National Report

of the President

of the Energy Regulatory Office

- 2019 -

July 2019

Table of contents

Acronyms and Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
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 (OJ L 211 of 14.08.2009, p. 55)
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 (OJ L 211 of 14.08.2009, p. 94)
ENTSO-E	The European Network of Transmission System Operators for electricity
ENTSO-G	The European Network of Transmission System Operators for gas
PGNiG Group	Polskie Górnictwo Naftowe i Gazownictwo S.A. group
DNC	Distribution Network Code
TNC	Transmission Network Code
NES	National Electricity System
OGP Gaz-System S.A.	Operator Gazociągów Przesyłowych Gaz-System S.A.
DSO	Distribution System Operator
SSO	Storage System Operator
TSO	Transmission System Operator
RES	Renewable Energy Sources
PGNiG S.A.	Polskie Górnictwo Naftowe i Gazownictwo S.A.
President of ERO	President of Energy Regulatory Office
President of UOKiK	President of Office of Competition and Consumer Protection
PSE S.A.	Polskie Sieci Elektroenergetyczne S.A.
PSG Sp. z o.o.	Polska Spółka Gazownictwa Sp. z o.o.
Regulation No 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 (EU OJ L 115 of 25.04.2013, p. 39)
Regulation No 713/2009	Regulation (EU) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (EU OJ L 211 of 14.08.2009, p. 1)
Regulation No 714/2009	Regulation (EU) 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 (EU OJ L 211 of 14.08.2009, p.15, as amended)
Regulation No 715/2009	Regulation (EU) 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 (EU OJ L 211 of 14.08.2009, p.36, as amended)

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 (EU OJ L 326 of 08.12.2011, p. 1)
BAL NC Regulation	Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks (EU OJ L 91 of 27.03.2014, p. 15)
CAM NC Regulation	Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013 (EU OJ L 72 of 17.03.2017, p. 1)
TAR NC Regulation	Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (EU OJ L 72 of 17.03.2017, p. 29)
SGT EuRoPol GAZ S.A.	System Gazociągów Tranzytowych EuRoPol GAZ S.A.
POLPX	Towarowa Giełda Energii S.A. (TGE S.A.)
TPA	Third Party Access
EU	European Union
ERO	Energy Regulatory Office
Act of 30 November 2016	Act of 30 November 2016 amending the Energy Law Act and certain other acts (JoL of 2016 item 1986)
Energy Law Act	Energy Law Act of 10 April 1997 (JoL of 2019 item 755, as amended)
Capacity Market Act	Act of 8 December 2017 on capacity market (JoL of 2018 item 9, as amended)
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 (JoL of 2018 item 1323)

1. FOREWORD

The National Report of the President of ERO describes a general situation on the energy market in 2019 and main developments as compared to previous years. It also describes measures and actions undertaken by the Polish Regulator to support competition development, balance interests of energy companies and customers and integrate Polish gas and electricity market.

One of key issues on the Polish energy market in 2018 were high electricity prices on the wholesale market. As suspicions arose that this increase may not be solely due to an increase of prices of hard coal and CO_2 emission rights, in 2018 the Regulator used the options provided under the REMIT Regulation to examine a potential market manipulation.

In 2018 works on the Baltic Pipe Project continued. At the beginning of 2018, PGNiG S.A. and OGP Gaz-System S.A. signed an agreement on provision of a service of gas transmission from Norway to Poland through Denmark and the President of ERO issued a coordinated decision on cross-border allocation of project costs. The Baltic Pipe Project is a key investment which will ensure safety of gas supplies to Poland and will enable to transport gas from Norway to Poland and Denmark and also to markets in neighbouring countries.

A detailed description of the developments on the Polish electricity and gas market and activities undertaken by the Polish Regulator in 2018 has been provided in this National Report of the President of ERO, to be submitted to the European Commission and ACER. Thus, the President of ERO has fulfilled its reporting obligation specified in Polish and European legislation.

2. MAIN DEVELOPMENTS IN THE ELECTRICITY AND GAS MARKETS

Legal and regulatory changes

The year 2018 was the first year of the Capacity Market Act being effective. The Act of 8 December 2017 was published on 3 January 2018 and entered into force on 18 January 2018. The purpose of the Act was to secure medium- and long-term security of electricity supply to final customers, which is cost-effective, non-discriminatory and compliant with the sustainable development rules. The Capacity Market Act has changed entirely the perception of the electricity market which so far operated as a energy-only market, by introducing regulations on the so-called dual-commodity market, that is the electricity market and the capacity market.

At the beginning of 2018 the Act of 11 January 2018 on electromobility and alternative fuels entered into force. Under the provisions of this Act, new obligations have been imposed on energy companies with regard to ensuring access to vehicle loading stations and construction of natural gas stations, and the President of ERO has been assigned rights to impose financial penalties for failure to fulfil these obligations. This Act has specified, among others, principles of development and operation of infrastructure to use alternative fuels in transport, including technical requirements which the infrastructure is supposed to meet. In addition, the Act imposed obligations related to development of alternative fuel infrastructure on public entities and specified the conditions of operations of clean transport zones. It also determined national framework for the policy of alternative fuel infrastructure development and a method for its implementation. This Act extended the scope of competences of the President of ERO with new obligations regarding:

- Designation, by a decision, of operators of a widely-accessible loading station,
- Agreeing on a programme of construction of a natural gas station and undertakings with respect to modernization, extension or construction of networks necessary to connect these stations,
- Collecting information on plans of construction of widely-accessible loading stations,
- Imposing financial penalties for violation of obligations laid down by the Act.

In 2018 an amendment to the Ordinance on detailed conditions of gas system operation was prepared. This was due to the necessity of maintaining continuity of supplies of gaseous fuels to customers, in connection with a sudden and unforeseen discontinuation of activity consisting in sale of gaseous fuel and electricity by two trading companies in September 2018. At that time, 55,730 gaseous fuels customers, including 53,581 household customers, faced a threat of withheld supplies of gaseous fuel or of supplies of gaseous fuel being considered illegal consumption. A solution adopted then specified the principles of last resort supply of gaseous fuels by a last resort supplier, that is an energy company performing business activity in the area of trading in gaseous fuels, to which a non-pecuniary contribution was made to cover the initial capital, referred to in Article 5b1 of the Energy Law Act or a vertically integrated enterprise referred to in Article 9d item 7 section 3 or 4 of the Act.
Due to the need to implement the last resort supply mechanism fast, it was agreed that the date of entry into force of the above described changes would be the day following the publication of the ordinance. In addition, the ordinance provides for a possibility to apply its provisions, if a supplier ceases to supply gaseous fuels for reasons on its side existing already before the date of the ordinance becoming effective.

Irrespective of the provisions of the above mentioned ordinance, in 2018 provisions on last resort supply were developed and implemented in a comprehensive manner in the act amending the Energy Law Act and certain other acts dated 9 November 2018. In the provisions of the act, reserve sale was regulated in details. An extraordinary launching of reserve sale, foreseen for household customers, was also regulated separately. The provisions of the above referenced amendment have been partly in force since 18 December 2018.

Due to dynamic increases of electricity prices in the wholesale market in 2018, in order to stabilize financial encumbrances of electricity customers in 2019, the legislator, by the Act of 28 December 2018 amending the Act on excise tax and certain other acts, introduced, among others, and obligation of energy companies supplying in electricity, to specify in 2019 electricity prices for final customers equal

to prices applied as at 31 December 2018 (in case of a tariff approved by the President of ERO) or not higher than those applied as at 30 June 2018 (in case of prices not subject to approval by the President of ERO). Energy companies conducting business activity consisting in electricity supply have been obliged to include the above mentioned prices in settlements with final customers for the period beginning on 1 January 2019 and to amend sales agreement or comprehensive agreements in this respect.

Electricity market

Wholesale market

The volume of gross domestic electricity production in 2018 amounted to 165,214 GWh and was lower than that of the preceding year by around 0.4%. Gross domestic electricity consumption (170,932 GWh) increased in that year by around 1.7% as compared to 2017. The structure of electricity production in 2018 did not change significantly in comparison to 2017. A great majority of production (80%) is based on conventional fuels, that is hard coal and lignite. 2018 saw a decrease of share of generation from wind and other renewable energy sources. On the other hand, share of electricity generation in gas power plants increased.

In 2018, installed capacity in the domestic electricity system totalled 45,939 MW, and generating capacity 45,650 MW, which is an increase by 5.8% and 5.4%, respectively, as compared to 2017[1]. An average annual demand for capacity was 23,322.7 MW, against maximum demand of 26,447.6 MW, which is an increase by 1.5% and 0.8%, respectively, as compared to 2017. The ratio of available capacity to generating capacity in 2018 was 66.1% (decrease by 1.2 percentage points as compared to 2017)[2].

The number and structure of entities of the electricity sector have not changed significantly. In 2018, the highest share in the electricity generation subsector amounting to 42,9%[3], was still held by PGE Polska Grupa Energetyczna S.A. (decrease by 0.6 percentage point in comparison to the preceding year). This group, having taken over energy companies which were part of the EDF Group also became leader on the market of sales to final customers, thus TAURON Polska Energia S.A., which for many years had the largest share, placed second in this area.

Three largest producers (which were part of the groups: PGE Polska Grupa Energetyczna S.A., TAURON Polska Energia S.A., ENEA S.A.) still had in total almost $^2/_3$ of the installed capacity and were responsible for almost 70% of domestic electricity production.

Retail market

In 2018, similarly to the preceding years, there were five big DSOs operating on the electricity market whose grids are directly connected to the transmission system (DSOt) and which are obliged to separate distribution activity performed by the system operator from other types of activity not connected with electricity distribution (unbundling). In addition, in 2018 there were 171 vertically integrated undertakings designated as DSOs (DSOn), which are not subject to the unbundling obligation.

In 2018 there were five incumbent suppliers and, depending on the area of five "large" distribution system operators, from 123 to 169 alternative trading companies active in the electricity supply to end-users, including households. On the electricity market there were also 171 suppliers acting within undertakings vertically integrated with the DSOn.

On the demand side of the retail electricity market, there are final customers. There are some 17.6 million of them, out of whom 90.8% (16 million) are the customers in the G tariff group, with a great majority of household consumers (over 15.1 million) that purchase electricity to consume it in their households. The rest of final customers are customers of the A, B and C tariff groups. Groups A and B

[1] As at 31 December 2017 and 31 December 2018, data of PSE S.A.
[2] Data based on average annual values from evening peak, data of PSE S.A.
[3] Share calculated taking into account the volume of electricity fed into the grid, while to calculate this ratio, the entity structure as at 31 December 2018 was taken into consideration.

comprise customers supplied from the high and medium voltage grids, which are so-called industrial customers, while the C group comprises customers connected to the low voltage grid consuming electricity for the purpose of conducted business activity, the so-called commercial customers. Electricity consumers are entitled to be supplied with electricity in an uninterrupted and reliable manner from a selected electricity supplier.

Between the 4th quarter of 2017 and the 4th quarter of 2018, electricity prices in all tariff groups increased. The strongest increase in electricity prices was observed for the tariff A customers – by 14.8%, and the lowest for the G tariff group customers and household customers – by 0.8%.

In 2018 distribution fees decreased for customers in all tariff groups, except for the C tariff group customers. The highest increase in the distribution fee was for customers in the A tariff group – by 3.9% and the lowest for the G tariff group customers – by 0.4%. For consumers in the C tariff group, the distribution fee increased by 0.3%.

Gas market

Wholesale market

As at the end of 2018, 197 entities held licence for trade in gaseous fuels in comparison to 200 at the end of 2017. 102 undertakings actively participated in natural gas trading. Gas trading undertakings from outside PGNiG Group acquired 97.1 TWh of natural gas.

Sale and purchase of gas on the Polish wholesale market is performed mainly on the commodity exchange managed by POLPX. 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 POLPX. Exchange is performed through conclusion of sales agreement (transactions) between the gas exchange participants.

In 2018, as a result of performance of contracts concluded on POLPX, in the entire period of listing of a particular type of contract, 132,161,649 MWh of natural gas were delivered at an average price of 92.97 PLN/MWh.

Retail market

As at the end of 2018, there were 55 gas distribution system operators, including one legally separated operator (PSG Sp. z o.o. belonging to PGNiG Group).

In 2018, the total sale of high-methane and nitrogen-rich gaseous fuel to final customers was 206,161,845 MWh. As compared to 2017, there was an increase of gas consumption generated mainly by industrial consumers. The sale of gas to final customers was dominated by undertakings of PGNiG Group, whose share increased, as compared to the previous year by around 2%, to 82.08%. The remaining 17.92% of gas sale to final customers was performed by other companies selling to domestic final customers.

Consumer protection

In 2018 customers filed a total of 4,914 requests to the Information Point for Fuel and Energy Customers operating at the Energy Regulatory Office. Among them the most common problems referred to the electricity (52%) and gas (38%) sector. Requests and complaints focused on issues related to invoices (63.7%), terms and conditions of concluded agreements (14.6%), unfair market practices, especially in the context of switching supplier (11.5%), complaints related to electricity price (5.2%) and customer service (5%).

In 2018, the Energy Regulatory Office received over 5,400 complaints lodged by household customers about the activity of electricity and gas undertakings. The complaints lodged by electricity customers referred to, mainly, issuing invoices and unfair business practices. Customers also touched on the issues related to agreements and sale. A large majority of complaints filed by household customers with respect

to gas also referred to invoices.

Following a quantitative and qualitative analysis of complaints/requests, meetings with representatives of energy companies (9 trading companies and 6 DSOs) were held at the Energy Regulatory Office, whose purpose was to jointly analyze the problematic areas and reflect on measures to be undertaken to eliminate undesired occurrences.

In 2018 the President of ERO undertook a number of information activities addressed to household customers. As part of these activities, the President of ERO published on ERO's website information about recurring or crucial problems leading to disputes between energy companies and household customers of gaseous fuels and electricity and on energy companies about which justified complaints were filed by these customers.

In the second half of 2018, the number of reservations about unfair practices of energy companies changing electricity prices contrary to provisions of agreements in force increased. The end of 2018 saw a prevalence of problems with retrieving overpayments from companies which ceased to supply electricity to customers and with prices of electricity from last resort suppliers. Difficulty of these issues lied in the fact that the President of ERO has not been equipped with any tools to efficiently solve such problems. The only measures possible to undertake were information campaigns. Possible options were indicated to customers, they were provided with model claims for receivables which had to be submitted to seek return of overpayment from an official receiver. With last resort supply customers filing complaints were instructed about a possibility to select a supplier.

3. THE ELECTRICITY MARKET

3.1. Network regulation

3.1.1. Unbundling

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, pursuant to Article 12a of the Energy Law Act (in connection with the wording of the Regulation of the Council of Ministers of 3 December 2015 on the Government Plenipotentiary for Strategic Energy Infrastructure).

On 4 June 2014 the President of ERO granted PSE S.A. the certificate of complying with independence criteria determined in Article 9d item 1a of the Energy Law Act.

In 2018, 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 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 2018 in the territory of the Republic of Poland 176 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 171 DSOs not obliged to be legally unbundled.

Pursuant to the provisions of the Energy Law Act, for failure to comply with the terms and criteria of unbundling, a transmission system operator or distribution system operator shall be subject to a financial penalty. An entity failing to ensure compliance with the unbundling criteria for the system operator designated for entity's grid shall also be subject to a financial penalty. The financial penalty in the cases

referenced above may not be lower than 1% or higher than 15% of the revenues of the entrepreneur on which the penalty was imposed, generated in the preceding fiscal year. Financial penalties shall be imposed thereunder by the President of ERO. Irrespective of the financial penalty referenced above, the President of ERO may impose a financial penalty also on a manager of the energy enterprise, in the amount not higher than 300% of his/her monthly remuneration.

There are no provisions in the Polish legal system which would explicitly impose a rebranding obligation on the DSO.

Compliance Programmes

Compliance Programmes are approved by the President of 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 ERO based on reports describing activities undertaken in the preceding year to implement the Compliance Programmes, submitted by Compliance Officers 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:

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

Similarly to previous years, outsourcing part of services to other entities, both affiliated with the vertically integrated enterprise and external ones, was common. In the assessment of the President of 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. A contractual obligation of a DSO contractor to comply with the provisions of the Programme is insufficient. This may lead to decreased protection of sensitive data.

In 2018 the President of ERO did not conduct any proceedings regarding a violation of the Compliance Programme.

In 2018 the President of ERO began work on updating the Framework Guidelines on the content of the Compliance Programmes. Compliance Officers were invited to the discussion. The final shape of the document was also consulted with operators. The Guidelines extended the scope of issues to be addressed by the Compliance Programme (for example: management of network infrastructure and its development - including ICT; principles of knowledge sharing with market participants; marketing activities and sponsoring of the operator; functioning of the operator in a vertically integrated enterprise; centralization or outsourcing of operator's services and purchases). It was pointed out that Compliance Programmes should also address more general issues related to the rules of proper unbundling (for example, issues related to independence, separate branding, logos or separate locations and separate customer service, where discrimination may indirectly manifest itself).

In 2019 the President of ERO expects operators to adjust their Compliance Programmes to the updated Guidelines.

3.1.2. Technical functioning of the system

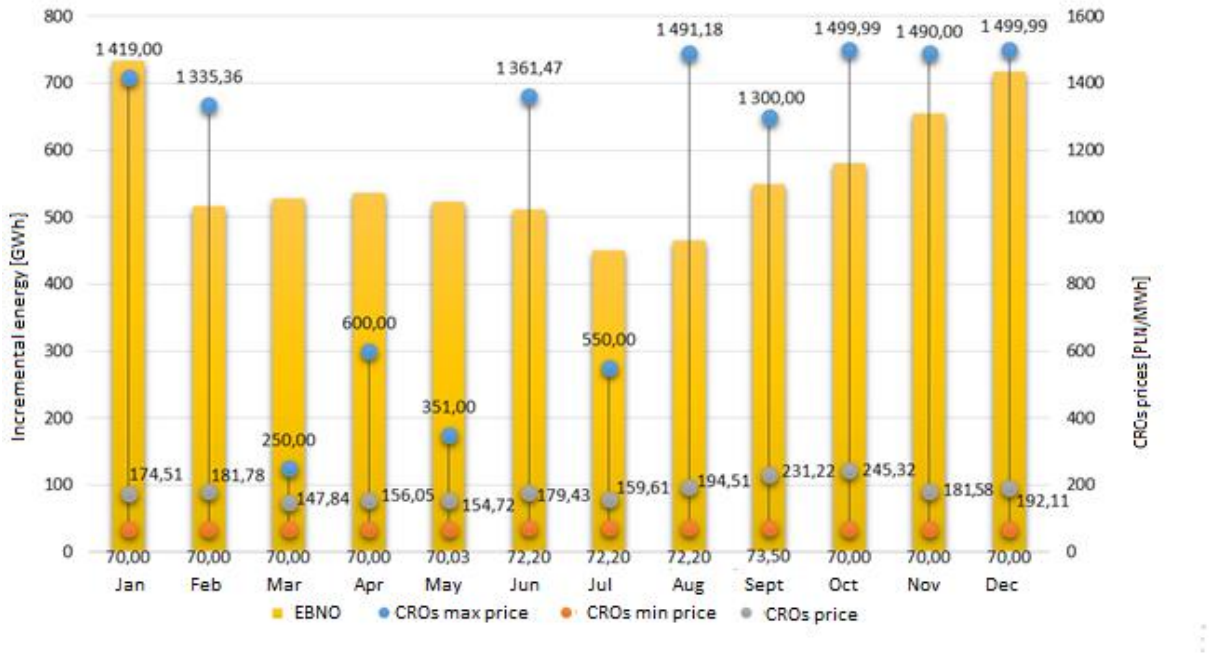
Balancing services

Rules for a mechanism of balancing the electricity system (the Balancing Market) are determined by transmission system operator in the transmission network code[4], which is subject to approval by the President of ERO.

At the end of 2018, 125 entities participated in balancing market processes, including 21 generators, 9 end-users, 8 network customers, 80 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 356 scheduling units.

Information on the volume of unplanned balancing energy purchased from the balancing market and settlement prices of non-balancing on this market in particular months of 2018 is shown in Figure 1.

Fig. 1. Purchased energy (EBNO) and the price of balancing energy on the Balancing Market (CROs) in 2018.



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

In 2018, the total volume of unplanned balancing electricity purchased on the balancing market (EBNO) amounted to 6.22 TWh, was lower by some 8% in comparison to the previous year and also constituted some 4% of gross national electricity consumption. In 2018, the total volume of unplanned balancing electricity delivered to the balancing market (EBND) amounted to 9.51 TWh and was by 3.29 TWh higher than the total volume of electricity purchased from the balancing market (EBNO). The maximum settlement price of deviation (CRO) in the balancing market varied between 426.80 PLN/MWh and 1,499.99 PLN/MWh, whereas weighted average monthly prices of CRO oscillated between 149.83 PLN/MWh and 199.84 PLN/MWh.

[4] Pursuant to Article 9g, item 8a of the Energy Law Act, the provisions of item 8 do not apply to the network codes prepared by the operator referred to in Article 9d item 7. In practice, this means that distribution system operators which operate in a vertically integrated structure and their scope of activity is local (small), are not obliged to present network codes for approval.

The analysis of the maximum value of CRO on the balancing market in individual months of 2018 shows that in some months this value approaches the price limit of 1,500 PLN/MWh. This depends 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.

According to the specificity of the balancing market, the amount of energy supplied to the balancing market by the market participants is the same as the amount of balancing energy received by the market participants. In 2018, market participants delivered 17.04 TWh of unplanned and planned balancing energy to the balancing market (sum of delivered and received volumes). In 2018, there was an overcontracting of market participants, and the volume of overcontracting was higher than in 2017. The costs of limitations determined in accordance with the definition in the transmission network code amounted to PLN 554.15 million in 2018 and PLN 407.3 million in 2017.

The operating power reserve (OPR) is settled on an hourly basis, and complementarily on a monthly and annual basis. Within these settlements, the average OPR price does not exceed the value of the reference hourly price valid in a given year. The number of settlement hours of OPR in 2018 amounted to 3,765 of which for 1,859 hours the OPR settlement price was equal to the reference price (42.58 PLN/MWh). Within these hours the settled OPR did not exceed the minimum hourly volume of this reserve required by the TSO, that is 3,541.9 MW in an hour. Weighted average hourly settlement price of OPR in 2018 amounted to 40.38 PLN/MWh, while hourly volume of this reserve stood at 3,734.9 MW in an hour.

The hourly budget for the operational power reserve in 2018 was determined by equally spreading, over all peak demand hours, the justified cost of acquiring the operational power reserve (JCOR), which resulted from the level of costs of purchasing this service, as assumed in the calculation of the Tariff of PSE S.A. In accordance with the OPR acquisition and settlement rules, the unspent OPR funds will be adjusted to the justified OPR acquisition cost in 2018 as part of the adjustment to the annual supplementary settlement.

In relation to the role of the DSOs in the system balancing, it should be underlined that their tasks include mainly acquisition and management of metering data. To this extent, distribution system operators co-manage the Balancing Market. These rules are specified in the distribution network codes and have impact mainly on the TPA rule implementation. In addition, distribution system operators are obliged to undertake measures ordered by the TSO, and these rules have been described by the TSO in the transmission network code. The key amendments to the distribution network codes of these operators in 2018 include:

- introduction or updating of standard consumption profiles used in commercial balancing of locations of supplying electricity to customers with contractual capacity not exceeding 40 kW – in case of three DNCs,
- modification of the TNC provisions related to the use of remote reading meters as prepayment metering and settlement systems, including the resumption of electricity supply, and the need to take into account the amendment of the Energy Law Act and the ADR Act - in case of two DNCs,
- introduction of a new mechanism for determining the absolute hourly electricity demand curve to better plan the absolute energy supply curve - for one DNC.

Attention should also be paid to the amendments made to TNC and approved in 2018 by the President of ERO, having indirect impact on system balancing, of which the key ones include:

- modification of the process of certification of Reduction Facilities (ORed) in connection with the provision of the service of demand reduction at the request of the TSO and a new programme under the DSR service - Simplified Current Programme, in which the subject of settlements is the use of the intervention reserve,
- modification of the TNC provisions concerning the functioning of the Balancing Market in the scope related to the activity of the Nominated Electricity Market Operators (NEMO) in such a way as to enable the functioning of many NEMOs in the Polish market area,
- change of electricity price limits on the balancing market which fulfil Poland's obligation specified in the notification decision of the European Commission concerning the implementation of the capacity market in Poland of 7 February 2018[5)] and modification of the balancing market mechanisms as a

[5] Decision of the European Commission of 7 February 2018 State aid No. SA.46100 (2017/N) – Poland – Planned Polish capacity mechanism (C(2018) 601 final), http://ec.europa.eu/competition/state_aid/cases/272253/272253_1977790_162_2.pdf.

result of experience gained from their operation and the development of the balancing market rules, taking into account the conditions of the current balancing market model.

Network security and reliability standards, quality of supply and service

The President of ERO monitors the electricity system operation in terms of security of electricity delivery, pursuant to a provision arising under Article 23 item 2 section 20f of the Energy Law Act, on the basis of information on the NES operation, prepared and provided daily by the transmission system operator. In addition, information was obtained from the five largest energy companies with respect to their maintenance of an appropriate level of operational safety of the distribution network and cooperation with the transmission system operator, in order to maintain an appropriate level of operational safety of the coordinated 110 kV network - in the light of their obligation under Article 9c item 3 section 14 of the Energy Law Act. This task has been formulated in a general manner and does not include all the actions referred to in Article 4 of Directive 2009/72/EC.

With regard to monitoring security and reliability of grid operation, the President of ERO reviews ex post measurement data from the NES operation, concerning the power balance for selected slots of each day, as well as the extent of measures undertaken by electricity system operators as part of their statutory duties. These tasks relate in particular to ensuring proper operation of electricity systems, according to the operation rules agreed with the President of ERO, approved in the network codes.

Monitoring time taken to connect and repair

The TSO and DSOs publish on their websites information on continuity of electricity supply 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 supply allowed to standardize the calculation methodology and ways of quality data collection within particular network companies.

The year 2018 was the first year of the new period of regulation (years 2016-2020), in which a quality regulation element was introduced to the calculation of tariffs. 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 safeguard measures

The President of ERO monitors the functioning of NES in the context of ensuring security of electricity supply. As a result of the impact of regulatory incentives (resulting from the energy market liberalization, compliance with environmental requirements by the electricity generation sector, improvement of energy efficiency and energy savings, development of renewable energy sources, development of combined heat and power generation and reliability of supply) security of electricity supply is monitored and assessed under a complex model through determinants such as: diversification of the structure of energy carriers forming the national balance, degree of diversification of external supply sources, technical condition and efficiency of equipment and installations of fuels and energy transmission and distribution systems. The process of monitoring this security by the President of ERO includes the acquisition and analysis of information in the field of:

- power balance in the NES,
- the condition of the network infrastructure and investment needs of the TSO and DSOs when agreeing on draft development plans for network enterprises.

In 2018, no significant events occurred in the NES that would result in the introduction of restrictions on the supply and consumption of electricity in Poland, requiring the announcement of the applicable power supply limitation degrees. Therefore, the TSO did not submit to the Minister of Energy, pursuant to the provisions referred to in Article 11c item 3 of the Energy Law Act, a request for the necessity for the Council of Ministers to introduce restrictions on the supply and consumption of electricity within the

territory of the Republic of Poland, by means of an ordinance, referred to in Article 11 item 7 of the aforementioned Act.

On the other hand, there were single cases of significant network failures, both in the TSO network and the five largest DSOs, resulting from technical reasons independent of them (unpredictable weather conditions). Each time, operators repaired the consequences of such failures using their own dispatching services. The President of ERO was provided with information on the causes of the failures, their extent, and the manner and time of restoring electricity supplies, including the amount of undelivered electricity.

Renewable energy sources: connection, access, dispatching and balancing

In 2018, 31,687 applications for connection of renewable energy sources (RES) to the grid were submitted to five largest DSOs and TSO, with a total connection capacity of 6,399 MW, out of which 28,838 of these installations with a total capacity of 330 MW were connected to the grid in 2018. Photovoltaic sources had the largest share of 99% in submitted applications and executed connections, respectively. These sources also had the largest share in the total capacity of submitted applications for connection to the grid, that is 56%, and the largest share in the total capacity of connections in 2018, that is 91%.

At the end of 2018, the number of RES units waiting for connection amounted to 5,269 with a total capacity of 12,685 MW, out of which 4,415 solar plants with capacity of 2,303 MW and 543 wind plants with capacity of 10,021 MW.

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

In 2018, there were no changes in the rules of RES access to the power grid and balancing as compared to the previous year. This information was presented in detail in the Report for 2015.

3.1.3. Network tariffs for connection and access

Tariff calculation for energy companies is based on clear rules which are intended to eliminate cross-subsidies between distribution and trading. The applied regulation model for largest DSOs is a revenue cap with elements of incentive-based regulation and, since 2016, also quality regulation. In 2015 the cost efficiency and technical efficiency (network losses) model was updated, using, among others, benchmarking. This model was a starting point for the subsequent regulatory period, that is 2016-2020. Tariffs for 2018 also included performance of quality regulation benchmarks in 2016.

3.1.4. Cross-border issues

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

In 2018, capacity calculation methodologies approved by the President of ERO in 2015 - allocation of transmission capacity through day-ahead market coupling mechanism - were still applied on the Polish-Swedish 4 (SwePol Link) and Polish-Lithuanian (LitPol Link) borders. Due to the fact that the decisions of the President ERO of 17 May 2017 issued in relation to the mentioned borders of the market areas Poland - Sweden 4[6] and Poland - Lithuania[7] remained in force in 2018, no long-term transmission rights were issued.

On 23 October 2018 the President of ERO, in agreement with other regulatory authorities of the Baltic CCR, issued a decision approving a common coordinated capacity calculation methodology for this region[8], and on 15 December 2018, in agreement with other regulatory authorities of the Hansa CCR, a decision approving the same methodology for that region[9] (both approved methodologies concern

[6] http://bip.ure.gov.pl/download/3/8918/20170517NiewydawanieprzezPolskieSieciElektroenergetyczneSAdlugoterminowychprawpr.pdf
[7] http://bip.ure.gov.pl/download/3/8917/20170517NiewydawanieprzezPolskieSieciElektroenergetyczneSAdlugoterminowychprawpr.pdf
[8] http://bip.ure.gov.pl/download/3/10303/20181023Zatwierdzeniewspolnejmetodywyznaczaniazdolnosciprzesylowych.pdf
[9] http://bip.ure.gov.pl/download/3/10422/20181215Zatwierdzeniewspolnejmetodywyznaczaniazdolnosciprzesylowychwregioniewyzn.pdf

capacity calculation in day-ahead and intra-day timeframes). The decisions in question apply respectively to the bidding zone border Poland-Lithuania (Baltic CCR) and to the bidding zone border Poland-Sweden 4 (Hansa CCR). The approved methodologies imply an approach based on coordinated net transmission capacity, i.e. a transmission capacity calculation methodology based on the principle of estimating and defining ex ante the maximum exchange of energy between adjacent bidding zones. In addition, they include, inter alia, methodologies of determining the input parameters to calculate transmission capacity (i.e. methodology for determining transmission reliability margin, methodology for determining operational security limits and contingencies and for allocation constraints, the methodology for determining the generation shift keys and the methodology for determining the remedial actions), a detailed description of the approach to capacity calculation, the methodology for the validation of cross-zonal capacity and the fallback procedures.

On 5 July 2018 the President of ERO, in consultation with the regulatory authorities of the CORE region, issued a decision approving the amendment of the regional design of long-term transmission rights for this region[10]. This change was due to the decision of the Czech and Slovak as well as Austrian and German regulatory authorities regarding an obligation to issue long-term transmission rights at Czech-Slovak and Austrian-German borders, respectively.

In 2018 the President of ERO together with other regulators from the Core CCR (to which the bidding zone borders Poland-Germany, Poland-Czech Republic and Poland-Slovakia are assigned) worked intensively on a common methodology for coordinated flow-based capacity calculation for this region. As the regulatory authorities of the region failed to reach an agreement, the case was referred to ACER and the President of ERO discontinued the administrative proceedings.

Notwithstanding the above, in 2018 transmission capacity on synchronous interconnections was allocated through tenders organized by the Joint Allocation Office S.A. (which, in accordance with the decisions of the President of ERO and other EU regulatory authorities, was established as a single allocation platform[11]) on the basis of the harmonized allocation rules for long-term transmission rights approved by ACER's decision of 2 October 2017[12] (along with the regional design of LTTR for this region approved in 2017 by the regulatory authorities of the Core CCR under the Harmonized Allocation Rules[13]), as well as in the day-ahead timeframe. The intraday capacity allocation on these interconnections was carried out by the Czech TSO - ČEPS, a.s.

Apart from the above, on 29 May 2018 the President of ERI approved the amended proposal of cross-zonal capacity allocation and other necessary arrangements concerning more than one NEMO in Poland[14].

Revenues from transmission capacity allocation on interconnections with the EU member states and the manner of their utilization in 2018

The final amount of revenues from cross-border transmission capacity allocation on interconnections with the EU member states in the period from 1 January to 31 December 2018 amounted to PLN 137,915,800. This sum is reduced by the amounts returned by the TSO to the participants of the cross-border exchange due to the fact that these participants returned part of the annual and monthly transmission rights they had acquired to be allocated during the daily auctions and due to the fact that these participants did not exercise their transmission rights in the daily auctions.

The above amount will be credited to the Special Purpose Fund established by adopting the Regulations of the Special Purpose Fund by means of a Resolution of the Management Board of PSE S.A. of 25 May 2006. The TSO allocates the resources accumulated in the Special Purpose Fund to maintain or increase interconnection capacity through investments in networks, i.e. in accordance with the objectives set forth in Regulation 714/2009. Completion of these investment projects will contribute to increasing the transmission capacity of the NES interconnections with the transmission systems of the EU member

[10] http://bip.ure.gov.pl/download/3/10069/20180705Zatwierdzeniezmianyregionalnegomodeludlugoterminowychprawprzesylowych.pdf
[11] http://bip.ure.gov.pl/download/3/9311/20171106ZatwierdzenieprzedlozonegoprzezPolskieSieciElektroenergetyczneSAwniosku.pdf
[12] https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2003-2017%-20on%20HAR.pdf i https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/ANNEXES_CCR_DECISION.aspx
[13] http://bip.ure.gov.pl/download/3/9261/20171017WniosekPolskichSieciElektroenergetycznychSA.pdf
[14] http://bip.ure.gov.pl/download/3/9960/Nr792514z30052018.pdf

states, and will increase the operational security of the national system within the interconnected European systems, in particular by increasing the possibilities of inter-operator cooperation (e.g. the possibility of using inter-operator remedies).

The investment projects related to maintenance and increase of transmission capacity on interconnectors of the NES with transmission systems of the EU member states have been specified in the Development Plan agreed by the President of ERO. So far, the TSO allocated part of the funds accumulated in the Special Purpose Fund to be one of the sources of financing of investments which are part of the project of construction of an interconnector between Poland and Lithuania, along with the necessary improvement of the NES.

In the period from 1 January to 31 December 2018 the TSO spent the amount of PLN 75,300,000 from the Special Purpose Fund.

Unplanned flows of electricity

The occurrence of unplanned flows over the last few years has resulted in lower cross-border transmission capacity available for Polish market participants, especially in the direction of imports. This is due, inter alia, to difficulties in forecasting physical cross-border flows resulting from commercial transactions.

Volume of transmission capacity available at synchronous borders (Germany, Czech Republic, Slovakia) in the direction of exports is much higher than in the case of imports. This situation is due primarily to the existence of unplanned energy flows. Unscheduled energy flows also mean that a significant portion of transmission capacity is made available in shorter time horizons. In particular, transmission capacities towards imports were made available only at daily auctions - on average 81% of offered transmission capacities and on auctions on the day of delivery - on average 19% of offered transmission capacities. Similarly, transmission capacities towards exports were offered only at daily auctions - an average of 63% and on auctions on the day of delivery - an average of 37% of offered transmission capacities.

In 2018, as in previous years, inter-operator remedial actions were taken, i.e. ad hoc measures aimed at ensuring secure operation of the interconnected systems. These measures included bilateral and multilateral redispatching (MRA), while in 2018, similarly to 2017, there was no need to use MRA to ensure security on Poland-Germany profile (criterion N-1). The volume of MRA amounting to 1.5 GWh only in October 2018 was due to the implementation of multilateral agreements concerning remedial measures. The scale of bilateral redispatching in 2018 was similar to the volume in 2017 and significantly smaller than in the period before the launch of physical phase shifters at Mikułowa station and the shutdown of the Krajnik-Vierraden line. The average monthly volume in 2018 was 1.01 GWh, with an increased volume:
- in the period from 2 February to 6 March 2018 (5.16 GWh), due to the planned sequential shutdown of AT1 / AT2 autotransformers at Mikułowa station,
- in August 2018 (5.37 GWh), which was the result of the necessary measures to eliminate congestion on the un-modernized 220 kV lines from the Vierreden station at the test run of the Krajnik-Vierraden interconnection.

In the first half of 2018, the temporary shutdown of the Krajnik - Vierraden line lasting since 2016 onwards contributed to maintaining secure operation of the transmission networks in Poland and Germany by reducing the amount of physical, unscheduled flows. The modernized Krajnik - Vierraden interconnection, which is currently being adapted for 380/400 kV operation, was included in the test run as late as on 2 August 2018.

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

As part of the regulator's tasks, analyses of planned investment execution are conducted annually. Their results are used in the process of agreeing further versions of development plans or their updates. These analyses are performed on the basis of annual reports on the development plan execution which are to be submitted by the companies under Article 16 item 18 of the Energy Law Act. The conducted

analyses of the reports on development plans' implementation in 2018 showed that five largest DSOs and the TSO executed in total level of investment expenditures lower by PLN 242.5 million than it was planned. The TSO realized investments in the lower amount of PLN 1,810 million, whereas the planned level of investments amounted to PLN 2,162.5 million. Five largest DSOs executed investments in the amount of PLN 6,446 million, whereas the planned level amounted to PLN 6,336 million.

In 2018, a draft development plan for PSE S.A. for the years 2018-2027 was submitted. During the process of agreeing on the plan, the coherence of the development plan of PSE S.A. with the European TYNDP prepared by ENTSO-E was checked. The identified inconsistencies are clarified with the TSOs on an ongoing basis (usually the inconsistencies result from inconsistent deadlines for updating these documents). The procedure to agree on the development plan of PSE S.A. was not completed in 2018.

Monitoring technical cooperation between the EU and third country TSOs

National electricity system is connected with two electricity systems of 2 third countries which are not members of the EU – Belarus and Ukraine. In case of the interconnection with Belarus, PSE S.A., after agreement at the ministerial level, decided to liquidate the 220 kV Rośь-Białystok interconnection in the section owned by PSE S.A. As part of the liquidation work, steps were taken to obtain permits for disassembly work.

The transmission capacities at the Poland-Ukraine interconnection were made available through explicit auctions organized on a monthly basis. The auctions introduced by the Polish TSO are one-sided. The transmission capacity for import to Poland were made available in the maximum volume of 210 MW. Temporary transmission capacity limitations were caused by emergency shutdown of the Zamość - Dobrotwór line. The reduction of allocated transmission capacities at the Poland-Ukraine interconnection took place from 22 June 2018, 6 p.m. to 25 June 2018, 7 p.m. The total reduction amounted to 9,785 MWh.

3.1.5. Compliance

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

Pursuant to Article 37 (1) (d) of Directive 2009/72/EC, the regulators' obligations include compliance with and implementation of all legally binding decisions of ACER and the Commission.

On 23 February 2018 ACER, at the request of EU regulators (with the exception of bodies of Member States located on islands which are not connected to other transmission systems via interconnectors), decided to extend the deadline for regulators to take a decision on a single methodology for pricing intraday cross-zonal capacity[15]. Despite this extension of the deadline, the regulators eventually failed to reach an agreement and delegated the power to ACER to issue a decision on the matter.

On 16 April 2018 ACER, at the request of the regulators of the Hansa CCR, decided to extend the period for the regulators of that region to reach an agreement on a single capacity calculation methodology in that region[16]. Finally, the regulators managed to reach an agreement which resulted in the methodology being approved, as mentioned above.

On 28 August 2018 ACER, at the request of the regulators of the Baltic CCR, issued a decision to extend the deadline for the regulators of that region to decide on a common coordinated capacity calculation methodology in that region[17]. The regulators managed to reach an agreement within the period

[15] https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2002-2018%20on%20the%20IDCZCP%206%20months%20extension_Rectified.pdf
[16] https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2003-2018%20on%20CCR%20Hansa%20extension.pdf
[17] https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2009-2018%20on%20extension%20for%20Baltic%20CCM.pdf.pdf

extended by ACER. As a result of the agreement reached, the methodology was approved, as mentioned above.

In the reporting period, the Commission did not issue any legally binding decision addressed to the President of ERO.

Compliance of operators' activities with relevant EU legislation

Electricity system operators perform tasks arising from the Energy Law Act (mainly Article 9c items 2 and 3), Regulation 714/2009 and regulations issued on its basis. The President of ERO monitors performance of these tasks on its own, as well as in cooperation with other regulatory authorities and the ACER.

Monitoring of coordinated cross-border exchange

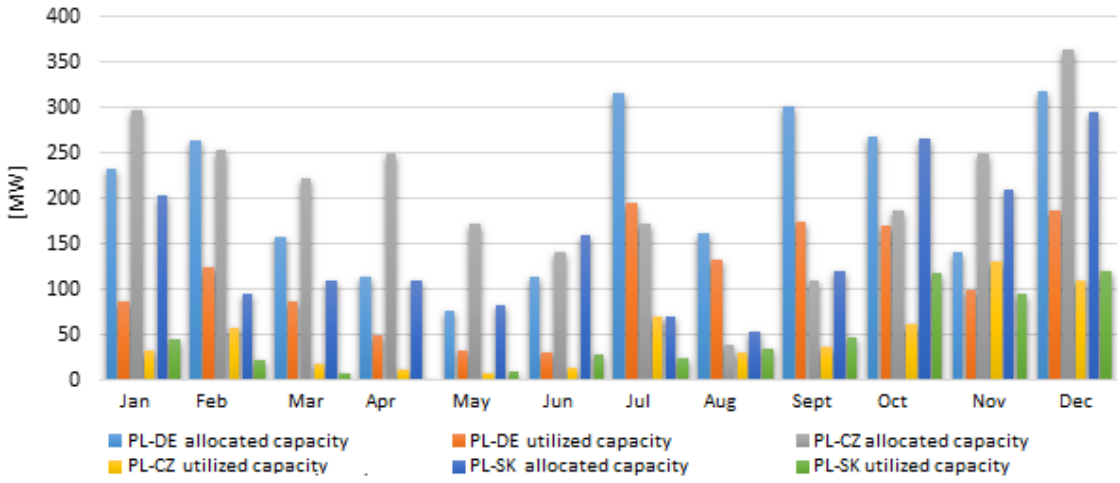
In 2018, the commercial balance on the Polish borders amounted to +5,788 GWh (imports). Electricity exports totalled 3,093 GWh and decreased by around 33% in comparison to the previous year. In 2018, electricity was mainly imported from Sweden, Lithuania, Ukraine and the Czech Republic and totalled 8,881 GWh (increase by some 27% 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 capacity offered to the participants on these borders.

In 2018, cross-border transmission capacities were made available on synchronous profile via explicit auctions organized both in export and import direction in day-ahead and intraday horizons.

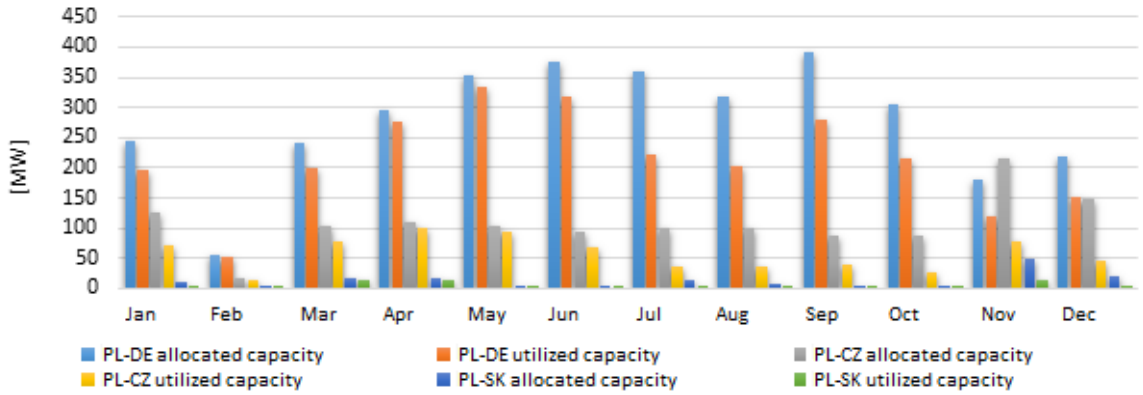
The figures below show monthly average volumes of allocated and utilized transmission capacities in export and import directions, respectively, on the synchronous interconnections in 2018.

Fig 2. Comparison of average monthly transmission capacity, made available in coordinated auctions, allocated and utilized in export direction on respective synchronous interconnections in 2018 [MW]



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

Fig 3. Comparison of average monthly transmission capacity made available in coordinated auctions, allocated and utilized in import direction on respective synchronous interconnections in 2018 [MW]



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

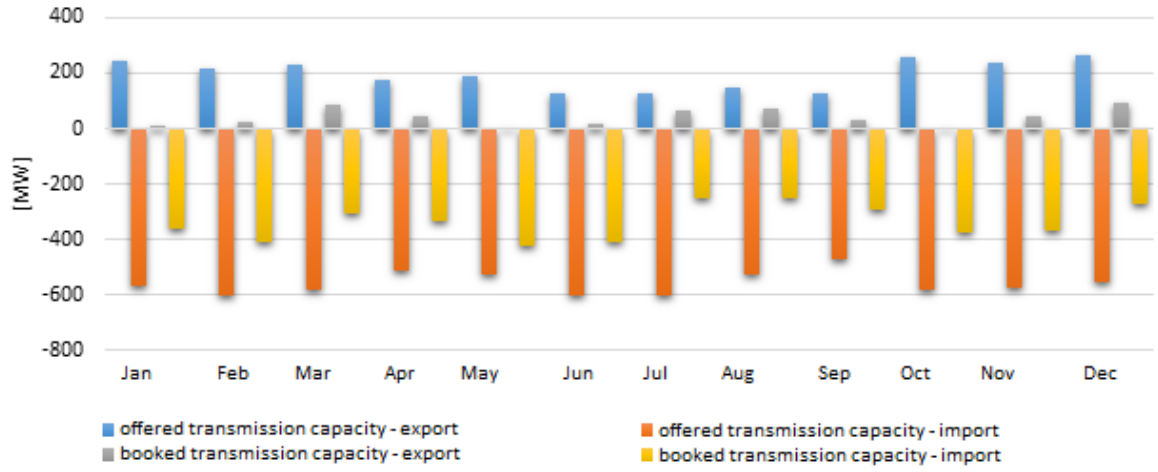
Allocation of transmission capacity offered on a technical profile (jointly: Germany, Czech Republic, Slovakia) among commercial profiles (separately: Germany, Czech Republic, Slovakia) is carried out according to a price ranking of offers submitted by participants. The data presented above indicate that in case of exports market participants in 2018 did not show any clear preference, though these preferences changed in particular months. 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. While in the case of electricity imports in 2018, allocation and utilization from Germany and the Czech Republic were dominant. 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 2018 differed in particular months, largely due to the operation of phase-shifting transformers and related problems. Phase-shifting transformers curb negative consequences of unplanned flows, in order to ensure safe operation of the transmission grid in NES in a set of combined systems.

It should also be noted that the volume of available transmission capacities at synchronous borders (Germany, the Czech Republic, Slovakia) in the direction of exports is much higher than in the case of imports, which is mainly due to the existence of unplanned energy flows[18].

In 2018 transmission capacity allocation on direct current interconnectors Poland-Sweden and Poland-Lithuania was performed under implicit auctions by POLPX and Nord Pool AS on the basis of market coupling mechanism. The average monthly volumes of offered and allocated transmission capacities in 2018 are presented in the Figures below.

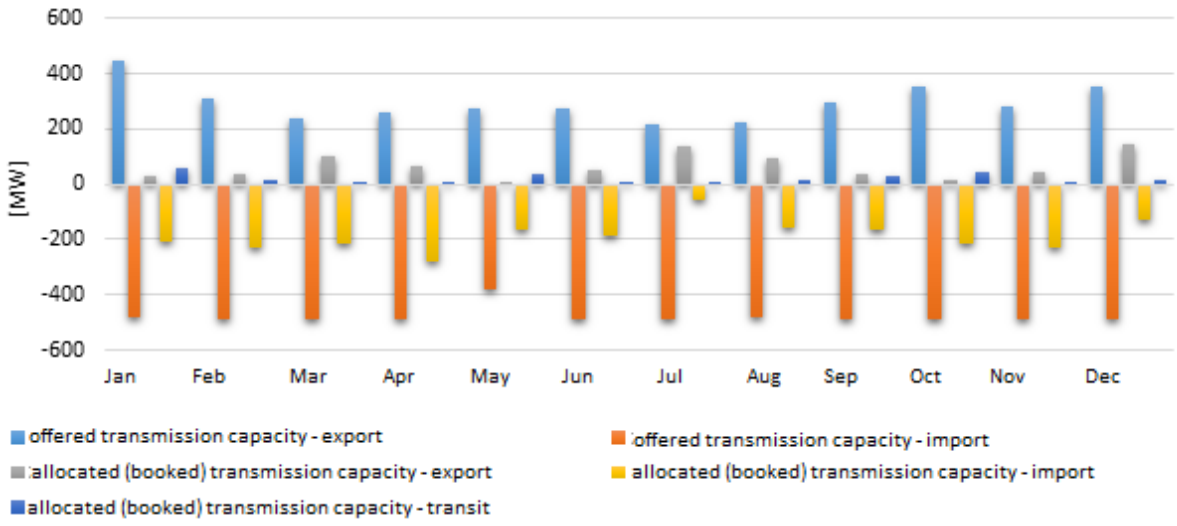
[18] More on this issue under item 3.1.4. of this Report: Cross-border issues, and in National Reports of 2015, 2016, 2017 and 2018.

Fig 4. Comparison of monthly average transmission capacities offered and allocated on the Poland-Sweden interconnector in 2018 [MW]



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

Fig 5. Comparison of monthly average transmission capacities offered and allocated on the Poland-Lithuania interconnector in 2018 [MW]



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

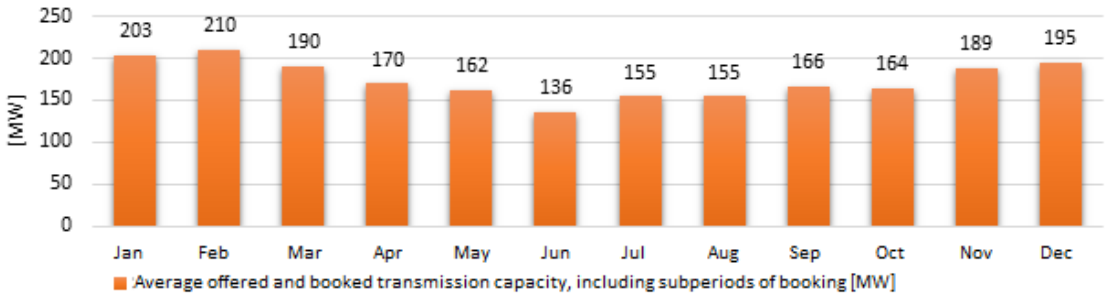
As shown by the data presented above, in 2018 for most of the time electricity prices were lower on the Scandinavian market, which in consequence resulted mainly in electricity imports to Poland from Sweden, limited due to the NES security reasons during the night time. Maximum volumes of offered transmission 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. In addition, transmission capacities for purposes of transit from Sweden to Lithuania, of average volume of 21 MW, were offered and allocated.

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

210 MW were made available to participants. Transmission capacities were reduced for selected days due to emergency line shutdowns.

The average monthly volumes of offered transmission capacities on Poland-Ukraine interconnector, in imports direction in 2018 are presented in Figure 6 below.

Fig 6. Monthly average transmission capacities offered on the Poland-Ukraine interconnector (import), direction UKRENERGO-PSE S.A. in 2018



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

Monitoring the limitations of transmission services in cross-border exchange due to lack of capacity or grid failures in 2018

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 2018.

While on the Poland-Ukraine interconnector via 220 kV Zamość-Dobrotwór line, there was a reduction of allocated transmission capacity from 6pm 22 June 2018 to 7pm 25 June 2018 due to extended shutdown of the Zamość-Dobrowtór line. The total reduction volume was 9,785 MWh.

Concentration of transmission capacities made available by PSE S.A., allocated via auctions on synchronous interconnectors in 2018

In annual and monthly auctions for capacity booking at the Polish borders in 2018, transmission capacities were not offered. On the other hand, in daily auctions for transmission capacity at the Polish borders, transmission capacities were allocated in the direction of exports and imports. Throughout the entire period (2018 – intraday auctions), transmission capacities were allocated to a total of 25 different entities (market participants). The maximum market share for one entity was approx. 25.90%.

Monitoring of compliance with independence criteria

Since 4 June 2014, that is the date of issuing a decision on granting energy company PSE S.A. a certificate of compliance with independence criteria, meeting these criteria is subject to monitoring and periodic review. 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 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.

3.2. Promoting competition

3.2.1. Wholesale market

The volume of gross domestic electricity generation in 2018 was slightly lower as compared to the previous year and totalled 165,214 GWh (decrease by 0.38% as compared to 2017). At the same time, gross domestic electricity consumption amounted to 170,932 GWh and increased by over 1.66% in comparison to 2017. In 2018 the rate of increase of domestic consumption of electricity was lower than the GDP increase rate, which – according to preliminary estimates of the Central Statistical Office – amounted to 5.1%.

In 2018, the share of imports in the domestic balance of physical flows constituted 7.7% of total electricity fed into, while the share of exports constituted 4.5% of electricity off-taken. As compared to 2017 both these parameters decreased by 0.3 percentage point and 2.1 percentage point respectively.

The electricity production structure did not change considerably as compared to 2017. A great majority of generation is still based on conventional fuels, that is hard coal and lignite. At the same time, the generation leader in the RES segment was still wind generation.

In 2018, the installed capacity in the NES amounted to 45,939 MW and the available capacity to 45,650 MW, which represents an increase by 5.8% and 5.4%, respectively, as compared to 2017[19]. The average annual capacity demand was at the level of 23,322.7 MW, with the maximum demand at the level of 26,447.6 MW, which means an increase by, respectively: 1.5% and 0.8% as compared to 2017.

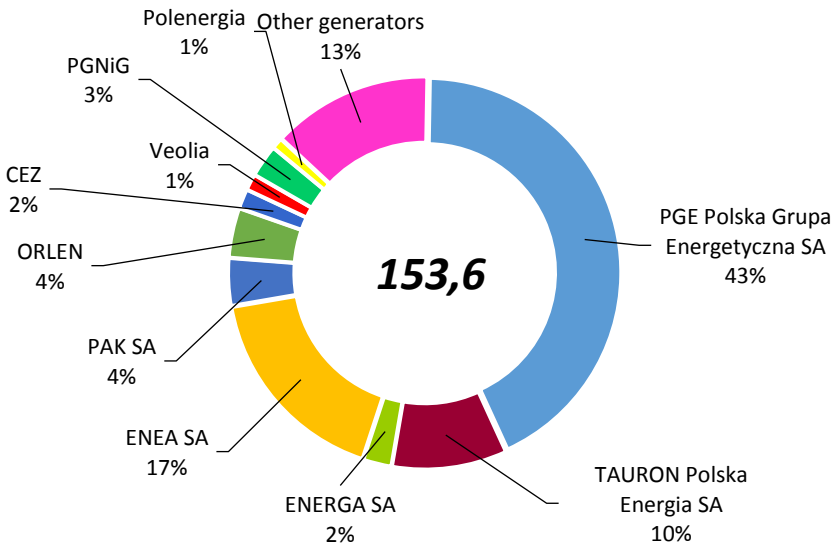
Wholesale electricity market structure by entities

The biggest share in electricity generation subsector in 2018 totalling 42.9%[20], was still held by the group PGE Polska Grupa Energetyczna S.A. (decrease by 0.6 percentage point in comparison to the previous year). This group, having acquired the energy companies of EDF group, also became leader on the market of sale to final customers, thus TAURON Polska Energia S.A., which for a number of years held a dominant position, placed second in this area.

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

[19] As at 31 December 2017 and 31 December 2018, data of PSE S.A.
[20] Share calculated according to the volume of electricity fed into the grid. When calculating this ratio, the entity structure as at 31 December 2018 was taken into consideration.

Fig 7. Share of groups in the volume of electricity fed into the grid in 2018 (considering the entity structure as at 31 December 2018)



NB. The group "Other generators" includes both generators which are part of groups (e.g. Azoty, FORTUM) and generators operating individually on the electricity generation market – outside groups.

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

With respect to the market share of three largest entities, 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), in 2018[21] an increase of this index continued and amounted to 69.7%, which is an increase by 0.7 percentage points as compared to 2017. At the same time, the index of the share held by three largest generators in installed capacity decreased slightly – by 1.1 percentage point. Three largest generators (members of groups: PGE Polska Grupa Energetyczna S.A., TAURON Polska Energia S.A., ENEA S.A.) still held in total almost 2/3 of installed capacities and were responsible for almost 70% of domestic electricity production. The above mentioned indices are presented in Table 1. Among three dominant entities on the electricity generation market, in 2018 the importance of generators of ENEA S.A. group increased. This is due to the fact that in December 2017 exploitation of new unit no. 11 with installed capacity of 1,075 MW began.

It is worth noting that the reduction in the number of entities holding at least a 5% share in the energy fed into the grid in 2018 as compared to 2017 was caused by the permanent withdrawal from exploitation of the generation asset in the PAK group, which resulted in a decrease in the importance of this group in the electricity generation sub-sector.

[21] When calculating the market share ratios of the three largest entities, both according to the energy fed into the grid and the installed capacity, the entity structure as at 31 December 2018, i.e., inter alia, after PGE Polska Grupa Energetyczna S.A. took over the generation assets of the EDF Group, was taken into account.

Table 1. Market shares and concentration of the generation subsector*

Year	Number of companies holding at least a 5% share in installed capacity	Number of companies holding at least a 5% share in electricity fed into the grid	Share of three largest entities in installed capacity [%]	Share of three largest entities	HHI[22]	
					Installed capacity in electricity	Electricity fed into the grid
2017	4	4	63.1	69.0	1,795.9	2,281.1
2018	4	3	62.0	69.7	1,740.0	2,281.0

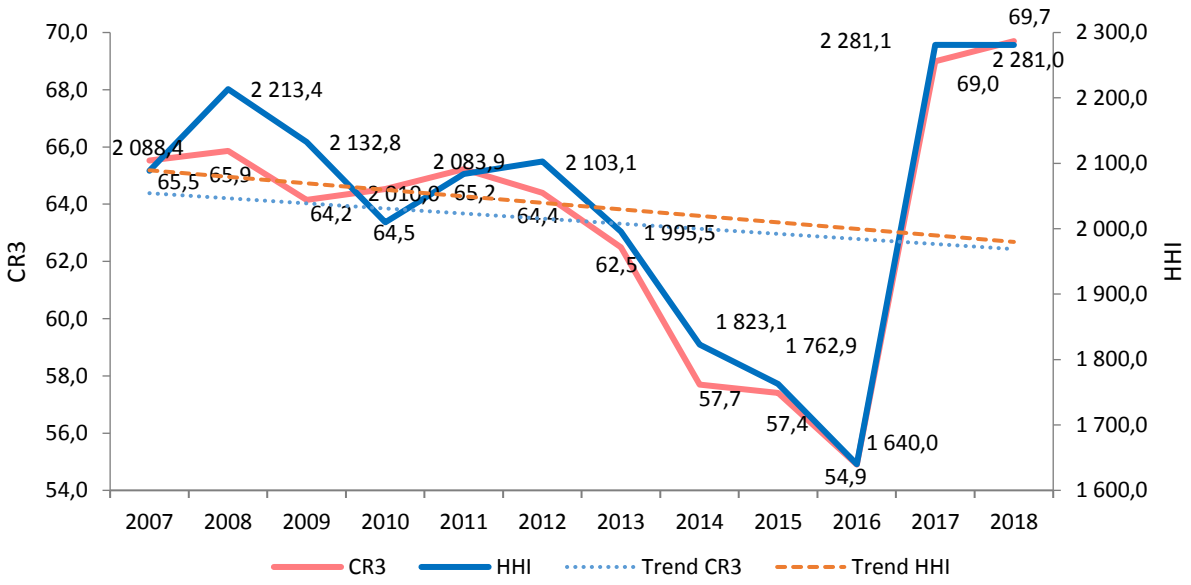
* For all entities operating in the generation sector, which are subject to an obligation of reporting statistics, including installed capacity and energy fed into the grid from wind and hydro sources.
When calculating the market share ratios of the three largest entities and HHI ratios, both according to the energy fed into the grid and the installed capacity, the structure of the entity as at 31 December 2018, i.e. after PGE Polska Grupa Energetyczna S.A. took over the generation assets of the EDF Group, was taken into account.

Source: Data of the Ministry of Energy and ERO.

A many-year downward trend concerning in particular HHI, measured according to installed capacity and according to volume of electricity fed into the grid (including volume of electricity supplied by generators directly to final consumers), changed considerably in 2017 and this trend was maintained in 2018. The high level of both concentration ratios recorded in 2017 slightly changed in 2018, in terms of installed capacity it decreased by 3.1% and in terms of energy fed into the grid it remained at the level of 2017. It is worth emphasizing that this index calculated for generation in 2017 reached a value allowing to state that the market concentration is high. While the index calculated for installed capacity is slightly below the high concentration threshold.

The changes of concentration index (HHI) and index of market shares of three largest entities in the generation subsector in the years 2007-2018 are presented in the figure below.

Fig 8. Concentration level in generation subsector (HHI) and market shares of three largest entities by volume of electricity fed into the grid, in 2007-2018



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

[22] The Herfindahl-Hirschman index (HHI) is defined as the sum of squares of individual market shares of all companies forming a given branch: HHI>5,000 - very high concentration, HHI from 1,800 to 5,000 - high concentration, HHI from 750 to 1,800 - medium concentration, below 750 - low concentration (according to the "Report on progress in creating the internal electricity and gas market", Brussels 2005 and J. Kaminski: *Methods for estimating market power in the energy sector*, Energetyczna Polityka, Volume 12, Zeszyt 2 / 2, 2009).

With reference to the data presented above regarding concentration, it should be noted that these indices changed so significantly the previous year due to organizational changes in the generation sector, that is taking over by two groups - PGE Polska Grupa Energetyczna S.A. and ENEA S.A. of assets of other groups, that is EDF and ENGIE Energia Polska, respectively. The launch of new generation assets in the ENEA S.A. group also contributed to the consolidation of concentration ratios in 2018 at the same high level as in 2017.

Sales of electricity in respective market segments

The structure and mechanisms of market operation do not differ from the corresponding structures and mechanisms, which formed in a majority of other European states deemed competitive markets. Market participants have, on a non-discriminatory basis, wide access to various forms of electricity sales and access to information on volumes and prices at which electricity is contracted and sold on a wholesale market.

The tables below present shaping the types of electricity sales in segments of generation and trading in the years 2017-2018.

Table 2. Types of electricity sales by generators in 2017-2018 [TWh]

Year	Trading companies	Regulated markets, including power exchange	Balancing market	Exports	Final customers	Other sales *
2017**	103.5	28.3	8.1	0.0	3.2	1.9
2018	101.0	35.1	8.2	0.0	2.1	1.2

* Other sales include volumes of electricity sold to TSO and DSOs as well as sales to small local distributors.
** The data were changed compared to the data in the National Report of the President of ERO for 2017 due to the correction of the data by the surveyed entities.

Source: Data of the Ministry of Energy and ERO.

Table 3. Types of electricity sales by trading companies in 2017-2018 [TWh]

Year	Trading companies	Regulated markets, including power exchange	Balancing market	Exports	Final customers	Other sales *
2017**	128.3	63.1	5.9	3.8	123.1	17.6
2018	131.4	70.7	6.3	2.6	125.3	23.7

* Other sales include volumes of electricity sold to TSO and DSOs as well as sales to small local distributors.
** The data were changed compared to the data in the National Report of the President of ERO for 2017 due to the correction of the data by the surveyed entities.

Source: Data of the Ministry of Energy and ERO.

As a result of a significant drop in trading on the power exchange in 2017 as compared to 2016, the obligation for electricity generators to sell electricity via power exchange was increased from 15% in 2017 to 30% in 2018 in order to maintain the original concept of introducing an power exchange obligation. However, this resulted in a slight increase in the volume of sales of generators and trading companies via the power exchange in 2018. In 2018, both generators and trading companies sold a significant part of their electricity to trading companies of their own group.

Therefore, in 2018, new legal regulations were adopted under which the exchange obligation was increased to 100% as of 1 January 2019[23]. At the same time, anticipating the above regulation, at the end of July 2018, the Minister of Energy appealed to energy companies to trade electricity under the most competitive and transparent rules, i.e. on the power exchange market, as of 1 August 2018[24]. The four largest groups, with the majority of Treasury shares, announced their intention to comply with the Minister's demand. However, the previously signed sale agreements concluded i.a. with trading

[23] This obligation was introduced by Act of 9 November 2018 amending the Energy Law Act and certain other acts (JoL of 2018, item 2348) and has been in force as of 1 January 2019.
[24] https://www.gov.pl/web/energia/minister-tchorzewski-wprowadzamy-caly-obrot-energia-elektryczna-na-gielde

companies from their own group for 2018 could not be cancelled, therefore the Minister's appeal did not cause a significant increase in the volume of electricity offered for sale on the power exchange.

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

The prices of electricity delivered in 2018 are illustrated by three price indices published by the President of ERO, i.e. the annual and quarterly average selling price of electricity on the competitive market and the quarterly average selling price of electricity on terms other than those provided for in Article 49a items 1 and 2 of the Energy Law Act.

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 2018, the average annual price of sales of electricity on the competitive market was 194.30 PLN/MWh. This price was by 13.7% lower than the weighted-average price of a contract for baseload delivery on the day-ahead market in 2018 (225.10 PLN/MWh) and by 19.8% lower than the weighted-average price of a contract for baseload delivery in 2019 (BASE_Y-19) on the CDM, which in the contracts concluded in 2018 was at the level of 242.40 PLN/MWh.

The algorithm for calculating the average quarterly price of electricity sales on the competitive market is the same as in previous years.

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

The algorithm for calculating the average quarterly selling price of electricity on the competitive market is the same as in the case of the average annual selling price of electricity on the competitive market.

The Table below shows average quarterly prices of electricity sales on the competitive market in 2018.

Table 4. Average quarterly prices of electricity sales on the competitive market in 2018

2018	
Quarter	Average quarterly price of electricity sales on the competitive market [PLN/MWh]
I	174.95
II	186.21
III	208.83
IV	205.50

Source: Data of POLPX and ERO.

Relating the average quarterly price of electricity sales on the competitive market in 2018 to the exchange market operated by POLPX, it should be stated that this price is similar to the quarterly prices on the power exchange. The 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 ERO.

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

The volumes and average quarterly price of electricity sold under rules other than those determined in Article 49a items 1 and 2 of the Energy Law Act[25], in respective quarters of 2018, are presented in the Table below:

Table 5. 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 2018

2018		
Quarter	Average quarterly price of electricity sold under rules other than those determined in Article 49a items 1 and 2 of the Energy Law Act*[PLN/MWh]	Volume of electricity sold under rules other than those determined in Article 49a items 1 and 2 of the Energy Law Act [TWh]
I	171.85	22.65
II	174.23	20.39
III	183.69	21.35
IV	180.25	22.81

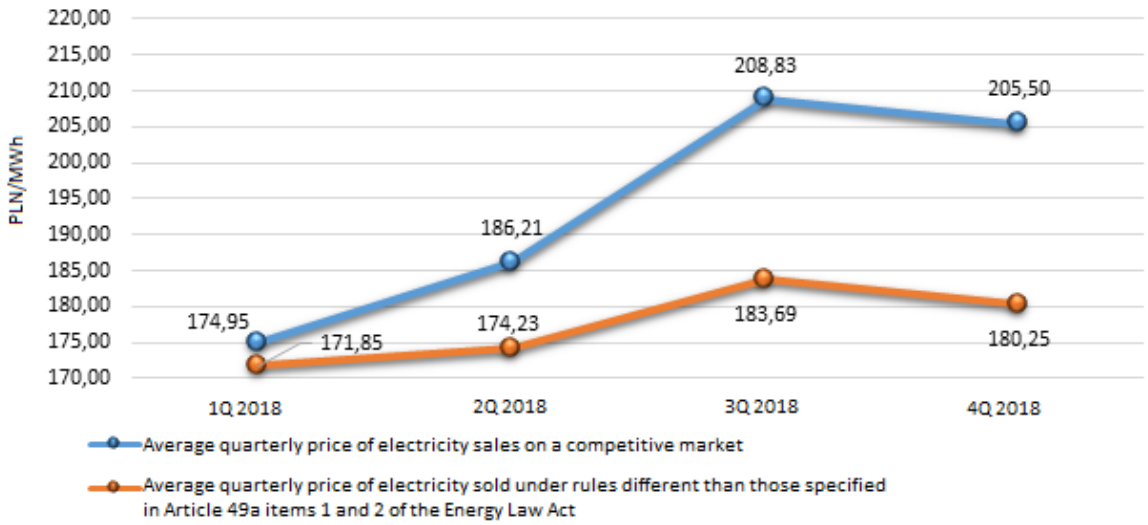
* The price does not include taxes (VAT, excise tax), charges not related to the volume of sold electricity or obligations related to certificates of origin.

Source: ERO, on the basis of data submitted by electricity producers for respective quarters of 2018.

The quarterly prices referred to above were set on the basis of data concerning performance of agreements on electricity sales to trading companies, concluded by energy companies generating electricity, obliged to sell part of generated electricity in the manner specified in Article 49a items 2 and 3 of the Energy Law Act.

The figure below shows a comparison of average quarterly price of electricity sold under rules different than those specified in Article 49a items 1 and 2 of the Energy Law Act with an average quarterly price of electricity sales on a competitive market in particular quarters of 2018.

Fig 9. Average quarterly prices of electricity sold under rules different than those specified in Article 49a items 1 and 2 of the Energy Law Act and average quarterly prices of electricity sales on a competitive market in 2018



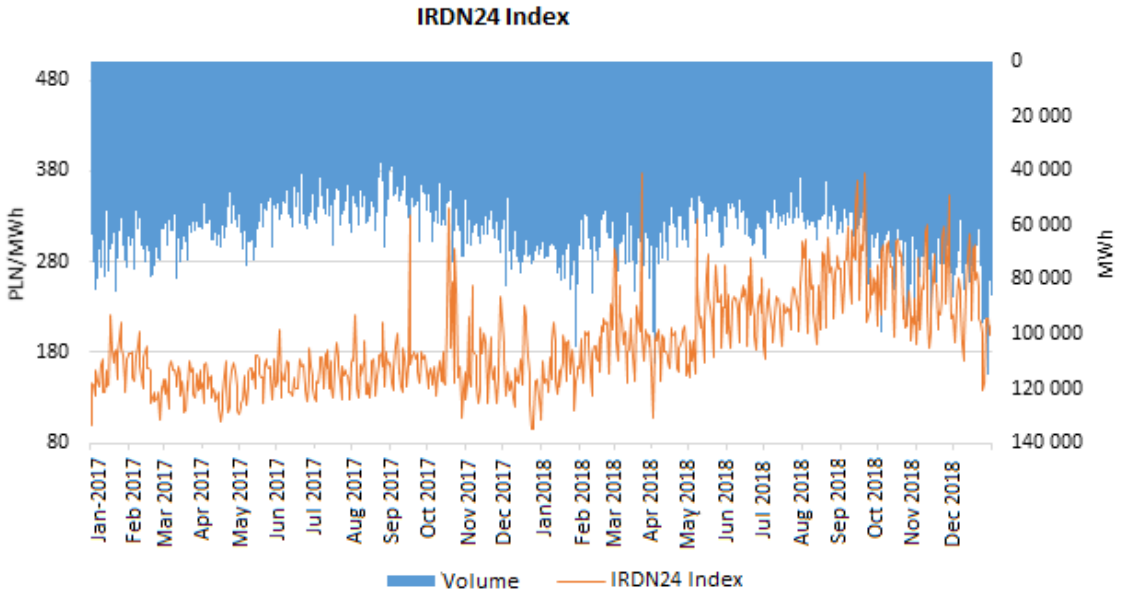
Source: ERO's own analysis

[25] Article 49a items 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) (provisions of the Article valid before amending the Energy Law Act by the Act of 9 November 2018 on amending the Energy Law Act and certain other acts (JoL of 2018, item 2348).

Prices on SPOT market of POLPX

The below figure presents development of electricity prices on the spot market – DAM, managed by POLPX, measured with the IRDN24 index. This index shows arithmetic average price of all transactions, except for block contracts, of DAM trading session, calculated for particular delivery date.

Fig 10. Average monthly electricity price of spot transactions, measured by IRDN24 [PLN/MWh], and volume of electricity traded on DAM market (without block contracts) [MWh] in 2017-2018



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

Volume-weighted average price of electricity on DAM in 2018 amounted to 224.71 PLN/MWh and was higher by 66.75 PLN/MWh in comparison to 2017 when this price was 157.96 PLN/MWh.

Prices on commodity forward instruments market with physical delivery of POLPX

In 2018 an increase in electricity prices on commodity forward instruments market with physical delivery of POLPX was observed. This tendency was reflected by the y/y increase of prices in BASE_Y forward contracts (yearly contract with baseload delivery for another year). The volume-weighted average transaction price of BASE_Y-19 contract in the entire year 2018 was at the level of 242.40 PLN/MWh, in comparison to 2017, when the volume weighted average transaction price of the corresponding BASE_Y-8 forward contracts amounted to 167.50 PLN/MWh.

At the same time, average monthly price of BASE_Y-19 contracts in December 2018 was equal to 281.17 PLN/MWh, whereas the monthly average price of corresponding contracts (BASE_Y-18) concluded in December 2017 amounted to 177.63 PLN/MWh, which indicates an increase of the price of these contracts by 58.3%.

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

Participants of the wholesale energy market, pursuant to the provisions of the REMIT regulation, are subject to the prohibition of manipulation or attempts to manipulate the market, as well as conducting trade based on inside information.

A special role in the process of detecting irregularities on the wholesale energy market rests with persons dealing professionally with the intermediation of transactions (PPATs)[26] that are required to create and

[26] PPATs – Persons Professionally Arranging Transactions.

maintain effective mechanisms and procedures to identify cases of violation of the prohibition of use of inside information and the prohibition of market manipulation.

Close cooperation between these entities and regulators is crucial in preventing abuses on the energy market. In 2018, activities recognized as the activity proper to PPATs were actively conducted by three entities: TGE SA, PSE SA and OGP Gaz-System SA. In 2018, the President of ERO held meetings with the above mentioned entities to deepen cooperation with PPATs and draw attention to their obligations resulting from the REMIT regulation.

In 2018, the above-mentioned entities, in cooperation with the President of ERO, after a monitoring based on the ACER questionnaire, reviewed their internal structures in terms of the implementation of PPAT obligations under the REMIT Regulation and improved mechanisms and procedures for identifying fraud including manipulation, attempts at manipulation and use of inside information. In addition, the above mentioned entities conducted trainings for market participants in order to present the implemented principles of monitoring the wholesale energy market aimed at detecting and preventing abuses defined in the REMIT regulation.

The most important information related to the REMIT Regulation has been published on the ERO's website[27]. 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 in the national register of market participants, to the ERO's dedicated e-mail address[28]. The activities undertaken by the President of ERO are complementary to the information published by the ACER on the REMIT Portal[29] dedicated to any issues included in the REMIT Regulation.

Participants of the Polish energy market are registered by the President of ERO by means of the Centralized European Register of Energy Market Participants (CEREMP) developed by ACER. As at the end of 2018, the number of market participants registered in the CEREMP system was over 13,820, out of which 628 market participants from Poland (some 4.5% of all registered entities). The number of registered market participants from Poland in 2018 increased by around 4% as compared to 2017. Information on concluded transactions and orders in Poland by wholesale energy market participants is reported[30] by intermediary of four entities, i.e. TGE S.A., OGP Gaz-System S.A., PSE S.A. and PGE Dom Maklerski S.A., which have been granted the Registered Reporting Mechanism (RRM) by ACER.

Market participants may publish inside information on their websites and via Exchange Information Platform (in Polish: GPI – Giełdowa Platforma Informacyjna)[31] run by POLPX and available free of charge to all market participants. This platform has been registered with ACER and operates as RIS (Regulated Information Services).

In 2018, the President of ERO received 6 notifications about manipulation/attempted manipulation on the wholesale energy market, submitted by PPATs pursuant to Article 15 of the REMIT Regulation.

As a result of one of the above mentioned notifications, in connection with the significant increase of electricity prices on the exchange market operated by POLPX S.A. observed in the first half of 2018 on the quarterly instrument BASE_Q-3-18 (contract for the supply of electricity in the third quarter of 2018), the President of ERO, after a thorough analysis of the materials and documents collected in this matter, exercising the right arising from Article 23p item 1 of the Energy Law Act, ordered an investigation to be conducted between 2 July 2018 and 2 January 2019 in order to determine whether there is a justified suspicion of manipulation or attempted manipulation on the market specified in the provisions of the REMIT Regulation.

The investigation referred to above, ordered by the President of ERO on 29 June 2018 and concerning specific trading sessions held on POLPX in April 2018 on the quarterly instrument BASE_Q-3-18, ended with the President of ERO filing a notification of suspicion of a criminal offence. The above notification was sent to the Prosecutor's Office on 19 December 2018.

[27] http://www.ure.gov.pl/pl/rynki-energii/energia-elektryczna/remit/6013,REMIT.html in 2018.
[28] REMIT.rejestracja@ure.gov.pl
[29] https://www.acer-remit.eu/portal/home
[30] Data provided is gathered by ACER using the ARIS system developed for this purpose (ACER REMIT Information System).
[31] Exchange Information Platform 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 ERO.

In the case of the remaining 5 notifications, until the end of 2018, no grounds were found for an investigation pursuant to Article 23p item 1 of the Energy Law Act into market manipulation or attempted market manipulation, as defined in Article 2(2)(a) and (3)(a) of the REMIT Regulation, or for a REMIT inspection referred to in Article 23c item 1 of the Energy Law Act.

Regardless of the above, given the increase in electricity prices on POLPX in the last months of 2018 in contracts with electricity supply in 2019, as a result of a market examination aimed at checking the reasons for the increase in electricity prices, which the President of ERO conducted from October to December 2018, on 19 December 2018 the regulator ordered to conduct another investigation under the REMIT Regulation, concerning the activities of market participants on POLPX S.A. with respect to annual contracts for the supply of electricity for 2019 (instrument BASE_Y-19). This investigation was not concluded in 2018. In the light of Article 23p item 1 of the Energy Law Act, the investigation procedure may last no longer than 6 months.

Within the competences specified in the Energy Law Act in the area of monitoring the wholesale energy market under the REMIT Regulation[32], in 2018 the President of ERO continued a comprehensive examination of the implementation by energy companies of the following obligations:

- obligation to register in the national register of energy market participants (CEREMP) in the event when market participants enter into transactions subject to notification to ACER - the obligation arising under Article 9 of the REMIT Regulation,
- obligation to provide ACER with data on transactions concluded on wholesale energy markets - the obligation arising under Article 8 of the REMIT Regulation.

The above mentioned examination related to the implementation of duties in the event of conclusion by energy companies of bilateral contracts (OTC), i.e. outside organized trading, such as power exchange.

In 2018, administrative proceedings were conducted to impose financial penalties under Article 56 item 1 of the Energy Law Act with respect to failure to provide ACER with data, contrary to the obligation referred to in Article 8 item 1 of the REMIT Regulation (section 40) - in 5 cases the financial penalty was waived.

3.2.2. Retail market

In 2018 there were five default suppliers and, depending on the area of five "large" distribution system operators, from 123 to 169 alternative trading companies actively selling electricity to final consumers. On the electricity market there were also 171 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 selected a new supplier.

In 2018, there were over 17.6 million final customers[33], out of which 90.8% (16 million) were from G tariff group[34], including the vast majority of household customers (over 15.1 million) who purchase energy for consumption in their households. The remaining group of final customers are consumers belonging to tariff groups A, B and C. Groups A and B are customers supplied from the high and medium voltage grid, i.e. industrial customers, while group C includes customers connected to the low voltage grid that consume electricity for the purposes of their business activity, i.e. business customers. Electricity consumers are entitled to receive electricity continuously and reliably from a selected electricity supplier.

[32] In the light of Article 23 item 2 section 19b of the Energy Law Act, the remit of activities of the President of the Energy Regulatory Office includes performing tasks, duties and using powers determined in a binding manner for the regulatory authority in the REMIT Regulation, and cooperation with ACER, regulatory authorities of the European Union Member States or Member States European Free Trade Agreement (EFTA) - parties to the Agreement on the European Economic Area, competent authority in matters of competition and consumer protection and the authority competent for supervision of the financial market, to the extent necessary to perform the obligations set out in the REMIT Regulation.
[33] On the basis of data provided by the DSO.
[34] G tariff group consumers are final customers offtaking electricity from low-voltage grid for living and housing needs.

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

Since 2010, all electricity suppliers selling electricity to consumers are legally obliged to publish on their websites and make publicly 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 contractor 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.

Table 6. 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	17,172,568	45,694,801	12,407,930	271.54
50 – 2 000 MWh	40,701	29,431,394	7,315,252	248.55
> 2 000 MWh	1,229	34,158,143	7,486,448	219.17
RAZEM	17,214,498	109,284,338	27,209,630	248.98

Source: On the basis of quarterly surveys of default suppliers in 2018

Similarly to the previous years, in 2018 an online tariff calculator was available on the ERO's website, allowing consumers to compare suppliers' offers addressed to households, and thus helping them to select the most favourable offer. At the end of 2018, 36 suppliers published their offers in the Calculator.

Availability 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.

When evaluating switching rates in 2018, it should be noted that globally still relatively few customers (approx. 4.58%) have so far exercised their right to switch. Although there was a slight increase in this indicator in relation to 2017 (in 2017 this was 4.15%), its dynamics is decreasing.

In 2018, the President of ERO was asked to intervene in cases concerning unfair practices of suppliers. As in the previous year, suppliers often act through door-to-door salesmen who present themselves as ERO employees or representatives of an existing electricity supplier. It is a common practice of suppliers not to inform consumers about all elements of the offer, e.g. about additional charges (trade fee) or misleading them, which leads to concluding unfavourable agreements by consumers. The President of ERO informs consumers about their rights, although regulator is not the competent authority in such matters. Actions taken by suppliers often have the characteristics of practices infringing the collective interests of consumers by violating the obligation to provide consumers with reliable, true and complete information and unfair market practices or acts of unfair competition. In 2018, in accordance with the jurisdiction, 159 cases which may indicate illegal activities of sales representatives were submitted to the President of UOKiK for evaluation.

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 ERO (they are published in the "Branch Bulletin of the 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 ERO.

Tariff calculation is based on clear rules which cover, among others, external costs of energy companies, including costs of support schemes for 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 ERO for the tariff correction with regard to increased costs. As at 31 December 2018, administrative proceedings regarding approval of tariffs for the period until 31 December 2019 have not been completed.

Conducting investigations and undertaking measures to promote effective competition

The President of ERO exercises control over energy companies on a current basis, in terms of compliance of application of tariffs with the terms and conditions specified in them, due to incoming correspondence from consumers of fuels and energy.

In 2018, the President of ERO received several dozen complaints concerning supplier switching by customers, or matters related to this issue. In addition, many complaints and interventions concerned cases related to the activities of energy companies which, in the opinion of consumers, infringed their interests. The President of ERO took a number of actions aimed at clarifying the issues covered by consumers' complaints, which included, among others, cases of hindering the switching of electricity suppliers. The most important issues raised by customers are listed below:

- malfunctioning information exchange platforms in IT systems,
- failure to sign general distribution agreements (GDAs) by small DSOs,
- no agreement on providing measurement data for the purpose of settlements on the balancing market between DSOp and DSOn,
- double invoicing,
- unjustified launching of last resort supply,
- questioning the effectiveness of the terminated sales agreements (e.g. a termination notice without the inclusion of a power of attorney),
- termination of contracts without proper notice,
- unlawful rejection of supplier switching applications (e.g. due to incorrect recipient data or address details for electricity purchase point),
- delays in the provision of measurement data.

The explanatory and intervention activities undertaken by the President of ERO in connection with the above complaints in most cases were resolved successfully from the point of view of consumers. Many interventions made by the President of ERO resulted in the supplier resigning from charging the customer with contractual penalties or in paying the compensation in the amount of the contractual penalty which the customer was charged by the previous supplier. These situations concerned the supplier switching procedure in the course of which the consumer was charged with such a penalty, due to the supplier’s omission or a mistake of its representative or an error in the IT system. It should be emphasized that the consumer could assert his/her rights from the supplier in court, nevertheless, the clarifications that the President of ERO demands from energy companies in similar cases often turn out to be sufficient to complete the case in a satisfactory manner to the consumer.

It should be noted that in 2018 consumers addressed to the President of ERO numerous enquiries related to the terms and conditions of the concluded agreement, including the possibility of changing energy prices in electricity sale agreements concluded with consumers not subject to tariffs. Due to the notorious practice of increasing energy prices during the term of the agreement by one of the energy companies, there was a doubt among consumers as to the legitimacy of significant increases in energy prices amounting to as much as 200%, and in some cases even 300%. With this in mind, the President of ERO issued Communication No. 90/2018 indicating the actions that can be taken by the consumer in the event of a unilateral contact amendment consisting in a price change throughout duration of the agreement. In addition, due to the emerging problem of payment arrears due to rising energy prices, and thus the threat of suspension of energy supplies to consumers, the President of ERO informed consumers about the right to apply for dispute resolution under Article 8 item 1 of the Energy Law Act in terms of assessing whether the suspension of electricity supplies was justified.

Cooperation with UOKiK and Consumer Ombudsmen was also continued.

Antimonopoly proceedings in cases of competition restricting practices and other activities undertaken by the President of UOKiK in relation to companies in the energy sector[35]

1. Concentrations of energy companies and the impact of these changes on the development of competition on the market

In 2018, the President of UOKiK conducted seven anti-monopoly proceedings concerning concentration related to entrepreneurs from the energy sector (producers /suppliers of electricity). In all cases a consent was issued pursuant to Article 18 of the Act of 16 February 2007 on Competition and Consumer Protection (hereinafter: the Act on Competition and Consumer Protection). It was considered that as a result, there would be no significant restriction of competition, in particular through arising or strengthening of a dominant position on the market. These were the proceedings concluded with the issuance of the following decisions:

1) By Decision No. DKK–37/2018 of 21 February 2018 the President of UOKiK issued a consent to the concentration consisting in the establishment by Impact Clean Power Technology S.A. with its registered office in Warsaw and Halny Cuprus Limitet with its registered office in Limassol (Cyprus) a joint venture under the business name of Energy Storage Management sp. z o.o. with its registered office in Warsaw.

2) By Decision No. DKK–70/2018 of 27 April 2018 the President of UOKiK issued a consent to the concentration consisting in the establishment by Statoil Holding Netherlands B.V. with its registered office in Rotterdam (the Netherlands) and Polenergia S.A. with its registered office in Warsaw of two joint ventures with their registered offices in Warsaw under the business names of: Polenergia Bałtyk II sp. z o.o. and Polenergia Bałtyk III sp. z o.o.

3) By Decision No. DKK–115/2018 of 13 July 2018 the President of UOKiK issued a consent to the concentration consisting in the establishment by Tauron Polska Energia S.A. with its registered office in Katowice and Polski Fundusz Rozwoju S.A. with its registered office in Warsaw a joint venture under the business name of Nowe Jaworzno Grupa Tauron sp. z o.o. with its registered office in Jaworzno.

4) By Decision No. DKK–131/2018 of 7 August 2018 the President of UOKiK issued a consent to the concentration consisting in the establishment by Mitsubishi Heavy Industries Ltd. with its registered office in Tokyo (Japan) and Mitsubishi UFJ Lease & Finanse Company Limited with its registered office in Tokyo (Japan) of a greenfield joint venture with its registered office in Tokyo (Japan).

5) By Decision No. DKK–132/2018 of 8 August 2018 the President of the UOKiK issued a consent to the concentration consisting in the establishment by Tauron Polska Energia S.A. with its registered office in Katowice, PFR Starter Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych with its registered office in Warsaw and EEC Ventures sp. z o.o. with its registered office in Warsaw a joint venture under the business name of EEC Magenta sp. z o.o. ASI SKA with its registered office in Warsaw.

6) By Decision No. DKK-133/2018 of 8 August 2018 the President of UOKiK issued a consent to the concentration consisting in the establishment by Tauron Polska Energia S.A. with its registered office in Katowice, PFR NCBR CVC Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych with its registered office in Warsaw and EEC Ventures sp. z o.o. with its registered office in Warsaw a joint venture under the business name of EEC Magenta sp. z o.o. 2 ASI SKA with its registered office in Warsaw.

7) By Decision No. DKK-159/2018 of 6 September 2018 the President of UOKiK issued a consent to the concentration consisting in the acquisition by PGE Polska Grupa Energetyczna S.A. with its registered office in Warsaw of control over Polenergia S.A. with its registered office in Warsaw.

2. Administrative proceedings regarding competition restricting practices

In 2018, the President of UOKiK did not conduct any antimonopoly proceedings concerning abuse of dominant position on the electricity market. One explanatory proceeding was conducted:

[35] On the basis of information provided by the Office of Competition and Consumer Protection (UOKiK).

By decision of 22 February 2018, explanatory proceeding was initiated in order to determine preliminarily whether the activities of Regionalna Grupa Energetycznaj RGE sp. z o.o. with its registered office in Gorzów Wielkopolski concerning the sale and distribution of electricity might constitute competition restricting practices. The purpose of the investigation was to determine, in terms of the competences vested in the President of UOKiK, how RGE shapes fees for electricity supply, including a possible assessment of the prices at which electricity is supplied to customers (as excessive or otherwise unfair prices). The investigation did not give rise to any antimonopoly proceedings and was concluded on 4 July 2018

3. Other conducts of energy companies that may violate competition rules, observed by UOKiK

In 2018 the President of UOKiK started monitoring the sale of reserve electricity in connection with complaints. The investigation does not have the form of proceedings.

4. Measures implemented to promote market transparency, i.e. measures aimed at providing customers with relevant market information

In 2018, on the basis of the collected information about unfair market practices applied by electricity suppliers (e.g. concerning misleading customers as to the identity of an entrepreneur by pretending an existing electricity supplier, or failing to provide the customer with a copy of the electricity sales agreement concluded by him/her), the President of UOKiK took numerous actions in 2018 within the scope of its powers, i.e. it initiated: explanatory proceedings, proceedings in the case of practices infringing the collective interests of consumers, in the case of recognition of the model contract provisions as prohibited, addressed positions to entrepreneurs pursuant to Article 49a of the Act on Competition and Consumer Protection, and issued decisions referred to in Articles 26, 27 and 28 of the aforementioned Act. The President of UOKiK also undertook actions aimed at informing consumers about threats on the electricity supply market. Still in 2017, UOKiK started activities aimed at preparing an information campaign involving publication by Telewizja Polska S.A. and Polskie Radio S.A. of announcements on threats to consumers related to off-premises contracts (including threats to the interests of electricity consumers). It should be noted that on 23 February 2018 public broadcasters were provided with spots in broadcasting formats to enable them to evaluate the campaign. On 25 February 2018, permission was obtained to broadcast the campaign by Polskie Radio S.A.. At the same time, the above mentioned company expressed its willingness to actively join the campaign. On 28 February 2018, permission was obtained to broadcast the campaign by TVP S.A.. As part of these activities, on 14 March 2018 a press conference was held at the Headquarters of the Chancellery of the Prime Minister (KPRM), at which spots were presented for the first time and their broadcasting was announced. After the press conference at the Headquarters of the Chancellery of the Prime Minister, the campaign was mentioned in many news programmes. UOKiK, the Chancellery of the Prime Minister and the Social Committee of the Council of Ministers also conducted an information campaign on Twitter. The publication of information spots concerning risks for consumers related to off-premises contracts was positively received by consumers.

In addition, UOKiK prepared press releases in which it warned consumers against unfair practices of electricity suppliers and informed them about their rights in connection with violation of their legally protected interests:

- Communication of 21.02.2018. "Electricity suppliers - decisions of the UOKiK" - informing about the decisions of the President of UOKiK regarding Energetyczne Centrum S.A. with its registered office in Warsaw, Novum S.A. with its registered office in Warsaw and Energa-Obrót S.A. with its registered office in Gdańsk;
- Communication of 24.07.2018 "Legal aid - call the Aquila Association" - informing about the activity of the Aquila Association, which on behalf of UOKiK provides assistance to persons who have received a payment order from the court or have been sued by a dishonest supplier of electricity, gas or telecommunication services;
- Communication of 01.10.2018 "Today is Senior Day" - again informing about the activity of the above mentioned Aquila Association;

- Communication of 26.11.2018 "Common Action for Seniors" - informing about a joint action of UOKiK, Police Headquarters, Social Insurance Institution and Agricultural Social Insurance Fund (Kasa Rolniczego Ubezpieczenia Społecznego) aimed at warning seniors against unfair practices, as well as at reminding them about their consumer rights.

Apart from the actions mentioned above, in 2018 the President of UOKiK did not take any actions to protect competition on the retail and wholesale markets. Also, in 2018 the President of UOKiK did not undertake any actions aimed at market deconcentration.

3.3. Security of supply

Security of electricity supply is a comprehensive issue, covering both short- and long-term activities. The process of monitoring this security, carried out by the President of ERO, includes the acquisition and analysis of information as part of activities, which include, among others:

- obtaining and analyzing information on the current operation of the NES,
- acquiring and analyzing information on the state of network infrastructure and investment needs of the TSO and DSOs in the process of agreeing on the development plans of network enterprises.

3.3.1. Monitoring balance of supply and demand

As a result of obtaining measurement data from the NES work on the capacity balance in the system, the analysis of the main figures included in this balance is presented below, while they are recognized as the key parameters to take a position on the supply of electricity to customers at a safe level. The surplus capacity available to the TSO was identified as a decisive parameter in terms of security - as the most important tool available to the TSO, by means of which it led to balancing domestic capacity demand.

Monitoring the level of installed capacity and generating capacity in the NES

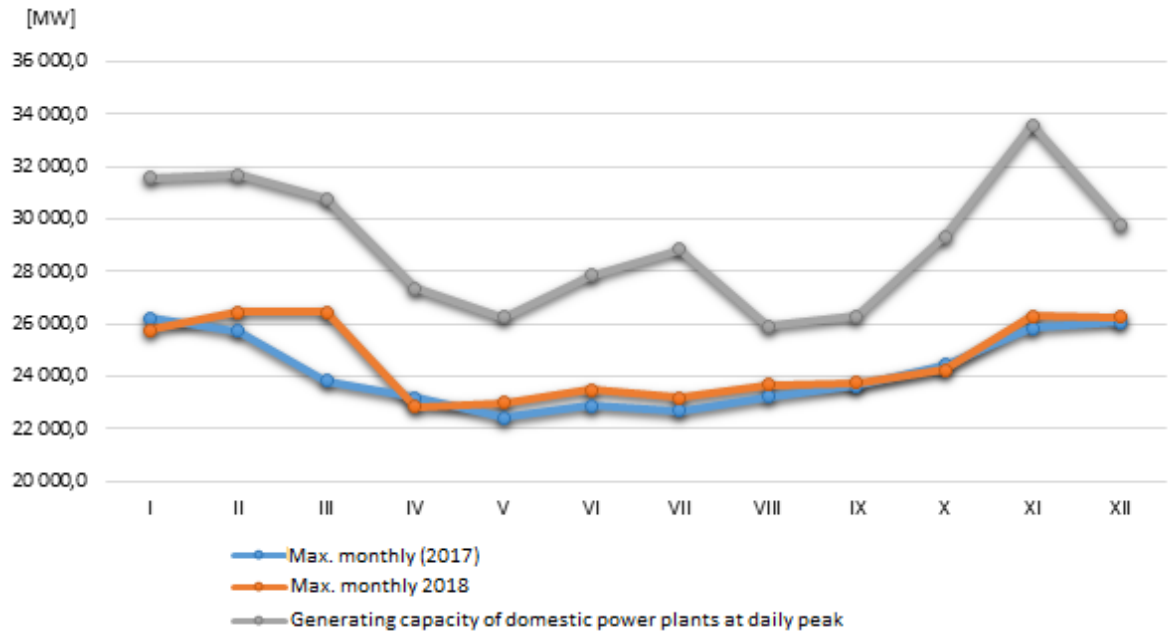
As at the end of 2018, the installed capacity in the NES was 45,939 MW, and generating capacity - 45,650 MW, which is an increase by 5.80% and 5.35% respectively in relation to 2017. The average annual demand for capacity was at the level of 23,322.7 MW with a maximum demand of 26,447.6 MW, which means an increase by 1.49% and an increase by 0.83%, respectively. The ratio of available capacity to generating capacity in 2018 remained at a similar level as in 2017 and amounted to 66.1% (a decrease by 1.2 percentage points as compared to 2017).

The power plants remaining at the disposal of the TSO had a 63% share in installed capacity in the NES.

Monitoring the peak capacity demand in the NES

At the end of 2018, the average annual demand for capacity (in relation to the value from the evening peak) was 23,322.7 MW, which was an increase by approx. 1.49% as compared to 2017, while the maximum demand in daily load peaks amounted to 26,447,6 MW, an increase by approx. 0.83% compared to 2017.
The figure below shows the changes in the peak capacity demand in particular months of 2018 in comparison with the reference values from the previous year. In addition, the capacity available to the TSO, corresponding to the occurrence of the daily peak in a given month was presented.

Fig. 11. Maximum monthly domestic peak capacity demand on business days in 2017-2018



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

As it can be seen from the chart above, practically throughout the entire 2018 the peak capacity demand remained at a higher level than the year before.

Monitoring of electricity supply

In 2018, 165,214 GWh of electricity were produced in Poland, which was a decrease by 638 GWh, i.e. by 0.38% as compared to the previous year. In turn, domestic electricity consumption reached a higher level of 170,932 GWh, which is an increase by 1.66% in comparison to the previous year.

As electricity production in 2018 did not cover domestic consumption, the trend with the growing share of electricity imports continued in this period.

In 2018, the dominant volume, that is as much as 86.70% of the generated electricity came from power plants and commercial heat and power plants. 85.37% of energy came from commercial thermal power stations, and only 1.33% from commercial hydroelectric power plants. The share of industrial heat and power plants in electricity generation remained virtually unchanged (6.07%).

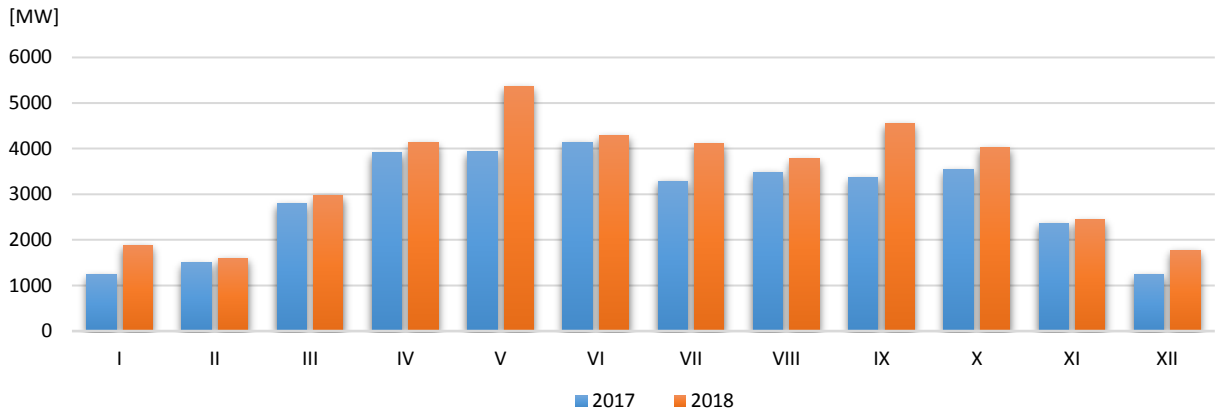
Although the most important group of commercial thermal power plants generated slightly more energy than a year earlier (increase by 1.45%), it is worth noting the limitation of production in the sub-segment of hard coal-based generation - a decrease in energy production by 5.60% partly compensated by an increase in production based on lignite (increase by 3.14%).

However, a significant increase in electricity production in 2018 from gas- fuelled sources (increase by 33.71%) is worth noting.

Monitoring of losses

Capacity losses caused by standstills due to major and medium repairs, throughout practically the entire 2018 were on average levels above the volumes regarding the reference periods of 2017.

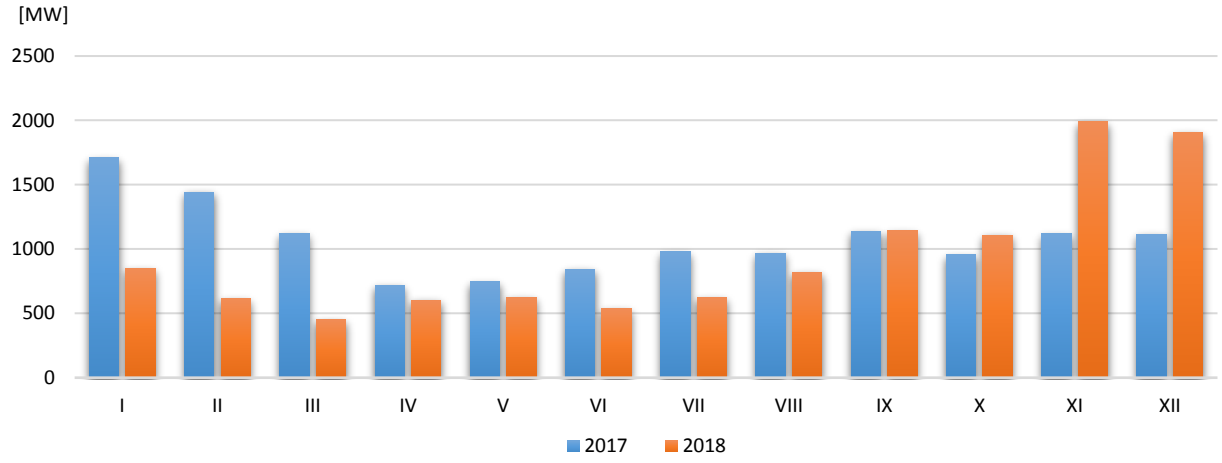
Fig. 12. Losses due to major and medium repairs



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

Power losses due to breakdowns of centrally dispatched generation units (CDGU) in 2018 were at an average level considerably lower than in 2017, with the accumulation of these breakdowns at the end of 2018 (November and December).

Fig. 13. Losses due to breakdowns



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

Below a summary of the amount of energy not supplied to customers in the NES during the whole 2018 is presented.

Table 7. Restrictions on supplies to customers in the NES in 2018 [in MWh]

Specification	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Power supply limitations due to lack of capacity in NES	0	0	0	0	0	0	0	0	0	0	0	0
Power supply limitations due to breakdowns of transmission system	0	2	0	0	0	0	0	0	0	0	0	0
Power supply limitations due to	967	312	54	46	113	3,283	139	263	1,082	765	254	2

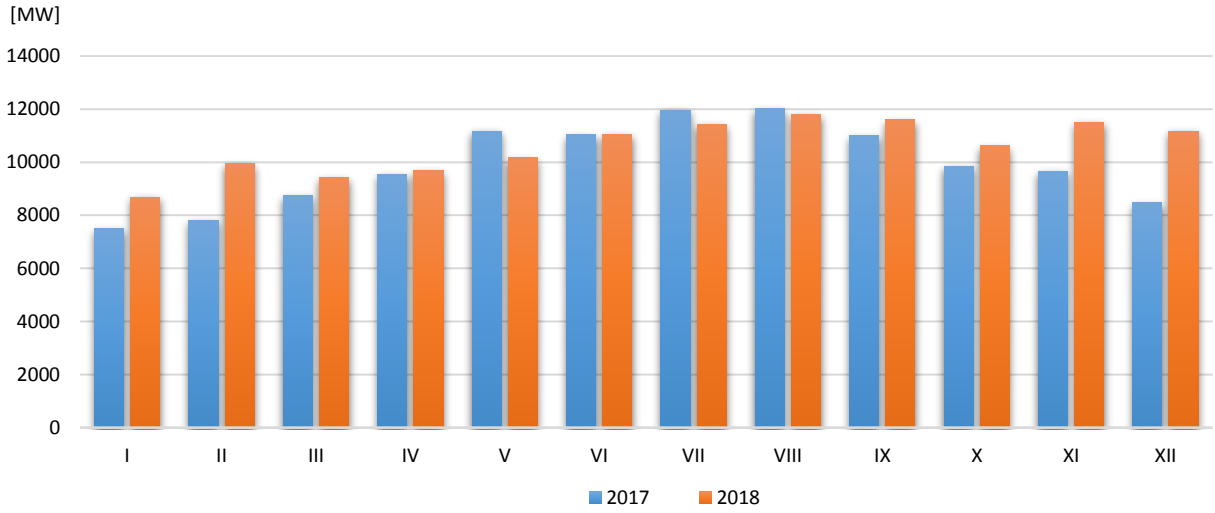
Specification	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
breakdowns of distribution system												
Including due to bad weather conditions	948	161	0	37	0	3,271	96	198	1,070	749	0	0
TOTAL power supply limitations	**967**	**314**	**54**	**46**	**113**	**3,283**	**139**	**263**	**1,082**	**765**	**254**	**2**

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

According to the data, the largest limitations in electricity supply to consumers occurred in June 2018 and in September 2018.

Other power losses resulting from stoppages and undervaluations of CDGU capacity reported by power plants due to operational conditions and caused by network operation conditions were practically throughout the entire 2018 (except for summer months) at a higher level than in the same period a year before.

Fig. 14. Other losses (including operational and caused by network operation conditions)



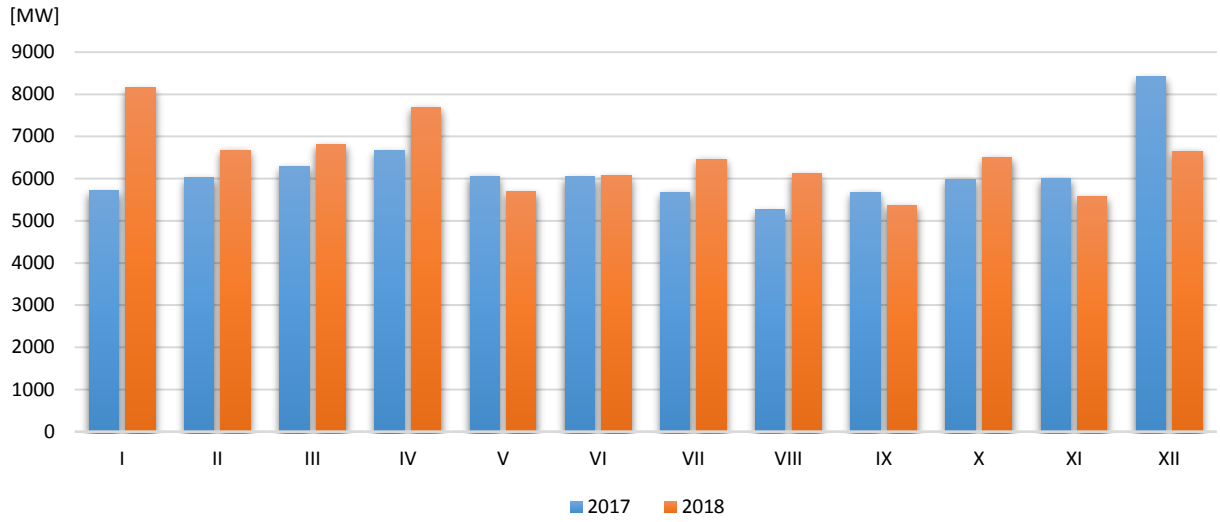
Source: ERO, on the basis of data provided by PSE S.A.

Monitoring the reserves

As a result of comparing the average annual volume of capacity reserves in commercial power plants, in 2018 an increase by around 6% in these reserves was recorded as compared to 2017, from 6,131 MW to 6,498 MW.

Below a graphical representation of average monthly volumes of capacity reserves in commercial power plants based on data from daily peaks in domestic power demand in 2018 as compared to the same figures a year earlier is included.

Fig. 15. Capacity reserves in commercial power plants



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

The table below presents the volumes of reserves in a time of maximum and minimum capacity demand in a given month.

Table 8. Volumes of capacity reserves corresponding to maximum and minimum demand for capacity

2018	Maximum demand for capacity				Minimum demand for capacity			
	Date of occurrence	NES demand for capacity	Available capacity reserve in CDGU	Reserve/ Demand	Date of occurrence	NES demand for capacity	Available capacity reserve in CDGU	Reserve/ Demand
		[MW]	[MW]	[%]		[MW]	[MW]	[%]
January	16-01-2018 16:45	25,764.1	7,015	27.23	01-01-2017 05:00	13,426.1	16,764	124.86
February	28-02-2018 18:30	26,447.6	5,291	20.00	04-02-2018 04:30	15,098.7	13,457	89.13
March	01-03-2018 19:00	26,440.1	4,631	17.51	11-03-2018 06:15	14,457.0	13,316	92.11
April	06-04-2018 20:15	22,837.2	6,243	27.34	01-04-2018 06:30	12,596.7	16,006	127.07
May	30-05-2018 13:00	22,999.0	5,358	23.30	27-05-2018 05:15	12,651.6	13,547	107.08
June	21-06-2018 12:45	23,503.0	4,908	20.88	24-06-2018 04:45	12,210.6	12,682	103.86
July	27-07-2018 13:15	23,205.2	6,875	29.63	15-07-2018 05:30	12,642.7	12,208	96.56
August	02-08-2018 13:15	23,680.3	3,221	13.60	19-08-2018 06:00	12,768.9	11,907	93.25
September	19-09-2018 19:45	23,763.2	4,311	18.14	02-09-2018 06:00	13,012.0	11,817	90.82
October	29-10-2018 17:00	24,240.1	6,500	26.81	14-10-2018 04:45	13,743.9	12,887	93.76
November	29-11-2018 16:45	26,291.9	7,541	28.68	04-11-2018 03:45	13,911.8	11,201	80.52
December	14-12-2018 13:15	26,253.7	5,113	19.47	25-12-2018 03:00	13,281.2	17,434	131.27

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

The above table shows the calculation of the amount of the reserve based on the sum of the thermal CDGU spinning reserve, water CDGU reserve and thermal CDGU cold reserve. As it appears

from the presented data, the lowest ratio of the level of reserves to the NES demand for capacity occurred during the morning peak on 2 August 2018 (13.60%). A case of increased demand for capacity (individual hourly intervals) in the evening peak, for which the 18% reserve buffer could not be maintained in March 2018 is also noteworthy.

The maximum capacity reserves, both for the morning and evening peaks, occurred on 25 December 2018, when the demand for capacity was at a moderate level, typical for a public holiday.

In 2018, the periods for which the capacity reserve (thermal spinning CDGU + water CDGU) were below the reference level of 9% were relatively short, and in the second half of that year - incidental (when including cold reserve in CDGU in the capacity reserve, it was found that such periods did not occur).

It should also be noted that for selected months of 2018 there were time slots, in which capacity reserve decreased below the reference level of 9% for longer than one hour. For example, on 24 September 2018 (in the evening peak, at 19:30) and 23 May 2018 (in the morning peak, at 8:45) in a single quarter of an hour corresponding to the peak capacity demand, capacity reserve levels were the lowest in 2018 (thermal spinning CDGU + water CDGU) in the amount of approx. 5.7% and 6.1% respectively.

Evaluation of capacity surplus available to TSO

When analyzing the level of capacity available to the TSO in the context of the demand for this capacity in the power system, it should be noted that from the point of view of average monthly values for 2018 (presented below, based on the Annual Coordination Plan (ACP)) the capacity surplus available to the TSO was planned at a safe level to ensure the current security of the NES operation, with the exception of the periods January-February and September-November, when it was supposed to be deficient (in accordance with the TNC in force) – coordination planning with the annual horizon assumes that the necessary reserve of available capacity over the planned capacity demand should amount to 18%.

Table 9. Yearly capacity balance for 2018 based on ACP (values in daily peak on business days in MW)

Peak	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Generating capacity of domestic power plants available for TSO	29,555	29,719	29,038	27,685	26,309	26,670	26,958	26,776	27,224	28,167	29,141	29,944
Domestic demand for capacity	25,596	25,390	24,391	22,942	22,128	22,300	22,509	22,518	23,300	23,883	25,100	25,338
Capacity surplus available for TSO	3,959	4,329	4,647	4,743	4,182	4,370	4,449	4,258	3,924	4,285	4,041	4,607
Capacity surplus required by TSO *(18% of demand)*	4,607	4,570	4,390	4,130	3,983	4,014	4,052	4,053	4,194	4,299	4,518	4,561
Difference between capacity surplus available and required by TSO	-648	-241	257	613	199	356	398	205	-271	-14	-478	46

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

Summary

The assessment of the security of electricity supply in 2018 allows to make the following observations:

- On 28 February 2018, the largest demand for electricity in the history of the NES occurred (26,230.60 MW), which exceeded the representative figure from the previous year by over 217 MW (increase by approx. 0.83% y/y),

- domestic electricity consumption increased to 170.93 TWh, that is by over 1.66% more than in 2017. The growth rate of this consumption was lower than the GDP growth rate in Poland in 2018, which according to estimates of the Central Statistical Office was 5.1%,
- the volume of installed capacity remained at a relatively high level reaching almost 46 GW, taking into account the dynamics of this increase by over 5.80% (y/y). This growth was accompanied by a parallel increase in the generating capacity by about 5.35% (y/y), i.e. the value of both capacities grew faster than in the previous year 2017,
- the level of capacity available to the TSO in relation to the demand for this capacity in the power system, from the point of view of average monthly values for 2018, was at a safe level to ensure the NES operation (in accordance with the safety margin required by the TNC). However, attention should be paid to the existence of negative reserves in the capacity surplus available above the required, at the peak capacity demand of NES, which means that in the process of controlling the system operation safety TSO must take appropriate countermeasures, adequate to the greater range of risk possible to occur,
- the TSO ensured an adequate level of reliability and security of the NES operation by delaying some of the renovation works and changes in the schedule of investment works, an important factor increasing the security of electricity supply was the inclusion of new generation capacities in the power system, including:
  - unit No 7 in Jaworzno with a capacity of 910 MWe (September 2018);
  - unit No 6 in Opole with a capacity of 900 MWe (November 2018).
- in 2018, the most dynamic growth in the generation segment was in hard coal-based sources. Contrary to the forecasted upward trend, the generation segment based on gas stabilized at its current level, despite the continuation of favourable trends stimulating the development of these technologies, including the prices of CO2 emission allowances,
- there was a noticeable development in the segment of RES generation in photovoltaic technology, however, with no further development in wind energy technology (due to the lack of factors stimulating this development, resulting from the implementation of the Act on wind farm investments and tax changes related to the taxation of buildings). To ensure security of electricity supply, a capacity market mechanism has been implemented, which will operate from 2021,
- there were no system or network failures resulting in the introduction of electricity consumption restrictions through emergency power supply rationing levels,
- as compared to 2017 (in relation to the occurrence of extreme weather phenomena: the storm of 10-12 August 2017, the "Ksawery" and "Grzegorz" storms), in 2018 there were far fewer weather anomalies, which translated directly into the number of power grid operation failures, through a favourable level of quality indicators for all power system operators,
- the observed upward megatrend in CO2 emission allowance prices, and in particular its increased volatility in 2018 (resulting in a significant increase in the market prices of electricity), together with a parallel striving to ensure the security of electricity supply, may initiate a future-oriented diversification of the electricity generation structure in Poland through the development of new generation capacities - in other than coal-based technologies and its selection based on the criterion of the lowest marginal cost of electricity unit generation,
- in 2018, a draft of the *Polish Energy Policy until 2040* was published. This document deals with the issues of changes in the structure of the energy mix and also points to the development of storage technology, electromobility, network infrastructure, increasing the role of the prosumer and changing the architecture of the energy market in Poland. The above issues, as being of fundamental importance for the security of electricity supply - in the final version of the document - should be based on transparent legislation regulating the functioning of various market segments, in the scope of information available to market participants, which will allow for making the best possible decisions based on data and their analysis, which in turn will allow for an ongoing analysis and optimization of costs of ensuring the security of electricity supply.

3.3.2. Monitoring investments in generation capacities

Monitoring of investments in generation capacity by the President of ERO is based on 15-year investment plans of electricity generators, submitted to the President of ERO every 2 years (in accordance with

Article 16 items 20 and 21 of the Energy Law Act) by energy companies generating electricity from sources with a total installed capacity not lower than 50 MW.

In 2018 the President of ERO audited the investment plans of electricity generators for the years 2018-2032. The forecasts included in particular: the amount of electricity generated, modernization projects, expansion of existing sources or construction of new ones, as well as technical and economic data on the type and size of these sources, their location and the type of fuel used to generate electricity.

On the basis of the collected information, the President of ERO prepared a report entitled "Information on investment plans in new generation capacities in the years 2018-2032", which is available on the ERO's website.

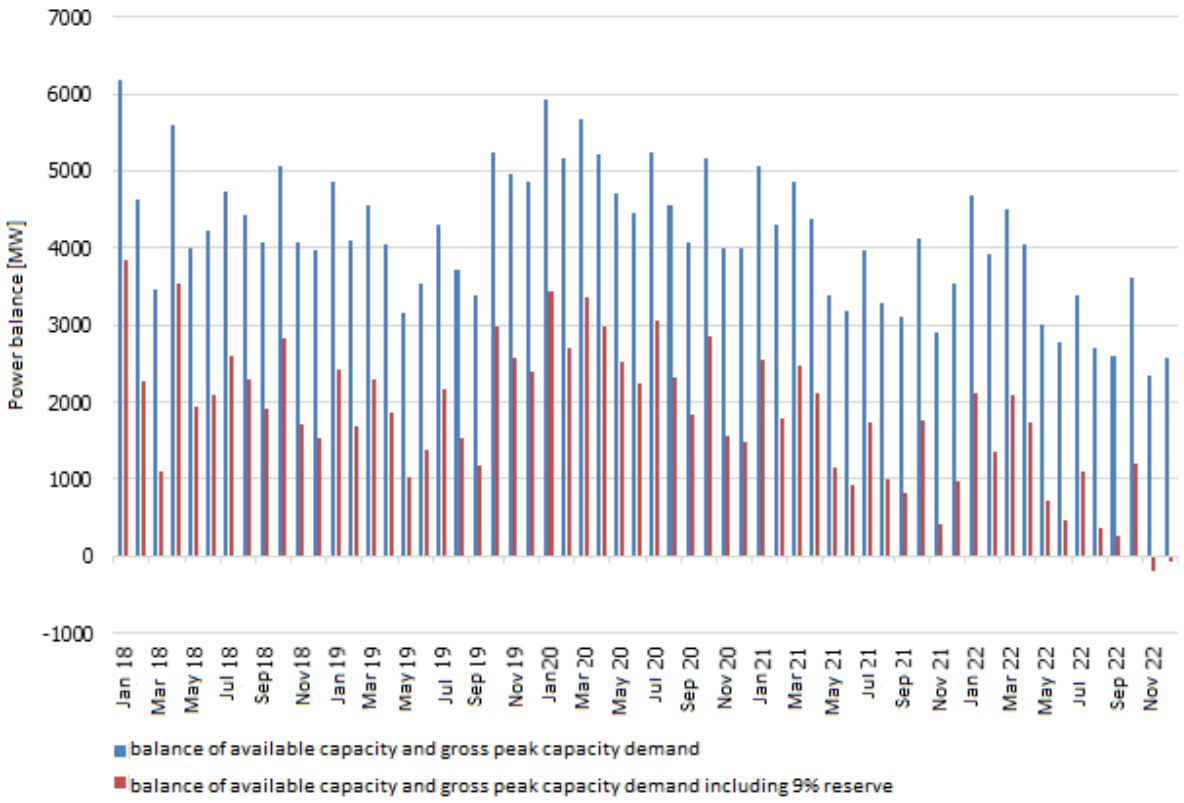
Among the most important conclusions from the last study the following should be mentioned:

- the results of the analysis indicate that the risk of lack of possibility to balance the available capacities in the NES and peak demand for capacity, while ensuring adequate reserves of capacity in the NES, may materialize in the near future. In particular, already in 2019, there may be significant difficulties in ensuring the balance of capacity (energy supply to customers without the need to introduce restrictions) in summer and autumn, while maintaining the required capacity reserves. The assessment of this situation is influenced, inter alia, by the fact that there is a small margin of available capacity in the NES in this period, assuming a capacity reserve only at the level of 9% above the demand, i.e. necessary in operational conditions. It is worth noting that long-term analyses assume a much higher value of the necessary capacity surplus[36],
- the results of the analysis based solely on the generation sources covered by the study do not take into account the possibility of capacity imports, investments in new generation capacities by energy companies not covered by the study, and capacities contracted under the intervention cold reserve (currently 830 MW) and DSR (currently approx. 500 MW in the Guaranteed Programme),
- information on 15-year investment plans (in new generation capacities, modernization and withdrawal of existing generation capacities) presented by the surveyed energy companies may not take into account projected investments in connection with the activation of the capacity mechanism under the Capacity Market Act. As a result, the information provided by the surveyed energy companies may have changed after the activation of the capacity mechanism - this applies in particular to the delivery periods covered by the capacity mechanism,
- analysis of the data obtained indicates that in the years 2018-2032 energy companies plan to commission a total of over 11.9 GW of new generation capacity. At the same time, the number of planned decommissioning in this period is approximately 11.8 GW,
- the largest share (64.8%) of planned capacity withdrawals are hard coal-fired units, followed by lignite-fired units (28.9%). Among the main reasons for the withdrawal of generation units, the generators pointed out that they did not meet the emission standards and technical wear and tear,
- in a study carried out in 2018, the largest increase in new generation capacity is expected between 2019 and 2020,
- the largest share in new generation capacities according to fuel technology are units operating on the basis of hard coal (33.2%), wind (31.9%) and natural gas (29.4%),
- possible delay in the commissioning of generating units in Elektrownia Opole and permanent decommissioning of generating units in Elektrownia Adamów may contribute to the deterioration of the capacity balance,
- the planned total capital expenditures in the years 2018-2032 for new generation capacities at current prices, planned by generators, were set at PLN 62,161,793.5 thousand with the planned installed capacity of 11,906.4 MW. Approximately 43% of the planned total expenditures relate to hard coal units, approximately 30% to wind units and approximately 21% to natural gas units,
- the average electricity price resulting from planned sales and planned revenues from electricity sales (according to survey data) from new generation units planned for implementation in 2018-2032, calculated for all fuel technologies, was at the level of PLN 237.20/MWh.

The following figure shows the balance of available capacity and peak demand for capacity in the years 2018-2022, including a 9% capacity reserve, based on surveys.

[36] According to the TNC in force, at coordination planning with the annual horizon it i assumed that the necessary reserve of available capacity over the planned demand should amount to 18%.

Fig. 16. Balance of available capacity and gross peak capacity demand , including capacity reserve at the level of 9% in the period from January 2018 to December 2022[37]



Source: ERO on the basis of data resulting from the survey and data of PSE S.A.

Due to the observed risk of the lack of possibility to balance available capacity in the NES and peak demand for capacity while ensuring adequate capacity reserves in the NES, the President of ERO requested the Minister of Energy to analyze the situation in detail and take appropriate actions. On this matter, at the beginning of 2019, a meeting was held in the Ministry of Energy with the participation of, among others: the President of ERO, the Minister of Energy, the Government Plenipotentiary for Strategic Energy Infrastructure, and PSE S.A.

As part of the work aimed at ensuring the security of electricity supply to final customers, at the meeting arrangements were made for, among others, resuming work on the amendment of the Ordinance of the Council of Ministers of 23 July 2007 on detailed rules and procedures for introducing restrictions on the sale of solid fuels and on the supply and consumption of electricity or heat[38].

It is also worth noting that information on investment plans is submitted to the President of ERO by about 60 generators, which constitutes just over 5% of licensed energy companies in the area of

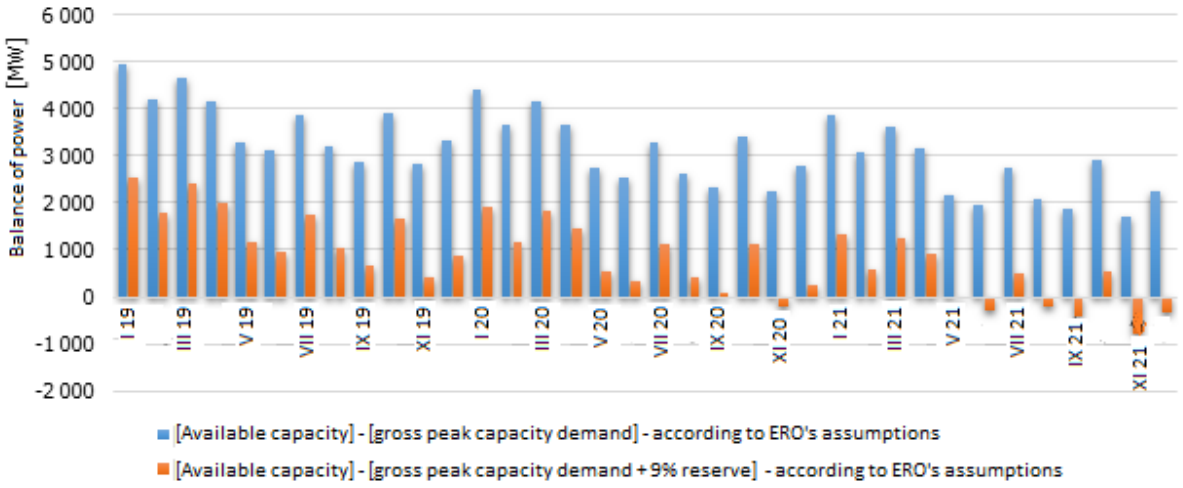
[37] The following methodology was used to investigate the possibility of covering peak demand for capacity in the power system:
- the forecast gross peak capacity demand is presented according to the data of PSE S.A,
- with respect to new investments - only investments of a significant degree of advancement (an investment is at least at the stage of financial engineering of the project) were taken into account, according to the data presented by energy companies owning generation units with an installed capacity of 50 MW or more, and by the 11 largest groups conducting energy activity in Poland,
- the analysis was conducted on the basis of actual (as-built) data concerning the available capacity of all generating units in the NES for the full 12 months in 2018 according to the data of PSE S.A., which was increased in subsequent years by the balance of available capacity resulting from new investments, decommissioning, and capacity increase or decrease as a result of modernization,
- the available capacity of new generation units and the capacity resulting from the modernization of existing generation sources was calculated using the correction factors specified in the Ordinance of the Minister of Energy of 22 August 2018 on the parameters of the main auctions for the delivery periods falling in the years 2021-2023,
- the assumption was made that peak demand for capacity is covered only by domestic sources - capacity imports, intervention cold reserve and the DSR programme was omitted.

[38] JoL of 2007 No. 133, item 924.

electricity generation[39]. Consequently, it should be pointed out that the analysis of data and information from generation companies and the conclusions reached on the basis of the data collected, due to the incomplete scope of the information collected, may lead to significant discrepancies in relation to the actual situation and investment needs of the whole electricity sector. Thus, conclusions based on information presented by 60 generators to the President of ERO may not be sufficient for a proper assessment of the security of electricity supply to consumers in the short and long term.

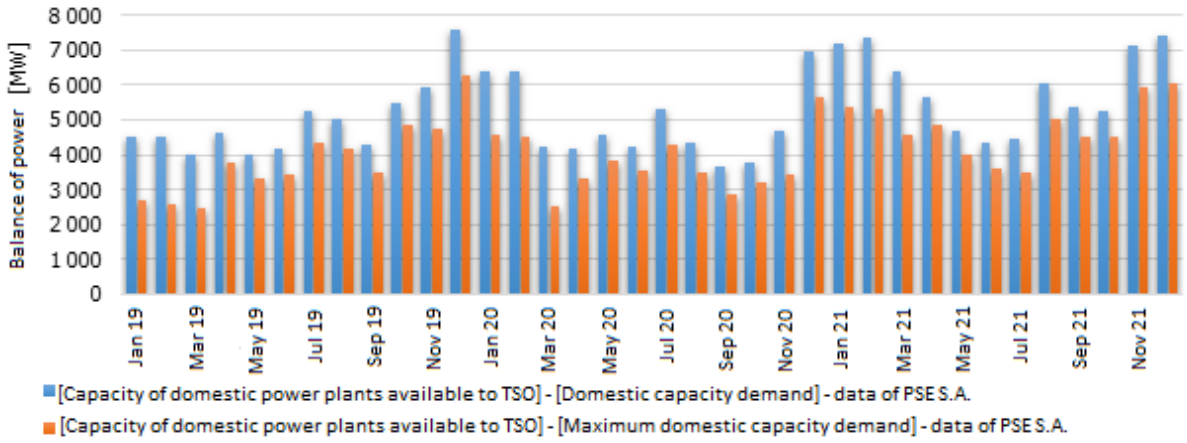
The ERO analysis based on incomplete information pursuant to Article 16 items 20 and 21 of the Energy Law Act, as compared to the analysis of PSE S.A., which is based on complete data, may serve as a justification for this conclusion. This is illustrated by the data presented in the following figures.

Fig. 17. Balance of available capacity and gross peak demand for capacity, including capacity reserve at the level of 9% in the period from January 2019 to December 2021 – ERO's survey



Source: ERO on the basis of data resulting from the survey and data of PSE S.A.

Fig. 18. Balance of available capacity and gross peak demand for capacity in the period from January 2019 to December 2021 – data of PSE S.A.



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

[39] Considering the fact that some energy companies are not obliged to obtain a licence (pursuant to Article 32 item 1 section 1 of the Energy Law Act), the number of electricity generators is much higher than the number of companies in the ERO licence database.

Actions related to the capacity market

The need to prevent electricity shortages in the future was one of the reasons for preparing legislative solutions whose main objective is to create investment incentives for the construction of new and modernization of existing generation units. In order to achieve this goal, a new regulatory solution was developed - the capacity market, which was introduced by the Act on the Capacity Market. The Act introduced a new mechanism of public aid aimed at ensuring security of electricity supply to all final customers in the medium- and long-term perspective. The state aid system in question was approved by the decision of the European Commission of 7 February 2018, published on 18 April 2018.

The introduction of the capacity market means a change in the architecture of the energy market from an energy-only market to a dual-commodity market, where not only the generated electricity but also the net available capacity (i.e. readiness to deliver electricity to the grid) will be subject to buy-sell transactions.

The capacity mechanism is a market mechanism, open to all types of providers of generation capacity (technologies), i.e. to DSR entities, to domestic suppliers of existing and new capacity, and to foreign entities. Thanks to participation in capacity auctions, capacity providers will obtain additional funds for the stable operation of existing sources, modernization projects and the construction of new low-emission sources.

The Act on Capacity Market imposed on the President of ERO a number of obligations related to the implementation of the Act. In this system, however, the President of ERO is not responsible for the implementation of the main capacity market processes, such as general certification and certification for the main auction or capacity auctions. Its key task is to ensure transparency of the electricity market, which is reflected in the statutory requirement to approve the capacity market regulations (which was approved by the President of ERO's decision of 30 March 2018[40]), as well as in the opinion on the parameters for the main auction. The President of ERO is also obliged to announce the final results of each capacity auction.

The first three main auctions under the Capacity Market Act took place in November and December 2018. On 15 November 2018, the main auction for the delivery year 2021 took place, on 5 December - for 2022 and on 21 December - for 2023. Further auctions will take place between 2019 and 2025.

Table 10. Data on main auctions for supply years 2021-2023

Supply year	Number of offers which won the main auction	Summary volume of capacity obligations arising under capacity agreements for a given supply year [MW]
2021	160	22,427.066
2022	120	23,038.875
2023	94	23,215.010

Source: ERO

Investment projects related to cross-border infrastructure

Investment projects related to interconnections are included in the PSE S.A.'s Development Plan in terms of satisfying current and future electricity demand in 2016-2025. The following investment projects were carried out in 2018 to expand interconnections and to increase technical transmission capacity for cross-border exchange:

- Modernization and development of 400/220 kV Krajnik substation
- Modernization and development of 400/220/110 kV Mikułowa substation
- Construction of 400 kV Baczyna – Krajnik line
- Construction of 400 kV Baczyna – Plewiska line
- Development of 400/110 kV Baczyna substation
- Construction of 400 kV Mikułowa – Świebodzice line

[40] https://bip.ure.gov.pl/download/3/9841/DecyzjaRRM3003.pdf

- Development of 400/220/110 kV Świebodzice substation
- Construction of 400 kV Mikułowa – Czarna line
- Construction of 400 kV Czarna – Pasikurowice line
- 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 Kozienice – Siedlce Ujrzanów line
- Modernization and development of 400/220/110 kV Kozienice substation
- Construction of 400 kV Ostrołęka – Olsztyn Mątki line
- Development of 400/220/110 kV Olsztyn Mątki substation

A list of investment projects aimed at construction and extension of the cross-border connections 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 2018, such measures were not undertaken by the President of 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.

At the same time, in December 2017, the Capacity Market Act was passed. It introduced the so-called capacity obligation which consisted in a capacity market unit remaining in readiness to supply power capacity to the system and a commitment to supply a specified capacity to the system during the emergency. The tasks of the President of ERO with respect to the capacity market include approval of the capacity market regulations or resolving disputes regarding capacity auctions.

4. THE NATURAL GAS MARKET

4.1. Network regulation

4.1.1. Unbundling

TSO

There is one gas transmission system operator on the territory of Poland – OGP Gaz-System S.A., a company wholly owned by the State Treasury. TSO's activity in 2018 comprised:
- managing the national transmission system owned by OGP Gaz-System S.A. under a decision designating the company as the gas transmission system operator for the period until 6 December 2068, issued by the President of ERO and under the licence for gas transmission valid until 6 December 2068 (in 2018 both the decision on TSO designation and the licence decision were extended),

- managing the Polish section of the Yamal-Western Europe pipeline under the decision of the President of 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 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 Energy Law Act the rights of State Treasury as the only shareholder are currently exercised by the Government Plenipotentiary for Strategic Energy Infrastructure.

The decisions on granting OGP Gaz-System S.A. a certificate of independence in both networks, along with opinions of the European Commission were issued in 2014-2015 and published in the Bulletin of the ERO. The procedure of TSO certification was regulated in Articles $9h^1$ and $9h^2$ of the Energy Law Act. Detailed information on the certification procedure were included in the previous Reports.

Unbundling rules determined in the Energy Law Act

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

Distribution System Operators

As of 31 December 2018, business activity in the scope of gas distribution was performed by 55 distribution system operators appointed by the decisions of the President of ERO, including one legally unbundeld operator.

This one DSO subject to the unbundling obligation is PSG Sp. z o.o., which belongs to PGNiG Group. The company is carrying out business consisting in gas distribution through distribution networks of low, medium and high pressure for the needs of customers located in the territory of the Republic of Poland. In addition, 54 energy undertakings performed DSO functions locally and were not subject to the unbundling obligation.

Storage System Operator

In 2018 the function of storage system operator was carried out by Gas Storage Poland Sp. z o.o., appointed SSO until 31 May 2022 under the decision of the President of ERO. The company performs its function on the assets owned by PGNiG S.A. As at 31 December 2018 the company carried out its tasks as regards the following storage installations: CUGS Mogilno, UGS Husów, UGS Wierzchowice, USG Strachocina, UGS Swarzów, UGS Brzeźnica and CUGS Kosakowo.

In December 2018 the SSO applied for a modification of the licence decision by extending its scope to include new additional storage capacity in the Kosakowo facility. The decision to change the UGS licence, and thus enable SSO to perform its functions in new additional storage capacity of the UGS Kosakowo, was issued in February 2019.

LNG System Operators

As at 31 December 2018, the President of ERO issued 8 decisions designating operators of LNG system. These operators are: PSG Sp. z o.o., DUON Dystrybucja Sp. z o.o., LNG-Silesia Sp. z o.o., PGNiG S.A., Barter S.A., Polskie LNG S.A, Blue Cold Sp. z o.o. and Mr Stanisław Andrysiewicz, conducting business activity under the business name of Zakład Budowlany – Stanisław Andrysiewicz.

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 the DSO, the Compliance Officer reports directly to the management board and does not combine 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 2018 with a position in a department dealing with 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 internal 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 sharing information on the Company's activity with 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.

In 2018, no cases of violation of the principle of equal and non-discriminatory treatment of users were identified in DSOs and SSOs. There were also no complaints regarding the application of the Compliance Programmes or the notification of suspected conflicts of interest.

In 2018 Compliance Officers of PSG Sp. z o.o. and Gas Storage Poland Sp. z o.o. actively participated in the works on updating the Guidelines referred to in item 3.1.1.

In 2019 the President of ERO expects the operators to adapt the Compliance Programs to the updated Guidelines.

4.1.2. Technical functioning

Rules of balancing the transmission system

In accordance with the regulations in force in Poland, operational balancing in the national gas system (entry-exit system) is conducted by the TSO. The entry-exit system includes networks between the entry point to the transmission system and the exit point from the distribution system. Physical balancing is performed through the purchase and sale of gas by the TSO for the purpose of ensuring the network's operation within its operational limits. Commercial balancing is based on the principle of daily settlement of network users. The balancing rules of the system comply with the BAL NC regulation, taking into account interim measures, described below.

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

The TSO conducts the system balancing mainly by selling/purchasing standard short-term products on the gas exchange. The purpose of operational balancing is to maintain the network in its operational limits, and effective and economically justified network exploitation. This contributes to the increase of liquidity of short-term gas market in Poland.

The regulations concerning the gas system balancing in 2018 cover mainly the issues of applying interim measures, neutrality of balancing activities and trading in the neighbouring balancing zone. Currently, the interim measures are not applied and the provisions of the BAL NC Regulation have been fully implemented.

The interim measures were applied under the provisions of the BAL NC Regulation. Their main task was to facilitate the creation of a liquid, competitive natural gas market. Interim measures applied in the NTSHM balancing area included balancing platform and the imbalance tolerance, which amounted to 5% until 1 April 2018, and was reduced to 2.5% after that date. Within the TGPS balancing zone and the NTSN balancing zone, interim measures were maintained in the form of a balancing platform and an interim imbalance charge. The interim imbalance charge is calculated based on the marginal price mechanism, differently for the TGPS balancing zone and the NTSN balancing zone.

The decision of the President of ERO of 29 September 2019 to approve the report on the interim measures expired on 1 October 2018. Consequently, pursuant to Articles 45 to 50 of the BAL NC Regulation, upon the request of OGP Gaz-System S.A., on 24 September 2018 the President of ERO issued a decision on interim measures. Interim measures were maintained in each of the three balancing areas, but only until 1 April 2019. In accordance with the provisions of the BAL Regulation, the report on interim measures must provide for their termination no later than five years after the entry into force of the Regulation. This means that interim measures may be applied until 16 April 2019 at the latest.

An important event which in the long term may contribute to the development of competition on the nitrogen gas market is the possibility of trading in nitrogen natural gas on the trading platform operated by POLPX. The introduction of the possibility to trade in nitrogen gas was associated primarily with the termination of interim measures application. Pursuant to the provisions of the BAL NC Regulation, the transmission system operator should be able to trade in gas for the purpose of balancing each balancing zone. POLPX commenced trading in December 2018. It should be highlighted that this is the first step towards building a liquid market in which companies will be able to purchase gas freely.

In order to balance a specific balancing zone, the TSO has the right to undertake balancing activities in adjacent zones. However, in 2018 the TSO did not take any actions in the adjacent balancing zone. With the decision of 27 August 2087, the President of ERO agreed for the TSO to carry out balancing services on the EEX trading platform in the GASPOOL balancing zone (Germany) and to transmit gas to and from this balancing zone in order to conduct balancing activities in the TGPS balancing zone and in the NTSHM balancing area. The possibility to buy or sell standard short-term products by the TSO on the EEX is an additional possibility (alternative to transactions concluded on the trading platform operated by POLPX) to undertake effective balancing activities by the TSO. In addition, pursuant to the decision of 27 August 2018 the TSO may undertake balancing activities in the NTSHM balancing zone in order to balance the TGPS balancing area. The decision also authorizes the transport of natural gas from the GASPOOL balancing zone to the TGPS and NTS balancing zones, and from the NTS balancing zone to the TGPS balancing zone for the purposes related to balancing activities. In addition, in the gas year 2018/2019, the operator may trade in gas on the territory of the Czech Republic in order to balance the National Transmission System for high-methane gas.

Balancing activities in the adjacent balancing zones may be undertaken by the operator if it is not possible to use the trading platform on which the TSO is obliged to conduct balancing activities for a given balancing zone, or if it is necessary to undertake balancing activities related to a given location on the border with the GASPOOL balancing zone, the balancing zone in the Czech Republic or in the Interconnection Point between the TGPS and the NTSHM balancing zone. It is worth explaining that the regulator's consent applies only to the above mentioned cases. However, the President of ERO refused to grant a general consent to trade in the adjacent balancing zone without indicating specific situations. Pursuant to Article 9(3) of the BAL NC Regulation, trading in the adjacent balancing zone is an alternative to trading in the own balancing zone, and therefore the TSO should primarily undertake balancing activities within the defined zone. Only if it is likely that it is not possible to balance the zone, balancing measures should be taken in the adjacent balancing zone. The decision of the President of ERO of 27 August 2018 became effective on 1 October 2018 and will apply until 1 October 2019.

On 15 December 2018 the President of ERO issued a decision approving the new "Mechanism for ensuring cost neutrality of balancing activities conducted by the Transmission System Operator Gaz-System S.A. in connection with the entry into force of Commission Regulation (EU) No. 312/2014 of 26 March 2014 establishing a network code for balancing gas in transmission networks". The proceedings had been pending since August 2018. Due to the need to consult the new mechanism with market players, the validity of the decision of the President of ERO of 1 October 2015 regulating the previous mechanism for ensuring cost neutrality of balancing activities was extended. Consultations were conducted from 29 September to 9 October 2018. The new mechanism for ensuring the neutrality of balancing activities introduces, first of all, new rules for determining the amount of necessary financial security that users are obliged to submit to the TSO. Under the new rules, network users must maintain financial securities that either doubles the value of allocated capacity or corresponds to 125% of the sum of shipper's unpaid obligations arising from invoice issued by TSO and from the amount of daily imbalance charge, whichever is greater. New collateral verification rules have also been introduced. The TSO shall verify the amount of securities for the previous gas day and if it is found that the collateral is too low, the TSO is obliged to take appropriate actions. It should be noted that if the financial security is more than 50% but lower than 125% of the TSO's requested amount, the TSO shall call upon the

user to supplement the collateral within 48 hours. However, if the amount of securities is lower than 50% of the amount required by TSO, the suspension of transmission service shall take place requesting replenishment of the financial security. In both cases, the transmission service will be resumed if the shipper supplements the financial security to an appropriate level within 72 hours from the suspension at the latest.

The introduction of new balancing settlement rules is primarily related to the efforts to ensure that users are motivated to balance the amount of gas fed into and withdrawn from the network during the gas day. The new mechanism ensures correlation between the level of imbalance and the amount of collateral required. In other words, the smaller the daily imbalance of a given shipper, the smaller the amount of collateral required. The introduction of such a mechanism is intended to ensure the secure functioning of the network and should contribute to increasing market liquidity, as users will increase the number of natural gas trading transactions they conclude.

It is worth mentioning that the neutrality mechanism has been correlated with the last resort supplier, introduced into the Polish legal system, which supplies gas to customers in a situation where the existing supplier has to stop selling gas to its customers, inter alia, because of the failure to establish financial security in the required amount. The decision approving the mechanism for ensuring the neutrality of balancing activities of the TSO has been applied since 1 January 2019.

In addition, in performing its duties related to the publication of relevant data under the provisions of the BAL NC Regulation, the transmission system operator publishes on its website information on the costs and number of balancing activities.

In 2018, balancing services were used at one entry point to the transmission system. The rules for the use of these services are included in Article 8 of the BAL NC Regulation and in a contract for the provision of these services, which is concluded by the transmission system operator after conducting a non-discriminatory bidding procedure. The small share of balancing services in the total volume of transmitted natural gas makes their impact on the market functioning and its competitiveness less than negligible.

In March 2018, together with consultations on the draft amendments to the TNC, the TSO conducted consultations on the methods and assumptions underlying the introduction of the within-day obligation at interconnection points at the Polish border with countries that are not members of the European Union, in particular at Tietierovka. Within-day obligations are regulated in Articles 24-28 of the BAL NC Regulation. The essence of the within-day obligation is to impose on network users the requirement of a specific market conduct during a gas day in order to ensure the integrity of the transmission network and to minimize the need for the TSO to undertake balancing actions. In the course of the proceedings, the President of ERO established that the within-day obligation as proposed by the operator does not meet the conditions specified in Article 26(2) of the BAL NC Regulation. In addition, in the opinion of the President of ERO, the within-day obligation would meet the objectives set out in Article 24(1) of the BAL NC Regulation only partially and for a limited period of time. In the case of the Tietierovka interconnection point, it is necessary to build a physical connection connecting the zone fed by the Tietierovka-Grabówka gas pipeline with the rest of the transmission system, which will also contribute to the development of the market and increase its competitiveness. The construction of the physical interconnection will enable more network users to offer natural gas to customers residing in Podlasie.

In 2016 PSG Sp. z o.o. was appointed as a forecasting party by the decision of the President of ERO. PSG Sp. z o.o. fulfils the obligations referred to in Article 39(1) of the BAL NC Regulation, i.e. provides the TSO operating in the high methane € and low-methane (Lw) gas balancing zone with the data necessary to information provision to network users pursuant to this Regulation. That information shall include the quantities delivered to and off-taken from the distribution system. Information is provided in the process of operational and settlement allocation described in the TNC and DNC of the PSG Sp. z o.o., and in the performance of the duties of forecasting party by the PSG Sp. z o.o. The information is presented to the TSO within a time period enabling the TSO to provide such information to the network users. The said deadlines have been specified in TNC and DNC of PSG Sp. z o.o.

Pursuant to Article 40 of the BAL NC Regulation, PSG Sp. z o.o. acquires and transfers to the TSO the operational and settlement allocations for the TSO needs in order to determine the imbalance of the system users. PSG Sp. z o.o. provides the TSO on a daily basis with data concerning the quantity of

gaseous fuel in kWh for the E and Lw gas systems at exit points and entry points from/to the transmission system being entry and exit points to/from the distribution system.

In performance of its obligations under the BAL NC Regulation, PSG Sp. z o.o. executes and sends to the TSO settlement allocations for the previous month within 7 business days after the end of the month to which the allocations refer.

The scope of provided data in the operational and settlement mode includes: quantities fed into the distribution system at the exit points from the transmission network, quantities fed into the sources connected to the distribution system, quantities off-taken by the DSO for its own consumption, system user's daily metered off-take, and quantities of non-daily metered off-take determined according to allocation profiles.

In connection with the obligation under Article 42(3) of the BAL NC Regulation to forecast the network user's non-daily metered off-takes, the company, as the forecasting party , developed a method for estimating the daily quantities of natural gas off-taken by individual distribution system users. In August 2016, a document entitled "Forecasting method for network user's non-daily metered off-take" was developed, describing the methodology of forecasted gas quantities. This document was published on the website of PSG Sp. z o.o. The implementation of the gas forecasting method was preceded by consultations with the TSO and consultations with system users.

Pursuant to Article 42(3) of the BAL NC Regulation, PSG Sp. z o.o. prepared a document entitled "Report of the Forecasting Party on the accuracy of forecast of a network user's non-daily measured off-take" for the period from September 2016 to August 2018. The report includes a summary of the process of appointing PSG Sp. z o.o. as the forecasting party, description of forecasting methodology, evaluation of forecast results and plans for the future. The document was published on the website of PSG Sp. z o.o. in September 2018. The company indicated in the document that the results of settlement allocation in the period covered by the report showed significant discrepancies in relation to the forecast of system user's non-daily measured off-takes. While in winter months the differences are not significant, then for example in June, July and August 2018 the scale of erroneous forecast was about 70-80%[41)]. In the opinion of the President of ERO, such a scale of forecasting errors requires an introduction of a number of changes, including changes to the TNC, which will prevent the occurrence of such significant discrepancies in the future. The improvement of the current situation may also require amending the applicable legal regulations. The introduction of the aforementioned changes will undoubtedly contribute to increasing the predictability of the situation on the market, and thus will have a positive impact on the development of competition, as the number of entities using the services of the distribution system operator will increase.

Distribution systems connected to the transmission network are an element of balancing areas managed by the TSO. Pursuant to the provisions of the regulation in force, the TSO is responsible for physical balancing of distribution systems. Thus, the unbalancing of market participants should be levelled by the TSO through the purchase or sale of short-term products (STSP). Pursuant to the BAL NC regulation, the TSO imposes a fee on individual network users resulting from their imbalance quantity. DSOs are involved in determining the level of imbalance of individual system users by allocating to them daily volumes fed to the distribution system.

PSG Sp. z o.o., performing the function of the largest DSO in Poland, has been appointed, by the President of ERO, entity responsible for preparation of forecasts of system user's (mainly households) non-daily measured off-takes within the area of its operational activity. Information on the forecasted amount of gas collected in a given day is provided to the network users via the TSO.

Security, reliability and quality standards

With respect to security and reliability of gas supplies, the President of ERO reviews the way the gas operators' implement their statutory obligations and assesses their activities in terms of ensuring the

[41] *Report of the Entity Responsible for Forecasting on the accuracy of forecasts of volumes measured less frequently than daily by network users*, September 2018, p. 103, https://www.psgaz.pl/documents/21201/-404516/Sprawozdanie+Podmiotu+Odpowiedzialnego+za+Prognozowanie/ce1e41a2-3606-40e1-b9ac-f297a7d84e13.

correct operation of the system, in accordance with the criteria set out in the network code. The assessment is also carried out as part of agreeing on development plans and analysis of reports on the implementation of these plans, including monitoring the implementation of investments 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. Criteria relevant to the security of supply taken into account in the analysis of investment tasks relate to:

1) adaptation of gas systems to new working conditions resulting from connecting new sources of gas acquisition and new customers,
2) the possibilities of diversifying the directions and routes of gas supplies to Poland,
3) reconstruction or modernization of existing gas infrastructure facilities,
4) adaptation of systems to current standards, legal and technical regulations,
5) liquidation of the so-called bottlenecks in networks.

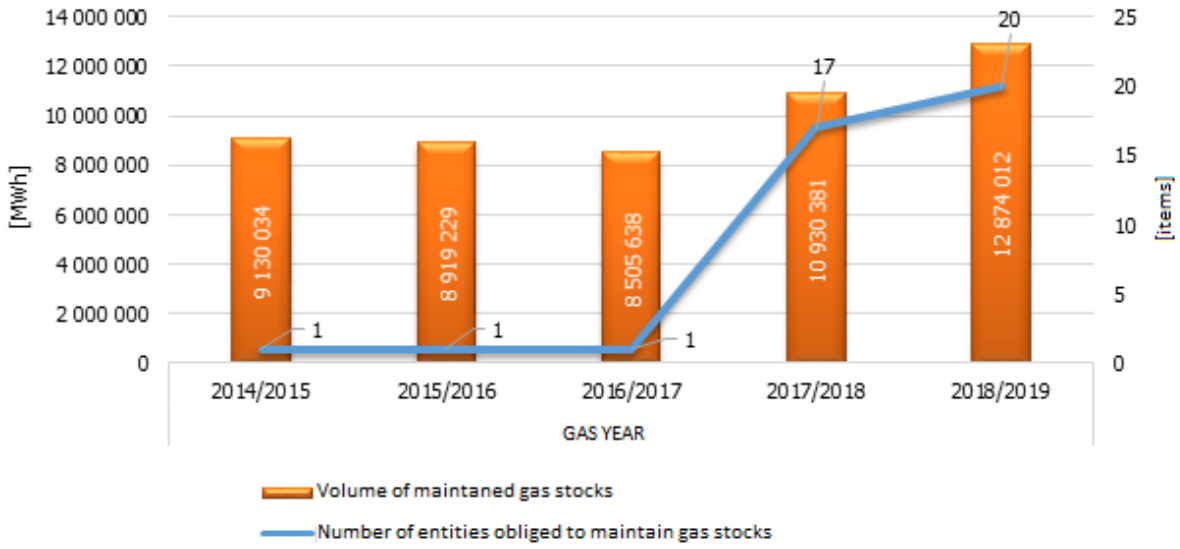
In 2018, the monitoring of the implementation of investments resulting from the development plans of gas companies revealed further progress in works aimed at diversification of natural gas supply sources and directions, i.e. activities contributing to the liberalization of the market and directly affecting the security of natural gas supply to Poland. This is all the more important as the improvement of the diversification of gas supply has an impact on the way it is perceived in terms of availability and reliability of supplies, which is a factor affecting the development of the power industry, clean transport and improvement of the natural environment.

In this context, the implementation of the Baltic Pipe Project, i.e. a gas interconnection to enable gas supplies from the Norwegian continental shelf through the Danish transmission system and submarine interconnection from Denmark to Poland (Baltic Pipe), and in the longer term also to other countries of Central and Eastern Europe and the Baltic Sea region, is particularly important here. In this respect, progress in the project implementation has been noted.

In 2018 the President of ERO also monitored the implementation of other interconnections of key importance for the development of an integrated and competitive natural gas market in Central Europe and the Baltic Sea Region, aimed at ensuring security and improving the diversification of natural gas supplies to Poland. As regards investments in the transmission network to ensure security of gas supply, the monitoring also included modernization and replacement investments resulting from technical or operational needs.

In addition, the assessment of standards of security of gas supply includes the control of compliance with the obligation to maintain mandatory reserves of natural gas and reporting by operators of the introduced supply restrictions. Between 2017 and 2018, there were significant changes in the obligations to maintain mandatory stocks of natural gas. As a result of amendments to the Act on Stocks, the number of entities actually maintaining mandatory stocks of natural gas increased, which in turn translated into an increase in the volume of maintained stocks. In the context of Poland's energy security, this trend should be regarded as positive.

Fig. 19. Maintenance of mandatory stocks of natural gas in the years 2014-2019



Source: ERO's own analysis.

From the perspective of recent years, the construction of the LNG Terminal in Świnoujście should also be positively assessed from the point of view of security of supply, thanks to which it is possible to supply gas from global gas markets. This investment has contributed to a fundamental change in the gas sector of the country. Thanks to this investment currently 1/3 of domestic gas consumption can be satisfied by LNG supplies.

Controlling the quality standards of customer service and quality parameters of gaseous fuels is intended to protect consumers from lowering both the quality of fuels supplied (including their heat of combustion), standards of services (interruptions in supply) and customer service standards.

Requirements regarding the quality parameters of the gas fuels supplied and the quality standards of customer service, including the manner in which the complaints were processed, were specified in the Ordinance of the Minister of Economy of 2 July 2010 on detailed conditions for the functioning of the gas system[42]. Pursuant to this ordinance, gaseous fuels supplied by gas companies should meet the appropriate quality parameters, while TSO and DSOs were obliged to conduct tests of individual quality parameters. Controlling the gas quality can also be performed at the request of the customer. The customer covers the costs of testing the quality of gaseous fuel only if it has been found that DSO or TSO fail to meet the quality parameters of gaseous fuel. At the request of the customer and for its exclusive needs, the DSO may perform an analysis of the fuel composition, including determination of the calorific value for a given offtake location. Information about the availability of this test and the amount of the fee is available on the DSO's website.

In addition, in the event of objections regarding the volume of gas to be supplied, the customer may request testing whether the measurement system operates properly in an independent testing laboratory accredited by the certification body, obtained under the terms and in accordance with the Act of 30 August 2002 on the conformity assessment system[43] and again – report the need for additional expertise of the measurement system tested before. In the case of irregularities identified through laboratory tests, the energy company covers the costs of testing, and at its own cost, adjusts the fees for supplied gas under the terms and in the dates specified in the tariff. Similarly, in the event when no irregularities were identified in the operation of the measurement system through laboratory tests, but then additional external expertise performer at the order of a customer showed irregularities in the readings of the measurement system, costs shall be charged to the energy company.

It is clear from the current practice that the reservations come mainly from household consumers, whereas the President of ERO's intervention consists primarily in calling DSOs to submit gas quality

[42] JoL of 2018, item 1158, as amended
[43] JoL of 2019 item 155, as amended

reports (including average monthly heat of combustion) in the part of the gas network to which the installation of the customer voicing reservations was connected. In some cases, the results of analyzes carried out by research institutes and science and research units were also used, as the regulator does not have either a laboratory or adequate apparatus to carry out independent tests for the quality of gaseous fuels.

Regulatory activities of the President of ERO with regard to control of the quality standards of customer service and gas quality parameters are also reflected in the process of approving tariffs for gaseous fuels. The President of ERO accepts the prices and fee rates in the tariffs only if they are calculated taking into account the quality parameters specified in the above-mentioned ordinance on detailed conditions of gas system operation. In the event when the operator fails to meet the quality parameters of gaseous fuels specified in the above ordinance, the customer is entitled to discounts. Methodology for establishment of these discounts is specified in the tariff. The provisions of the tariff also set discounts for failure to meet the quality standards of customer service. The manner of determining the discounts is specified by the provisions of the Ordinance of 15 March 2018 on detailed rules for shaping and calculation of tariffs and settlements in the trade of gaseous fuels[44], and their amount is specified in tariffs approved by the President of ERO.

Customers complaining to the regulator about the activities of gas companies often do not know their rights. In such cases, they are provided with explanations and information about rights and obligations in accordance with the legal provisions currently in force. Extensive information for customers is also posted on the website of the Energy Regulatory Office (www.ure.gov.pl), in particular in the Set of Rights of Electricity Consumer and the Set of Rights of Gas Consumer[45].

In the case of the TSO, the control of security and reliability of gas supply, and quality standards is also carried out by analyzing information submitted by TSO quarterly about discounts for failing to meet the gas quality parameters and related to restrictions on supply for reasons attributable to the TSO.

Monitoring time to connect and repair

Information on interruptions and limitations of gas supplies in the transmission network in 2018 are presented in the Table below.

Table 11. Information on interruptions and limitations of gas supplies in the transmission network in 2018

	number	Interruptions and limitations			
		Duration [minutes]	Number of affected customers	Average time [minutes per customer]	Volume of unsupplied fuel [mcm/MWh]
Breakdowns	35	2,164.2	3	721.4	0.082/913.7
Ongoing scheduled works	72	1,124,618.0	11	102,238.0	141.1/1,587,371
Limitations	–	–	–	–	–

Source: ERO

In 2018 OGP Gaz-System S.A. recorded 35 breakdowns out of which 3 caused downtimes in gas supply. The downtimes lasted in total 2,164.2 minutes. The number of breakdowns decreased by 4 in comparison to 2017 (39), while total downtime in gas supply during breakdown doubled from 1,055 minutes in 2017 to 2,164.2 minutes in 2018, which after recalculation gives and average downtime in gas supply of 721.4 minutes. The total volume of fuel not supplied due to breakdowns in 2018 amounted to 0.082 million cubic meters (913.7 MWh).

In addition, in 2018, 72 scheduled works were carried out on the transmission network, of which 3 caused interruptions in the transmission of gas. They lasted a total of 1,124,618 min. In 2017, more

[44] JoL of 2018 item 640.
[45] http://www.ure.gov.pl/pl/urzad/informacje-ogolne/aktualnosci/5768,Konsumencie-paliw-i-energii-Poznaj-swoje-prawa-przed-wakacjami.html?search=54599

planned works were carried out (103 planned works), and their total duration was also longer (1,594,955 min).

Table 12. Interruptions in gaseous fuels supply to customers connected to the gas networks in 2013-2018

Year	Downtimes caused by					
	breakdowns			breakdowns		
	duration	Number of affected customers	Average time	duration	Number of affected customers	Average time
	[minutes]	[number]	[minutes per customer]	[minutes]	[number]	[minutes per customer]
2013	63,372,633.60	91,931	1,113.56	159,639,406.18	166,928	956.34
2014	19,894,108.80	105,730	599.38	65,364,360.60	156,603	417.39
2015	25,227,170.40	97,022	205.05	53,612,689.20	126,884	422.23
2016	22,442,721.00	62,809	357.32	38,921,618.40	102,398	380.10
2017	28,798,586.82	67,053	429.49	41,932,233.00	89,986	465.99
2018	110,390,901.60	73,951	1,492.76	67,283,942.00	114,435	587.97

Source: ERO.

The data presented in the table above show that 2018 saw an increase in both the average duration of breakdowns due to accidents and planned works. As a result of breakdowns in 2018, the number of customers to whom gas supplies were suspended amounted to 73,951, and the average time of interruptions due to such breakdowns per customer was 24.88 h (1,492.76 min). In the case of the planned work in progress, the number of customers to whom gas supplies were suspended was higher than in 2017 and amounted to 114,435, and the duration of interruptions per customer increased by approx. 2 hours.

Operators indicated that all breakdowns were immediately dealt with by gas emergency services, eliminated by network teams, and gas networks restored to their proper technical condition. In order to ensure security and continuity of gas supplies, the operators primarily conducted inspections of the gas infrastructure in operation in accordance with their instructions. The most frequently mentioned causes of breakdowns were mechanical damage caused by third party interference (caused mainly by earthworks) and self-generated breakdowns (corrosion, weld cracks, unsealed connections, leaks in fittings, unstable soil).

In 2018, the President of ERO also monitored the number of connections made to the network and the time needed for enterprises to implement them. Information on the number of connections made by OGP Gaz-System SA and the distribution system operator subject to unbundling obligation is presented in the table below.

Table 13. Information on the connections to the gas network completed in 2018

	Number of completed network connections	Number of completed full-charge connections	Number of connections completed after initial refusal
OGP Gaz-System S.A.	10	10	0
Distribution System Operators subject to the legal unbundling obligation	96,820	2	15

Source: ERO.

In the case of the TSO, the number of grid connections completed in 2018 was 10 (in 2017 - 13), all connections were made on full payment terms (group C customers[46]). As in 2017, OGP Gaz-System SA did not carry out connections preceded by a refusal to issue the terms of connection to the network. In

[46] Pursuant to Article 3 item 3 of the Ordinance of the Minister of Economy of 2 July 2010 (Journal of Laws of 2018, item 1158, as amended) - entities involved in the transmission or distribution of gaseous fuels, their production, processing or extraction, storage of gaseous fuels and liquefaction or regasification of liquefied natural gas.

turn, the DSO subject to unbundling obligation in 2018 realized 96,820 gas connections to the network (54,922 in 2017), which is an over 176% increase as compared to 2017.

- In addition, the following information for 2018 was obtained from the DSO subject to the unbundling obligation: the average number of days for submitting the connection cost offer was 10.6 days;
- the maximum number of days for connection to the network and activation of gas supplies to the customer in the case of small works amounted to 180 days;
- the maximum number of days for disconnection from the network at the request of the customer is typically 1-5 days or longer, as agreed with a customer individually.

The tasks imposed on the regulator were also carried out through monitoring the fulfilment by enterprises of the mandatory obligation to notify the President of ERO of any refusal to connect to the gas network[47]. In 2018 the President of ERO received in total 11,925 notifications of refusal to connect to the gas network, out of which 2 concerned the TSO and the other ones the DSO.

Monitoring access to storage, linepack and other ancillary services

In 2018 Gas Storage Poland Sp. z o.o. performed the function of SSO. This company performs its function on the assets owned by PGNiG S.A. The company provides storage capacities in the following installations and installation groups:

- Group of Storage Facilities Kawerna (GSF Kawerna), including CUGS Kosakowo and CUGS Mogilno,
- Group of Storage Facilities Sanok (GSF Sanok), including UGS Husów, UGS Strachocina, UGS Swarzów and UGS Brzeźnica,
- UGS Facility Wierzchowice.

At the end of 2018 their total working storage capacity amounted to 2,985.35 mcm.

According to duration of the storage service, they are divided into long-term, short-term and within-day services. According to the type of services, firm storage services and interruptible storage services are distinguished.

The party ordering the storage service can order storage services in the form of bundled unit, a flexible unit or as a unbundled storage service.

In order to fulfil the obligations indicated in Article 19 of Regulation 715/2009, SSO publishes information on the mechanisms for allocation of storage capacity, including the services and conditions it offers, along with technical information needed by storage system users to obtain effective access to storage facilities, numerical information about the contracted and available capacity of storage facilities, as well as on information sharing and the frequency of information updates on the volume of gas stored in each storage facility or in a group of storage installations. This information is also available in English on the SSO' website (https://ipi.gastoragepoland.pl). In addition, SSO sends to Gas Infrastructure Europe (Gas Storage Europe) information on the total filling levels of storage facilities, quantities of gas injected into and withdrawn from storage facilities and the parameters of storage installations. Data regarding storage installations are published in the form of the AGSI+ database https://agsi.gie.eu/.

SSO implements the information obligation arising from Article 9 (7) and (9) of Regulation 1348/2014[48], which is the implementing regulation for Regulation 1227/2011.

The obligation arising under Article 22 of Regulation 715/2009 is implemented through the application of the provisions of Storage Services Rules regarding the secondary trade of storage capacities.

In 2018, SSO did not have the storage capacities exempted from third party access, in particular did not use the exemption under Article 4i of the Energy Law Act.

[47] Article 7 item 1 of the Energy Law Act "... (…) If an energy company refuses to conclude a grid connection agreement, it must immediately notify the President of ERO in writing of the refusal to conclude it, stating the reasons for the refusal".
[48] Commission Implementing Regulation (EU) No 1348/2014 of 17 December 2014 on data reporting implementing Article 8(2) and Article 8(6) of Regulation (EU) No 1227/2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency (OJ L 363 of 18.12.2014, p.121)

Procedure for allocating the released storage capacities in the GSF Kawerna and the UGS Facility Wierzchowice for the period from the beginning of the storage year 2018/2019 commencing on 15 April 2018 at 6 a.m. to the end of the storage year 2021/2022 ending on 15 April 2022 at 6 a.m., that is for the period of 4 storage years was launched on 1 December 2017 pursuant to the Storage Services Rules of 18 June 2014, as amended[49], published on SSO's website.

The storage capacities made available included:

- GSF Kawerna as part of a long-term storage service or a firm short-term storage service in the amount of up to 396 units or flexible units, or storage capacity under unbundled storage service in the amount of up to 396,000 MWh of working volume, up to 342.144 MWh/h of injection capacity, up to 734.976 MWh/h of withdrawal capacity,
- at the UGS Facility Wierzchowice, as part of a long-term storage service:
  - on a firm basis - in the amount of up to 1 042 units or flexible units, or storage capacity under unbundled storage service in the amount of up to 1,042,000 MWh of working volume, up to 434,514 MWh/h of injection capacity, up to 1,183,712 MWh/h of withdrawal capacity;
  - on an interruptible basis - in the amount of up to 658 units or flexible units or storage capacity under unbundled storage service in the amount of up to 658,000 MWh of working volume, up to 193,452 MWh/h of injection capacity, up to 309,918 MWh/h of withdrawal capacity.

The SSO adopted revised deadlines for the procedure of concluding long-term storage services contracts, which were communicated to market participants on 1 December 2017. The company amended the aforementioned regulations on 10 February 2018 and 24 February 2018. Amendments Nos. 1 and 2 were also applied to the procedure of concluding a long-term contract for the provision of storage services, which was in force on the date of their entry into force.

After the amendments were introduced, the company extended the deadline for submitting applications for concluding long-term storage services contracts and changed the deadlines for the procedure of concluding long-term storage services contracts.

The company received seven applications for the conclusion of a long-term storage services contract. Applications for firm storage services were submitted for the purpose of establishing and maintaining mandatory stocks of natural gas. The applicants' demand for storage capacity at GSF Kawerna and at UGS Facility Wierzchowice, covering firm long-term storage services, enabling the maintenance of mandatory stocks, exceeded the capacity made available by the SSO in this procedure.

Due to the limited availability of storage capacity, all available capacities offered under the procedure were allocated to the applicants in this category in proportion to the amount of storage capacity requested in each storage year, taking into account the priority set out in point 3.3 of the amended Regulations.

The firm storage capacities made available under the procedure were fully allocated. The applicants' demand for storage capacity to maintain mandatory stocks exceeded the levels of capacity made available by the SSO. As a result, one applicant was refused a storage service contract, while the other applicant was allocated a limited amount of storage capacity. The SSO stated that the sole reason for refusing to conclude contracts for firm storage services was the lack of sufficient storage capacity in the requested storage facilities under the procedure.

Interruptible storage capacities were allocated to applicants to the full extent requested by them.

Under the firm and interruptible long-term services, storage capacities covering the working volume of 1,981,000 MWh were allocated. The remaining storage capacities in the amount of up to 115 units, flexible units or storage capacity under unbundled storage services covering up to 115,000 MWh of working volume, up to 33,810 MWh/h of injection capacity, up to 54,165 MWh/h of withdrawal capacity, at the UGS Facility Wierzchowice, as part of interruptible services, for the period from the beginning of the gas year 2018/2019 starting on 15 April 2018. at 6.00 a.m. until the end of the storage year 2021/2022 ending on 15 April 2022 at 6.00 a.m. These capacities were also not allocated under short-term services.

[49] Amendments of: 25 May 2015, 2 July 2015, 29 March 2016 and 8 May 2017.

The procedure was concluded in March 2018. Contracts on the provision of storage services were signed with parties ordering storage services. The provision of services commenced on 27 May 2018, i.e. on the date of entry into force of the tariff for gas storage services No. 1/2018.

The SSO declares to comply with its disclosure obligations under applicable laws, in particular under Articles 15(1) and 19 of Regulation 715/2009. The following information, among others, is published on the company's website at https://ipi.gasstoragepoland.pl:

- detailed information on storage capacity allocation mechanisms, including the services offered by the SSO and the conditions applied by it, along with the technical information necessary for storage facility users to gain effective access to storage facilities,
- numerical information on contracted and available storage capacity,
- urgent market announcements.

Pursuant to Article 22 of Regulation 715/2009, the SSO provides for secondary trading of storage capacity on the basis of the rules set out in the Storage Services Rules. In 2018, the SSO did not receive any application for the sale of storage capacities ordered by the customer of the storage service on the secondary market.

In December 2018 the SSO applied for a modification of the licence decision by extending its scope to include new additional storage capacities in the CUGS Kosakowo facility. The decision to change the storage licence and thus enable the SSO to perform its functions on new additional storage capacities of the CUGS Kosakowo was issued in February 2019.

Currently, storage capacities of gas pipelines are not offered for gas storage. The TSO does not offer a linepack flexibility service based on the provisions of the BAL NC regulation either.

Monitoring correct application of criteria that determine the model of access to storage

The access model to the storage facility is a regulated access model. First of all, the President of ERO approves the tariff of the storage system operator. In addition, the regulator monitors whether the SSO provides access to the storage facility on equal terms and conditions compliant with applicable regulations.

Monitoring the implementation of safeguard measures

In 2018 the President of 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 on 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 (plans on restrictions), were presented in the reports for previous years.

In total, ERO received 52 applications from operators obliged to do so, for approval of the plans on restrictions for the 2018/2019 season (previous season 2017/2018 - 48 applications), including 49 applications in 2018 and 3 applications already in 2019.

The difference between the number of existing operators and the number of applications for approval plans on results from the fact that enterprises which are DSOs on coke-oven gas are not subject to the relevant obligation. The Act on Stocks refers to natural gas, whereas the Energy Law Act - to gaseous

fuels, i.e. it covers a broader scope (this applies to JSW Koks, Grupa Azoty Zakłady Azotowe Kędzierzyn, Koksownia Częstochowa and PCC Energetyka Blachownia).

In 2018, with respect to the plans on restrictions for the 2018/2019 season, the President of ERO approved 17 restriction plans - including a decision of 20 December 2018 approving the plan prepared by the TSO OGP Gaz-System S.A., and a decision of 14 December 2018 approving the plan on restrictions prepared by the gas DSO PSG Sp. z o.o. The proceedings concerning the remaining restriction plans developed for the 2018/2019 season were continued in 2019.

In 2018, there were no circumstances justifying the introduction of the restrictions on natural gas consumption, and therefore they were not launched.

Mandatory reserves of natural gas

The purpose of maintaining mandatory stocks is to ensure natural gas supplies and minimization of consequences of a threat to fuel supply security or of an emergency situation in the gas network and an unforeseen increase in natural gas consumption by its consumers. Mandatory reserves allow quick intervention measures to be taken to compensate for shortages in the gas supplies.

The principles of maintaining mandatory stocks of natural gas are regulated by the provisions of the Act on Stocks.

With regard to the obligation to maintain stocks, 27 proceedings were conducted in 2018 to establish or verify mandatory reserves of natural gas for the period until 30 September 2019 – pursuant to Article 25 item 4 of the Act on Stocks. Among the conducted proceedings:
- 24 were completed with the issuance of decisions pursuant to Article 25 item 3 of the Act on Stocks,
- 2 were completed with the issuance of decisions pursuant to Article 25 item 5 and item 9 of the Act on Stocks,
- 1 was discontinued.

In 12 cases, the initiation of proceedings was refused on the grounds that the requests were not justified in view of the absence of natural gas imports during the period for which the mandatory stocks were calculated.

In 2018 the President of 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 provided to the President of ERO pursuant to Article 27(2)(2) of the Act on Stocks by energy companies conducting business in the field of foreign trade in natural gas and entities bringing in natural gas from abroad

In total, ERO received information from 67 companies, of which 56 were submitted by entities obliged to comply with this reporting obligation in 2018. The information was also provided by 2 enterprises outside the gas foreign trade category, which are entities bringing in natural gas from abroad within the meaning of Article 2(14a) of the Act on Stocks, and therefore obliged to comply with the reporting obligation.

The information was also provided by entities which were not obliged to fulfil this obligation in 2018. These were companies which, upon their request, had their license withdrawn in 2017, or non-licensed entities which ceased bringing in natural gas from abroad by 5 August 2017 and submitted appropriate statements in 2017.

- information provided pursuant to Article 27(2)(1) of the Stocks Act concerning the actual amount of mandatory stocks of natural gas maintained and the place of their storage as of 15 September

This information was provided by companies that were obliged to hold mandatory stocks in the first sub-period of 2018, including 15 September. This group includes companies that had a non-zero level of mandatory stocks of natural gas established or verified in 2018.

The information provided by the companies and entities obliged to provide the aforementioned information in 2018 indicated that in the period until 30 September 2018 mandatory stocks of natural gas were maintained by 17 companies or entities. All entities with respect to which decisions on the amount of mandatory reserves were issued correctly fulfilled their stocks obligations.

– information obtained from entities obliged to maintain mandatory stocks of natural gas about the actual amount of mandatory stocks of natural gas and the place of their storage, as at 1 October.

The information was obtained from energy companies conducting business in the field of foreign trade in natural gas and from entities importing natural gas in the scope of the stocks obligation as at 1 October 2018 (6:00 a.m. CET), as the day on which the new period of maintaining gas stocks begins, i.e. 1.10.2018-30.09.2019. In view of the above, the following has been established:

- the amount of the mandatory stocks created: 12,874,012 MWh (19 entities); 3 entities created mandatory stocks simultaneously under the storage service agreements with the SSO and under the ticket agreements;
- maintaining mandatory stocks in the territory of the Republic of Poland: 12,183,783 MWh (18 entities) – including:
  - stocks maintained under storage service agreements with the SSO: 11,797,336 MWh (5 entities)
  - stocks maintained under ticket agreements: 386,447 MWh (13 entities);
- maintaining mandatory stocks outside the territory of the Republic of Poland: 694,274 MWh (4 entities) – including:
  - stocks maintained under agreements for the provision of storage services: 114,229 MWh (3 entities),
  - stocks maintained under ticket agreements: 576,000 MWh (1 entity);
- non-compliance with the obligation to maintain mandatory stocks (1 entity).

– information provided to the President of ERO by the gas transmission system operator in connection with verification of technical possibilities of supplying mandatory stocks of natural gas and in conjunction with Article 52 item 7 of the Act on Stocks

In 2018, the Operator did not report any specific events related to mandatory stocks as part of the information provided pursuant to the Act on Stocks.

However, pursuant to Article 52 item 7 of the Act on Stocks, the gas transmission system operator or the combined gas system operator was obliged to immediately inform the minister competent for energy matters and the President of ERO on the date and quantity of launched mandatory gas reserves (information provided daily until 10:00 am, regarding the previous day). The Act amending the Act on Stocks changed the content of Article 52 of the Act on Stocks, simultaneously introducing to this Act Article 52a, in particular Article 52a item 1, under which the gas transmission system operator or the combined gas system operator, after the end of each gas day in which mandatory natural gas reserves are launched, by 12:00, shall provide the minister responsible for energy matters and the President of ERO with information on: 1) date and number of launched mandatory reserves of natural gas on this gas day and storage facilities from which they were released; 2) energy undertakings and entities referred to in Article 52 item 7 section 1, from which the mandatory stocks of natural gas on that gas day were acquired.

In 2018, the President of ERO did not receive from the gas TSO information provided under Article 52 item 7 or Article 52a item 1 of the Act on Stocks.

4.1.3. Network and LNG tariffs for connection and access

Gas enterprises with licences for the transmission, distribution, storage of gaseous fuels, natural gas liquefaction or regasification of liquefied natural gas conduct the above-mentioned activities based on tariffs set by themselves and approved by the President of ERO.

A prerequisite for the approval of the tariff is its compliance with the provisions of the Energy Law Act and the executive acts to this Act, including in particular the Ordinance on detailed rules for setting and calculating tariffs and settlements in the trade in gaseous fuels.

On 1 April 2018, the Ordinance of 15 March 2018 on detailed rules on setting and calculating tariffs and settlements in trade in gas fuels came into force, which replaced the Regulation of 28 June 2013[50]

[50] Ordinance of the Minister of Economy of 28 June 2013 on detailed rules of shaping and calculating tariffs and settlements in trade in gaseous fuels, which introduced fundamental changes, among others, in the way fee rates are determined by companies providing services in the field of gaseous fuels transmission; the type of services offered by companies involved in transmission,

(Tariff Ordinance). The new regulations contain a number of provisions that need to be taken into account when shaping prices and fee rates and settlements of customers, not only in the area of sale, but also distribution, storage and regasification. Under the new regulations, definitions of distribution and reverse flow have been added, and the definition of virtual reverse flow has been changed. The rules for settlement of fees for suspension and resumption of gas supply were changed. The rules for determining fees for provision of regasification services were specified. Provisions concerning a separate tariff classification using several buy-back agreements were abandoned. The rules for the settlement of gas transmission were changed, abandoning variable charges, introducing the principle of a minimum rate for interconnection points and reviewing the definition of correction coefficients for short-term and interrupted capacity. In the case of distribution fees, the settlement rules for prepayment systems were changed, the scope of justified costs was extended, correction coefficients for short-term capacity were lowered. The rules for calculating tariffs for storage and regasification services were made more detailed, taking into account the extended process storage of LNG. In the case of trading, a mechanism for the application of maximum prices and fee rates, set in accordance with the amended requirements of the Ordinance, was introduced. Some of the regulations concerning calculation and settlement of grid connection were amended. The rules of settlements and their corrections were changed.

Some of the proposed amendments are based on the cost-effectiveness of adjusting to the new tariffication requirements of the TAR NC Regulation.

Another significant change in the regulations was the amendment introduced by the provisions of Article 19 of the Act of 6 June 2018 amending the Act on biocomponents and liquid biofuels and certain other acts (Journal of Laws, item 1356), according to which tariffs for the transmission of gaseous fuels approved by a valid decision of the President of ERO before the date of entry into force of Article 47(5) of the Act amended by Article 4, which were not introduced before that date, apply as of 1 January 2019. The above change resulted from compliance with Articles 29 and 32(a) of the TAR NC Regulation and Article 11(4) of the CAM NC Regulation. According to the aforementioned provisions, 30 days before the annual yearly capacity auction (which takes place on the first Tuesday of July), transmission tariffs which will be applied during the period when auctioned product is provided, must be known,.

In the tariff approval process, the President of ERO thoroughly analyzes the costs which form the basis for calculating the fees rates, ensuring that there is no cross-subsidies between the licensed and non-licensed activities and between the various types of licensed activities. The basis for the assessment of costs accepted for the calculation of tariffs are the data included in the financial statements. Comparative analyzes are used to a limited extent.

Tariffs approved by the President of ERO are published in the ERO Bulletin within 14 days of the date of approval. Gas companies introduce tariffs for application not earlier than after 14 days and no later than 45 days of the date of their publication, while energy companies involved in the transmission of gaseous fuels introduce the tariff for application on the date specified by the President of ERO in the decision approving the tariff, not earlier than 14 days after its publication.

The decision of the President of ERO approving or refusing to approve the company's tariff may be appealed from to the District Court in Warsaw - the Competition and Consumer Protection Court, via the President of ERO, within two weeks of the date of its delivery.

Enterprises dealing with the transmission or distribution of gaseous fuels are required to conclude (on a non-discrimination basis) an agreement for connection to their network with entities applying for connection, if there are technical and economic conditions for connection and delivery of these fuels, and the contracting party meets the conditions of network connection and of gas off-take, specified by these companies. For the connection to the high-pressure network, entities that do not perform activities in the field of transmission or distribution of gaseous fuels, their production or extraction, storage of gaseous fuels and liquefaction or regasification liquefied natural gas, pay a fee of 1/4 of actual expenditures incurred for the connection. For connection of entities performing activities indicated in the preceding sentence, a fee is charged in the amount corresponding to the actual expenses incurred for the implementation of the connection. On the other hand, entities whose devices, installations and networks are connected to low, medium and higher pressure networks, pay a fee determined on the basis of rates calculated by the distribution network operators and contained in their tariffs approved

distribution or storage. In addition, as of 1 August 2014, it introduced an obligation to apply energy units in settlements for gaseous fuel instead of the currently used volume units.

by the President of ERO. These rates are calculated on the basis of 1/4 of the average annual investment expenditure on the construction of sections of the network used to connect these entities, as defined in the development plan, developed by the distribution system operator.

The key infrastructure companies in the gas sector include OGP Gaz System SA, PSG Sp. z o.o. and EuRoPol Gaz SA (companies dealing in gas transport), Gas Storage Poland Sp. z o. o. (a company providing gas storage services) and Polskie LNG SA (a company providing services in the area of LNG regasification).

Tariff of OGP Gaz-System S.A.

As of 1 January 2018, in the settlements for gas transmission services provided by OGP Gaz-System S.A.,TSO applied tariff no. 11 approved by the decision of the President of ERO of 29 November 2017 for the period until 31 December 2018.

The need for prior approval of the tariff arose from the provisions of Article 30(1) and 32(b) of the NC TAR Regulation, which introduced as of 1 October 2017 the obligation to publish the information listed in Article 30, including the fee rates, no later than 30 days before the start of the tariff period.

On 2 February 2018 OGP Gaz-System S.A. was requested to submit an application for approval of tariff No. 12 for gas transmission services (for 2019). The relevant application was submitted on 29 March 2018. By the decision of 1 June 2018 the President of ERO approved the Tariff for Gas Transmission Services No. 12 for the period until 31 December 2019[51].

The above - much earlier - date of approval of tariff No. 12 resulted from the provisions of Articles 29 and 32(a) of the TAR NC Regulation, pursuant to which the publication of transmission fee rates for the next gas year (2018/19) should take place no later than 30 days before the annual auction of annual capacity, which since 2018 has generally taken place on the first Monday of July each year (see the tariff of EuRoPol GAZ S.A.).

The tariff set by OGP Gaz-System S.A. ensured coverage of the planned costs with a reasonable return on capital employed. The tariff was calculated in accordance with the requirements of the tariff ordinance. The transmission fee rates were set at the entries to and exits from the transmission system (for high-methane and nitrogen-rich natural gas), including high-methane natural gas also at the entries to and exits from underground gas storage facilities.

In the tariff for 2019, the share of revenues from fixed charges, both for high-methane and nitrogen-rich gas, amounted to 100%, which was a change compared to the tariff in force in 2018, which included a 10% share of revenues from variable charges in the calculation. The division of revenue into entry and exit points in the proportion of 45/55 was maintained. The rates at entry and exit points to/from storages were set in accordance with the principle applied in tariff No. 11, i.e. these rates amount to 20% of the transmission rates at entry and exit points to/from the high-methane natural gas transmission network other than storages. At the entry point to the transmission system from the LNG terminal, a 100% discount was applied, resulting in no fees for feeding gas into the transmission system at that point.

Tariff of PSG Sp. z o.o.

On 25 January 2018, tariff no. 6 for gas distribution services and LNG regasification services for the period until 31 December 2018, was approved and published in the ERO's Bulletin. Under this tariff, the average fee for the distribution service decreased by more than 7%. In addition, the decision unified the criteria for selecting customers to tariff groups with a pressure above 0.5 MPa for Lw gas. In addition, the rates for grid connection fees were unified, both lump-sum fees for connections up to 15 m and for each meter above 15 m. The decision also unified the rates for grid connection fees, both lump-sum fees for connections up to 15 m and for each meter above 15 m. The equalization of rates was made at the level of the lowest rates, i.e. the rates of the Tarnów zone increased by 3%. The tariff in question became applicable on 1 March 2018.

[51] https://bip.ure.gov.pl/bip/taryfy-i-inne-decyzje-b/paliwa-gazowe/3638,Taryfy-opublikowane-w-2018-r.html

Then, on 14 September 2018, the amendment to tariff no. 6 of PSG Sp. z o.o. was approved and published. The reason was the circumstance stipulated in Article 46 of the tariff ordinance, i.e. purchase of a gas network from an company conducting business in the field of gas transmission. Through this amendment, the Company also adjusted its tariff to the provisions of the Ordinance of the Minister of Energy of 15 March 2018 on detailed rules on setting and calculating tariffs and settlements in trade in gaseous fuels, and changed the amount of discounts for non-compliance with the quality standards for customer service. In addition, the tariff included provisions concerning settlements based on the so-called prepayment systems. Under the decision, the rates for grid connection fees for customers in connection group B were reduced.

Tariff of Gas Storage Poland Sp. z o.o.

Tariff 1/2018 for gas storage services of GSP Sp. z o.o. was approved on 13 April 2018 for a period of 12 months from the date of its application. In July 2018, the tariff of GSP Sp. z o.o. was amended due to the change in the costs of purchase of transmission services, arising from the approval of the TSO's tariff and the increase in the costs of gas purchase.

In addition to the services offered in the previous storage year, i.e. units and unbundled storage services, offered on a firm and interruptible basis under a long-term or short-term agreement, tariff 1/2018 introduced two new products: storage bundled unit 90/40 and reverse storage service bundled unit (UM Reverse).

The size of the package remained at the level of 1,000 MWh of active capacity. The technical parameters, i.e. injection and withdrawn capacity assigned to particular units, were not changed either.

Tariff of Polskie LNG S.A.

As of 1 January 2018, the services provided by Polskie LNG S.A. - the operator of the LNG Terminal in Świnoujście – i.e. LNG regasification services and additional services, were settled on the basis of tariff no. 3. The Tariff was approved by the decision of the President of ERO of 14 December 2017 for a period of 12 months from the date of entry into force[52].

On 29 August 2018 Polskie LNG S.A. was requested to submit an application for approval of the tariff for LNG regasification services no. 4. The relevant application was submitted on 4 October 2018. By decision of 17 December 2018, the President of ERO approved the Tariff for LNG regasification services No. 4 for a period of 12 months from the date of the tariff entry into force[53], which, according to the information provided by Polskie LNG S.A., took place on 1 January 2019.

The tariff assumed an increase in the average rate for regasification services by 2.9% as compared to the average rate calculated on the basis of the valid tariff (for the value of contractual capacity and the quantity of gas after regasification, used for the approved tariff calculation), while the rate for reloading LNG onto tank trucks increased by 1.7%.

In tariff no. 4, similarly to the previous one, (fixed and variable) fee rates were established for units of LNG regasification services, including: unloading LNG from a tanker, process storage in reservoirs, regasification and transfer of gas to the transmission system, and fee rates for additional services in the field of reloading of LNG to road tankers. LNG regasification services may be provided on a long-term basis - in a period longer than one year, and on a short-term basis - for a period of at least one gas day. In addition, the tariff contains fees for unbundled services, i.e. unbundled prolonged process storage and unbundled contracted capacity, which may be provided in addition to the unit services.

Tariff of EuRoPol GAZ S.A.

[52] https://bip.ure.gov.pl/bip/taryfy-i-inne-decyzje-b/paliwa-gazowe/3506,Taryfy-opublikowane-w-2017-r.html
[53] https://bip.ure.gov.pl/bip/taryfy-i-inne-decyzje-b/paliwa-gazowe/3638,Taryfy-opublikowane-w-2018-r.html

On 4 June 2018, the Tariff for high-methane natural gas transmission services set by the SGT EuRoPol GAZ S.A. for the period until 31 December 2019 was approved. The obligation to approve the tariff, which was de facto to apply in 2019, well in advance resulted from the provisions of Articles 29 and 32(a) of the TAR NC Regulation and Article 11(4) of the CAM NC Regulation. According to these provisions, 30 days before the annual capacity auction (which takes place on the first Tuesday of July), the transmission tariffs that will be applied during the period when auctioned product is provided, must be known.

However, the tariff of SGT EuRoPol GAZ S.A. approved in June 2018 was not implemented due to an appeal against the decision approving the tariff, of which the President of ERO informed on 19 June 2018 by publishing an appropriate announcement in the ERO Gas Bulletin No. 37 (1131).

4.1.4. Cross-border issues

Access to cross-border infrastructure, including capacity allocation 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 Gas Transmission Network Code developed by the TSO and approved by the President of ERO. 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.

Due to the lack of system congestion at these points in 2018, the capacity for the oversubscription and buyback procedure was not offered. There was also no need to apply a long-term capacity allocation procedure based on the long-term "use-it-or-lose-it" principle (LT UIOLI). On the other hand, the network users took advantage of the possibility of resignation from allocated capacity.

Cooperation with the regulatory authorities from other countries

In 2018, bilateral cooperation between the Energy Regulatory Office and the German regulator Bundesnetzagentur (BNetzA) was continued in order to choose a common booking platform and approve incremental capacity project for the GCP GAZ-SYSTEM/ONTRAS interconnection point.

The principles of capacity allocation specified in the provisions of the CAM NC Regulation regulating the principles of capacity allocation at interconnection points and the principles of cooperation of transmission system operators in this process have been specified in detail in the provisions of the TNC. As a capacity allocation mechanism, the CAM NC Regulation provides for an auction procedure using an internet platform dedicated to booking of firm and interruptible capacity at interconnection points. The capacity offered at these points should be bundled. The same auction model is used at all interconnection points and the relevant auction processes start simultaneously for all relevant points. In any auction process involving one standard capacity product, capacity shall be allocated independently of any other auction process, except for so-called competing capacities.

The implementation of the provisions of the CAM NC Regulation enable creation of uniform and transparent mechanisms of capacity allocation. The application of this regulation regulating the process of acquiring incremental capacity ensures that market participants may request incremental capacity, reduce the risk of unjustified investment expenditures by TSOs due to the establishment of a new assessment tool for investment projects (i.e. economic test) and the need for TSOs to get an approval of the project proposal by the regulatory authority, and is beneficial for the development of the gas market due to the adoption of a two-year cycle of assessing market demand for incremental capacity.

The provisions of the CAM NC Regulation were the exclusive material and legal basis for two administrative proceedings conducted by the President of ERO in 2018 - proceedings concerning the selection of a capacity booking platform and proceedings concerning the approval of a proposal for an incremental capacity project.

The procedure to select a capacity booking platform at interconnection points at the Polish-German border was initiated due to the failure of the transmission system operators (OGP Gaz-System S.A. with GASCADE Gastransport GmbH for the Mallnow IP, and ONTRAS Gastransport GmbH for Grid Connection Point GAZ-SYSTEM/ONTRAS) to reach an agreement on selection of a common platform. At that time, in accordance with Article 37(3) of the CAM NC Regulation, the case was referred to the NRAs - BNetzA and ERO. The regulators conducted administrative proceedings in which discussions were held with a view to making a common choice of a reservation platform. However, regulators were not able to make a joint choice of platform. By decision of 26 April 2018 the President of ERO decided to close the proceedings *ex officio*. Subsequently, pursuant to Article 37(3)(4) and (5) of the CAM NC Regulation, ACER initiated the proceedings regarding this case and on 16 October 2018 it issued a decision on the selection of the GSA platform owned by OGP Gaz-System S.A. The PRISMA European Capacity Platform appealed against the decision on 14 December 2018 to the ACER Board of Appeal. By decision of 14 February 2019 the Board of Appeal repealed the decision of ACER concerning the selection of the reservation platform and referred the case back to ACER for reconsideration.

The administrative proceedings concerning the approval of the proposal for an incremental capacity project for the border of the market area of Poland (transmission system of group E high-methane natural gas) - GASPOOL were initiated in 2018 at the request of OGP Gaz-System S.A. It was conducted in coordination with BNetzA pursuant to Article 28(1) and (2) of the CAM NC Regulation. The project proposal was agreed between OGP Gaz-System S.A. and ONTRAS Gastransport GmbH. It envisages the expansion of the Grid Connection Point GAZ-SYSTEM-ONTRAS resulting in an increase in the amount of capacity available in this interconnection point for the users of the transmission network. In April 2019, pursuant to Article 8 of Regulation 713/2009, the case was referred to ACER for decision.

In 2018, cooperation continued on the implementation of gas interconnection projects between Poland and other EU member states that were granted the status of projects of common interest (PCI). In particular, the cooperation focused on gas interconnection project Poland - Denmark, implemented by the Polish TSO - OGP Gaz-System SA and the Danish TSO - Energinet.dk. The project includes the construction of a new gas pipeline that will connect the natural gas transmission systems of Poland and Denmark. The purpose of the Norwegian Corridor, which is the basic element of the Northern Gate concept, is to create technical possibilities for transferring gas from the Norwegian continental shelf via the Danish transmission system and submarine connection from Denmark to Poland (Baltic Pipe), and in the longer term also to transmit gas to other Central and Eastern European countries and the Baltic Sea region.

Due to the assumed priorities, as well as the scope of competences, the regulator's activity in the field of building cross-border interconnections focused on this interconnection and to a large extent referred to:

- ensuring appropriate regulatory conditions (ensuring compliance with EU regulations, in particular the provisions of the third energy package, with respect to the part of the gas pipeline located in Poland, as well as outside the borders of the Republic of Poland,
- ensuring the possibility of including the costs resulting from the Baltic Pipe gas pipeline, regardless of the place of their origin, if they are necessary for the provision of transmission services by the Polish transmission system operator using this infrastructure.

In 2018, as in previous years, the President of ERO performed tasks related to the construction of the Baltic Pipe, inter alia, in cooperation with the Danish regulator Energitilsynet (as of 1 July 2018, after the transformation Forsyningstilsynet, i.e. the Danish Utility Regulator - DUR). Coordinated decisions on cross-border cost allocation of the Baltic Pipe project (the so-called CBCA decisions) are of significant importance for the construction and operation of the Baltic Pipe[54] issued by ERO and DUR. These decisions were necessary to initiate the implementation of the project as they significantly reduce the project risks related to the inclusion of costs incurred in future transmission tariffs. The decision of the President of ERO was issued on 12 March 2018 on the basis of a joint investment request submitted by OGP Gaz-System S.A. together with Energinet.dk pursuant to Article 12(3) of Regulation 347/2013. The decision includes costs and benefits related to the implementation of the Baltic Pipe project of economic, social and environmental nature, as well as the needs for financial support in the Member States concerned.

[54] Information on the request concerning the Baltic Pipe project are included in the previous report.

The decision provides that the costs of constructing certain transmission infrastructure located in Denmark may be included in the future tariff of OGP Gaz-System S.A. This provision of the decision to a large extent eliminates the uncertainty related to the financial stability of the project, creating conditions for OGP Gaz-System S.A. to cover the costs incurred (qualified as eligible) with the tariff revenues. The decision also refers to other aspects related to the financing of the project, such as the legitimacy of the project's external financing.

The intergovernmental agreement with Denmark was dedicated to similar objectives. Before concluding the agreement, the President of ERO issued several opinions on the draft of the agreement, making a number of comments, including those of importance for the future assurance of compliance of the Baltic Pipe operation with the provisions of the third energy package. The agreement with Denmark regulated the legal status of some elements of the Baltic Pipe project infrastructure located in Denmark and determined that Gaz-System will also act as a gas transmission system operator for the part of the pipeline located outside Poland. President of ERO will be entitled to approve the operator's tariff, taking into account the costs incurred by it for the construction, maintenance and operation of this part of the pipeline and the costs of maintenance and operation of the gas compression plant located in Denmark[55]. The intergovernmental agreement also opens the way for wider cooperation between regulators in the area of ensuring compliance of the gas pipeline with the third energy package in the coming years.

In 2018, cooperation on the implementation of cross-border gas interconnection projects between Poland and other EU countries, which have been granted the status of projects of common interest (PCI) continued. This cooperation was mainly related to the area of joint monitoring of their implementation.

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 item 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 planned investments aimed at connecting new customers and projects necessary to maintain an appropriate level of reliability and quality of provided network services.

On 22 February 2018, the Act on Electromobility and Alternative Fuels entered into force, which, by virtue of Article 20 item 1 imposed an obligation on the gas DSO[56] to develop a programme for the construction of natural gas stations[57] and projects to modernize, expand or construct the networks necessary to connect these stations (hereinafter: the CNG/LCNG Programme).

The Act implements the Government's Electromobility Development Plan for Poland and responds to the proposal for legislative measures and infrastructure development objectives contained in the National

[55] The manner in which OGP Gaz-System S.A. covers part of the capital expenditures related to the construction of the gas compressor station located in Denmark, working for the needs of the Baltic Pipe, was regulated by the CBCA decision of the President of ERO. This decision does not determine the operating costs.
[56] Specifically: the gas distribution system operator, which prepares and agrees with the President of ERO a development plan for satisfying the current cost allocation and future gas demand referred to in Article 16 Section 4 of the Energy Law Act.
[57] Pursuant to the provisions of Article 2 item 26 of the Act on Electromobility and Alternative Fuels, a "natural gas station" is understood as a set of facilities, including a CNG or LNG refuelling point, connected to a gas distribution network or a terminal intended for importing, unloading and regasification of LNG together with auxiliary facilities and storage tanks used in the regasification process.

Policy Framework for the Development of Alternative Fuel Infrastructure, adopted by the Council of Ministers on 29 March 2017.

According to the provisions of Article 20 item 3 of the above mentioned Act, the DSO shall include in the CNG/LCNG Programme any municipality in area of its activity which meets jointly the following criteria:

- the municipality has a population of at least 100 000 inhabitants and
- at least 60 000 motor vehicles are registered in the municipality, and
- there are at least 400 motor vehicles per 1 000 inhabitants of the municipality.

The provisions of Article 60 item 2 of the Act specified that the minimum number of compressed natural gas (CNG) refuelling points located in municipalities until 31 December 2020 is at least:

- 6 - in municipalities with more than 1 000 000 inhabitants, where at least 60 000 motor vehicles are registered and there are at least 700 motor vehicles per 1 000 inhabitants,
- 2 - in municipalities with more than 100 000 inhabitants, where at least 60 000 motor vehicles are registered and there are at least 400 motor vehicles per 1 000 inhabitants.

In addition, the provisions of Article 60 item 3 of the above mentioned Act indicate that the number of CNG refuelling points referred to in Article 60 item 2 includes, respectively, the charging points and CNG refuelling points located along the TEN-T core network.

Pursuant to the provisions of Article 20 item 2 of the Act, the CNG/LCNG Programme constitutes a separate part of the development plan referred to in Article 16 item 4 of the Energy Law Act, therefore, in general, the time horizon of the CNG/LCNG Programme should be consistent with the development plan time horizon, and the deadline for its submission to be agreed with the President of ERO is the same as for the development plan , i.e. until 31 March, and arises from the provisions of Article 16 item 14 of the Energy Law Act. Pursuant to the provisions of Article 16 items 2 and 4 of the Energy Law Act, gas DSOs are required to update the development plan every two years. However, the (adjusting, transitional and final) provisions of Article 78 item 1 of the Act on Electromobility and Alternative Fuels obliged DSOs whose development plan update date falls after 6 months from the date of entry into force of this Act to prepare the CNG/LCNG Programme within 6 months from the date of entry into force of this Act (i.e. until 22 August) for the duration of the development plan valid as of the date of entry into force of this Act, and to agree on it with the gas TSO and subsequently with the President of ERO.

The provisions of Article 78 item 2 of the Act on Electromobility and Alternative Fuels oblige the gas DSO to specify in the CNG/LCNG Programme the number of planned CNG refuelling points, not lower than the number specified in the aforementioned Article 60 item 2 of the Act.

In consideration of this obligation, on 8 March 2018 the President of ERO issued a communiqué in the following case.

The analysis of the criteria for the development and implementation of the CNG/LCNG Programme carried out by the ERO showed that it is advisable to amend the Act, as there are municipalities in the territory of the Republic of Poland[58], where more than one gas DSO operates, which agrees a development plan with the President of ERO. Moreover, there are also such municipalities in which there are operators distributing gaseous fuels other than natural gas. Nevertheless, it follows from the applicable provisions of the Act on Electromobility and Alternative Fuels that each gas DSO referred to in Article 20 item 1 of the Act (regardless of the type of gas distributed, the number of operators in the municipality, the scale of its operations) was obliged under the Act in the wording in force until 31 December 2018 to implement the Programme, and thus to build 2 or 6 CNG refuelling points in that municipality, respectively. The above raised doubts, due to the fact that DSOs subject to the obligation to implement the Programme and not subject to legal separation (unbundling) are relatively small operators with a small number of final customers and often operating in closed industrial areas or distributing gas other than high-methane gas. In addition, due to the provisions of Article 16 item 10[59] of the Energy Law Act, as well as the information contained in the National Policy Framework for the

[58] Meeting the criteria referred to in Article 20(3) of the Act on Electromobility and Alternative Fuels.

[59] The development plan should ensure long-term maximization of the efficiency of expenditures and costs incurred by the energy company, so that expenditures and costs do not cause in particular years an excessive increase in prices and fee rates for the supply of gaseous fuels or energy, while ensuring continuity, reliability and quality of their supply.

Development of Alternative Fuel Infrastructure[60], the construction of natural gas stations by these operators seems unjustified. What is equally important, in each case the above mentioned operators operate in municipalities where an unbundled operator already operates.

On 1 January 2019, the aforementioned Act was amended[61] and the scope of entities covered by this obligation was reduced to unbundled gas DSOs, i.e. to the gas DSO referred to in Article 9d item 1d of the Energy Law Act, with the exclusion of the companies referred to in Article 9d item 7 sections 3 and 4 of this Act.

In the case of operators which have drawn up a Programme for the Construction of Natural Gas Stations pursuant to the existing legislation and that are not required to draw up such a Programme under Article 20 of the Act as amended by Article 4, the provisions of Article 12 item 1 of the Amending Act (see footnote 60) required them to notify the President of ERO of:

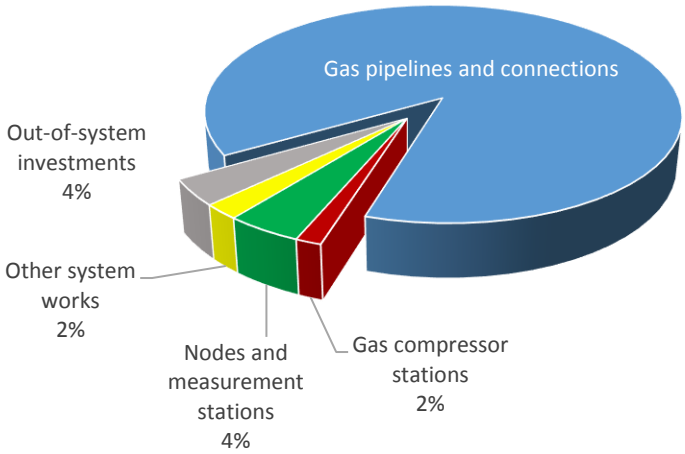
- the continuation of this programme and the construction of natural gas stations, or
- the abandonment of this programme and of the construction of natural gas stations
- within 30 days of the entry into force of this Act[62].

In practice, the CNG/LCNG Programme will be implemented by PSG Sp. z o.o. The remaining DSOs withdrew from the implementation of the programme in question. In view of the fact that this operator owns 97% of the national distribution networks and supplies natural gas to more than 7 million customers, it seems justified to limit the obligation in question to this Operator.

TSO

In 2018, the plan for the development of the OGP Gaz-System SA transmission network operator, "*The National Ten-Year Transmission System Development Plan. Development plan for satisfying the current and future demand for gaseous fuels for 2018 - 2027* " (hereinafter: NTYDP), agreed for the period 2016-2025, was in force. This plan was described in the ERO's National Report for 2017. An extract from the agreed NTYDP is available at http://www.gaz-system.pl/fileadmin/pliki/open-season/Krajowy_Dziesiecioletni_Plan_Rozwoju_2018-2027.pdf.

Fig. 20. Structure of investments in 2018



Source: "Survey on the company's activity for the reporting year 2018", OGP Gaz-System S.A., p. 25

[60] The document states that, given the specification of natural gas-based transport, at least in the initial development phase, there is no need for as many CNG/LNG stations, as there are stations selling traditional fuels and that, with the number of vehicles assumed, the CNG refuelling infrastructure will not be profitable in 2020 and its operation will require State aid.
[61] Article 4 of the Act of 9 November 2018 amending the Energy Law Act and certain other acts (Journal of Laws of 2018, item 2348).
[62] The Act entered into force on 1 January 2019.

In 2018 OGP Gaz-System S.A. carried out investment projects in the transmission system in two basic areas:

- Development area: construction of new system facilities and modernization of the existing ones, aimed at increasing the technical capability of the transmission system;
- Security area: modernization and replacement projects arising from technical or operational needs.

The extent of financial implementation of the investment by OGP Gaz-System S.A. was 62.4% compared to the level of expenditures agreed in 2018.
In 2018 OGP Gaz-System S.A. completed the construction and commissioned the following facilities

- the Lwówek - Odolanów gas pipeline, stage II: Krobia - Odolanów, 54 km long and 1,000 mm in diameter,
- the Czeszów - Kiełczów gas pipeline, 33 km long, 1,000 mm in diameter,
- the Odolanów gas compressor station with a pumping capacity of 5 MW and a capacity of 180,000 m^3/h.

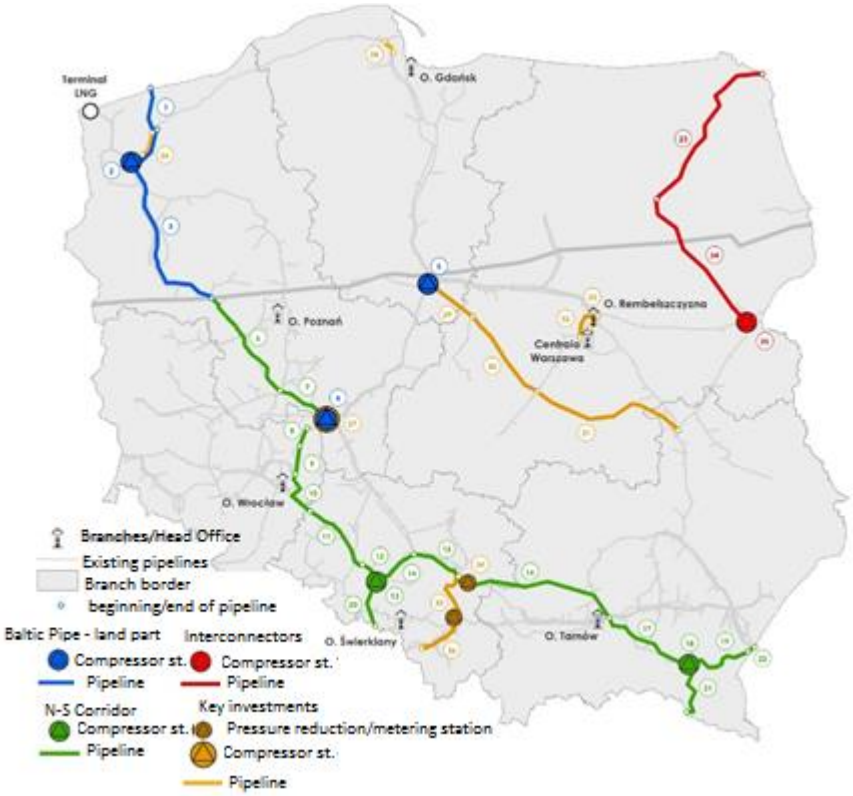
In 2018 OGP Gaz-System S.A. also conducted 12 investments in new gas pipelines at the design stage (including 3 under the Baltic Pipe Programme) and 11 investments in new gas pipelines at the execution stage.
In the area of security, OGP Gaz-System S.A. carried out 485 investment tasks, including 187 one-year tasks, of which 120 were completed (64%). The material effect of the investments was the following:

- modernization of the DN 500 Krobia - Śrem gas pipeline,
- modernization of equipment at 106 non-linear facilities, 7 anti-corrosion protection stations,
- execution of 41 general construction works.

Investments continued by OGP Gaz-System S.A. in the area of security (worth over PLN 20 million) include:

- modernization of the DN 500 Skwierzyna - Barlinek (Chełmsko) gas pipeline - design phase,
- modernization of the DN 300 Radlin - Racibórz gas pipeline, PN 1.6 MPa, L = 20.74 km - design phase,
- reconstruction of the DN 500 Goleniów - Police gas pipeline in the area of the Rezerwat Olszanka - design phase,
- project of reconstruction of part of building "C" with social, hygienic and sanitary rooms and a workshop for electricians and anti-corrosive protection - implementation phase,
- replacement of the 8.1 km long section of DN 500 WRG I Włocławek (Brzezie) - Wieniec gas pipeline - implementation phase,
- reconstruction of the Oświęcim - Szopienice gas pipeline in Imielin - design phase.

Fig. 21. Strategic/key investments as at 31.12.2018



Source: "Survey on the company's activity for the reporting year 2018", OGP Gaz-System S.A., p. 30.

Programme	item	Name of key investment valid in 2018	Phase
Baltic Pipe onshore	1	Construction of a gas pipeline connecting the subsea gas pipeline with the national transmission system: Niechorze – Płoty, Goleniów – Płoty (NB: the landing place may change)	Design
	2	Expansion of Goleniów compressor station, capacity = 30 MW	Design
	3	Goleniów-Lwówek gas pipeline DN=1000, L=188.3 km	Design
	4	Construction of Odolanów compressor station, capacity = 30 MW (phase I) + 20 MW (phase II) + 15 MW (phase III)	Design
	5	Gustorzyn compressor station, capacity = 30 MW	Design
N-S corridor	6	Lwówek – Odolanów gas pipeline (phase I Lwówek – Krobia) DN=1000, L=113.5 km	Implementation
	7	Lwówek – Odolanów gas pipeline (phase II Krobia – Odolanów) DN=1000, L=54.1 km	Gas pipeline completed
	8	Czeszów – Wierzchowice gas pipeline DN=1000, L=14 km	Gas pipeline completed, fibre-optic cable in design
	9	Czeszów – Kiełczów gas pipeline DN=1000, L=33 km	Gas pipeline completed, fibre-optic cable in design
	10	Zdzieszowice – Wrocław gas pipeline (section: Brzeg – Zębice – Kiełczów) DN=1000, L=49km	Implementation
	11	Zdzieszowice – Wrocław gas pipeline (section: Zdzieszowice – Brzeg) DN=1000, L=84 km	Implementation
	12	Zdzieszowice – Kędzierzyn Koźle gas pipeline DN=1000, L=17.4 km	Implementation
	13	Construction of Kędzierzyn compressor station, capacity = 23 MW	Tender (WRB/ WNI)
	14	Tworóg – Kędzierzyn Koźle gas pipeline DN=1000, L=43.4 km	Implementation
	15	Tworóg – Tworzeń gas pipeline DN=1000, L=56 km	Implementation
	16	Pogórska Wola – Tworzeń gas pipeline DN=1000, L=168 km	Tender (WRB/ WNI)
	17	Strachocina – Pogórska Wola gas pipeline DN=1000, L=97.5 km	Implementation
	18	Construction of Strachocina compressor station, capacity = 30 MW	Tender (WRB/ WNI)
	19	Hermanowice – Strachocina gas pipeline DN=700, L=72 km	Implementation
	20	Poland – Czech Republic gas pipeline DN=1000, L=52.5 km	Design completed
	21	Poland – Slovakia gas pipeline DN=1000, L=59 km	1. Design (replacement documentation) 2. Tender (WRB/WNI)

Programme	item	Name of key investment valid in 2018	Phase
	22	Poland – Ukraine gas pipeline (Hermanowice – State border) DN=1000, L=1.5 km	Design
Interconnectors	23	Poland – Lithuania gas pipeline (Rudka Skroda – PL – LT border) DN=700, L=185 km	Design
	24	Poland – Lithuania gas pipeline (Hołowczyce – Rudka Skroda) DN=700, L=153 km	Design
	25	Expansion of TG Hołowczyce II compressor station to compress gas to pressure of 8.4 Mpa	Design
Key investments	26	Szczecin – Gdańsk gas pipeline (phase V: Goleniów – Płoty) DN=700, L=41 km	Implementation
	27	Odolanów compressor station – phase 0 (transfer of compressors) capacity = 20 MW	Facility completed
	28	Szczecin – Gdańsk gas pipeline (phase VI: Reszki – Wiczlino) DN=700, L=8 km	Design
	29	Gustorzyn – Wronów gas pipeline (phase I: Gustorzyn – Leśniewice) DN=1000, L=60 km	Design
	30	Gustorzyn – Wronów gas pipeline (phase II: Leśniewice – Rawa Mazowiecka) DN=1000, L=100 km	Design
	31	Gustorzyn – Wronów gas pipeline (phase III: Rawa Mazowiecka – Wronów) DN=1000, L=156 km	Design
	32	Rembelszczyzna – Mory gas pipeline DN=700, L=29 km	Design
	33	Construction of connection to a facility of Żerań heat and power plant (PGNiG TERMIKA S.A.) DN=500, L=10 km	Implementation
	34	Tworzeń System Reduction and Measurement Station in the area of Sławków (phase I)	Tender (Design)
	35	Oświęcim – Tworzeń gas pipeline along with Oświęcim System Reduction and Measurement Station (phase II) DN=700, L=50 km	Tender (Design)
	36	Skoczów – Komorowice – Oświęcim gas pipeline (phase III) DN=500, L=53 km	Design

Source: "Survey on the company's activity for the reporting year 2018", OGP Gaz-System S.A., pp. 30-31.

In September 2018, the President of ERO agreed on the development plan of OGP Gaz-System S.A. entitled "Draft Update of the National Ten-Year Transmission System Development Plan; Part B; Development of the TGPS infrastructure for the years 2019-2028". This plan includes investments in the transmission infrastructure owned by the SGT EuRoPol GAZ S.A., on which OGP Gaz-System S.A. acts as the operator. The level of investment expenditures on the transmission network entrusted to OGP Gaz-System S.A. was agreed for the years 2019-2022.

The investment tasks included in the plan are aimed at maintaining full technical efficiency through replacement investments and necessary modernization works. The planned investments include modernization of equipment, installations and facilities of the compressor stations, including control, protection and data archiving systems, modification and modernization of communication systems, as well as tasks arising from technical inspections and environmental controls and tasks improving health and safety conditions.

4.1.5. Compliance

The Act of 30 November 2016 amending the Energy Law Act and certain other acts fulfils the obligations of the Republic of Poland to abolish the obligation to submit tariffs for approval to the President of ERO by the gas trading companies, in accordance with the ruling of the European Court of Justice of 10 September 2015, ref.no.: C-36/14, concerning breach of the provisions of Directive 2009/73/EC.

According to this Act, as of 1 January 2017, the obligation to submit tariffs for approval does not apply to the sale of gaseous fuels to wholesale customers and final customers that purchase them: 1) at a virtual point, 2) in the form of liquefied natural gas (LNG) or compressed gas natural gas (CNG) and 3) in the mode of tenders, auctions or orders. As of 1 October 2017, the prices of gaseous fuels sold to other groups of final customers were released, except for household consumers. Tariffs for the gas sale to consumers in households will remain regulated until the end of 2023.

In 2018, in the context of agreeing by the President of ERO on draft gas development plans for DSOs, a new obligation arose to include the construction of natural gas stations supplying motor vehicles in these plans. This is due to the fact that the development of refuelling points, both LNG and CNG, was included among measures aimed at implementing Directive 2014/94/EC of the European Parliament and of the Council of 22 October 2014 on the development of alternative fuel infrastructure. The regulator's involvement in the indicated activities is described in the "Monitoring of investment plans" section, contained in item 4.1.4. of this report.

Independence criteria

Pursuant to the statutory provisions, the President of 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. The competences of the President of ERO with respect to controlling compliance with the independence criteria have been described in previous reports.

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

In addition, in 2018, the activities undertaken by the President of 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 2015, and on monitoring whether OGP Gaz-System S.A. continues to meet the independence criteria specified in Article 9d item 1a, in connection with Article 9d items 1b and 1c of the Energy Law Act. The President of ERO also monitored the scope and type of data provided by the TSO to the network owner. The analysis of the information and documents submitted did not provide evidence of any irregularities in the relations between the above mentioned companies or in the extent or type of data provided by the TSO to the network owner.

In November 2018 the President of ERO, acting pursuant to Article 9h1 item 12 in conjunction with Article 9h1 items 7 and 11 of the Energy Law Act, initiated *ex officio* administrative proceedings against OGP Gaz-System S.A. regarding the determination of criteria under Article 9h1 item 7 of the Energy Law Act that are not met, and the determination of the deadline for taking action to meet these criteria. The proceedings concern the performance by OGP Gaz-System S.A. of the TSO function on the Polish part of the Yamal gas pipeline and is related to the failure to implement the recommendation indicated in the above-mentioned certification decision of 19 May 2015. The proceedings were continued in 2019. Also in November 2018, the President of ERO, acting pursuant to Article 9h item 14 in conjunction with Article 9h1 item 7 of the Energy Law Act, initiated administrative proceedings *ex officio* in respect of the obligation of the SGT EuRoPol GAZ S.A. to take measures to ensure that the transmission system operator designated on the SGT EuRoPol GAZ S.A.'s network meets the conditions referred to in Article 9h1 item 7 sections 2 to 4 of the Energy Law Act, and sets a deadline for undertaking them. The proceedings were continued in 2019.

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

The President of ERO monitors the TSO's performance of its obligations, in particular those related to third party access to transmission services, in compliance with the principles of non-discrimination, transparency and reporting obligations. The scope of obligations and tasks of the transmission system operator is regulated primarily in Articles 9c and 9g of the Energy Law Act. The TSO, applying objective and transparent rules ensuring equal treatment of system users and taking into account environmental protection requirements, is responsible, inter alia, for the security of gas supply through ensuring the security of the gas system operation and the performance of agreements with system users.

Pursuant to Regulation 715/2009, the TSO is obliged to fulfil its information and data registration obligations, in particular those specified in Article 18 of the Regulation and in point 3 of the Annex thereto. That Regulation requires an appropriate level of transparency to enable all market participants to have equal access to information on network capacity, flows and maintenance, balancing, availability and use of storage facilities. Information for users is published for the so-called relevant points of the system, which are subject to approval by the President of ERO. Pursuant to Article 18(3) of Regulation 715/2009, with regard to the services it provides, each TSO shall make public numerical information on technical, contracted and available capacity for all relevant points, including entry and exit points, on a regular and continuous basis, in a user-friendly and standardized form. Article 18(4) of the Regulation provides the basis for approval of the relevant points by the President of ERO. In 2018, the catalogue of relevant points of the transmission system remained unchanged. However, in 2019 the President of ERO conducted proceedings concerning the approval of a new catalogue of relevant points of the transmission system. The decision approving the relevant points was issued on 30 April 2019. First of all, the catalogue of relevant points was extended with virtual exit points for mandatory stocks. The introduction of this point was connected with the introduction into the TNC of rules for launching mandatory reserves of natural gas, compatible with EU regulations.

The TSO shall make maximum capacity available to market participants at the relevant points of the system. It shall offer unused capacity on the primary market on a firm basis and, in the event of contractual limitations, on an interruptible basis and shall enable network users to resell or otherwise make available unused contracted capacity on the secondary market. The TSO shall, pursuant to Article 18 of Regulation 715/2009 and point 3 of Annex I thereto, publish the information needed by the user to use the services offered by the TSO. The data is available on the website of OGP Gaz-System S.A.[63], also in English[64].

The capacity resulting from the oversubscription procedure at specified points of the NTS and TGPS shall be published on the TSO's website on an ongoing basis in the event of contractual limitation at these points. In 2018, there were no circumstances resulting in making the capacity available under the oversubscription and buyout mechanism. Moreover, the TSO did not find it necessary to apply the LT UIOLI procedure to long-term capacity allocations. Neither was there a need for a use-it-or-lose-it mechanism for the provision of firm day-ahead capacity. The TSO enables trading in capacity on the secondary market on the GAZ-SYSTEM Auctions platform. The user may resign from the capacity allocated on a firm basis at physical entry/exit points at interconnections with transmission systems of neighbouring countries and at the Interconnection Point.

In 2018 PSG Sp. z o.o. provided firm and interruptible gas distribution services. The table below presents the volume of gas transported by PSG Sp. z o.o. and the number of offtake points.

Table 14. Volume of gaseous fuel transported by PSG Sp. z o.o. and number of offtaking points in 2018

Data type	Gaseous fuels distribution service	
	firm	interruptible
Volume [TWh]	124.695	0.005
Number of offtaking points [items]	7,044,516	3

Source: Analysis of PSG Sp. z o.o.

In addition, PSG Sp. z o.o. ensures the protection of sensitive commercial information pursuant to Article 9c, item 4a of the Energy Law Act, the provisions of the applicable compliance programme and the internal regulations entitled "Instruction for the protection of sensitive commercial information". The compliance with the sensitive data protection rules in the company is supervised by the compliance officer.

The Company fulfils the obligation to cooperate with other gas system operators or energy companies in order to ensure reliable and effective operation of gas systems and interconnected gas systems and to coordinate their development in accordance with Article 9c item 1 section 5 of the Energy Law Act through:

[63] http://www.Gaz-System.pl/strefa-klienta/system-przesylowy/tsotransparencytemplate/
[64] http://en.Gaz-System.pl/strefa-klienta/system-przesylowy/tsotransparencytemplate/

- concluding inter-operator agreements with system operators on the terms and conditions of their cooperation,
- introduction of procedures to be followed in the event of disturbances in the supply of natural gas, pursuant to Article 49 of the Act on Stocks, specifying the obligations in the event of a threat to the security of gas supply and an unforeseen increase in the consumption of natural gas by customers, the occurrence of disruptions in the supply of natural gas and the occurrence of an emergency situation in the customer's or supplier's installation,
- concluding inter-operator distribution agreements with technical annexes specifying detailed conditions of cooperation between PSG Sp. z o.o. and the cooperating distribution system operator.

PSG Sp. z o.o. fulfils the obligations of protecting measurement data of final customers, at whom the operator installed remote reading meters, connected to the operator's network, pursuant to the principles set forth in the provisions on personal data protection pursuant to Article 9c item 5a of the Energy Law Act.

In 2018 the President of ERO did not impose administrative penalties on energy companies operating in the gas sector for breaching the provisions of Regulation 715/2009 and regulations issued on the basis of the provisions of that Regulation.

4.2. Promoting competition

4.2.1. Wholesale market

As at the end of 2018, 197 entities held a licence for gas trade, as compared to 200 entities as at the end of 2017, while 102 undertakings actively participated in the trade in natural gas. Gas trading undertakings from outside the PGNiG Group acquired 97.1 TWh of natural gas. The data on purchase and sale of gas by trading companies are presented in the table below. This value does not incorporate acquisition for own needs by trading companies under monitoring and gas acquisition by large final customers.

Table 15. Volumes of gas acquired and sold under wholesale trading by the trading companies in 2018 [TWh]

	Total	PGNiG Group	Other trading companies
Gas acquisition (purchase and extraction)	395.5	298.4	97.1
Wholesale sales of gas	160.9	104.9	56.0

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

Natural gas exchange

The sale and purchase of gaseous fuels on the Polish wholesale market takes place primarily on the commodity exchange operated by POLPX. Exchange market participants are mainly gas fuel trading companies and the largest final customers which can act independently after concluding an appropriate agreement with POLPX, becoming exchange members or through brokerage houses. Gas exchange trading takes place by concluding sales agreements (transactions) between exchange members.

In 2018 POLPX carried out the following gas sales markets: Intraday Market (IDMg), Day-Ahead Market (DAMg) and Commodity Forward Instruments Market with Physical Delivery (CFMg). Sales of natural gas were also conducted in the auction system.

On the Commodity Forward Instruments Market with Physical Delivery supply of gas in equal volumes at all hours of the delivery period (weekly, monthly, quarterly and yearly) is traded.

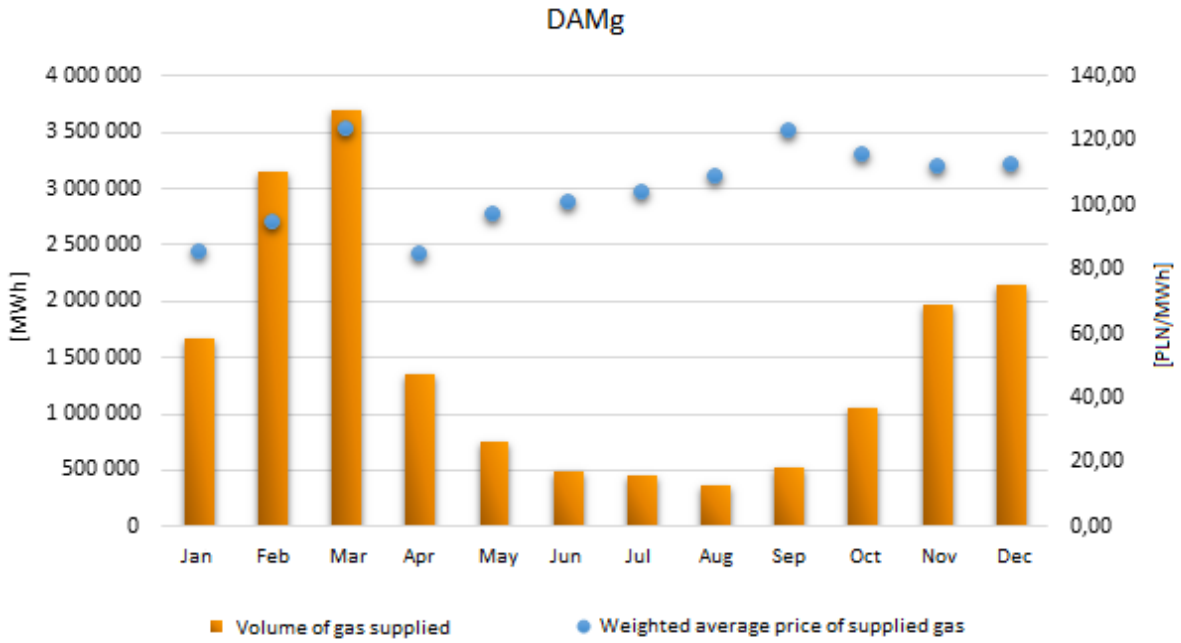
On the Day-Ahead Market, supply of gas in equal volumes at all hours of the delivery day (a single contract corresponds to the delivery of 1 MWh of gas in every hour of the delivery day) is traded.

Trading is conducted during one day preceding the date of delivery in the fixing and continuous trading system.

Trading on the Intraday Market is conducted in the continuous trading mode.

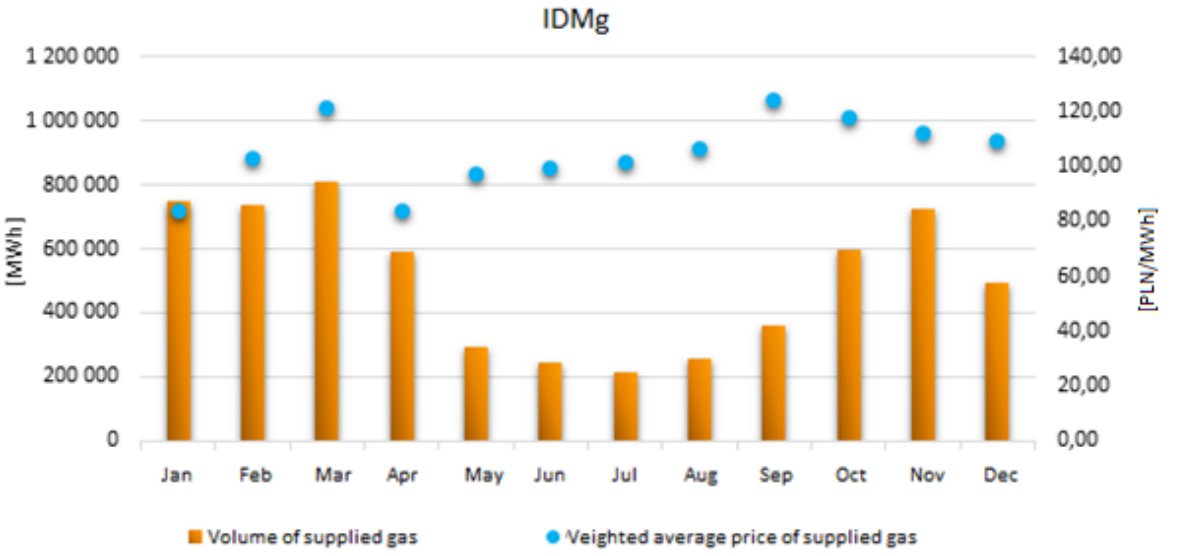
The figures below show the volume and price of gas delivered under contracts concluded on the Intraday Market, Day-Ahead Market and Forward Instruments Market with Physical Delivery for gas products.

Fig. 22. Volume and price of gas supplied as a result of the execution of contracts concluded on the Day-Ahead Market (DAMg), which were performed in 2018



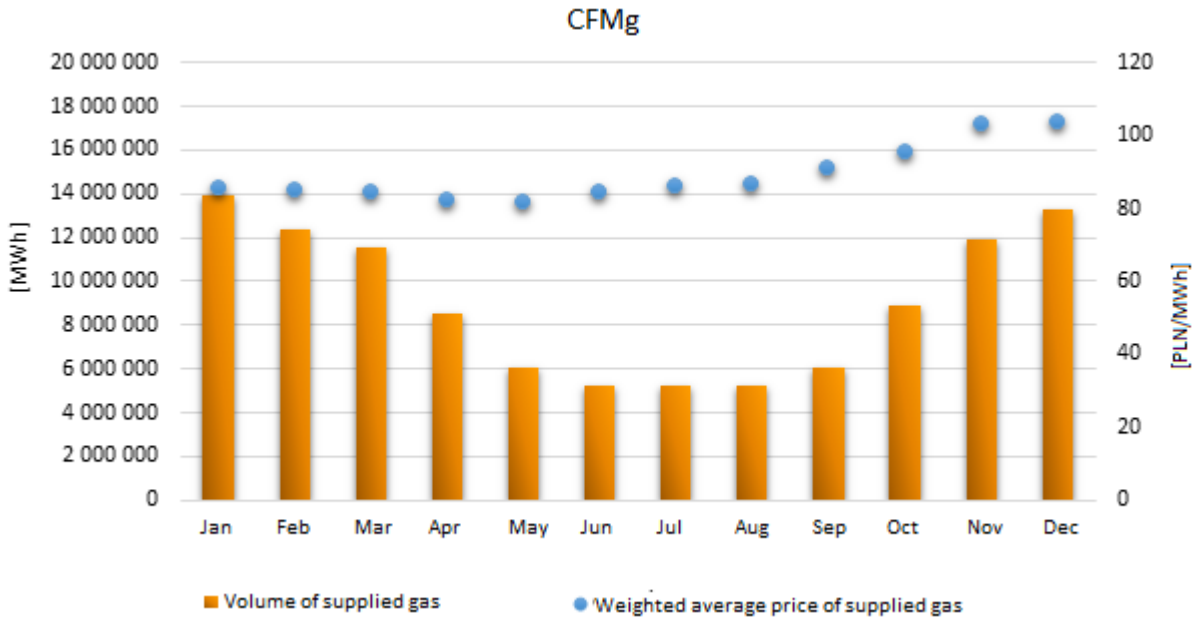
Source*: Own analysis on the basis of data provided by POLPX.*

Fig. 23. Volume and price of gas supplied as a result of the execution of contracts concluded on the Intraday Market (IDMg), which were performed in 2018



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

Fig. 24. Volume and price of gas supplied as a result of the execution of contracts concluded on the Commodity Forward Instruments Market (CFMg), which were performed in 2018



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

In 2018, as a result of contracts concluded on POLPX, in the entire period of listing a given type of contract, 132,161,649 MWh of natural gas were delivered at an average price of 92.97 PLN/MWh (17,640,196 MWh were delivered on the DAMg at the average price of 106.07 PLN/MWh; 6,072,251 MWh on the IDMg at the average price of 105.23 PLN/MWh and 108,449,202 MWh on the CFMg at the average price of 90.15 PLN/MWh).

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

In 2018, the President of ERO also monitored transactions concluded at the virtual point on the over-the-counter market. As a result of performance of contracts executed in the virtual point on the OTC market, regardless of the contract conclusion date, a total of 28.0 TWh of natural gas was delivered at an average price of 95.04 PLN/MWh. The prices in particular quarters in comparison to exchange prices and prices of gas purchase from the EU are presented in the Table below.

Table 16. Comparison of average prices from contracts of sales in the virtual point on OTC and purchase from abroad, in particular quarters of 2018 [PLN/MWh]

	QI	QII	QIII	QIV
Average price from contracts on sales in the OTC virtual point	87.00	87.36	98.12	112.68
Average price from contracts on sales via POLPX	89.38	83.99	90.97	103.32
Average price of natural gas purchase from abroad from EU Member States or EFTA Member States – parties to the EEC Agreement	84.72	90.61	96.71	104.13

Source: ERO 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.

4.2.2. Retail market

The analysis of the retail gas market was made by the President of ERO – separately for high-methane, nitrogen-rich gas and LNG - on the basis of annual monitoring of suppliers. The analysis showed that total sales of high-methane and nitrogen-rich gas to final customers in 2018 amounted to 206,161,845 MWh. In comparison to 2017, gas consumption, mainly by industrial consumers, increased. The sale of gas to final customers was dominated by entities from the PGNiG Group. The share of these entities amounted to 82.08% and it increased in comparison to the previous year by around 2%. The observed increase of the PGNiG Group's share in the sale of gaseous fuel to final customers since 2017 was due to a significant drop in gas purchases from abroad directly by large (industrial) final customers for their own needs and to purchase from the PGNiG Group. This was mainly due to changes in legal regulations regarding mandatory stocks. The remaining 17.92% of gas sales to final customers were made by other suppliers selling gas to final customers in Poland. The table below presents information on the structure of natural gas sales to final customers.

Table 17. Structure of sales of natural gas to consumers in 2018 [MWh]

Sales of high-methane and nitrogen gas to final customers			
	Alternative sellers	GK PGNiG	Total
Sales of gas to final costumers	36,936,155	167,497,381	204,433,536
Out of which: industry	29,601,263	108,799,885	138,401,148
agriculture	85,804	359,423	445,227
services and public utility	5,661,882	13,270,512	18,932,394
households	1,587,206	45,067,561	46,654,767
Consumption for own needs	14,681	1,713,628	1,728,309
Total	**36,950,836**	**169,211,009**	**206,161,845**

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

The President of ERO also monitored the sale of LNG in 2018. The LNG acquisition was 38,858,704 MWh, the majority of which was obtained through the LNG terminal in Świnoujście. Most of the LNG gas acquired was sold to final customers after regasification and the introduction of high-methane gas to the gas network. As indicated in the table below, the volume of LNG gas sales to consumers amounted to approx. 423,887 MWh and was performer exclusively by alternative suppliers.

Table 18. Structure of LNG sales to final customers in 2018 [MWh]

	Alternative suppliers
Sales of gas to final customers by suppliers operating in Poland	423,887
Out of which: industry	381,945
agriculture	-
services and public utility	41,280
households	662

Source: ERO on the basis of survey of selected suppliers.

Monitoring supplier switching

The TPA principle, regulated in Article 4 item 2 of the Energy Law Act, means that the consumer can use the local distributor's network to supply gas or electricity purchased from any supplier. As of 1 July 2007, all gas consumers obtained the right to freely choose and change the supplier. The number of

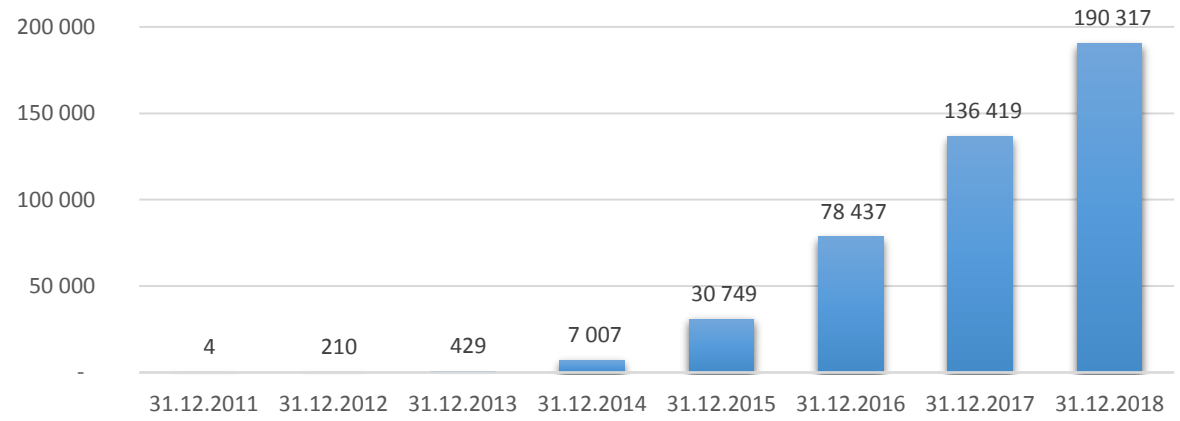
supplier switchings is a simple but authoritative measure of the development of a competitive gas market. Therefore, the President of ERO systematically monitors the degree of effective use of the right to choose a supplier by eligible consumers. Systematic monitoring of the degree of real use of the right to choose a supplier was undertaken due to the gradually progressing liberalization of the gas market.

The freedom to choose supplier is influenced by several important factors, including the level of consumer awareness and motivation to change the supplier, as well as the ease of switching or the number of competitive offers available on the market.

The analysis of data from completed surveys shows an increase in the number of consumers switching supplier in 2011-2018. In 2011, only a few cases of switching were noted, in 2012 their number increased to 210, while the total number of switches from the beginning of monitoring until the end of 2018 was already 190,317.

The chart below shows the dynamics of supplier switching (according to the number of switchings).

Fig. 25. Number of switches of natural gas supplier by final customers (according to the number of switchings)



Source: ERO's own analysis.

The above figure does not include cases of last resort supply launched for customers in September 2018 after two trading companies (with a total of 55,730 customers) ceased operations.

It is worth noting that out of 190,317 supplier switches made by the end of 2018, the vast majority (as many as 181,453 cases) concerned W 1-4 tariff groups, i.e. mainly households. This may be due to the intensification of advertising campaigns dedicated to this group of consumers. The growing interest of consumers in switching supplier on the gas market is also visible in the intensification of telephone enquiries addressed to the Information Point for Energy and Gas Fuels Consumers - a unit operating within the Energy Regulatory Office, whose purpose is to inform consumers about their rights on the energy markets, but also about their obligations towards energy companies.

An important factor supporting the increase in the number of supplier switching on the gas market is the DSO having as many as possible contracts signed with supplier for the provision of gas fuel distribution services (Framework Agreements). Framework Agreements, concluded between the operator and the supplier, define the terms and conditions of the supplier's operation at the operator's operational area, and its cooperation with this operator. At the end of the fourth quarter of 2018, 145 suppliers had valid contracts with the TSO, out of which 82 suppliers also had agreements with DSO - PSG Sp. z o. o

Tariffs for gaseous fuels

Pursuant to Article 29 item 4 of the Tariff Ordinance, the prices of gaseous fuels and subscription fee rates set in the tariff have the character of maximum prices and subscription fee rates. In settlements

with consumers, the gas supplier may use lower prices and subscription fee rates than those set in the tariff approved by the President of ERO, provided that the consumers are treated equally in individual tariff groups. Pursuant to the provisions of Article 47 of the Energy Law Act, energy companies develop a tariff according to the scope of their activity (licenses held) and submit it for approval to the President of ERO, which approves or refuses to approve the tariff, if it finds that it has been established contrary to the provisions of Articles 44-46 of the Act. Whereas the provision of Article 45 item 1 of the above Act requires energy companies to calculate tariffs in a manner that ensures: covering the justified costs of their operations, a justified return on equity engaged in this activity, and protecting the interests of customers from unjustified levels of prices and rates.

The rules for tariff calculation in 2018 have not changed in relation to the rules in 2017.

In the procedure for approving the tariff, the President of ERO shall in particular examine whether the prices and fee rates set out in the tariff have been calculated in accordance with Article 45 of the Energy Law Act, i.e. whether they ensure coverage of only justified costs and protect the interests of consumers against their unjustified level.

The year 2018 was special due to the fact that it was a full year in which tariffs set by energy companies for the gas sale are subject to approval by the President of ERO if gas is sold to households, and there was a significant increase in the gas prices on POLPX. Therefore, from the point of view of households, the key factor is the tariff of PGNiG OD Sp. z o.o., which supplies gas to over 90% of households. In 2018 the President of ERO approved two modifications to the tariff for the above mentioned company. The above modifications caused an increase in prices. The main reason for the increase in gas prices is the significant increase observed since May 2018 in the cost of purchase of high-methane natural gas bought by the company on POLPX, which is the main source of purchase of this raw material by PGNiG OD Sp. z o.o.

In 2018 the President of ERO made and published two tariff decisions concerning prices and fee rates for households, applied by PGNiG OD Sp. z o.o. The first one concerns the modification of the tariff and the change of its period of validity, the second one concerns the modification of the tariff. The first decision - made by the President of ERO and published in the ERO's Bulletin on 14 March 2018 - came into force on 1 April 2018. The second one, however, made on 25 July 2018 and published on 26 July 2018, entered into force on 10 August 2018.

The modification of tariff no. 6 of the designated company, approved on 14 March 2018, concerned both the change of prices and the change of duration - by extending it until 31 December 2018. In connection with the announcement on 9 February 2018 of the communiqué of the President of the Central Statistical Office on the average remuneration in the national economy in 2017, which constitutes the basis for determining the amount of discounts for failure to meet the quality standards of customer service, the value of discounts was also adjusted. On the other hand, fuel prices (as a commodity) were increased by 1% due to an increase in the cost of purchase of high-methane natural gas purchased on POLPX. As a result, average trading prices increased by 0.9% for both high-methane and nitrogen-rich gases. Subscription fee rates remained unchanged.

On 25 July 2018, the second modification to tariff no. 6 of PGNiG OD Sp. z o.o. was approved. The reason was an unforeseen significant change in the conditions of conducting business, consisting in an increase in the costs of purchase of high-methane natural gas on POLPX.

The prices of gas were increased by 5.9% compared to the binding tariff. Due to the fact that the subscription fee rates remained unchanged, the increase in average payments in trading grew by 5.3% for both high-methane and nitrogen-rich gas.

The increase in average monthly payments for households serviced by PGNiG OD Sp. z o.o. connected to the PSG Sp. z o.o. distribution network in 2018 was as follows:

- for consumers qualified to the W-1 group using gaseous fuel for cooking, for the average annual domestic consumption of 1,312 kWh, this increase amounted to (+)0.1%, which means an increase in average monthly payments by PLN 0.03,
- for consumers qualified to the W-2 group using gaseous fuel for cooking and heating water, for the average annual domestic consumption of 7,367 kWh, this increase amounted to (+)1.7%, which means an increase in average monthly payments by PLN 1.61,

- for consumers qualified to the W-3 group using gaseous fuel for cooking, heating water and heating rooms, for the average annual domestic consumption of 22,339 kWh, this increase amounted to (+)1.9%, which means an increase in average monthly payments by PLN 5.29.

Despite an increase in monthly payments in 2018, the monthly payment for these consumers as compared to the payment in force on 31 December 2014 decreased for the average statistical consumption by consumers. For W-1, W-2 and W-3 consumers, the average monthly decrease was (-) 10.8%, (-) 12.8% and (-) 11.8%, i.e. PLN (-) 2.80, (-) 12.84 and (-) 37.58, respectively.

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, in particular supervision over security of natural gas supplies, is the Minister of Energy. At the same time, this minister was also the competent authority within the meaning of Regulation 2017/1938, that is an authority responsible for the implementation of measures specified in the above mentioned Regulation, with the purpose to ensure security of gas supply.

In 2018 the regulator cooperated with the Minister of Energy with respect to ensuring the security of gas supply in relation to the tasks resulting from the aforementioned regulation and Directive 2009/73/EC, in connection with the competences of the President of ERO determined by national legislation.

4.3.1. Monitoring balance of supply and demand

Purchases of gas from abroad, in the amount of 163.5 TWh, were supplemented with gas originating from domestic sources in the amount of 42.4 TWh. The total gas supply from abroad in 2018 included import and intra-Community acquisition. In 2018 the import from the East, carried out as part of a long-term contract concluded between PGNiG S.A. and Gazprom, continued to be important.

Information on the structure of gas supply in 2018 is presented in the table below.

Table 19. Structure of gas supply in 2018.

Specification	Quantity [TWh]
1. Supplies from abroad	163.5
2. Extraction from domestic sources	42.4
3. Change in stock status	1.3

Source: ERO based on data provided by OGP GAZ-SYSTEM SA and gas trading companies.

In 2018, 557.1 TWh of high-methane gas and 8.3 TWh of nitrogen-rich gas flowed through the Polish transmission system. Most of the high-methane gas was transported via the Yamal gas pipeline. The table below presents the most important directions of gas flow in the transmission system.

Table 20. Balance of trade flows* of high-methane and nitrogen-rich gas in the transmission network (including the Transit Gas Pipeline System) in 2018

2018			
Gas type		High-methane gas	Nitrogen-rich gas
System entry - total [TWh]		**557.1**	**8.3**
Out of which:	mines and nitrogen removal plants	23.1	4.3
	storages	25.0	0.0
	supplies from outside EU (excluding LNG)	443.2	0.0
	supplies from EU	34.8	0.0
	LNG terminal	29.5	0.0
	other (entry from distribution)	1.5	4.0
System exit - total [TWh]		**557.1**	**8.3**
Out of which:	blending facilities and nitrogen removal plants	0	2.0
	storages	24.0	0.0
	to distribution network	135.8	6.1
	to final customers on distribution network	45.9	0.2
	supplies to EU	339.7	0.0
	supplies outside EU	7.3	0.0
	operator's own needs (including change of operator's account status)	4.4	0.0

* Data refer to the amount of gas fed into and offtaken from the transmission network as a result of the implementation of transmission contracts by the TSO. These data may differ from physical flows in the system.

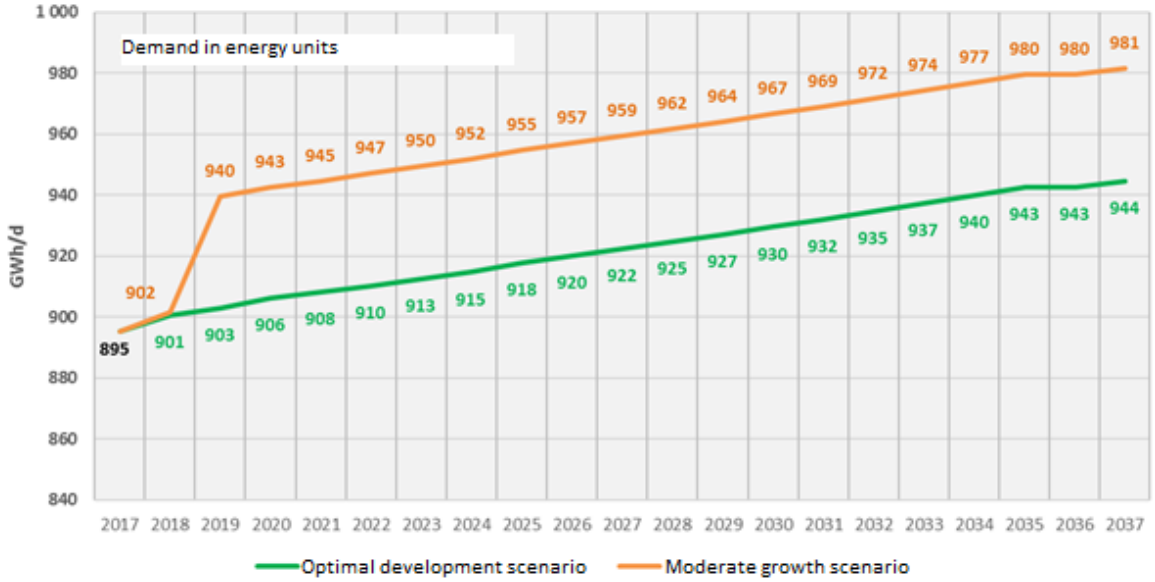
Source: ERO based on data provided by OGP Gaz-System S.A. and EuRoPol GAZ S.A.

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 2018–2027 and presented in the Report of the President of ERO for 2017. This demand remained unchanged in 2018.

Expected future demand for transmission services has been specified by OGP Gaz-System S.A. in the NTYDP for 2018–2027 in 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.

Fig. 26. 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 2018–2027", p. 44.

When developing the forecasts indicated above, the TSO took into account (i) statistical data of the Central Statistical Office on gas consumption broken down by administrative units and groups of customers for the years 2009-2015, (ii) own reporting data, including settlement data, for the years 2010-2016 and own analyses of the transmission system operation in the same period, and (iii) own analysis of investment plans on the electricity market based on signed connection agreements and connection terms and conditions issued to potential customers from this sector of economy.

The basic factors with the strongest impact on demand for gas transmission in the years 2017-2037 will include:
- electricity and heat production on the basis of gaseous fuels,
- GDP growth,
- gas price.

Compared with the forecast presented in the previous NTYDP for the years 2016-2025 OGP Gaz-System S.A. made minor adjustments to forecasts of gas demand. And so, in the MG option of the NTYDP for the years 2018-2027 for 2022, the demand was estimated at 16.6 billion m³ of gas, and in the previous NTYDP (for 2016-2025) - at 16.0 billion m³ (increase by 3.75%). For the OD option, these figures are 17.9 billion m³ and 18.7 billion m³, respectively (decrease by 4.28%). Therefore, the forecasts of demand growth for the OD option have decreased in the last two years, while for the MG option they have slightly improved. Therefore, the effect of these changes in the expected actual demand for a gas transmission service (between the options indicated), should be assessed as neutral in relation to the previous NTYDP.

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

Monitoring of the security of gas supply, carried out in 2018, was focused on the areas of the market functioning which related in particular to the issues referring to:
- licences,
- tariffs,
- approving the plans of introducing restrictions to the natural gas consumption, developed by the operators,
- analysis of information provided to the President of ERO (pursuant to Article 27 (2) of the Act on Stocks) by undertakings binging in natural gas from abroad for the purpose of its further resale to

customers,
- 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,
- giving consents for the conclusion of the so-called ticket agreements[65],
- monitoring of congestion management,
- trade restrictions in the gas supply introduced in 2017,
- monitoring conditions for network connection and their implementation,
- diversification of natural gas supply from abroad.

The above-mentioned tasks have been described in detail in the individual parts of this Report, as well as in the Reports for previous years. In carrying out these tasks, the President of ERO is guided primarily by the requirements of the applicable laws.

Particularly noteworthy is the monitoring of the safety of gaseous fuels supply carried out in 2018 with respect to issues related to:

- licences

As already indicated in last year's report, licences for foreign trade in natural gas are issued with consideration of diversification of natural gas supplies and energy security. An energy company dealing with foreign trade in natural gas is obliged to diversify natural gas supplies from abroad (Article 32 item 2 of the Energy Law Act). In addition, in 2018, licences for foreign trade in natural gas included a condition relating to the obligation to diversify natural gas supplies. As part of the procedure for granting licences for foreign trade in natural gas, the President of ERO also verifies whether the applicant has submitted a declaration to comply with the obligation to diversify.

- diversification of supplies of natural gas from abroad

In 2018, the President of ERO monitored compliance with the provisions of the Ordinance of the Council of Ministers of 24 April 2017 on the minimum level of diversification of natural gas supplies from abroad by energy companies licensed to foreign trade in natural gas in 2017. This monitoring covered the period from 10 May to 31 December 2017, and covered 71 entities. Due to the need to supplement the information and documentation provided, these activities were continued in 2019.

On the other hand, the proper fulfilment of the 2018 diversification obligation by energy companies holding a licence for foreign trade in natural gas in 2018 will be monitored by the President of ERO in 2019.

[65] Pursuant to Article 24b item 1 of the Act on Stocks, an energy company conducting business activity consisting in foreign trading in natural gas and an entity importing natural gas may entrust, under a contract, performance of tasks related to maintaining mandatory natural gas reserves to another energy company engaged in foreign trading in natural gas or energy company conducting business activity in the area of gas trading. Before concluding such an agreement, the company or entity is obliged to submit the draft contract to the President of ERO and obtain consent to its conclusion. In 2017, the President of ERO, by way of a decision, gave consent to the conclusion of ticket agreements to 11 obligated entities.

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 Coordinator for Negotiations established with the President of ERO as a support for consumer

Since May 2017 the Coordinator for Negotiations has been operating with the President of ERO. The Coordinator's 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 grid, 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) complex agreements.

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.

The tasks of the President of ERO include, among others, carrying out information activities addressed to the electricity and gas consumers. In particular, these activities cover publishing on the ERO's website information on recurring or significant problems leading to disputes between energy enterprises and household consumers of gas or electricity, as well as on energy companies on which these consumers complained about. As part of information actions, information is provided to energy and gaseous fuels customers via comprehensive information point comprising an info-line to inform and promote the right to switch supplier. In order to fulfil this task, there is the Information Point for Fuel and Energy Customers within the structure of ERO, where consumers 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.

Pursuant to the obligation imposed by the Energy Law Act, gas and electricity suppliers shall provide household consumers with copies of the Set of Energy Consumer Rights developed by the President of ERO in cooperation with the President of UOKiK, and ensure public access to this document.

In 2018 the President of ERO analysed the information collected under monitoring of the obligation of electricity suppliers to provide a set of electricity consumer rights to household customers. On the basis of the information provided by energy companies, it was established that the companies covered by monitoring delivered a set of electricity consumer rights to 90.6% of household consumers. Taking into account the information collected during the monitoring process, the President of ERO published on the ERO's website the public recommendations on the delivery of the Set of Rights to household consumers, and on its publication and updating on the suppliers' websites.

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 consumers. 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 agreement on sales of electricity or gas, and reside in the place of supplying this energy or fuels. At the end of 2018, the amount of the energy allowance for households amounted to PLN 11.35, PLN 15.77 or PLN 18.92 PLN per month, depending on the number of persons in the household: 1, 2 to 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).

Notwithstanding the above, it should be pointed out that the President of ERO, acting to strengthen the position of consumers, especially vulnerable ones, took part in the work of the Team established by the Minister of Energy's order of 26 June 2017 on reducing energy poverty, to develop proposals for assumptions for a comprehensive public policy that ensures protection of vulnerable consumers against energy poverty. The area of work was the analysis and evaluation of the functioning of measures, programmes and support systems implemented so far, addressed to households in the areas of energy poverty and an attempt to develop a legal definition of energy poverty. The team's work resulted in two reports approved in April 2018 and submitted to the Plenipotentiary of the Prime Minister for the Clean Air Programme, who coordinated the draft assumptions of a comprehensive public policy ensuring optimal protection of vulnerable social groups against energy poverty.

In addition, in 2018, the President of ERO took part in the project "Technical support for defining, measuring and monitoring energy poverty in Poland", established at the request of the Ministry of Energy under an agreement concluded on 18 June 2018 between the Structural Reform Support Service of the European Commission, the Institute for Structural Research and the Ernst&Young Company, which are the project contractors. The aim of the project was primarily to create a statistical model for monitoring energy poverty in Poland and to develop characteristics of energy poverty. The project was completed in November 2018.

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 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 authorized 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 purchased gaseous fuels or services related to their supply provide consumers 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]),
- gas consumption in the settlement period, expressed in [kWh],
- whether the indicated consumption is the actual or forecasted consumption.

5.2. Dispute resolution

Pursuant to Article 8 item 1 of the Energy Law Act, the President of ERO, at the request of a party, resolves disputes concerning: (i) refusal to conclude a grid connection agreement, including those related to increasing connection capacity, (ii) sale agreement, (iii) agreement to provide transmission or distribution services for fuels or energy, (iv) agreement to provide natural gas transport services, (v) agreement to provide storage services for gas fuels, (vi) agreement referred to in Article 4c item 1 of the Energy Law Act, (vii) agreement to provide services for liquefaction of natural gas (viii) and a comprehensive agreement. The regulator also resolves disputes in the event of an unjustified suspension of gaseous fuels or energy supply, refusal to connect a renewable energy installation in the first place, refusal to connect a microinstallation, failure to connect a microinstallation despite the expiry of the deadline referred to in Article 7 item 8d7 section 2, unjustified limitation of operation or disconnection of a microinstallation from the network.

In 2018, 28 decisions pursuant to Article 8 item 1 of the Energy Law Act were issued in disputes concerning energy companies' refusal to conclude agreements on the connection of RES (excluding microinstallations) to the power grid. In this respect, 7 decisions were issued stating the existence of a public-law obligation to connect to the grid and ruling on the conclusion of agreements on the connection of RES to the power grid, as well as 13 administrative decisions stating that there are no technical or economic conditions for the connection of a RES installation to the power grid. In 7 cases, decisions discontinuing administrative proceedings were issued and 1 self-auditing decision was issued.

Table 21. Statistical data – cases under dispute related to refusals to connect RES to the electricity network in 2018

Number of settled cases	Number of decisions in which a public legal obligation to conclude a grid connection agreement was stipulated	Number of decisions in which no public legal obligation to conclude a grid connection agreement was stipulated	Number of decisions stating no need to adjudicate a case	Number of decisions repealing the decisions issued as part of self-audit
28	7	13	7	1

Source: ERO.