National Report

The President

of the Energy Regulatory Office

in Poland

2017

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Acronyms and Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
n/a	not available
Directive 2009/72/EC	Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC
Directive 2009/73/EC	Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC
DSO	Distribution System Operator
ENTSO-E	European Network of Transmission System Operators for electricity
ENTSO-G	European Network of Transmission System Operators for gas
ERO	Energy Regulatory Office
President of ERO	President of Energy Regulatory Office
EU	European Union
DNC	Distribution Grid Code
TNC	Transmission Grid Code
LNG	Liquefied Natural Gas
NES	National Electricity System
UOKiK	*Urząd Ochrony Konkurencji i Konsumentów* Office of Competition and Consumer Protection
OGP Gaz-System S.A.	Operator Gazociągów Przesyłowych Gaz-System S.A.
PGNiG S.A.	Polskie Górnictwo Naftowe i Gazownictwo S.A.
PSE S.A.	Polskie Sieci Elektroenergetyczne S.A.
PSG Sp. z o.o.	Polska Spółka Gazownictwa Sp. z o.o.
POLPX	*Towarowa Giełda Energii S.A.* Polish Power Exchange
Regulation 713/2009	Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators
Regulation 714/2009	Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003
Regulation 715/2009	Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005

REMIT regulation	Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency
Regulation 347/2013	Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009
RES	Renewable Energy Sources
SGT EuRoPol Gaz S.A.	System Gazociągów Tranzytowych EuRoPol Gaz S.A.
SSO	Storage System Operator
TSO	Transmission System Operator
TPA	Third Party Access
Act on stocks	Act of 16 February 2007 on stocks of crude oil, petroleum products and natural gas, the principles of proceeding in circumstances of a threat to the fuel security of the State and disruption on the petroleum market (Journal of Laws of 2014, item 1695, as amended)
Energy Law Act	Act of 10 April 1997 on Energy Law (Journal of Laws of 2012, item 1059, as amended)

1. FOREWORD

The National Report of the President of the Energy Regulatory Office (ERO) describes a general situation on the electricity and gas market in Poland and major developments as compared to the preceding years. This knowledge has been built as a result of continuous monitoring of the situation in the sector and systematic collection and processing of information on the situation on domestic energy markets.

From the Regulator's perspective, one of the key domestic developments which took place in 2016 was a presentation of a draft act on liberalization of the domestic gas market. The Act of 30 November 2016 amending the Energy Law Act and certain other acts specified the schedule for discontinuation of the regulated prices of gas. Prices shall be liberalized gradually for particular groups of customers, so that the latter are prepared for these changes.

In 2016, the Polish Regulator's activities in the European context included, among others, continued measures aimed to solve the problem of loop flows. In this respect, the President of the ERO was involved as regards the implementation of the Opinion issued by the ACER in September 2015, confirming that the lack of allocation procedure on the German-Austrian border was in breach of the EU law. The President of the ERO also acted as intervener in the proceedings before the ACER's Board of Appeal.

A detailed description of these and other activities undertaken by the Polish Regulator for further development and integration of the Energy market is provided below. Thereby, the President of the ERO fulfils its reporting obligation set forth in the Polish and European law.

2. MAIN DEVELOPMENTS IN THE ELECTRCITY AND GAS MARKETS

Legal and regulatory changes

The Act of 30 November 2016 on amending the Energy Law Act (hereinafter: the Act of 30 November) and certain other acts introduces resignation from regulating the natural gas prices (exempting from the obligation of establishment of tariffs for gas by the trading companies and submitting them for approval of the President of the ERO) and presents a schedule for its implementation for particular groups of customers.

As of 1 January 2017, the obligation to submit tariffs for approval does not apply to sale of gaseous fuels on the wholesale market, that is:

1) at a virtual point,
2) in the form of liquefied natural gas (LNG) or compressed natural gas (CNG), and
3) gaseous fuels sold under tender, auction or public procurement procedure.

As of October 2017, prices will be liberalized for other customers, except for household customers, for whom gas prices will be liberalized as of 1 January 2024. This time span of several years is aimed to ensure that households have time to gradually adapt to the market and to learn to exercise their rights on the competitive gas market.

The pace of changes introduced on the gas market was influenced, among others, by the ruling of the European Court of Justice of 10 September 2015 (case C-36/14).

The Act on Alternative Dispute Resolution (ADR), which amended the provisions of the Energy Law Act as of 10 January 2017, introduces the institution of amicable settlement of disputes involving consumers into the legal system, which is an alternative to pursuing claims in court. The new provisions provide for appointment (by competition) of the President of the ERO's Negotiation Coordinator (hereinafter referred to as "the Coordinator") and specify the scope of his/her activity. Proceedings on alternative consumer dispute resolution, that is disputes between a customer of gaseous fuels, electricity or heat in a household or a prosumer that is a consumer, and an energy undertaking, are conducted by the Coordinator, upon request of a customer of fuels or energy or upon request of a prosumer that is a consumer. Following this procedure requires consent of both parties. By conducting proceedings on alternative consumer dispute resolution, the Coordinator facilitates bringing the positions of the parties closer to one another in order to settle the dispute or presents a proposal of dispute resolution to the parties.

Electricity market

Wholesale market

The volume of gross domestic electricity production in 2016 was at a similar level to that of the preceding year (162,626 GWh, increase by 0.5%). In turn, gross electricity consumption increased in that year almost by 2.0% as compared to 2015. The structure of electricity production in 2016 did not change significantly in comparison to 2015. Similarly to the previous years, there has been a further growth of share of generation from renewable energy sources, including wind (highest growth).

The number and structure of entities of the electricity sector have not changed significantly. In 2016, the highest share in the generation subsector amounting to 35.8%[1)], was still held by PGE Polska Grupa Energetyczna S.A. (decrease by 1.5 percentage point in comparison to the preceding year), whereas in the subsector of sales to final customers the leader was TAURON Polska Energia S.A with the share of 10.2% (decrease by 1.1 percentage point in comparison to the preceding year).

Three largest producers (which were part of the groups: PGE Polska Grupa Energetyczna S.A., TAURON Polska Energia S.A., ENEA S.A.) had in total little more than half of the installed capacity and were responsible for less than 60% of domestic electricity production.

[1)] Share calculated taking into account electricity fed into the grid.

Retail market

In 2016, there were five big DSOs operating on the electricity market which are obliged to separate distribution activity performed by the system operator from other types of activity not connected with electricity distribution (unbundling) and 167 vertically integrated undertakings designated as DSOs, which are not subject to the unbundling obligation.

In 2016, there were five default suppliers and over 100 alternative trading companies active in the electricity supply to end-users, including households. On the electricity market there were also 167 suppliers acting within undertakings vertically integrated with the DSOs. The biggest share in the electricity sales to end-users was still held by the so-called incumbent suppliers, performing a function of default suppliers for household consumers who have not decided to switch to a new supplier.

In 2016 there were some 17.24 million of final customers, out of whom 90.6% (15.61 million) are the customers in the G tariff group, with a great majority of household consumers (over 14.63 million). The rest of end-users are industrial customers of the A and B tariff groups, supplied from the high and medium voltage grids, and the customers connected to the low voltage grid consuming electricity for the purpose of conducted business activity (group C).

In 2016 there was an almost 20% decline of the number of cases of supplier switching as compared to the number as at the end of 2015 among commercial customers (groups A, B, C). Whereas among household consumers, there was a 15% increase of the number of supplier switches in comparison to the end of 2015.

In the 4th quarter of 2016 electricity prices in tariff groups A, B, C and G decreased as compared to the 4th quarter of 2015: the strongest decrease in electricity prices was observed for the A tariff group customers – by 8.3%, and the lowest for the G tariff group customers – by 0.04%. Whereas for household consumers electricity prices increased by 1.9%.

In 2016 distribution fees increased for customers in the A tariff group by 1.8% and for household consumers by 0.1%. For consumers in the other tariff groups, a distribution fee decrease was observed: the highest decrease was noted for the C tariff group – by 3.5%, and the lowest for the customers in the B tariff group – by 0.6%[2)].

Gas market

Wholesale market

In 2016 there was a gradual further development of liquidity of the wholesale market of natural gas in Poland, connected mostly with the increase in the number of undertakings holding a licence for trade in gaseous fuels and undertakings taking an active part in such trading, as well as a binding obligation to sell natural gas on the power exchange. In the described year this obligation concerned 55% of gas fed into the network.

As of the end of 2016, 196 entities held licence for trade in gaseous fuels in comparison to 172 at the end of 2015. 127 undertakings actively participated in natural gas trading. Gas trading undertakings acquired in total 338.3 TWh of natural gas, out of which 76.5 TWh was acquired by undertakings from outside GK PGNiG S.A. Sale and purchase of gaseous fuels on the Polish gas exchange market is performed mainly on the commodity exchange managed by TGE S.A., mainly due to the obligation of public sale of gas by the largest entities (currently PGNiG S.A.), arising under legal provisions in force. The gas exchange participants include mainly gas trading companies and big end-users which may act through brokerage houses or independently, after concluding a relevant contract with TGE S.A. In 2016, as a result of performance of contracts concluded on TGE S.A., 118,372,614 MWh of natural gas were delivered at an average price of 86.03 PLN/MWh.

[2)] Data concern electricity prices and distribution fees applied in the referenced periods to customers with complex contracts.

Retail market

As at 31 December 2016, gaseous fuels distribution was conducted by 53 distribution system operators, including one legally unbundled operator (Polska Spółka Gazownictwa Sp. z o.o. belonging to GK PGNiG S.A., hereinafter: PSG Sp. z o.o.) and 52 local DSOs.

In 2016, the total number of gas customers was 6.9 million, while the total sale of natural gas to final customers by 90 trading companies was 180,055,871 MWh. The largest group of customers (some 6.7 million) were customers in households, who consumed 44,743,431 MWh of gas in 2016. The largest volume of natural gas was consumed by industrial customers and totalled 100,229,503 MWh.

In 2016, the sale of natural gas to final customers was dominated by undertakings of GK PGNiG S.A., whose share decreased, as compared to the previous year, to 73.69% (80.22% in the preceding year). The remaining 26.31% of gas sales to final customers was performed by other trading companies selling to final customers in Poland (18.55%) and by companies selling gas from abroad directly to big final customers that brought this fuel to Poland to satisfy their own needs (some 7.76%). In 2016, in the group of alternative sellers operating on the domestic market, two companies reached a share in sales to final customers between 2% and 3%, and for three companies this share amounted to between 1% and 2%. The share of the other companies was below 1%.

In 2016, there was an increase in the number of customers that switched supplier. Out of 78,437 supplier switches performed by the end of 2016 (for comparison, in 2015 this number totalled 30,749), a great majority, that is as many as 72,964, were customers from the W 1-4 tariff groups, that is mainly smaller customers, in particular households.

In 2016, an obligation of administrative regulation of natural gas prices in sales to final customers was still binding. Nevertheless, the legal provisions in force allow to sell natural gas below the price established in the tariff, subject to non-discrimination of customers in tariff groups. In 2016, a majority of gas sellers sold this fuel to final customers below the prices established in the approved tariff. This referred to some 60% of the volume of high-methane gas sales to final customers.

Security of supply

As at the end of 2016, the installed capacity in NES amounted to 41,396 MW and, in comparison to 2015, it increased in total by 2.4%, including by over 1.55% in thermal power plants, by over 11.55% in RES and by over 61.16% in gaseous sources. The generating capacity in NES at the end of 2016 totalled 41,278 MW and increased, in comparison to 2015, by a total of 3.8%, including by over 1.83% in thermal plants, by over 15.01% in RES and by over 64.03% in gaseous sources.

The average annual capacity demand amounted to 22,483 MW, with the maximum demand at the level of 25,546 MW (which means, respectively, an increase by 1.2% and decrease by 1.8% in comparison to 2015). Relation of available capacity to generating capacity in 2016 was at a similar level as in 2015 and amounted to 69.4% (an increase by 0.6 percentage point in comparison to 2015).

Electricity production in 2016 amounted to 162,626 GWh, while its domestic consumption totalled 164,625 GWh. The trade balance at the Polish borders in 2016 totalled -2,820 GWh (imports). Whereas exports of electricity totalled 2,493 GWh and decreased by some 5% in comparison to the preceding year. In 2016, electricity was imported mainly from Sweden, Lithuania, Ukraine and the Czech Republic and totalled 5,313 GWh (an increase by some 48% in comparison to the previous year). At the same time, there are still significant differences between trade and actual flows of electricity on synchronous borders (Germany, the Czech Republic, Slovakia), which are due to unscheduled flows of electricity.

Gas supplies from abroad, in the amount of 151.9 TWh were supplemented with gas from domestic sources in the amount of 42.6 TWh. Total gas supplies from abroad in 2016 comprised the intra-Community supply and imports from the east, in a considerable proportion, executed under a long-term contract concluded between PGNiG S.A. and Gazprom.

At the end of 2016, active storage capacity of UGS installations totalled 2,928.65 mcm.

A key development on the natural gas market in Poland in 2016 was launching the operation of the LNG Terminal in Świnoujście. The President of the ERO, by means of decision of 11 May 2016, granted licence to liquefy natural gas and regasify liquefied natural gas with the use of this terminal to Polskie LNG S.A., a company owning the terminal. The above mentioned installation of liquefied natural gas has regasification capacity at 5 billion m^3/year, while two warehouse tanks have a total capacity of 320 thousand m^3.

Consumer protection

In 2016, the Information Point for Fuel and Energy Customers, launched in 2011 pursuant to Article 3(12) of Directive 2009/72/EC and Article 3(9) of Directive 2009/73/EC, supported customers mostly by providing them with information on their rights and obligations in their relations with energy undertakings. Problems and requests submitted by customers focused on issues related to switching electricity supplier, terms and conditions of concluded agreements, customer service and unfair market practices.

In 2016, the Energy Regulatory Office received over 3,500 complaints lodged by household customers about the activity of electricity and gas undertakings. The measures undertaken by the ERO mainly focused on examining a case with energy undertakings, including a verification whether they acted in line with the legal regulations in force, including the provisions of the Act on consumer rights. In a number of cases, the measures undertaken allowed to change the position of an energy undertaking and to consider customers' complaints, for instance it was possible to terminate an electricity sales agreement without paying contractual penalties or to rectify irregularities in settlements for supplied electricity or fuels. In cases of complaints which were beyond the competences of the President of the ERO, in the correspondence addressed to a customer, further options of asserting his/her rights were highlighted, for instance instigating civil proceedings. In order to minimize practices reported by customers in their complaints described above, in particular unfair business practices, the President of the ERO cooperated with the President of the Office of Competition and Consumer Protection, making referral of 119 complaints of customers to the latter.

3. THE ELECTRICITY MARKET

3.1. Network regulation

3.1.1. Unbundling

TSO

In the territory of the Republic of Poland there is one transmission system operator for electricity – PSE S.A. with its seat in Konstancin-Jeziorna, whose 100% of shares belong to the State Treasury. Since 2015, the rights of the State Treasury attached to PSE S.A.'s shares have been exercised by the Government Plenipotentiary for Strategic Energy Infrastructure.

PSE S.A. runs business activity in the field of transmission of electricity in the territory of the Republic of Poland under a licence for electricity transmission granted with the decision of the President of the ERO and valid until 31 December 2030.

PSE S.A. conducts business using its own transmission grid and – to a small extent – with the use of electricity facilities leased under usufruct agreements (civil law agreements). PSE S.A. does not own transmission systems outside the territory of the Republic of Poland.

On 4 June 2014 the President of the ERO granted PSE S.A. the certificate of complying with independence criteria determined in Article 9d (1a) of the Energy Law Act. The granted certificate of independence allowed the President of the ERO to appoint PSE S.A. as the TSO in the territory of the Republic of Poland until 31 December 2030.

In 2016, compliance with independence criteria and conditions of conducting licensed activity and exercising the TSO function was monitored on a current basis, and the monitoring results did not reveal any irregularities in the functioning of the TSO.

DSOs

Distribution system operators (DSOs) operating within vertically integrated companies and serving more than 100,000 customers connected to their grids, are obliged to be independent in terms of legal form, organizational structure and decision-making (Article 9d of the Energy Law Act).

At the end of 2016 in the territory of the Republic of Poland 172 DSOs appointed under the decisions of the President of the ERO were involved in electricity distribution, including 5 entities legally separated from former distribution companies and 167 DSOs not obliged to be legally unbundled. Almost all DSOs not obliged to be legally unbundled perform their functions in systems not connected directly to the transmission grid, but to the distribution networks of the five legally unbundled operators.

Four out of five legally unbundled DSOs operate within groups which are vertically integrated energy companies. The ownership supervision over these groups is, in principle, performed by the State Treasury. On behalf of the State Treasury, the ownership supervision is performed by the Minister of Energy. One DSO is owned by the company whose main shareholders are not associated with the State Treasury.

Compliance Programmes

Compliance Programmes are approved by the President of the ERO for five largest DSOs which are obliged to be unbundled in terms of legal and organizational form and decision making (Article 9d of the Energy Law Act). The other DSOs are not obliged to submit Programmes for approval. Implementation of the approved Compliance Programmes is controlled by the President of the ERO based on reports describing activities undertaken in the preceding year to implement the Compliance Programmes, submitted by DSOs each year, before 31 March.

Compliance Officers appointed by DSOs are responsible for monitoring the Compliance Programmes implementation. As the areas of activity are extensive, in most companies the Compliance Officer is assisted by regional coordinators who report to him/her in terms of the subject matter under monitoring, but in terms of their structural function, they report to directors of branches.

All operators published the Compliance Programmes on their websites. Employees were trained with respect to the Compliance Programme and had also an opportunity to ask Compliance Officers about interpretation of particular provisions of the Programme. As a rule, new employees are trained not later than one month after they were employed.

As part of the implementation of their tasks, Compliance Officers performed, among others, the following activities:

1) reviewed applied templates of documents and gave opinion on their consistency with the provisions of the Programmes;
2) reviewed procedures applied to the provision of basic business services, such as: connection to the grid, distribution, supplier switching, processing of complaints, customer service;
3) monitored proper use of DSO's brand in terms of differentiation from brands of other companies which are part of capital groups;
4) reviewed contents of DSOs' websites.

In 2016, outsourcing part of services to other entities, both affiliated with the DSO and external ones, was common. In the assessment of the President of the ERO, when entrusting the tasks the implementation of which is related to access to sensitive data, to third parties, it is necessary to provide Compliance Programme training to all employees involved in performing outsourcing-covered activities. This refers in particular to risk of unauthorized access to sensitive data by companies from the same group.

The problem of lack of appropriate protection of sensitive data occurred in 2016 with respect to one DSO, which resulted in launching administrative proceedings aimed at imposing a financial penalty. The problem referred to sending measurement data to other trading companies than current suppliers of electricity to these customers.

3.1.2. Technical functioning of the system

Balancing services

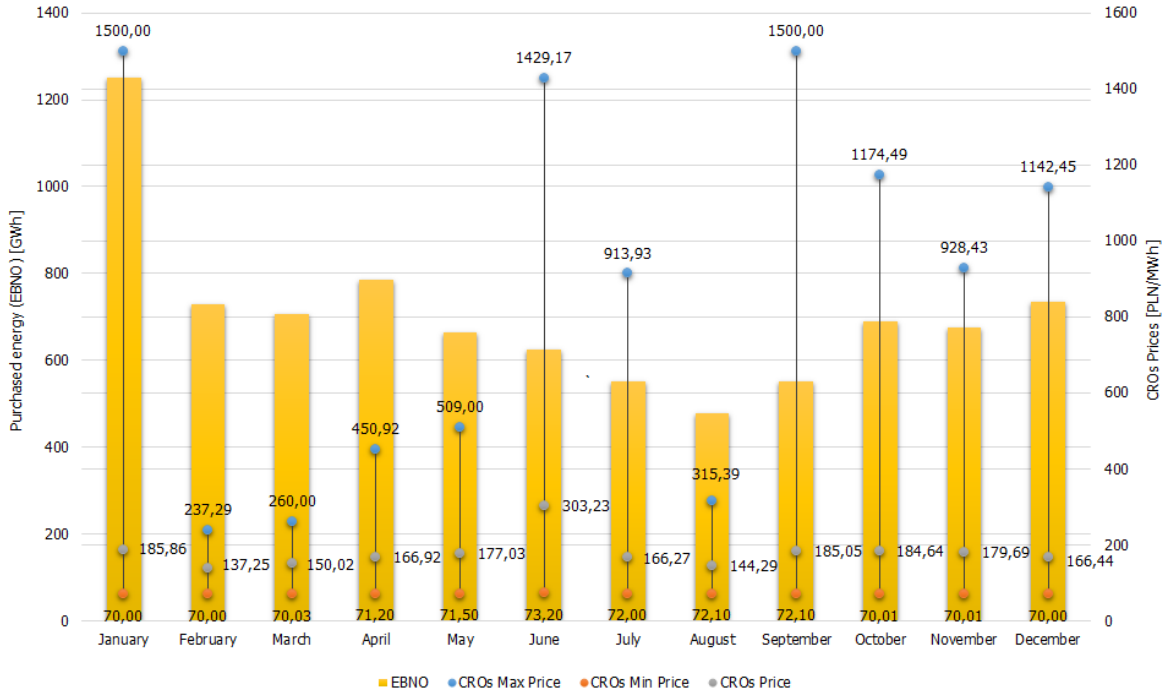
Rules for balancing and congestion management in NES are determined by (transmission and distribution) system operators and are subject to approval by the President of the ERO in the electricity network code[3)]. Rules for balancing in the distribution grid must take into account the rules indicated in the transmission network code (TNC).

The Balancing Market run by TSO operated according to the same rules as in the previous year, while in 2016 the rules of active customers' participation in the Balancing Market were modified, along with the scope of providing a service of demand reduction upon request of TSOs, which in practice will become valid as of 2017.

At the end of 2016, 120 entities participated in balancing market processes, including 10 generators, 9 end-users, 8 network customers, 75 trading companies, a power exchange, 5 DSOs and PSE S.A. as the TSO. Technical and commercial data were notified by 46 market operators and concerned 339 scheduling units.

Information on the volume and prices of balancing energy on the Balancing Market is one of the areas which are monitored by the President of the ERO. These data are shown in Figure 1.

Figure 1. Purchased energy (EBNO) and the price of balancing energy on the Balancing Market (CROs) in 2016



Source: ERO, on the basis of data provided by PSE S.A.

In 2016, the total volume of electricity purchased on the Balancing Market (EBNO) amounted to 8.44 TWh, was higher by some 16% in comparison to the previous year and constituted some 5% of gross national electricity consumption. In 2016, the total volume of electricity delivered to the Balancing Market (EBND) amounted to 8.82 TWh and was by 0.38 TWh higher than the total volume of electricity purchased from the Balancing Market (EBNO), which indicates certain "over-contracting" of balancing market participants that occurred in most months of 2016, but the over-contracting volume was significantly smaller than in 2015.

[3)] Pursuant to Article 9g (8a) of the Energy Law Act, Article 8 is not applied to network code developed by operator referred to in Article 9d (7). In practice, this means that distribution system operators that operate within vertically integrated structures and who operate on local (non-significant) area, are not obliged to submit their network codes for approval. However, they are obliged to develop their own codes.

The maximum settlement price of deviation (CRO) in the balancing market varied between 237.29 PLN/MWh and 1,500.00 PLN/MWh, whereas weighted average monthly prices of CRO oscillated between 137.25 PLN/MWh and 303.23 PLN/MWh. In seven months of the year, the maximum price exceeded 900 PLN/MWh (in 2015 there were only two such months), while in two months, the maximum price was 1,500 PLN/MWh, which means that production units providing a service of intervention cold reserve were used to balance the system. The situations described above depended on various conditions, with the key and repetitive ones included atmospheric conditions, demand for capacity in the NES, capacity reserves in this system and market conditions.

The costs of removal of limitations in the NES specified in line with the definition included in the transmission network code amounted to PLN 412.7 million.

The operating power reserve (OPR) is settled on an hourly basis, and complementarily on a monthly and annual basis. The number of settlement hours of OPR in 2016 amounted to 3,780 of which for 1,238 hours the OPR settlement price was equal to the reference price of PLN 41.20 for MW in an hour. Within these hours the settled OPR did not exceed the minimum hourly volume of this reserve required by the TSO, that is 3,451.1 MW in an hour. Weighted average hourly settlement price of OPR in 2016 amounted to 32.98 PLN/MWh, while hourly volume of this reserve stood at 3,904.2 MW in an hour.

In relation to the role of the DSO in the system balancing, it should be underlined that their tasks include mainly acquisition and management of metering data, assignment of entities responsible for commercial balancing and rules of supplier switching and proceeding in the case of loss of the existing supplier by household customers (last resort supply). To this extent, distribution system operators co-manage the Balancing Market. The key amendments to the distribution network codes of these operators in 2016 include:

- changes related to the planned implementation of a single model of information exchange and communication standards for the retail area of the electricity market by launching the Central System of Information Exchange (CSIE),
- regulation and specification of requirements for some devices which are components of measurement and settlement systems and settlement systems, including reactive energy meters and active energy meters with precision class higher than 0.5, in connection with their exclusion from the legal metrological control,
- updating standard consumption profiles used in commercial balancing of locations of supplying electricity to customers with contractual capacity not exceeding 40 kW,
- specification of rules and requirements related to making available of measurement data, supplier switching procedures, launching last resort supply and commercial balancing.

Network security and reliability standards, quality of supply and service

The President of the ERO is responsible for monitoring of electricity system operations, among others in terms of security of electricity delivery[4)].

With regard to security and reliability of grid operation, the President of the ERO reviews actions of electricity system operators undertaken as part of their statutory duties, and analyses them from the point of view of ensuring proper grid operations, taking into account criteria developed by system operators in the grid codes. These tasks are performed ex-post and relate to evaluation of operational security of electricity systems in the context of fulfilling tasks by electricity system operators. This evaluation is submitted each year to the minister in charge of energy.

Detailed information on electricity system functioning with regard to available capacities of domestic power plants, capacity reserves and losses in relation to peak demand, is presented in point 3.3.1 of the Report.

[4)] The remit of tasks of the President of the ERO does not cover the forecasts of balancing electricity supply and demand in the next five years and capability to balance supply in the period from five to at least fifteen years, counting from the report preparation date (pursuant to Article 4 of Directive 2009/72/EC). Such forecast is presented by the minister in charge of energy in the report drawn up and submitted to the European Commission every two years.

Monitoring time taken to connect and repair

The transmission system operator and distribution system operators publish on their websites information on continuity of electricity supplies with the use of SAIDI and SAIFI indicators for long-term planned and unplanned interruptions, taking into account extremely bad weather conditions, and the MAIFI indicator for short-term interruptions. The conducted verification of information published by network companies concerning the quality of electricity supplies allowed to standardize the calculation methods and ways of quality data collection within particular network companies.

The year 2016 saw the new period of regulation (years 2016-2020), in which a quality regulation element was introduced, while in 2017, its assumptions will be verified. Implementation of quality regulation required, among others, determining efficiency (quality) parameters. Apart from the SAIDI and SAIFI parameters, the connection time was determined as one of key indicators.

Monitoring of safeguard measures implementation

The rules for taking emergency actions by system operators in the event of threat to security of electricity supply, such as introduction of restrictions on power supply and off-take, are described in detail in the relevant Ordinance of the Council of Ministers, as well as in the network codes developed by electricity system operators.

Pursuant to the provisions of the Energy Law Act, the body responsible for notifying the European Commission about undertaken emergency measures is the Minister of Energy.

In 2016, there were no events entailing introduction of limitations in electricity supply and off-take.

Renewable energy sources: connection, access, dispatching and balancing

In 2016, there were no changes to the rules of connecting renewable energy sources (RES) to the electricity network, to the rules of their access to the grid or to balancing with respect to the previous year.

In 2016, 12,776 applications for connection of RES to the grid were submitted to five biggest DSOs and TSO, with a total connection capacity of 1,835 MW, out of which 12,361 RES with a total capacity of 796 MW were connected to the grid. Solar power plants had the largest share in submitted applications and executed connections – 98% and 99%, respectively. Solar power plants also had the largest share in the total capacity of submitted applications for connection to the grid, that is 52%, whereas wind power plants had the largest share in the total capacity of RES connected in 2016, that is 83%.

At the end of 2016, the number of RES units waiting for connection amounted to 3,714 with a total capacity of 17,484 MW, out of which 2,571 solar plants with capacity of 1,397 MW, 801 wind plants with capacity of 15,690 MW.

The aforesaid data include micro-installations connected upon an application.

3.1.3. Network tariffs for connection and access

Tariffs for transmission and distribution of electricity are set by the licensed energy companies according to the rules determined in the Energy Law Act and the Ordinance of Minister of Economy on detailed rules of setting and calculating tariffs and financial settlements in electricity trading (hereinafter: "the Tariff Ordinance"). Energy companies submit tariffs to the President of the ERO for approval on their own initiative or upon a request of the President of the ERO. The scope of regulation of electricity prices and its transmission and distribution did not change in comparison to those as at the end of 2015. Detailed information on the rules of tariffs approval by the President of the ERO, including possible appeal against decisions of the President of the ERO is included in the reports from the previous year.

Tariff approval for the transmission system operator – PSE S.A.

In 2016 works were continued on the PSE S.A.'s application "for setting correction coefficients stipulating the projected improvement in performance efficiency in terms of operational costs of PSE S.A.'s transmission activity and agreement on the rules for determination of costs used as a basis for calculation of fee rates in the Tariffs of PSE S.A. in the years 2017–2021". Due to the ongoing discussions on a multi-year tariff, the President of the ERO called upon PSE S.A. to submit an application for approval of a one-year tariff for 2017; the tariff was approved by means of a decision of 15 December 2016.

Tariff approval for distribution system operators (DSOs) unbundled on 1 July 2007

Changes occurring in the electricity sector and its environment pressed for publication of new rules of DSO regulation for the next several-year period beginning in 2016. A document "Strategy for Regulation of Distribution System Operators for 2016-2020" published in 2015 by the President of the ERO is a continuation of transparent and stable rules for regulation of these companies. The purpose of these rules is to increase the quality of electricity distribution services with maintaining price affordability of these services, as well as to keep the current level of investments.

Guidelines on tariff calculation for 2017 for distribution system operators were included in the document "DSO tariffs for 2017 (for DSOs unbundled on 1 July 2007)" published on the ERO's website. The basic assumption on which the President of the ERO relied in the course of preparation in 2016 for tariff approval was a continuation of the approach taken in the previous year for a five-year DSO regulation period, that is rules arising from the documents: "Operating costs for Distribution System Operators for 2016-2020 (unbundled on 1 July 2007)", "Balance difference for Distribution System Operators for 2016-2020 (unbundled on 1 July 2007)", "Method for calculation of return on capital employed for Distribution System Operators in 2016-2020" and "Quality regulation for Distribution System Operators in 2016-2020 (unbundled on 1 July 2007)".

On 15 December 2016, the President of the ERO approved in total tariffs for the period until 31 December 2017 for four largest distribution system operators, that is PGE Dystrybucja S.A., TAURON Dystrybucja S.A., ENEA Operator Sp. z o.o. and ENERGA OPERATOR S.A., and on 29 December 2016 for innogy Stoen Operator Sp. z o.o. As a consequence of the approval of those companies' tariffs (five DSOs), the distribution fee rates for final customers increased by 5.5% on average. The distribution fee rates for customers in the G tariff group increased from 4.5% in ENERGA-OPERATOR S.A. to 6.8% in PGE Dystrybucja S.A. The increase of distribution fee rates was mainly due to a significant increase of the transition fee rates specified in Article 11a of the Act on termination of long-term contracts and to a new RES fee rate published in the Information of the President of the ERO no. 62/2016 of 22 November 2016, for which Article 98(2) of the RES Act is a basis.

Prevention of cross-subsidizing

Tariff calculation for energy companies is based on clear rules which are intended to eliminate cross-subsidies between distribution and supply, which applies in particular to vertically integrated companies, that is the ones that are not subject to unbundling obligation. The applied regulation model for biggest DSOs (which are obligated to unbundle) is a revenue cap with elements of cost of service. In 2015 the cost efficiency and technical efficiency (network losses) models were updated, using, among others, benchmarking. This model was a starting point for the subsequent regulatory period, that is 2016-2020. 2016 was also the first year of applying quality regulation elements.

3.1.4. Cross-border issues

Approval of rules for access to the cross-border infrastructure, including the rules for the allocation of capacity and congestion management

In 2016, methods of transmission capacity allocation approved by the President of the ERO in 2015 were applied on the Polish-Swedish and Polish-Lithuanian borders.

Due to the opinion issued by the ACER in September 2015[5] stating, in line with the request of the President of the ERO, non-compliance of the decisions issued by the regulators of the Central and Eastern Europe region approving transmission capacity allocation methods with the EU legislation, as well as failure to implement the recommendations included in the opinion, the President of the ERO did not complete the administrative proceedings conducted with respect to synchronous interconnections for all time horizons: forward, day-ahead and intraday auctions. The main recommendation in the opinion for the TSO and regulators from this region was to commit themselves to adopt a coordinated procedure for transmission capacity allocation on the German-Austrian border, based on a realistic yet ambitious implementation schedule with specified particular measures to be taken. The ACER's decision on establishment of capacity calculation regions (CCR)[6] also indicated that it is necessary to consider the German-Austrian border as a border for price zones, on which transmission capacity must be calculated and allocated. It was appealed against to the ACER's Board of Appeal by, among others, the Austrian regulator and TSOs.

Irrespective of the above, transmission capacity for 2016 on synchronous borders was allocated in line with harmonized rules of auctions via the Joint Allocation Office (JAO).

Revenues from transmission capacity allocation on interconnections with the EU states and the manner of their utilization in 2016

From 1 January to 31 December 2016, revenues from allocation of transmission capacity on interconnections with the EU states totaled PLN 88,035.4 thousand[7]. This amount will in total be paid into the Earmarked Fund, from which the TSO allocates means to maintain or increase capacity of interconnections by investments in the grid, that is the purposes specified in Regulation 714/2009. The investment projects have been specified in the Development Plan agreed by the President of the ERO. So far, the TSO allocated part of the funds accumulated in the Earmarked Fund to be one of the sources of financing of investment tasks which are part of the project of construction of an interconnector between Poland and Lithuania, along with the necessary improvement of the NES. In 2016, no funds were spent from the Earmarked Fund.

Unplanned flows of electricity

Unplanned electricity flows constitute cross-border exchange of electricity, which was not notified to the transmission system operator in the form of cross-border commercial schedules and, therefore, is not subject to market-based mechanism of cross-border transmission capacity allocation[8].

Figure 2 shows annual average volumes of unplanned flows of electricity on the borders of Poland and some other borders in the Central-East Europe in 2016, as well as their change in comparison to 2015.

[5] Opinion of the Agency for the Cooperation of Energy Regulators No 09/2015 on the compliance of National Regulatory Authorities' decisions approving the methods of allocation of cross-border transmission capacity in the Central-East Europe region with Regulation (EC) No. 714/2009 and the Guidelines on the management and allocation of available transfer capacity of interconnections between national systems contained in Annex I thereto (http://www.acer.europa.eu/Official_documents/-Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2009-2015.pdf).

[6] Pursuant to Regulation 2015/1222, all European regulatory authorities were obliged to issue univocal decisions on establishment of the capacity calculation regions (CCR). Due to regulators' failure to reach agreement by the deadline specified in the regulation, the decision in this respect was issued by the ACER on 17 November 2016 (available from: http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/ANNEXES_CCR_DECISION.aspx).

[7] The above referenced revenue amount is as at 20 February 2017.

[8] More on this issue may be found in the *National Report of the President of the ERO for 2015.*

Figure 2. Average annual volume of unplanned power flows on the Polish borders and some other borders in the region of Central-East Europe in 2016 [MW-h] as well as change in this volume in comparison to 2015 [%]

Source: ERO, on the basis of data provided by PSE S.A.

A decrease in loop flows on Polish synchronous borders in 2016 in comparison to the preceding year was due to the implementation of actions undertaken by the transmission system operators from Poland and Germany as part of their several-year-long cooperation. This cooperation is based on two key activities: (i) operative cross-border redispatching on the Polish-German border (virtual phase-shifting transformer), (ii) launching physical phase-shifting transformers in Mikułowa electrical substation (cross-border connection Mikułowa – Hagenwerder) with simultaneous disconnection of the Krajnik – Vierraden line. It should be emphasized that disconnection of the Krajnik – Vierraden line was due to a delay in the construction of the phase-shifting transformer in Vierraden electrical substation by the German transmission system operator 50Herz, and thus, to the necessity of enabling an efficient operation of the phase-shifting transformer installed in Mikułowa electrical substation.

Using the mechanism of a virtual phase-shifting transformer was a basic tool of limiting the negative impact of unplanned flows in the first half of 2016, while in the second half of that year, using a physical phase-shifting transformer allowed to significantly decrease the volume of operative supplies as part of the virtual phase-shifting transformer operation. Setpoints for the physical phase-shifting transformer are agreed as part of the regional cooperation (under supervision of TSCNET[9]), after setting and allocation of transmission capacity. Thus, regulatory options of the phase-shifting transformer are potentially used only when this is necessary from the perspective of safety of operation of interconnected electricity systems. The experience of the first months of utilization showed, however, that in practice they have to be used almost every day.

It should be emphasized that the activities pursued in cooperation of the two transmission system operators do not solve the problem of unplanned energy exchange, but merely allow to limit its negative impact. The consequence of disconnecting the Krajnik – Vierraden line is not only a reduction in unplanned electricity flows but also weakening of the Poland-Germany connection (disconnecting two out of four transmission lines), as a result of which the allowed capacity transmission from Germany to Poland was reduced to 1,300 MW. In addition, unplanned electricity flows on Polish synchronous borders, in particular the Polish-German one, are still a significant part of the import transmission capacity. As a consequence, import transmission capacity made available to the market participants are only a small part of technical capacity. In addition, transmission capacity for imports is made available only in short time horizon (day-ahead market, and most of all current day's market) due to the fact that it is impossible to predict unplanned electricity flows in the long-term horizon.

[9] TSCNET Services GmbH is a company providing services to those transmission system operators which are members of the Transmission System Operator Security Cooperation (TSC).

Monitoring investment plans and assessment of their consistency with the Community-wide network development plan

The conducted analyses of the reports on development plans' implementation in 2016 showed that five biggest DSOs and the TSO executed in total level of investment expenditures higher by PLN 784 million than it was planned. TSO realized investments in the amount of PLN 1,217 million, whereas planned level of investments amounted to PLN 793 million. Five biggest DSOs executed investments in the amount of PLN 5,928 million, whereas the level of agreed investments (model) amounted to PLN 5,567 million.

In September 2015, PSE S.A. submitted for agreeing with the President of the ERO the draft development plan with respect to satisfying current and future electricity demand in the years 2016-2020. The agreement on draft development plan was reached in January 2016, and an excerpt of the plan is available on the TSO's website: http://www.pse.pl/index.php?modul=10&gid=534.

The control of consistency of PSE S.A.'s development plan with the European-wide development plan (TYNDP) established by ENTSO-E, is carried out alongside every update of each of the aforesaid documents. Identified inconsistencies are clarified with TSO on regular basis (usually these inconsistencies result from different dates of documents' updates). In 2016 the consistency assessment was performed during the works on the National Ten-Year Network Development Plan 2016, as part of cooperation with ACER.

Monitoring technical cooperation between the EU and third country TSOs

National electricity system is connected with two electricity systems of two third countries – Belarus and Ukraine. In case of the cross-border interconnection with Belarus, the existing line remains decommissioned due to the poor technical condition that prevents its utilization. Interconnection with Ukraine enables electricity supplies, which are carried out with a use of transmission capacity allocation mechanism based on explicit monthly auctions. The auctions, implemented by the Polish TSO, are unilateral.

Cooperation with regulatory authorities from other EU Member States and as part of the Commission's working groups

Works on market development are focused mainly on the implementation of network codes and framework guidelines, projects of early implementation of solutions that would be subject to the planned legal regulation, the energy market monitoring report, as well as other issues related to market-based aspects of cross-border cooperation.

The decision on the establishment of capacity calculation regions (CCR) in practice shaped the new framework for regional cooperation, in which national regulatory authorities, transmission system operators and nominated electricity market operators (NEMO) are currently engaged. The borders of the Polish price zone have been ascribed to three independent CCRs: Core (synchronous connections), Hansa (connection with Sweden) and Baltic (connection with Lithuania). With respect to the works in the CEE region (currently: Core), in 2016 activities related to the development of a method of calculation and allocation of cross-border transmission capacity (Flow-Based Market Coupling[10)]) were continued.

As part of preliminary works on the selection of projects which are to be included in the third EU list of projects of common interest, necessary to implement energy infrastructure priority corridors and areas specified in Annex 1 to Regulation 347/2013, the representatives of President of the ERO participated in the works of the following groups: "Baltic Energy Market Interconnection Plan in electricity" (BEMIP Electricity) and "North-South electricity interconnections in Central Eastern and South Eastern Europe" (NSI East Electricity). The works of the regional groups will be completed in 2017, and then the Commission will announce the third list of projects of common interest.

[10)] Flow Based Market Coupling – a method of calculation and allocation of cross-border transmission capacities, in which a model of real electricity flows in grids managed by TSOs was used, as well as coupling offers for sale and purchase of electricity from two or more markets, taking into account transmission capacities available on the interconnections of these markets, based on a common algorithm, including the one related to price calculation. Cross-border transmission capacities are allocated by NEMO (energy exchanges).

As part of cooperation with the regulators of the countries of the Visegrad Group (V4) in 2016, the regulators implemented a project of analysis of deregulation of energy markets in these countries. The purpose of the project was to analyze and assess positive and negative aspects of fully liberalized and regulated energy markets with respect to customers in households in the V4 countries. The works on the project were not completed in 2016 and have been continued in 2017.

In 2016, as part of the Baltic Electricity Market Forum meetings which are held twice a year, the regulators from Latvia, Lithuania, Estonia, Sweden, Finland and Poland exchange information on current initiatives and problems related to the development and integration of the Baltic States' markets.

3.1.5. Compliance and implementation of the EU regulations on the national level

Compliance of the regulatory authority with any legally binding decisions issued by the ACER and the European Commission and with the ACER guidelines

On 17 November 2016, the ACER issued a decision on establishment of capacity calculation regions (CCR). The decision is addressed to all European TSOs. In the reporting period, the Commission or the ACER did not issue any legally binding decision addressed to the ERO.

Compliance of operators' activities with relevant EU legislation

The President of the ERO, while monitoring the electricity market, shall control fulfilment of duties arising from Regulation 714/2009 by the electricity TSO and other electricity market participants. The regulator performs these tasks on its own, as well as in cooperation with other regulatory authorities and the ACER, e.g. when implementing network codes and the EC guidelines.

Monitoring of compliance with independence criteria

As part of monitoring of compliance with the TSO independence criteria, in connection with certification of meeting the independence criteria, a particular emphasis is placed on monitoring of issues which were pointed out as problematic in the opinion of the European Commission, that is the issue of PSE S.A.'s rights to disposing of electricity facilities used for the fulfilment of duties in the field of electricity transmission, non-discrimination of their owners and other system users, as well as the issue of PSE S.A.'s independence in the context of independence of respective government bodies. The monitoring is carried out by tracking of press releases, websites and current checks and calling upon PSE S.A. to update the changing information on the composition of the company's bodies.

The evaluations conducted hitherto show the lack of violation of independence criteria.

Monitoring of coordinated cross-border exchange

In 2016, the commercial balance on the Polish borders amounted to -2,820 GWh (imports). Electricity exports totalled 2,493 GWh and decreased by around 5% in comparison to the previous year. In 2016, electricity was mainly imported from Sweden, Lithuania, Ukraine and the Czech Republic and totalled 5,313 GWh (increase by some 48% in comparison to the previous year).

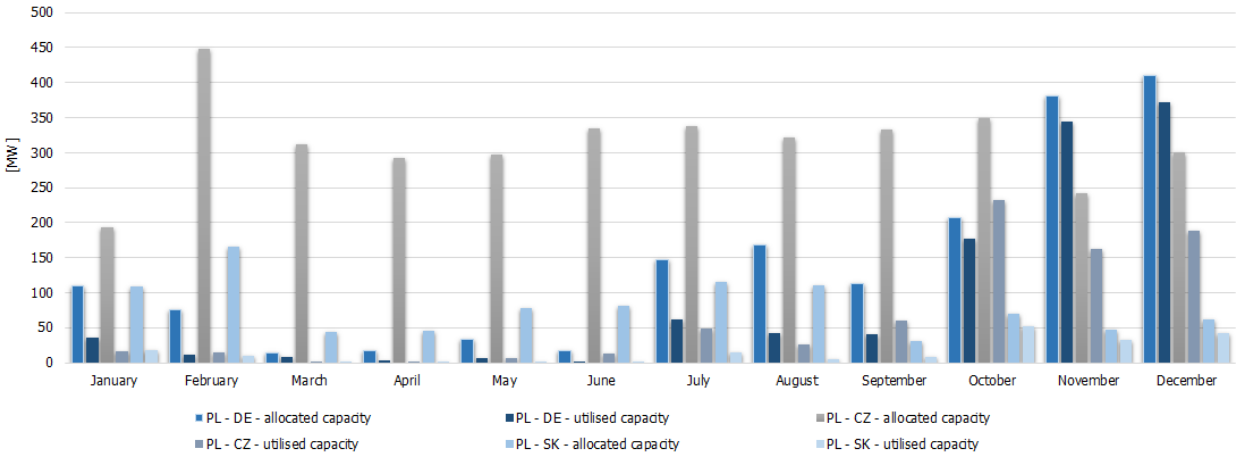
At the same time, there is still a significant difference between commercial and actual flows of electricity on synchronous borders (Germany, Czech Republic, Slovakia), which may be due to an increase in unplanned electricity flows, which contributes to a significant limitation of transmission capacities offered to the participants on these borders, in particular in import direction (more information on unplanned flows of electricity may be found under item 3.1.4.).

In 2016, cross-border transmission capacities on synchronous profile were made available via explicit auctions organized both in export direction and in day-ahead and intra-day export direction. Total transmission capacities offered on the technical profiles (Germany, the Czech Republic, Slovakia jointly)

are allocated to commercial profiles (Germany, the Czech Republic, Slovakia separately) on the basis of ranking of price offers submitted by participants.

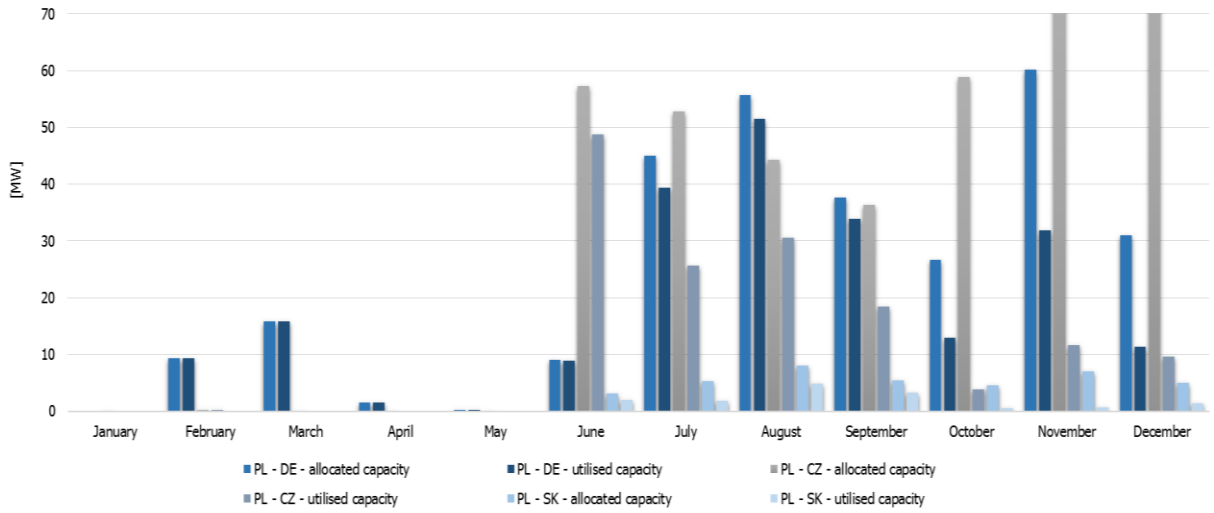
The figures below show monthly average volumes of allocated and utilized transmission capacities in export and import directions, respectively, on the synchronous interconnections.

Figure 3. Comparison of average monthly transmission capacity allocated and utilized in export direction on synchronous interconnections in 2016 [MW]



Source: ERO, on the basis of data provided by PSE S.A.

Figure 4. Comparison of average monthly transmission capacity allocated and utilized in import direction on synchronous interconnections in 2016 [MW]



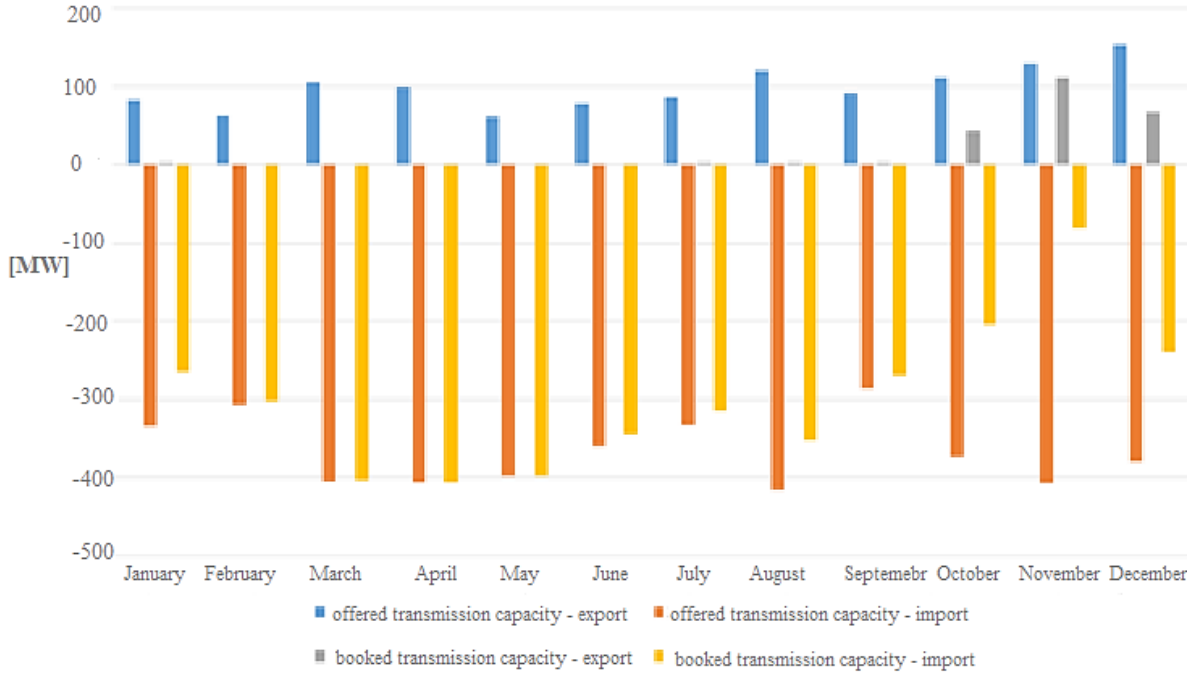
Source: ERO, on the basis of data provided by PSE S.A.

In case of exports market participants in most months of 2016 expected the highest market surplus on the borders with the Czech Republic and Slovakia. At the same time, the degree of utilization of allocated transmission capacities may indicate that to the greatest degree, the transmission capacities allocated to Germany were utilized. The situation in allocation of transmission capacities was different in the case of electricity imports. In particular, the greatest volume of offered transmission capacities was allocated from Germany and the Czech Republic. The amount of offered and allocated transmission capacities in the second half of 2016 was significantly higher than in the first half, which is largely due to the launch of the phase-shifting transformer on the Polish-German border. Transmission capacities in the import direction were allocated only under day-ahead auctions (on average, 59% of offered transmission capacities) and intraday auctions (on average, 41% of offered transmission capacities).

In 2016 transmission capacity allocation on direct current interconnectors Poland-Sweden and Poland-Lithuania was performed under implicit auctions by TGE S.A. and Nord Pool AS on the basis of market coupling mechanism.

The average monthly volumes of offered and allocated transmission capacities in 2016 are presented in the Figures below.

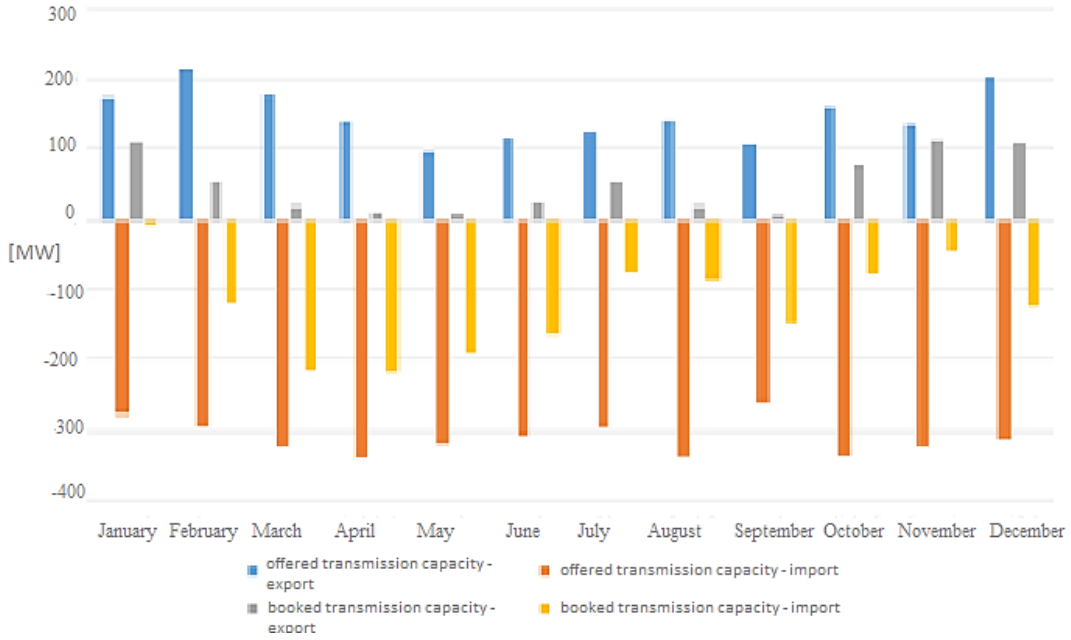
Figure 5. Comparison of monthly average transmission capacities offered and allocated on the Poland-Sweden interconnector in 2016 [MW]



Source: ERO, on the basis of data provided by PSE S.A.

In 2016 for most of the time electricity prices were lower on the Scandinavian market, which in consequence resulted mainly in electricity imports to Poland from Sweden, limited due to the NES safety reasons during the night time. Maximum volumes of offered transmission capacities on this border amounted to 600 MW in both directions. A similar situation occurred on the Poland-Lithuania interconnector, though in the case of this interconnector, electricity was periodically exported. The direction of commercial exchange on this interconnection was largely due to availability of the interconnector Lithuania-Sweden. Maximum volumes of offered transmission capacities amounted to: 492 MW in export direction to Lithuania, and 488 MW in import direction to Poland.

Figure 6. Comparison of monthly average transmission capacities offered and allocated on the Poland-Lithuania interconnector in 2016 [MW]



Source: ERO, on the basis of data provided by PSE S.A.

Transmission capacities on the Poland-Ukraine interconnection were made available on the basis of explicit monthly auctions. Transmission capacity allocation only in import direction to Poland of up to 220 MW were made available to participants. Transmission capacities were reduced for selected days due to planned line shutdowns or risk of exceeding voltage limits.

Monitoring the limitations of transmission services in cross-border exchange due to lack of capacity or grid failures in 2016

In case of cross-border exchange on synchronous interconnections and interconnections Poland-Sweden and Poland- Lithuania, the limitations (reductions) of allocated transmission capacities did not occur in 2016.

While on the Poland-Ukraine interconnector via 220 kV Zamość-Dobrotwór line, there was a reduction of allocated transmission capacity to 120 MW from 00:00 of 8 August 2016 to 24:00 of 13 August 2016 caused by an extension of emergency shutdown of Zamość-Mokre line.

Concentration of transmission capacities made available by PSE S.A., allocated via auctions on synchronous interconnectors in 2016

In 2016, transmission capacities on synchronous interconnectors were allocated via day-ahead auctions to 25 different entities (market participants) in total. Maximum share in the market for one entity was around 29%.

3.2. Promoting competition

3.2.1. Wholesale market

The volume of gross domestic electricity generation in 2016 reached 162,626 GWh and was similar to the previous year volume (increase by 0.5%). At the same time, gross domestic electricity consumption amounted to 164,626 GWh and increased by almost 2% in comparison to 2015.

In 2016, the share of imports in the domestic balance of electricity flows constituted 7.8% of total electricity fed into, while the share of exports constituted 6.7% of electricity off-taken, as compared to 2015, when both these parameters were at a similar level and constituted around 8% of total electricity fed into and off-taken, respectively, in domestic balance of electricity.

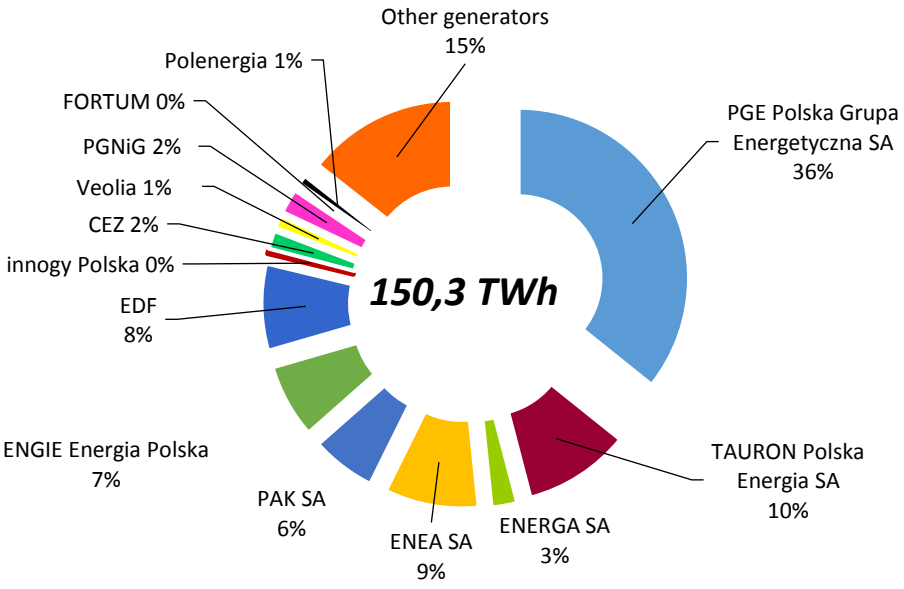
A great majority of generation is still based on conventional fuels, that is hard coal and lignite. In the examined period, the dynamics of electricity generation from RES decreased in comparison to previous years, and the generation leader in this segment was still wind generation.

Wholesale electricity market structure by entities

The biggest share in electricity generation subsector in 2016 totalling 35.8%[11)], was still held by the group PGE Polska Grupa Energetyczna S.A. (decrease by 1.5 percentage point in comparison to the previous year). While the leader on the market of sale to final customers was TAURON Polska Energia S.A. with a share of 10.2% (decrease by 1.1 percentage point in comparison to the previous year).

Share of groups in the volume of electricity fed into the grid is shown in the figure below.

Figure 7. Share of capital groups in the volume of electricity fed into the grid in 2016



Notice: In 2016 RWE Polska S.A. changed its name to innogy Polska S.A.

Source: Own analysis based on data of the Ministry of Energy and ERO.

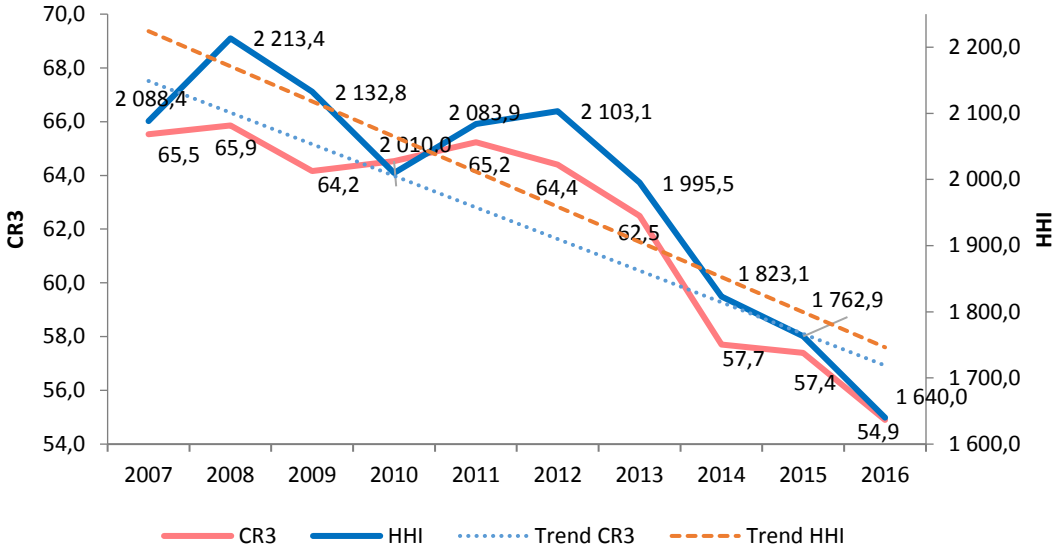
With respect to the market share of three largest entities (CR3) and market concentration indices (HHI) measured according to the volume of electricity fed into the grid (taking into account the volume of electricity supplied by generators directly to final customers), a many-year downward trend may be observed. In 2016, a decrease of these indices was considerable and amounted to 4.2% and 7.0%, respectively, in comparison to the previous year. The change of indices in recent years is largely due to an increase of electricity generation from RES, mainly wind, in the domestic balance of electricity generation. It is worth emphasizing that the market concentration index (HHI) calculated for generation, already in 2015 reached a value allowing to state that the market concentration is medium.

A similar trend may be observed for the above mentioned indices measured according to installed capacity, whereas the values of these indices are lower than the values of the indices measured according to generation. At the same time the number of entities holding at least 5% share in installed capacity and volume of electricity fed into the grid remained unchanged – 5 and 6 entities, respectively.

[11)] Share calculated according to the volume of electricity fed into the grid.

The changes of concentration index (HHI) and index of market shares of three largest entities (CR3) in the generation subsector in the years 2007-2016 are presented in the figure below.

Figure 8. Concentration level in generation subsector (HHI) and market shares of three largest entities (CR3) by volume of electricity fed into the grid, in 2007-2016



* For all entities operating in the generation sector which are subject to the statistics reporting obligation, including electricity fed into the grid from wind and hydro sources.

Source: Own analysis based on data of the Ministry of Energy and ERO.

Sales of electricity in respective market segments

In 2016, the main types of electricity sales among generators were: sales on the regulated market where power exchange played a dominant role (45% share in total sale of electricity by generators), as well as sales to trading companies (44% share). The share of electricity sale on power exchange in case of generators is decreasing slowly but systematically (decrease by 2 percentage points in 2016 in comparison to the preceding year). At the same time, sale of electricity by generators to the balancing market increased slightly in 2016. This situation is presented in the Table below.

Table 1. Types of electricity sales by generators in 2015–2016 [TWh]

Year	Trading companies	Regulated markets, including power exchange	Balancing market	Exports	Final customers	Other sales*
2015	66.9	71.3	7.9	0.0	3.7	3.4
2016	64.7	66.0	10.0	0.0	2.5	3.2

* Other sales include volumes of electricity sold to TSO and DSO as well as sales to small local distributors.

Source: Data of the Ministry of Energy and ERO.

In case of trading companies, they targeted their sales mainly towards other trading companies (36% share in total electricity sales of trading companies), as well as towards final customers (32% share). The share of electricity sale on power exchange in case of trading companies is increasing systematically – in 2016 this share was 25% of total traded volume. This situation is presented in the Table below.

Table 2. Types of electricity sales by trading companies in 2015–2016 [TWh]

Year	Trading companies	Regulated markets, including power exchange	Balancing market	Exports	Final customers	Other sales*
2015**	142.8	81.5	6.2	1.4	116.0	24.4
2016	131.7	90.8	5.1	2.9	116.7	19.3

* Other sales include volumes of electricity sold to TSO and DSO as well as sales to small local distributors.
** Data were changed comparing to data in the Activity Report of President of ERO for 2015 due to data correction by evaluated entities.

Source: Data of the Ministry of Energy and ERO.

On the domestic wholesale market, electricity is traded under bilateral contracts (OTC market), on the organized market run by POLPX (power exchange) and via brokerage platforms. The structure and mechanism of market functioning do not differ from corresponding structures and mechanisms, which have been developed in most European countries recognized as competitive markets.

3.2.1.1. Monitoring prices, market transparency and the level of openness to competition

On the basis of surveys submitted by electricity producers and trading companies, as well as from reports of public statistics and data from power exchange, information on, among others, the average annual prices of electricity sales on the competitive market, and average quarterly prices of electricity sales on competitive market, as well as average quarterly prices of electricity sold under other rules than sale on Polish Power Exchange are calculated and published.

Average annual price of electricity sales on the competitive market and the method for its calculation

In 2016, the average annual price of sales of electricity on the competitive market was 169.70 PLN/MWh and was comparable to the price in the preceding year. Simultaneously, this price is by around 5% higher than the weighted-average price of a contract for baseload delivery on the day-ahead market in 2016 (161.74 PLN/MWh) and by around 7% higher than the weighted-average price of a contract for baseload delivery in 2017 (BASE_Y-17) on the CDM, which in the entire 2016 was at the level of 159.26 PLN/MWh.

To calculate the average annual price on the competitive market, the algorithm was used, similarly to the preceding years.

Average quarterly price of electricity sales on the competitive market and the method for its calculation

The Table below shows average quarterly prices of electricity sales on the competitive market in 2016.

Table 3. Average quarterly prices of electricity sales on the competitive market in 2016

2016	
Quarter	**Average quarterly price of electricity sales on the competitive market [PLN/MWh]**
I	167.45
II	171.14
III	171.52
IV	168.88

Source: Data of POLPX and the ERO.

Comparing the level of average quarterly price of electricity sales on the competitive market in 2016 with the power exchange market, it should be stated that it is close to quarterly prices on the power exchange. Algorithm adopted for price calculation to a great extent takes into account volumes of electricity sold on the power exchange, which allows electricity wholesale market participants to estimate its level in close approximation even before official publication of this price by the President of the ERO.

Average quarterly price of electricity which is not subject to the public sale obligation

The volumes and average quarterly prices of electricity sold under rules other than those determined in Article 49a (1) and (2) of the Energy Law Act[12)], in respective quarters of 2016, are presented in the Table below:

Table 4. Volumes and average quarterly price of electricity sold under the rules other than those stipulated in Article 49a (1) and (2) of the Energy Law Act, in 2016

2016		
Quarter	**Average quarterly price of electricity sold under rules other than those determined in Article 49a (1) and (2) of the Energy Law Act*[PLN/MWh]**	**Volume of electricity sold under rules other than those determined in Article 49a (1) and (2) of the Energy Law Act [TWh]**
I	169.13	14.56
II	173.50	11.38
III	172.34	10.52
IV	169.57	12.69

* The price does not include taxes (VAT, excise tax), charges not related to the volume of sold electricity or obligations related to certificates of origin.

Source: ERO, on the basis of data submitted by electricity producers for respective quarters of 2016.

Average quarterly prices of electricity not subject to the public sale obligation were at slightly higher levels than quarterly prices of sale of this electricity on the competitive market. While the greatest difference between these prices occurred in Q2 2016. At the same time, these prices were higher in Q2 and Q3 in comparison to Q1 and Q4, which is mainly due to higher supply of electricity on the market in winter, related to additional electricity production in co-generation sources.

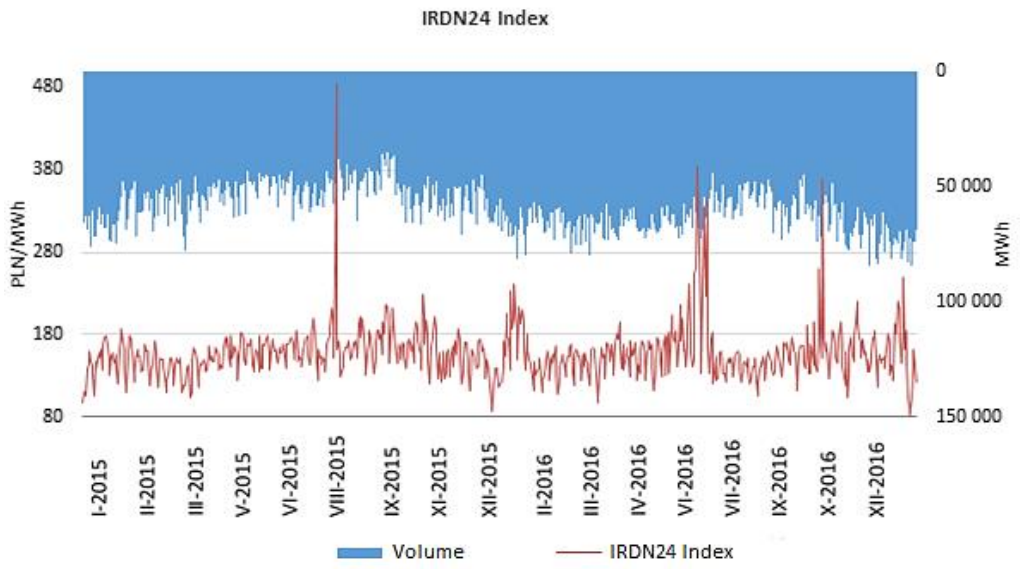
To calculate the average quarterly price of electricity not subject to the public sale obligation, the algorithm was used, similarly to the preceding years.

Prices on SPOT market of POLPX

The below figure presents development of electricity prices on the spot market – DAM (day-ahead market), managed by POLPX. The IRDN24 index shows arithmetic average price of all transactions of DAM trading session, calculated for particular delivery date.

[12)] Article 49a(1) and (2) of the Energy Law Act specifies the obligations with respect to sale of electricity in the manner ensuring public access to it (power exchange obligation).

Figure 9. Average monthly electricity price of spot transactions, measured by IRDN24 [PLN/MWh], and volume of electricity traded on DAM market [MWh] in 2015-2016



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

Volume-weighted average price of electricity on DAM in 2016 amounted to 161.74 PLN/MWh and was higher by 3.9% in comparison to 2015 when this price was 155.66 PLN/MWh.

Prices on commodity forward instruments market with physical delivery of POLPX

In 2016 a decrease in electricity prices on commodity forward instruments market with physical delivery of POLPX was observed. This tendency was reflected by the decrease of prices in BASE_Y-17 forward contracts (yearly contracts with baseload delivery in 2017), when the volume-weighted average transaction price of this contract in the 2016 was at the level of 159.26 PLN/MWh, in comparison to 2015, when the price of the corresponding BASE_Y-16 forward contracts amounted to 164.37 PLN/MWh. This is a decrease in electricity prices of yearly forward contracts by about 3.1%.

At the same time, average monthly price of BASE_Y-17 contracts in December 2016 was equal to 160.44 PLN/MWh, whereas the monthly average price of corresponding contracts (BASE_Y-16) concluded in December 2015 amounted to 166.75 PLN/MWh, which indicates a decrease of this price by 3.8%.

Transparency of the wholesale energy market – fulfilment of obligations under the REMIT Regulation

In 2016 the President of the ERO held meetings with PPATs that is persons professionally arranging transactions on wholesale energy markets, in order to draw attention to their obligation and agree on the rules of cooperation. These entities have a special role to play as they are obliged to create and maintain effective mechanisms and procedures to identify cases of infringement of the prohibition to use inside information and of prohibition of market manipulation. In Poland the function of PPATs is exercised by the following entities: POLPX, OGP Gaz-System S.A., PSE S.A., Polish Trading Point S.A. and InfoEngine S.A.

The most important information related to the REMIT Regulation has been published on the ERO's website[13]. Market players may also send their questions about performance of obligations arising from the above mentioned Regulation and from secondary legislation on registration of market participants

[13] http://www.ure.gov.pl/pl/rynki-energii/energia-elektryczna/remit/6013,REMIT.html

in the national register of market participants, to the ERO's dedicated e-mail address[14]. The activities undertaken by the President of the ERO are complementary to the information published by the ACER on the REMIT Portal[15] dedicated to any issues included in the REMIT Regulation.

Participants of the Polish energy market are registered by the President of the ERO by means of the Centralized European Register of Energy Market Participants (CEREMP) developed by the ACER. As at the end of 2016, the number of market participants from Poland registered in the CEREMP system was over 550 (some 5% of all registered entities).

Information on concluded transactions and orders[16] by wholesale energy market participants is reported exclusively through the entities which are granted the Registered Reporting Mechanism (RRM) by the ACER. In Poland, the entities performing the RRM tasks in 2016 included: POLPX, OGP Gaz-System S.A., PSE S.A. and PGE Dom Maklerski S.A.

Market participants may publish inside information on their websites and via Regulated Information Services (RIS, in Polish: GPI – Giełdowa Platforma Informacyjna)[17] run by POLPX and available free of charge to all market participants.

In 2016 the President of the ERO conducted explanatory proceedings, as part of tasks related to monitoring the energy market and cooperation with the ACER. As part of cooperation with other regulators, at the end of 2016 the President of the ERO undertook measures aimed to explore the options of joining the Southern Group under which regulators from Austria, Slovenia, Hungary, the Czech Republic and Croatia cooperate, and the Nordic-Baltic Group under which Energy regulators from Sweden, Norway, Denmark, Finland, Lithuania, Latvia, Estonia, Great Britain and energy exchange Nord Pool cooperate.

3.2.2. Retail market

In 2016 there were five default suppliers and over 100 alternative trading companies actively selling electricity to final consumers, including households. On the electricity market there were also 167 suppliers operating under companies vertically integrated with the DSOs. The greatest share in electricity sales to final customers is still held by incumbent suppliers which are default suppliers to households that have not switched to a new supplier.

In 2016 there were around 17.24 million final consumers, out of which 90.6% (15.61 million) are G tariff group consumers[18], including in great majority household consumers (over 14.63 million). The other group were final consumers supplied with electricity from medium- and high-voltage grid – so-called industrial consumers from A and B tariff groups, and consumers connected to low-voltage grid, off-taking electricity for the purposes of conducted business activity (C tariff group).

3.2.2.1. Monitoring the level of prices, market transparency and effectiveness of market opening to competition

Since 2010, all electricity suppliers selling electricity to final consumers are legally obliged to publish on their websites and make publically available in their premises information on electricity sales and terms and conditions of their application. In case of big industrial/commercial consumers, offers are presented individually by trading companies. Prices and other terms and conditions of the agreement are each time negotiated with the client and are different, depending on delivery time, volume and firmness of off-take.

Average electricity sale prices broken down by electricity consumption are presented in the Table below.

[14] REMIT.rejestracja@ure.gov.pl

[15] https://www.acer-remit.eu/portal/home

[16] The provided data are collected by the ACER by means of the ARIS system (ACER REMIT Information System) developed for this purpose.

[17] Giełdowa Platforma Informacyjna (GPI) has been operational since 27 February 2014 and has been created in cooperation with representatives of the entire power sector, under the patronage of the President of the ERO.

[18] A, B and C tariff group consumers are those final consumers that off-take electricity from high-, medium- and low-voltage grid for other needs than living and housing needs. G tariff group consumers are consumers offtaking electricity from low-voltage grid for living and housing needs.

Table 5. Number of consumers, volume, value and average prices of electricity applied to final consumers, broken down by consumption

Consumption	Number of customers [items]	Volume [MWh]	Value [PLN thousand]	Average price [PLN/MWh]
< 50 MWh	16 730 006	44 258 430	12 041 048	272,06
50 – 2 000 MWh	74 831	29 076 021	6 639 030	228,33
> 2 000 MWh	6 773	32 203 813	6 218 777	193,11
TOTAL	16 811 610	105 538 264	24 898 854	235,92

Source: On the basis of quarterly surveys of default suppliers in 2016.

Similarly to the previous years, in 2016 an online tariff calculator was made available on the ERO's website, allowing consumers to compare electricity suppliers' offers addressed to households, and thus helping them to select the most favourable offer for them. In 2016, around 30 suppliers published their offers in the Calculator on average per month.

Undoubtedly, a possibility to take advantage of the list of suppliers active within an operational area of the operator to whose grid the customer is connected, which is published on the website of that operator, is a great facilitation to a consumer who switches supplier.

In 2016 more than 164 thousands of consumers of A, B, and C tariff groups actively exercised their right to purchase electricity from a chosen supplier (a decrease by over 21% in comparison to the number as at the end of 2015), whereas in the household segment this number amounted to more than 432 thousand (an increase by over 15% in comparison to the number as at the end of 2015). When assessing the supplier switching growth rate, it should be borne in mind, however, that from a global perspective, still relatively few consumers (around 3.46%) exercised their right to switch supplier (around 3.43% as at the end of 2015). The total volume of electricity supplied in 2016 to TPA final consumers was 64,853.4 GWh, that is 47.43% of energy provided in total to final consumers (increase by some 2 percentage points, in comparison to the preceding year).

A common practice among suppliers is non-informing the consumers about all elements of the offer, e.g. additional charges (commercial charges), or misinforming them, which leads consumers to conclude agreements which are unfavourable to them. As the President of ERO is not a competent body in such cases, regulator informed consumers about their rights and forwarded 119 cases which could indicate illegal activities of suppliers to the President of UOKiK for investigation (suspicion of practices infringing collective interests of consumers and unfair market practices or unfair competition).

3.2.2.2. Recommendations on supply prices, investigations and measures to promote effective competition

System of price regulation

Electricity tariffs for consumers of G tariff group are still subject to approval by the President of the ERO (they are published in the "Branch Bulletin of Energy Regulatory Office – Electricity"). It should, however, be emphasized that tariffs are only applied with respect to a default supplier. A supplier that is not a default one uses price lists that are not approved by the President of the ERO.

Tariff calculation is based on clear rules, which cover, among others, external costs of energy companies, including costs of supporting different energy sources, including, among others, RES. Hence, the risk of suffering the loss by energy companies is reduced to minimum. Moreover, in case of significant change of external conditions, the companies are allowed to apply to the President of the ERO for the tariff correction with regard to increased costs. As a result of conducted proceedings, in December 2016 these tariffs were approved by the President of the ERO for the period until 31 December 2017.

Conducting investigations and undertaking measures to promote effective competition

In 2016 there was a dramatic increase in the number of complaints voiced against practices of energy undertakings. The most often reported problems included:

- lack of reliable and complete information on the terms and conditions of the offer, including with respect to electricity prices and agreement validity date,
- failure to perform other information obligations arising under, among others, a licence,
- persuading consumers to sign a blank, not completed agreement form, often under time pressure, and printing additional information on the terms and conditions of the agreement without the consumer's knowledge or consent,
- passing oneself off as employee of the existing suppliers, employee of the DSO or regulatory body,
- lack of reliable information on the necessity to adapt the measuring and metering system after switching supplier,
- falsifying signatures on agreements and numerous discrepancies with respect to the presented terms and conditions of the agreement,
- double invoicing, that is issuing invoices to a consumer by a new and previous supplier,
- concluding electricity sales agreements by mistake, as a result of the above mentioned practices of energy undertakings.

In particular the elderly and the disabled were targeted by the practices described above. In the reported period, many practices listed above were applied by one supplier to consumers conducting agricultural farms and small enterprises. In the reported cases, the President of the ERO initiated explanatory proceedings which in many cases resulted in clarifying the situation and withdrawal from agreements entered into in the manner described above. Those lodging complaints were provided with appropriate explanation and some of the cases were forwarded to the UOKiK due to a suspicion of practices infringing collective interests of consumers. Cooperation with poviat and municipal ombudsmen of consumer rights was also continued, also in the form of training organized by the ERO. The President of the ERO also published an announcement on its website in which it emphasized the necessity to be particularly prudent when signing and terminating agreements by consumers that as part of conducted agricultural activity run farms and small entrepreneurs who are not covered by provisions protecting consumers (households) of the Act on consumer rights protection.

Due to an increase in the number of complaints about practices of energy undertakings, the President of the ERO made available a special complaint form to consumers on the ERO's website (campaign "Consumers report unfair practices"). As a result of submitted complaints and performed monitoring, some energy undertakings adopted remedy programmes and a significant decrease in the number of complaints lodged by consumers in H2 2016 about the practices described above.

The President of the ERO also undertook measures related to monitoring compliance of energy undertakings with quality standards of customer service and terms and conditions arising from tariffs, as well as to providing consumers with explanation in this respect. Problems which occurred included:

- applying incorrect tariff group labelling in settlements,
- untimely processing complaints about settlements after replacement of a measurement-metering devices by energy undertakings,
- manner of ordering contractual capacity for particular months of the year.

As part of other proceedings conducted in 2016, the President of the ERO, among others, notified relevant bodies of conducting business activity by one of undertakings without the required licence, and initiated proceedings related to failure to comply with the terms and conditions of the granted licence.

Antimonopoly proceedings in cases of competition restricting practices and other activities undertaken by the President of the Office for Competition and Consumer Protection (UOKiK) in relations to companies in the energy sector[19)]

I. Concentrations of energy undertakings and their impact on competition development on the market

In 2016 the UOKiK conducted seven antimonopoly proceedings in concentration cases with the participation of undertakings from the energy sector (electricity or heat producers/suppliers). In all cases consent was granted pursuant to Article 18 of the Act on Competition and Consumer Protection.

[19)] On the basis of information provided by the UOKiK.

It was concluded that as a result of every concentration, there would be no substantial restriction of competition, in particular by occurrence or strengthening of dominant position on the market.

II. Administrative proceedings conducted in cases of practices restricting competition

– Completed antimonopoly proceedings:
  By means of the Decision of 28 November 2016 (ref.no.: RWR 11/2016), under self-audit of the President of UOKiK, a binding decision of 24 August 2016 was changed (ref.no.: RWR 9/2016). The case concerned competition restricting practice of Tauron Sprzedaż Sp. z o.o., with its registered seat in Kraków, which abused the dominant position in the regional market of purchase of electricity generated from renewable energy sources, in the territory covering operational area of Tauron Sprzedaż Sp. z o.o. (which act as the supplier obliged to buy purchase energy from RES), i.e. the operational area of area of Jeleniogórskie, Legnickie, Opolskie, Wałbrzyskie, Wrocławskie, Bielskie, Będzińskie, Częstochowskie, Krakowskie and Tarnowskie, through making the conclusion of the agreement on sales of electricity generated from renewable energy sources dependent on accepting or fulfilling other provisions not related to or normally associated with the scope of the agreement, i.e. settling in the aforesaid agreement issues related to charges for commercial balancing, through:
  1. as of the day of the Decision of the President of UOKiK coming into force – not making conclusion of the agreement on sales of electricity generated in RES dependent on settling charges for commercial balancing service;
  2. addressing all counterparties (by sending a registered letter) with which Tauron Sprzedaż Sp. z o.o. has signed agreements on sales of electricity generated in RES with an offer amending them, by sending an annex to the agreement on sales of electricity generated in RES, so that these agreements do not include provisions making their conclusion dependent on settling therein the issue of charges for the commercial balancing service, within two months of the decision of the President of UOKiK becoming effective.

  At the same time, the President of UOKiK imposed an obligation on Tauron Sprzedaż Sp. z o.o. to submit, within three months of the date of this decision coming into force, a report on performance of the assumed obligations, which should include:
  1) copies of templates of agreements on sales of electricity generated in RES, valid as of the date of this decision coming into force;
  2) a copy of an annex to agreements on sales of electricity generated in RES, valid until the date of this decision coming into force, amending these agreements in such a way that they do not include the provisions making their conclusion dependent on settling therein the issue of charges for the commercial balancing service;
  3) a list of all counterparties which were provided with an offer of concluding an annex to agreements on sales of electricity generated in RES;
  4) a list of all counterparties which were not provided with an offer of concluding an annex to agreements on sales of electricity generated in RES, along with a justification why they were not provided with such an offer.
– Pending explanatory proceedings:
  a) By the Resolution of 27 June 2016, explanatory proceedings was initiated with the aim to establish preliminarily whether the rules and manner of connecting real estate to the electricity grid and increasing connection capacity, applied by ENERGA–OPERATOR S.A with its seat in Gdańsk, do not violate the provisions of the Act on Competition and Consumer Protection, including whether the case concerns antimonopoly practices.
  b) By the resolution of 19 February 2016, explanatory proceedings were initiated with the aim to establish preliminarily whether the activities of ENERGA–OPERATOR S.A with its seat in Gdańsk conducted on the local electricity distribution market with respect to Multimedia Polska Energia Sp. z o.o. with its seat in Gdynia, with which the Company has concluded a General Distribution Agreement on a complex service no. CJ 00062/15 of 27 March 2015, do not violate the provisions of the Act on Competition and Consumer Protection, including whether the case concerns antimonopoly practices.

III. Other practices of energy undertakings which may infringe competition rules, recorded by the UOKiK:

In 2016 the President of UOKiK requested PGE Dystrybucja S.A. Oddział Łódź-Teren to provide explanation with regard to a notification (ref. no.: RŁO-412-38/15) concerning a dispute

about an agreement to connect electricity installation in a wind power plant to the electricity grid due to the operator's refusal to restitute grid connection technical conditions. Information was gathered without initiating explanatory proceedings. Finally, no sufficient grounds were found to suspect competition restricting practices, therefore no further action was taken.

IV. Key activities undertaken by the President of UOKiK with respect to protection of competition on the retail and wholesale markets:

In 2016 the President of UOKiK conducted two audits of execution of binding decisions issued with respect of abusing dominant position on the market of last resort supply in Krakow by Tauron Sprzedaż Sp. z o.o. with its seat in Krakow and Tauron Sprzedaż GZE Sp. z o.o. with its seat in Gliwice (ref. no.: RKR-3/2015 and RKR-4/2015). In the above referenced cases, the entrepreneurs were obliged to change the rules of conduct at concluding agreements. The decisions also imposed an obligation on the entrepreneurs to submit a report on performance of the assumed obligations, within a specified deadline. The audit of execution of the decision consisted in an analysis of reports and documents enclosed to them submitted by entrepreneurs in February 2016. The audit results confirmed the performance of the obligations imposed by the decisions.

3.3. Security of supply

3.3.1. Monitoring balance of supply and demand

Maximum and minimum capacity reserves which were available for the TSOs in morning and evening peak demand in 2016, including capacity available in cold reserve in centrally dispatched generation units (CDGUs) are presented in the Table below. It should be noted that the minimum level of this reserve in the evening peak was lower than the reference level of 9%.

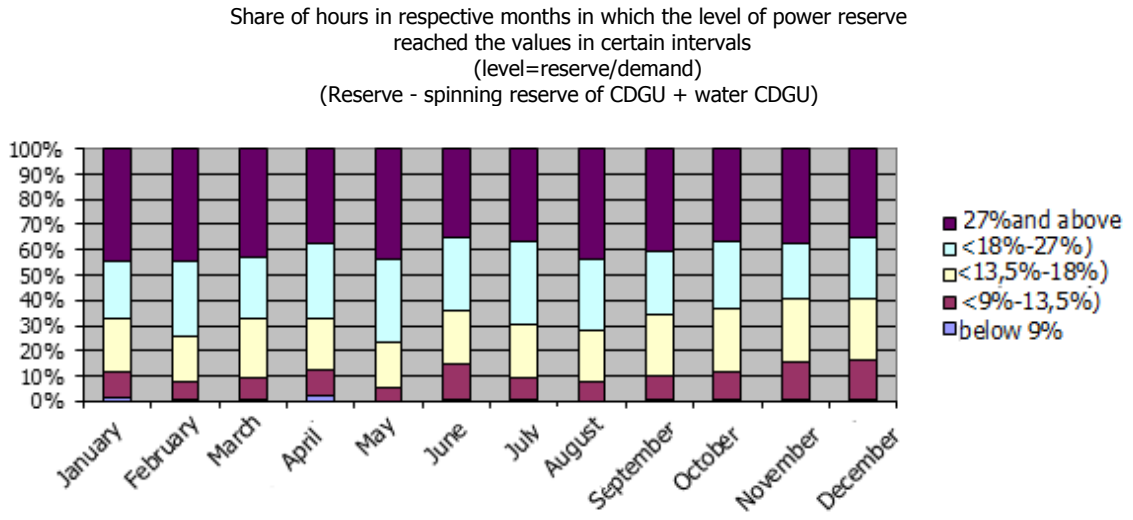
Table 6. Minimum and maximum capacity reserves (including cold reserve) in 2016, in the morning and evening peaks (on the basis of daily reports of PSE S.A. of all days of the year)

	Morning peak		Evening peak	
	Capacity reserve in CDGUs [MW]	**reserve/demand [%]**	**Capacity reserve in CDGUs [MW]**	**reserve/demand [%]**
min	2 053	9.11	1 456	6.37
max	17 801	134.11	16 138	108.13

Source: ERO, on the basis of data provided by PSE S.A.

Periods in which capacity reserve of spinning reserve of thermal CDGUs and water CDGUs, that is excluding cold reserve of CDGUs, was below the reference level of 9% were relatively short – this situation is presented in Figure 10.

Figure 10. Percentage share of hours in particular months, in which power reserve (a sum of spinning reserve of thermal CDGU and reserve of water CDGU) related to capacity demand reached the level: below 9%; from 9% to 13.5% inclusive; from 13.5% to 18% inclusive; from 18% to 27% inclusive; and 27% and above)

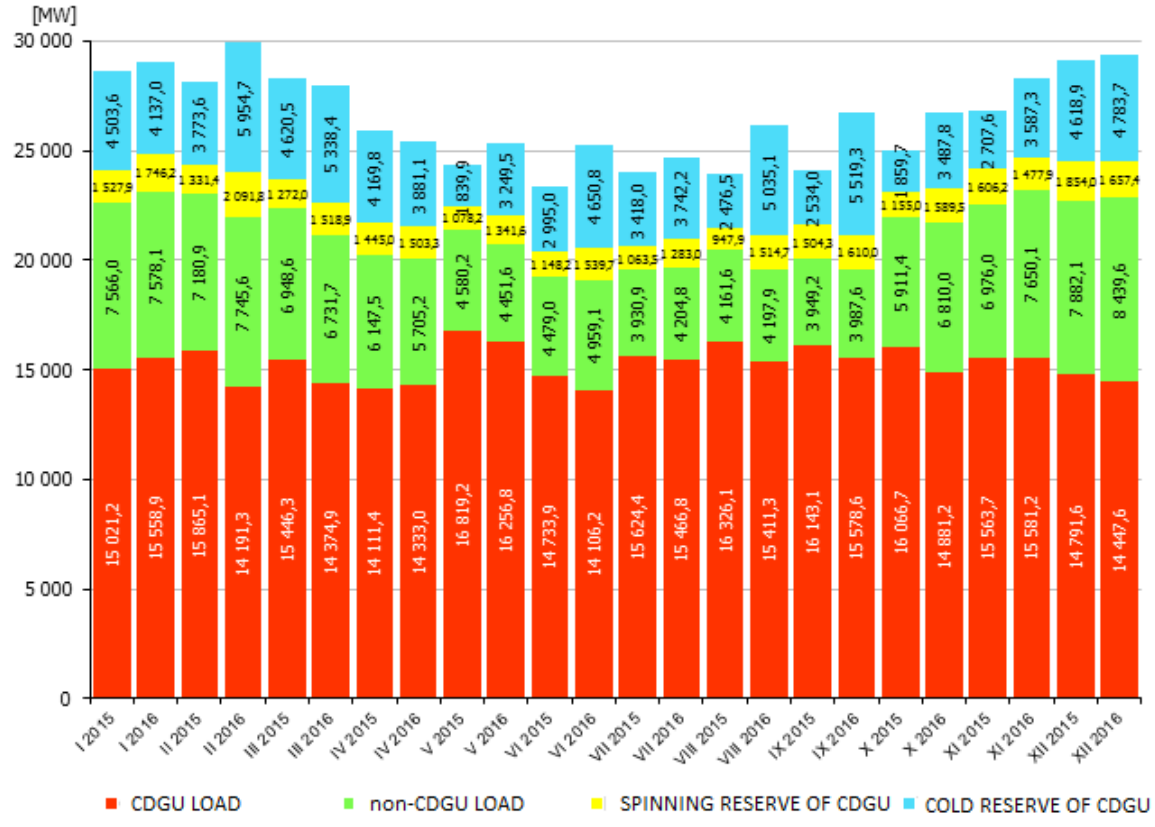


Source: ERO, on the basis of data provided by PSE S.A.

However, if the capacity reserve includes also cold reserve of CDGU, the cases of decrease of power reserve available to the TSO below the reference level of 9% were incidental. Also the frequency of occurrence of such periods in comparison to the preceding year (2015) was noticeably lower. At the same time it should be emphasized that for selected days of January 2016, there were time slots in which power reserve decreased below the reference level of 9% for much longer than one hour. The drops were also quite considerable – for instance on 3 January 2016 in a single quarter at 4.45 pm, the level of power reserve was the lowest in 2016 (thermal spinning CDGU + water CDGU) at some 3.9%. At the same time, on annual average in 2016, as compared to 2015, there were noticeable drops in power outages related to extensive, medium and emergency renovations. In 2016, the greatest unplanned power outages, including current and emergency renovations, and utility outages and outages due to grid operation, with reference to business days power demand, occurred in the summer (June-September), reaching the maximum for the evening peak in September.

The average annual load of CDGUs decreased in comparison to the level of 2015, while load of non-CDGU increased in comparison to the previous year (this situation did not occur only in the period from March to May 2016). When comparing average annual volume of spinning reserves of CDGU with load of CDGU, it should be noticed that it increased from 8.5% in 2015 to 10.5% in 2016, whereas in case of cold reserve – it increased from 21.2% to 29.6%. Figure 11 presents data on available capacities and power reserves of domestic power plants in 2015-2016.

Figure 11. Available capacities and power reserves of domestic power plants, available to TSO in 2016, compared to 2015 – average monthly values of daily peak capacity demand in the country



Source: ERO, on the basis of data provided by PSE S.A.

3.3.2. Monitoring investments in generation capacities

Due to the recent changes in the market and legal situation (including, among others, the planned introduction of the BAT conclusions or commencing works on the draft act on capacity market), which entailed changes of some investment plans of electricity generators, including investment projects whose implementation should be deemed advanced, the President of the ERO decided to repeat the examination conducted in 2016. In January and February 2017, generators updated their investment forecasts. Currently, these data are under analysis.

Investment projects related to cross-border infrastructure

Investment projects related to cross-border interconnections are included in the PSE S.A.'s Development Plan in terms of satisfying current and future electricity demand in 2016-2025:

- Modernization and development of 400/220 kV Krajnik substation
- Modernization and development of 400/220/110 kV Mikułowa substation
- Construction of 400 kV Kozienice – Siedlce Ujrzanów line
- Development of 400/220/110 kV Kozienice substation
- Construction of 400 kV Ostrołęka – Stanisławów line
- Development of 400/220 kV Stanisławów substation
- Development of 400/220/110 kV Ostrołęka substation
- Construction of 400 kV Ostrołęka – Olsztyn Mątki line
- Development of 400/220/110 kV Olsztyn Mątki substation
- Construction of 400 kV Baczyna – Krajnik line
- Development of 400/110 kV Baczyna substation

Construction of 400 kV Mikułowa – Świebodzice line
Construction of 400 kV Baczyna – Plewiska line

A list of investment projects aimed at construction and extension of the cross-border interconnections is included in Ten Year Network Development Plan, developed in 2016 (TYNDP 2016).

3.3.3. Measures to cover peak demand and remedy electricity shortfalls of one or more suppliers

Detailed information on announcing, organizing and conducting tenders for construction of new electricity generation capacity or implementation of actions reducing demand for electricity are included in reports from previous years. In 2016, such measures were not undertaken by the President of the ERO.

With respect to other measures aimed at covering peak demand and remedying shortfall in electricity supply by one or more suppliers, these measures are determined by the minister responsible for energy, who is a competent authority to supervise the security of supply in gaseous fuels and electricity and to supervise the functioning of domestic energy systems to the extent specified in the Energy Law Act.

4. THE NATURAL GAS MARKET

4.1. Network regulation

4.1.1. Unbundling

TSO

There is one transmission system operator in the territory of Poland – OGP Gaz-System S.A., a company wholly owned by the State Treasury. TSO's activity in 2016 comprised:

- managing the national transmission system owned by OGP Gaz-System S.A. under a decision designating the company as the gas transmission operator for the period until 31 December 2030, issued by the President of ERO and under the licence for gaseous fuels transmission valid until 31 December 2030,
- managing the Polish section of the Yamal-Western Europe pipeline under the decision of the President of the ERO ex officio designating OGP Gaz-System S.A. for the period until 31 December 2025, as the TSO of the gas pipeline owned by EuRoPol Gaz S.A., which holds a licence for transmission of gaseous fuels.

In reference to OGP Gaz-System S.A. in the scope of operatorship on its own networks, the ownership unbundling (OU) model shall apply, whereas with regard to networks that do not constitute a property of OGP Gaz-System S.A., i.e. the Polish section of the Yamal pipeline – the independent system operator (ISO) model. Pursuant to Article 12a of the Act on Energy Law the rights of State Treasury as the only shareholder are currently exercised by the Government Plenipotentiary for Strategic Energy Infrastructure.

The decisions on granting a certificate of independence in both networks to OGP Gaz-System S.A. along with opinions of the European Commission were issued in 2014-2015 and published in the Bulletin of the ERO. Due to the fact that the decision granting a certificate of independence under the ISO model (the Polish section of the Yamal pipeline) was challenged by means of appeal at court by an entity which is not a party to the proceedings, in 2015 and 2016 the President of the ERO undertook measures to defend the decision appealed against in the court proceedings. Finally, all the means of challenging by appeal used by the above referenced entity were dismissed in court proceedings in 2016, and in

December 2016 the Supreme Court refused to accept for consideration the cassation appeal lodged by the above referenced entity.

Unbundling rules determined in the Energy Law Act

The scope of activity that may be conducted by the TSO, DSO and SSO, the scope of exemption from the unbundling obligation for DSO and provisions on independence of the above mentioned system operators are regulated in the Energy Law Act and were described in detailed in the report of the previous year.

Distribution System Operators

As of 31 December 2016, business activity in the scope of distribution of gaseous fuels was performed by 53 distribution system operators appointed by the decisions of the President of the ERO, including one legally separated operator – PSG Sp. z o.o. (Polska Spółka Gazownictwa Sp. z o.o.), which belongs to PGNiG S.A. Group. The company is carrying out business activity consisting in distribution of gaseous fuels through distribution networks of low, medium and high pressure for the needs of customers located in the territory of the Republic of Poland. The remaining 52 energy undertakings performed DSO functions locally and were not subject to the unbundling obligation.

Storage System Operator

In 2016 the function of storage system operator was carried out by Operator Systemu Magazynowania Sp. z o.o. (operating since 4 October 2016 under the name of Gas Storage Poland Sp. z o.o., hereinafter: GSP), appointed SSO until 31 May 2022 under the decision of the President of the ERO. The company performs its function on the assets owned by PGNiG S.A. As of 31 December 2016 the company carried out its tasks as regards the following storage installations: UCGS Mogilno, UGS Husów, UGS Wierzchowice, USG Strachocina, UGS Swarzów, UGS Brzeźnica and UCGS Kosakowo.

Natural Gas Liquefaction System Operators

Until the end of 2016, the following seven entities were designated to perform the function of natural gas liquefaction system operators: PSG Sp. z o.o., DUON Dystrybucja S.A., LNG-Silesia Sp. z o.o., PGNiG S.A., Barter S.A., Polskie LNG S.A. and Blue Cold Sp. z o.o.

By means of a decision of 11 May 2016, the President of the ERO granted a licence to Polskie LNG S.A., the owner of the LNG terminal in Świnoujście, to liquefy natural gas and regasify liquefied natural gas with the use of this terminal, until 31 December 2030. On the same day, the President of the ERO designated Polskie LNG S.A. to be natural gas liquefaction system operator in LNG Terminal in Świnoujście until 31 December 2030. This liguefied natural gas installation has regasification capacity of 5 bcm/year, while the total storage capacity of two warehouse containers is 320 thousand cm.

Compliance Programmes

There are two entities operating on the market which are obliged to develop compliance programmes and submit reports on their performance: Gas Storage Poland Sp. z o.o. (SSO) and PSG Sp. z o.o. (DSO).

In 2016, no cases of infringement of the principle of equal and non-discriminatory treatment of the distribution system users were detected with the DSO or SSO. There were also no complaints received regarding the application of Compliance Programme provisions, or any notification of the suspicion of conflict of interest.

In the case of DSO, the Compliance Officer reports directly to the management board and does not join his/her function with other positions. The Compliance Officer is supported in the performance of his/her tasks by coordinators from particular branches of the company. In the SSO, the Compliance

Officer's function was joined in 2016 with a position in a department dealing with regulatory issues and legal service. As part of tasks performance, Compliance Officers undertook, among others, the following measures:

- Provided answers to questions asked by employees, including interpretations of Compliance Programmes,
- Issued opinions on interal legal acts on these areas of activity which were covered by the Compliance Programme,
- Analyzed provisions of internal regulations in force as to their consistency with the provisions of the Programme,
- Participated in the process of making information on the Company's activity available to third parties, including public administration bodies and energy undertakings,
- Conducted training for employees, including the newly recruited ones.

Both entities published their Compliance Programmes on their websites.

4.1.2. Technical functioning

Rules of balancing the transmission system

According to the regulations binding in Poland, gas system balancing in the national transmission system is performed by the TSO. Commercial balancing carried out by the transmission system operator is based on daily settlements. Balancing rules of the system are in line with the Network Code on Gas Balancing of Transmission Networks (BAL), including interim measures described below.

There are three balancing areas of the National Transmission System (NTS): balancing area for high-methane gas (NTSHM), balancing area on the Polish part of the Yamal pipeline (the so-called Transit Gas Pipeline System – TGPS) and balancing area for nitrogen gas (NTSN). NTSN balancing area for nitrogen gas does not have any interconnection points with other balancing areas or cross-border interconnection points.

The transmission system operator conducts the activity in the field of system balancing mainly by selling/purchasing standard short-term products on the gas exchange. This contributes to the increase of liquidity of short-term gas market in Poland. These products are available on the trading platform only in one of the three balancing areas, that is the NTSHM balancing area. In the other areas, the operator may use the balancing market platform as interim measure, until liquidity of exchange trading is reached.

Pursuant to Articles 45-50 of the NC BAL regulation, on 30 September 2016 the President of the ERO, upon request of Gaz System S.A., granted its consent to apply interim measures in the gas year 2016/2017. Interim measures applied on the NTSHM balancing area include balancing market platform for localized products and imbalance tolerance (at the level of 5%). On the TGPS balancing area and balancing area for nitrogen gas interim measures in the form of balancing market platform and temporary charge for imbalance have been introduced. Temporary charge for imbalance is calculated on the basis of the margin price mechanism, in a different manner in the case of TGPS balancing area and the balancing area for nitrogen gas.

In line with the balancing neutrality rule, the transmission system operator shall not generate profit or incur losses related to the transmission system balancing. Therefore, the President of the ERO, by means of a decision of 1 October 2015, approved the "Mechanism to ensure cost neutrality of the balancing activities of the Transmission System Operator, GAZ-System S.A.". Under this decision, the balancing neutrality charge in the gas year starting from 1 October 2015 and lasting until 30 September 2016, was equal to 0. The financial result on the TSO activity related to balancing was established for this entire period after its end. It is calculated for particular system users in the gas year 2016/2017 per month. Starting with the gas year 2016/2017, the balancing activity result and the neutrality charge arising from it shall be calculated and settled per month.

With the decision of 26 September 2016, the President of the ERO agreed for the TSO to carry out balancing services on the EEX trading platform in the GASPOOL balancing area (Germany) and to transmit gas to and from this balancing area. In addition, under this decision, the TSO may trade in gas in the high-methane gas balancing area and transport gas to and from this balancing area to conduct balancing activity in the TGPS balancing area.

Rules of balancing the distribution system

Distribution systems connected to the transmission network are an element of balancing areas managed by the TSO. DSOs participate in establishing the level of imbalance of particular system users by allocating to them the daily volume of gas fed into the distribution system. Differences between the volume allocated for the needs of establishment the imbalance and the volume actually measured at exit from the distribution system to final consumers are settled ex post, based on average market prices. PSG Sp. z o.o., performing the function of the largest DSO in Poland, has been appointed, by the President of the ERO, entity responsible for preparation for system users the forecasts of volumes provided by them, measured less frequently than daily (mainly to households). This information is provided via DSO, in line with the NC BAL.

Security, reliability and quality standards

Rules of controlling quality standards of customer service and quality parameters of gaseous fuels were described in detail in the Report of last year.

With respect to security and reliability of supplies, the President of the ERO:

- Reviews the manner of performance of statutory obligations by gas system operators and evaluates their performance in terms of ensuring proper operation of the system, in accordance with the criteria set out in the Network Code,
- analyses the reports on the execution of the Development Plans, including monitoring of the projects aimed at ensuring the continuity of transmission and distribution services, while maintaining the required level of security and reliability, as well as creating conditions for market development.
- controls if the relevant entities fulfil the obligation to maintain the obligatory natural gas reserves, as well as reporting by the operators on the applied limitations in gas supply.

Monitoring time to connect and repair

Information on interruptions and limitations of gas supplies in the transmission network in 2016 are presented in the Table below.

Table 7. Information on interruptions and limitations of gas supplies in the transmission network in 2016.

	Number	Downtimes and limitations			
		Duration [minutes]	Number of affected customers	Average time [minutes per customer]	Volume of unsupplied fuel [mcm]
Breakdowns	26	516	26	19.85	0.004
Ongoing scheduled works	99	1 658 392	99	16 751.40	n/a
Limitations	0	-	-	-	-

Source: Report on performance of the Development Plan in terms of satisfying current and future demand for gaseous fuels for 2016, OGP Gaz-System S.A.

In 2016 OGP Gaz-System S.A. recorded 26 breakdowns causing downtimes and limitations to gas supply to one entity during 516 minutes. The number of breakdowns decreased by 13.3% in comparison to 2015 (30 breakdowns). Average downtime in gas supply during breakdown also decreased significantly (by 78.5%) in comparison to 2015, in which it amounted to 2,395 minutes. At the same time, the number of scheduled works on the transmission network increased significantly from 45 in 2015 to 99 in 2016. These works caused an increase in a total time of downtimes and limitations from 1,064,526 minutes in 2015 to 1,658,392 minutes in 2016. In 2016 OGP Gaz System did not introduce limitation arising from the "Plan of introduction of limitations" within the meaning of Article 58(17) of the Act on stores.

Table 8. Interruptions in gaseous fuels supply to customers connected to the gas networks in 2015-2016

Year	Downtimes caused by					
	Breakdowns			Scheduled works in progress		
	Duration	Number of affected customers	Average time	Duration	Number of affected customers	Average time
	[minutes]	[number]	[minutes per customer]	[minutes]	[number]	[minutes per customer]
2015	25 227 170.40	78 141	322.84	22 990 615.20	81 840	280.92
2016	22 442 721.00	62 809	357.32	38 921 618.40	102 398	380.10

Source: ERO, on the basis of data included in reports of energy undertakings on performance of Development Plans.

It follows from the data presented in the table above that in 2016, both the average time of downtimes caused by breakdowns increased (by 10.7%) and so did the time of breaks caused by planned renovations (by 35.3%) in comparison to their level in 2015. A successive decrease in the number of consumers affected by breakdowns shows that the technical state of repair of gas networks improved. An increase in the number of consumers affected by downtimes due to planned renovation works may be a derivative of an increase in investment activities conducted by energy undertakings.

Information on connections to the gas network of Gaz-System SA and distribution system operators subject to the obligation of legal unbundling in 2016 is presented in the table below.

Table 9. Information on the connections to the gas network completed in 2016

	Number of completed network connections	Number of completed full-charge connections	Number of connections completed after initial refusal
OGP Gaz-System S.A.	15	14	0
Distribution System Operators*	63 638	3	n/a

* Distribution system operators subject to the legal unbundling obligation.

Source: ERO, on the basis of data included in reports of energy undertakings on performance of Development Plans for 2016.

Information presented in the table shows a high number of gas network connections completed by DSOs and the TSO in 2016. In the case of the TSO the increase equals 66.7% of the number of completed network connections, and in the case of DSOs 65.0%, in comparison to 2015. At the same time, on the basis of information obtained under gas system monitoring concerning conditions for connecting entities to the network carried out by the ERO, the main reasons for missing the network connection deadline provided for in the agreements were identified, including, among others:

- difficulties with obtaining required administrative and legal decisions (i.e. difficulties with obtaining property owners' permits for localisation and construction of a pipeline/connector, often connected with a necessity to obtain legal title to the real estate on which gas network or installation was supposed to be built; time-consuming administrative or court proceedings related to determining utility easement),
- customers' delays in meeting the deadlines set in the network connection agreement,
- unfavourable weather conditions causing the delays in outdoor works.

In 2016, the President of the ERO received 7,298 notifications from gas undertakings informing about gas network connection refusals. This is a much higher number of refusal notifications than in 2015, when 6,551 notifications were made (increase by almost 11.5%), which shows an increase in interest of consumers in using network gas, and at the same time it reveals that there are many areas poorly equipped with gas infrastructure. In 5,318 cases, the notified connection refusals were caused by lack of economic conditions for connection to the system and in 1,980 cases, the refusal was due to lack of technical conditions for connection.

Refusals for economic reasons were due to negative results of conducted economic analyses – non-profitability of an investment project due to the need to bear additional financial expenditures on construction of new sections of gas infrastructure necessary to connect new consumers (investment projects were not included in current development plans of a given operator).

The reasons for refusal to connect to the network due to lack of technical conditions, indicated by distribution system operators, included, among others:

- lack of low pressure gas system capacity,
- lack of existing gas network at the location of the facility for which connection was requested,
- lack of gas system in a given location,
- lack of available capacity reserves in the transmission system,
- non-inclusion of a given region in the gasification plan.

In some cases, after an analysis of these refusals was performed, and based on complaints lodged by consumers, the President of the ERO undertook measures related to conducting explanatory proceedings, or administrative proceedings were conducted to settle a dispute on refusal to connect to the system, initiated upon consumers' request.

Monitoring access to storage, linepack and other ancillary services, and monitoring correct application of criteria that determine the model of access to storage

The entity performing tasks assigned to the SSO is Gas Storage Poland Sp. z o.o., previous name: Operator Systemu Magazynowania Sp. z o.o. Storage capacity managed in the season 2016/2017 by this operator amounts to 2.9 billion cm.

In 2016 the SSO offered gaseous fuel storage services for the need of the market with new storage capacity arisen due to extension of storage facilities. In addition, storage services were offered with released storage capacity, as a result of termination of concluded contracts. Rules of allocation are based on the pro rata formula, with preference for long-term contracts. New services offered for a maximum period of four storage years were ordered only for the period of one storage year.

In 2016, the SSO received three requests for concluding contracts on provision of storage services. One applicant was not allocated storage capacity as requested. In 2016, no requests for settling disputes regarding refusal to conclude an agreement on provision of storage services were submitted to the President of the ERO.

Monitoring the implementation of safeguard measures

In 2016 the President of the ERO monitored the implementation of safeguard measures in the event of sudden crisis on the energy market, a threat to the physical security or safety of persons, equipment, installations or system integrity, by approving emergency plans for restrictions in natural gas consumption developed by the transmission, distribution and combined system operators. It was also carried out within verification or determination of the level of obligatory reserves of natural gas, and analysis of information related to the aforesaid measures.

Restrictions in natural gas consumption

Detailed rules of introducing restrictions in natural gas consumption and of development of plans of introducing restrictions of natural gas consumption by transmission system operators, distribution system operators and combined gas system operators, or energy undertakings performing the function of operators, were presented in the National Report for 2015.

In 2016 the obliged operators submitted 47 applications for the approval of restrictions plans for the 2016/2017 season, out of which 44 applications were submitted in 2016 and 3 applications in 2017. In 2016, in this regard, the President of the ERO issued 8 decisions, although the restriction plans of fundamental importance for the gas system functioning, i.e. the plan developed by the gas transmission system operator – OGP Gaz-System S.A. and the restriction plan developed by the gas distribution system operator PSG Sp. z o.o., were approved with the decisions of 22 December 2016. Proceedings with respect to the restriction plans developed for the season of 2016/2017 which were not finished in 2016, were continued in 2017.

In 2016 restrictions in natural gas consumption were not introduced.

Obligatory reserves of natural gas

Pursuant to the provisions of the Act on Stocks, in 2016 the President of the ERO verified or determined the volume of obligatory reserves of natural gas imported by energy undertakings holding a licence for cross-border trading in gas. The purpose of maintaining the obligatory reserves is to prevent the negative effects of disruptions in the natural gas supply, which enable rapid interventions allowing for compensation of deficiencies in the balance of gas supply to the market.

In 2016 there were 48 proceedings on determining or verifying the obligatory reserves of natural gas conducted. Out of the conducted proceedings:

- 32 were finalised with a decision issued pursuant to Article 25 (3) of the Act on Stocks, that is the President of the ERO verified the volume of stocks established by undertakings on the basis of their imports, in the period from 1 April 2015 to 31 March 2016, arising from their statistical reports;
- 15 were finalised with a decision issued pursuant to Article 25 (5) of the Act on Stocks, that is the President of the ERO determined the volume of stocks for undertakings for the period from the date of starting imports to 30 September and/or from 1 October following the date of starting imports to 30 September of the following year, on the basis of statistical data on the average gas volume imported in the period of the activity conducted so far;
- 1 was discontinued.

In 2016 the President of the ERO monitored the implementation of safeguard measures also by the analyses of information received in connection with functioning of the above-mentioned measures, in particular:

- information submitted to the President of the ERO pursuant to Article 27 (2) of the Act on Stocks by the energy companies running business in the scope of natural gas imports for the purpose of its further resale to customers, i.e. the information about actions undertaken during the period from 1 April of the previous year to 31 March of a given year, in order to (1) ensure fuel security of the state with respect to foreign trade in natural gas, and (2) implement the obligation to maintain obligatory reserves of natural gas.
  In 2016, 51 undertakings submitted to the President of the ERO information pursuant to Article 27 (2) of the Act on Stocks;
- information collected by the President of ERO in a survey conducted among energy undertakings which hold a licence for foreign trade in natural gas, concerning the obligation to maintain obligatory reserves of natural gas and having developed procedures referred to in Article 49 (1) of the Act on Stocks In 2016, the President of the ERO conducted a survey concerning the obligation to maintain obligatory reserves of natural gas. Its purpose was to obtain information on the implementation of tasks related to maintenance of obligatory reserves of natural gas from 1 June 2016 to 30 September 2016 and having developed procedures referred to in Article 49 (1) of the Act on Stocks, that is procedures applied in the following events: disruptions in natural gas supply to the gas system and unpredicted increase in natural gas consumption by consumers. The survey was conducted among 71 energy undertakings holding a licence for foreign trade in natural gas as of 30 September 2016, out of which 70 undertakings holding a relevant licence responded. The answers received from the undertakings show that in the assessed period obligatory reserves of natural gas were maintained by only one undertaking, i.e. PGNiG S.A.;
- information provided to the President of the ERO by gas transmission system operator pursuant to Article 24 (4) and Article 52 (7) of the Act on Stocks;
  Pursuant to Article 24 (4) of the Act on Stocks, if it is determined that technical parameters of storage installations do not ensure the off-take of obligatory reserves of natural gas to the gas system in the period not longer than 40 days, the gas transmission system operator or gas combined system operator shall notify this fact to the President of the ERO within 7 days. In 2016 the President of the ERO did not receive from the gas transmission system operator any information provided pursuant to Article 24 (4) of the Act on Stocks. Under Article 52 (7) of the Act on Stocks, the gas transmission system operator or gas combined system operator shall immediately inform the minister responsible for economy and the President of the ERO about the date and amount of released obligatory reserves of natural gas. This information is provided daily until 10:00 a.m., and concerns the previous day. In 2016 the President of the ERO did not receive the information provided pursuant to Article 52 (7) of the Act on Stocks from the gas transmission system operator.

4.1.3. Network and LNG tariffs for connection and access

The rules of establishing and approval of tariffs, including the rules of establishing charges for connection to the network were described in the Report of the President of the ERO for 2015.

The key infrastructural undertakings in the gas sector are OGP Gaz-System S.A., PSG Sp. z o.o. and EuRoPol Gaz S.A. (undertakings involved in gas delivery), Gas Storage Poland Sp. z o.o. (undertaking providing gas storage services, until 3 October 2016 operating under the name Operator Systemu Magazynowania Sp. z o.o.) and Polskie LNG S.A. (undertaking providing services in the scope of regasification of liquefied natural gas).

The tariff of OGP Gaz-System S.A applied in 2016 to settlements with system users was approved by the decision of the President of the ERO of 17 December 2014 for the period until 31 December 2015 and amended by:

- the decision of 17 December 2015 extending the validity term of the above mentioned tariff until 30 June 2016 and approving new higher discounts due to the breach in quality standards of customer service and adjusting it to the new wording of provisions of the Transmission Network Code,
- the decision of 9 June 2016 extending the validity term of the above mentioned tariff until 31 December 2016 and approving the update of discounts for failure to comply with the quality standards of system users service and provisions specifying the wording of the item on lack of charges on the connection of the transmission system with the LNG terminal.

Maintaining the rates at the level binding in 2015 was justified by lack of substantial changes in the level of justified costs and capacities ordered by system users for the gas year 2015/2016, in comparison to volumes adopted for the calculation of the applied tariff.

Similarly to OGP Gaz-System S.A. also PSG Sp. z o.o. in 2016 used the tariff approved on 17 December 2014 in its settlements for the provided distribution services, as justified costs which were the basis for its establishment did not change substantially. With respect to the tariff of 2015, the discounts which the undertaking was obliged to grant for failure to comply with quality standards of system users' service were updated twice (by decision of 17 December 2015 and 9 June 2016). In addition, provisions on criteria for qualification to tariff groups and settlements in the area of connection to the distribution system were specified.

On 22 April 2016, a tariff for SSO regarding gaseous fuel storage services was approved, with a validity term until 31 March 2017.

On 2 June 2016, the first tariff for LNG regasification services established by the energy undertaking Polskie LNG S.A. was approved for the period until 31 December 2016. Then, on 16 December 2016, Tariff no. 2 of this undertaking was approved for 12 months from the date of its introduction for application. In the tariff, rates of fees were established for package services of regasification of liquefied natural gas including: unloading LNG from a tanker, process storage in storage facilities, regasification and delivering the gaseous fuel to the transmission system, as well as rates of fees for ancillary services in reloading LNG to road tankers provided in the long term, that is longer than one year, and in the short term – at least one gas day. In addition, the above mentioned tariff includes rates of fees for separated services, that is separated extended process storage and separated contracted capacity, which were provided in addition to package regasification services.

In 2016 SGT EuRoPol Gaz S.A. conducted its activity based on the tariff approved on 17 December 2015. Settlements for services provided with networks of EuRoPol Gaz S.A. are made only on the basis of fixed rates of transmission fees.

4.1.4. Cross-border issues

Approval of rules of access to cross-border infrastructure, including allocation of transmission capacity and congestion management

The rules of access to the transmission system, including rules of allocation of cross-border capacity and system congestion management were regulated in the Transmission Network Code developed by the TSO and approved by the President of the ERO. The last amendment to the Code was made on 1 March 2016. Its purpose was to finalize the implementation of the EU network codes, including CAM, BAL and IO.

As part of mechanisms of management of system congestion on cross-border interconnectors, oversubscription and buy-back (OS&BB), surrender and long-term use-it-or-lose-it (LT UIOLI) schemes are used.

In the "ACER annual report on contractual congestion at interconnection points in 2015" in case of interconnection points located on the Polish-German border (Gubin, Mallnow) and an interconnection point on the Polish-Czech border (Cieszyn), it was stated that in 2015, the criteria indicating the existence of contractual limitations pursuant to Annex I (2.2.3) (1) to Regulation 715/2009 were met. In the case of the interconnection point in Cieszyn, contractual limitations were identified only on the Czech side. The interconnection point in Gubin was connected on 1 April 2016 with the points in Kamminke and Lasów into one point (GCP GAZ-SYSTEM/ONTRAS). On the basis of this report, the President of the ERO conducted proceedings regarding the TSO's obligation to implement the firm day-ahead use it or lose it (FDA ULIOLI) mechanism. As a result of the proceedings, the President of the ERO did not identify the need to apply this mechanism at any of the above mentioned points.

In addition, the President of the ERO, by means of a decision of August 2016, approved methods of allocation of transmission capacity for the planned entry/exit point Poland-Slovakia as part of the Open Season procedure. The purpose of Open Season was to evaluate the market demand for the capacity of this interconnector. The evaluation revealed no such interest.

Cooperation with the regulatory authorities from other countries

The President of the ERO cooperates with the regulatory authorities from the other EU Member States mainly on the ACER and CEER fora. Representatives of the President of the ERO actively participate in meetings of groups and bodies of these organizations and join in the process of elaborating documents and positions.

As part of bilateral cooperation in the natural gas market area in 2016, the main activity focused on the preparation of a project of gas interconnection to Denmark. In 2016 works began on transmission infrastructure which will allow transmission of high-methane natural gas from deposits in the Norwegian Continental Shelf to Denmark, and then to Poland and reverse transmission of high-methane natural gas from Poland to Denmark. This should contribute to development of competition on the gas market and to increase security of supplies of this fuel in Poland. To this end, on 8 November 2016 a four-party meeting was held in the ERO's office, in which participated representatives of regulators from Poland and Denmark: the ERO and DERA, as well as transmission system operators: GAZ-SYSTEM S.A. and Energinet.dk. During the meeting the following issues were discussed: competences of national regulatory authorities, detailed applicable provisions, rules of transmission capacity allocation and other conditions necessary for the implementation of the investment project. The cooperation will be continued in 2017.

Cooperation on the implementation of Network Codes

In 2016 bilateral cooperation between the Energy Regulatory Office and the German Regulator Bundesnetzagentur (BNetzA) was continued in order to agree the implementation method of the CAM regulation. Main subject of the consultation was to choose the right platform for the allocation of bundled capacity at the Mallnow and GCP GAZ-SYSTEM/ONTRAS interconnection points on the Polish-German border. Lack of agreement in this scope between OGP Gaz-System S.A. and the German operators OSP ONTRAS Gastransport GmbH (GCP interconnector) and Gascade Gastransport GmbH (Mallnow interconnector) resulted in the amendments to the NC CAM to provide for a possibility of formal involvement of regulators in this process.

Integration of systems in the Visegrad Group (V4)

The main purpose of the Polish Presidency in the Visegrad Group lasting from 1 July 2016 to 30 June 2017 was to elaborate and approximate the positions of particular states on the issues of key importance to the region's Energy security, including the Eastern Partnership and Energy Community, strengthening the position of the European Union on negotiations regarding Energy supplies, increasing transparency

of intergovernmental contracts and agreements on Energy supplies and increasing security and diversification of gas sources, its suppliers and transmission routes.

With respect to the natural gas sector, the detailed goals include: continuation of works on the investment projects which are part of the North-South Corridor, acquisition of financial support from EU funds for the implementation of the projects, analysis of ways of utilization of transmission infrastructure used to import gas to the territory of the V4 states (including the LNG terminal in Świnoujście), elaborating a common position on the Nord Stream 2 project, strengthening cooperation with regard to security of supplies, in particular elaborating a common position during works on the amendment to Regulation 994/2010 and strengthening the single gas market in line with the Gas Target Model II.

Cooperation on infrastructure issues

Similarly to the previous year, all planned cross-border gas interconnections between Poland and other EU states in 2016 had a status of Projects of Common Interest (PCI) and were placed on the second PCI list published as an attachment to the Delegated Regulation of the European Commission amending Regulation 347/2013. A relevant annex was published on 18 November 2015 and included all unfinished projects on the earlier – first list; at the same time, the list was not supplemented with additional projects. These projects include, among others: a project of interconnection between Poland and Denmark (the Baltic Pipe), a project of capacity extension of the LNG terminal in Świnoujście or projects of interconnections between Poland and neighbouring states within the EU, that is the Czech Republic, Slovakia and Lithuania.

With respect to the Poland-Czech Republic project, the measures undertaken by the President of the ERO in 2016 mainly focused on monitoring its implementation. It should be reminded that in 2016 at the EU level, the discussion intensified on the implementation of the Nord Stream 2 gas pipeline and associated pipelines such as EUGAL, which are an extension of the under-the-sea section of Nord Stream and are to transport gas from the Eastern direction on the land area of the EU. Such a situation was not without impact on the positions of the transmission system operators which in the course of preparation of implementation plans for their own projects are obliged to consider any circumstances, and such circumstances, of key importance, include the occurrence of events significantly increasing the likelihood of major projects resulting in new gas volumes in the Central and Eastern Europe region.

Due to this situation, the operators began works on updating analyses and adapting the strategy to new circumstances. As a consequence, no major progress was observed in the project of interconnection between transmission systems of Poland and the Czech Republic, under the working name Stork 2.

The operators conducted works on mutual agreements regulating all issues related to the implementation and further operation of the interconnector (including, among others, with respect to technical aspects, the operators have to agree on a common position regarding equipping the measurement station with measurement devices and data transmission sets, while with respect to financial aspects, they have to specify the scope of operation of the guarantee mechanism arising from a coordinated decision of regulatory bodies on cross-border allocation of costs).

Such a situation entails a risk of putting the Stork 2 gas pipeline to use later than originally assumed, that is by the end of 2018. The President of the ERO obtained relevant information on risks of implementation of the above mentioned project, including risks related to the implementation schedule, in the report on the implementation of the Stork 2 project, as part of the monitoring activities conducted. The report did not prejudge the scope of change to the schedule, but it allowed to diagnose the risk related to the section of 60 km from Kędzierzyn to the State Border along with measurement node and station in Kędzierzyn. Yet this does not refer to the other part of the project including strengthening the internal transmission system of Poland through a construction of a network with total length of 194 km and a compression station with a capacity of 11.5 MW.

In reference to Poland-Slovakia project, in 2016 the President of the ERO monitored the works concerning implementation of the Regulator's decision of 28 November 2014 on cross-border allocation of costs incurred by OGP Gaz-System S.A., concerning the implementation of the project of Poland-Slovakia gas interconnection. In order to support the assessment and implementation of the investment, representatives of the President of the ERO were participating in the works of the Working Group established on 22 November 2013 under an intergovernmental agreement, i.e. "Agreement between the Government of the Republic of Poland and the Government of the Slovak Republic on cooperation in the implementation of the investment project concerning interconnector between the Polish and

Slovak transmission systems". In 2016 one meeting of the Group was held, during which an analysis was made of results of the competition for CEF subsidies for projects in which the Poland-Slovakia gas interconnector was not considered eligible for financing due to a too small number of scores and obtaining partial scores below the required minimum in 3 out of 7 evaluated areas: maturity of action, need to overcome financial obstacles, stimulating effect of the CEF financial assistance. It was stated that there was no significant delay in the implementation of the project, while it would be necessary to take additional efforts to eliminate obstacles making it impossible to obtain co-financing for the project from the EU funds, which on the Polish side requires, among others, following the open season procedure. A relevant procedure was developed with the participation of the President of the ERO and carried out after final approval by the regulators. This required its prior agreement with the Slovak side in order to ensure equal and non-discriminatory conditions for the stakeholders on both sides of the border.

As regards Poland-Lithuania interconnection, the activity of the President of the ERO in 2016 to a high extent concerned the implementation of ACER's Decision of 11 August 2014 No 01/2014 on the investment request including cross-border cost allocation for the gas interconnection Poland-Lithuania Project of Common Interest No 8.5 (hereinafter: GIPL)[20], and connected activities aimed at limiting project risks. In this context, the President of the ERO held a dialogue with OGP Gaz-System S.A. on possible actions supporting the implementation of the above mentioned project. To this end, regulator made itself familiar with the agreement concluded by the GIPL project promotors with the INEA Agency on financial support for the project from financial assistance made available under the CEF instrument. In its positions presented in 2016, the Regulator highlighted that it supports the project due to its pan-European importance. However, it was underlined that net positive impact of the project which were identified by the project promotors, that is OGP Gaz-System S.A. and AmberGrid, and then in the ACER's Decision on GIPL, refer to LT, LV and EE, whereas PL will bear net negative impact (costs outweigh benefits), and therefore it is justified for the project to be neutral for the users in Poland. In this context it should be noted that Article 12(1) of the Regulation 347/2013 provides for the obligation to bore investment costs by the relevant operators of the Member States to which the project provides a net positive impact, which is not the case of Poland. As part of the analyses carried out in previous years to assess the impact of the project on the operator's tariff, it was estimated that assuming a gas flow at a level corresponding to 20% of the technical capacity of the pipeline, transmission rates of OGP Gaz-System S.A. would increase by 7.7%, and in the absence of flow – by 9.7%[21]. In this state of affairs, the President of the ERO stipulated that the project promotors, OGP Gaz-System S.A. and AmberGrid, should undertake actions leading to the financial closing of the GIPL project and allowing its implementation in the manner ensuring its neutrality to consumers in Poland. Regulator declared the will to enforce the ACER's decision due to pan-European goals which the implementation of this project will meet, and asked to be provided with any information on circumstances related to its implementation, including encountered problems and possible cases in which the involvement of the President of the ERO could bring expected benefits, considering in particular broadly understood tasks and statutory goals of the regulator. The President of the ERO emphasized that the ACER's decision regarding the CBCA, which was supposed to be a basis for settlements between the involved operators, at the implementation of the GIPL project, is an autonomous document which does not require for its validity any additional documents not provided for in Regulation 347/2013, and that this decision is directly binding, therefore the project's promotors should demonstrate more proactive activities, assuming on one hand their multioptionality and the need for their constant adaptation to external conditions, and on the other – the importance of the dialogue, considering the consequences of the decisions made by these promotors. In the positions it was emphasized that

[20] Regulatory Authorities failed to agree a common position within the time limit provided for in the Regulation, and pursuant to Article 12 (6) of Regulation 347/2013 the case was referred to ACER. As a result, on 11 August 2014, ACER issued Decision No 01/2014 on the investment request including cross-border cost allocation for the Project of Common Interest, i.e. the gas interconnection Poland-Lithuania. Under the aforesaid decision, ACER recalculated the cost-benefit analysis submitted by the promoters of the project and assessed the submitted project in terms of, among others, the admissibility of the project, including the consultations conducted with the operators from the neighbouring countries affected by the project, its stage and maturity. In the ACER's decision Poland was identified as a country incurring costs (i.e. a net negative effect), while the net beneficiaries were: Lithuania, Latvia and Estonia. Therefore – as indicated in the decision – lump sums should be paid by the TSO of the Member States on which the project has a significant positive net effect, i.e. Lithuania, Latvia and Estonia, to the TSO of the Member State with a net negative effect of the project, i.e. Poland.

[21] ACER's assessment of the GIPL implementation on the tariff of the Polish operator at the level of 4.5% correspond to the discounted tariff increase within 20 years of its usage, whereas ERO's analyses refer to 2019, i.e. the first year after investment completion which will be the most important from the Polish customers' point of view.

the promotors of the GIPL project would have to undertake measures to hedge against the risks, in particular related to insufficient utilization of the GIPL. Another issue is noting in 2016 a change of the assumed term of putting to exploitation of the GIPL gas pipeline, which is due to the change of the route of the gas pipeline section on the Polish side and transferring the initial point of the investment from the Rembelszczyzna node to Hołowczyce node. As a result, putting the project to exploitation is currently foreseen for the year 2021, and not 2019, as assumed before.

Another project included in the PCI list is the Baltic Pipe gas interconnection project. In 2016, the President of the ERO made itself familiar with the project assumptions in the course of the works preceding and accompanying the development by OGP Gaz-System S.A. of assumptions to the National 10-year Development Plan for the years 2018-2027 and the document drawn up for the needs of conducting public consultations. In 2016 the project in question was at a relatively early stage of development and until December 2016 it functioned in official documents as a concept and not a project with clearly specified technical and economic parameters. In the consultation document it was stated that "*Diversification projects concerning the Northern Gate are at an early stage of works. Connection with the Norwegian shelf requires coordination and arrangements at many levels among several entities. As at the end of 2016, a feasibility study for the entire connection – that is gas infrastructure connecting the Polish transmission system with Norwegian sources of gas - will be obtained. At the same time, the necessary extension of the domestic transmission system allowing for the optimal functioning of this connection, was identified."* In addition, it included information on the planned performance of the open-season procedure in 2017 with the aim to obtain a confirmation of interest from the market in gas supplies from this direction and to sign binding agreements on gaseous fuel transmission. According to the draft development plan, the Baltic Pipe Project is a basic project of the base scenario, assuming ensuring new sources of gas imported from the Northern-Western direction before 2022. The assumed capacity of the interconnector is up to 10 mcm/year. Due to the assumed schedule, the works on the Baltic Pipe project in 2016 were only of a preliminary nature.

The project of common interest called "Extension of entry points, Lwówek i Włocławek, to the Yamal gas pipeline in Poland" was already completed and in 2016 was, along with other PCI projects – subject to monitoring, in the context of the assessment of results of the completed actions.

Monitoring investment plans and assessment of their consistency with the Community-wide development plan

Energy undertakings involved in the transmission or distribution of gaseous fuels, pursuant to Article 16 (1) of the Energy Law Act, are obliged to prepare, for the area of their activity, development plans for satisfying current and future demand for those fuels.

Agreeing of the draft development plans is aimed at ensuring compliance of these draft plans with the Energy Law Act and its implementing provisions. Development plans – due to a multiannual investment cycle and involvement of significant financial resources (high capital-intensity), which cause long-term financial consequences for the undertaking and its customers – have a direct impact on the level of the future tariffs of the undertaking. Therefore, agreeing the draft development plans is directly connected with issuing decisions on tariff approval.

Development plans are also a source of information on the investment plans of the undertaking in terms of planned investments aimed to connect new consumers and projects necessary to maintain an appropriate level of reliability and quality of provided network services.

TSO

In 2016 the development plan of OGP Gaz-System S.A. (TSO) agreed for the period 2016-2025 was in force. The process of drawing up and submitting for agreement of the "National ten-year development plan for the gas transmission system in the years 2016-2025" (hereinafter: the NTYDP) began in 2015 (more information on this may be found in the National Report for 2015). The final materials for the agreement of the above mentioned plan were provided in February 2016, which allowed the President of the ERO to agree on the plan on 6 April 2016.

In the NTYDP for the years 2016-2025 OGP Gaz- System S.A. plans further development of the transmission network, especially interconnections which apart from ensuring high diversification of

sources and directions of gas transmission shall ensure access to competitive markets. In the 2020 perspective, as a result of implementation of the projects included in the NTYDP, OGP Gaz-System S.A. foresees further significant improvement of the extent of diversification of supply directions and sources. It plans to reach this goal by executing two new interconnections in the South of Poland: with the Czech Republic and Slovakia, as well as the Poland- Lithuania interconnection.

With reference to the Baltic Pipeline Project, it should be noted that it may substantially improve the conditions of gas supplies to Poland and the whole region, and due to this fact, its implementation is of utmost importance. It should be underlined that the pipeline project ensures not only a diversification of directions but also sources of natural gas supplies to Poland and therefore it is a project requiring special attention. The manner of agreeing on the tasks related to the Baltic Pipeline Project has revealed that the President of the ERO expects OGP Gaz-System S.A. to define the scope of the project more explicitly, so that it is possible to specify its material scope and full measurement of costs and benefits arising from its implementation.

In the planning period OGP Gaz System S.A. assumes a material increase of gas pipelines with a nominal diameter of 1000, which will be elements of the future North-South Corridor. These pipelines will be located mainly in Western and Southern Poland. Thanks to such parameters, it will be possible to supply gas from the LNG terminal and other sources in the North of Poland to consumers located in the South and East of Poland, and also to the neighbouring countries.

It was also agreed that the investment outlay requested in the NTYDP substantially deviated from the amounts arising from the agreed development plan for 2014–2023 (hereinafter: the agreed DP). For 2017 the requested investment outlay was higher by 22.1% than the agreed amount, while for 2018 the requested investment outlay was higher by 37.6% than the agreed amount. Also for 2019 – despite a lack of agreed outlay in the DP 14-19 – the investment outlay requested in the DP 2018-27 is substantially different than the one in DP 2016-25 as it is higher by 43.4%.

At the same time, demand forecasts in the NTYDP for 2016–2025 deteriorated with respect to those presented in the DP 2014-23 (which is described in detail under item 4.3.2 of this Report).

4.1.5. Compliance and implementation of the EU legislation at the national level

Compliance of transmission and distribution system operators, system owners and gas undertakings with the relevant Community legislation, including cross-border issues

Pursuant to the provisions of Regulation 715/2009, the TSO shall publish on its website data on the functioning of the transmission system, including on the balancing activity. By means of a decision of 13 July 2016, the President of the ERO approved lists of relevant points of the transmission system. The disclosure obligation with respect to relevant points of the transmission system includes most of all publishing the information on offered transmission services and terms and conditions applied to their provision. In addition, the TSO on a regular basis provides detailed information on technical, contracted and available capacities for all relevant points. TSO publishes also detailed information on the quality parameters of the transmitted gas and the required pressure level for all relevant points. The TSO provides information concerning the basis and methodology for tariffs calculation on its website, along with a calculator of charges for transmission service and gas odourisation.

The rules of transmission capacity allocation are in principle consistent with the NC CAM, whereas with regard to management of system congestion, the CMP guidelines are applied.

With respect to allocation of transmission capacity on interconnectors with the EU states and on points between internal entry-exit areas, bundled products are offered via allocation platform. Interconnectors on the border with Germany are an exception, as the operators have not yet decided on the selection of a common allocation platform. At these points, unbundled products are offered for the period of a maximum one year.

As a result of monitoring the implementation of tasks related to system congestion management it was stated that due to a lack of system congestions at these points in 2016, capacity was not offered under oversubscription or buy back procedure. There was no need to apply within the long-term capacity allocation, a procedure based on the long-term "use it or lose it" (long-term UIOLI). Network users used an option to withdraw from using the allocated capacity.

In 2016 there were no complaints filed with the President of the ERO about performance of tasks by the TSO.

Compliance and implementation of the EU legislation at the national level

The Act of 30 November 2016 on amending the Energy Law Act and certain other acts (Journal of Laws of 2016, item 1986) fulfils the obligations of the Republic of Poland in terms of abolishing the obligation of undertakings involved in trading of gaseous fuels to submit tariffs for approval to the President of the ERO, according to the ruling of the Court of Justice of the European Union of 10 September 2015, ref.: C-36/14, on infringement of the provisions of Directive of the European Parliament and of the Council no. 2009/73/EC of 13 July 2009 **concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC**.

Pursuant to the provisions of this Act, as of 1 January 2017, the obligation to submit tariffs for approval shall not apply to sales of gaseous fuels to wholesale consumers or final consumers that purchase these fuels: in a virtual point, 2) as liquefied natural gas (LNG) or compressed natural gas (CNG) and 3) through tender, auction or public procurement procedure, and this fact has been reflected in tariffs approved in December 2016. As of 1 October 2017, prices of gaseous fuels sold to the other groups of final consumers shall be liberalized, except for consumers in households, in respect of which the tariff obligation shall apply until the end of 2023.

ERO's adherence to the binding decisions of the Agency and the Commission (Article 41 (1) (d)) and guidelines (Article 43)

No binding decisions were issued by the Agency or the Commission in 2016.

Independence criteria

Pursuant to the statutory provisions, the President of the ERO shall be empowered to efficiently control the fulfilment by system operators and the transmission system owner of their statutory obligations arising under the Energy Law Act, including in particular control whether the TSO meets the independence criteria specified in Article 9d (1a) of the Energy Law Act and the criteria specified in Article $9h^1$ (7) of this Act.

With respect to the TSO, pursuant to the provisions of Article 23 (2) of the Energy Law Act, the remit of competences of the President of the ERO includes, among others: controlling the fulfilment of the obligations by the TSO, arising under Regulation 715/2009, approval of the Transmission Network Code, approval of tariffs and control of their application, monitoring the functioning of the gas system with respect to rules of management and allocation of capacity of interconnections, mechanisms of balancing and congestion management, fulfilment of the TSO's obligation to publish information on interconnections, network utilization and allocation of transmission capacity.

In addition, pursuant to Article 23 (2) (6b) of the Energy Law Act, the remit of activities of the President of the ERO includes controlling the fulfilment by the owner of the transmission system and the operator of the gas transmission system of their statutory obligations and obligations specified in the agreement referred to in Article 9h (3) (2) of the Act, including monitoring of ties between the transmission system owner and the gas transmission system operator and of the flow of information between them.

Pursuant to Article 9h (13) of the Energy Law Act, in the case of entrusting the performance of the obligations of the transmission system operator under item 3 (2) or of designation of the transmission system operator under item 9, the President of the ERO shall be empowered to control the fulfilment of obligations referred to in items 11 and 12, in Article 9c and in Article 16 by the owner of the transmission system or the transmission system operator. Provisions of Article 79 (1) and (4-7) of the Act on Freedom of Economic Activity of 2 July 2004 shall not apply to the above referenced control.

In addition, under the Act of 22 July 2016, Article 9h (14) was added to the Energy Law Act. Pursuant to the provisions of this Article, the President of the ERO may, in justified cases, oblige the network

owner to undertake specific measures with the aim of fulfilment by the system operator designated on its network, of independence conditions and criteria referred to in Article 9d (1-1c) and conditions referred to in Article 9h[1] (7) (2-4), and set the date to undertake them. When issuing the decision, the President of the ERO takes into account, in particular, the conditions of obtaining a certificate of meeting the independence criteria by this operator.

Meeting the independence criteria by the TSO was analyzed by the President of the ERO in the course of certification proceedings. The results of these analyses have been presented in decisions of the President of the ERO issued after the completion of the above mentioned proceedings and published in the ERO Bulletin.

In addition, in 2016, the activities undertaken by the President of the ERO with respect to the TSO certification focused on monitoring activities of the TSO aimed at fulfilment of the recommendation included in the certification decision of 19 May 2016, and on monitoring whether OGP Gaz-System S.A. continues to meet the independence criteria specified in Article 9d (1a), in connection with Article 9d (1b) and (1c) of the Energy Law Act. The President of the ERO also monitored the issue of the scope and type of data provided by the TSO to the network owner.

4.2. Promoting competition

4.2.1. Wholesale market

In 2016 there was a gradual development of the wholesale natural gas market in Poland, related mainly with the increase in the number of undertakings holding licence for trade in gaseous fuels and the number of undertakings actively participating in this trade, as well as with the obligation to sell natural gas on the commodity exchange (55% of the gas fed into the network). Sales and purchase of gas on the Polish wholesale gas market are carried out most of all on the commodity exchange run by POLPX, in which large consumers may also participate.

4.2.1.1. Price monitoring, market transparency and its level of openness to competition

Acquisition and flows of natural gas

Purchase of gas from abroad in the amount of 151.9 TWh was supplemented with gas from domestic sources in the quantity of 42.6 TWh. Total supplies of gas from abroad in 2016 included imports and intra-Community purchase. In 2016, imports from the Eastern direction were still a considerable part of supplies performed under a long-term contract concluded between PGNiG S.A. and Gazprom. Information on gas supplies structure in 2016 is presented in the Table below.

Table 10. Structure of gas supplies in 2016

Specification	Quantity [TWh]
1. Supplies from abroad	151.9
2. Extraction from domestic sources	42.6
3. Change of stock	-5.2

Source: ERO, on the basis of data provided by gas trading companies.

In 2016, 537.8 TWh of high-methane gas and 7.8 TWh of nitrogen gas flowed through the Polish transmission system. Most of high-methane gas was transited with the use of the Yamal pipeline. The below table shows the most important directions of gas flows in the transmission system.

Table 11. Balance of high-methane and nitrogen gas trade flows* in the transmission system (including Transit Gas Pipeline System) in 2016 [TWh]

2016			
Type of gas		**High-methane gas**	**Nitrogen gas**
Entry to the system, in total		**537.8**	**7.8**
Out of which:	Mines and denitriding plants	24.8	6.2
	Storage facilities	19.0	0.0
	Supplies from outside the EU	453.0	0.0
	Supplies from the EU	28.6	0.0
	LNG terminal	11.2	0.0
	Other (entries from distribution)	1.2	1.6
Exit from the system, in total		**537.8**	**7.8**
Out of which:	Blending stations and denitriding plants	0.0	2.6
	Storage facilities	24.3	0.0
	To the distribution network	127.1	5.0
	To the final customers on the transmission network	35.3	0.2
	Supplies to the EU	336.3	0.0
	Supplies outside the EU	10.3	0.0
	Operator's own needs (including the change in operator's account)	4.5	0.0

* Data concern the amounts of gas fed into the transmission network and off-taken from it under execution of transmission agreements concluded by the TSO with system users (energy undertakings and final customers). These data can differ from the physical flows in the system.

Source: ERO, on the basis of data provided by OGP Gaz-System S.A. and EuRoPol GAZ S.A.

Trading in natural gas

As at the end of 2016, 196 entities held a licence for trade in gaseous fuels, as compared to 172 entities as at the end of 2015, while 127 undertakings actively participated in the trade in natural gas. Gas trading undertakings from outside the GK PGNiG S.A. group acquired 76.5 TWh of natural gas. The data on purchase and sale of gas by trading companies are presented in the table below.

Table 12. Volumes of gas acquired and sold under wholesale trading by the largest trading companies in 2016 [TWh]

	Total	**GK PGNiG S.A.**	**Other trading companies**
Gas acquisition (purchase and extraction)*	338.3	261.8	76.5
Wholesale sales of gas	140.1	110.6	29.5

* This value also incorporates acquisition for own needs by trading companies under monitoring and gas acquisition by large final consumers directly from abroad.

Source: ERO, on the basis of data provided by gas trading companies.

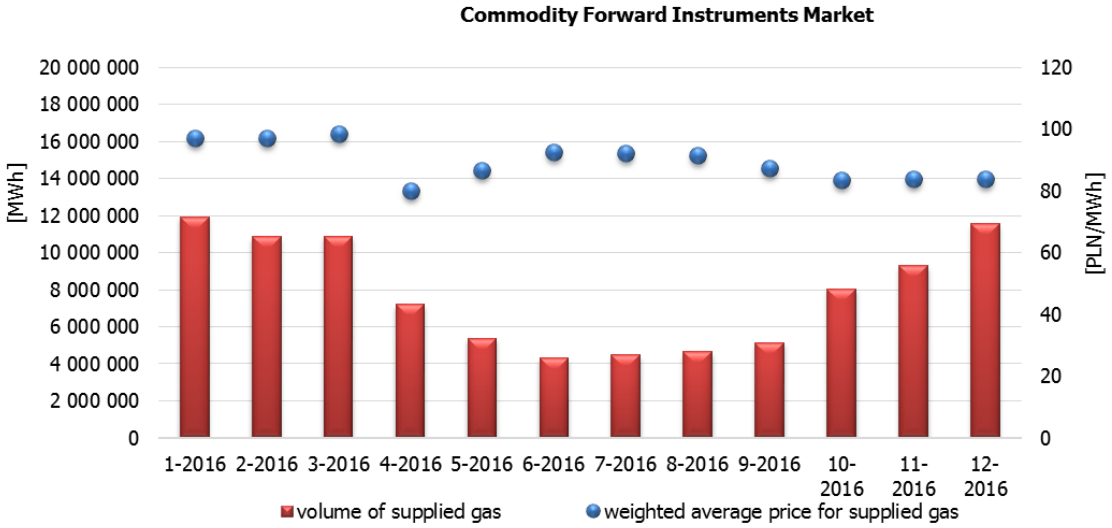
Natural gas exchange

In 2016 POLPX carried out the following gas sales markets: Intraday Market, Day-Ahead Market and Commodity Forward Instruments Market with Physical Delivery. Sales of natural gas were also conducted in the auction system.

Subject of trade on the Commodity Forward Instruments Market with Physical Delivery for gas (CFMg) is the supply of gas in equal volumes at all hours of the delivery period (weekly, monthly, quarterly and yearly). Subject of trade on the Day-Ahead Market (DAMg) is the supply of gas in equal volumes at all hours of the delivery day (a single contract corresponds to the delivery of 1 MWh of gas in every hour of the delivery day). Trading is conducted during one day preceding the date of delivery in the fixing and continuous trading system. Trading on the intraday market (IDMg) is conducted in the continuous trading mode.

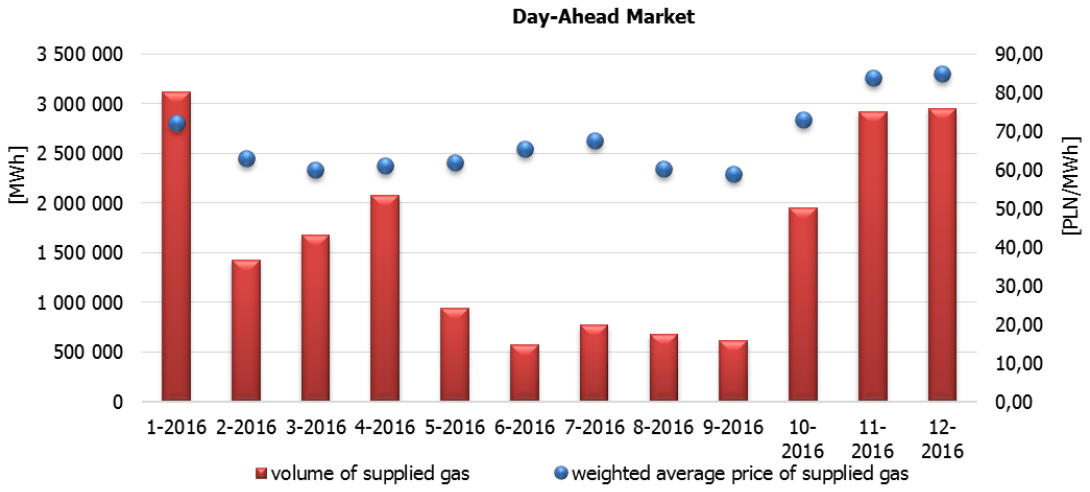
The figures below show the volume and price of gas delivered under contracts concluded on the Intraday Market, Day-Ahead Market and Forward Instruments Market with Physical Delivery for gas products.

Figure 12. Volume and price of gas supplied as a result of the execution of contracts concluded on the Commodity Forward Instruments Market, which were performed in 2016



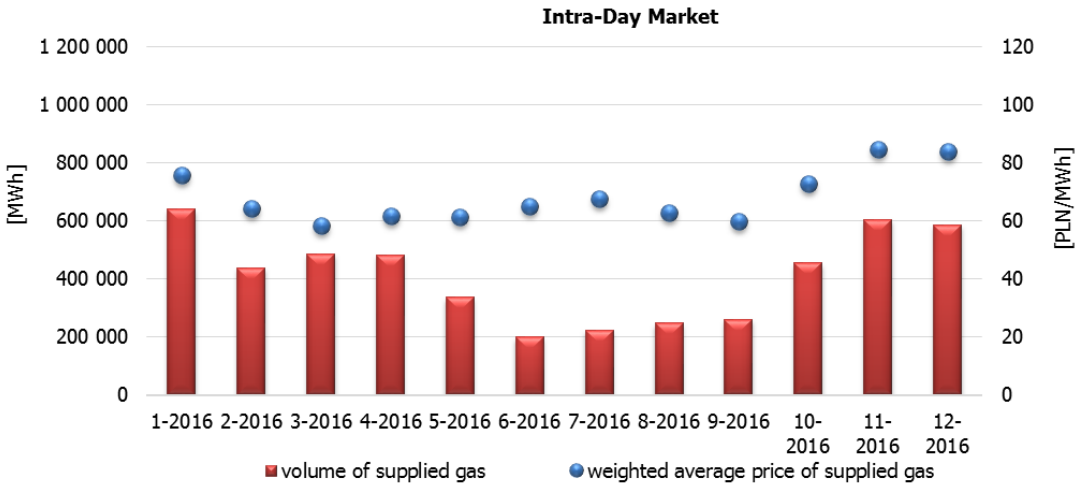
Source: Own analysis on the basis of data provided by POLPX.

Figure 13. Volume and price of gas supplied as a result of the execution of contracts concluded on the Day-Ahead Market, which were performed in 2016



Source: Own analysis on the basis of data provided by POLPX.

Figure 14. Volume and price of gas supplied as a result of the execution of contracts concluded on the Intra-Day Market, which were performed in 2016



Source: Own analysis on the basis of data provided by POLPX.

In 2016, as a result of contracts concluded on POLPX, 118,372,614 MWh of natural gas were delivered at an average price of 86.03 PLN/MWh, out of which 93,725,416 MWh on the forward market (average price 89.95 PLN/MWh), 19,686,012 MWh on the Day-Ahead Market (average price 71.34 PLN/MWh) and 4,961,186 MWh on the Intraday Market (average price 70.22 PLN/MWh).

Trading in high-methane natural gas in the virtual point on the Over-the-Counter (OTC) market

As a result of performance of contracts executed in the virtual point on the Over-the-Counter (OTC) market, a total of 15.7 TWh of natural gas was delivered at an average price of 80.47 PLN/MWh. The prices in particular quarters in comparison to gas exchange prices and prices of gas purchase from the EU are presented in the Table below.

Table 13. Comparison of average prices from contracts of sales in the virtual point on OTC and purchase from abroad, in particular quarters of 2016 (data in PLN/MWh)

	QI	QII	QIII	QIV
Average prices from contracts on sales in the OTC virtual point	87.43	72.90	76.14	78.26
Average prices from contracts on sales via POLPX	91.77	80.34	85.75	83.15
Average prices of natural gas purchase from abroad from EU Member States or EFTA Member States – parties to the EEC Agreement	74.37	63.90	61.95	73.74

Source: Own analysis.

Efficiency of competition on wholesale market of natural gas

Wholesale trade on the Polish gas market focuses on the commodity exchange, mainly due to the obligation of public sale of gas by the largest entities (currently PGNiG S.A.), arising from the legal provisions. The level of liquidity of this market is high in comparison to final consumption. However, a large part of transactions is executed between entities from the PGNiG group, which may impact the transparency of price terms. It stems from the analysis of data presented in this part of the report that gas prices in transactions executed on the commodity exchange were significantly higher than the prices of gas purchased from abroad and in the contracts concluded on the out-of-exchange market.

4.2.2. Retail market

4.2.2.1. Price monitoring, market transparency and its level of openness to competition

An analysis of the retail market performed on the basis of monitoring for 2016, which covered 90 trading companies, has shown that the total sale to final consumers of natural gas amounted to 180,055,871 MWh. The total number of consumers was 6.9 million, out of which 6.7 million were consumers in households. In 2016 gas sales to final customers was still dominated by undertakings of the PGNiG S.A. Group, whose share decreased in comparison to the preceding year to 73.69% (80.22% the year before). The remaining sale to final consumers was performed by other trading companies selling to final consumers in Poland (18.55%) and by companies selling gas to large final consumers which imported this fuel to Poland on their own to satisfy their own needs (around 7.76%). Information on the structure of sales of natural gas to final consumers is presented in the Table below.

Table 14. Structure of sales of natural gas to final consumers in 2016 (in MWh)

Sales of high-methane and nitrogen gas to final consumers via gas networks

	Alternative suppliers	GK PGNiG S.A.	Total
Sales of gas to final consumers by trading companies in Poland*	32 650 280	130 227 023	162 877 303
Out of which: industry	26 863 680	73 365 823	100 229 503
agriculture	57 953	347 239	405 192
services and public utility	4 141 066	13 358 111	17 499 177
households	1 587 581	43 155 850	44 743 431
Other sales to final consumers (including sales to operators)	754 358	2 453 935	3 208 293
Purchase from abroad directly by large final consumers for their own needs	13 970 275**	-	13 970 275
Total	**47 374 913**	**132 680 958**	**180 055 871**

* Data include sales of high-methane gas after LNG gas regasification.
** Data include also purchase of gas on POLPX commodity exchange by selected large final consumers for their own needs.

Source: ERO, on the basis of survey among selected trading companies.

In 2016 in the group of alternative suppliers active of the domestic market two undertakings had a share between 2% and 3% in sales to final customers and for three undertakings this share was between 1% and 2%. The share of the remaining trading companies was below 1%.

Despite maintaining the administrative regulation of natural gas prices in sales to final consumers in 2016, the provisions of law allow for selling gas below the price established in the tariff, provided that there is non-discrimination of customers in all tariff groups. Monitoring of the gas market functioning undertaken by the President of ERO in 2016 showed that the majority of gas suppliers sold this fuel to end-users below the prices set in the approved tariff. This situation concerned approximately 60% of the volume of gas sales to end-users.

The results of monitoring of sales of liquefied natural gas (LNG) in 2016, which covered 12 energy undertakings purchasing this gas for domestic needs, revealed that the total acquisition of LNG by these undertakings was 12.4 TWh, out of which a majority was acquired via the LNG terminal in Świnoujście. Most of the acquired LNG was sold to final consumers after regasification and feeding the obtained high-methane gas to the gas network. The total volume of sales of LNG in the liquefied form to final consumers was around 1.7 TWh, most of which was sales for the needs of start-up of the LNG terminal in Świnoujście. The remaining sales to final consumers was around 0.3 TWh, a prevailing majority of which (around 75%) was performed by entities from outside GK PGNiG S.A. Information on the structure of the LNG sales to final consumers is presented in the table below.

Table 15. Structure of LNG sales to final consumers in 2016 (in MWh)

	Alternative sellers	GK PGNiG S.A.	Total
Sales of gas to final consumers	224 914	73 328	298 242
Out of which: industry	199 740	18 443	218 183
agriculture	7 675	2	7 677
services and public utility	17 499	21 640	39 139
households	0	33 243	33 243
Other sales (including purchase for the needs of the LNG terminal start-up)	1 380 731	0	1 380 731
Total	1 605 645	73 328	1 678 973

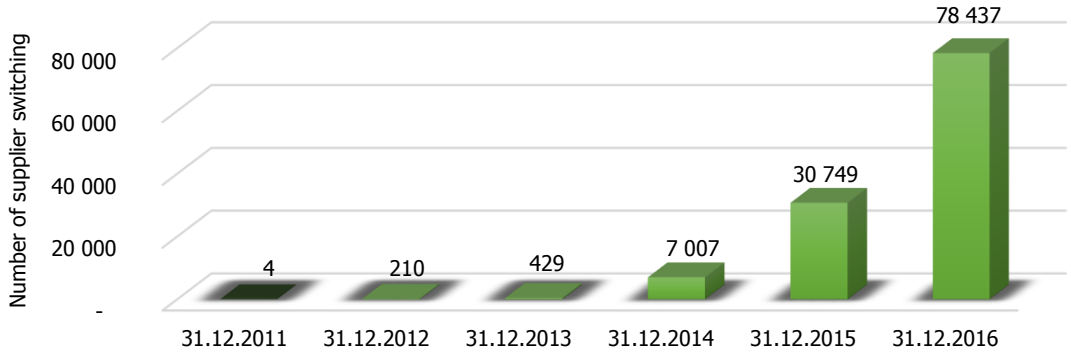
NB. Data in the table refer only to sales of gas in the LNG form. Data on the sales of high-methane gas acquired as a result of LNG regasification are included in the previous table. The table does not include data on LNG own consumption for the needs of operation of trading companies covered by monitoring.

Source: ERO on the basis of survey of selected trading companies.

Monitoring supplier switching

Analysis of data gathered on the basis of quarterly questionnaires completed by the TSO (OGP Gaz-System S.A.), PSG Sp. z o. o. and other distribution system operators shows a significant increase in the number of consumers switching supplier in the years 2011–2016, in particular in 2016. Dynamics of supplier switching (according to the number of switches) in the years 2011–2016 is shown in the figure below.

Figure 15. Number of switching of natural gas supplier in the years 2011–2016



Source: Own analysis on the basis of data provided by the TSO and DSO.

In 2016 sales of gas to final consumers was still dominated by entities from the PGNiG S.A. Group (PGNiG S.A. – sales to wholesale customers and final consumers with the annual natural gas consumption above 25 mcm; PGNiG Obrót Detaliczny Sp. z o.o. – sales to the other final consumers).

It should be noted that vast majority of the 78,437 supplier switches made by the end of 2016 – as many as 72,964 – concerned customers from W 1-4 tariff groups, that is mainly smaller customers, mainly household consumers. This situation may be caused by:

- intensive advertising campaigns addressed to this group of customers carried out recently by some suppliers,
- door-to-door selling to this group of customers,
- an option of a maximum price formula allowing to prepare attractive offers below tariff prices approved by the President of the ERO,
- a gradual market entry by new suppliers, resulting in increased competition and more attractive offers for customers.

Functioning of new suppliers on the market is confirmed by the number of Framework Agreements concluded by the TSO and DSOs with suppliers, which are a condition for the supplier of gaseous fuels to conduct activity in the area of a given system operator. As at the end of QIV 2016, 134 suppliers had Framework Agreements concluded with the TSO, out of which 80 has also Framework Agreements

concluded with DSO. The increase in consumer interest in the subject of supplier switching on the gas market is also seen in the increase in the number of telephone inquiries addressed in the current year to the Information Point for Gaseous Fuels and Energy Consumers.

A potential barrier to supplier switching, in particular for household consumers, may be lack of legal regulations on the obligation to supply gaseous fuels in a situation when the selected seller ceases to sell – so called "last resort supply". Such a situation may be perceived by customers as an additional risk in the case of discontinuation of activity by a given seller.

The rules for tariff calculation in 2016 have not changed in relation to the rules in the previous years. These rules were described in the previous reports of the President of the ERO.

In 2016, gas prices in the tariff of PGNiG S.A.:

- were lowered three times (as of 1 January, as of 1 April and as of 1 July 2016), which was related to a downward trend in world oil prices from mid-2014 to mid-2016, and low gas prices in the wholesale markets of Western Europe,
- were increased twice (as of 1 November 2016 and 1 January 2017) due to an increase in prices of oil and gas referred to above in the second half of 2016.

Prices of high-methane gas valid on 31 December 2016, in relations to prices valid on 31 December 2015, were lower by some 14%, while prices of nitrogen gas Lw were lower by 12.6%.

In 2016 the President of the ERO also released PGNiG S.A. from the obligation to submit tariff for approval with respect to sales of high-methane gas to wholesale customers, and under the amendment of 30 November 2016 to the Energy Law Act such release was effected with respect to sales in the virtual point. This situation was reflected in subsequent tariffs of PGNiG S.A.

In 2016 the following tariffs of PGNiG Obrót Detaliczny Sp. z o.o. were valid:

- of 17 December 2015, which entered into force on 1 January 2016, approved for 3 months; prices of high-methane gas and nitrogen gas Lw decreased in this tariff to a greater extent than prices of nitrogen gas Ls, due to continued levelling-up of prices for 1 kWh for all types of gases sold by PGNiG Obrót Detaliczny Sp. z o.o. in groups with the same index; the purpose of shortening of the tariff validity term was to enable to assess market conditions for the activity of PGNiG OD Sp. z o.o. on the basis of real data for 2015 (and not their predicted performance) and adequate shaping of the tariff of this undertaking for the future period,
- of 15 March 2016, which entered into force on 1 April 2016, with a validity term until 30 June 2016; prices of gas fuels were reduced in this tariff, while for groups of consumers with a capacity not higher than 110 kWh/h (in which households are settled) the decrease was lower than for consumers with a capacity higher than 110 kWh/h; the purpose of the various paces of price decrease was to restore correct price relations which – as a rule – should be lower, the higher the volume sold,
- of 16 June 2016, which entered into force on 1 July 2016; in this tariff, prices of gaseous fuels were lowered further.

A cumulative decrease in prices of high-methane gas in 2016 was 9.6%. In the case of nitrogen gases: Lw (GZ-41,5) – 9.6% and Ls (GZ-35) – 8.7%, respectively. In addition, on 17 December 2016 another tariff of this company was approved, riding on the downward trend in gas prices.

4.2.3. Recommendations on supply prices, investigations and measures to promote effective competition

Antimonopoly proceedings in cases restricting competition, and other activities undertaken by the President of the Office for Competition and Consumer Protection (UOKiK) in relation to gas sector companies[22)]

I. Concentrations of energy undertakings and their impact on development of competition on the market:

In 2016 the President of UOKiK reviewed three cases to which parties were undertakings operating in the natural gas sector, natural gas/crude oil or fuel sector. For these concentrations, consent was

[22)] On the basis of information provided by the UOKiK.

issued pursuant to Article 18 of the Act on Competition and Consumers Protection, because as a result of them, no appreciable restriction of competition occurred, in particular through arising or strengthening of a dominant position on the market. The concentrations included:

- An intention to take control over VNG Verbundnetz Gas Akiengesellschaft with its seat in Lipsk (Germany) by EnBW Energie Baden-Württemberg AG with its seat in Karlsruhe (Germany) – the President of UOKiK issued its consent in the decision no. DKK–31/2016 of 3 March 2016,
- An intention to take control over Lukoil Polska Sp. z o.o. with its seat in Warsaw by Amic Energy Managements GmbH with its seat in Vienna (Austria) – the President of UOKiK issued its consent in the decision no. DKK–38/2016 of 11 March 2016,
- An intention to create a joint venture under the business name of PEGAS CEGH Gas Exchange Services GmbH with its seat in Vienna (Austria) by Powernext S.A. with its seat in Paris (France) and Central European Gas Hub AG with its seat in Vienna (Austria) – the President of UOKiK issued its consent in the decision no. DKK–116/2016 of 4 August 2016.

In addition, by a decision no. DKK-69/2016 of 18 August 2016, the President of UOKiK decided to discontinue the antimonopoly proceedings initiated upon request of PAO Gazprom with its seat in Moscow (Russian Federation), Uniper Global Commodities SE with its seat in Düsseldorf (Germany), ENGIE S.A. with its seat in Courbevoie (France), OMV Nord Stream II Holding AG with its seat in Zug (Switzerland), Shell Exploration and Production (LXXI) B.V. with its seat in the Hague (The Netherlands) and Wintershall Nederland B.V. with its seat in Rijswijk (The Netherlands), concerning concentration consisting in establishment by the applicants of a joint venture under the business name of Nord Stream 2 AG with its seat in Zug (Switzerland). Having analyzed the information gathered in the course of the proceedings, the President of UOKiK concluded that the execution of the planned transaction may lead to appreciable restriction of competition. Therefore, pursuant to the provisions of Article 96a (3) of the Act on Competition and Consumers Protection, on 19 July 2016, it voiced its reservations to this concentration to the undertakings involved. In a response of 12 August 2016, the applicants withdrew their notification of an intention of concentration. In the light of the above, the proceedings were discontinued.

II. Administrative proceedings conducted by the President of UOKiK with respect to practices restricting competition:

Moreover, by the Resolution of 19 August 2015, the explanatory proceeding was initiated, which investigated two cases of potential abuse of dominant position by PGNiG S.A. and PGNiG OD Sp. z o.o. The first one concerns applying by these companies a potentially anticompetitive discount policy. The second relates to questioning, by PGNiG OD Sp. z o.o., power of attorneys granted by hitherto clients of the company to a new supplier with the aim to terminate the agreement with PGNiG OD Sp. z o.o. under the supplier switching process (Ref. No.: DOK1-400-1/15/FS). The proceeding is pending.

III. Measures implemented to promote market transparency, that is actions aimed to ensure relevant market information to consumers:

In 2016, the President of UOKiK analyzed a practice of questioning, by PGNiG OD Sp. z o.o., power of attorneys granted to employees of alternative suppliers with the aim to terminate agreements on gas sales under the supplier switching process.

As part of analysis, the President of UOKiK held a dialogue with the undertaking with the aim to find an optimal solution eliminating potential obstacles to supplier switching, caused by excessively rigorous requirements as to the form of the power of attorney to terminate the agreement, and ensuring transparency with respect to the practice of verification of powers of attorney applied by PGNiG OD Sp. z o.o. to market participants. As at the end of 2016, the proceedings was pending.

4.3. Security of supply

Pursuant to the Energy Law Act, the government authority in charge of energy policy, including issues related to energy security, was the Minister of Energy. At the same time, this minister was also the competent authority as regards the security of gas supplies referred to in Regulation 994/2010. The Regulator has been cooperating with the Minister of Energy with regard to the tasks stemming from the aforesaid Regulation and Directive 2009/73/EC, in connection with the competences of the President of the ERO determined in the national law.

In consequence, the security of natural gas supply understood as ensuring customer access to the energy of specified quality and at transparent prices, is the area of energy security monitored by the President of the ERO with the use of instruments assigned to it.

4.3.1. Monitoring balance of supply and demand

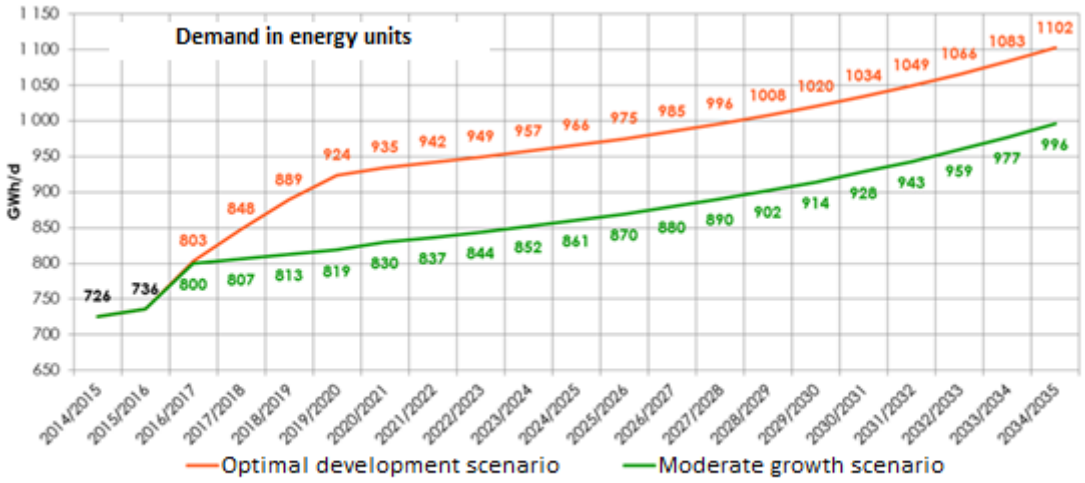
A majority of gas supplies on the domestic market were performed under gas purchase from abroad, the remaining volume was from the domestic sources. In 2016 imports from the Eastern direction under a long-term contract concluded between PGNiG S.A. and Gazprom were still a significant share. The other supplies from abroad included imports and intra-Community purchase.

Information on the structure of gas supplies in 2016 is presented under item 4.2.1.1.

4.3.2. Expected future demand and supplies

Expected future demand for transmission services has been specified by OGP Gaz-System S.A. in the NTYDP for 2016–2025. The TSO presented two boundary scenarios, that is Moderate Growth (MG) and Optimal Development (OD), assuming that the actual demand will most likely be in between the two boundary scenarios. The projected scenarios are presented in the figure below.

Figure 16. Comparison of forecasts for demand for transmission service



Source: OGP Gaz-System S.A., "National Ten-Year Development Plan for the Transmission System. Development plan with regard to satisfying the current and future demand for gaseous fuels in 2016–2025", p. 46.

When developing the forecasts indicated above, the TSO took into account demand forecasts specified in the document "Energy Policy of Poland until 2030", statistical data on gas consumption broken down by administrative units and groups of customers of the Central Statistical Office, own analyses of the transmission system operation and investment plans on the electricity market based on signed connection agreements and connection terms and conditions issued to potential consumers from this sector of economy. The basic factors with the strongest impact on demand for gas transmission in the years 2015-2035 will include:

- electricity and heat production on the basis of gaseous fuels,
- GDP growth,
- gas price.

In comparison to the forecast set out in the agreed Development Plan for the years 2014-2023, OGP Gaz-System S.A. has made a significant revision of the forecasts of demand for gas – the Moderate Growth (MG) scenario for 2020 adopted in the NTYDP is lower by 14.7%, and the Optimal Development (OD) scenario for 2020 adopted in the NTYDP is lower by 26.4%. These revisions have been made as

according to OGP Gaz-System S.A. there has been a significant decline in the interest of potential investors in the construction of new generating units based on gas fuel.

4.3.3. Measures to cover peak demand and shortfalls of one or more suppliers

Monitoring of the security of gaseous fuels supply, carried out in 2016, was focused on the areas of the market functioning which related in particular to the issues referring to:

- licences[23)],
- tariffs,
- approving the plans of introducing restrictions to the natural gas consumption, developed by the operators,
- analysis of information provided to the President of the ERO pursuant to Article 27 (2) of the Act on Stocks by energy undertakings conducting business in the scope of natural gas imports for the purpose of its further resale to customers,
- conducting a survey among energy undertakings which hold a licence for foreign trade in natural gas in respect to the obligation to maintain obligatory reserves of natural gas and to have developed procedures referred to in Article 49 (1) of the Act on Stocks,
- agreeing draft development plans of gas network undertakings and monitoring their implementation,
- determining the level of obligatory reserves of natural gas and monitoring the maintenance of these reserves,
- monitoring of works undertaken by the European Commission with respect to amending Regulation 994/2010, including filing a number of comments in 2016 (among others, as part of participation in the CEER works) with the aim to ensure efficient operation of the European solidarity mechanisms in terms of security of supply of natural gas,
- monitoring of congestion management,
- trade restrictions in the supply of gaseous fuel introduced in 2016,
- monitoring conditions for network connection and their implementation,
- diversification of natural gas supply from abroad.

The above mentioned tasks were described in detail in particular parts of this Report and in the Reports for the previous years. In the implementation of these tasks, the President of the ERO shall follow above all the requirements arising from the legal regulations in force.

It should be emphasized that an important element of ensuring energy security of the country is the diversification of sources of natural gas supply from abroad. In 2016, Article 32 (2) of the Energy

[23)] In the case of a licence for foreign trading in natural gas, the President of the ERO verifies whether the applicant has met the requirement specified in Article 33 (1a) of the Energy Law Act, that is whether it has enclosed documents to the application, which confirm that:

a) it has its own storing capacity, or
b) it has concluded a preliminary agreement on provision of a service of storing mandatory stocks of natural gas in the quantity agreed pursuant to Article 25 (2) or (5) of the Act on Stocks, or
c) it has concluded a preliminary agreement on performance of tasks consisting in maintenance of mandatory stocks of natural gas (ticketing agreement).

In addition, pursuant to Article 35 (1a) of the Energy Law Act, a request for granting a licence for foreign trading in natural gas should specify projected volume of imports of natural gas or and manner of maintenance of mandatory stocks of natural gas in the territory of the Republic of Poland or a Member State of the European Union or an EFTA member – a party to the agreement on the European Economic Area, pursuant to the Act on Stocks.

In the case of the applicant's failure to provide the above mentioned documents and information, the President of the ERO, acting pursuant to Article 35 (2b) of the Energy Law Act, does not process such a request for granting a licence.

In addition, considering the importance of the obligation of maintenance of mandatory stocks to ensure the energy security of the state, the President of the ERO includes a condition referring to this obligation in licences granted for the trading in natural gas.

It should also be noted that pursuant to Article 41 (2a) of the Energy Law Act, the President of the ERO withdraws a licence for foreign trading in natural gas if the energy undertaking which conducts business activity consisting in imports of natural gas for its further resale to consumers fails to maintain mandatory stocks of natural gas or to ensure their availability pursuant to Article 24 (1) and (2), Article 24a and Article 25 (2) or (5) of the Act on Stocks.

In the case of a licence for foreign trading in natural gas, the entity's capability to create mandatory stocks which impact the security of supply is taken into consideration. In accordance with the law in force until 2 September 2016, the applicant for such a licence had to own its storing facilities, have a preliminary agreement concluded for provision of a service of maintenance of mandatory stocks or be released from the obligation to maintain mandatory stocks (by an administrative decision issued by the minister competent for energy).

Law Act was amended by the Act of 22 July 2016. The amendment consisted in imposing a statutory obligation on energy undertakings involved in foreign trading in natural gas to diversify gas supplies from abroad. Until then, this obligation arose from the content of the licences granted to undertakings for this type of activity, while its specification was included in the Ordinance of the Council of Ministers of 24 October 2000 on the minimum level of diversification of foreign natural gas supplies. According to the provisions of the aforesaid ordinance, in 2016 the maximum share of gas imported from one country of origin in relation to the total amount of gas imported in a given year could not be higher than 59%. In 2016 the President of the ERO did not monitor compliance with the provisions of the above referenced Ordinance by the undertakings which held a licence for foreign trading in natural gas in 2015 due to external circumstances beyond control of the President of the ERO. A fundamental circumstance which influenced this state of affairs were amendments to legislation concerning the diversification obligation, related to legislative works conducted in 2016 over the energy-fuel package, which significantly affected the principles of implementation and enforcement of this obligation. As a result of these works, amendments the Energy Law Act were adopted in July and November 2016, which entailed a significant amendment to the existing regulations concerning the obligation to diversify supplies of natural gas from abroad, and it was resolved, among others, that the provisions of the above referenced diversification ordinance shall remain effective no longer than until 3 March 2017. Amendments concerning diversification, introduced by the above mentioned package of acts are the following:

- on 2 September 2016 diversification of natural gas supplies became a statutory obligation for all energy undertakings involved in foreign trading in natural gas (amended Article 32 (2) of the Energy Law Act),
- on 2 September 2016 a new statutory delegation to pass an Ordinance of the Council of Ministers specifying the minimum level of natural gas supplies from abroad (amended Article 32 (3) and added Article 32 (31) of the Energy Law Act),
- on 3 August 2016 a regulation was introduced stipulating that the existing Ordinance of the Council of Ministers of 24 October 2000 on a minimum level of diversification of foreign gas supplies shall remain in force until the secondary legislation passed under Article 32 (3) of the Energy Law Act becomes effective in the wording specified in the Act of 22 July 2016, yet no longer than until 3 March 2017 (Article 15 of the Act of 22 July 2016),
- on 9 December 2016 an abolition provision entered into force, pursuant to which proceedings shall not be initiated, and the initiated ones shall be discontinued, in cases concerning failure to fulfil the obligations arising under a licence for foreign trading in natural gas with respect to diversification of supplies of natural gas and proceedings under Article 32 (2) of the Energy Law Act in the wording specified in the Act of 22 July 2016, concerning the period before the entry into force of secondary legislation passed under Article 32 (2) of the Energy Law Act in the wording specified in the Act of 22 July 2016 (Article 4 (2) of the Act of 30 November 2016).

In addition, in 2016 works on the contents of the new diversification ordinance were conducted by the Ministry of Energy. The President of the ERO was involved in issuing opinions on the draft ordinance submitted for consultation. As at the end of 2016, the new diversification ordinance was not adopted by the Council of Ministers.

Considering the provisions of Article 32 (1) (4) and Article 32 (2) of the Energy Law Act, the President of the ERO each time includes a condition concerning an obligation to diversify supplies of natural gas from abroad in licences granted for foreign trading in natural gas. As it arises from the above referenced provisions, conducting economic activity consisting in foreign trading in natural gas requires a licence, while such licences are granted considering diversification of supplies of natural gas and energy security. An energy undertaking involved in foreign trading of natural gas shall diversify natural gas supplies from abroad. In addition, in the course of proceedings concerning granting a licence for foreign trading in natural gas, the President of the ERO verifies whether the applicant has submitted a statement in which it undertakes to fulfil the diversification obligation.

In 2016 monitoring performance of tasks arising from development plans of network undertakings showed further improvement in functionality of the Yamal Pipe which plays a particular role in the context of ensuring security of supply, and towards which there are particular expectations[24)] in terms of further

[24)] Among others, those indicated in the plan of preventive measures of 2014 (second edition) – a document drawn up by the Minister of Economy pursuant to Article 4 (1) (a), in conjunction with Article (5) (4) of Regulation 994/2010. These tasks concern increasing functionality of the Yamal pipeline and in this context OGP Gaz-System S.A. was selected by the Minister of Economy to be responsible for activities the implementation of which will significantly contribute to improve Poland's energy security.

improvement of its functionality. Extension of a measurement station in Mallnow in 2016 supplemented the activities undertaken in the previous years[25], which ensured a possibility to provide a physical reverse flow service with higher efficiency. As a result, technical capacity of the station increased from the existing 620 thousand cm/h to 1,240 thousand ncm/h, and the German side undertook to make available a firm capacity of 700 thousand cm/h (currently 620 thousand cm/h) in Mallnow as of January 2017. It should be emphasized that the issue of firm reverse gas flow in the "Mallnow reverse" point, highlighted in the previous Report, was clarified to a large extent by the Ministry of Energy in cooperation with its German counterpart. The information obtained confirm that uninterrupted transmission capacity on the Mallnow interconnection point, which is of key importance for security of supplies, is ensured under the existing rules, and security of supply should not be an issue of concern. Due to the above, the Mallnow IP may be treated as any other point of gas supplies from the EU to Poland. This confirms its utility even in extreme situations.

In the current conditions of the gas system, the task of ensuring a possibility of providing a physical reverse flow service at the Mallnow station with a higher efficiency was a key project in terms of security of supply of natural gas to Poland. It was appreciated in the document of the Minister of Energy of 2016 „Plan of preventive measures (third edition)", which, with respect to this infrastructure, does not define tasks of ensuring new capacities that translate into possibilities of ensuring additional volumes of gas from abroad. Currently projects are highlighted whose purpose is to improve interoperability of this pipeline with other elements of the national gas system, and to improve security at the local level (enhancing a possibility of offtaking natural gas from an underground cavern storing facility in Mogilno and an entry point in Włocławek, extension of the gas network in Mazowieckie, allowing to supply gas to the area near Białystok, currently supplied from the Tietierowka direction). The last of the listed tasks – ensuring an additional connection with the OGP Gaz-System S.A.'s network near Zambrów – was already included in the previous plan of preventive measures, yet was not implemented. The purpose of the other projects is to enhance flexibility of the system's operation and are not included in the plan of preventive measures (reorganization of Lwówek node).

5. CONSUMER PROTECTION AND DISPUTE SETTLEMENT IN ELECTRICITY AND GAS SECTORS

5.1. Consumer protection

Consumer right to benefit from transparent, simple and inexpensive procedures for investigating complaints and settling disputes with the use of out of court system. Institution of consumer ombudsman as a support for customers and an alternative mechanism to resolve disputes

In 2016 works were completed on the Act on out of court consumer dispute resolution, which implements Directive 2013/11/EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC (Directive on consumer ADR), and **Regulation (EU) No 524/2013 of the European Parliament and of the Council of 21 May 2013 on online dispute resolution**

[25] These activities included extension of the Mallnow interconnection point in 2014 in the manner allowing to provide service of firm reverse flow as of 1 April 2014 up to 2.3 bcm per annum (around 263 thousand cm/h). Under the assumptions, in an emergency (in the case of stoppage of supplies from the East), it would be possible to off-take up to 620 thousand cm/h (which corresponds to some 5.5 bcm per year). Other works related to increasing the functionality of the Yamal pipeline included the interconnection points in Lwówek and Włocławek which together form the Mutual Interconnection Point. Modernization of the entry point in Lwówek ensured a daily technical capacity of 6.95 mcm/day and a yearly technical capacity of 2.31 bcm/year. As a result of the extension of the IP in Włocławek, in January 2015, OGP Gaz-System S.A. was able to provide to users from the Western direction, using a reverse flow mechanism, firm capacity of 5.5 bcm per year (increase by 3.2 bcm), while including interruptible capacity (2.7 bcm) even up to 8.2 bcm.

for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC (Regulation on consumer ODR).

The Act on out of court consumer dispute resolution of 23 September 2016 introduced a tool allowing consumers to file a request for resolution of disputes with undertakings to entities offering independent, impartial, transparent, efficient and fast methods of their alternative resolution. The above reference Act also amended the Energy Law Act, by establishing with the President of the ERO an institution of Coordinator for Negotiations whose tasks include conducting proceedings on out of court resolution of disputes between consumers of gaseous fuels, electricity or heat in households and energy undertakings, or between prosumers that are consumers and energy undertakings, arisen under agreements:

1) on connection to the electricity, gas or heat network, including connection of a microinstallation,
2) on provision of services of transmission or distribution of electricity or natural gas,
3) on provision of services of transmission and distribution of heat,
4) on sales,
5) common service agreements.

The Act on out of court consumer dispute resolution entered into force on 10 January 2017, until then household consumers has an option to apply for amicable settlement of a dispute to amicable settlement consumer courts operating at the Commercial Inspection. Until 9 January 2017 permanent amicable settlement consumer courts operating at the Commercial Inspection reviewed disputes arisen from sales agreements, agreements on provision of transmission or distribution services and agreements on connection to the grid, concluded between an energy undertaking and a household consumer of gaseous fuels or electricity.

There are Municipal and District Consumer Ombudsmen in Poland, to whom customers can complain in individual cases, including the energy-related cases. The competences of Customer Ombudsmen comprise, among others, providing free of charge customer advice and legal advice on the protection of consumer interests, bringing proceedings for the consumers and joining the ongoing proceedings on the protection of consumer interests upon the consumer consent.

Sales agreement or common service agreement should comprise, among others, information about the way of filing complaints and settling disputes. At the same time, the supplier of gaseous fuels or electricity has been obliged to inform household consumer about his rights, including the way of filing complaints and settling disputes.

Competences of the President of the ERO in respect of settling disputes were described in detail under item 5.2. However, it should be noted that the regulator settles disputes under administrative regime, which does not fully correspond to the alternative dispute settlement mechanisms.

Notwithstanding the above, it should be noted that the tasks of the President of the ERO include also carrying out information activities addressed to the electricity and gas consumers, including providing information via comprehensive information point comprising an info-line to inform and promote the right to switch supplier. In order to fulfil these tasks, there is the Information Point for Fuel and Energy Customers within the structure of the ERO, where customers can obtain information and advice regarding their rights (by phone, in writing, as well as electronically). Detailed information on the activity of the Point as well as contact data are posted on the ERO website.

In addition, the President of the ERO in cooperation with the President of UOKiK drafted a set of energy consumer rights based on the guidelines of the European Commission. The document contains practical information on the rights of electricity and gaseous fuels consumer. Pursuant to the obligation imposed by the Energy Law Act, suppliers of gaseous fuels or electricity shall provide household consumers with copies of the Set of Energy Consumer Rights and ensure public access to this document.

Vulnerable consumer protection

Amendment to the Energy Law Act which came into force in September 2013 introduced the definition of vulnerable consumer of electricity and vulnerable consumer of gaseous fuels, and established a system of financial support for these customers. Definitions of vulnerable consumers refer to the law on housing allowances. The financial support system provides for payment of energy allowances by municipalities to vulnerable consumers who were granted housing allowance (electricity consumers) or a lump sum for the purchase of fuel (gaseous fuels consumers) and who are, respectively,

a party to the common service agreement or supply agreement of electricity or gas, and reside in the place of supplying this energy or fuels. Furthermore, a fixed annual limit of electricity consumption has been set. It amounts to 900 kWh for a single- person household, 1 250 kWh for a household consisting of 2 to 4 persons and 1 500 kWh for household comprising at least 5 people. At the same time municipalities have been provided with funds for payment of the aforesaid allowances. These funds will come from the designated subsidy of the state budget. Minister responsible for energy announces, by 30 April each year, the amount of the energy allowance for the next 12 months. At the end of 2016, the amount of the energy allowance for household amounted to PLN 11.29, PLN 15.68 or PLN 18.81 PLN per month, depending whether the household consisted of 1, 2-4, or at least 5 persons, respectively.

Consumers can also turn to energy undertakings for help in order to take advantage of the programs implemented within the framework of corporate social responsibility (CSR).

Ensuring access to consumption data

Pursuant to the provisions of the Energy Law Act, electricity suppliers are obliged to inform their customers about the volume of electricity consumed by these customers in the previous calendar year, about the place where information on average electricity consumption for a given energy group of connected customers is provided, as well as on the measures to improve energy efficiency and technical characteristics of energy efficient devices.

In addition, an undertaking providing energy distribution service or an energy supplier who provides the complex service shall, when issuing an invoice for the consumer, in a settlement attached to the invoice provide information on, inter alia:

- the volume of electricity consumption in the settlement period, which was a basis for the calculation of due amount,
- the manner of conducting the metering and billing system reading - whether it was a physical or remote reading made by an authorised representative of the energy undertaking, or a reading made and reported by the consumer,
- the method of determining the value of electricity consumption in a situation when the settlement period is longer than one month and the first or the last day of the settlement period does not coincide with the dates of the metering and billing system readings, or if during the course of the settlement period there was a change in prices or fees, or about the place where such information is available.

In the case of gaseous fuels, undertakings conducting settlements of the off-taken gaseous fuels or services related to their supply provide customers with the following information, depending on the type of settlements:

- readings of the metering and billing system at the beginning and the end of the settlement period, expressed in [cubic metres],
- value of the conversion factor (for converting from [cubic metres] to [kWh]),
- consumption of gaseous fuels in the settlement period, expressed in [kWh],
- whether the indicated consumption is the actual or forecasted consumption.

5.2. Dispute resolution

The President of the ERO carries out his tasks in the scope of dispute settlement provided for in Article 37 (1) of Directive 2009/72/EC and Article 41 (11) of Directive 2009/73/EC pursuant to Article 8 (1) of the Energy Law Act. According to the aforesaid provision, the President of the ERO, upon a request of a party, shall settle disputes concerning the refusal to conclude network connection agreement, sales agreement, contract for the provision of transmission or distribution services of fuels or energy, agreement for the provision of transport services of natural gas, agreement for the provision of natural gas storage services, agreement for the provision of liquefaction services of natural gas, agreement for making available of a part of gas storage installation to the gas transmission operator for remuneration, common service agreement, as well as unjustified stoppage in the supply of gaseous fuels or electricity.

Issues related to unjustified stoppages of electricity or fuels supply and refusal to conclude a network connection agreement, sales agreement, contract for the provision of transmission or distribution

services of fuels or energy, or a complex agreement are of the highest gravity as regards dispute settlement. There were also disputes related to refusal to connect renewable energy sources to the electricity network. In 2016, dispute settlement proceedings in this respect concerned mainly wind power plants, due to lack of technical or economic conditions.

Table 16. Disputes concerning refusals to connect renewable energy sources to the electricity grid in 2016

Number of requests for dispute settlement	Number of settled cases	Number of decisions stating that there is no legal obligation to conclude network connection agreement	Number of decisions stating that there is legal obligation to conclude network connection agreement	Number of decisions to discontinue the proceeding	Number of administrative settlements
18	16	7	3	6	0

Source: ERO.

It should also be reminded that the President of the ERO lacks competence to settle disputes concerning the already concluded agreements. Nevertheless, a significant number of disputes between customers or producers and energy undertakings arise with regard to the agreements concluded between these entities. In such a situation a general court is the competent authority to resolve a dispute.