sales volume according to tariff groups [MWh]	
			A, B, C	G	A, B, C	G
> 2 000	4 222	54 769 480	807	1	22 774 184	24
50 – 2 000	99 567	24 737 398	2 774	9	1 195 984	740
< 50	16 401 783	43 174 696	4 030	1 362	718 743	6 024
Total	**16 505 572**	**122 681 574**	**7 611**	**1 372**	**24 688 911**	**6 788**

* Estimated electricity sales volume (lack of some measurements as for the end of 2010).

Source: ERO, on the basis of data provided by DSOs.

Prices

Data presented in Table 3.8 and in Figure 3.11 applies to electricity power prices (excluding distribution charges) applicable in relevant periods, rather than the prices approved in tariffs or those featured on the bills for customers charged on the basis of consumption projections.

Electricity prices applied with regard to users who did not exercise the right to switch the supplier did not increase significantly between Q4/2009 and Q4/2010. In comparison to the period between Q4/2008 and Q4/2009, when consumer prices went up, in total, by 31.7%; in the period discussed in this study there was a price decrease of 0.51%. The biggest decrease was observed in the category of biggest commercial customers (tariff group A) – 3.94%, and the biggest increase was observed among household consumers (tariff group G) – by 4.51%.

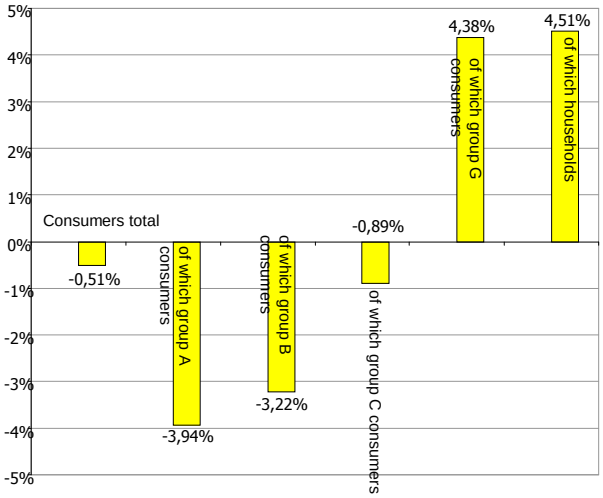
As far as the consumers who used the right to switch the supplier are concerned, their price of electricity is determined within the framework of bilateral contracts.

Table 3.8. Electricity prices for consumers with common service agreements

Specification	Price of electricity		Change [%]
	Quarter 4, 2010 [PLN/MWh]	Quarter 4, 2009 [PLN/MWh]	
Consumers total	Consumers total	266.83	99.49
Tariff group A consumers	235.75	245.42	96.06
Tariff group B consumers	264.27	273.05	96.78
Tariff group C consumers	297.24	299.91	99.11
Tariff group G consumers	252.80	242.20	104.38
Of which: households	252.90	241.99	104.51

Source: EMA (ARE SA).

Figure 3.11. Change in electricity prices – comparison between Q4/2010 and Q4/2009



Source: EMA (ARE SA).

Supplier's switching

Actual freedom of supplier's switching is measured by the number of active consumers on the market and the number of supplier's switching cases reported during the period. Its level is a function of many overlapping factors, starting from buyer's awareness, through his/her motivation to switch supplier, up to the actual easiness of switching procedure or availability of competitive offers on the market. In Poland, very few consumers (only 0.05%) have to date exercised the right to switch supplier. Notwithstanding the low level of consumer activity, one should analyse it according to various profiles to be able to observe positive as well as negative characteristics, and identify the barriers. Another important point is the change in the use of supplier's switching right in time and

according to geographical boundaries, and whether the behaviour of all customers, coming from different tariff groups, is similar or not. In that context, the status of TPA rule application with various distribution system operators is outlined in Table 3.9.

Table 3.9. Supplier's switching: 2009–2010

Item	Distribution system operator	Number of TPA users*		Volume of electricity supplied under TPA [MWh]		Share of electricity supplied under TPA in total electricity supplied [%]	
		2009	2010	2009	2010	2009	2010
1	PGE Dystrybucja SA	888	1 889	1 571 494	4 180 962	5,38	13,75
	Of which:						
	PGE Dystrybucja SA Oddział Białystok	604	735	44 717	250 943	1.44	7.70
	PGE Dystrybucja SA Oddział Lublin	35	127	51 075	257 428	1.98	9.55
	PGE Dystrybucja SA Oddział Rzeszów	32	103	201 458	619 964	5.21	15.08
	PGE Dystrybucja SA Oddział Łódź-Miasto	34	167	37 235	793 559	1.27	25.99
	PGE Dystrybucja Zamość	32	83	173 139	237 232	9.08	11.92
	PGE Dystrybucja SA Oddział Skarżysko-Kamienna	42	201	423 153	641 403	8.71	13.03
	PGE Dystrybucja SA Oddział Łódź-Teren	36	167	353 865	793 559	7.90	16.97
	PGE Dystrybucja SA Oddział Warszawa	73	306	286 852	586 874	5.23	10.32
2	ENERGA – Operator SA	227	1 353	1 833 747	2 130 397	9.72	11.03
3	ENION SA	424	1 625	2 723 188	7 190 001	15.92	39.27
4	EnergiaPro SA	527	2 414	1 711 749	2 879 108	12.39	19.63
5	ENEA Operator Sp. z o.o.	239	751	509 733	2 806 482	3.14	16.52
6	Vattenfall Distribution Poland SA	196	455	3 483 848	4 644 573	34.42	42.15
7	RWE Stoen Operator Sp. z o.o.	94	458	14 819	838 675	0.22	11.89
8	PKP Energetyka SA	4	30	657	24 837	0.02	0.75
9	Polenergia Dystrybucja Sp. z o.o.	0	1	0	662	0.00	0.41
10	Orlen SA	0	0	0	0	0.00	0.00
11	Przedsiębiorstwo Energetyczne ESV Sp. z o.o.	0	0	0	0	0.00	0.00
12	Synthos Dwory Sp. z o.o.	0	0	0	0	0.00	0.00
13	Energoserwis Kleszczów Sp. z o.o.	0	0	0	0	0.00	0.00
	Total	**2 599**	**8 976**	**11 849 235**	**24 695 698**	**10.17**	**20.13**

* User defined as a natural or legal person with whom distribution company entered into one or more network connection agreements and distribution agreements.

Source: ERO, based on data provided by DSOs.

Table 3.10 below presents the data on supplier's switching status in the respective areas of individual distribution system operators, with detailed attention to household customers.

Table 3.10. Supplier's switching – according to tariff groups (2010)

Item	Distribution system operator	Number of TPA users*		Volume of electricity supplied under TPA [MWh]	
		A, B, C	G	A, B, C	G
1	PGE Dystrybucja SA	1 216	673	4 179 452	1 510
	Of which:				
	PGE Dystrybucja SA Oddział Białystok	159	576	250 012	931
	PGE Dystrybucja SA Oddział Lublin	111	16	257 384	44
	PGE Dystrybucja SA Oddział Rzeszów	102	1	619 962	2
	PGE Dystrybucja SA Oddział Łódź-Miasto	160	7	793 524	35
	PGE Dystrybucja Zamość	75	8	237 218	14
	PGE Dystrybucja SA Oddział Skarżysko-Kamienna	179	22	641 393	10
	PGE Dystrybucja SA Oddział Łódź-Teren	160	7	793 524	35
	PGE Dystrybucja SA Oddział Warszawa	270	36	586 436	438
2	ENERGA – Operator SA	1 293	60	2 129 730	667
3	ENION SA	1 473	152	7 189 114	887
4	EnergiaPro SA	2 314	100	2 878 799	309
5	ENEA Operator Sp. z o.o.	665	86	2 805 996	486
6	Vattenfall Distribution Poland SA	260	195	4 642 296	2 277

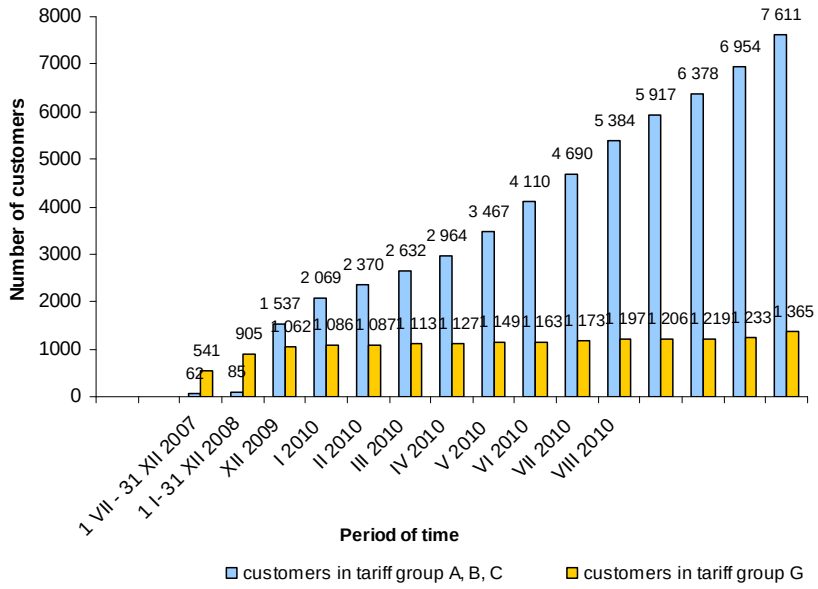
7	RWE Stoen Operator Sp. z o.o.	359	99	838 025	651
8	PKP Energetyka SA	30	0	24 837	0
9	Polenergia Dystrybucja Sp.z o.o.	1	0	662	0
10	Orlen SA	0	0	0	0
11	Przedsiębiorstwo Energetyczne ESV Sp. z o.o.	0	0	0	0
12	Synthos Dwory Sp. z o.o.	0	0	0	0
13	Energoserwis Kleszczów Sp. z o.o.	0	0	0	0
	Total	**7 611**	**1 365**	**24 688 911**	**6 788**

* User defined as a natural or legal person with whom distribution company entered into one or more network connection agreements and distribution agreements.

Source: ERO, based on data provided by DSOs.

As can be inferred from the analysis of the breakdown into tariff groups, in 2010 there was an over 300% increase in the number of consumers who switched supplier, in comparison to the number of supplier switching cases in 2009. Of that, the number of supplier switching cases in tariff groups A, B, C went up by approximately 500%, and in tariff group G by about 17% (Fig. 3.12). These growth rates, however, must be analysed in the context of a very low number of customers (only 0.05%) who decided to switch supplier, up to date.

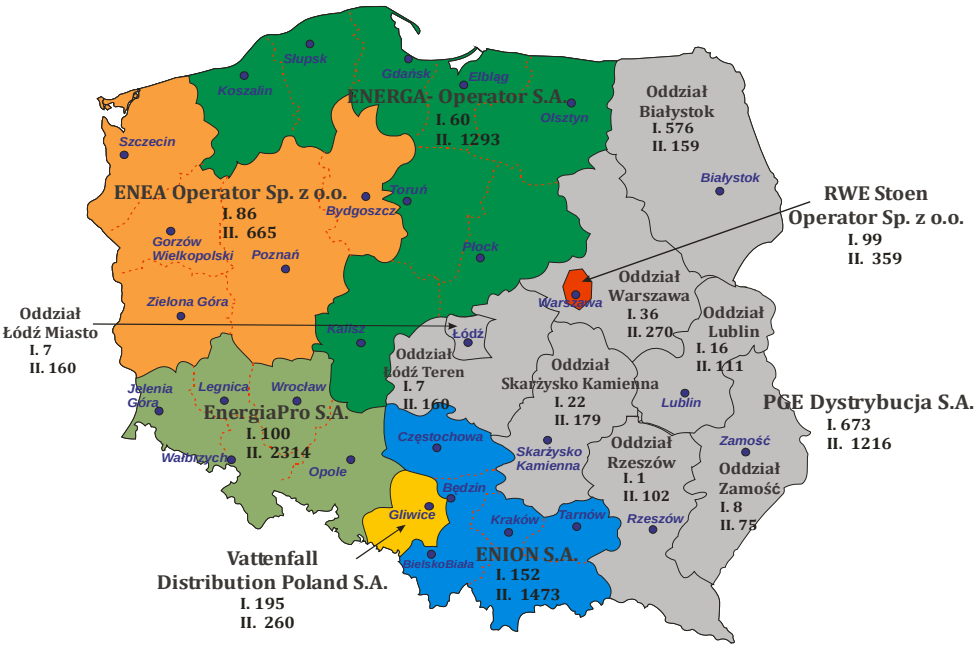
Figure 3.12. Application of supplier's switching procedure, 2007–2010



Source: ERO.

Application of TPA rule was uneven in Poland, as illustrated by the data provided by individual operators (Table 3.10). The biggest number of customers from tariff groups A, B, C who switched supplier was observed in the operating area of *ENERGIA PRO SA, ENION SA* and *ENERGA – Operator SA.* As far as households are concerned, the biggest number of consumers who switched supplier was observed in the operating area of *PGE Dystrybucja SA Oddział Białystok*. In 2010, the biggest volume of electricity supplied under TPA was purchased by customers connected to the network of *Vattenfall Distribution Poland SA*, where the electricity supplied to consumers under TPA rule represented more than 42% of overall supply. The second and the third position are occupied by, respectively: *ENION SA* with 39% share of electricity supplied under TPA, and *PGE Dystrybucja Oddział Łódź-Miasto SA* with approximately 26% share of electricity supplied under TPA. The biggest number of consumers using TPA, among all distribution operators – 2414 users – was reported by *EnergiaPro SA*.

Figure 3.13. Supplier's switching cases according to operating areas of individual distribution system operators



Liczba odbiorców TPA na terenach 7 OSD

Number of TPA customers in the operating areas of 7 DSOs

I – consumers from tariff group G, II – consumers from tariff groups A, B, C

In 2010 the volume of electricity supplied to customers connected directly to transmission network amounted to 1 915 GWh. *Nota bene*, all customers purchased electricity from the suppliers they had chosen. To sum up, total volume of electricity supplied in 2010 to end users on market terms, i.e. with the application of TPA rule (supplied through the distribution and transmission network), amounted to 26 611 GWh, i.e. 21.7% of overall electricity supplied to end users. Notably, consumers from groups A, B and C are defined as those end users who are supplied in electricity on high, medium and low voltage for the purposes other than household utility needs. For these consumers, electricity prices are exempted from the requirement of approval by the President of ERO. In contrast, consumers from tariff group G use electricity supplied on low voltage for household utility purposes. Electricity sales tariffs for those users still require the approval of the President of ERO, however it regards only default suppliers.

The number of electricity distribution service agreements signed by distribution system operators with suppliers (so-called general distribution agreements, or GUD), is one of the factors of competition development on retail market.

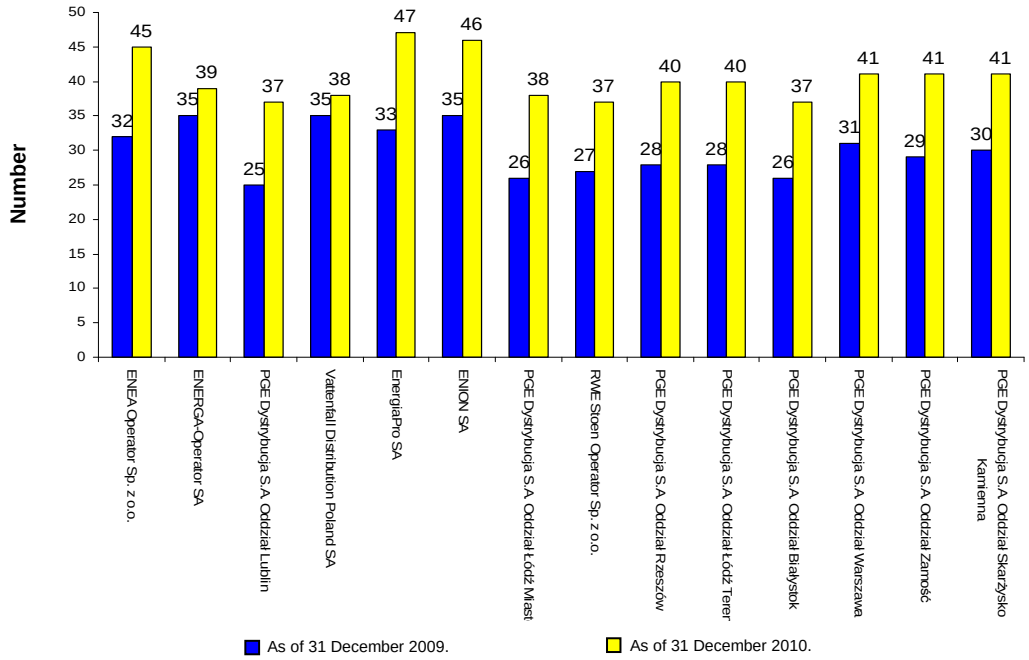
Those agreements, known as general agreements and concluded between the operator and suppliers, define the terms of cooperation between the operator and the supplier; they are a pre-requisite for supplier activity in the area of a distribution system operator. Therefore, general distribution agreements are necessary to ensure that there is actual possibility to use the right to purchase electricity from a supplier of choice by the customer. It should be emphasized that towards the end of 2009 DSOs together with suppliers associated in Energy Trade Association prepared a joint template of general distribution agreement, and recommended that template for common use. In 2009 the template was not widely applied, which was probably due to very diverse needs of trading companies. Nevertheless, in the last months of 2010 one could observe increased interest among trading companies in signing agreements drafted in accordance with the recommended template.

As reflected in the monitoring activity carried out in 2010, total number of general distribution agreements signed, compared to 2009, went up by one fourth, on average. As of the end of December 2010, *EnergiaPro SA* DSO had the biggest number of concluded general distribution agreements, i.e. 47. Moreover, many agreements are in negotiation phase. At the same time, all

operators have entered into general distribution agreements with companies that act as default suppliers in their respective operating areas.

A set of general distribution agreements signed by individual operators is presented in Fig. 3.14 below.

Figure 3.14. The number of general distribution agreements (GUD) signed



Source: ERO, based on data provided by DSOs.

It is worth noting that, following the consolidation that took place in 2010, the number of DSOs within the structure of *PGE SA* corporate group went down. At present, there are seven DSOs, and *PGE Dystrybucja SA* preserves the division into branches, in line with former DSO division. As of the end of 2010, five out of seven operators put in their general distribution agreements the clause allowing the possibility of entering into new common service agreements in their respective operating areas by default suppliers formed as a result of unbundling of a vertically integrated company. One must note, however, that different branches of *PGE Dystrybucja SA* use different solutions in that regard.

Most operators (four out of seven) do not stipulate the cost of additional meter reading when switching supplier. Three operators have clauses that allow the collection of such charges by DSO in the case when additional meter reading is made at a different time than the time specified in operator's tariff. In this case, the situation is similar to the one described above, i.e. different branches of *PGE Dystrybucja SA* apply different solutions. Analysis of existing legislation indicates that the rate of subscription fee includes all costs incurred by the reading of metering and billing systems, irrespective of the reason for which the reading is taken. These costs must be justified, however. It should be underlined that the provisions of the regulation of the Minister of Economy of July 2, 2007, on detailed principles governing the development and calculation of tariffs and financial settlements in electric power trade[8)] do not differentiate the calculation of subscription fee depending on whether meter readings are taken at the times corresponding with the billing period, or at other times, including supplier's switching cases, for example. The practice of operators referred to above could be a barrier in the process of supplier's switching (extra cost that will ultimately be borne by the consumer switching a supplier), and as such it negatively assessed by the Regulator. This issue has been resolved in the template of general distribution agreement developed jointly by Polish Power Transmission and Distribution Association (DSOs) and Energy Trade Association.

[8)] Journal of Laws of the Republic of Poland, No 128, item 895, with further amendments.

As shown by monitoring results, increasing trend in the process of signing general distribution agreements continues. However, taking into account both monitoring results and a wider knowledge of the Regulator, there are some justified doubts if the progress in terms of quantity is not achieved at the expense of quality, i.e. whether both parties involved in negotiations of general distribution agreements have an equally standing, and whether concluded agreements take into account – on equal terms – the best interest of both parties.

Measures to promote customer education and information

In an effort to develop a system-based approach to solving problems which customers face, already at the end of 2008 the President of ERO launched 'Consumer Zone' project, which will be continued and expanded. This initiative has become a forum for the representatives of consumers, public administration and companies operating on electricity, gas and heat markets, focused on identifying and solving common issues encountered by consumers, and on developing the standards of good practice.

Within the framework of that project, in the years 2008–2010 educational meetings and workshops were held, and problems faced by customers in their relationship with energy companies were collected and analysed, and suggested solutions proposed. 'Consumer Zone' also represents a key platform for cooperation between ERO and social partners, such as, first and foremost, all the organizations and associations involved in consumer protection, as well as associations of energy sector companies.

In 2008–2009 ERO organized more than 380 workshops, seminars and educational meetings promoting Corporate Social Responsibility of energy companies, protection of vulnerable customers and consumer rights.

Promoting Corporate Social Responsibility (CSR) in energy businesses is among ERO's priorities, and in the period 2008–2010 the ERO was involved in popularization of good practices and promotion of reliable customer service of energy companies, advocating closer bonds of cooperation between companies on the one hand, and local institutions and organizations dealing with consumer protection on the other. In the European Union, CSR is regarded as an important tool supporting the development of competitiveness of European companies.

The President of ERO was the first institution of public administration to initiate, back in 2008, the work on the idea of Corporate Social Responsibility of the power sector, support for vulnerable customers and energy efficiency standards. On the initiative of the President of ERO, three working groups were established. The outcome of their work included the publication of reports presented in ERO Bulletins no 6/2008 and 5/2009.

As part of CSR promotion, on June 17, 2010, a second nationwide conference on 'Responsible Energy' was held in Warsaw. This meeting, held under the auspices of ERO and co-organized by *PGNiG SA* and *PricewaterhouseCoopers*, brought together representatives of the government, power industry, economic sector and experts. During the conference, ERO presented the findings of the second survey diagnosing the rate of involvement in CSR activities in energy companies, entitled: 'Corporate Social Responsibility of Energy Companies in the light of the Second Survey Research. Preliminary Results.' The first research of that kind was carried out by the President of ERO in 2009 – findings from both projects were published on the ERO website, and the President of ERO continues research activity in that area in 2011.

Within the framework of a project co-funded by the EU, ERO has developed a set of good practices of electricity and gas suppliers and distribution system operators (DSOs), and recommended proposals of standardized contracts concluded between suppliers, distribution system operators (DSOs), and energy consumers. In the preparation of good practices, the President of ERO concentrated on customer needs, with due consideration for issues such as, among others, transparency of contracts, commercial quality of customer service, transparent supplier's switching procedure, a need to notify the user about possible ways to rationalize electricity consumption, the ways in which complaints and disputes between the user and energy company can be resolved, the right to information about consumer rights as regards universal services (i.e. the right to electricity supply of specified quality, at reasonable prices, easily and clearly comparable, and transparent). The document prepared on that basis has been presented by the President of ERO to energy companies for application in their customer relations.

Already in 2009, ERO started preliminary work on the project called 'Activating the demand side of energy market – promotion of rights of electricity and gas consumers, resulting from *acquis communautaire*', financed from the EEA Grants. The purpose of the project was to carry out promotional campaign dedicated to the single market in electricity and gas, and consumer rights in Poland. The campaign is aimed at activating electricity and gas market consumers, in order to develop a free and competitive energy market. It was based on a broad information and promotional campaign, with elements of education and consumers to help to execute the consumers' rights. Thanks to the campaign, the consumers has an opportunity to understand the principles governing energy trade, the role of market participants, and their own new rights and responsibilities as energy market stakeholders. Educational objectives included training dedicated to prevention of abuse by unethical suppliers.

During the campaign, modern media were used to inform consumers about the ways to switch their electricity and gas supplier. The following media were involved in the campaign: press, radio, television ('product placement' in a soap opera), billboards, posters and flyers, as well as training for elderly citizens. ERO website dedicated to free market issues and ERO call center supplemented the campaign. As a result of project implementation, co-financed from the EEA Grants, ERO designed and launched in 2010 a new website called '*Masz wybór*' ('You have a choice') – www.maszwybor.ure.gov.pl. During the year the website was viewed by 177 319 users. The average number of entries during the year was 14 776 per month.

Within the structure of Energy Regulatory Office, an information point for customers has been established. The Point provides information and assistance to gas and electricity consumers in their relations with energy companies, cooperating with energy companies and consumer institutions and organizations in scope of customer protection. Its role is to inform consumers by providing direct replies on the telephone or by mail (including electronic mail) to problems and inquiries submitted by customers, and by publishing the information targeted at a wider audience in 'Consumer Guidebook' placed on ERO website.

The 'Guidebook' contains information relevant for customers. For example there are: the positions of the President of ERO related to consumer issues, replies to frequently asked questions, and a more detailed overview of common problematic issues, as well as articles dealing with the issues that might be of interest to users. The 'Guidebook' has a separate section on 'Energy Saving', with practical information on how to save energy in the household, and on energy saving programs and organizations that promote that cause. The latter information is targeted at medium and large energy consumers.

Tariff calculator

In June 2011, Online Electricity Price Calculator (*Cenowy Energetyczny Kalkulator Internetowy/CENKI*) was placed on ERO's website. This tool can be used to compare the offers from all interested stakeholders offering electricity for households. It was designed within the framework of projects co-funded by the European Union. The tool can assist consumers who consider switching supplier, and it is not an offer in the meaning of the Civil Code. Currently (status as of June 2011), the calculator includes six alternative offers from tariff group G suppliers (*PGE Obrót, Energia dla Firm, Energa Obrót, PKP Energetyka, Vattenfall* and *RWE Polska*).

Customer complaints and enquiries

Consumer 'complaints' and 'enquiries' are brought to the attention of the President of ERO by regular mail, e-mail, telephone, fax, or during personal appointments. They are analysed by relevant ERO organizational units including, first of all, the local branches and the Information Point. The tasks of the Point consist in, first and foremost, communicating with the consumers who report problems, informing consumers about their rights, explaining how a dispute can be solved, and which organizational units are competent to further address the case in question. In connection with the growing number of cases and their increasing complexity, in the middle of 2010.

Responses are provided in the form of written explanations, telephone consultations and during face-to-face appointments in the office. In each and every case the consumer applying to the President of ERO receives complete information on how the problem can be solved, and in the event when the issue does not fall within the mandate of the Regulator, the consumer is informed which institution is competent to address the case in question.

In 2010 Regulator's assistance was requested most frequently by electricity consumers (gas consumers sought help much less frequently, to a certain extent this results from the proportion in the number of users of these two energy sources), mostly from households, but there were also the self-employed (small businesses), representatives of enterprises, cooperatives and homeowner associations.

Overall, the number of cases related to electricity and brought to the attention of the President of ERO was similar to that observed in 2009, but there has been a marked increase in the number of complaints against energy companies. There are several reasons behind that. One of those reasons has been the growing awareness of consumer rights among electricity users and the determination to exercise those rights. Another significant factor stems from ongoing changes in energy companies (restructuring processes carried out in leading corporate groups in the sector, changes in IT systems – including customer service systems), which affect customer relations and trigger numerous problems, e.g. with discerning the contents of bills for electricity consumption.

Consumers were concerned mostly with the issues related to electricity sales contracts, whether those already concluded or those in the process of contract conclusion, and 'Terms of contract' of common service contracts. At the same time, these issues are outside of Regulator's mandate: disputes arising from civil law agreements concluded with the companies, unless resolved between the parties to the agreement, must be settled by common court.

Tables 3.11. and 3.12. present detailed data regarding the volume of cases, according to underlying reasons.

Table 3.11. Complaints*

Specification	Number of cases
Price	52
Metering systems and installations	76
Customer service	95
Commercial practices	2
Misleading advertising	0
Terms of contract	288
Billing	168
Supplier switching issues	18
Supply issues related to payments, e.g. disconnection	49
Supply issues related to technical problems	139
Connection refusal	83
Other	99
Total	1 069

* A complaint is defined as any problem/inconvenience faced by the consumer in relation with energy company, which is brought to the attention of the President of ERO.

Source: ERO.

Table 3.12. Inquiries*

Specification	Number of cases
Price	107
Metering systems and installations	131
Customer service	59
Commercial practices	1
Misleading advertising	0
Terms of contract	389
Billing	217
Supplier switching issues	178
Supply issues related to payments, e.g. disconnection	63
Supply issues related to technical problems	100
Connection refusal	22
Other	252
Total	1 519

* An enquiry is defined as each request for information directed by consumer at the President of ERO.

Source: ERO.

Looking at the data shown in the tables, one should pay special attention to the 'Billing' category, which includes cases related to incorrect electricity bills, explanations of legal grounds behind those bills, and tariff rules, as well as to the 'Price' item, involving rates and prices. The presence of so

many cases in those categories confirms already heralded consumers' problems with understanding complicated structure of electricity bills; it also indicates that many objections towards companies are justified. Cases connected with 'Supplier switching issues' are also high on the agenda. There has been growing interest in the application of the right to switch supplier, with a corresponding increase in consumer reactions to the circumstances and conditions encountered on the way. Yet, due to the fact that tariffs for household users are regulated, the potential for exercising that right remains quite limited. The next most numerous category of cases that have much in common, falls within the definition of 'Metering systems and installations' together with 'Supply issues related to payments, e.g. disconnection'. The former category applies to technical conditions required for metering and billing equipment as well as to the way billing is performed when billing equipment is faulty; the latter includes cases of disconnection from electricity supply due to various reasons, such as, for example, late payments for consumed electricity. One must also note the item of 'Supply issues related to technical problems'; the number of cases in this category went up compared to last year, to a significant extent this is related to a very high number of serious network outages resulting from exceptionally harsh and snowy winter. Item marked as 'Other', which is quite numerous as well, includes cases such as, for example, illegal usage of electricity, companies installing energy equipment on property that does not belong to the company, non-compliance with the deadlines of concluded connection agreements.

Information regarding the number and type of complaints and enquiries helps to identify consumer problems more effectively. This, in turn, allows the President of ERO to improve regulatory activities, to argue in favour of pro-consumer solutions in discussions with other public authorities.

3.2.3. Measures to avoid abuse of dominance on the market

Measures to avoid abuse of dominance on the energy markets fall within the competence of the President of the Office for Competition and Consumer Protection (OCCP) - the anti-trust authority performing the tasks set forth in Competition and Consumer Protection Law. The President of OCCP has oversights also mergers and acquisitions in that sector. The President of ERO, as the regulatory body, is entrusted with monitoring and promotion of competition in the energy sector, in scope of prerogatives set forth in the Energy Law. Ownership supervision and restructuring in the sector fall within the competence of the Ministry of State Treasury. In view of such division of responsibilities, below are presented: first, the activities undertaken by the President of ERO in scope of monitoring the performance of energy companies, then those undertaken by the President of OCCP (antimonopoly and concentration proceedings), and at the end, privatization and restructuring activities undertaken by the Minister of State Treasury.

Monitoring generators' performance

Transparency

In 2010 there were no major developments, in comparison to 2009, as regards publication of information on available generation capacity, the period elapsing between placing the order and order execution, and forecasted level of generation capacity and capacity demand for it. Those principles have been implemented within the framework of capacity demand forecast and projected level of generation capacity and generation capacity. National capacity demand forecast is prepared within the framework of coordination planning. Coordination plans are published on *PSE Operator SA* website. Annual coordination plans are made available for the period of three subsequent years by 30th November of the preceding year, whereas monthly plans for the month of March are disseminated by February 23rd, and those applicable to the remaining months are published by the 25th of the preceding month, for the coming month. Preliminary daily plans are made available by 4:00 p.m. on the day directly preceding the day of energy supply, and daily coordination plans by 5:00 p.m. on the day directly preceding the day of energy supply. In turn, the first update of current daily coordination plan is made by 7:00 p.m., with subsequent updates made as needed, on the day directly preceding the day of energy supply and during the day of supply.

Information about sales offers

In the first half of 2010, analogically to 2009, more than 90% of electricity sales transactions were carried out within the framework of bilateral contracts. Moreover, in line with the strategy of consolidated power sector groups, sales of electricity by their generators was to a great extent done within the group (i.e. no direct sales outside of the group). During that time, same as in 2009, generators were practically excluded from the power exchange market transactions. The only way to access offer data would be explicit auction sales, but it must be emphasized that the volume of energy sold that way has been quite small.

That situation changed in the second half of the year. On August 9, 2010, the provision of Article 49a of the Energy Law came into effect, binding electricity generators to sell electricity[9)] on the energy exchange, on regulated market or at the auctions organized by those companies or by users. Pursuant to this provision, generators have to submit to the President of ERO the information on concluded contracts on the basis of which they sell electricity through different channels than energy exchange, regulated market or organized auctions. Based on accumulated data, the President of ERO announces average quarterly price of electricity exempt from the obligation imposed pursuant to the provision.

Energy companies are not required under the law to publish their sales offers in the case of electricity sales to consumers other than end users.

Given that electricity generators have been exempt from tariff obligation (since 2001), continuous monitoring of electricity market performance is the basic measure in which the President of ERO can execute its mandate. The President of ERO monitors contracts concluded by market participants and publishes, by March 31 each year, average price of electricity traded on competitive market valid for the preceding calendar year.

In connection with central balancing mechanism, a big role in ongoing monitoring of generators' behaviour is played by transmission system operator, who has adequate resources to pursue this task. If any irregularities are identified, e.g. as regards the abuse of dominance, the operator notifies the President of ERO.

Traders' activity

Transparency of operations and disclosure requirements

Before March 11, 2010, there was no legal obligation to publish sales offers. As of that date, the provisions of Article 4j, paragraph 5, Energy Law, came into force. According to that article, companies that trade in electricity and gas and sell it to end users, connected to the distribution network, have to disclose the information regarding the prices and related terms and conditions on their websites, and to make such information publicly available at their premises.

On the internet portal of Energy Trade Association , an organization of trading companies, one can find information about supplier choice together with the details regarding subsequent stages of supplier switching procedure, as well as a description of present day barriers hindering the functioning of free energy market in Poland.

Structure of contracts

Typically, traders present their offer to final customers on individual basis (the provision of Article 4j, Energy Law, imposes the obligation of information provision regarding price and related terms and conditions). Prices and other contractual terms are negotiated with a business partner on a case by case basis, and they may vary depending on the period of supply, deviations and consumption profile. Some traders also offer assistance in negotiating transmission service agreements.

Generally speaking, contracts between trading companies and their clients are short-term contracts, concluded for the period of one day (spot contracts), several days, a month, six months, and the longest ones for a period of a year. They usually come as framework agreements, each time

[9)] 100% of energy generated in a given year – state aid beneficiaries by virtue of termination of long-term contracts, 15% – remaining generators.

encompassing the transactional agreement. There may also be sales contracts with a pre-determined energy volume. Most contracts include indemnity clauses in case of non-performance or unsatisfactory performance, describing the liabilities of each party. Some traders rely on standard EFET (European Federation of Energy Traders) agreements.

Mode of payment for electricity is always specified in the contract. Traders can be very flexible in that respect. Billing may be done on a weekly basis, every ten days, twice a month, or once a month. Payment is usually made by a bank transfer, with the deadline of 14, 21 or 30 days from invoice issue date.

Each contract includes dispute resolution provisions. Amicable dispute resolution is preferred, followed by arbitration procedure, and when the case falls within the competence of the President of the Energy Regulatory Office (refusal to conclude the contract), a request to initiate administrative proceeding is filed.

Distribution companies enter into electricity distribution service agreements with final consumers. Trading companies enter into sales agreements or common electricity supply service agreements. Customers are charged for electricity supplied and distribution services provided in accordance with prices and rates set for tariff groups included in approved electricity tariffs.

Billing for electricity supplied or distribution services provided is carried out according to billing periods determined separately in the tariffs of individual suppliers.

Steps taken by the President of the Office of Competition and Consumer Protection with regard to energy companies[10)]

The President of OCCP oversees compliance with Competition and Consumer Protection Law (the Law), and in particular in preventing and counteracting the practices which hinder competition, such as anticompetitive agreements and abuse of dominance cases, as well as mergers control. Whenever there is a suspicion of anticompetitive practices attempted by the companies, also in power sector, the President of OCCP may initiate the proceeding concluded with administrative decision, if the practice is confirmed.

Competition protection and promotion policy pursued by the President of OCCP

In March 2010 the President of OCCP published a report entitled 'Competition and Consumer Protection Development in Polish Energy Sector (2010)'. The paper presents a description of the power sector in Poland, such as, for example, its structure, basic forms of energy trade and market where the development of competition is possible, evaluation of anticompetitive barriers, together with suggested actions to achieve positive changes in that regard, and an outline of relations between consumers and energy suppliers. The report can be downloaded from: http://uokik.gov.pl/download.php?plik=8012.

Measures undertaken by the President of OCCP in scope of antimonopoly proceedings

Due to unique market characteristics of the power sector, and especially the presence of a natural monopoly in the area of grid operations, a vast majority of anti-trust proceedings relates to the abuse of dominance (in 2010 all cases). In 2010, in three cases final decisions were issued, and four proceedings are pending.

Decisions regarding anti-competition practices, issued in 2010

The first decision issued in 2010 by the President of OCCP (decision no RWR 2/2010, dated February 22, 2010) dealt with the abuse of dominance on power network connections market, covering the area of Dolnośląskie and Opolskie regions (voivodeships). In particular, the President of OCCP ruled that the practice which consisted in imposing onerous terms of contract on energy consumers through charging them with the cost of drafting notary deeds regarding the easement of a piece of land situated along the track of a power line was unlawful. According to antimonopoly

[10)] Based on input developed by OCCP.

office, charging connecting entities with fees other than the connection fee, such as, for example, the cost of notary deeds drafted in relation to the easement of a piece of land situated along the power line, has been unfounded and should not have taken place. In the course of proceeding, *EnergiaPro* confirmed that in its Wrocław branch in the years 2006–2009 there was a (customary) practice to charge energy consumers (connecting entities) with the cost of the above-mentioned notary deeds. In the course of proceeding it was determined that the average cost of the above-said notary deed amounted to more than PLN 520. According to antimonopoly office, such an amount represented a burdensome and additional charge for the budgets of connecting entities which sought connection to *EnergiaPro* power network. The practice described above was temporary in nature, since, as of 22 September, 2009, *EnergiaPro* no longer charges their consumers with such additional cost. The decision is final.

In another decision (no RKT-17/2010, dated July 19, 2010), the President of OCCP ruled that *EnergiaPro SA*, based in Wrocław, has abused the dominant position on the local market of street, public area and road lightning services in the area of Opole Municipality. According to antimonopoly office, that constituted anticompetitive practice that consisted in imposing onerous contract terms associated with the performance of operation and maintenance of street lightning. Such practise gave *EnergiaPro SA* unfair advantage, since the municipality was charged with the obligation to incur the cost of removal of street lightning failure not related to the failure of lightning points. Pursuant to the decision, such practice should be discontinued. The decision is not final.

As far as the third antitrust decision issued in 2010 is concerned (no RPZ-17/2010, dated August 4, 2010), the President of OCCP ruled that there was an anticompetitive practice violating the ban referred to in Article 9, paragraphs 1 and 2, point 6 of the Law, which consisted in the abuse of dominance by *ENEA Operator Sp. z o.o.*, based in Poznań, on regional electricity distribution market covering the area of western and north-western part of Poland (i.e. the following regions or sections thereof: Wielkopolskie, Lubuskie, Zachodniopomorskie, Kujawsko-Pomorskie). The practice involved imposing onerous contract terms in power grid connection contracts, as a result of which connected power was decreased to the level of contractual power in the case when contractual power requested in electricity distribution agreement (electricity sales agreement or common service agreement) was lower than the connected power. This gave *ENEA Operator Sp. z o.o.* unfair advantage. It was stated in the decision that the practice had been discontinued. The decision is not final.

Antimonopoly proceedings initiated in 2010 and not finalised in that year

By decision of July 5, 2010, proceeding was initiated against *ENEA SA*, based in the city of Poznań, in connection with suspected abuse of dominant position on regional market of maintenance of road and public area lightning services, covering the area of western and north-western part of Poland (i.e. the following regions or sections thereof: Wielkopolskie, Lubuskie, Zachodniopomorskie, Kujawsko-Pomorskie). In this proceeding, antimonopoly office examines whether *ENEA* imposed onerous contract terms leading to unfair advantage in contracts involving road and public area maintenance services on the facilities owned by *ENEA SA,* by imposing the obligation to incur the cost of work not related to the construction and maintenance of lightning points, which might constitute a violation of Article 9, paragraphs 1 and 2 of the Law.

Then, on August 14, 2009, proceeding was initiated in connection with suspected violation of Article 9, paragraph 2, point 5 of the Law, by *ENEA Operator Sp. z o.o.,* based in the city of Poznań. The company was accused of abuse of dominance on local electricity distribution market by anticompetitive behaviour on national electricity trade market. Enea, allegedly, made it difficult for users to exercise their right to switch supplier. The practice in question consisted in charging the users supplied through cable or overhead lines which were not owned by *ENEA Operator Sp. z o.o.* in electricity distribution contracts (concluded in connection with supplier switch decision), with additional or increased costs of network losses on those lines in the case when the old contract did not include such provisions or included them to a lesser extent and, at the same time, there were no technical modifications in electricity supply conditions that would justify such a change.

Antimonopoly proceeding initiated with the decision of August 6, 2010, involves suspected violation by *PGE Zakłady Energetyczne Okręgu Radomsko-Kieleckiego Dystrybucja Sp. z o.o.,* based in the town of Skarżysko-Kamienna, of the ban referred to in Article 9, paragraphs 1 and 2, point 6 of the Law. The President of OCCP examines whether the company demonstrated abuse of dominance on regional electricity distribution market in the area of Świętokrzyskie and parts of Mazowieckie and Małopolskie

regions, by enforcing in power connection contracts with a three-phase supply system the minimum value of connection capacity at the level of 6 kW, despite the presence of technical and legal conditions allowing connection with lower capacity. Such practise may be a demonstration of onerous contract terms bringing the company unfair advantage.

Furthermore, as of 25 August, 2006, proceeding was initiated on suspected abuse of dominance by *RWE Polska SA*, based in Warsaw, on local electricity distribution market in the area of company power grid, by:

1) not allowing electricity trade companies other than *RWE Polska SA* to create combine schedules for users who use TPA rule, which may hinder the development and promotion of competition on domestic electricity trade market and thus constitute the violation of Article 8, paragraphs 1 and 2, point 5 of Competition and Consumer Protection Law of December 15, 2000[11)];
2) imposing onerous contractual terms that give *RWE Polska SA* unfair advantage by introducing a burdensome obligation upon electricity trade companies other than *RWE Polska SA* to prepare and submit to *RWE Polska SA* separate schedule units for every final consumer who uses TPA rule, when at the same time allowing *RWE Polska SA* to apply combined billing approach in relations with transmission system operator, which may constitute violation of Article 8, paragraphs 1 and 2, point 6, of the Law.

Moreover, in 2010 the President of OCCP conducted explanatory proceedings involving matters referred to below, which did not give rise to antimonopoly proceedings:

- liquidation of transformer station, as a result of which the company was forced to adapt 'equipment and installations to new supply conditions due to the change of electricity supply location', and such an adaptation was supposed to consist in construction of 0.4 low voltage line from another transformer station located in Leśniów Wielki by *JORGE Sp. z o.o.*,
- principles governing contractual capacity modifications,
- suspected anticompetitive practices consisting in the abuse of dominance on the market of lighting service provision and maintenance of lightning infrastructure for the purpose of street, public area and road lighting in the municipality,
- wind farm connection applications,
- verifying whether electricity supply billing and collection of fees violate provisions of the Law,
- verifying whether the actions that consist in the refusal to extend the term of common service agreement (electricity sales agreement together with distribution service) until the point when supplier switch application processing is completed and the sales of electricity by the new supplier is initiated, violate provisions of the Law,
- verifying whether the mode and manner of processing complaints filed by electricity consumers who suffered as a result of power grid outages violate provisions of the Law,
- preliminary verification whether, in connection with distribution company activities regarding the determination of conditions for connecting client's installation to the network, there was a violation of provisions of the Law justifying the initiation of antitrust proceeding, including the determination whether the case qualifies as antimonopoly issue,
- verifying whether electricity trade company activities involving lack of possibility to perform electricity billing for entities subordinate to Prison Service District Director in the city of Gdańsk according to tariff G12w violate provisions of the Law, and whether these activities should trigger anti-trust proceeding, including the determination whether the case is anti-trust in character,
- verifying if a distribution company acts in line with Competition Law in relation to connecting customers to the network,
- preliminary verification whether there was abuse of dominance on the local market of road and street lighting facilities and network modernization, maintenance and renovation, by: 1) not allowing other entrepreneurs whose bidding offers were awarded contracts in the area of road and street lighting by the municipality to do renovation and maintenance work, which might represent violation of Article 9, paragraphs 1 and 2, point 5 of the Law, 2) imposing onerous contract terms that give the company unfair advantage through excessively high fees for road and street lighting

[11)] Effective April 21, 2007, there is a new Competition and Consumer Protection Law of 16 February, 2007 (Journal of Laws of the Republic of Poland, No 50, item 331, with further amendments), which repealed Competition and Consumer Protection Law of 15 December, 2000 (consolidated text Journal of Laws of the Republic of Poland, No 244, item 2080, with further amendments), which explains why anti-trust proceedings conducted throughout 2007, as well as decisions issued in the matters of concentration, may be based on different legal premises.

operation and maintenance, which might represent violation of Article 9, paragraphs 1 and 2, point 6 of the Law,
- preliminary verification whether there might have been a violation of provisions of the Law, in particular, Article 9 of the Law, with regard to projected electricity consumption calculations and billing by the distribution company,
- preliminary verification whether there was a violation of provisions of the Law justifying the initiation of anti-trust proceeding, in connection with forcing the consumers to establish gratuitous transmission easement, which might violate Article 9, paragraph 2, point 6 of the Law,
- preliminary verification whether, in connection with the provision of street, public area and road lightning, there was a violation of provisions of the Law,
- preliminary verification whether, in connection with distribution system operator activities regarding the application of TPA rule, there was a violation of provisions of the Law justifying the initiation of anti-trust proceeding, including the determination whether the case qualifies as antimonopoly issue,
- preliminary verification whether, in connection with trade and distribution company activities regarding supplier switch procedure, there was a violation of provisions of the Law justifying the initiation of anti-trust proceeding, including the determination whether the case qualifies as antimonopoly issue.

Explanatory proceedings initiated in 2010 and still pending:
- No RWA-400-9/10/DGB, with the purpose to review the principles governing the determination of the amount of compensation for *RWE Stoen Operator Sp. z o.o*. in Warsaw and financial settlements made by *RWE Stoen Operator Sp. z o.o.* with the client in connection with the removal of collision of network elements,
- No DOK1-400-20/11/MGa, with the purpose to make a preliminary verification whether, in connection with the provision of electricity supply service by *PGE Polska Grupa Energetyczna SA*, based in Warsaw, there was a violation of provisions of the Law justifying the initiation of anti-trust proceeding, including the determination whether the case qualifies as antimonopoly issue,
- No DOK1-400-18/11/MGa, with the purpose to make a preliminary verification whether, in connection with the activities of *PSE Operator SA,* based in Konstancin – Jeziorna, in scope of the procedure involving connecting wind farms to NES, there was a violation of provisions of the Law justifying the initiation of anti-trust proceeding, including the determination whether the case qualifies as antimonopoly issue,
- No RLU-400-29/10/IM, regarding electricity supplier switching conditions in the area of *PGE Dystrybucja SA Lublin*,
- No RLU-400-19/10/PM, regarding the conditions of access to power grid in the area of *Bielsk Podlaski* municipality provided by *PGE Dystrybucja Białystok Sp. z o.o.*

Merger control policy pursued by the President of OCCP

In 2010 the President of OCCP conducted and completed five proceedings involving concentration of energy sector companies. In all the cases completed in 2010, approval decisions were issued pursuant to Article 18, Competition and Consumer Protection Law of 16 February, 2007. It was decided that such concentration would not have significant anticompetitive impact, in particular through the establishment or reinforcement of dominant position on the market.

The following decisions were issued as a result of those proceedings:

1. By decision No DKK-104/2010 of 11 October, 2010, the President of OCCP issued non-objection to the concentration involving the establishment, by *PGNiG SA*, based in Warsaw, and *Tauron Polska Energia SA*, based in Katowice, of a joint venture *Elektrociepłownia Stalowa Wola SA*, based in Stalowa Wola. Joint venture will produce electricity and heat in the newly built gas and steam unit, operating on a gaseous fuel technology (natural gas).

2. By decision No DKK-122//2010 of 24 November, 2010, the President of OCCP issued non-objection to the concentration involving the establishment, by *Południowy Koncern Energetyczny SA*, based in Katowice, and *ZAK SA*, based in Kędzierzyn-Koźle, of a joint venture *Ecocarbon Sp. z o.o.*, based in Łaziska Górne, with the purpose to implement the project involving construction and further operation of a modern, coal-fired poly-generation plant, enabling simultaneous production of electricity, heat, synthetic gas and carbon dioxide sequestration.

3. By decision No DKK-132/2010 of 9 December, 2010, the President of OCCP issued non-objection to the concentration involving the acquisition of *ENEA SA*, based in Poznań, by *Kulczyk Holding SA*, based in Warsaw.

4. By decision No DKK-135/2010 of 10 December, 2010, the President of OCCP issued non-objection to the concentration involving the establishment, by *Energia Invest SA*, based in Gdańsk, and *Electricity Supply Board International Investments*, based in Amsterdam (the Netherlands), of a joint venture in the form of limited liability company with the purpose to construct and operate gas power plant located in the vicinity of the town of Grudziądz or city of Gdańsk.

5. By decision No DKK-147/2010 of 27 December, 2010, the President of OCCP issued non objection to the concentration involving the acquisition of *Elektrociepłownia Zabrze SA*, based in Zabrze, and *Zespół Elektrociepłowni Bytom SA*, based in Bytom, by *Fortum Power and Heat Polska Sp. z o.o.*, based in Wrocław.

Moreover, in 2010 proceeding was in progress, regarding the merger of *PGE* and *Energia* companies; the proceeding was finalized on 13 January, 2011, with a refusal to allow concentration.

On 20 October, 2010, upon the request from *PGE Polska Grupa Energetyczna SA*, based in Warsaw, merger proceeding was initiated to access the acquisition of *Energa SA*, based in Gdańsk, by *PGE Polska Grupa Energetyczna SA*, based in Warsaw. Acting pursuant to Article 20, paragraph 1, of the Law of 16 February, 2007, on Competition and Consumer Protection (Journal of Laws of the Republic of Poland, No 50, item 331, with further amendments), the President of OCCP issued a decision of 13 January, 2011, prohibiting the above concentration. The negative decision was based on the assessment that the concentration would result in a substantial disruption of competition on the energy market by further strengthening the dominant position of *PGE Polska Grupa Energetyczna SA. PGE Polska Grupa Energetyczna SA* has appealed against that decision to Warsaw District Court – the Court of Competition and Consumer Protection. The case is now pending in the Court of Competition and Consumer Protection.

Furthermore, in 2010, in connection with the withdrawal of notification regarding intended concentration, two concentration proceedings involving energy sector companies were discontinued, namely:

- By decision of 26 October, 2010, proceeding was discontinued regarding concentration involving the establishment, by *PSE Operator SA*, based in Konstancin-Jeziorna, and *50Hertz Transmission GmbH*, based in Berlin (Germany), of a joint venture by the name of *Ger-Pol Power Bridge Sp. z o.o.,* based in *Poznań*;
- By decision of 27 October, 2010, proceeding was discontinued regarding concentration involving the acquisition of *Enea SA*, based in Poznań, by *Energetický a Průmyslový Holding a.s.*, based in Brno (the Czech Republic).

Also in 2010, by decision of June 22, upon the motion of the parties, concentration proceeding was suspended involving the establishment, by *Energa Invest SA*, based in Gdańsk, *Grupa Lotos SA*, based in Gdańsk, and *PGNiG SA*, based in Warsaw, of a joint venture in the form of special purpose capital company.

Actions taken by the Minister of State Treasury in scope of ownership changes in power sector[12)]

Ministry of Treasury exercises ownership supervision and supervises ownership changes in the sector. Privatisation of state-owned companies is carried out in accordance with 'Privatisation Plan for 2008-2011', adopted by the Council of Ministers on 22 April, 2008, and the amendments thereof dated 10 February, 2009, and 11 August, 2009. It should be underlined that privatisation processes are affected by the provisions contained in strategies and industry programmes adopted by the Council of Ministers, such as, *inter alia*, 'Programme for the Power Sector', 'Poland's Energy Policy until 2030', which - taking into account the fundamental premises of State policy for the industry – determine the rules for the privatization of companies important for the sector. Ownership and organizational changes in the power sector aim at improved operational efficiency, cost reduction, development of clear organizational structure and separation of ancillary activity in the form of separate business entities were carried out in accordance with adopted strategies and programmes.

[12)] Based on materials submitted by the Ministry of Treasury.

According to 'Poland's Energy Policy until 2030', among other things:

- The Treasury will hold majority stake in *PGE Polska Grupa Energetyczna SA*, and a controlling stake in *Tauron Polska Energia SA,* at the level sufficient to preserve State control over that company,
- Position of *PGE Polska Grupa Energetyczna SA* and *Tauron Polska Energia SA* will be reinforced in order to give these entities an opportunity to build market power, in view of the development of regional market in electricity and expected decline in the shares of those entities in the relevant market,
- Allowing for takeover of *ENERGA SA* by *PGE Polska Grupa Energetyczna SA* while maintaining the separation of the Company and under assumption that the Company will eventually go public.

Ownership structure of energy companies operating on electricity market, status as of 31 December, 2010, can be outlined as follows.

The Treasury held the following blocks of shares in energy companies:

- *PGE Polska Grupa Energetyczna SA*, based in Warsaw – 69.29%
- *TAURON Polska Energia SA*, based in Katowice – 41.96%
- *ENERGA SA,* based in Gdańsk – 84.19%
- *ENEA SA,* based in Poznań – 52.92%
- *Zespół Elektrowni Pątnów Adamów Konin SA*, based in Konin – 50%
- *Zespół Elektrowni Wodnych Niedzica SA*, based in Niedzica – 100%
- *Elektrociepłownia Zabrze SA*, based in Zabrze – 100%
- *Zespół Elektrociepłowni Bytom SA*, based in Zabrze – 100%
- *ENERGA Elektrownie Ostrołęka SA*, based in Ostrołęka – 4.38%
- *ENERGA-OPERATOR SA*, based in Gdańsk – 14.55%
- *PGE Elektrownia Opole SA*, based in Brzezie k/Opola – 8.25%
- *PGE Górnictwo i Energetyka Konwencjonalna SA*, based in Bełchatów – 0.000024%

As regards the process of ownership changes and restructuring in the power sector, the following cases were initiated by the Minister of Treasury as the owner in 2010:

On September 29, 2010, Minister of Treasury signed a conditional sale agreement involving the sales of shares in *ENERGA SA* to *PGE SA*, which was supposed to come into effect upon approval of the President of OCCP, who issued a negative decision. *PGE* Board has appealed against that decision to Warsaw District Court – the Court of Competition and Consumer Protection.

On November 24, 2010, Minister of Treasury signed a sale agreement involving the sales of 85% of shares in *Elektrociepłownia Zabrze SA* and 85% of shares in *Zespół Elektrociepłowni Bytom SA* to *Fortum Power and Heat Polska Sp. z o.o.*, based in Wrocław. Transfer of ownership of the shares took place on January 3, 2011, following the non-objection decision from the President of OCCP and payment of transactional price.

As part of the implementation of the 'Strategy for Coal Mining Operations in Poland', on December 28, 2010, an agreement was concluded involving the transfer of in kind contribution and financial resources by virtue of state aid provided prior to Poland's accession to the EU and taking the shares in the increased share capital of *Kompania Węglowa SA*, under which the Minister of Treasury made a contribution of 100% of shares in *Nadwiślańska Spółka Energetyczna Sp. z o.o.* to increase *Kompania Węglowa* share capital.

Changes in ownership structure within individual Corporate Groups are described below.

1. *PGE Polska Grupa Energetyczna SA*

On 31 August, 2010, Registry Court registered the merger of *PGE SA* with the following companies: *PGE Górnictwo i Energetyka SA* and *PGE Energia SA*. The merger was carried out pursuant to Article 492, § 1, point 1, Commercial Companies Code (CCC), i.e. by transferring all the assets of Acquired Companies to *PGE SA.* In consequence of the merger, the share of the Treasury went down from the level of 85% to 79.29% of Company capital.

In connection with the sale by the Treasury, on 8 October, 2010, of 186 978 000 shares in the Company, the share of the Treasury decreased to the level of 69.29% Company capital.

On 31 December, 2010, District Court registered the merger of *PGE Polska Grupa Energetyczna SA* with the subsidiary of *PGE Electra SA*. The merger was carried out pursuant to Article 492, § 1, point 1, CCC, Article 515, § 1, CCC, and Article 516, § 6, CCC, i.e. by transferring all the assets of the Acquired Company (*PGE Electra SA*) to the Acquiring Company (*PGE Polska Grupa Energetyczna SA*), without increasing the share capital of the Acquiring Company and without issuing new shares of the Acquiring Company in exchange for the shares of the Acquired Company.

2. *TAURON Polska Energia SA*

As of 1 January, 2010, Company's shareholding structure was as follows: 87.99% of shares were owned by the Treasury, 12.01% – minority shareholders: natural and legal persons.

On 30 June, 2010, the Treasury conducted a public offering of shares of *TAURON Polska Energia SA*, through which individual and institutional investors bought 51.65% of shares of the Company.

On 2 July, 2010, *KGHM Polska Miedź SA* announced the purchase of shares of *TAURON Polska Energia SA* and exceeding 5% (previously, 4.90%) of total number of votes in the Company.

On 21 October, 2010, the Company and the Treasury signed an agreement to extend Treasury shares under private placement, based on which the Treasury took over 163 110 632 common registered shares of the Company. After this transaction, Treasury share was equivalent to 41.96%.

3. *ENERGA SA*

Within *ENERGA* group, there was compulsory acquisition of shares of *ENERGA-OPERATOR SA* from minority shareholders. In accordance with Article 4181, CCC, in connection with the motions of minority shareholders in that Company, there was a repurchase of 376 296 Company shares.

In 2010 the shares of *ENERGA-OPERATOR SA* and *ENERGA Elektrownie Ostrołęka SA* were swapped with the shares of *ENERGA SA*. The process was carried out pursuant to the Law of 7 September, 2007, on the principles governing the acquisition of shares from the Treasury in the process of consolidation of power sector companies. In total, 15 098 individuals were eligible for the swap, with 726 841 669 shares of nominal value 1.00 PLN each. As a result of share swap process, eligible individuals took the stock representing 13.44% of ENERGA SA share capital. Taking into account the previously issued series C shares (in consequence of division of *ENERGA-OPERATOR SA*), shareholders other than the Treasury had, as of the end of 2010, 15.81% shares in *ENERGA SA* share capital.

There acquisition of *ZEP-TECH Sp. z o.o.* and *ZEP-INFO Sp. z o.o.* took place (the merger was carried out pursuant to Article 492, § 1, point 1, CCC, i.e. by transferring all the assets of *ZEP-TECH Sp. z o.o.* to *ZEP-INFO Sp. z o.o.*, registration was made on April 30, 2010), as well as an acquisition of *Zakład Oświetlenia Drogowego „Północ" Sp. z o.o.* and *ENERGA Oświetlenie Sp. z o.o.* (pursuant to Article 492, § 1, point 1, CCC, i.e. by transferring the assets of *Zakład Oświetlenia Drogowego „Północ" Sp. z o.o.* to *ENERGA Oświetlenie Sp. z o.o.* in exchange for the shares issued by the Acquiring Company to *Zakład Budownictwa Energetycznego Sp. z o.o.,* based in Koszalin, as the sole Partner in the Acquired Company, registration was made on June 1, 2010).

In 2010, a sale of *ENERGA* Group companies took place which, after the sale of shares, do not form part of the Corporate Group (on March 12, 2010, *ZEP-TECH Sp. z o.o.* signed a sale agreement involving the shares in *ERA-GOST Sp. z o.o.*, and on April 16, 2010, *ENERGA SA* signed the memorandum on the transfer (acquisition) of shares in *Toruńska Energetyka Cergia SA*).

On March 8, 2010, a new company of *Elektrownia Ostrołęka SA* was registered in *KRS* National Court Register – 100% of shares is owned by *ENERGA SA*, and on December 2, 2010, a company by the name of *ENERGA Innowacje Sp. z o.o.* was registered in *KRS* National Court Register – 100% of shares is owned by *ENERGA-OBRÓT SA*. Capital increases in the following companies were registered:

1. *ZEP-INFO Sp. z o.o.* with the amount of PLN 685 500.00 on April 30, 2010 (as of the end of 2010, share capital was equivalent to PLN 1 463 500.00, and it was divided into 2 927 shares with nominal value PLN 500 each);
2. *ENERGA Kogeneracja Sp. z o.o.* to the amount of PLN 93 465 000,00 on May 27, 2010 (to cover the increased amount of share capital, *ENERGA SA* brought in monetary contribution equivalent to the nominal value, i.e. PLN 50 000 000.00);
3. *ENERGA Oświetlenie Sp. z o.o.* with the amount of PLN 22 410 500.00 on June 1, 2010, and on November 30, 2010, another capital increase was registered with the amount of PLN 138 590 500

(as of the end of 2010, share capital of *ENERGA Oświetlenie Sp. z o.o.* was equivalent to PLN 191 621 500.00, and it was divided into 383 243 shares with nominal value PLN 500 each);
4. *Elektrownia Ostrołęka SA* to the amount of PLN 10 100 000.00, on October 12, 2010;
5. *Międzynarodowe Centrum Szkolenia Energetyki Sp. z o.o.* with the amount of PLN 24 241 000.00 on November 15, 2010 (as of the end of the year, share capital of the Company was equivalent to PLN 31 966 000.00, and it was divided into 63 932 shares with nominal value PLN 500 each);
6. *ENERGA BIO Sp. z o.o.* with the amount of PLN 3 335 000.00 on January 27, 2011 (share capital of the Company is equivalent to PLN 3 990 000.00. and it is divided into 7 980 shares with nominal value PLN 500 each);
7. *ENERGA Centrum Usług Wspólnych Sp. z o.o.* with the amount of PLN 4 000 000.00 on December 6, 2010 (as of the end of the year, share capital of the Company was equivalent to PLN 4 052 000.00, and it was divided into 8 104 shares with nominal value PLN 500 each).

Moreover, within *ENERGA* group, the following company changes were made:
1. Centrum Badawczo-Rozwojowe ENERGA Sp. z o.o. into ENERGA Centrum Usług Wspólnych Sp. z o.o.;
2. ENERGA Elektrownie Słupsk Sp. z o.o. into ENERGA Elektrownie Wiatrowe Sp. z o.o.;
3. Zakład Energetyczny Płock – Multienergetyczne Przedsiębiorstwo Sieciowe Sp. z. o.o. changed the name to ENERGA BIO Sp. z o.o.

4. *ENEA SA*

On February 9, 2010, *ENEA SA* sold to *KWB „Konin" SA*, based in *Kleczewo*, the package of 6 000 shares owned in the company *„PWE Gubin" Sp. z o.o.,* representing 50% of share capital of the Company.

The following mergers (acquisitions) took place within *ENEA* group:
1. On July 1, 2010, *Elektrownie Wodne Sp. z o.o.* company, based in Samociążek, was merged with *EnergoPartner Sp. z o.o.*, based in Poznań, by the way of incorporation of the latter company into the former one pursuant to Article 492, § 1, point 1, CCC, i.e. by transferring all the assets of *EnergoPartner Sp. z o.o.* to *Elektrownie Wodne Sp. z o.o.* in exchange for the shares in *Elektrownie Wodne Sp. z o.o.*, which were granted to *ENEA SA* as the sole partner in the acquired company. As a result of the merger, share capital of *Elektrownie Wodne Sp. z o.o.* was increased from the amount of PLN 205 020 000 by the amount of PLN 8 821 000, i.e. to the amount of PLN 213 841 000 by the way of creating 17 642 new shares with nominal value of PLN 500 each;
2. On October 29, 2010, Extraordinary General Meeting of Shareholders was held in connection with the merger of *EP PUE ENERGOBUD Leszno Sp. z o.o.* (Acquiring Company) and *ZUP ENERGOTRANS Sp. z o.o.* and *EWINN Sp. z o.o.* (Acquired Companies) by transferring all the assets of Acquired Companies to the Acquiring Company. As a result of the merger, there was an increase in the share capital of *EP PUE ENERGOBUD Leszno Sp. z o.o.* from the amount of PLN 6 216 000 with the amount of PLN 1 418 000, i.e. to the amount of PLN 7 634 000, by creating 2 836 (219 - *ZUP ENERGOTRANS Sp. z o.o.;* 2 617 – *EWINN Sp. z o.o).* equal and indivisible shares with nominal value of PLN 500 each. Registration of increased share capital of the merged companies took place on December 1, 2010. After the merger of December 1, 2010, share capital in *EP PUE ENERGOBUD Leszno Sp. z o.o.* amounted to PLN 7 634 000, and it was divided into 15 201 shares worth PLN 500 each, 67 shares were redeemed with net profit;
3. On October 28, 2010, during the Extraordinary General Meeting, resolution was made to merge *Miejska Energetyka Cieplna Piła Sp. z o.o.,* based in Piła (Acquiring Company) with *Przedsiębiorstwo Energetyki Cieplnej – Gozdnica Sp. z o.o.*, based in Gozdnica, and with *Cogen Sp. z o.o.*, based in Piła (Acquired Companies) by transferring all the assets of *Przedsiębiorstwo Energetyki Cieplnej – Gozdnica Sp. z o.o.* and *Cogen Sp. z o.o.* to *Miejska Energetyka Cieplna Piła Sp. z o.o.* The merger of *COGEN Sp. z o.o., PEC Gozdnica Sp. z o.o.* and *MEC Piła Sp. z o.o.* was registered on November 30, 2010. In consequence of the above, share capital of the Acquiring Company was increased from the amount of PLN 27 407 000 with the amount of PLN 509 000, i.e. to the amount of PLN 27 916 000. All the shares in increased share capital were taken by *ENEA SA*. Shareholder structure of *MEC Piła Sp. z o.o.* after consolidation, as of 31 December, 2010, is as follows: 1. *ENEA SA:* 17 884 shares – 64.06%; 2. Piła Municipality: 10 032 shares – 35.94%.

4. REGULATION AND PERFORMANCE OF THE NATURAL GAS MARKET

4.1. Regulatory Issues [Article 25(1)]

4.1.1. Management and allocation of interconnector transmission capacity and network congestion management mechanisms

Principles governing network congestion management on transmission network in the territory of the Republic of Poland are set out, first and foremost, in *Gaz-System SA* Transmission Grid Code (*IRiESP*). Information on cross-border transmission capacity, required pursuant to Regulation 715/2009/EC, is published on *Gaz-System SA* websites.

Scope and location of network congestion within the national transmission system did not change in 2010, as compared to previous years. Table 4.1 contains information about network congestion observed in 2010, and about congestion management mechanisms.

Table 4.1. Managing physical congestion within the national transmission system

Location	Range of congestion	Mitigating measures	Transmission capacity at the point of congestion [m^3/per day]
North-western Poland	Lack of transmission capacity reserve was noticed in high methane gas system	In order to improve capacity in the north-west of Poland, construction of Goleniów compressor station is in progress. Construction completion is planned for 2011	0.6 million
Częstochowa region	Lack of transmission capacity reserve was noticed in high methane gas system	In order to increase supplies in the region of Częstochowa, gas pipeline DN 500 Lubliniec – Częstochowa is under construction	1.3 million
Gdańsk region	Lack of transmission capacity reserve was noticed in high methane gas system	Continued construction of DN 500 Włocławek – Gdynia transmission system	1.2 million
Piotrków Trybunalski region	Lack of transmission capacity reserve was noticed in high methane gas system	Completion of Mory-Meszcze gas pipeline construction	1.5 million
Jarosław region	Lack of transmission capacity reserve was noticed in high methane gas system	Modernization of Jarosław II compressor station	15.6 million

Source: Gaz-System SA, 2010.

At all „entry" points to Polish transmission system, the share of capacity booked by *PGNiG SA* is equivalent to almost 100%. In 2010 the extent of capacity utilization was varied, from almost 100% on interconnections with the German operator, to approximately 50% on remaining interconnectors (annual average approach). Significant increase in the utilization rate of Lasów interconnector with German *ONTRAS* operator, to the level close to its technical capacity, is a new development. This can be accounted for by the lack of alternative supply options which would offset transmission on low capacity pipelines, and by the absence of TPA rule with Poland's eastern neighbours.

When analyzing utilization of transmission capacity on major entry points to the national transmission system from eastern direction (Drozdowicze, Wysokoje), it is worth pointing out that daily utilization rates frequently exceeded the level of 70%. This was due to seasonal volatility of capacity utilization. As far as the review of transmission capacity utilization on national transmission system entry points from Yamal pipeline is concerned, one must note that transmission capacity volume at Włocławek and Lwówek entry points, which in total amounts to 5 431 300 000 m^3/year, by

far exceeds the volume of 2 660 300 000 m^3/year, i.e. transmission capacity reservation in EuRoPol-Gaz network for domestic demand.

This indicates low level of simple reserves which might be mobilised through contractual congestion management mechanisms, set forth in *Gaz-System* Transmission Grid Code (*IRiESP*). That situation confirms the need for construction of new supply channels and for implementation of purely market-based rules on the Yamal pipeline.

The analysis of information regarding interconnections between national transmission system and other systems shows that physical congestion is present.

Physical congestion was observed on *Gaz-System* interconnection with the transmission system of EU member states. One example would be the case of Lasów connection on Polish-German border, which in fact is the only interconnector between national and Western Europe transmission system, and thus has high significance for cross-border exchange. As noted, the level of utilization of that interconnector was at almost 100% on average annual basis, and at the level of 100% at some periods, which meant that natural gas could not be transmitted on intermittent terms. Connectors between national transmission system and transmission systems that supply gas from the East were fully booked, but it were not long-term reservations. The only long-term transmission agreements concluded to date by *Gaz-System SA* refers to transmission capacity offered in the capacity facilitation procedure on Polish-Czech connection in Podkarpacie region, scheduled for launch in 2011. Other similar agreements are planned for new investments and may be applied in the case of Lasów interconnector extension, *inter alia*.

In order to create available transmission capacity at system entry points the introduction of entry-exit system is needed. A pre-agreed, proposed draft of changes in regulations based on that methodology was submitted to the Ministry of Economy in 2010, for further legislative processing. Those solutions, planned for implementation from 2011 onwards, are expected to rationalize transmission capacity contracting. At present, charges for transmission services in 2010 were calculated according to transmission capacity on system exit points, which means that there is no economic incentive which would encourage limitations in the volume of contractual capacity ordered at entry points.

Another initiative undertaken to ensure greater availability of capacity is the construction of new system entry points, including the construction of a new interconnector with the Czech system near the town of Cieszyn, construction of LNG terminal, and extension of the existing Lasów interconnector with German system administered by *ONTRAS* company. Thanks to these steps, new market participants will be able to enter the market. It is expected that some part of currently booked capacity will be made available, as there are plans to use new networks.

Lack of interest in gas supply connectors from the East in 2010 on the part of entities applying for transmission agreements might have been affected by the supply of storage capacity available for third party use in connection with mandatory natural gas reserves obligation. According to binding regulations, access to storage facilities or exemption from that obligation is a pre-condition which not only paves the way for entering into transmission agreement, but also pre-conditions obtaining the for the licence for natural gas trading with other countries. That situation is supposed to change when the Law on the Stocks is amended in 2011, and the new Gas Law is adopted.

Absence of demand for transmission services provided through gas supply connectors from the East, observed in 2010, may be related to diversification obligation. Pursuant to the provisions set forth in the regulation of the Council of Ministers on the minimum level of diversification of foreign gas supplies, dated October 24, 2000, the maximum share of imported natural gas from one country of origin relative to the total volume of imported gas could not exceed 70% in 2010. This requirement is particularly difficult to meet by market entrants, who have just begun their operation and have difficulty in concluding several purchase contracts in the case when sales volume is limited.

In 2010 interested parties could, in theory, conclude interruptible transmission agreements for Eastern entry interconnections, but the absence of interest in such agreements was also affected by the lack of TPA rule in the third countries neighbouring Poland, and the fact that alternative supplier could not be found there. In view of the prohibition on re-export of Russian gas and the decision set forth in 2010 state budget of the Ukraine, stipulating that natural gas from Ukrainian domestic production should be channelled to satisfy internal market demand, Ukrainian *NAK Naftogaz* not only responded in a negative way to requests to increase the supply, but also suspended ongoing imports of small volume of gas via the pipeline near the town of Hrubieszów. Likewise, cooperation involving transit did not win *NAK* support.

This means that purchasing gas and ordering transmission services in the countries bordering Poland from the East represents a challenge not only for those interested in entering domestic market, but also for the incumbent company; improvement in market conditions in the countries that border EU member states should be seen as a possibility to improve the situation as well.

Table 4.2 presents information on cross-border congestion observed in 2010, and the mechanisms used to deal with congestion, as well as the information on general status of transmission capacity.

Table 4.2. Managing physical network congestion on interconnectors

Location	Range of congestion	Mitigating measures	Scope of congestion
Interconnectors between national transmission system and EU member states gas network	Physical transmission congestion was observed	In order to remedy the situation, the following actions were undertaken: – Construction of new entry points to the national transmission system: (1) connection with Czech *RWE-Transgasnet* near Cieszyn, (2) LNG terminal in Świnoujście, – Extension of the existing interconnection with German *ONTRAS* system, located in Lasów – Introducing virtual reverse flow service at the Polish section of Yamal pipeline	Due to mutual interdependence between congestion occurring in particular connection categories, the scale was not estimated
Connectors between national transmission system and gas supply systems from the East	Full reservation of transmission capacity was observed, it has not long-term character	Introduction of entry-exit system, Construction of new entry points to the system	N/A

Source: ERO, Gaz-System SA.

The deficit of capacity in NTS results from the lack of necessary investment in transmission network development. As a result, areas suffering from network congestion are characterized by significant number of refusals regarding connection to transmission and distribution networks. Moreover, in the periods of increased gas demand, there are problems with securing supplies for customers already connected to distribution network.

Data collected in Table 4.3 illustrates the status observed in 2010. Average time of supply interruptions per one consumer connected to transmission network was calculated on the basis of information provided by the TSO.

Table 4.3. Interruptions and congestion in gas supply

	Quantity	Interruptions and congestion			
		Duration [min]	Number of customers disconnected	Average time [min/cons]	Quantity of fuel not supplied [millions m^3]
Breakdowns	1	2 882	1	2 882	1 047
Planned work in progress	124	610 525	–	–	–
Congestion	–	–	–	–	–

* TSU – Transmission Service User – *PGNiG SA.*

Source: Gaz-System SA.

Table 4.4 presents the description of interconnection capacity in national transmission system and its utilization.

Table 4.4. Cross-border interconnectors under cooperation between operators

System Operator's name	Operator's country	Point of connection	Direction of supplies	Types of filed nominations	Total transmission capacity* [million m³/ year]	Booked transmission capacity [million m³/ year]	Not booked transmission capacity [million m³/ year]
ONTRAS	Germany	Lasów	Poland	day/hour	1 030.5	1 030.5	0.0
ONTRAS	Germany	Gubin	Poland	day	17.5	17.5	0.0
Severomoravske plynarenske	The Czech Republic	Branice	Poland	day	1.4	1.4	0.0
Severomoravske plynarenske	The Czech Republic	Głuchołazy	Poland	day	105.1	105.1	0.3
Ukrtransgaz	The Ukraine	Drozdowicze	Poland	day/hour	5 694.0	5 694.0	0.0
Biełtransgaz	Belarus	Tietierowka	Poland	day/hour	196.4	188.4	8.0
Biełtransgaz	Belarus	Wysokoje	Poland	day/hour	5 443.8	5 443.8	0.0
EuRoPol GAZ SA	Poland	Włocławek	Poland	day/hour	3 066.0	3 066.0	0.0
EuRoPol GAZ SA	Poland	Lwówek	Poland	day/hour	2 365.2	2 365.2	0.0
ONTRAS	Germany	Kamminke	Germany	day	131.4	131.4	0.0

* Maximum firm transmission capacity that transmission system operator may offer to network users, taking into account system integration and requirements pertaining to the maintenance of transmission grid.

Source: Gaz-System SA.

In 2010, the following gas volumes were transported via Polish section of Yamal-Europe gas pipeline: *OOO Gazprom Export* – 23.10 billion m³, *PGNiG SA* – 2.66 billion m³. In comparison to previous year, transit through the pipeline went down by almost 9%, and gas reception from the pipeline at entry points in the territory of the Republic of Poland (*Lwówek, Włocławek*) remained at the same level. In aggregate, pipeline utilization in 2010 was equivalent to approximately 82% of its technical capacity.

Methodology for nominating maximum technical capacity, compliant with generally binding standards, was not subject to separate regulatory control.

4.1.2. The regulation of the tasks of transmission and distribution companies

Network tariffs

The method of gas tariff approval[13)] has not been changed since last year. It consists in the verification of tariff compliance with Energy Law provisions and Energy Law secondary legislation including, first and foremost, the regulation on tariff development and calculation, referred to as the 'Tariff Regulation'[14)]. Pursuant to Article 47, paragraph 2, Energy Law, the President of ERO is authorized to approve the tariff only if the tariff is in line with the mentioned regulation. In 2010 system regulation was promulgated[15)], but the provisions contained therein did not entail any changes in scope of the calculation of tariffs set out by gas sector companies.

In 2010 (analogically to previous years), regulated revenue of gas companies was calculated according to cost-based approach. With regard to companies such as *EuRoPol SA* and *Gaz-System SA,* the main reason was the fact that they were not comparable to other companies operating on the Polish market, and as regards DSOs, comparative analysis approach, which may well be applied in the future[16)], could not be used this time due to lack of comparable statistical data[17)]. Return on capital employed was determined by the companies themselves pursuant to the principles set out in the Tariff Regulation. The President of the Energy Regulatory Office, following the mandate set out in Article 23, paragraph 2, points 2 and 3, letter 'c', the Energy Law, defined four components, i.e. the

[13)] Pursuant to the Energy Law, Article 47.

[14)] Regulation of the Minister of Economy of February 6, 2008, on detailed principles governing the development and calculation of tariffs and financial settlements in gaseous fuel trade (Journal of Laws of the Republic of Poland, No 28, item 165).

[15)] Regulation of the Minister of Economy of July 22, 2010, on gas system operation (Journal of Laws of the Republic of Poland, No 133, item 891).

[16)] The analysts claim that in order to be able to employ comparative approach to determine operating costs of companies when the number of companies involved does not exceed ten entities, one would need stable statistical data covering the period of at least five years.

[17)] It was only in the middle of 2007 that DSOs started operation, taking over some obligations from trade activity (consequently, notwithstanding functional separation from trade activity, which is in effect as of January 1, 2006, cost data related to their operation was valid for only 18 months), and the assets owned by operators in 2008 were not comparable to their assets of 2007, due to the fact that a substantial share of high pressure network assets had been taken over from *Gaz-System*.

risk-free rate of return, own and foreign equity risk premium, and the *asset beta* coefficient; further, the President of ERO defined the level of fixed assets and working capital subject to compensation. The assumptions of the President of ERO as regards return on capital employed taken into account in the calculation of tariffs approved in 2010 were as follows:

1) Compensation is due only and exclusively with regard to:
   a) fixed assets committed in operations applicable to the tariff; in the case of *GK PGNiG SA* Distribution System Operators (DSOs), whose assets were revalued to a fair value as of January 1, 2007, these were distribution assets with the value prior to revaluation, increased with the assets taken over from *Gaz-System SA* Transmission Pipeline Operator (*Gaz-System*) and the assets built after that date,
   b) working capital at the level not exceeding 1% of fixed assets value; the President of ERO considered it unfounded that the capital should be compensated for at the level defined by the companies; in the opinion of the President of ERO the necessary amount of that capital should give the gas company stable cash flow, which will be guaranteed with the level of capital specified above,
2) The weighted average cost of capital will be defined in accordance with the algorithms set out in § 6, paragraphs 4 and 5 of the Tariff Regulation, with the following assumptions:
   a) risk-free rate equal to the amount of weighted average yield of 10-year Treasury bonds with fixed interest rate, recorded at auctions held during the 12-month period directly preceding the submission of tariff application [r_f],
   b) owner's equity risk premium at the level of 4.64% [$r_m - r_f$], liability risk premium at the level of 1% [DP = $K_d - r_f$] (in the case of *OGP*, according to the decision of the President of ERO, leasing contract servicing cost is regarded as liability cost),
   c) measure of equity commitment risk beta = asset beta* (1 + liability/owner's equity), where asset beta is determined in line with the World Bank recommendation[18)]
   d) owner's equity and liability – specific for each company, average values during the tariff period.

The main reason behind an increase in regulated revenue in network gas companies in 2010, and the resulting increase in transmission and distribution rates, was the high rate of return on committed capital in relation to the capital included in tariffs approved for 2009, caused by an increase in the value of compensated assets in connection with an increased value of completed network investments, in comparison to the year referred to above.

Types of collected information

Compared to previous years, in 2010 there were no significant changes in the scope of collected data. As before, grid companies were required to submit – in the course of their tariff approval process – the following information:

- Length of the network, according to the breakdown by pressure levels,
- Number and capacity of reduction stations,
- Value of fixed assets committed to network operation,
- Value of amortization of network assets,
- Level of investment levels during the term of tariff,
- Number of connected customers and the level of connection fees,
- Number of consumers in each tariff category, the volume of gas transported to meet their demand, and the capacity ordered by those consumers,
- Gas balance,
- Volume of gas purchased to cover balance deficit,
- Volume of network losses,
- Amount of company costs by types of profiles, in the breakdown according to particular tariff categories,
- Amount of revenues in particular tariff categories.

New requirements were related to the information on the amount of working, domestic and foreign capital.

[18)] In accordance with the World Bank recommendation, presented in a study entitled 'Regulatory Structure and Risk and Infrastructure Firms, An International Comparison', December 1996, Alexander Mayer and Weeds, asset beta for gas companies with average investment risk=0.57, and with low investment risk=0.2.

This data was applicable to the last reporting year, i.e. the year preceding the year of tariff designation, for which financial statements have been audited in accordance with accounting provisions, and the amounts planned for the year in which the tariff submitted for approval is binding.

Review of collected information

A fundamental guarantee of the reliability of data for the reporting year is data accuracy statement, subject to the sanction of imprisonment of up to three years in the case of false data submission. The sanction described above applies to individuals authorized to represent the company before the Regulator. Further, it is examined whether financial data presented in the tariff application for the reporting year does not exceed respective values from company financial statement, and whether it is consistent with the data provided for the purpose of monitoring effort undertaken by the Regulator once a quarter. It is important to note that company financial statements (irrespective of company activity profile) are reviewed by a certified auditor.

The key method for the examination of planned financial data is to compare this data to reporting year information or, when in doubt, to the data pertaining to previous years. Examination of other data required for tariff calculation, such as, for example, planned volume of gas to be supplied to customers and planned volume of capacity ordered by customers, is carried out by the way of comparison to the reporting year data side by side with last years' trends, and by taking into account forecasted conditions in those sectors of national economy which may influence performance of gas sector. Additionally, mainly in tariff categories with a large number of customers (more than 100), trend analysis of the average volume of transmitted gas per one consumer and average capacity ordered per one consumer is carried out. Moreover, consistency of gas balances and ordered capacity planned by gas system operators and gas traders is verified.

Tools used for efficiency improvement potential evaluation

Efficiency analysis is performed mostly by the way of comparison of unit costs (company costs versus the volume of transmitted gas, length of the network, number of reduction stations, taking into account their technical condition), the share of gas dedicated to losses, and balance deficit in the total volume of transmitted gas.

Econometric models used for evaluating company efficiency in terms of operating costs, balancing differences and capital expenditures represent the basic tool to improve company efficiency.

However, according to analysts, in the event when the number of grid companies is not greater than ten, econometric model can be applied to the evaluation of operating costs in an effective manner only when there is a stable cost base covering the period of at least five years. However, it was only in July 2007 that DSOs started their independent economic activity, and stable cost base in their case can only be taken into account as of January 1, 2008, when substantial assets associated with high pressure networks were transferred to DSOs. In view of the above, the tender for the design of econometric model for the evaluation of operating costs has not been announced to date.

Nevertheless, the work of the Project Team appointed in the second half of 2009 was continued. Project Team is composed on the representatives of Gas Chamber of Commerce and Energy Regulatory Office. Its purpose is to develop a regulatory model of performance of distribution network operators, which would enter into force in 2011 and enable the extension of the existing annual regulatory period up to 3-4 years, by defining clear procedures and objective parameters for the evaluation of operating costs of six DSOs. Furthermore, Project Team is supposed to determine precise indexing formula for the base value of operating costs in subsequent years of regulatory period, and to outline the path leading to the compensation of company assets according to the book value calculated in line with International Financial Reporting Standards. The team's work is highly advanced, with a viable possibility that the long-term model for the regulation of *GK PGNiG* gas companies will be introduced in 2011.

Speaking of the model applicable to the evaluation of the level of balancing difference, there were no developments in 2010, as compared to previous years. The President of ERO has not been equipped with such a model yet. However, the President of ERO adopted a strict assumption – based on the information referring to the European Union distribution system operators – of maximum

volume of gas for balancing difference purposes not exceeding 2% of the volume of gas distributed by the company in question.

Econometric model for the calculation of a fair level of capital expenditures was developed by the ERO.

Regulatory period

Tariffs of gas sector companies, except for *EuRoPol* tariff, were approved in 2010 for a one year period. *EuRoPol* tariff, which was approved in March 2010, was supposed to stay in effect until December 31, 2010. Another *EuRoPol* tariff, approved in December 2010, was in effect until May 31, 2011, i.e. its validity was seven months shorter in comparison to the period requested by the Company. Tariff validity period was shortened until May 31, 2011, due to the following reasons:

1) The need to introduce enter/exit tariff system, in line with the EU regulations,
2) The merit of the same dates for the enforcement of *EuRoPol* tariffs and the tariffs of key gas sector companies, because:
   a) TSO was appointed as network operator on the network owned by *EuRoPol*,
   b) *PGNiG SA* tariff calculation includes the cost of high methane gas transmission service provision through *EuRoPol* network.

The role of regulatory body in the process of evaluation of effectiveness of network performance

The role of the President of ERO in that respect has not changed, and it consists in the following tasks:

- Within the framework of tariff approval process, to approve such revenues which may ensure security of supplies and improvement of the effectiveness of network operations, measured – among other – on the basis of average time of supply interruptions resulting from breakdowns, increased capacity of the network, and a decrease in the share of gas for balance deficit purposes,
- To evaluate network performance during the process of development plan design for subsequent years, where the reasons of planned investment levels able to be covered by tariff revenues are analysed in the context of network development and security of supplies,
- To require that network companies should include in their tariffs the provisions regarding rebate amounts in respect of service quality, including rebates triggered by limitation of contractual capacity and unsatisfactory customer service quality standards.

Table 4.5. Interruptions in gaseous fuel supplies

Year	Interruptions					
	Breakdowns			Outages planned due to works		
	Duration (min.)	Number of customers without supply	Average time (min./cons.)	Duration (min).	Number of customers without supply	Average time (min./cons).
2005	43 341 809.10	109 571	395.56	79 411 583.60	194 219	408.88
2006	89 518 594.80	123 361	725.66	76 721 978.40	153 386	500.19
2007	46 707 750.34	89 218	523.52	78 061 416.00	153 083	509.93
2008	110 416 057.40	104 108	1 060.62	131 395 059.60	130 673	1 005.53
2009	81 563 843.00	102 763	793.71	130 628 780.40	151 273	863.53
2010	27 236 695.80	117 616	231.60	55 470 326.40	162 637	341.07

What information is provided to market participants by the TSO and DSOs?

Tariffs approved by the President of ERO, including service fee rates and underlying principles, are made available to market participants by network companies. Additionally, companies publish on their websites information pertaining to their network coverage, types of transmitted or distributed gaseous fuels, customer service points, branches, their contact data, contract and application form templates, gaseous fuel transmission and distribution congestion plans, Distribution Grid Code (*IRiESD*) and Transmission Grid Code (*IRiESP*). Furthermore, DSOs publish on their websites average monthly

values of quality parameters as regards the gas they distribute, determined on the basis of periodic gas quality measurements performed by DSOs at selected points of the network.

In 2010, gas distribution companies reported 3287 cases of network connection refusals[19]. Such cases are registered by ERO Branches.

Storage tariff

Analogically to 2009, *PGNiG SA* storage tariff included three tariff groups: for those who contract storage service with *KPMG Mogilno*, and for those who contract storage service with *WIM*[20] on continuous or interruptible terms, respectively. Total number of packages included in the offer went up to 1 582, of which 352 packages are allocated to *KPMG Mogilno* (including 50 packages for *Gaz-System*). Out of 1 230 packages on offer in *WIM*, 905 have been allocated to production needs.

In 2010 there was a slight increase in the average storage service charge, equivalent to 0.29%. The increase in storage service fees resulted from higher operating costs, which went up by 14.35%, with simultaneous decrease in return on equity by 8.53%. Operating costs increased due to a substantial increase in indirect costs, resulting from the establishment of the Storage System Operator in 2009, and from increased direct operating costs in *PMG Strachocina*, related to the renovation work in this storage facility. A drop in the amount of compensation for storage services was caused about by RAB depreciation.

Gaseous fuel prices

In 2010, the price of gaseous fuels on retail market was modified twice. The first change took place on June 1, 2010, and resulted in an increase in the price of gas as a commodity and an increase in fuel delivery charges, which cover the cost of gas transportation via operators' networks and the cost of storage. On a national scale, taking into account supplies to consumers connected to both transmission and distribution networks, there was an increase in average price of high methane gas supplies, equivalent to 3.3%. The other change occurred as of October 1, 2010, resulting in an increase of gaseous fuels price as a commodity, translating into a 4.4% increase in average high methane gas supplies on a national scale.

Balancing

Balancing of gas transmission system is managed by *Gaz-System SA*, in accordance with principles set out in the Transmission Grid Code. In comparison to 2009, the details of that mechanism have not changed.

Table 4.6 presents characteristics of balancing mechanism and the charges.

[19] Article 7, paragraph 1, Energy Law.
[20] WIM – Virtual Storage Facility comprising *PMG Husów* and *PMG Wierzchowice*.

Table 4.6. Balancing – description

Indicator	Description
Period	24 hours
Area	Balancing is performed within one area – at the level of national transmission system
Gate closure time	12:00 day n-1
Impact of ordered capacity volume on the limits	Criterion K_m=15 000 m^3/h was adopted in order to determine the volume of permitted unbalancing limits as the sum of contractual capacity ordered by TSU at entry points Quantity in brackets for K_m, respectively, above and below 5 000 m^3/h Diversification of limits is supposed to help protect small market participants as well as new entrants
CHARGES: Daily unbalancing	*Unbalancing within the gas day (24 hours)* *It is a gap between the quantity designated for transmission and received from the transmission system within a single gas day (24 hours).* *There are two permitted unbalancing limits for the gas day.* *Daily Unbalancing Limit (5% and 15%)* *Maximum Daily Unbalancing Limit (15% and 45%)* *Limit values pertain to the quantity transmitted at the entry points on a given day* *Unbalancing service regarding DUL is included in transmission charge* *Exceeding DUL and MDUL, respectively, results in additional charges*
Maximum incremental unbalanced quantity (MIUQ)	*Incremental unbalancing is a sum of daily unbalancing over subsequent gas days* *The value of MIUQ is set for (20% / 40%) of daily average value in a given gas month, calculated on the basis of monthly quantities for a given month in Annual Nomination.* *If MIUQ is exceeded in a given month, additional incentive charge is triggered in order to secure stable system operations.*
Fee for failing to maintain daily nomination above the limits	*Calculated separately for each entry and exit point if the limit is exceeded by 10%*
Fees and rebates for failing to meet quality parameters of transmitted fuel	*Calculated separately for each entry and exit point if the gross calorific value or other quality parameters are not met*

Source: ERO.

4.1.3. Effective unbundling

Legal regulations pertaining to the issue of unbundling were discussed in great detail in the chapter devoted to the power sector. Nevertheless, it should be noted that the obligation of legal and organizational unbundling of gas sector distribution system operators functioning in a vertically integrated company, which came into effect on July 1, 2007, does not apply to distribution system operators in the case when the number of users connected to the network does not exceed one hundred thousand, and their annual sales of gaseous fuels are not greater than 100 million m^3.

Formally, the process of DSO unbundling – as regards the six companies owned by *PGNiG* corporate group - was completed by the end of 2008. Pursuant to the decision of the President of ERO, all gas DSOs were designated as DSOs until the end of the term of their distribution licence, which – depending on a DSO – expires in 2011 (4 DSOs) or in 2013 (2 DSOs). In 2010, in the case of four DSOs the President of ERO extended their original term of their distribution licence, due to expire in May 2011, until the end of 2030, which means that these DSOs must file the application to the President of ERO, requesting extension of decision regarding DSO designation for a subsequent period. In 2010, upon request from one of these DSOs, the President of ERO extended the validity period of DSO

designation decision until 2030. In the case of the three remaining gas DSOs, such decisions were extended until the end of 2030 in May 2011.

It should be noted that, in connection with the Energy Law amendment, unbundling requirement also applies to energy companies involved in licensed activity in scope of gaseous fuels distribution on a local scale – in 2010 two companies exceeded the threshold of 100 million m^3 of gaseous fuels sold, and they are subject to legal, organisational and decisional unbundling requirement (DSO unbundling is in progress).

As of the end of 2010, there was also one DSO operating on a local scale, designated by the President of ERO, exempt from legal and organisational unbundling.

Pursuant to the decision of the President of ERO, the function of gas transmission system operator in Poland has been performed since 2006 by *Gaz-System SA*, a state-owned joint stock company and the owner of a large part of transmission assets, utilized in connection with business activity involving transmission of gas pursuant to the licence issued by the President of ERO. Starting from November 17, 2010, *Gaz-System SA* also acts as the TSO at the Polish section of Yamal-Western Europe gas pipeline, owned by *SGT EuRoPol Gaz SA* energy company, holding a gas transmission licence.

Table 4.7. Unbundling description, status as of 31 December, 2010

Specification	Quantity
TSO– ownership unbundling	1
DSO – ownership unbundling	0
TSO – legal unbundling, with assets (grid)	1*
TSO – legal unbundling, no assets (grid)	0
DSO – legal unbundling, with assets (grid)	6
DSO – legal unbundling, no assets (grid)	0

* DSO owns approximately 98.7% of grid assets – after the transfer of dividend tranche on October 4, 2010.

In 2010 the Treasury continued the process of transferring to *Gaz-System SA*, as contribution in kind, subsequent elements of leased transmission assets taken from *PGNiG SA* in the form of non-monetary dividend. At the end of 2010, *Gaz-System SA* own assets represented almost 98.7% of the value of all transmission assets administered by the TSO.

In Poland there is one gas storage system operator – *(OSM) PGNiG SA* – designated as gaseous fuel storage system operator on December 31, 2008.

4.2. Competition Issues [Article 25(1)(h)]

4.2.1. Description of the wholesale market

In 2010, total natural gas consumption in Poland amounted to 158.1 TWh/year. Gas import supplies of almost 110.4 TWh/year were supplemented with gas supplies from domestic sources, equivalent to 46.3 TWh/year, which represented about 30% of the total national natural gas supplies. In comparison to 2009, the total gas consumption increased by 7.8%, imports rose by more than 9%, and domestic production went up by 2.7%, with production capacity remaining at the stable level.

Technical capacity of Polish gas system is presented in Table 4.8.

Table 4.8. National production capacity in 2010*

Production capacity [billion m³/year]	Production capacity [million m³/day]
Natural gas	
4.3	13.1

* Production capacity was determined based on 90% maximum daily production capacity of 365 days, taking into account operational downtime of mining facilities. The difference between production capacity and natural gas production is connected with seasonal variations in the demand for nitrified natural gas in summer and winter season. At peak time in terms of demand for nitrified natural gas (significant winter temperature drops), production capacity is utilized to the maximum, and during summer season demand for that type of gas utilization is much smaller. Production capacity of the mines that extract high-methane natural gas are utilized to the maximum throughout the entire year.

Source: PGNiG SA.

Total foreign supplies in 2010 included imports from Russia, the Ukraine, and EU supplies from Germany and the Czech Republic. The biggest share of imports came from Russia, within the framework of a long-term contract concluded by and between *PGNiG SA* and *Gazprom Export* in 1996. In 2010, the amount of 99 TWh of natural gas was purchased under that contract, which represented about 89% of entire gas supply to the territory of Poland, whereas the volume of natural gas transit via Polish section of Yamal-Europe pipeline amounted to 259.41 TWh/year. Imports were supplemented with supplies from Germany, the Ukraine and the Czech Republic. Aggregate volume of these supplies, delivered under contracts, reached 1 038 million m^3, which constituted about 11% of total gas imports into the territory of Poland.

The volume of liquefied natural gas sales has been rather modest – about 18 thousand tons. In 2010 a small gas volume (slightly more than 18 thousand tons), only in the form of liquefied natural gas/LNG, was purchased for resale by two entities, but those entities did not use TPA rule.

Table 4.9. Structure of gas supplies in 2010

Specification	Quantity [millions m^3]
Imports, of which:	10 066.4
– The Yamal contract	9 028.4
Purchases within the EU / country of origin	
a) Czech Republic	0.3
b) Germany	1 031.9
Other imports / country of origin	
a) Ukraine	5.9
Domestic production	4 220.4
Gas storage (change in stock)	272.1

Source: PGNiG SA.

High level of concentration on gas wholesale market results in a very small share of active, independent market participants – their share stays at approx. 2% (Table 4.10). By and large, those entities purchase gas from *PGNiG SA*.

Table 4.10. Number of major companies and their market share in 2010

Number of companies with natural gas market share above 5%	Share of the three biggest companies in gaseous fuel supply [%]	Share of the three biggest trade companies [%]	Number of foreign capital companies active on the market	Foreign capital companies market share [%]
1	100	97.4	12	1.34

Source: ERO.

In 2010 gas trade continued to be carried out only and exclusively on the basis of bilateral contracts. In Poland there were none gas sales realized on the exchange or through hubs, despite of their great significance for development of trade potential.

Gas prices do not vary depending on the fact whether the consumer will use the gas to satisfy their own needs or whether they will resell the gas – price depends on ordered capacity, treated individually for each point of delivery. Sales volume does not affect price diversification in a direct way.

In 2010 transmission activity was performed by two entities: *OGP Gaz-System SA* and *System Gazociągów Tranzytowych EuRoPol-Gaz SA* (hereinafter: *SGT EuRoPol-Gaz SA*). *Gaz-System SA* activity included national transmission system management. The company managed high pressure networks of total length of 9 753 km.

Moreover, *Gaz-System SA* regional cooperation is carried out pursuant to agreements concluded by operators, i.e. with the Ukrainian operator *Uktransgaz*, German operator *Ontras-VNG Gastransport GMbH*, and *Biełtransgaz* from Belarus.

SGT EuRoPol-Gaz SA performed its activities using Polish section of Yamal-Europe transit gas pipeline with the length of 685 km. The pipeline is utilized for natural gas transmission to Germany, and for the delivery of natural gas supplies to Poland through two exit points, located in the towns Włocławek and Lwówek.

In that regard one important development for the functioning of natural gas market in Poland, including gas transmission management and performance, was the decision to appoint *Gaz-System SA* as the operator of the Polish section of Yamal-Europe Transit Gas Pipeline Systems. *Ex officio* decision was issued on November 17, 2010. *Gaz-System* transit gas pipeline operator was designated as the operator for gas transmission system at the Polish section of Yamal-Western Europe Transit Gas Pipeline Systems for the period until December 31, 2025 (Polish section of Transit Gas Pipeline Systems is owned by *System Gazociągów Tranzytowych EuRoPol GAZ*).

Pursuant to that decision, key responsibilities of transmission system operator (TSO) are: offering transmission services to gas market participants in a non-discriminatory way, providing all stakeholders with the information regarding terms and conditions of transmission service provision, and ensuring secure and uninterrupted performance of transmission system, including the performance of interconnectors with other transmission systems.

The TSO will also be responsible for the implementation and execution of all tasks of the operator, including the transmission capacity allocation mechanisms, which will require Regulator's approval for the Transmission Grid Code (*IRiESP*). The operator will also publish the information on technical, contracted and available transmission capacity for transit gas pipeline system entry and exit points.

In the designation decision, the President of ERO defined boundary conditions required to guarantee the independence of transmission system operator in scope of performance of its tasks in the case when the operator uses the network owned by another entity. Those responsible for TSO management must be able to act independently, and they cannot report to the management of *System Gazociągów Tranzytowych EuRoPol GAZ* – the owner of the Polish section of transit gas pipeline system. The TSO must also carry out operator's tasks using objective and transparent rules to ensure non-discriminatory access to the Polish section of Yamal-Western Europe gas pipeline to all stakeholders. According to the Energy Law, the TSO (*Gaz-System)* may define, in agreement with the owner of transmission network (*EuRoPol GAZ*), by the way of contract, detailed principles governing the performance of duties within the scope of responsibility of the TSO.

Article 9h, paragraph 11 of the Law provides that transmission network owner is required to provide the operator with the information and records necessary for the execution of operator's tasks, and to cooperate with the operator. In the case when transmission network owner does not fulfill the obligations under this provision, the President of ERO, on the basis of Article 56 of the Law, may impose a monetary fine upon transmission network owner in the amount up to 15% of owner's annual revenue. These provisions guarantee that *Gaz-System* will be able to offer maximum transmission capacity available on transit gas pipeline system on the market.

Gaz-System SA is also obliged to submit for approval by the President of ERO the Transmission Grid Code (*IRiESP*) for transit gas pipeline system, including, *inter alia*: a full catalogue of services required under legal provisions, non-discriminatory mechanisms for the allocation of available transmission capacity, congestion management mechanisms, balancing rules and charges for unbalancing. Draft Code, following public consultations, was submitted for approval on June 27, 2011.

In 2010, storage services were provided by gas storage system operator, *PGNiG SA, OSM* (SSO) branch. 100% of underground gas storage capacity was owned by *PGNiG SA* (Table 4.11). In 2010, *PGNiG SA* made 50 million m^3 of gas available to *Gaz-System SA*, in view of the fact that *Gaz-System*

SA performed the function of transmission system operator. Remaining storage capacity was utilized exclusively by *PGNiG SA.* Moreover, three companies: *Handen Sp. z o.o., Lumius Polska Sp. z o.o.* and *ENTRADE Sp. z o.o.* filed their offers under Available Storage Capacity Procedure, announced on July 1, 2010, but these offers were rejected for formal and legal reasons. At the same time, starting from July 2010, there was temporary modification in natural gas storage service structure available in Virtual Storage Facility based on *PMG Wierzchowice* and *PMG Husów*.

In 2010, active capacity of underground gas storage facilities was equivalent to, approximately, 17.9 TWh. Storage characteristics are presented in Table 4.11.

Table 4.11. Underground gas storage

Item	Name of storage facility	Type of storage facility	Working capacity [million m^3]	Volume of gas withdrawn from the facility [million m^3]	Volume of gas injected to the facility [million m^3]	Minimum storage level [million m^3]	Maximum storage level [million m^3]	Level at the end of reporting period [million m^3]
1	Wierzchowice	Depleted natural gas field	575.000	545.825	458.938	130.793	589.731	386,564
2	Brzeźnica	Depleted natural gas field	65.000	79.522	65.540	5.801	71.341	41,153
3	Strachocina	Depleted natural gas field	150.000	149.890	142.542	16.920	159.410	98,964
4	Swarzów	Depleted natural gas field	90.000	103.325	86.487	3.521	90.000	49,521
5	Husów	Depleted natural gas field	350.000	384.264	324.072	101.324	375.396	270,313
6	Mogilno	Salt cavern	370.000	267.488	195.042	232.364	375.000	302,308
7	Daszewo	Depleted natural gas field	30.000	0.381	9.206	0.000	9.206	8,825
8	Bonikowo	Depleted natural gas field	200.000	25.597	72.968	0.000	72.968	47,371
		TOTAL	1 837.890	1456.133	1219.155	345.671	1517.106	877.203

Source: PGNiG SA.

In conclusion, in spite of substantial import levels and continued progress in integrating Polish gas system with the systems of neighbouring countries, and despite the decision to designate the TSO for the Polish section of Yamal-Europe gas pipeline, which was very important for development of wholesale gas market in Poland, the geographic scope of the market remains national.

4.2.2. Description of the retail market

Retail gas market in Poland is still a market of national scope, at best. Dominant position on the retail market is held by *PGNiG SA.* Apart from *PGNiG SA*, a few dozen other entities are involved in retail trade: they resell natural gas – purchased from *PGNiG SA* – to final customers, but their market share is about 2%. A vast majority of those companies sell gas via their own, local distribution networks. Taking into account sales volume, the following companies are the leaders: *EWE energia Sp. z o.o., ENESTA SA, G.EN. Gaz Energia SA, KRI SA.* These entities play an important role as far as market operation is concerned, because they are local monopolies with their own networks, which combine both distribution and trade activity.

In 2010 there was one entity without the network, involved in natural gas sales under TPA. Additionally, there are new market players, involved in LNG sales without the use of gas network.

In 2010, gas sale on retail market according to customer groups were dominated by domestic gas consumers (households), representing 97.08% of all customers. Their share in 2010 sales volume reached 28.41%. Industrial users had the biggest share in the volume of natural gas sales – equivalent to 56.88%, with fuel sector companies, such as refineries and petrochemical companies, as well as chemical (nitrogen) plants taking the lead. Furthermore, *PGNiG SA* sells gas to *Gaz-System SA* and *PGNiG SA* distribution system operators – for their own needs and for system balancing purposes. In 2010, technological demand (losses and internal consumption) of *Gaz-System SA* and distribution system operators from PGNiG corporate group amounted to 211.7 million m^3. Table 4.12 presents the volume and structure of gas sales to final customers.

Table 4.12. Volume and structure of gas sales to final customers

Specification	Volume	Number of customers
TOTAL	14 416.8	6 624 884
1. Wholesale customers*, of which	312.1	64
within *GK PGNiG SA*	0.0	0
outside *GK PGNiG SA*	312.1	64
2. TSO – (*Gaz-System SA*)	91.4	19
3. DSOs	177.8	14
4. Export	43.9	1
5. End users – industry, of which	8 200.9	39 925
Fertilizer plants	2 107.2	20
CHPs	1 040.0	356
Heat stations	309.8	1 746
Other small customers (up to 1 million m^3/year consumption)	1 053.4	37 273
Other mid-size customers (consumption above 1 million m^3 and up to 25 million m^3/year)	1 780.9	506
Other large customers (consumption above 25 million m^3/year)	1 909.6	24
6. End users – commerce and services, of which	1 494.9	153 330
Small customers (up to 1 million m^3/year consumption)	1 371.2	153 279
Mid-size customers (consumption above 1 million m^3 and up to 25 million m^3/year)	123.7	51
Large customers (consumption above 25 million m^3/year)	0.0	0
7. Households	4 095.8	6 431 531

* Customers who purchase gas for resale.

Source: PGNiG SA.

Retail gas market in Poland, shaped by restructuring processes that took place in previous years, is highly concentrated market, and its geographical range is still limited to the area of Poland. Due to the market structure dominated by the incumbent, efforts aiming at promotion and development of competition encounter much greater barriers than in the power sector. In view of the concern that under present-day structure the dominant energy company may take advantage of its position, it seems justified that full regulation should be maintained with regard to the company, and there should be continued efforts aiming at diversification of gas supplies and encouraging entry of new players in the market.

Gaseous fuel prices

In 2010 there were three proceedings resulting in modification of gaseous fuel prices. Price levels for users connected to transmission network (i.e. wholesale prices), in subsequent periods of 2010, are shown in the Table below.

Table 4.13. Price levels for users connected to transmission network

Gas type	Price in PLN/1000 m^3 Valid for the period of:			Price dynamics in %		
	1.01 – 31.05	1.06 – 30.09	1.10 – 31.12	kol. 3/2 – 1	kol. 4/3 – 1	kol. 4/2 – 1
High methane GZ-50	910.0	954.5	1 015.5	4.9	6.4	11.2
Nitrified GZ-41.5	704.5	752.2	800.3	6.8	6.4	13.6
Nitrified GZ-35	594.2	641.3	682.3	7.9	6.4	14.8

Gas type	Price in PLN/GJ Valid for the period of:		
	1.01 – 31.05	1.06 – 30.09	1.10 – 31.12
High methane GZ-50	23.0	24.2	25.7
Nitrified GZ-41.5	21.5	22.9	24.4
Nitrified GZ-35	20.6	22.3	23.7

The key reason of the increase in high methane gas prices, effective as of June 1, 2010, was increased cost of gas acquisition from import purchase, which is affected, to the same extent, by import prices at which the gas is purchased abroad, and by currency exchange rates (USD and EUR). The drop in currency exchange rates (which were expected in Quarter 2 and Quarter 3, 2010) was accompanied by significant increase in import prices, resulting in an increase of average price (weighted in PLN) of high methane gas acquisition from imports by about 11%, in comparison to the price included in the tariff valid until May 31, 2010.

Another gas price increase came into effect on October 1, 2010; it was caused by increased cost of high methane gas purchase from imports due to much higher level of USD exchange rate (purchase from abroad is made predominantly in USD), compared to the level adopted during commodity price calculations – applied starting from June 1, 2010 – and the need to take into account the costs of maintenance of the so-called mandatory reserve, increased by the volume of 116 million m3 of gas. Following the modification in gas price referred to above, prices of nitrated gases were modified in the same proportion, for the same reasons as above.

By decision of the President of ERO of December 16, 2010, a price decrease in gas sold by *PGNiG SA* was introduced, in effect as of January 1, 2011. It was announced on the basis of a rebate, expected in Quarter 1, 2011, in the cost of purchase of high-methane gas under the main import contract concluded with *OOO Gazprom-Export* in connection with the addendum to the contract between *PGNiG SA* and *OOO Gazprom-Export*, signed in October 2010.

Together with an increase in gas prices as of June 1, 2010, network rates went up as well. The reasons were connected with an increase in *Gaz-System* and DSOs tariffs, and with an increase in the cost of storage in *PGNiG SA* facilities. Thus, average rate for transmission services provided by *Gaz-System* went up by 3.4%, and the average rate for distribution services provided by *GK PGNiG* distribution companies increased by a range from 0.5% (*Dolnośląska Spółka Gazownictwa Sp. z o.o).* to 5.6% (*Wielkopolska Spółka Gazownictwa Sp. z o.o)..* Average storage rate increase was small, equivalent to 0.29%. Transport fees were raised mostly due to higher amounts of return on capital employed taken into account in rate calculations in connection with an increase in the value of fixed assets subject to compensation. In turn, that was a consequence of an increase in capital expenditures (those made in 2009 and 2010, and those planned as well) dedicated to network development, and increase of storage capacity ensuring energy security of the country. The increase in storage service charge rates resulted from higher operating costs, which went up by 14.35%, with simultaneous decrease in return on capital by 8.53%. Operating costs increased due to a substantial increase in indirect costs, resulting from the establishment of the Storage System Operator in 2009, and from increased direct operating costs in *PMG Strachocina*, related to the renovation work in this storage facility. A drop in the amount of compensation for storage services was brought about by RAB depreciation.

Customer complaints and enquiries

Customer complaints and enquiries – as described in the tables below – brought to the attention of the President of ERO by regular mail, e-mail, telephone, fax, or during personal appointments are processed by relevant ERO organisational units, including local branches and the Consumers' Information Point.

Cases put forward by gas consumers are processed in the same way as those coming from electricity consumers. A more detailed discussion to the point can be found in the section dedicated to electricity.

Tables 4.14 and 4.15 present detailed specification of cases, together with underlying causes.

Table 4.14. Complaints

Specification	Number of cases
Price	34
Metering systems and installations	14
Customer service	10
Commercial practices	0
Misleading advertising	0
Terms of contract	68
Billing	32
Supplier's switching issues	1
Supply issues related to payments, e.g. disconnection	16
Supply issues related to technical problems	5
Connection refusal	11
Other	8
Total	199

Source: ERO.

Table 4.15. Inquiries

Specification	Number of cases
Price	73
Metering systems and installations	11
Customer service	11
Commercial practices	0
Misleading advertising	0
Terms of contract	125
Billing	73
Supplier's switching issues	10
Supply issues related to payments, e.g. disconnection	24
Supply issues related to technical problems	14
Connection refusal	29
Other	27
Total	397

Source: ERO.

Looking at the specification of both complaints and enquiries, there is a significant number of cases under the heading of 'Terms of contract': users have serious concerns about the contracts they have signed, and at the same time most of these cases do not fall within the mandate of the President of ERO. Another quite numerous item is 'Price' and 'Billing'. This can result of still very unclear gas bills, due to complex charge components. Interestingly, the number of complaints regarding gas network connection refusals has been declining, compared to previous period, which is a consequence of investments in the development of distribution network. It should be underlined that there is a small number of complaints and inquiries regarding 'Customer service' and there has been substantial improvement in that field, which is a result of customer service improvement policy implemented by the dominant market player, *GK PGNiG SA*.

4.2.3. Measures to avoid abuse of dominance on the market

Supervision over the market and market players is performed by the President of Energy Regulatory Office, President of the Office for Competition and Consumer Protection, Minister of Economy, Minister of Treasury and other institutions, within their respective mandates (such as, for example, Polish Financial Supervision Authority). Cooperation between the President of ERO and the President of OCCP consists in mutual information and knowledge sharing, notifying one another of reported issues, in accordance with their respective scope of competence, and reporting law violations, again in accordance with the scope of competence of each office.

The biggest energy company operating on Polish gas market, *PGNiG SA*, is a public company, listed on Warsaw Stock Exchange. The laws that regulate financial market set forth a number of disclosure requirements, with compliance overseen by Polish Financial Supervision Authority. Entities listed on

Warsaw Stock Exchange, including *PGNiG SA*, must publish periodic statements (quarterly, semi-annual and annual) with the report on company performance including, among other things, financial results for the period, and they must publish these reports without delay. In line with the principles set forth in the 'Code of Good Practice for Warsaw Stock Exchange Joint Stock Companies' ('*Kodeks Dobrych Praktyk Spółek Notowanych na Giełdzie Papierów Wartościowych SA w Warszawie*'), *PGNiG SA* also publishes on its website the 'Corporate Governance Compliance Declaration' ('*Oświadczenie o przestrzeganiu zasad ładu korporacyjnego*').

In view of an almost complete concentration of domestic production in *PGNiG SA*, and taking into account the character of contracts concluded with *Gazprom*, gas availability and the potential for effective functioning and development for other companies is very limited on the Polish gas market. Suppliers involved in gas sales, which do not belong to *PGNiG SA* corporate group, in most cases sell natural gas they had purchased from *PGNiG SA*, only and exclusively via their own, local distribution networks, and they do not resell gas to other consumers. In turn, *PGNiG SA* does not have a specific offer targeted at consumers located at the networks owned by those entities. Consequently, despite the introduction of pro-competitive provisions into national legislation, present-day situation on the gas market practically precludes the possibility of switching to gas supplier of their choice for end users. Furthermore, the President of ERO has no mandate to impose upon energy company, by the way of administrative decision, the obligation to comply with such measure as, for example, 'gas release programme from long-term contracts'.

Within the framework of project financed from Transition Facility PL2006/018-180.02.04 – 'Implementation of Competitive Energy Market' – in 2009 ERO prepared 'Best Practices for Gaseous Fuel Suppliers and Distribution System Operators'. Project execution phase came to an end at the end of 2009. In March 2010, following public consultations on a wide scale, involving gas (and electricity) market participants, industry associations and consumer organizations, documents concluding the first stage of the work were developed. At the end of stage two, from April till August 2010, with a number of meetings and discussions with the representatives of associations representing diverse interests of individual industries from the energy sector, 'Best Practices for Gaseous Fuel Suppliers and Distribution System Operators' were published on ERO website on October 13, 2010. The President of ERO recommended the document for use by energy companies working on their 'Best Practice Codes'. 'Best Practices for Gaseous Fuel Suppliers and Distribution System Operators' regulate issues connected with customer empowerment on the gas market, such as: comprehensive information about sales offer prior to contract signing, transparency and proper way of contract conclusion, quality of commercial customer service, principles for handling complaints and resolving disputes between the customer and the company, the right to information about consumer rights regarding natural gas supplies, diligence and absolute integrity towards the customer in scope of metering and billing equipment reading service, or the right to free supplier switching, in compliance with relevant procedures.

In relation to the execution of the task of the President of ERO set out in Section 5.2. in the 'Action Plan for the years 2009 – 2012', appended to the document entitled 'Poland's Energy Policy until 2030', the President of ERO developed a catalogue of prohibited contractual clauses in contracts concluded between electricity and gas consumers on the one hand, and energy companies on the other. The catalogue was created on the basis of the register of prohibited contractual clauses kept by the President of OCCP. The register contains numerous contractual clauses, included in contracts from various fields, which are regarded as prohibited and adjudicated with a final verdict of OCCP, which means that the application of such clauses in consumer relations is forbidden. As far as the energy sector is concerned, the register contains such clauses as, for example, those related to company liability for damages, resolution of disputes between the user and the company, as well as the clauses pertaining to the timing of planned interruptions, or contract termination issues. The President of ERO sent the catalogue to OCCP for consultation and, as a result of mutual cooperation, the catalogue eventually developed by ERO – modified in line with OCCP comments – was published in January 2011 on ERO website.

In 2010 the President of ERO held numerous consultations with the companies operating on domestic and foreign markets which might be interested in entering Polish gas market. During the talks, the following topics were discussed, *inter alia*: licences and tariffs, including the possibility of exemption from tariff submission for approval, and the requirements from the Law on the Obligatory Stocks. Additionally, the President of ERO had many meetings with the customers interested in switching gas supplier. Such meetings were helpful in effective identification of problems encountered by the customers who decided to switch supplier, for example those associated with the division of

common service agreement. The President of ERO undertook measures aiming at the removal of existing barriers, and the provision contained in point 1.1. of *PGNiG SA* gaseous fuel tariff approved on May 17, 2010, was deleted. According to that clause, the tariff was applicable to the *supply of fuel on the basis of common service agreement or gaseous fuel sales agreement concluded prior to the effective date of the tariff, the execution of which requires that the Supplier contracts the transportation of gaseous fuel through transmission or distribution network, or utilization of storage facility.* The President of ERO also indicated it to the TSO that the Transmission Grid Code (*IRiESP*) submitted to the President of ERO should include the clauses that 'assign' contractual power to the customer.

In 2010 the President of ERO received notifications from many household users about the clauses the applicants regarded as non-compliant with currently binding regulations. Those clauses were included in draft contracts presented by *PGNiG SA* within contract update procedure, including, in particular, the requirement to provide detailed personal data (among other things, *PESEL* Social Security number, ID number and *NIP* tax identification number). In response to such notifications, the President of ERO submitted to the Inspector General for Personal Data Protection (*GIODO*) a copy of the draft contract, together with the general terms of contract and the cover letter, forwarded by *PGNiG SA* to customers. In their correspondence, Inspector General informed the President of ERO that *GIODO* is acquainted with such cases and the matter is under review. Deputy Human Rights Defender also addressed that topic, and notified the President of ERO about concerns regarding potential refusals to conclude contracts in the proposed wording. The President of ERO took appropriate actions in scope of ERO powers. In order to eliminate the violation of the law, *PGNiG SA* has taken appropriate steps to adapt contractual forms used for contract update to Personal Data Protection Law, which ultimately lead to the discontinuance of the *GIODO* proceeding.

In February 2010, the President of ERO, within the framework of cooperation with OCCP, presented detailed information on the performance of tasks indicated in 'Competition Policy for the years 2008 – 2010', assigned to the President of ERO for implementation in scope of Priority II – Creation and intensification of competition in power and gas sectors. At the turn of April and May 2010, the President of ERO submitted comments to the draft government document entitled 'Consumer Policy Strategy for the years 2010 – 2013', emphasizing the need to expand the document with a detailed action plan, specifying other institutions responsible for consumer policy tasks, including the role of the President of ERO in that regard.

The President of ERO has statutory obligation to cooperate with relevant institutions in scope of counteracting anticompetitive practices of energy companies. In 2010, the President of ERO continued cooperation with the President of OCCP, initiated in 2009, in connection with the information obtained from many users regarding the possible presence of provisions that are non-compliant with currently binding regulations in draft update contracts developed by *PGNiG SA*. Within the framework of such cooperation, *inter alia*, the President of OCCP received draft contracts obtained from the customers (maintaining the confidentiality of data protected under the law) and relevant explanations were made, as required by OCCP to resolve the case. Users' reservations were mostly connected with the length of contract termination period, sanctions in the case when the amount of delivered gaseous fuel is smaller or greater than previously specified, and the level of security the establishment of which will increase production costs and thus make the company uncompetitive on foreign markets. Another frequent issue was the lack of real possibility to negotiate particular draft contract clauses, which should be the basis for cooperation between entities. As of the end of 2010, the case was still pending.

An important issue brought to the attention of the President of OCCP by the President of ERO in 2010 was the issue associated with *PGNiG SA* refusal to enter into common service agreement. The President of ERO received an application with a request to resolve the dispute concerning a refusal to enter into natural gas sales agreement by *PGNiG SA*. In view of the absence of mandate to resolve the case, the President of ERO returned the application[21)]. According to the disposition of Article 23, paragraph 2, point 14, the Energy Law, the President of ERO notified the President of OCCP about the application filed by market participant, indicating the possibility of anticompetitive practices exhibited

[21)] According to jurisprudence, it is within the competence of the President of ERO to adjudicate in disputes, listed in Article 8, paragraph 1, the Energy Law, in which a specific request of the applicant corresponds to a public obligation of the energy company, resulting from *ius cogens* statutory legal standard.

by *PGNiG SA*. Consequently, at the beginning of 2011, the President of OCCP initiated an antimonopoly proceeding regarding abuse of dominance by *PGNiG SA* on domestic wholesale natural gas market.

Furthermore[22)], in 2010 the President of OCCP conducted explanatory proceedings in the cases referred to below, which did not give grounds for the initiation of antimonopoly proceedings:

- Preliminary verification whether *Wielkopolska Spółka Gazownictwa Sp. z o.o.* abuses dominant position on natural gas market in scope of gas network connections, by failing to make the connection at the pre-agreed time and by introducing subsequent addenda to the contract, based on which the company extends performance deadline;
- Preliminary verification whether, as a result of actions taken by *Wielkopolska Spółka Gazownictwa Sp. z o.o.*, based in Poznań, the principles governing competition on natural gas market were violated, in connection with consumer complaint questioning the wording of connection contract and the practice of *Wielkopolska Spółka Gazownictwa Sp. z o.o.*, which consisted in proposing another gas network connection contract in the circumstances when the deadline under the previous contract had not been met;
- Regarding the failure to meet, by *Wielkopolska Spółka Gazownictwa Sp. z o.o.*, the provision set out in *PGNiG S.A.* gaseous fuel tariff, in scope of the possibility to install by the Company the device enabling measurements of combustion heat (calorific value) of gaseous fuel supplied;
- Preliminary verification whether, by the actions taken by *PGNiG SA – Pomorski Oddział Obrotu Gazem* in Gdańsk – *Gazownia Bydgoska* on natural gas market – which consisted in linking the increase of ordered gas capacity to the investment involving metering system replacement, the provisions of Competition and Consumer Protection Law were violated, including the verification whether the case has anticompetitive scope;
- Preliminary verification whether, by the actions taken by *Pomorska Spółka Gazownictwa Sp. z o.o. Oddział Zakładu Gazowniczego* in Bydgoszcz on natural gas market, which consisted in putting the clause on contractual penalty in gas network connection agreement for connection group 1, the provisions of Competition and Consumer Protection Law were violated, including the verification whether the case has anticompetitive scope;
- Preliminary verification whether, in connection with the activity of *PGNiG SA* in scope of provision of gaseous fuel supply service, the provisions of Competition and Consumer Protection Law were violated in the manner justifying the initiation of antimonopoly proceeding, including the verification whether the case has anticompetitive scope.

In scope of concentration oversight, the President of OCCP carried out one proceeding involving gas industry companies in 2010. By decision No DKK-104/2010 of 11 October, 2010, the President of OCCP issued non-objection to the concentration involving the establishment, by *PGNiG SA*, based in Warsaw, and *Tauron Polska Energia SA*, based in Katowice, of a joint venture by the name of *Elektrociepłownia Stalowa Wola SA*, based in Stalowa Wola. Joint venture will produce electricity and heat in the newly built gas and steam unit, operating on a gaseous fuel technology (natural gas). The decision was issued pursuant to Article 18, Competition and Consumer Protection Law. It was decided that such concentration would not restrict competition in a substantial way, in particular through the emergence or reinforcement of dominant market power. Also, by decision of June 22, 2010, upon the request of the parties, concentration proceeding was suspended involving the establishment, by *Energa Invest SA*, based in Gdańsk, *Grupa Lotos SA*, based in Gdańsk, and *PGNiG SA*, based in Warsaw, of a joint venture in the form of special purpose capital company.

Actions taken by the Minister of State Treasury in scope of ownership changes in the power sector[23)]

Minister of Treasury supervises the following entities operating on natural gas market:

- *Operator Gazociągów Przesyłowych Gaz-System SA* Transit Gas Pipeline System Operator, based in Warsaw – 100%,
- *Polskie Górnictwo Naftowe i Gazownictwo SA*, based in Warsaw – 73.5%.

[22)] Based on input developed by OCCP.
[23)] Based on input developed by the Ministry of Treasury.

In 2010 there were no developments as far as the ownership structure of *Gaz-System SA* Transit Pipeline System Operator is concerned. The changes in the ownership structure of *GK PGNiG* are outlined below:

- On 11 January, 2010, *PGNiG Energia SA* was registered in *KRS* National Court Register,
- On 19 January, 2010, *GEOFIZYKA Kraków Libya JSC* in liquidation was deleted from commercial register in Libya,
- On 14 June, 2010, *PGNiG Energia SA* purchased from *PGE Energia Odnawialna SA* 1 288 shares in *Polskie Elektrownie Gazowe Sp. z o.o.* in liquidation, which represents 51.52% of company share capital; on 30 June, 2010, Ordinary Shareholders' Meeting of *Polskie Elektrownie Gazowe Sp. z o.o.* in liquidation took a resolution on continued company operation and the waiver of liquidation,
- On 30 July, 2010, *Górnictwo Naftowe Sp. z o.o.* was transformed into *PGNiG Technologie Sp. z o.o.*; the company was established with the purpose to consolidate construction and assembly companies; thanks to consolidation under one entity, in the future the company will be able to compete and win new contracts on domestic and international markets more effectively,
- On 11 August, 2010, *'INVESTGAS' SA* purchased 51 000 shares in *Ośrodek Badawczo-Rozwojowy Górnictwa Surowców Chemicznych CHEMKOP Sp. z o.o.,* based in Cracow, with total nominal value of PLN 2 550 000, representing 85% of share capital,
- On 16 November, 2010, *Operator Systemu Magazynowania Sp. z o.o.* (Storage System Operator) was established; company share capital amounts to PLN 1 000 000 and is divided into 20 000 shares of nominal value PLN 50 each; all the shares were paid for in cash by the sole shareholder, *PGNiG SA*; the company was registered in *KRS* National Court Register on 29 December, 2010,
- On 21 December, 2010, *POGC Trading GmbH* was established; company share capital amounts to EUR 10 000 000; company core business includes the purchase, sale and trade in gas, fuels and other energy carriers and derivative products in their physical form, as well as trade in derivatives and financial products involving gas, fuels and energy on European and other markets.

In 2010, there were the following developments in company share capital:

- Registration of increased share capital of *Górnośląska Spółka Gazownictwa Sp. z o.o.* with the amount of PLN 850 000, to the level of PLN 1 300 338 000, which took place on 4 January, 2010,
- Increased share capital of *PGNiG Energia SA* with the amount of PLN 1 000 000, to the level of PLN 6 000 000; registration of capital increase took place on 14 December, 2010,
- Decreased share capital of *Polskie Elektrownie Gazowe Sp. z o.o.* from the level of PLN 2 500 000 to PLN 1 212 000 by redeeming the shares of a partner of *PGNiG Energia SA; PGNiG SA* became the sole shareholder; registration of company share capital decrease took place on 28 December, 2010;
- Increased share capital of *PGNiG Technologie Sp. z o.o.* with the amount of PLN 2 000 000 to the level of PLN 2 050 000; registration of company share capital increase took place on 26 August, 2010; another company share capital increase with the amount of PLN 118 348 000 to the level of PLN 120 398 000; new shares were partially paid for in cash in the amount of PLN 500 000, and in contribution in kind in the form of shares owned by *PGNiG SA* in the following companies: *BUG Gazobudowa Sp. z o.o., Zakład Urządzeń Naftowych Naftomet Sp. z o.o., ZRUG Sp. z o.o. (Pogórska Wola), Budownictwo Naftowe Naftomontaż Sp. z o.o.*; registration of company share capital increase in *KRS* National Court Register took place on 30 December, 2010.

5. SECURITY OF SUPPLY

In a document entitled: 'Poland's Energy Policy until 2030' ('*Polityka energetyczna Polski do 2030 roku*'), security of supply was defined as securing stable fuel and electricity supply at the level which guarantees that national needs will be met, and at a price acceptable to the economy and general public, assuming maximum utilisation of domestic energy resources and diversification of sources and supply directions of oil as well as liquid and gaseous fuels.

Monitoring the security of electricity and gas supplies is among the tasks performed by the President of Energy Regulatory Office.

The level of energy security is affected by many different factors. The significance of those factors for electricity and fuel demand-supply balance depends on both internal circumstances observed within the country, and on global market situation. Important factors include diversification of the energy mix in the national energy balance, the level of diversification of external supply sources, technical condition and efficiency of equipment and systems used for transmission and distribution of fuels and energy.

5.1. Electricity [Article 4]

Security of electricity supply is a complex issue, including both short- and long-term measures. The President of ERO collects information in that regards in following way:

1) Collecting information on power system performance,
2) Collecting information on the condition of network infrastructure and TSO and DSO investment needs in the course of draft development plans for grid companies approving,
3) Controlling the status of coal reserves in power plants,

as well as other actions, such as:

1) Keeping the database about energy companies, developed on the basis of annual reports (mainly economic data obtained from information resources of other ministries and research institutions, such as, for example, the Ministry of Economy, Statistical Office, and EMA),
2) Conducting non-periodic research to evaluate extraordinary situations threatening the security of NES performance.

Energy security depends mostly on the ability to meet peak demand for electricity and corresponding capacity, and on present-day and future structure of fuel consumption in the process of electricity generation. In the monitoring of security of supply, special focus was put on verification of the following aspects: generation adequacy (sufficiency), system operational security, and availability of equipment.

In 2010, gross generation of electricity in the country was at the level of 156 342 GWh, i.e. over 3% higher than in 2009. The key reason behind generation increase is an increased demand for electricity, related to economic growth observed in 2010. Domestic consumption of electricity amounted to 154 988 GWh and it was over 4% higher than 2009 consumption. Majority of electricity produced was generated in utility thermal power plants, including those fired with hard coal and lignite.

Some selected data on generation and consumption of electricity is presented in Table 5.1.

Table 5.1. Generation and consumption of electricity in 2010

Specification	Generation [GWh]			Generation structure [%]	
	2009	2010	dynamics*	2009	2010
Gross domestic electricity generation	150 913	156 342	**103.60**	100.00	100.00
1. Utility power plants, of which:	141 874	146 106	**102.98**	94.01	93.45
a) Thermal power plants, of which:	139 123	142 838	**102.67**	92.19	91.36
– fired with hard coal	84 274	89 212	**105.86**	55.84	57.06
– fired with lignite	50 797	49 459	**97.37**	33.66	31.64
– gas-fired	4 052	4 166	**102.81**	2.68	2.66
b) Hydro power plants	8 204	3 268	**39.83**	5.44	2.09
2. Industrial power plants	2 751	3 268	**118.79**	1.82	2.09
3. Wind and other renewable energy power plants	835	1 311	**157.01**	0.55	0.84
Gross domestic consumption of electricity	148 718	154 988	**104.22**		

* 2010 / 2009, where 2009 = 100

Source: PSE Operator SA.

As far as the level of installed and total capacity of domestic power stations is concerned, it should be noted that on a global scale there were no fundamental changes in comparison to 2009 in those values. One must pay attention to a considerable increase in the generation of electricity from renewable sources (more than 50 percent increase in installed and total capacity from renewable sources), including predominantly wind sources, and in industrial power plants. There was also a change in generation structure in coal-fired plants in favour of hard coal, as compared to lignite. Another interesting development is an increase in capacity in utility gas thermal power plants.

Some selected data regarding the structure of installed and total capacity in domestic power plants is presented in Table 5.2.

Table 5.2. Structure of installed and total capacity in domestic power plants – status as of December 31, 2010, versus status as of December 31, 2009

Specification	Installed capacity [MW]			Total capacity [MW]		
	2009	2010	dyna-mics*	2009	2010	dyna-mics*
Aggregate capacity of domestic power plants, of which:	35 594	35 756	**100.46**	35 243	35 509	**100.75**
Utility power plants, of which:	32 473	33 304	**102.56**	32 460	32 382	**99.76**
Thermal utility power plants, of which:	30 259	30 083	**99.42**	30 168	30 085	**99.72**
– fired with hard coal	20 512	20 377	**99.34**	20 396	20 351	**99.78**
– fired with lignite	8 978	8 772	**97.71**	9 013	8 817	**97.83**
– gas-fired	769	934	**121.46**	759	917	**120.82**
Hydro utility power plants	2 214	2 221	**100.32**	2 292	2 297	**100.22**
Industrial power plants	2 484	2 486	**100.08**	2 169	2 173	**100.18**
Renewable energy power plants	637	966	**151.65**	614	953	**155.21**
CDGU	25 635	25 429	**99.20**	25 615	25 419	**99.23**
Non CDGU	9 959	10 327	**103.70**	9 628	10 090	**104.80**

* 2010 / 2009, where 2009 = 100

Source: PSE Operator SA.

In 2010, average annual capacity demand was equivalent to 21 405.3 MW, i.e. it went up by more than 3.8%, and maximum demand amounted to 25 448.9 MW, i.e. it went up by almost 3.5% in comparison to 2009. Some selected indicators pertaining to NES performance in 2010 are presented in Table 5.3.

Table 5.3. Selected data on NES performance in 2010.

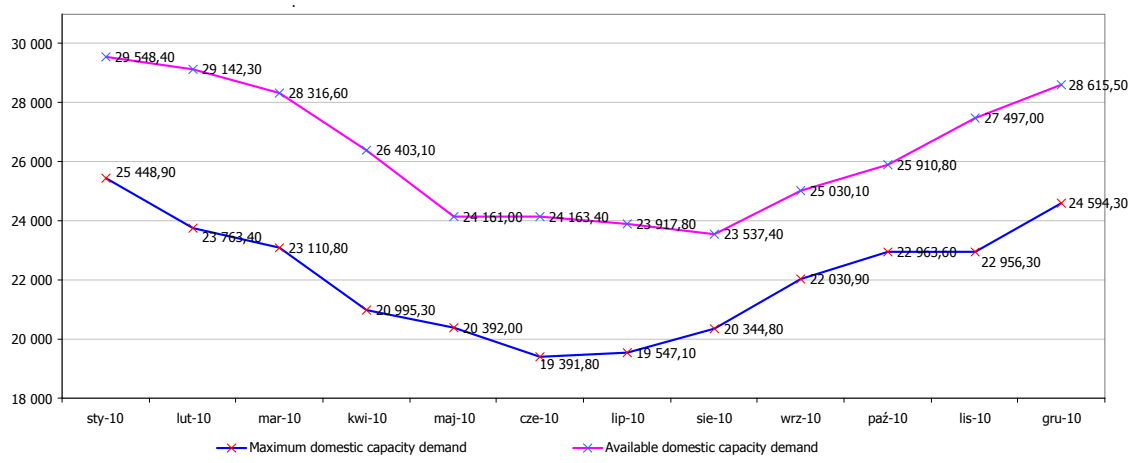
Specification	Value [MW]		
	2009	2010	dynamics*
Total capacity of domestic power plants**	34 830.7	35 537.5	**102.03**
Available capacity of domestic power plants **	26 684.2	26 136.0	**97.95**
Capacity demand**	20 620.7	21 405.3	**103.80**
Maximum domestic capacity demand	24 593.5 2009.12.21	25 448.9 2010.01.26	**103.48**
Capacity reserve on the date of maximum domestic capacity demand	4 861.2	3 586.3	**73.77**
Minimum domestic capacity demand	16 999.4 2009.07.10	17 872.4 2010.06.25	**105.14**
Capacity reserve on the date of minimum domestic capacity demand	6 973.9	4 936.8	**70.79**

* 2010 / 2009, where 2009 = 100
** Data on the basis of annual average values from business days evening peak.

Source: PSE Operator SA.

The rising trend observed in previous years, in terms of capacity demand and domestic consumption of electricity, after a short decrease in 2009, continued in 2010. This may have some significance for the values of capacity available for transmission system operator, and the size of required capacity reserves. Figure 5.1. illustrates available capacity of domestic power stations in relation to maximum demand for capacity in NES in subsequent months of 2010.

Figure 5.1. Available capacity of domestic power stations and maximum domestic capacity demand at evening peak capacity demand in average values from business days in a month [MW]



Source: ERO, based on the data from PSE Operator SA.

Average annual value of total capacity of domestic power stations from evening peak on business days went up from 34 690 MW in 2009 to 35 538 MW in 2010, and corresponding average annual value of available capacity went down from 26 685 MW in 2009 to 26 136 MW in 2010, which resulted in a change in the relation of available capacity to generating capacity from 76.7% to 73.5%. Additionally, in 2010, compared to 2009, there was a decrease in reserves in utility power plants, and an increase in power losses related to overhauls, medium and emergency repairs.

In the course of monitoring process, special attention was paid to the possibility of meeting current demand for electricity and capacity, operating security of the power system and availability of equipment, including availability of generation units. Analogically to 2009, the volume of installed capacity has maintained at the relatively high level exceeding 35 GW, and on a global scale it practically remained unchanged in 2010. As regards available capacity and capacity reserves in NES, they were at the adequate level in 2010, as far as the security of NES performance is concerned. Yet, it should be remembered that this improvement in comparison to previous years is to a large extent

a consequence of a substantial drop in demand for electricity and capacity in 2009. Still, one can observe a rising trend in that indicator. At the same time, it must be mentioned that Energy Law amendment, effective as of 11 March, 2010, put an obligation on energy companies involved in the generation of electricity in the sources of total installed capacity not smaller than 50 MW to submit the reports to the President of ERO regarding their investment plans for the next 15 years, and to update those reports every three years. As a result, the scope of electricity security of supply monitoring will be enhanced with a long-term outlook timeframe.

Investments in new network infrastructure

An important factor in the security of electricity supply is the amount of power grid capacity and grid technical condition. Therefore, investments carried out by transmission system operator gain particular significance. Investment efforts initiated by TSO in national transmission network are two-fold: its purpose is to ensure security of electricity supply and to promote free trade in electricity, including trade on the common market (interconnectors). Investment decisions are made by the TSO on the basis of periodic analyses (in particular, as regards power flow structure in the system taking into account peak demand for power, forecasted construction, modernisation and withdrawal of generation sources, as well as cross-border exchange and interconnectors), and the assessment of technical criteria, mainly related to the reliability and quality of supply, as well as the evaluation of effectiveness of projects under design.

Investment tasks are included in the development plan of national transmission network, which is subject to consultations with the President of ERO, in accordance with the Energy Law. Furthermore, investments on a scale greater than local one, including cross-border interconnectors, are taken into account in the European development plan, i.e. the Ten Year Network Development Plan, prepared by European TSOs under the auspices of ENTSOE.

A list of planned investment projects in scope of cross-border interconnector development is presented below:

- Construction of Poland-Lithuania interconnector, including the construction of a double-track 400 kV Ełk-Alytus line, together with the necessary development of Polish and Lithuanian transmission system. Interconnector launch is planned for 2015 (1st Stage), and target capacity values should be available around 2020 (2nd Stage);
- Re-launch of Poland-Ukraine interconnector on 750 kV voltage. The launch is planned for 2015, at the earliest;
- Construction of Poland-Belarus interconnector, including the construction of a double-track 400 kV Narew-Roś line. The launch is planned for 2015, at the earliest;
- Construction of phase shifters on existing Poland-Germany interconnectors, along with switching Krajnik-Vierraden line to the rated voltage of 400 kV. Launch of the shifters is planned for 2014;
- Construction of the third Poland-Germany interconnector consists of the construction of a double-track 400 kV line connecting the station in western section of NES with Eisenhuttenstadt station. Interconnector launch is planned for 2020, at the earliest.

The Table below presents a list of selected investment projects carried out in 2010 in scope of construction and development of stations and power lines.

Table 5.4. Types of TSO investment tasks and project timelines

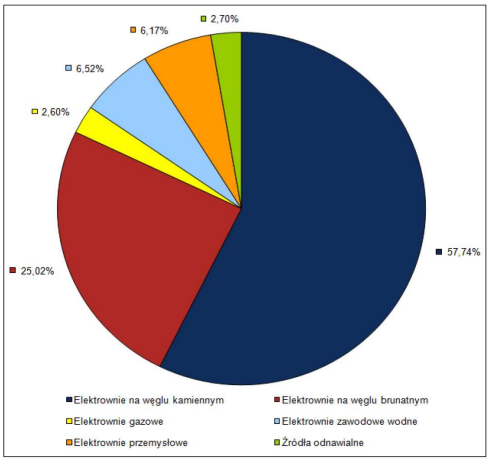
1	Development and modernisation of Łagisza node	2007-2010
2	Construction of a double-track 400 kV Kromolice-Pątnów line	2006-2012
3	Development of Trębaczew station	2007-2011
4	Transformer station installation in Skawina station	2010-2010
5	Transformer station installation in Płock station	2009-2011
6	Development of Morzyczyn station	2007-2011
7	Construction of 400 kV Ostrów-Plewiska line	2003-2010
8	400 kV and 220 kV network coupling in Byczyna station	2006-2013
9	Construction of 400 kV Pasikurowice – Wrocław line	2006-2012
10	Development and modernization of Moszczenica station	2008-2011
11	Transformer station installation in Leśniów station	2006-2010
12	Development and modernization of Lubocza station	2009-2012
13	Construction of Ołtarzew station	2009-2013
14	Construction of 400 kV Świebodzice – Wrocław line	2006-2012
15	Construction of Wrocław station	2006-2012
16	Development of Świebodzice station	2006-2013

Source: PSE Operator SA Development Plan.

Investments in new generation capacity

For many years, electricity generation has been based mainly on hard coal and on lignite, and those fuels would remain major energy sources used for the purpose of electricity generation also in the future. This situation is shown in Figures 5.2 and 5.3.

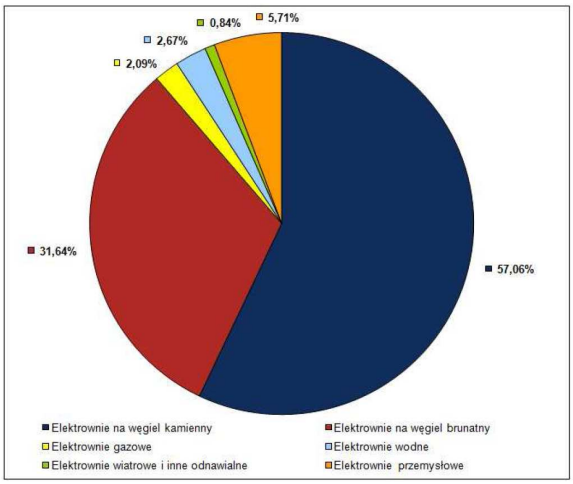
Figure 5.2. Percentage structure of National Electricity System total capacity, status as of 31.12.2010



- power plants fired with hard coal
- gas-fired power plants
- industrial power plants
- power plants fired with liquate
- hydro utility power plants
- renewable energy power plant

Source: PSE Operator SA.

Figure 5.3. Structure of domestic generation of electricity in individual groups of power plants, according to types of fuel, in 2010



Source: PSE Operator SA.

The provisions of 'Poland's Energy Policy until 2030' are linked to EU regulations, in particular those associated with the implementation of environmental policies. As a result of Climate Package adoption, competitiveness of individual electricity sources in the future will be, in fact, dependent on the cost of purchase of emission allowances. In practical terms, this forces Polish power sector to

modify its fuel mix, which in turn requires investments in new energy generation sources, including the construction of nuclear power stations.

Introduction of nuclear energy will represent a new direction of development in Poland. Apart from the advantage of no CO_2 emissions, nuclear energy will help fill up energy balance and gain independence from typical energy sources, and thus it will help improve country energy security. According to the objectives set out in the draft of 'Poland's Energy Policy until 2030', gross electricity generation capacity [MW] from nuclear sources will reach the following values: 1 600 MW in 2020, 3 200 MW in 2025, and 4 800 MW in 2030.

Tables 5.5 and 5.6 present the structure of capacity installed in the power sector (without renewable energy sources) according to generation technology (fuel), divided between capacity released for and withdrawn from operation in 2010.

Table 5.5. Installed capacity released for operation in 2010.

Installed capacity released for operation	[MW]
coal / oil	154.9
gas	10.2
RES	0.0
other	0.0
total	**165.1**

Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA).

Table 5.6. Installed capacity withdrawn from operation in 2010

Installed capacity withdrawn from operation	[MW]
coal / oil	-263.9
gas	0.0
RES	-3.8
other	0.0
total	**-267.7**

Source: ERO, on the basis of data provided by Energy Market Agency (ARE SA).

Regulatory determinants of new generation unit launch, including renewable energy sources and CHP

One of the tasks of the President of Energy Regulatory Office is issuing of a licence (promise of a licence) for electricity generation from renewable sources or cogeneration electricity generation sources, with the exception of electricity generation from agricultural biogas; electricity transmission, distribution or trade.

In 2010 there was a significant change in licence issuing for electricity generation from renewable energy sources. Based on the provisions of the law of February 8, 2010, amending the Energy Law and some other laws, from March 11, 2010 until December 31, 2010, generation of electricity from agricultural biogas became a free business activity, not subject to licensing requirement. However, pursuant to Article 9p, Energy Law, business activity involving agricultural biogas production or electricity generation from agricultural biogas represents regulated activity, in the meaning of the Law of July 2, 2004, on the freedom of business activity, and – as of January 1, 2011 – it must be entered in the register of energy companies involved in the production of agricultural biogas, which is kept by the President of Agricultural Market Agency, according to Article 9p, paragraph 2, the Energy Law.

In the structure of the ERO, the licensing responsibilities are performed by the Department of Energy Companies (the Department), and local branches. In 2010, the President of ERO issued 162 licences for electricity generation (including 134 licences for generation from renewable sources). At the end of December 2010, valid licences (1 581 licences) were held by 1 332 companies involved in electricity generation, transmission or distribution, and trade in electricity.

In 2010, 166 decisions altering the licences already granted were made. Licence modifications were caused mainly by the following:

- extension or limitation of the scope of activity,
- change in the name or domicile of licence holder,
- change in the terms of operation (expanded geographical area of operation),
- extension of licence term, pursuant to Article 39, Energy Law,
- decision change by self-check.

In 2010 the President of ERO issued 71 decisions on licence cancellation, withdrawal or termination, due to, among other things, permanent discontinuance of business activity or not taking up activity covered by the licence, and in connection with company equity restructurization process, as a result of which licence holders were deleted from appropriate registers or records. In five cases, licences were lifted at the request of companies. In three cases a decision was issued with a refusal to grant the licence: one for electricity trade and two for electricity generation from a renewable energy source. The reason behind the refusals was the fact that the entrepreneur did not provide a security which, by the decision of the President of ERO, was a pre-requisite for issuing the licence, and due to the fact that the entrepreneur had been convicted, with a final court verdict, for a business-related offence.

With the purpose to facilitate business start-ups in that regard, ERO website contains information on licence application procedure in electricity generation from renewable sources and in cogeneration, which can be found in the so-called 'Information packages'.

Besides, ERO website contains numerous memos and announcements to remind energy companies of their obligations, and to clarify any doubts how those obligations should be met. Moreover, the website contains templates of certificate of origin applications and cogeneration certificate of origin applications, along with the guidelines what attachments are required together with the application to obtain certificates of origin (RES) and cogeneration certificates of origin (CHP).

Within the framework of Transition Facility 2006/018-180.02.04: 'Implementation of Competitive Energy Market', co-financed from Polish and European Union resources, a project called 'Design and dissemination of regulatory tools and procedures applied with regard to the sector of renewable energy sources and electric power produced in cogeneration' was carried out in ERO. The goal is to provide better access to 'statistical' knowledge on renewable energy sources located in the territory of Poland, to be achieved by designing and placing on ERO website an interactive map of Poland featuring installations generating electricity from renewable sources. The map provides quick access to data regarding the type and capacity of sources in the area, in the breakdown according to regions (voivodships) and counties (poviats). The map was also designed with the option to produce summary tables specifying capacity installed in licensed RES installations.

In 2010, the level of new capacity from renewable sources increased by about 563 MW, compared to 2009. The biggest increase was observed in wind farms.

Table 5.7. RES installations, according to licences valid as of the end of 2009 and 2010

RES type	Aggregate capacity installed at the end of 2009 [MW]	Aggregate capacity installed at the end of 2010 [MW]
Biogas plants	70.888	82.884
Biomass plants	252.490	356.190
Solar plants	0.001	0.033
Wind farms	724.657	1 180.272
Water power stations	945.210	937.044
Co-firing*	–	–
Total	**1 993.246**	**2 556.423**

* Due to different ranges of a percentage share of biomass (in the entire fuel stream), the total installed capacity data is not provided for such installations.

Currently in Poland there are no formal mechanisms supporting the construction of new generation capacity which would serve as incentives to foster investment decisions. One exception is the preferential principles for connecting renewable energy sources and CHP units with installed capacity below 1 MW, whereby only half of the connection fee determined on the basis of actual cost is

required, and 50% of investments levels is covered by the DSO or TSO. Other generators have to pay the fee calculated on the basis of 100% outlays on connection investment.

Transmission capacity

Last year, interconnector exchange balance was equivalent to 1 354 GWh. Thus, analogically to previous years, in 2010 Poland was a net exporter, but the surplus of exports over imports, in relative values, remained on virtually the same level. The biggest volume of actual flows was directed from NES to the Czech Republic and Slovakia, and majority of physical imports of electricity came from Germany.

High demand for transmission capacity on NES synchronous connections, over and above existing technical capacity, makes such congestion structural in character. *PSE Operator SA* provided export transmission capacity under annual, monthly and daily auctions, and import capacity was made available under daily auctions. As far as the annual auctions are concerned, the operator provided export capacity of 200 MW; under monthly auctions, at the maximum up to 500 MW (on average in a year, 158 MW); and under daily auctions, at the maximum up to 1 308 MW (on average in a year, 1 106 MW). As far as imports are concerned, maximum capacity available under daily auctions was 382 MW (on average in a year, 266 MW). In 2010, export and import auctions caused similar interest among market participants, as can be concluded from the rate or reserved capacity in both directions, relative to the capacity provided by the operator. The biggest volume of transmission capacity was reserved on the borders with Germany and the Czech Republic.

Moving on to the volume of transmission capacity allocation among market participants, one must note that in 2010 there was no excessive concentration in that regard. The shares of capacity allocated under annual auction remained within the range of 2.5–27.5%. Maximum market share for one entity under a monthly auction amounted to, approximately, 25%, and under daily auctions it reached about 23%.

As a result of cross-border transmission capacity allocation on synchronous connections between Poland and neighbouring countries, the operator accumulated the revenue equivalent to PLN 25 475 637.91. These funds were disbursed in accordance with the objectives set forth in Article 6, paragraph 6, Regulation 1228/2003/EC.

In 2010 the number of NES interconnectors with neighboring power systems and their performance profile did not change, and NES investments carried out in 2010 did not exert direct impact on an increase in cross-border transmission capacity exchange.

In 2010 there were no cases involving the limitation of allocated transmission capacity in the execution of interconnector exchange services due to capacity shortages or network breakdowns.

Implicit auctions on SwePol Link interconnector were launched on December 15, 2010 (with the option to place orders for December 16). Market players on *TGE SA* and *Nord Pool Spot AS* could use interconnector capacity at the maximum volume of 600 MW for imports, and 300 MW for exports. With the use of implicit auctions, market coupling mechanism is the tool for transmission congestion management on a day-ahead market, which improves the efficiency of utilization of existing interconnectors.

In the period of December 16–31, 2010, average hourly capacity provided in export direction (from Poland to Sweden) amounted to 125.18 MW, and in import direction (from Sweden to Poland) to 475.76 MW. *PSE Operator SA* provided capacity predominantly at out-of-peak periods, i.e. between 1:00–6:00 a.m. and 11:00–12:00 p.m. Transmission capacity offered in export direction was smaller than the one available for imports to Poland. This was due to limited potential for export capacity provision by *PSE Operator SA* in view of the need to ensure security of electricity supply, especially in the northern part of the country. At the same time, almost entire transmission capacity available in Poland-Sweden direction was utilized by market participants. It was a consequence of price level gap between Polish market (less expensive) and Swedish one (more expensive). Thus, electricity went from the lower to the higher price area.

Initiatives of the Treasury or state-owned companies undertaken in 2010 with the purpose to develop interconnectors[24)]

In 2010 *TAURON Polska Energia* resumed and commercially optimised energy supplies on 110 kV connectors, connecting distribution areas of TAURON group companies with areas located in the Czech Republic. The connectors involve *EnergiaPro* areas on the Polish side, and *CEZ Distribuce* areas on the Czech side. Running lines operate in island mode are as follows: Boguszów – Porici, Trzyniec – Mnisztwo, and in scheduled as well as emergency mode: Kudowa – Nachod line.

EnergiaPro SA reported the following cross-border high voltage line connections operated by *EnergiaPro SA* in the area of Company operation:

a) Line S-311 110 kV, Turów KWB1 – Neueibau – Hagenwerder;
b) Double-track line S-167/S-168 110 kV, Boguszów – Porici;
c) Line S-295 110 kV, Kudowa – Police – Nachod.

Moreover, the Company indicated that, due to the fact that according to Transmission Grid Code provisions, electricity transmission at the voltage of 110 kV is not suitable for parallel operation (interconnector exchange), the lines referred above are only used to improve the reliability of supply on DSO border areas, and for electricity exchange on a local scale, i.e. supply is directed to a separated 'island' or from the active 'island' (with generation).

Similarly, *ENION SA* reported that the operation and development of cross-border interconnectors enabling electricity trade between neighbouring countries and improvement of system operation security, pursuant to the Energy Law, is the responsibility of Transmission System Operator. *ENION SA*, as a DSO, according to Transmission Grid Code, can only operate and develop interconnectors with neighbouring countries using 110 kV lines, running only in separated systems, through the separation of distribution network areas. Such interconnectors help improve reliability of supply on DSO border areas and enable electricity exchange exclusively on a local scale. The Company reported that it operated 110 kV line 'Mnisztwo – Trzyniec' and 'Mnisztwo – Ustroń – Trzyniec', utilised for the provision of electricity distribution services ending at the Polish-Czech border. Furthermore, in 2010, upon the initiative of *TAURON Czech Energy s.r.o.*, with the purpose to improve the security of power system operation and to enable electricity exchange, the Company resumed its efforts to construct 110 kV line reaching to Polish-Slovak border.

The Board of *ENEA SA* reported that there were talks with Belarus in 2010, associated with the possibility of using 110 kV cross-border line 'Wólka Dobryńska ↔ Brześć' for the purchase of electricity from eastern direction.

In contrast, *GK PGE* proposes that the issue of energy market regionalization may well be discussed in line with the argument that an increase in the utilisation of present-day transmission capacity is possible in the nearest future without the need to invest in new cross-border interconnectors. This is conditioned by appropriate measures to be taken at the level of transmission system operators and regulators, in order to integrate the markets and remove network congestion. Nevertheless, *GK PGE* did get involved in the talks leading to a more detailed analysis of potential construction of interconnector between Poland and Kaliningrad Oblast, which resulted in the establishment of a tri-partite working group by *PGE-PSE Operator* – Russian partner. To date, the parties have agreed that the scope of required analyses must be defined in order to specify technical feasibility and economic viability of the project. In this case, it is also necessary to determine clear legislative assumptions in scope of participation of commercial entities in such projects. *GK PGE* does not preclude the possibility of business talks concerning similar projects on the remaining eastern borders as well.

Having said that, it must be emphasised that investment decisions in that area will be made by state-owned companies with great caution and on a case by case basis, with due consideration for the cost analysis, risks, financial and economic indices, legal status, and additional business-related conditions.

Conclusions

The need to satisfy growing demand represents the key issue in the context of security of electricity supplies to end users.

[24)] Based on input developed by MoST.

The level of capital expenditures included in the tariffs of the TSO and seven DSOs unbundled as of July 1, 2007, went up by almost 24% in comparison to 2009. TSO upholds the assumptions as regards the scope of transmission network development included in the previous edition of development plan. Changes made to the updated development plan were mostly related to the plans involving connecting new generation sources, conventional as well as RES, to the network. Similarly, investment plans of distribution companies in the nearest years lean towards dynamic development and modernisation of grid infrastructure. This is a response to the need to reinforce and extend the grid to be able to connect new users and new sources, especially RES, and to refurbish existing assets. It should be noted in this context that the stage of completion of development plans may raise concern as regards funding potential and existing legal and formal barriers in leading network investments. Those barriers were among key reasons behind the preparation and publication, in November 2010, of the so-called 'Infrastructural Package' by the European Commission, which was intended to boost the number of network investments and facilitate the implementation of such investments.

In conclusion, the attainment of a key priority of 'Poland's Energy Policy until 2030', i.e. increased security of fuel and energy supply, depends on the implementation of investments in energy sector. The President of ERO was equipped with additional powers to monitor investment plans and their execution. These prerogatives would allow a more detailed assessment of secure status in scope of electricity supplies in the future.

5.2. Gas [Article 5] and 2004/67/EC [Article 5]

Gas consumption forecast[25)]

In 2010, total natural gas consumption in Poland was equivalent to 14 416.8 million m³ (13.4 Mtoe). It is forecasted that in the coming years the role of natural gas in Poland's energy mix will increase, considering its use for the purpose of electricity generation, expected development of high performance sources in combined cycle technology, and in view of gradual increase in end user gas consumption. Table 5.8 illustrates gas demand forecast by 2019.

Table 5.8. Natural gas demand forecast for 2010-2019

Year	Natural gas demand forecast	
	[billion m^3]	[MToe]
2011	15.27	14.58
2015	18.37	17.55
2019	18.44	17.62

Source: PGNiG SA.

In 2010, *Gaz-System* Transmission System Operator provided operator service by transmitting, respectively: 13.02 billion m³ (11.16 Mtoe) of high-methane gas and 1.10 billion m³ (0.77 Mtoe) of nitrified gas. Table 5.9 presents TSO forecast regarding the increase in the volume of transmitted gas in years 2010-2019[26)].

Table 5.9. Forecast of growth in the volume of transmitted gas in 2010–2019

High methane natural gas

	Year	[MToe]	[billion m^3]
Volume of transmitted gas (actual)	2010	11.160	13.020
Expected demand levels (forecast)	2011	11.160	13.020
	2012	11.870	13.850
	2019	19.681	20.600

[25)] Facts and figures presented in Section 5.2 are presented according to standard conditions in compliance with the methodology applied by EU member states, i.e. for temp.=15°C, dry gas with vapor molar fraction moisture < 0,001 and pressure of 101.325 kPa, converted into heat of combustion of 39.5 MJ/m^3 (except for 'Storage capacity' subsection').

[26)] The volume of gaseous fuel transmitted in 2010, as well as the forecast for subsequent years, do not include gas volumes transmitted to and from underground gas storage facilities. Expected volumes were presented in accordance with the forecast made in respect of TSO development plan. Division was made in proportion to the flows observed in 2010.

Nitrified natural gas

	Year	[MToe]	[billion m^3]
Volume of transmitted gas (actual)	2010	0.77	1.10
	2011	0.77	1.10
	2012	0.79	1.14
	2019	0.47	0.67

Source: Gaz-System SA.

According to the TSO, projected increase in the volume of gas supplied may be related to the continuous process of connecting new customers to distribution networks, mostly small business customers, and connecting large industrial consumer to transmission network. By the end of 2014, expected increase in the transmission of gaseous fuel in the system will be covered mostly by supplies from already existing gas import 'entry' points.

Resources, domestic production, imports

At present, documented domestic resources of recoverable natural gas, in terms of high-methane gas, amount to, approximately, 101.2 billion m^3, about 60% of which is located in the Polish Lowlands (*Niż Polski*), and the remainder in the vicinity of the Carpathians[27)]. This represents about 0.2% of documented European gas deposits, estimated at 54 billion m^3. In other words, assuming present-day level of natural gas production, domestic resources will suffice for about 25-30 years.

In 2010, domestic production amounted to about 4.2 billion m³ of natural gas (approx. 29 million boe), which represents about 30% of its annual consumption[28]. Supplementary supply was secured by *PGNiG SA* by gas imports of 10.07 billion m³, within the framework of agreements and contracts referred to below, i.e. the long-term import contract with Russia and mid-term supply contracts for natural gas supplies:

- Long-term contract for Russian gas supply with *OOO Gazprom Eksport*, effective until 31 December 2022. In 2010, annual contractual volume reached 9 028.4 million m^3,
- Gas import agreement concluded with *VNG-Verbundnetz Gas AG*, effective until 1 October 2016. In 2010, annual contractual volume reached 1 031.9 million m^3,
- Gas import agreement concluded with *VNG-Verbundnetz Gas AG*, effective until 1 October 2011.

Furthermore, within the framework of local supplies:

- For Hrubieszów area, *PGNiG SA* imports gas under the long-term agreement concluded on 26 October 2004 with *NAK Naftogaz Ukrainy*, effective until 2020;
- For Branice area, *PGNiG SA* imports gas under the agreements with *Severomoravska plynarenska*, effective until December 31, 2011.

The other major gas importer, *EWE energia Sp. z o.o.*, in 2010 imported from Germany approx. 41.46 million m^3 of gas under the terms of agreement signed with *EWE AG*.

When analysing the issue of natural gas supplies, it should be noted that on October 29, 2010, a Polish-Russian agreement on natural gas supplies to Poland was concluded. Under the agreement, *inter alia*, gas supplies increased from the existing volume of 7.45 billion m^3 to about 10 billion m^3 annually, with concurrent preservation of the binding term of contract until 2022. Modification in the volume of contracted natural gas was in fact related to the need to supplement the supplies due to the termination, as of January 1, 2010, of gas supply contract concluded in 2006 by *PGNiG SA* and *RosUkrEnergo*, involving annual gas supply of 2.3 billion m^3, despite the fact that the contract was not executed by the company since the beginning of 2009. In consequence of the above government agreement, in October 2010, *PGNiG SA* and *Gazprom Export* concurrently signed the addendum to the Yamal contract of September 25, 1996.

[27)] The forecast does not take into account the so-called unconventional gas (shale gas, tight gas). Confirmed data on unconventional gas resources will be available after thorough research into this field, i.e. in about 4 years from now.

[28)] Natural gas extraction in 2010 amounted to 4.22 billion m^3, expressed in high-methane gas (E). In relation to the forecast with projected extraction at the level of 4.5 billion m^3, a drop of 0.28 billon m^3 was observed.

Gas production prospects

In accordance with the document entitled 'Poland's Energy Policy until 2030', adopted by the Council of Ministers at the end of 2009, implementation of investments leading to increased natural gas extraction in the territory of Poland is one of key objectives in natural gas market.

As of December 31, 2010, there were 227 gas exploration licences, and 229 gas extraction licences. *PGNiG SA* and *Petrobaltic SA* are two leading companies involved in natural gas and petroleum prospecting and extraction in Poland.

PGNiG SA holds 89 licences for exploration of hydrocarbons in Poland. Additionally, there are several dozen other companies, domestic as well as foreign, involved in prospecting and extraction activity in Poland, such as, for example: *FX Energy, Maraton Oil Corporation, ExxonMobil, RWE Dea, DVP, Chevron, Energia Karpaty.*

With the purpose to satisfy gas demand, prospecting activity targeted at gas extraction from the so-called unconventional resources was intensified in Poland. Considering the increasing number of licences (77 – status as of December 31, 2010) issued by the Minister of Environment, it is possible that in a few years from now recoverable deposits of unconventional gas, i.e. shale gas and tight gas, will be estimated and confirmed and, in consequence, gas production will go up.

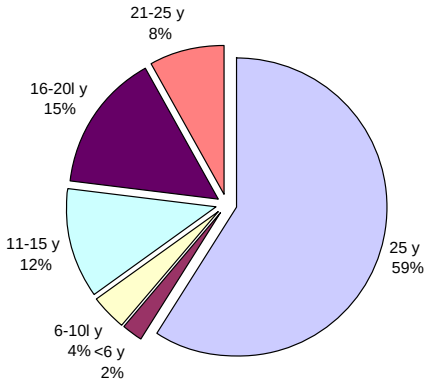
In 2010 r. *PGNiG SA* was involved in work aiming at increasing domestic gas extraction potential. Exploration and prospecting drilling was carried out in the following provinces: the Carpathians, Lublin Syncline, Polish Lowlands; and seismic work was done in the Carpathians and in Polish Lowlands. The following projects are among major investments carried out in 2010 in connection with the preservation of domestic extraction capacity:

- Lubiatów, Międzychód, Grotów natural gas field development design,
- Design of the development of natural gas field in the area of Grodzisk, and enabling gas sales from nitrified fields after prior processing (cryogenic de-nitrification of nitrified gas) to obtain high-methane gas parameters,
- Design of the development of natural gas field in the area of Środa Wielkopolska,
- Design of the development of natural gas field in Rudka borehole with directing the gas to the national gas system,
- Design of the development of natural gas field in the area of Rylowa-Rajsko with directing the gas to the transmission system or nitrogen plant,
- Design of the development of wells in the area of Wola Różaniecka and directing the gas to the transmission system,
- Design of the development of wells in the area of Góra Ropczycka and directing natural gas to the transmission system.

Infrastructure and planned investments increasing the security of natural gas supply (source diversification)

Transmission infrastructure is of key importance for the security of gas supply. It should be remembered that substantial exploitation of pipelines may pose a threat to the continuity of supply in the future or generate high operational costs, and create a barrier to modern transmission grid management. In 2010 there were no major objections regarding transmission system operation, despite its unfavourable age structure - Figure 5.4. Almost 60% of pipelines have been operated for more than 25 years and significant financial investments are required for their maintenance and restoration. Despite of ongoing investment efforts, pipelines currently under construction will not be sufficient to replace the ageing transmission network. Notwithstanding the fact that in recent years some of the ancillary equipment in gas compressor stations was renovated, replaced or upgraded, technical condition of some facilities requires further substantial modernisation effort.

Figure 5.4. Age structure of gas transmission pipelines in years [y]



Source: Gaz-System SA.

Anticipated increase in gas demand in Poland, which is a part of the policy advocating increased share of ecological fuels in the national mix of primary fuels, and results from expected economic development of Poland, heralds the need to mobilise additional sources of gas. On the other hand, in view of a high degree of Polish economic dependence on gas supplies from one direction, and the problems suppliers had in recent years with ensuring continuity of supply, there is need for measures aimed at the diversification of gas supply sources.

Thus, work has been carried out in Poland to make sure that new, systemic gas sources are connected, and there is physical diversification of gas import directions. These projects include:

- Construction of LNG terminal for the reception of liquefied natural gas by sea,
- Development of transmission system in the northern part of Poland,
- Construction of gas pipeline connecting Polish and Czech gas systems under capacity facilitation procedure in Podbeskidzie area,
- Development of Lasów interconnector and underground gas storage facilities.

Considering the need to take measures leading to the accumulation of information regarding the demand for transmission capacity, and ensuing implementation of investments focused on gas transmission through new connections, in 2010 *OGP Gaz-System SA* continued the work on the application of Open Season procedure. All entities which declared that they were interested in transmission capacity reservation and the sales of imported natural gas on domestic market were eligible for this non-discriminatory procedure.

In January 2010, *Gaz-System SA* transmission system operator announced completion of the procedure for the facilitation of interconnector capacity in Podbeskidzie area. The subject of the was allocation of capacity related to investment project of the construction of a gas pipeline from Polish-Czech border in the vicinity of the town of Cieszyn, where a new entry point to transmission system is located, to Skoczów area, where it should be connected with the existing transmission system. The new pipeline, with the capacity of 500 million m^3 of natural gas transmission annually, will be connected on Polish-Czech border with the pipeline prepared by *RWE Transgas Net*[29)] (Czech operator), running from the border to the point of connection to the transmission system in the territory of the Czech Republic.

In December 2010 work on the pipeline on the Polish side was completed (22 km). It is planned that work on the measuring point on the Polish side will be completed by mid-2011, and gas pipeline construction on the Czech side is expected to be finished by the end of 2011. Gas interconnector pipeline should be commissioned and, consequently, transmission service should be launched, at the turn of 2011/2012.

Moreover, in the course of procedure, *OGP Gaz-System SA* and *RWE Transgas Net* signed cooperation agreement in scope of investment implementation. Gas transmission service agreements were signed with the three companies participating in the procedure, i.e.: *PGNiG SA, Handen Sp. z o.o.* and *KRI SA*.

Importantly, concurrently to *Gaz-System SA* procedure, a similar procedure was performed on the Czech side. Both procedures followed uniform basic principles, especially those pertaining to

[29)] As of March 2010, the name of *RWE Transgas Net* group was changed to *Net4Gas*.

interconnector transmission capacity and project timeline, and they were prepared with due attention to binding legal regulations.

Another similar transmission capacity allocation procedure, i.e. Open Season procedure, was held in 2011 for additional capacity in Lasów area. It is expected that additional capacity in the volume of 0.5 billion m^3, enabling the reception of 1.5 billion m^3 on interconnector with Germany, could be commissioned in 2011/2012. On July 5, 2011, *OGP Gaz-System SA* transmission system operator launched the 'Additional capacity allocation procedure in Lasów entry point'. It involves allocation of additional capacity – 52 thousand m^3/h obtained as a result of development and modernisation of transmission system in Lower Silesia in Lasów area, allowing for an increase in gas pipeline capacity on German interconnector from 0.9 billion m^3/year to the total volume of 1.5 billion m^3/year (i.e. from 128 000 m^3/h to 180 000 m^3/h). Also, on June 28, 2011, *OGP Gaz-System SA* transmission system operator filed an application to the President of ERO, requesting approval for the 'Rules for additional capacity allocation procedure at Lasów entry point', in accordance with the formal requirement ensuing from Regulation No 715/2009/EC of the European Parliament and of the Council of July 13, 2009, on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 (EU Journal of Laws, L211/36 of 14.8.2009). Prior to application filing, the 'Rules' were subject to consultation process, carried out by the operator with the President of ERO and market participants.

As far as the implementation of the investment enabling the reception of liquefied natural gas by sea, i.e. construction of LNG terminal, is concerned, it should be noted that on July 15, 2010, a contract involving construction of liquefied natural gas terminal in Świnoujście was signed by and between the investor, *Polskie LNG SA* and the contractor: consortium comprising *Saipem S.p.A.* (Italy) – *Saipem SA* (France) – *Techint Compagnia Technica Internazionale S.p.A.* (Italy) – *Snamprogetti Canada Inc.* (Canada) – *PBG SA* (Poland) – *PBG Export Sp. z o.o.* (Poland). Moreover, related investments are in progress to develop transmission system and enable the transmission of additional quantities of gas received from the terminal. Ultimately, it is planned that a northern trunk pipeline ring will be created, which will represent a part of highly secure and reliable transmission system owing to evenly distributed source connections. Construction of the following pipelines has been continued as a part of gas reception and distribution ring from that source: Szczecin – Gdańsk (DN 700), completion of construction of Włocławek-Gdynia (DN 500) gas pipeline, Szczecin – Lwówek (DN 700), Gustorzyn – Odolanów (DN 700).

Storage capacity[30)]

In 2010, 100% of underground storage capacity was owned by *PGNiG SA*. The company operates eight underground gas storage facilities of total working capacity equal to 1837.89 billion m^3.

In 2010 the company provided 50 million m^3 to *OGP Gaz-System SA* in connection with transmission system operator function performed by that company. The remaining capacity was utilised for *PGNiG SA* needs.

In 2010 work on the construction and development of high methane natural gas storage facilities was continued in: Mogilno, Strachocina, Wierzchowice and Kosakowo, and Bonikowo nitrified gas storage facility launched in 2010. Even though the work did not result in an increase in physical storage capacity, working capacity of Mogilno underground storage went up by 7.89 million m^3, due to the reduction in buffer gas in favour of working capacity of the storage facility.

In 2010 investment work was carried out with the purpose to develop storage capacity in natural gas storage facilities listed below:

a) *PMG Kosakowo*
   - Type of investment: construction of an underground cavern gas storage facility. Kosakowo underground gas storage facility will be located in the area of Mosty village, Kosakowo municipality, Pomorskie region (voivodship). In line with *PMG Kosakowo* design, gas will be stored in salt caverns created in 'Miechelinki' salt deposit under the maximum pressure of

[30)] Facts and figures are presented according to conditions compliant with *PGNiG SA* tariff, i.e. for temp.=0°C, dry gas with vapor molar fraction moisture < 0.001, and pressure of 101.325 kPa.

17 MPa. The project involves construction and installation work connected with building ground level technological facilities and comprehensive back-up facilities required for storage facility operations, drilling work for exploitation boreholes for the construction of caverns and operation of underground section of the facility, as well as cavern leaching. Supply and installation of technological equipment apply to both ground level and underground construction of *PMG Kosakowo* storage facility.

Investment project includes:

- Construction of 10 storage compartments located in 'Miechelinki' salt deposit,
- Construction of ground level gas section of *PMG Kosakowo*,
- Construction of a leaching plant and dumping pipe to drain the brine originating during cavern leaching to Zatoka Pucka bay; the plant will be made up of two sections: on-shore and off-shore one.

Completion of the development of storage facility capacity to the volume of 250 million m^3 is planned for the end of 2020.

b) *PMG Wierzchowice*
   - Type of investment: development of an underground gas storage facility. The project will be executed in the area of former *KGZ Wierzchowice* natural gas mine. It consists in the development of Wierzchowice underground gas storage facility to working capacity level of 1 200 million m^3, planned for implementation in 2007–2011/2013. When the project is completed, total storage capacity of *PMG Wierzchowice* will increase by 625 million m^3, i.e. from the current capacity of 575 million m^3 to 1 200 million m^3. Work involving the development of *PMG Wierzchowice* to working capacity of 1.2 billion m^3 was started in 2000. Planned investment consists in the development of ground level technical infrastructure required for the operation of underground gas storage facility, and drilling storage boreholes grouped into sections. Completion of the development of storage facility capacity to the volume of 1.2 billion m^3 is planned for the end of 2011 (storage facility will be filled with gas up to working capacity of 1.2 billion m^3 in 2012), connection agreement with *Gaz-System SA* will be executed in 2013.

c) *KPMG Mogilno*
   - Type of investment: development of an underground cavern gas storage facility. *KPMG Mogilno* investment in progress consists in successive development of gas storage facility with new storage compartments (caverns), together with concurrent development of installations for ground level facility infrastructure. Currently, working capacity of *KPMG Mogilno* amounts to 370 million m^3, the objective is to add ten new compartments with working capacity equivalent to 868 million m^3 by 2020. Construction of the first four storage compartments will be completed in 2015.

d) *PMG Strachocina*
   - Type of investment: development of an underground gas storage facility. The investment in progress is expected to increase working capacity of the facility from 150 million m^3 to 330 million m^3. For that purpose, investment tasks must be carried out, involving the construction of ground level technical infrastructure required for the operation of underground gas storage facility, construction of two sections of grouped storage boreholes, and construction of necessary transmission pipeline infrastructure. Completion of the development of storage facility capacity to the volume of 330 million m^3 is planned for 2011.

e) *PMG Daszewo*
   - Type of investment: construction of an underground gas storage facility. *PMG Daszewo* construction project involved building an underground gas storage facility for Ls nitrified gas, with working capacity up to 30 million m^3. The facility was built as a result of conversion of the existing petroleum and natural gas 'Daszewo' mine. The project consisted in the construction of ground level section of *PMG Daszewo*, together with connection infrastructure. Implementation of *PMG Daszewo* investment was completed in 2009.

f) *PMG Bonikowo*
   - Type of investment: construction of an underground gas storage facility. *PMG Bonikowo* construction project involves building an underground gas storage facility for Ls nitrified gas, with working capacity up to 200 million m^3. The facility was built as a result of conversion of the existing natural gas mine. The project consisted in the construction of ground level section of *PMG Bonikowo*, drilling, construction of gas pipeline from Kościan distribution node, and additional construction work. Implementation of *PMG Bonikowo* investment was completed in 2010.

Table 5.10. Description of gas storage facilities: developed ones and those under construction.

Name of facility	Type of investment	Working capacity	Target capacity	Execution deadline
High methane gas storage facilities				
Wierzchowice	Development	575	1 200	2011
Strachocina	Development	150	330	2011
Mogilno	Development	370	840	2020
Kosakowo	Construction	-	250	2020
Nitrified gas storage facilities				
Bonikowo	Completed	200	200	2010
Maszewo	Completed	30	30	2009

* Facts and figures are presented according to normal conditions, i.e. dry gas with vapor molar fraction moisture < 0.001, and pressure of 101.325 kPa.

Security of supply standards

In 2010 security of gas supplies in Poland was ensured in compliance with the requirements of Directive 2004/67/EC and with due consideration for country regulations, i.e. the law on natural gas obligatory stocks and the principles of proceeding in circumstances of a threat to supply security[31)] (hereinafter, the Law), and secondary legislation such as, *inter alia*, the regulation on the restrictions.

The law on obligatory stocks, in effect since 2007, provides normative basis for annual development of the system ensuring security of natural gas supply. Pursuant to the law, the following gas supply security mechanisms were in force:

1. Companies involved in gas trade with other countries and natural gas importers were obliged to maintain the stocks of gaseous fuel in the territory of Poland:

- in the period between October 1, 2009, and September 30, 2010 – in the amount equivalent to at least 15 days,
- in the period between October 1, 2010, and September 30, 2012 – in the amount equivalent to at least 20 days.

Compulsory stocks must be maintained as a safeguard against negative implications of disruptions in natural gas supplies, so that quick intervention measures can be taken to compensate for the shortage in gas supply balance on the market.

The volume of stocks was verified by the President of ERO on the basis of 2010 gas import projection.

2. Energy companies involved in gas trade and the entities which commissioned transmission service were obliged to prepare relevant procedures in case of threat to continuity of supplies.

3. Gas transmission system operators, distribution system operators were obliged to prepare plans for the introduction of restrictions in natural gas consumption, specifying maximum hourly and daily volumes of natural gas consumption by each consumer connected to the network, for each degree of supply[32)]. Restriction plans are introduced and, concurrently, compulsory gas stocks are launched upon the motion of the minister competent for the economy.

4. If the steps taken by the operator should turn out to be inadequate and the threat to the security of natural gas supplies would continue, the operator would have to notify the Minister of Economy, who might apply to the Council of Ministers to take action and notify the Head of Gas Coordination Group[33)].

5. The President of ERO controls energy companies involved in gas trade and gas imports from other countries, as well as gas storage, in scope of compliance with the obligation to maintain compulsory gas stocks.

[31)] The Act on obligatory stocks of crude oil, petroleum products and natural gas, the principles of proceedings in circumstances of a threat to fuel security of the State and disruption on petroleum market, dated 16 February 2007, Journal of Laws of the Republic of Poland 2007, no 53, item 343.

[32)] The President of ERO, by the way of 2010 decisions, approved of the restriction plan submitted by gas transmission system operator – *OGP Gaz-System SA* – and relevant plans presented by six gas distribution system operators.

[33)] Gas Coordination Group was established to streamline coordination at the EU level as regards measures taken in the circumstances of substantial disruption of supplies.

In 2010, the mechanisms referred to above were applied in the following way:

1. Energy companies involved in gas trade and natural gas imports from other countries, as well as in gaseous fuel storage, were obliged to apply to the President of ERO to obtain a decision on the volume of compulsory fuel stocks for 2010. The President of ERO determined the volume of stocks on the basis of gaseous fuel imports quantity during statutory period. In 2010, *PGNiG SA* maintained compulsory gas stocks in the volume specified in the decisions issued by the President of ERO and compliant with the provisions of the law on stocks. Other energy companies subject to compulsory stocks requirement did not have to maintain such stocks due to the fact that they did not start trading natural gas with other countries, or took advantage of the exemption from that obligation upon the decisions issued by the Minister of Economy.

2. Stock verification applies to the companies already involved in gas imports, and stock determination applies to the companies which are about to start operation in that regard.

With regard to the former, the volume of compulsory gas stocks is determined by the company itself on the basis of the volume of imports, in the period between April 1 of previous year and March 31 of the year in question, which is derived from statistical records prepared by the company. Information on the specified volume of stocks is submitted by the company to the President of ERO by May 15 of the year in question, for verification purposes (Article 25, paragraph 3, of the Law of February 16, 2007).

With regard to the latter, in accordance with the provisions of Article 25, paragraph 5 of the Law – the quantity of compulsory stocks is determined by the President of ERO:

- For the period between the date of commencement of imports and September 30, on the basis of company declaration pertaining to the planned imports volume,
- Between October 1 and September 30 of the following year, on the basis of average imports volume for the past period of operation.

In 2010 the President of ERO, in accordance with the Law of February 16, 2007, issued one decision approving the volume of stocks determined by *PGNiG*; the company must maintain such volume of stocks in the period between October 1, 2010 and September 30, 2011.

3. On January 15, 2010, the Minister of Economy, upon request from *Gaz-System SA* transmission system operator, issued a decision allowing the utilisation of compulsory stocks of natural gas, in accordance with Article 26, paragraphs 1 and 2, Law on the Stocks. Pursuant to that decision, the quantity of compulsory stocks amounted to 413.3 million m^3, they were accumulated in three underground gas storage facilities of Wierzchowice, Husów, and Mogilno.

4. The President of ERO undertook two inspections to check compulsory fuel stocks status, on May 31 and September 30, 2010, respectively. Inspections have shown that the required volume of stocks was maintained by all the entities obliged.

5. Pursuant to the provisions set forth in the Law on the Stocks, entities have to develop plans pertaining to restrictions in natural gas consumption; they notify users about the maximum volume of natural gas consumption determined in the approved restriction plan, in accordance with each degree of supply. Such volumes, specified in approved restriction plans, become an integral part of sales contracts, natural gas transmission or distribution service agreements, and common service agreements.

In 2010 the President of ERO, by decisions issued in the period of 26 November – 23 December, 2010, approved of the restriction plan presented by *Gaz-System SA* gas transmission system operator, and relevant plans submitted by six gas distribution system operators. Restriction plans approved by the President of ERO may be modified at the request of relevant operator, during their term of validity. In 2010, in the case of two gas distribution system operators, the President of ERO issued decisions amending the decisions made by the President of ERO in 2009 on approving the plans for natural gas consumption restrictions, presented by these operators. Those changes were linked to the changes in contracts concluded with the users connected to the network administered by these operators, i.e. changes in maximum hourly and daily volumes of natural gas consumption under each degree of supply.

Incentives for new investments

National regulations include a set of measures (incentives) for new investments. The Energy Law contains a mechanism enabling the President of ERO to exempt enterprises from the obligation to provide services on the basis of TPA rule and present tariffs for approval in the case when those

services are rendered on the basis of gas system or gas installation elements the construction of which was not completed before August 4, 2003, or was commenced after that date. In 2010 no company applied for such a decision.

Furthermore, the catalogue of incentives for new investments included items such as the following:

1. Investment co-financing from EU support funds. Gas sector was included in two priorities: Priority IX – Environment-Friendly Energy Infrastructure and Energy Efficiency, and Priority X – Energy Security, including diversification of energy sources. Within those two priorities, the sector used, in total, EUR 22.4 mln in 2010.
2. Justified cost related to the construction, development or modernisation of gaseous fuel storage facilities may be reimbursed, together with a justified return on capital committed to that investment, in the amount not smaller than a 6% rate of return. In 2010 *PGNiG SA* obtained in the tariff a 9% rate of return on capital.
3. Justified cost incurred by transmission and distribution system operators in relation to the performance of their tasks. In 2010, the rate of return on capital for transmission system operator was equal to 9%, and average rate of return for six distribution operators was at 8.6%.
4. Elimination of legal barriers concerning implementation of power sector line investments. Measures that facilitate the implementation of energy investments directly translate into better energy security of the state, improved quality of services in scope of supplies of natural gas to end users, *inter alia*, and accelerated disbursement of EU funds.
5. 2010 amendment of the law of April 24, 2009, concerning the investments in LNG re-gasification terminal in *Świnoujście*. The law sets forth the rules for the preparation of LNG terminal investment implementation and financing, required due to important state security interest at stake, with associated investments; the amendment to the law enhances and streamlines the process of investment implementation through added provisions pertaining to the construction of gas pipelines and the infrastructure necessary for terminal operation.

Country regulations regarding the so-called 'new infrastructure'

Regulations regarding new infrastructure are included in Article 4, the Energy Law. According to the provisions of that Article, the President of ERO may exempt the company from the requirement to follow TPA rule with regard to specified infrastructure or to submit tariffs for approval, in the situation when such service provision is performed by means of the so-called 'new infrastructure', i.e. the elements of gas system or gas installations the construction of which was not completed by August 4, 2003, or was commenced after that date.

The President of ERO grants the exemption when the following conditions are met jointly:

- new infrastructure contributes to competitiveness in scope of gaseous fuel supply and the security of supply,
- because of the risk related to infrastructure construction, it would never be initiated without such exemption,
- new infrastructure is/will be owned, at least in legal terms, by an entity independent from gas system operator in whose system the new infrastructure was/will be built,
- there are infrastructure usage fees charged from new infrastructure users,
- the exemption in question will not result in the deterioration of the conditions of competition and efficiency of operation of gaseous fuel market or gas system in which the new infrastructure has been/will be built.

Infrastructure projects within the framework of trans-European energy networks (Decision no 364/2006/EC)

Addendum no 1 to the Decision no 1364/2006/EC describes LNG terminal in *Świnoujście* for the reception of liquefied natural gas by sea as infrastructure project 'of European interest'. The construction of LNG terminal in *Świnoujście* is planned for completion in 2014. Terminal reception capacity should amount to 5-7.5 billion m^3 natural gas a year.

Relationship with 'third country' gas producers and exporters

Relationship between Poland and third countries in the area of natural gas market can be divided into two categories:

1. Technical relations involving cooperation between transmission system operators.

Gaz-System SA Transmission System Operator, within the framework of company operation, cooperated with the operators from neighbouring countries. Such operators' cooperation is related to transmission system management in borderline areas and system interconnectors. The Polish TSO has entered into official agreements on operators' cooperation with *Ukrtransgaz NAK Naftogaz Ukrainy*, *OAO Bieltransgaz* in Belarus and *ONTRAS-VNG Gastransport GmbH*. These agreements involve cooperation in dispatching control of gas flows at border points of Drozdowicze (the Ukraine), Wysokoje Tietierowka (Belarus) and Lasów, Gubin and Kamminke (Germany). At the same time, they specify technical conditions of border stations were gas quantity and quality measurements are taken, along with the method and procedures for information exchange among operators, and emergency procedures. Additionally, contacts were maintained as regards the possibility of increasing transmission capacity at border points, for example in Lasów. Furthermore, at the regulatory level, within the framework of the Regional Coordinating Committee for Southern and South-Eastern Market Gas Regional Initiative, discussions were held on the interconnector with the Czech Republic near the town of Cieszyn, which would be used to supply natural gas to Poland in the annual volume of about 0.5 billion m^3, and Lasów interconnector with Germany, currently under development, target capacity of that interconnector will reach the level of 1.5 billion m^3 annually.

2. Commercial relations involving gaseous fuel trade.

- On October 29, 2010, *PGNiG SA* and *Gazprom export* signed the addendum to the Yamal Contract, in particular specifying the increase in the volume of annual gas supplies to Poland between 2010 and 2020. With this addendum, gas supplies to Poland are stabilised due to the fact that, *inter alia*, the contract is concluded directly with the producer. At the same time, increasing the volume of supplies will not have a negative impact on diversification projects under way.
- Moreover, considering the relationship with the companies that export gas to Poland, one must note the fact that in Ukraine the Law of July 8, 2010, on the principles governing the operation of natural gas market, specifying legal, economic and organisational rules for the operation of natural gas market in Ukraine, came into effect, which resulted in the suspension of supplies by *NAK Naftogaz* on September 1, 2010. In consequence of actions taken by *PGNiG* and bilateral discussions, supplies were resumed on September 28, 2010. At the same time, the Ukrainian partner communicated that in connection with the new law, the contract for gas supplies to Poland will be executed only until the end of 2010. On December 20, Ukrainian operator announced the suspension of supplies at Hrubieszów entry point, arguing that it was necessary due to the change in internal regulations in Ukraine, according to which the entire volume of natural gas derived from domestic production must be allocated solely to satisfy the needs of the Ukraine, which precludes the possibility of supplies to Poland, in the opinion of the Ukrainian stakeholder. Despite the fact that supplies from Ukrainian direction were disrupted, the supply for all gas consumers in Hrubieszów area was secured with the gas from the stocks and delivered from the national transmission system.

PGNiG SA was also involved in prospecting and production activity on Norwegian continental shelf – in Norway and in Denmark. In 2010 seismic work was continued, leading to prospecting drilling. Also, prospecting and production activity was carried out in Libya, Algeria, Pakistan and Egypt; the work was quite advanced and, after the review of data, it resulted in a positive decision regarding further drilling.

Conclusions

In the analysis of individual measures taken in 2010 in order to ensure security of gas supplies, the following conclusions can be drawn:

1. Gas system efficiency did not give rise to any concern, and all stakeholders responsible for gas supply have met their statutory obligations. The only exception was the failure to meet the obligation,

by transmission system operator, to submit Transmission Grid Code (IRiESP) for approval to the President of ERO, which resulted in a financial fine imposed on the company[34)].

Further, energy companies responsible for gas supplies carried out modernisation and investment projects in order to increase system efficiency and provide new supply channels (construction of LNG terminal for the reception of liquefied natural gas by sea, development of transmission system in the northern part of Poland, construction of a pipeline connecting Polish and Czech gas system under available capacity procedure in *Podbeskidzie* region, development of Lasów interconnector and underground gas storage facilities).

Efforts in the field of infrastructure development undertaken in 2010 should be viewed positively, but due to the length of investment cycle the work carried out with the purpose to enable supplies from new directions has not been completed to date (potential benefits will be obtained in the future). Consequently, there was no real possibility to purchase natural gas from the eastern direction from suppliers other than *Gazprom*.

2. Legislative changes introduced in 2010 at the national as well as community law were beneficial from the standpoint of increased security of supply. These changes applied to the performance of the entire gas sector, in particular in scope of security of supply, including crisis response mechanisms and procedures, and the extent of support for infrastructural investment, as well as the policy of Poland, other European countries and the European Commission in the area of energy security. Furthermore, the following factors had very high impact on the evaluation of security of supply: market demand for gaseous fuels, the level of diversification and contractual portfolio for gas supplies to Poland, technical infrastructure and functionality of transmission, storage and distribution systems, and interconnector status between Polish and European gas system. Another important factor is domestic extraction potential, the growth of which – in the context of prospecting work currently in progress in scope of unconventional sources of natural gas may determine energy security of the country for decades to come.

3. Pursuant to the Energy Law (amendment came into effect on March 11, 2010), the President of ERO is authorised to appoint *ex officio*, for a specified term, gas transmission, distribution and storage system operators, as well as natural gas liquefaction system operator. Before, the law stipulated that the President of ERO could appoint the operator only upon the motion of the company. Legislative changes introduced with the amendment aligned Polish law with the EU requirements, and paved the way for the appointment of the transmission system operator at the Polish section of Yamal-Europe gas pipeline. Consequently, the President of ERO was able to designate on November 17, 2010, *OGP Gaz-System SA* as the operator of gas transmission system at the Polish section of Gas Transit Pipeline Systems Europe – Western Europe until December 31, 2025.

4. Removal of market entry barriers for new suppliers under the law on the stocks, while at the same time ensuring the security of supply.

The work on amending the law of of 16 February 2007 on stocks of crude oil, petroleum products and natural gas, and the principles of proceeding in circumstances of a threat to the fuel security of the State and disruption on petroleum market was continued in 2010 (and in 2011), with the purpose to develop conditions for competition development on domestic gas market and align the law with Community legislation, preserving high level of security. The following clauses represent important proposals for the performance of competitive gas market:

- Allowing for the possibility of maintaining compulsory stocks of natural gas in gas storage facilities located outside of the country;
- Limiting the requirement to maintain natural gas stocks only and exclusively to the companies dealing with business activity involving natural gas imports for further resale to users in the territory of the Republic of Poland;
- Increasing the limit of natural gas imports allowing for applying for exemption from the requirement to maintain natural gas stocks to the level of 100 million m^3 annually;
- Allowing the entities which plan to enter Polish market to apply for exemption from the requirement to maintain natural gas stocks.

[34)] In 2010 the President of ERO initiated a proceeding concerning monetary fine for non-compliance with the requirement to submit Transmission Grid Code (IRiESP) to the President of ERO for approval by the relevant transmission system operator. It was determined that the obligation referred to in Article 9g, paragraph 7 of the Energy Law, involving the submission, within the deadline specified in Article 14, paragraph 1, law of January 8, 2010, amending the Energy Law and some other laws (Journal of Laws of the Republic of Poland, 2010, No 21, item 104), of Transmission Grid Code (IRiESP), together with the information on comments by system users and the way in which such comments were taken into consideration. The proceeding ended with a decision in which, pursuant to Article 56, paragraph 1, point 1b, in connection with Article 56, paragraph 2, point 3 and point 6 of the Energy Law, monetary fine in the amount of PLN 249 797.63 was pronounced.

Moreover, efforts aiming at the elimination of market entry barriers for new suppliers were reflected in the regulation of the Minister of Economy of July 2, 2010, concerning detailed conditions for gas system operations, repealing the previous Regulation of the Minister of Economy, Labour and Social Policy of April 6, 2004, concerning detailed conditions for connecting entities to gas networks and gas network operation, which was not compliant with regulatory requirements in scope of domestic gas market operation. Among the most important provisions of the Regulation one should underline those that give priority in offering storage capacity to the entities obliged to maintain compulsory stocks of natural gas.

Furthermore, these provisions were also connected with the hitherto unregulated issue of effective cooperation between different owners of individual elements of gas infrastructure. According to the provisions, transmission and distribution services must be rendered in such a way that the utilisation of storage and re-gasification services is possible, in order to prevent the situations when access to storage facility or LNG terminal is blocked due to the fact that gas transmission is not possible.

It should be noted that the members of the team appointed for the design of draft Regulation agreed that the implementation of many mechanisms significant for the development of competition and improvement in the security of gas supplies requires primary legislation (among other things, the issue of virtual hub). With the introduction of virtual gas hub solution to the legislation, physical gas flows would be streamlined, and new entrants would appear of gas market, which would result in improved security of supply.

5. On December 2, 2010, the Regulation of the European Parliament and of the Council No 994/2010/EC of October 20, 2010, concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC came into force; the provisions for safeguarding the security of gas supplies contained therein are not without impact on the operations of individual enterprises, especially *OGP Gaz-System SA* and *PGNiG SA*.

6. Due to inadequate mechanisms of cooperation with Poland's neighbouring countries which are not EU member states, gas supplies carry certain risk, and the level of security is lower. It refers to Belarus as well as the Ukraine. It makes difficult to fully utilise transmission capacity on *Gaz-System* network connectors with the networks of Belarusian and Ukrainian operators, which translates into difficulties with securing gas supplies from the East.

7. Conclusion of Polish-Russian agreement on October 29, 2010, concerning natural gas supplies to Poland, and signing the addendum to the Yamal Contract of September 25, 1996, by *PGNiG SA* and *Gazprom Export.* In this context, one must see in the positive light the repeal of natural gas re-export clause, thus allowing Poland to sell the gas and trade it in the European Union. Moreover, the parties to the contract declared that they were interested in signing the contract for gas transit through the territory of Poland until 2045.

Yet, the repeal of re-export clause may have no practical significance. It seems that western companies, despite the absence of such clauses, did not sell gas *PGNiG SA* in 2010, probably for fear of deterioration of their trade relations with *Gazprom*. This shows that market coupling solutions should be implemented, with transactions performed by trade platforms and anonymity of the parties to the transaction, which will allow departure from bilateral contracts.

Additionally, it turned out in 2010 that Poland's negotiating position does not allow for the attainment of fully satisfying pricing terms from external suppliers, and notwithstanding the fact that Poland has its own natural gas resources, the price of gas offered to end users remains at a relatively high level. This situation testifies to the validity of arguments for common negotiations within the European Union. At the same time, the analysis of prices obtained by foreign companies in gas hubs show that it is possible to obtain more favourable pricing conditions. In view of the above, a point to consider is the issue of giving Polish companies access to such markets.

8. In the opinion of the Regulator, thanks to the work carried out in Poland in 2010 (construction of LNG terminal in Świnoujście, cross-border interconnectors with the Czech Republic near Cieszyn, and development of transmission capacity on Lasów interconnector with Germany), the investments of key importance for gas supply security should be completed in the near future. At the same time, thanks to access to new natural gas sources, physical diversification of natural gas import directions will be possible. Moreover, initiatives undertaken by the entities responsible for gas infrastructure development, with the application of available procedures, such as, for example, Open Season Procedure, should be evaluated favourably from the standpoint of non-discriminatory access to capacity, as well as the economics and optimisation of efficiency of investment projects under way. The methods of collecting market information on transmission capacity demand adopted by gas companies appears to be satisfying, and it will be applied during subsequent investment projects.

6. PUBLIC SERVICE ISSUES [ARTICLE 3(9) ELECTRICITY AND 3(6) GAS]

Public service issues are at the core of electricity and gas market liberalisation. Fundamental public service objectives are as follows: ensuring security of supply, network reliability, adequate quality and price of service, together with regard for environmental as well as company energy efficiency improvement obligations. Those obligations are specified in Polish legal regulations (the Energy Law and secondary legislation), as well as in licence terms and conditions. They are bidding for the stakeholders of energy and gas market. Pursuant to Article 56, paragraph 1, point 12 of the Energy Law, in the event when an energy company fails to meet the requirements set out in the licence, it is subject to a financial penalty administered by the President of ERO. Moreover, if an entrepreneur blatantly violates terms of licence or other requirements related to licensed economic activity, as set out in the law, the President of ERO shall revoke their licence, pursuant to Article 41, paragraph 3 of the Energy Law.

Certificates of origin

The President of ERO confirms that electricity is generated from renewable sources by certificates of origin of electricity. The system of issuing (and then redeeming) certificates of origin has been fully operational since the beginning of 2005 (Articles 9a and 9e of the Energy Law). Pursuant to these provisions, electricity generated from renewable sources is branded according to the following generation technologies: biogas, biomass, wind, water, and cogeneration. Certificates of origin are issued by the President of ERO upon a request from the generator (licence holder) and certified by the power system operator in scope of electricity generation volume for the period in question.

Quantity of electricity generated in renewable sources of energy, confirmed with certificates issued for 2009-2010, is presented in the table below.

Table 6.1. Electricity generation and certificates of origin in the period 2009-2010 (Status as of May 6, 2011).

RES type	2009	2010
	Electricity volume [MWh]	Electricity volume [MWh]
Biogas plants	295 311.766	364 090.474
Biomass plants	601 088.244	635 634.844
Wind farms	1 035 019.729	1 819 653.862
Hydro power	2 375 778.805	2 920 555.895
Co-firing	4 286 588.172*	5 148 833.652*
Total	8 593 786.716 (8 533 SP)	10 888 768.73 (10 317 SP)

* Including solar power plants.

In the Polish system, three types of certificates of origin are issued for electricity produced from cogeneration:

1) certificates of origin for electricity generated in installations fuelled with gas, or with installed capacity below 1 MW (known as 'yellow' certificates),
2) certificates of origin for electricity generated in the remaining cogeneration sources (known as 'red' certificates),
3) certificates of origin for cogeneration units fuelled with methane released and captured during underground mining work in hard coal mines that are open, under liquidation, or liquidated, or by gas obtained from biomass processing ('purple' certificates).

Production of electricity from cogeneration, confirmed with issued certificates of origin from cogeneration for 2009-2010, is presented in the table below.

Table 6.2. Production of electricity from cogeneration, in 2009 and 2010, status as of May 6, 2011.

Type of cogeneration unit	2009	2010
	Electricity volume [MWh]	
'Yellow'	3 069 811.55	3 029 330.71
'Red'	21 149 913.97	22 364 868.60
'Purple'	–	101 577.16

Generators who have obtained certificates of origin or CHP certificates of origin may sell those certificates on the Polish Power Exchange to stakeholders who are obligated to purchase certificates, thus earning additional income from electricity generation.

The system of support for renewable sources and CHP includes also legal provisions which foresee that financial penalties may be imposed upon those companies which have not fulfilled their obligation to purchase a required quantity of certificates of origin or CHP certificates of origin, or have not paid a relevant substitution fee instead.

An obligation to purchase certificates of origin and CHP certificates of origin and present them for redemption, or to pay a substitution fee, was imposed upon companies dealing in electricity generation or trade and selling such electricity to end users.

In order to meet this requirement, these companies may:

- redeem appropriate certificates of origin,
- pay a substitution fee to the account of National Fund for Environmental Protection and Water Management, which should be dedicated to supporting renewable energy and cogeneration sources located in the territory of the Republic of Poland.

According to the law, the President of ERO verifies compliance with the obligations referred to above by energy companies. Verification is performed after the end of each calendar year (after March 31).

Implementation of the criteria from Annex A to Directives 2003/54/EC and 2003/55/EC

Criteria from Annex A to Directives 2003/54/EC and 2003/55/EC were implemented in 2005 with the law of March 4, 2005, amending the Energy Law, and with the Environmental Protection Law (Journal of Laws of the Republic of Poland, 2006. No 62, item 552). It should be underlined that a majority of the criteria laid down in those Annexes were introduced as primary legislation provisions. However, the criteria are so detailed that some of them had to be included in appropriate secondary legislation. Detailed implementation of electric power market criteria was performed on the basis of the regulation of the Minister of Economy of July 2, 2007, on detailed principles governing the development and calculation of tariffs and financial settlements in electric power trade, and, among others, provisions regarding customer service quality standards and handling complaints were implemented.

In the regulation of the Minister of Economy concerning detailed conditions of gas system operation (communicated to the European Commission on February 1, 2010), provisions implementing the criteria referred above were also included, for example, those regarding customer service quality standards and complaints.

Furthermore, the law of January 8, 2010, amending the Energy Law and some other laws (Journal of Laws of the Republic of Poland, 2010, No 21, item 104) came into effect, for the most part, on March 11, 2010. With this law, a customer may switch supplier without any additional costs over and above the cost specified in the contract. Further, gaseous fuel suppliers who sell such fuels to end users connected to distribution or transmission network and electricity suppliers who sell electricity to end users connected to distribution network have to publish the information on gas or electricity sales prices respectively and underlying conditions on their websites, and make such information publicly available at their premises.

Support for socially vulnerable customers

Question of vulnerable customers has not yet been addressed at primary legislation level, despite that fact the an increase in electricity and gas prices has become a social issue which generates poverty, including energy poverty. During the period of energy market transition, including liberalisation processes in progress, new energy directives strongly emphasise the need for customer empowerment on the market in order to provide customer with equal opportunities. In particular the need to implement, under the framework of social policy, a programme aiming at the protection of vulnerable customers, exposed to fuel poverty was emphasised. This stipulation was indicated in Activity 5.5 of 'Action Plan for 2009-2012', a document accompanying 'Poland's Energy Policy until 2030', adopted on November, 10, 2009. According to this document, the development and implementation of a relevant solution for vulnerable household customers within the framework of national system of social assistance rests upon the Minister of Economy and the Minister of Labour and Social Policy. The President of ERO has no specified role in that regard.

In December 2009 the Minister of Economy submitted to the Committee of the Council of Ministers a draft of the 'Assumptions for the acts introducing a system of support for vulnerable electricity consumers'. This document was developed by the Working Group which role was to draft legal framework regarding support for vulnerable household consumers of electricity on competitive market within the framework of national system of social assistance. Representative of the President of ERO was among Group members. In 2010 the work on draft assumptions was continued due to the fact that the concept gave rise to numerous controversies as far as proposed support mechanisms are concerned. In February 2010 the Minister of Economy submitted to the Committee of the Council of Ministers draft 'Assumptions for the acts introducing a system of support for vulnerable electricity consumers' once again. This draft contained a new approach (completely different from the one developed by the Working Group), based on the introduction of a lump-sum payment for electricity and related compensation scheme for energy companies, involving earmarked grants for those companies. On May 11, 2010, draft assumptions were approved by the Council of Ministers. In consequence, in October 2010, a draft law amending the Energy Law and some other laws was prepared, in line with the 'Assumptions for the acts introducing a system of support for socially vulnerable electricity consumers'. The President of ERO presented comments to the assumptions for the system of support for vulnerable customers as well as to the draft law, consistently arguing that, in compliance with the wording of the directives, protection of such customers should be provided within the structure of social assistance system. The involvement of energy companies in the system was regarded by the President of ERO as unnecessary difficulty with potential strong negative impact on system effectiveness. To date, the system of support for socially vulnerable customers has not been put in place.

Notwithstanding the above, it should be noted that in 2010 the President of ERO undertook educational and informational activity carried out by ERO branches and working groups to better inform the stakeholders about problem of vulnerable customers.

Default suppliers – obligations and selection methods

From 1 July, 2007, energy companies dealing only with electric power distribution started activities on the market. They were established on the basis of 14 biggest incumbent companies which, until that point in time, had been involved in electricity distribution and trade. By the way of administrative decision, the President of ERO appointed them as distribution system operators (DSOs)[35]. In consequence, electricity market saw the emergence of suppliers who were parties to common service agreements. At present, they act as default suppliers for household customers who did not decide to switch supplier. There are also other suppliers on the market, who have not been established on the basis of incumbent energy companies. Approximately 200 other suppliers are vertically integrated industrial power sector companies, involved in sales and distribution activities.

Pursuant to the Energy Law, default supplier is selected in tender procedure. Until the tender is announced, that function is performed by „incumbent" suppliers. In 2010, no tenders were held.

[35] The number of legally unbundled DSOs went down from 14 to 7, as a result of horizontal consolidation of electricity distribution areas in *PGE* corporate group, which took place in 2010.

Electricity consumers have entered into the so-called common service agreements with default suppliers, which include the provisions of a sales contract with transmission or distribution service contract. Moreover, a default supplier is obliged to provide comprehensive services and enter into common service agreement on equal terms with a household consumer who did not decide to switch the supplier and who is connected to the network of energy company indicated in default supplier licence. It is worth noting that a household consumer who decides to terminate common service agreement within contractual notice period cannot be charged with any additional costs in that regard by the default supplier.

The number of customer disconnections in 2010, in comparison to previous years, is presented in Table 6.3 below.

Table 6.3. Number of user disconnections

Electricity			
Year	**Number of disconnections**	**Total number of customers**	**[%]**
2004	236 012	15 661 600	1.5
2005	239 289	15 761 619	1.5
2006	190 936	15 817 289	1.2
2007	160 860	16 064 750	1.0
2008	173 940	16 201 598	1.1
2009	224 961	16 363 511	1.4
2010	264 031	16 487 877	1.6

Gas			
Year	**Number of disconnections**	**Total number of customers**	**[%]**
2004	46 451	6 337 536	0.73
2005	44 957	6 386 160	0.70
2006	33 815	6 396 234	0.53
2007	31 006	6 493 775	0.48
2008	43 319	6 594 867	0.66
2009	53 236	6 641 066	0.80
2010	46 080	6 682 227	0.69

Source: ERO.

The issue of disconnections for non-payment is regulated by the Energy Law. However, there is no information and no regulations with regard to disconnections during winter time.

Electricity

In 2008, the system for approving end user energy prices was changed, and the new mechanism was upheld in 2009 and 2010, and in 2011 as well. The requirement to submit electricity tariffs for approval was upheld with regard to 'G' tariff category consumers connected to the network of distribution system operator who have not switched supplier. This groups consists mainly of household users.

The table below presents increase in tariff price and fees in tariffs approved for 2011.

	Increase in electricity distribution price for all consumer categories	**Increase in electricity distribution price for household consumers**	**Increase in electricity price for household consumers**	**Total increase in fees on household consumers' bills**
	%	%	%	%
Average increase in approved tariffs	3.5	3.5	7.7	5.7

New tariffs are introduced by energy companies between 14 and 45 days from the moment of tariff publication by the President of ERO. All tariff decisions are announced in Electric Power Industry Bulletins (*Biuletyny Branżowe dla Energii Elektrycznej*). Approved tariffs will be in force until the end of 2011.

Approved prices or rates may be changed at company request or *ex officio* if there is a change in external circumstances, triggering the need to increase the prices. One of the factors which may trigger such cost increase, for example, is an increase in the price of electricity on the wholesale market.

Table 6.4. Price regulation for final customers in 2010

Specification	Electricity		
	The biggest customers (according to the volume of electricity supply)	**Small and medium business**	**Households**
Tariff regulation supply (Y/N)[36]	N	N	Y
% tariff customers (supply)	-	-	100

Source: ERO.

There are no legal regulations which would allow for potential cost compensation to the Supplier who is obliged to sell energy to users at regulated prices.

Gas

As far as gas sector regulation is concerned, there were no new developments in 2010, as compared to 2009. In 2010, network activity related to gas supply (transmission and distribution) and trade were both regulated. Regulation applied not only to small (municipal and domestic) consumers, but to large ones as well. Either category had their gas supplied under common service agreements, and more than 90% of sales to end users was provided by one company – *PGNiG*. Furthermore, other companies operating on the gas market purchase gas mainly from *PGNiG*. Under the circumstances, the gas market is not enough competitive for the President of ERO to exempt those companies from tariff obligation.

In 2010 gas prices were increased twice, when a new tariff of *PGNiG* came into effect on June 1 and October 1. Following the change of that tariff, the tariffs of other gas companies were changed as well.

In view of the number of consumers serviced by *PGNiG*, as compared to all gas consumers in Poland, one can assume without much error that average gas prices for *PGNiG* consumers are equivalent to average gas prices for consumers all over the country. Below there is specification of average prices of gas supply for household consumers a(including not only gas as a commodity, but also the cost of gas transportation via transmission and distribution grid, and the cost of storage).

Tariff category symbol	Average gas price GZ-50 in PLN/m^3		
	In the period		
	1.01÷31.05.2010	1.06÷31.09.2010	1.10. ÷31.12.2010
W–1	2.3756	2.4497	2.5107
W–2	1.7841	1.8460	1.9070
W–3	1.5589	1.6145	1.6755

W-1 – annual consumption up to 300 m^3,
W-2 – annual consumption above 300 m^3 and up to 1 200 m^3,
W-3 – annual consumption above 1 200 m^3 and up to 8 000 m^3.

There are no legal regulations which would allow for potential cost compensation to the Supplier who is obliged to sell energy to users at regulated prices.

[36] Where Y means YES and N means NO.

The law. Contents of electricity and gas supply contracts are regulated in the Energy Law and in secondary legislation, i.e. regulations specifying the so-called 'necessary items' of such contracts.

Certain legal provisions to that point are included in the Law on Competition and Consumer Protection of February 16, 2007, which provides prohibition of onerous or inconsistent contract terms in similar contracts with third parties; prohibition to make contract execution dependent on the fact whether the other party will accept or provide a benefit not connected in any way with the subject of contract; prohibition of onerous contract terms which may result in unfair benefits for the enterprise; prohibition of direct or indirect enforcement of other unfair contract provisions, such as extended payment deadlines or other conditions of sales or purchase of goods. Contract transparency in that regard is supervised by the President of OCCP. Any abuse of above-mentioned prohibitions may be regarded as a abuse of dominance on the market. General provisions regarding contract obligations, including contract templates, may also be found in the Civil Code (Articles 384 through 396). Those provisions regulate the subject of contracts and contract templates. According to the regulations provisions of an agreement, which were not agreed individually with consumer, shall not be binding for the consumer if they blatantly violate customer interest, rights and obligations (abusive clauses). This does not apply to mutual consideration as long as it was phrased in unambiguous way. The authority responsible for settlement of such disputes is a common court.

Law enforcement. Under the Energy Law, the President of ERO is not empowered with the tools for direct influencing the contents of electricity or gas supply contracts, e.g. by contract template approval procedure or by imposing the obligation on energy companies to implement such contract clauses which are not required under the law but results from the best practice. In consequence, it is a common practise that the company only follows the rules set out in the law.

In particular cases of dispute (Energy Law, Article 8, paragraph 1), the President of ERO may impact the contents of an agreement between the energy company and the consumer, but always within the scope defined in submitted request for arbitration. Under such circumstances, energy company obligations can also be found in the Energy Law and secondary legislation. And applying of best practice, in some cases, would require some amendments in agreements that do not follow directly from the Energy Law provisions. Thus, it must be concluded that contract transparency (purposed to provide the customers with adequate information about pricing levels, service quality and the terms of service provision, or changes to those terms) has been implemented by energy companies themselves or – indirectly – by the President of ERO through properly structured tariffs and licence terms.

Initiatives undertaken directly by the Regulator

1) In 2010, in cooperation with OCCP, the President of ERO developed a catalogue of prohibited contract clauses for contracts concluded between electricity and gas consumers on the one hand, and energy companies on the other. The catalogue was created on the basis of the register of prohibited contract clauses kept by the President of OCCP. On January 4, 2011, the catalogue was published on ERO website, together with other guidance and information for electricity and gas consumers regarding the possibility to file lawsuits to the Court of Competition and Consumer Protection, municipal (poviat) consumer ombudsmen, as well as NGOs and the consumers themselves; the possibility to apply to the common court with a request to recognise certain agreement provisions as non-binding. The possibility to question certain contract clauses before a common court is based on the Civil Code provisions. Moreover, a relevant extract from Civil Code provisions is presented on ERO consumer website.

2) In 2010 the President of ERO prepared and published on ERO website the documents entitled: 'Good Practices for Electricity Suppliers and Distribution System Operators' and 'Good Practices for Natural Gas Suppliers and Distribution System Operators'.

These documents were developed within the framework of a project financed from Transition Facility – 'Implementation of Competitive Energy Market'. Project execution phase was created on the basis of public consultations with many stakeholders, such as: electricity and gas market participants, industry associations and consumer organizations. In March 2010, the documents concluding the first stage of the work were developed. The second stage involved direct cooperation with the representatives of associations and industries. Between April and August 2010, a number of meetings and consultations were held. 'Good Practices for Electricity Suppliers and Distribution System

Operators' were agreed upon with the Energy Trade Association and with Polish Power Transmission and Distribution Association. The President of ERO recommended "Good Practice' documents for use by energy companies working on their 'Good Practice Codes'. These documents were developed to promote consumer empowerment on the market and they regulate issues such as: comprehensive information about sales offer prior to contract signing, contract transparency and proper method of contract conclusion, quality of commercial customer service, principles for handling complaints and disputes between the customer and the company, the right to information about consumer rights regarding electricity and natural gas supplies, diligence and absolute integrity towards the customer in scope of metering and billing equipment reading, or the right to free supplier switching, in compliance with relevant procedures.