PGNiG Head Office
25 M. Kasprzaka St.
01-224 Warsaw
Tel. +48 22 589 45 55
www.en.pgnig.pl

PR Department
Tel. +48 22 589 44 49
media@pgnig.pl

Marketing Department
Tel. +48 22 691 45 92

Investor Relations Team
Tel. +48 22 589 43 22, +48 22 589 48 46,
+48 22 589 47 97
ri@pgnig.pl
www.en.pgnig.pl/investor-relations

PGNiG

Annual Report 2016

PGNiG - Polish Oil and Gas Company

Annual Report 2016

PGNiG - Polish Oil and Gas Company

View the Annual Report online

Visit www.en.pgnig.pl
to view the Annual Report
in interactive format
or download it as
a PDF file.

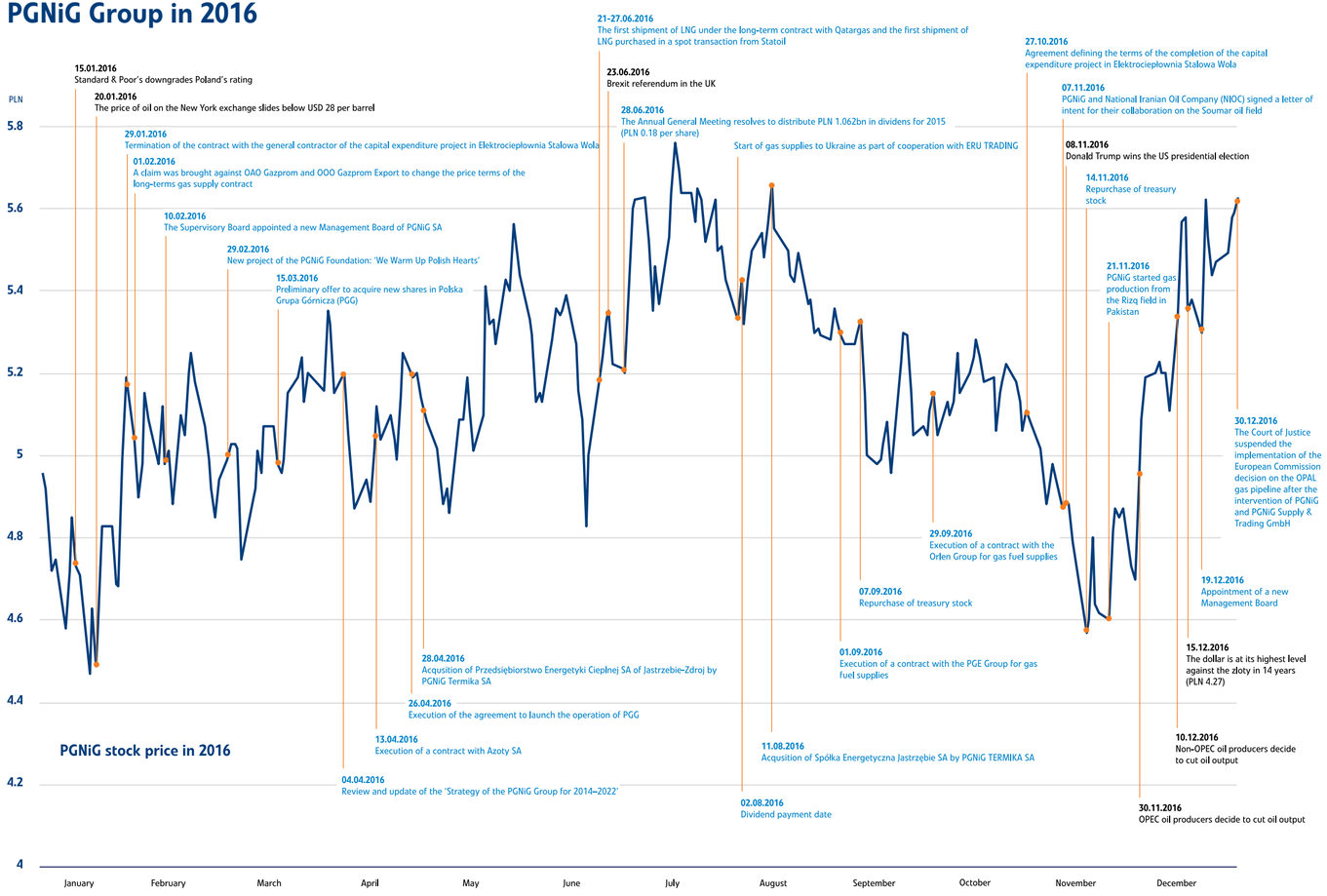
Legend

Notes in the margins refer to information highlighted in the Report.

- key to acronyms and abbreviations used in the Report
- websites containing additional information
- supplementary information, definitions and comments

PGNiG

PGNiG Group in 2016



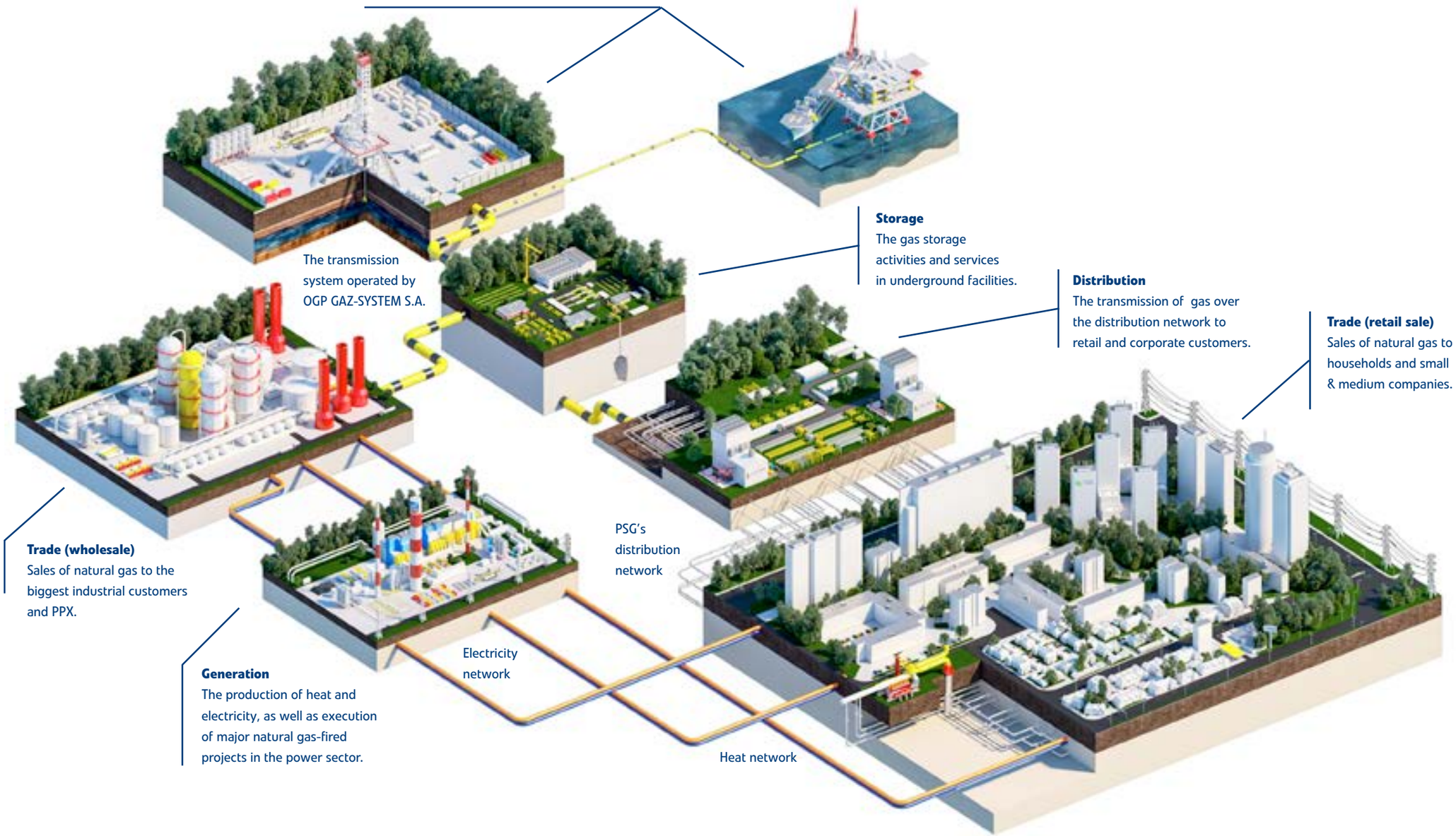
Contents

Annual Report 2016

PGNiG - Polish Oil and Gas Company

Our business model

Exploration & Production
The entire process of oil and gas exploration and production, from geological analyses, to geophysical surveys and drilling work, to field development and hydrocarbon production.



Contents

PGNiG
key figures

PGNiG Group in 2016

PGNiG on WSE

5.5 EV/EBITDA

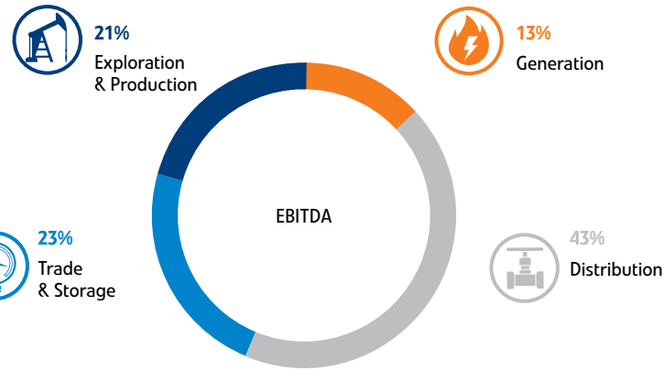
13.8 P/E

1.0 P/BV

25.5 PLN m average daily turnover

4th largest company on WSE

32.5 PLN bn market capitalisation



PGNiG Group in 2016

33.2 PLN bn revenue

6 PLN bn EBITDA

3.4 PLN bn EBIT

2.3 PLN bn net profit

49.7 PLN bn total assets

25.3 thousand employees

7.3% ROE

4.7% ROA

Exploration & Production

1.3 m tonnes production of crude oil, condensate and NGL

over 2 thousand producing wells

4.5 bcm production of natural gas

54 of oil and gas production facilities in Poland

48 hydrocarbon exploration and appraisal licences

225 production licences

770 mln boe oil and gas reserves

Trade & Storage

24.3 bcm volume of gas sold

9.1 bcm volume of gas sold via the PPX

11.5 bcm volume of imported gas

3.2 bcm gas storage capacities

Distribution

6.9 m number of customers

1.5 thousand municipalities/communes connected to the gas grid

10.9 bcm volume of distributed gas

Generation

397 km length of heat distribution network

3.6 TWh electricity output

1.1 GW electric power

40 PJ heat output

5.4 GW thermal power

Letter from the Chairman of the Supervisory Board

Ladies and Gentlemen,

In 2016, the PGNiG Management Board faced the need to take decisions critical to the future positioning of the business. These decisions concerned key agreements and investments, as well as work on a new strategy for 2017-2022. Last year was also a period of intensive work for the Supervisory Board, who provided opinions on numerous proposals put forward by the Management Board, assisting it in the delivery of bold business goals and the policy to enhance national energy security.

The Supervisory Board expressed a very favourable opinion on the Management Board's performance against the previous strategy, and supported them in developing the 2017-2022 strategic plan. This means that PGNiG has at the helm a competent management team, who – looking beyond the strong financials and robust operating performance – understand the need to further solidify PGNiG's position in a changing market. The ambitious investment programme, designed to grow the Group's value in the long term, demonstrates PGNiG's commitment to maintaining leadership in the domestic gas market.

Last year, the Supervisory Board closed the recruitment process to select members of the Management Board for a new term. I am confident that the team of experienced and seasoned professionals we finally appointed is the right choice. For the next three years, they have taken on the hard work of managing PGNiG, which operates in the fast-changing and demanding markets of natural gas, crude oil, electricity and heat.

2016 brought with it new challenges for PGNiG as a listed company, particularly with respect to compliance with corporate governance rules and an appropriate disclosure policy. We believe that PGNiG is adequately prepared for new regulations coming into force, inclu-ding those related to fulfilment of disclosure requirements. In addition, the Institute of Accounting and Taxes and the Gazeta Giełdy Parkiet daily recognised PGNiG for its efforts to raise corporate governance standards, ranking it among the most transparent companies of the year 2016.

In 2017, as in previous years, the Supervisory Board will work with the Management Board to deliver the objectives of the new strategy. As part of our role, we will continue to support initiatives creating value for PGNiG, and to provide corporate governance oversight. Our common goal is to further improve PGNiG's transparency and build its reputation of a reliable business partner among all stakeholders.

I am convinced that a consistent effort to deliver these objectives will help PGNiG towards sustainable growth in the years ahead.

With best regards,

Bartłomiej Nowak
Chairman of the Supervisory Board

Letter from the President of the Management Board

Ladies and Gentlemen,

I have the honour to present to you this Annual Report of PGNiG SA and its Group for 2016.

Last year it was the PGNiG Group's revised strategy that provided direction and focus to all our efforts. In revising the strategy, not only did we modify the existing strategic initiatives in key business areas, but we also added several new projects.

This led to solid financial performance at the consolidated level – we generated revenue of PLN 33.2bn and operating profit of PLN 3.4bn. Despite the persistently low prices of hydrocarbons globally, the Group's EBITDA came in at PLN 6bn, on a par with the previous year. The effect of the macroeconomic backdrop was a lower contribution to overall performance of the Exploration and Production segment. This, however, was offset by the strong performance in Trade and Storage, which doubled its previous year's operating profit as a result of the effective sales policy based on expanding customer relations. In 2016, we entered into a number of new contracts with both wholesale and SME customers. We also rolled out attractively priced dual fuel plans for retail customers, with gas and electricity supplies bundled in a single contract. During 2016, we sold almost 1.4 bcm more of natural gas than in 2015. We also launched gas exports to Ukraine.

The Distribution and Generation segments saw sustained year-on-year growth of approximately 10% each. The financial health and business reliability of the PGNiG Group are also confirmed by our investment grade rating.

In view of the need to develop a new gas procurement strategy beyond 2022, we decided to go ahead with projects designed to further diversify our supply sources, connected primarily with the 'Norwegian Corridor'. We see strong prospects for the future in our operations on the Norwegian Continental Shelf. Last year, our Norwegian assets yielded 0.5 bcm of natural gas, but we have plans to ramp up the annual gas production to 2.5 bcm by 2025. In 2016, we received the first deliveries of liquefied natural gas at the Lech Kaczyński Terminal in Świnoujście – seven shipments under the Qatar contract and one spot delivery from Statoil. We opened an office in London, the world's LNG trading hub, which will enable us to trade in LNG on international markets.

We launched a multi-year upstream project that will make use of innovative technologies to extract coal bed methane. Work is also under way on a new extended 'R&D&I' (research, development and innovation) strategy to create new innovation support tools. We embarked on a project to develop framework and tools for establishing partnership relations with start-ups, to be used in the delivery of our strategy.

In 2016, we also worked on streamlining the Group's organisation, which included the adoption of a new strategy by Polska Spółka Gazownictwa Sp. z o.o. and the acquisition of Przedsiębiorstwo Energetyki Cieplnej S.A. of Jastrzębie Zdrój and Spółka Energetyczna Jastrzębie S.A. by PGNiG TERMIKA S.A. Our projects in the coal mining sector are moving forward in line with the business plan adopted in April 2016.

In 2017, we aim to solidify our position in the domestic and European energy markets. I would like to thank our Customers and Shareholders for the trust they place in us.

Kind regards,

Piotr Woźniak
President of the PGNiG Management Board

Regulatory and market environment

Regulatory and market environment

Regulatory environment

The regulatory environment of the PGNiG Group is formed by a combination of national and EU laws.

LNG - liquefied natural gas, natural gas condensed into liquid form.

Regulatory environment in Poland

Energy Law

The Energy Law is the main legal act governing the operation of the energy sector in Poland. In particular, it specifies the rules of development of the national energy policy, matters concerning the supply and use of fuels, energy and heat, and lays downs rules of operation applicable to utility companies. The Energy Law also defines the authorities competent for matters of fuel and energy management.

The Energy Law of April 10th 1997 (consolidated text: Dz. U. of 2012, item 1059 as amended).

As at December 31st, 2016, the PGNiG Group companies held the following licences granted by the President of Energy Regulatory Office (URE) under the Energy Law:

- 3 licences to trade in gas fuels;
- 1 licence to trade in natural gas with foreign partners;
- 1 licence to trade in liquid fuels (the licence expired in January 2017 by operation of law);
- 3 licences to produce electricity;
- 4 licences to trade in electricity;
- 3 licences to produce heat;
- 2 licences to trade in heat;
- 3 licences to transmit heat;
- 2 licences to liquefy and regasify LNG at LNG regasification plants;
- 1 licence to store gas fuel in storage facilities;
- 1 licence to distribute gas fuels.

CNG - compressed natural gas, natural gas compressed to a pressure of 20-25 MPa.

In 2016, the Energy Law was amended and the key legislative changes included:

- An amendment whose main objective was to improve the organisation of the liquid fuels and natural gas markets and to enhance Poland's energy security by introducing changes to the system of crude oil and fuels emergency stocks and to enhance security of natural gas supplies;
- An amendment whose main objective was to abolish the system of administrative regulation of natural gas prices. The adopted timetable provides for exemptions from the obligation to submit gas tariffs for approval in respect of:
  - wholesalers and end customers purchasing gas fuel (i) at a virtual gas trading point, (ii) in the form of LNG or CNG, and (iii) under a tender, auction or public procurement procedure pursuant to the provisions of the Public Procurement Law of January 1st, 2017;
  - other end customers (businesses) as of October 1st, 2017;
  - households as of January 1st, 2024.

PGNiG SA actively participated all key initiatives to amend the Energy Law, presenting its positions and proposals how to protect the interests of the PGNiG Group and its customers.

Act on Emergency Stocks

The Act on Emergency Stocks lays down the rules for creating and maintaining emergency stocks of natural gas and procedures for monitoring and proper enforcement of the act. The act also sets out the rules to be followed in the event of any threat to Poland's energy security.

On July 22nd, 2016, the Act Amending the Energy Law and Certain Other Acts was passed. With respect to emergency stocks of natural gas, the amendment extends the list of obligated entities to include gas importers, and removes exemptions from the obligation enjoyed by utilities with fewer than w100 thousand customers and importing less than 100 mcm of natural gas in a calendar year. Until the amendment of July 22nd, 2016, the obligation to maintain mandatory stocks of natural gas applied only to energy companies engaged in the business of importing natural gas for resale to customers. The obligation therefore applied only to trading companies. Under the amendment, however, the obligation was extended to cover companies importing natural gas for their own consumption.

The Act on Emergency Stocks also allows those of the obligated entities which have no reserved storage capacities of their own to cover the obligation by contracting ticketing services from third parties.

The developed solutions contribute to Poland's energy security and provide a more level playing field for competitors on the Polish gas market.

Energy Efficiency Act

Energy Efficiency Act establishes an energy efficiency obligation scheme which implements into the Polish legal system the provisions of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ EU L 315 of November 14th 2012). Pursuant to the act, obligated entities are required to generate savings in final energy consumption of 1.5% each year. The Energy Efficiency Act references two principal methods to fulfil this obligation:

- to implement a project or projects designed to improve end customers' energy efficiency;
- to obtain an energy efficiency certificate and to submit the certificate to the President of URE for redemption.

The Energy Efficiency Act of May 20th 2016 (Dz.U. of 2016, item 831).

Act on Stocks of Crude Oil, Petroleum Products and Natural Gas, and on Rules to be Followed in the Event of Threat to National Fuel Security or Disruptions on the Petroleum Market of February 16th 2007 (consolidated text: Dz.U. of 2016, item 1899, as amended).

The act provides for the option to fulfil the obligation by paying a substitution fee. However, as a rule this option cannot be exercised to cover more than 30% of the obligation for 2016, 20% for 2017, and 10% for 2018.

In 2016, PGNiG was actively involved in the legislative process aimed at adopting the new Energy Efficiency Act. The Company's proposals concerned abolishing the preferences given to natural gas purchases with delivery at the border and reinstatement of deductions from the basis used for calculation of the obligation.

Act on Special Hydrocarbon Tax

Act on Special Hydrocarbon Tax of July 25th 2015 (consolidated text: Dz.U. of 2016, item 979).

The Act on Special Hydrocarbon Tax stipulates a special tax regime where the tax base is the surplus of revenue generated from hydrocarbon extraction activities in a given year over the eligible expenditures incurred in a given tax year. The date of receipt of receivables is deemed to be the date on which revenue from hydrocarbon production is generated. The date of payment of liabilities is deemed to be the date on which an eligible expenditure is incurred.

The obligation to pay special hydrocarbon tax (SHT) will only apply in respect of revenue generated after January 1st, 2020. Nevertheless, the obligation to keep appropriate tax records and to file relevant tax returns with the competent tax authority have been in force since January 1st, 2016.

In the first tax year, i.e. the year beginning January 1st, 2016, SHT payers may include in their eligible expenditures any expenditures they incurred in the four calendar years preceding January 1st, 2016, and also – to a specified extent – the value of property, plant and equipment associated with the hydrocarbon production business which they acquired or generated internally in earlier periods as well as the value of fixed assets under construction in the amount determined as at January 1st, 2012.

Geological and Mining Law

The Geological and Mining Law specifies, without limitation, the terms and conditions for performing geological work, extraction of minerals from deposits, storage of waste matter in rock mass (including in worked-out caverns), protection of mineral deposits, underground waters and other components of the environment in connection with geological works and extraction of minerals.

Business activities involving the exploration and appraisal of mineral deposits, the extraction of minerals from deposits, tankless storage of substances and storage of waste matter in rock mass, including in worked-out caverns, require a licence.

From the perspective of the conduct of such business, important is the obligation to provide security for non-compliance or improper compliance with the conditions specified in the license in an amount not exceeding the equivalent of up to 20% of the cost of geological work, which represents an additional and considerable financial burden for the industry.

In 2016, the Minister of the Environment commenced work on a new amendment to the Geological and Mining Law. One of the purposes of the new regulations is to simplify provisions applicable to administrative proceedings. The main changes are expected to cover the following:

- imposing an obligation to submit opinions to an eligible entity in the form of decisions by bodies participating in the qualification procedure, not only to the minister in charge of the environment;
- allowing for the issue of a partially positive assessment in the qualification procedure (as regards safety) if in the course of the procedure it is found that the eligible entity does not have the required experience;
- waiver of security for non-compliance or improper compliance with the conditions of the licence;
- introduction of a second, open-door procedure for granting hydrocarbon licences enabling the conduct of a tender procedure at the request of a commercial undertaking.

Diversification Regulation

The Diversification Regulation prescribes the maximum share of gas imported from a single country in total gas imports in a given year. In 2015–2018, this share may not exceed 59%.

Work on an amendment to the Diversification Regulation is expected to be concluded in 2017. PGNiG is actively involved in the legislative process to ensure that the Company is able to perform long-term import contracts.

System Regulation

The System Regulation specifies the rules for the operation of the gas system set forth in the Energy Law. In particular, it lays down the terms and conditions for applying for grid connection, the procedure for trading in gas fuel and the ability to provide services in the gas system, including the manner of handling complaints, balancing and transmission constraints management and it also outlines the terms of cooperation between market participants.

According to the Minister of Energy's Regulation of January 10th, 2017, only equipment and installations used for gas fuel transmission operations may be connected to gas transmission networks with diameters of DN 1,300 or higher. The Regulation has also raised the capacity threshold for customers authorised to be connected to the transmission network from 5,000 to 45,000 cm/h. It thus expands the operating reach of distribution companies and stabilises the gas fuel transmission and distribution market.

Tariff Regulation

The Council of Ministers' Regulation of October 24th 2000 on the minimum level of diversification of foreign sources of gas supplies (Dz.U. of 2000, No. 94, item 1042).

The Tariff Regulation sets out the principles for determining tariffs for gas fuels, in particular the calculation of prices and rates, as well as the rules of settlements between market participants.

In 2016, PGNiG and PGNiG Obrót Detaliczny Sp. z o.o. held gas fuel trading tariffs.

Regulation of the Minister of Economy of July 2nd 2010 on specific conditions for the operation of the gas system (consolidated text: Dz.U. of 2014, item 1059, as amended).

Moreover, in 2016 Gas Storage Poland Sp. z o.o. applied gas storage services tariffs, whereas Polska Spółka Gazownictwa Sp. z o.o. applied gas distribution services tariffs and liquefied natural gas services tariffs.

In the Generation segment, the following companies held their own tariffs: PGNiG TERMIKA SA (for heat generation and transmission), Przedsiębiorstwo Energetyki Cieplnej SA (for heat generation) and Spółka Energetyczna Jastrzębie SA (for heat and electricity generation).

Regulation of the Minister of Economy of June 28th 2013 on detailed rules for determining and calculating tariffs for gas fuels and on settlement of transactions in gas fuels trade (Dz. U. of 2013, item 820).

Pursuant to the transitional provisions to the Energy Efficiency Act, the current Tariff Regulation will expire by March 31st, 2018. Therefore, legislative work on the new regulation is expected to commence in 2017.

On February 19th, 2013, the President of URE issued Communication No. 2/2013 on the exemption of energy utilities holding gas fuel trading licences from the obligation to seek approval of wholesale gas trading tariffs.

On August 30th, 2013, PGNiG applied to the President of URE for an exemption from the obligation to seek approval for tariffs for the sale of natural gas to energy utilities which purchase gas as part of their gas fuel trading business. By decision of August 4th, 2016, the President of URE exempted PGNiG from this

obligation in relation to high-methane gas, but refused to grant an exemption in relation to nitrogen-rich gas.

On August 10th, 2015, PGNiG applied to the President of URE for an exemption from the obligation to seek approval for tariffs for the sale of natural gas to energy utilities purchasing it for the purposes of gas transmission, distribution, storage, liquefaction or regasification activities. By decision of August 4th, 2016, the President of URE exempted the Company from this obligation.

On January 26th, 2016, PGNiG applied to the President of URE for an exemption from the obligation to seek approval for tariffs for liquefied natural gas (LNG). By decision of February 3rd, 2016, the President of URE exempted PGNiG from this obligation.

ACER - Agency for Cooperation of Energy Regulators, an organization that aims to coordinate and support the cooperation of national regulators.

ENTSO-E - European Network of Transmission System Operators for Electricity, organization of European transmission system operators.

Regulation (EU) No. 994/2010 of the European Parliament and of the Council of October 20th 2010 concerning measures to safeguard security of gas supply.

European regulatory environment

Third Energy Package

In 2016, the so-called Third Energy Package was adopted as the all-inclusive regulation for the European gas market. The Package included five acts of law adopted by EU institutions in 2009: The objective of the Package is to boost competition on the European energy market and create an internal energy market based on mechanisms such as ownership unbundling, organisation of cooperation between regulators and energy companies (ACER, ENTSO-E and ENTSO-G) and the introduction of network codes.

SoS Regulation

The SoS Regulation is aimed at preventing disruptions in the supply of natural gas to Member States or mitigating their effects if they occur.

To that end, in the case of a shortage in gas supply, Member States may announce one of the three crisis levels in their territory: early warning level, alert level and emergency level. Each subsequent crisis level allows the Member State to take specific measures to minimise related risks. The regulation defines a group of 'protected customers' which includes all households connected to the distribution network.

The mechanisms for securing the supply of gas to customers are set out in Preventive Action Plans and Emergency Plans adopted by the Member States.

On February 16th, 2016, the European Commission published a draft of the new SoS Regulation, which is slated to supersede the current version. In the new draft, the role of regional cooperation in the event of gas supply disruptions was given a greater priority and a new solidarity mechanism was introduced. In the course of the work at the EU Council and the European Parliament, the risks identified by PGNiG were discussed. It seems that the EU Council and the European Parliament intend to address at least some of those risks and PGNIG will continue to keep monitoring the legislative process.

TAR NC Regulation

On September 30th, 2016, a Commission Regulation (EU) was adopted establishing a network code on rules regarding harmonised gas transmission tariff structures. According to ACER, the Regulation is planned to be published in the spring of 2017. Work on the adoption of this Regulation began in 2011.

The PGNiG Group participated in public consultations organised by the European Commission and devoted to discussing the extent of the effect of the new regulation on the tariff systems in force in Member States.

NC CAM Regulation

Commission Regulation (EU) No 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009 of the European Parliament and of the Council has been designed to promote the building of correctly operating interconnected transmission network systems, which would provide the foundation for further development of the EU internal energy market through harmonisation of mechanisms that ensure transparent and non-discriminating rules for transmission capacity allocation.

One of the proposals brought forward by the PGNiG Group as part of consultations organised by the European Commission was that appropriate mechanisms be put in place to provide for auctions for quarterly capacity allocation to be held four times a year (previously they were held once a year).

EU ETS

The EU Emission Trading Scheme, imposes the obligation to account for CO_2 emissions and regulates the allocation of free emission allowances for heat and electricity. Under the ETS Directive, emitters of greenhouse gases (including CO_2) are under the obligation to account for their emissions by surrendering their CO_2 emission allowances by April 30th each year for the preceding year. If the number of emission allowances is too small, the excess emissions penalty of EUR 100 per tonne of CO_2 is imposed and the operator must acquire and surrender the necessary number of emission allowances.

Work on draft amendments to the EU ETS Directive, which were presented on July 15th, 2015, was continued in 2016. If the proposed solutions are adopted, the prices of emission allowances may rise, which may have a negative impact on the PGNiG Group's electricity and heat business.

Macroeconomic environment

In 2016, the global economy grew 3.1% year on year according to OECD and 1.7% year on year taking into account the inflation factor. According to Eurostat's estimations, the real GDP growth rate across the EU was moderate at 1.9% year on year. The growth rate remained stable relative to 2015, despite the high probability that the EU's ranks will shrink following the outcome of the Brexit referendum in the UK. The positive economic sentiment was attributable to several factors, including the European Central Bank's quantitative easement policy, higher capital expenditures and the continued upward trend in the prices of raw materials. As a result, Europe recorded an inflation rate of 1.2% year on year with projections showing that the uptrend will be maintained. A positive sentiment also continues on the European labour market where the number of unemployed has fallen again and the unemployment rate (8.2%) is at its lowest in 8 years.

Preliminary estimates of the Gross Domestic Product (GDP) published by Poland's Central Statistical Office (GUS) indicate that in 2016 the Polish economy grew 2.8%, down 1.2 pp relative to 2015. The slight slowdown in Poland's economic growth was caused by a temporary decline in investment activity (5.5% year on year**), both in the public and private sectors. The dampened investment sentiment is chiefly attributable to delays in the completion of infrastructural projects co-financed with EU funds. On the other hand, domestic demand stabilized at 2.4% year on year** on improved private consumption, robust labour market and launch of government social programmes. According to GUS, as at the end of 2016 the unemployment rate was 8.3% (down 1.4 pp year on year), its lowest for over 25 years. The consumer price index (CPI) data published in December 2016 pointed to a return of month-on-month inflation after two and a half years, with rising commodity prices among the contributing factors.

ETS - European Union Emission Trading Scheme.

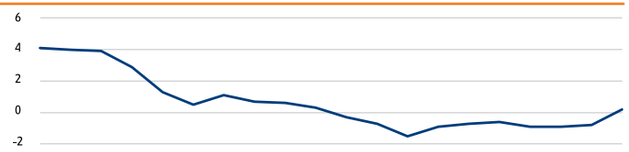
See also: www.stat.gov.pl/en/

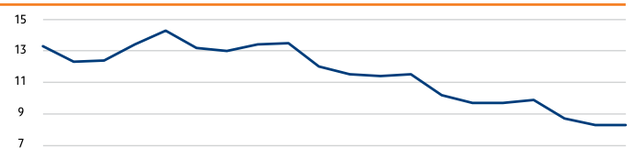
OECD - Organisation for Economic Co-operation and Development.

See also: www.ec.europa.eu/eurostat

Selected macroeconomic indicators in 2012-2016

Indicator [%]	2012	2013	2014	2015	2016
Gross Domestic Product (quarterly data)*					
Change y/y*	1.6%	1.4%	3.3%	3.9%	2.8%**
Inflation (quarterly data)*					
Change y/y*	3.7%	0.9%	0.0%	-0.9%	-0.6%
Unemployment rate (quarterly data)*					
year-end data	13.4%	13.4%	11.5%	9.7%	8.3%





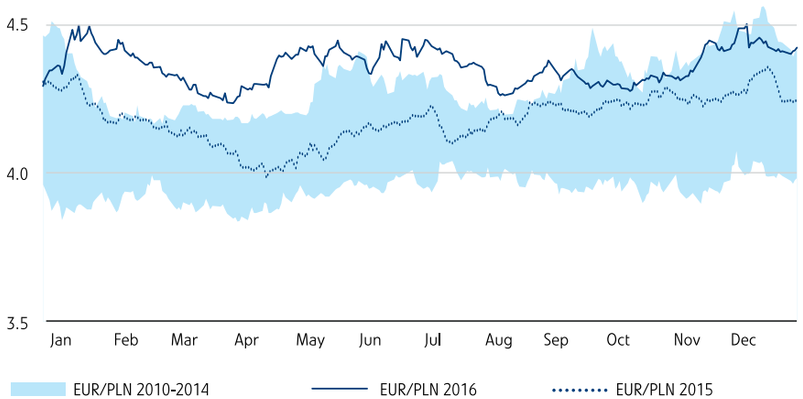
* Source: Central Statistical Office

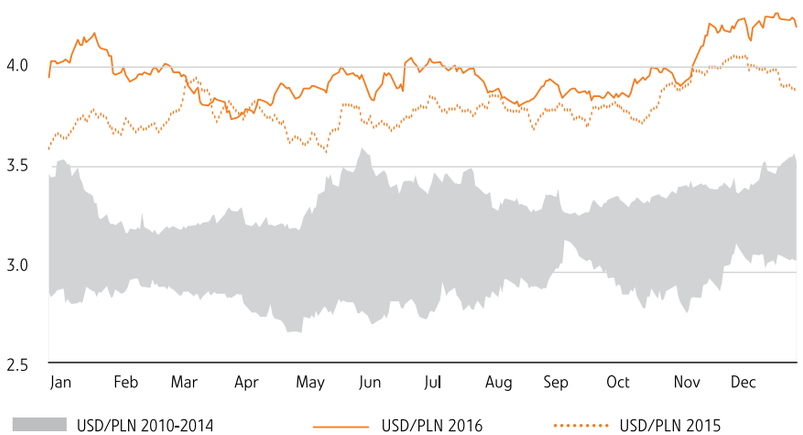
** Preliminary estimation.

EUR/PLN and USD/PLN exchange rates

In 2016, the currency market was highly volatile. The Polish złoty significantly weakened relative to the euro and the US dollar amid concerns about the economic situation in China. However, the depreciation of the PLN was short-lived and the exchange rate was soon back on a downward trajectory. In April, the EUR/PLN and USD/PLN pairs were at their all-year low of 4.2455 and 3.7193, respectively. Rising expectations regarding potential interest rate hikes in the US caused the exchange rate to deviate from its established price band. Market sentiment was negative, spurred by the UK's exit from the EU. Contrary to investors' concerns, the third quarter brought about a stabilization in forex trading and the Polish currency once again rallied. Donald Trump's win in the US presidential elections had a profound impact on market sentiment. In consequence, the USD/PLN exchange rate spiked to its highest level since 2002 (4.2493) and the EUR/PLN pair recorded an all-year high (4.5035). The downward trend was only consolidated by interest rate hikes in the US and the Fed's plans to pursue a tighter monetary policy.

Federal Reserve System (Fed) – the central banking system of the United States.





Polish gas market

The PGNiG Group plays a key role on the Polish gas market and, as its leader, is responsible for preserving Poland's energy security. To this end, the Group takes measures aimed at satisfying the steadily growing demand for gas fuel. The PGNiG Group ensures supply diversification by developing domestic deposits and sourcing gas from abroad as the largest importer and supplier of natural gas in Poland. Gas is transported to Poland via an extensive transmission network, with LNG having been fed into the network since 2016. Gas is supplied to end users via distribution networks. The national gas system is complete with gas fuel storage facilities whose purpose is to cover seasonal and daily shortages of gas fuel. In gas fuel trading, the key role is played by the Polish Power Exchange where PGNiG has been the Gas Market Maker since 2013.

The management of the transmission network and transport of natural gas via the national transmission network for delivery to distribution networks (in which the PGNiG Group has a 96% stake) and end users connected to the transmission system is the responsibility of Operator Gazociągów Przesyłowych Gaz-System S.A., a state-owned company. The existing transmission network comprises two operationally interlinked systems, the Transit Gas Pipeline System and the National Transmission System (high-methane gas [E group] and nitrogen-rich gas [L subgroup]).

With respect to interconnectors, in 2016 activities were taken to:

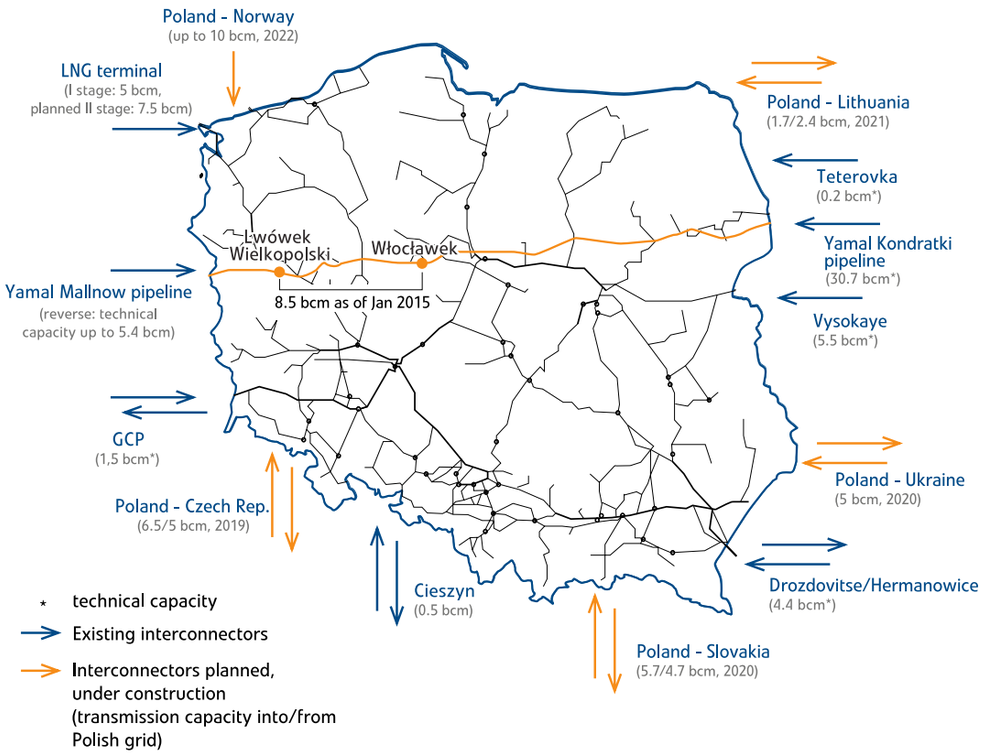
- test and commission for commercial purposes the LNG Terminal in Świnoujście managed by Polskie LNG S.A., a subsidiary of Gaz-System;
- continue work on projects involving the construction of interconnectors at the border with Lithuania, Ukraine, Slovakia and the Czech Republic;
- carry out market consultations regarding the Norwegian Corridor.

Operator Gazociągów Przesyłowych Gaz-System SA - state company whose key role is to handle the transport of gaseous fuels via the transmission network in Poland.

See also: www.gaz-system.pl

Polish Power Exchange, Towarowa Giełda Energii SA - a commodity exchange licensed by the Polish Financial Supervision Authority for trading in electricity, liquid and gaseous fuels, electricity generation and emission volume limits, property rights.

Map of existing and planned strategically important cross-border entry points into the transmission system



Source: Gaz-System and ENTSOG

Gas flow

In 2016, imports of gas fuel into Poland rose to 150.1 TWh (up by 13%, or 16.8 TWh), with a 24% year-on-year increase in supply from Poland's eastern neighbours and a 37% decline in supply from the EU. A vast majority of imported gas, nearly 75% of total flows, originated from countries east of Poland. According to ENTSOG, the Drozdovitse point saw the largest volumes of gas flowing into Poland. As regards imports from the west, the largest flows were recorded at the Mallnow point. The existing cross-border connections at Lasów, Gubin and Kamminke were replaced with a single point called GCP GAZ-SYSTEM/Ontrans. In addition, 2016 saw the first deliveries of liquefied natural gas by sea to the LNG Terminal in Świnoujście. The highest year-on-year growth was recorded at the Hermanowice exit point (Polish-Ukrainian border), where gas exports increased almost six-fold.

ENTSOG - European Network of Transmission System Operators for Gas, association of Europe's transmission system operators.

Gas flows at Poland's gas grid entry/exit points

Entry/exit point (in TWh)	2016	2015	Change y/y
Supplies from EU	26.92	42.67	-37%
including Lasów, Gubin (GCP)	4.85	8.03	-40%
including Cieszyn	0.06	0.18	-66%
including Mallnow	22.01	34.45	-36%
Supplies from across Poland's eastern border	112.08	90.65	24%
including Drozdovitse	48.09	39.03	23%
including Teterovka	0,80	0.79	2%
including Kondratki	28.15	23.70	19%
including Vysokoye	35.04	27.14	29%
LNG regasification	11.14	-	-
Exports to Ukraine (mainly Hermanowice)	10.24	1.56	557%
Total flow	150.14	133.32	13%

Source: ENTSOG

LNG in Poland

In 2016, the Lech Kaczyński LNG Terminal in Świnoujście commenced commercial operations. The LNG Terminal and its infrastructure were built with the involvement of four main partners: Gaz-System, Polskie LNG S.A. (a wholly-owned subsidar of Gaz-System), the Maritime Office of Szczecin and the Harbour Authority of Szczecin and Świnoujście. Following the completion of the first stage of the project, the terminal can handle annual gas imports of 5 bcm. Should demand for this type of gas fuel grow, the terminal's capacity may be extended to 7.5 bcm without enlarging the facility itself.

A single shipment of LNG by sea may supply approximately 0.21 mcm of LNG, equivalent to approx. 126 mcm of natural gas. The end product of gas regasification is fed into the national transmission grid via the Goleniów pumping station located over 80 km away from the LNG Terminal. LNG is also transported by tankers to regasification plants or stations located throughout Poland.

The company has reserved some 60% of

the terminal's capacity to receive and regasify approximately 2.5 million tonnes (slightly more than 3 bcm) of LNG annually over the next 20 years.

See also:
www.tge.pl/en

Distribution system

Distribution services are provided by one major distribution system operator, namely PSG (a member of the PGNiG Group), and several dozen smaller DSOs operating locally whose networks are connected to the system operated by PSG or Gaz-System, the transmission system operator.

Gas storage

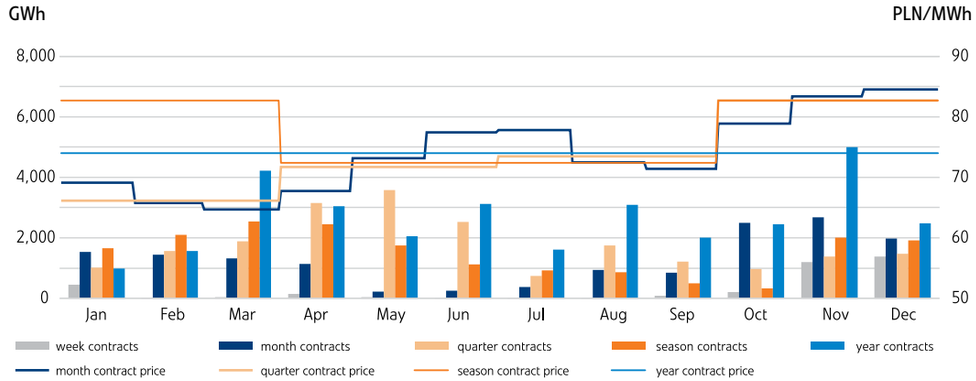
PGNiG owns all of Poland's underground gas storage facilities. The average daily volume of gas withdrawal from Polish storage sites in Q1 2016 was 90 GWh/day, more or less unchanged from the previous year. As at March 31st, 2016, Polish storage sites were filled to 30% of capacity, which means they held approximately 10 TWh of gas. In 2016, gas was injected into storage at an average rate of 135 GWh/day, a 22 GWh/day increase compared to 2015. Before the beginning of the winter season, storage facilities in Poland were filled to over 98% of capacity.

Polish Power Exchange

PGNiG is the leader of gas trading on the Polish Power Exchange (PPX).

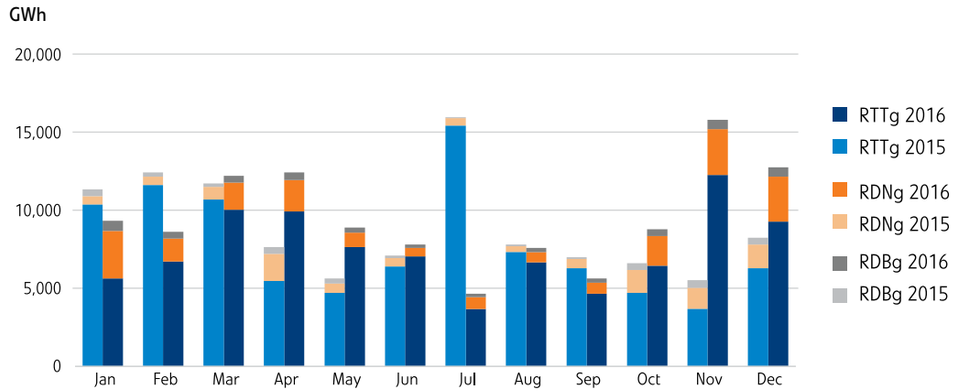
2016 was a record year in terms of gas trading volume on the PPX, which reached 114.5 TWh, up 7.1% relative to 2015. The trading volume on the Day-Ahead Market (DAM) and Intraday Market (IDM) for gas was 24.6 TWh, an increase of 76.5% year on year. The Day-Ahead Market saw the strongest growth of 87.4% to 19.6 TWh. The trading volume on the Commodity Futures Instruments Market (CFIM) totalled 89.9 TWh in 2016, a 3.3% decline year on year. It is worth noting that the share of futures in total trading on the natural gas market came close to 78.5%. The growth in spot trading (IDM) attests to the developing deregulation of the market and increased activity by new entrants who use spot transactions to balance their gas portfolios in the short term.

Evolution of volumes and prices of futures contracts for natural gas quoted on the PPX 2016



In-house analysis based on PPX data. CFIMg prices are calculated on the basis of the average volume-weighted price of the futures instrument.

Natural gas trading volumes on the PPX in 2015 and 2016



In-house analysis based on PPX data.

Gaspool (GPL) - German gas hub, a virtual natural gas trading in northern Germany.

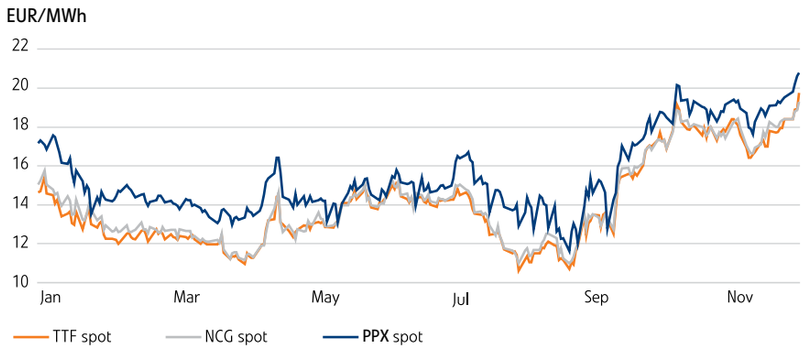
Net Connect Germany - German gas hub, a virtual natural gas trading in southern Germany.

Title Transfer Facility - Dutch energy exchange, a virtual natural gas trading point in the Netherlands.

National Balancing Point (NBP) - British gas hub, a virtual natural gas trading in United Kingdom.

As at the end of 2016, there were 127 active participants in natural gas trading, a nearly two-fold increase from 2015, with 197 companies holding licences to trade in gas fuels, 20 more than the year before. In 2016, the average spot price of gas was PLN 67.37/MWh, down 24% compared to 2015. Gas prices in Poland were strongly correlated with gas prices in Germany and on other West European gas markets. The difference between spot prices on the PPX and Germany's Gaspool market shrank from EUR 1.39/MWh to EUR 1.34/MWh year on year. The most significant differences in prices between these markets were observed in Q1 2016.

Spot price of gas on the PPX, TTF and NCG in 2016



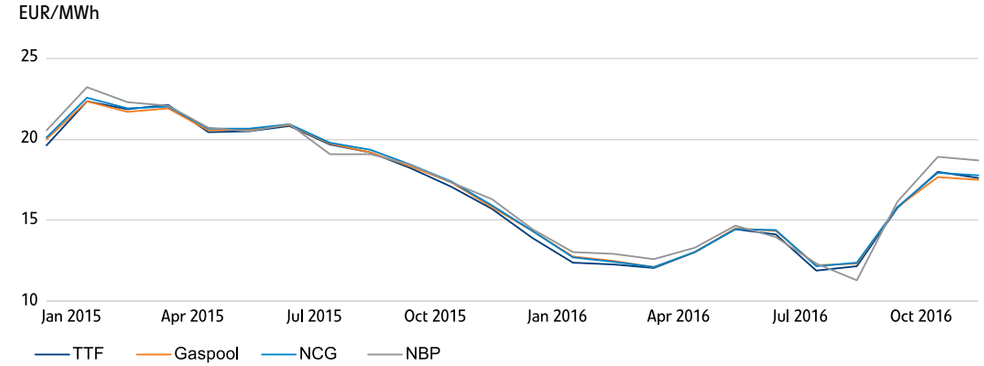
Source: Bloomberg

Trends on the natural gas market

In 2016, prices of gas futures quoted on the TTF declined by 29% relative to 2015. The price plummeted on the back of low prices of crude oil and petroleum products which are used to determine pricing terms in some natural gas import contracts. The European market was flooded with natural gas delivered under flexible import contracts, which generated excess supply and led to declining prices. Prices on the spot market fell 30% year on year. Average prices on the TTF day-ahead market were EUR 13.97/MWh, compared with EUR 19.77/MWh the year before.

Average prices across the main European markets were similar, although there were differences between Continental Europe's markets and the British hub. For instance, lower prices in the United Kingdom in September were attributable to increased supplies from Continental Europe and Norway as well as high regasification rates.

Average monthly spot prices of natural gas at selected European hubs in 2015–2016

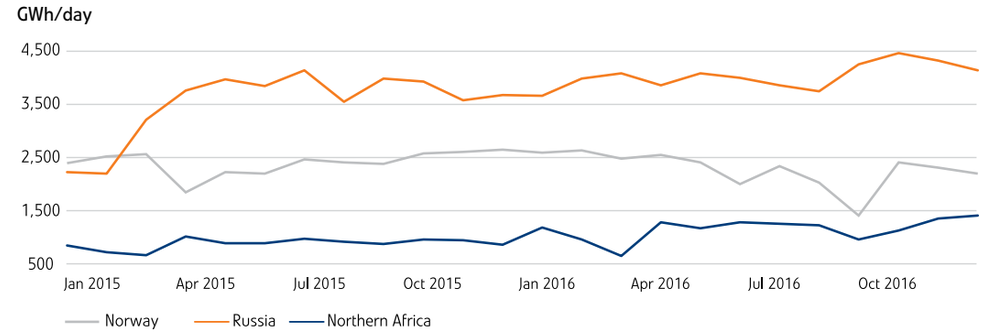


Source: ICE - Intercontinental Exchange, EEX – European Energy Exchange

Increased demand for natural gas in Europe was recorded for the third year running. Total demand reached 493 bcm, up 17 bcm from 2015. Demand generated by power plants and combined heat and power plants grew by 13 bcm, to 149 bcm. Households and small business also showed an increased need for natural gas with an aggregate consumption of 192 bcm, up 2% year on year. No changes were observed in consumption generated by the industrial sector. Countries with the most pronounced increase in natural gas consumption were the United Kingdom and Germany, with their demand growing by 6 bcm and 5 bcm, respectively.

Over 1447 TWh (135 bcm), representing 54% of last year's European imports via gas pipelines, originated from Russia. The share of Russian imports increased 15% year on year. Norway emerged as the second largest supplier of gas to Europe, providing 835 TWh (76 bcm), or 31% of total imports. Supply of gas fuel from Norwegian deposits dipped 5% relative to 2015. Exports from North Africa amounted to 423 TWh (39 bcm). The primary factor driving higher imports from Russia was falling crude oil prices. The flexible structure of purchase contracts linked to crude oil prices allowed European importers to increase imports from the East during the slump on the crude oil market and scale back purchases from other directions.

Sources of fuel imports to Europe



Source: Thomson Reuters

The European LNG market also saw certain changes in 2016. The average daily re-gasification rate was approximately 1.1 TWh/day, down 8% on average compared with 2015. The United Kingdom curbed its demand by 25% year on year, yet the country continues as the undisputed leader with a 27% share in Europe's total LNG imports. Imports to other European countries remained relatively stable year on year.

As at the end of 2016, volumes of gas stored in European gas storage facilities fell to 65% of the capacity. In the corresponding period of 2015, storage facilities were 70% full. In Poland, storage facilities were filled to 77% of the capacity, one of the highest levels among the countries under analysis.

See also: https://transparency.gie.eu/

Progress in implementing infrastructural projects on the European gas market

In early September 2015, representatives of Gazprom, Germany's E. On and BASF Wintershall, Anglo-Dutch Royal Dutch Shell, France's Engie (former GdF Suez) and OMB signed a legally binding shareholders' agreement on the construction of the Nord Stream 2 gas pipeline. Pursuant to the agreement, a company will be formed to first build and then operate the gas pipeline, with Gazprom as the majority shareholder with a 51% stake and the remaining shareholders having minority stakes adding up to 49%. Next, an application for the registration of the consortium responsible for building the pipeline was submitted with German and Polish antitrust authorities. In mid-August 2016, the Polish Office of Competition and Consumer Protection concluded that concentration of gas supplies through the pipeline would jeopardise competition on the gas markets of Poland and other CEE countries. Despite these hurdles, in December 2016, the CEO of Russia's Gazprom, Mr Alexey Miller, announced that Nord Stream 2 would progress as planned and its second leg would be commissioned by the end of 2019.

The Turkish Stream project was put on hold in late 2015 after a Russian Su-24 attack aircraft was shot down by the Turkish air force. Following a spell of tensions between Moscow and Ankara, relations between the two countries improved. On October 10th, 2016, Russia and Turkey returned to work on the project and signed an international agreement on the construction of two legs of the pipeline, which are slated for commissioning in December 2019 upon expiry of a transit agreement between Russia and Ukraine. On January 20th, 2017, the act was ratified by the State Duma, and in early February – by the Federation Council. The act on the construction of the gas pipeline was then signed by Vladimir Putin, the last formal approval needed to start the project. As things stand currently, the Turkish Stream has a greater chance of completion than Nord Stream 2 as the former is not subject to the jurisdiction of the European Commission and cannot be blocked like its predecessor, the South Stream.

Crude oil market

Trends on the crude oil market

In early 2016, the downward trend on the crude oil market continued. In January, prices of Brent crude slipped to approximately USD 28/bbl, a 13-year low. After the minimum was reached, prices gradually rebounded with a strong upward trend prevailing until June 2016 when Brent crude topped out at approximately USD 52/bbl, to follow a lateral trend in subsequent months. In November, members of OPEC and certain non-OPEC producers agreed on production cuts designed to limit the persisting oversupply, deplete high inventories and neutralise the consequences of the flow of Iran oil. At year-end, one barrel of crude oil cost approximately USD 57.

Brent oil - a blend of crudes produced from fields in the North Sea.

OPEC - Organization of the Petroleum Exporting Countries - associating countries that account for about 40% of global oil production.

Brent crude oil prices

USD/bbl

Source: ICE – Intercontinental Exchange

The average global demand for crude oil in 2016 was 1.4m bbl/d higher than in 2015, at 95.4m barrels per day. Among the world's largest consumers outside the OECD, the most pronounced increase was observed in India and China – by 7% and 3.5%, respectively. A decline in consumption was only recorded in Oceania and some countries of Latin America. The reasons for higher demand include a very low base price of crude oil.

In 2016, the supply of crude oil expanded by 0.4 bbl/d year on year, to 96.1m bbl/d. Non-OPEC producers reduced output in 2016, while production among OPEC members grew to 32.5m barrels, that is 0.8m barrels more than in 2015.

1 barrel is equal to approximately 0.136 tonnes or 159 litres.

Crude oil demand and supply worldwide

bn bbl	Demand		Supply	
	2015	2016	2015	2016
OECD	46.42	46.62	26.82	26.41
including the US	19.53	19.66	15.12	14,8
non-OECD	47.66	48.81	68.96	69.72
including China	11.28	11.66	4.72	4.46
including former USSR countries	-	-	14.1	14.3
including OPEC	-	-	38.3	39.29
Worldwide	94.08	94.53	95.78	96.14

Source: Thomson Reuters

The main driving factor on the oil market in 2016 were the arrangements between OPEC members to cut global supply. Following numerous announcements and lengthy negotiations, members of the cartel decided to reduce output by 1.8m barrels per day in the first half of 2017.

Outlook for crude oil and natural gas market

A decline in global crude oil supply is expected to markedly affect prices in 2017. A joint and consistent performance of the agreement by all signatories should favour price increases. However, a number of large producers (including the US, China, Canada, Brazil, Libya and Nigeria) made no commitments to reduce output in 2017. In their case, and the US's in particular, an increase in oil prices may be followed by a major growth in output, which may, at least to a certain extent, compensate for the reduced supply. It should further be noted that inventories of crude oil are very high. To make any meaningful dent, a supply shortage would have to continue for a very long time.

Considering the above, oil prices in 2017 may be visibly higher than in 2016, but are expected to stay within the range of USD 50-60/bbl. Surveys conducted by information agencies among global investors present similar expectations.

Gas prices in Europe were low in 2016 and they are very unlikely to continue at such low levels in 2017. In the second half of 2016, crude prices rallied contributing to an increase in prices of indexed import contracts for natural gas in Europe. Forecasts suggest that this trend may persist in the coming year.

Similar factors drive up prices of import contracts on the LNG market. On the other hand, the expected increase in liquefaction capacities in Australia and the US may curb any LNG price increases and indirectly erode the price of natural gas. Forecasts show that in the coming years an oversupply will affect the LNG market, which may trigger a strong downward trend in prices.

All of the above factors suggest that in 2017 gas prices may be higher than in 2016. The expected growth may be restrained by price competition between traditional suppliers (Russia, Norway) and LNG suppliers entering the European market. As a result, gas prices in Western Europe may oscillate between the level seen in 2016 (approximately EUR 14/MWh) and the prices of futures contracts seen in early 2017 (approximately EUR 18/MWh).

PGNiG on the stock market

PGNiG on the stock market

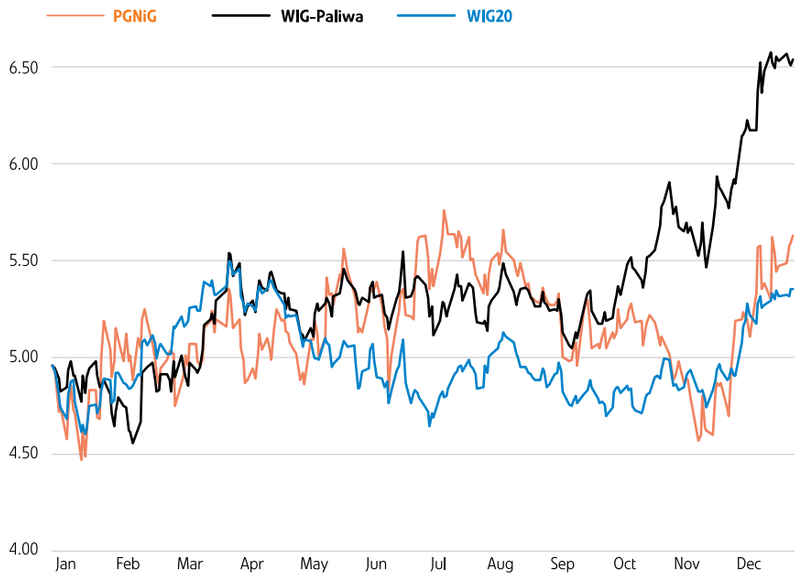
See also: www.odpowiedzialni.gpw.pl/root_en

Performance of the PGNiG stock

Since September 23rd, 2005, the PGNiG stock has been listed in the continuous trading system of the main market at the Warsaw Stock Exchange. Its issue price in the public offering was PLN 2.98. In 2016, the PGNiG stock was included in the following WSE indices: WIG, WIG20, WIG30, WIG-Poland, RESPECT Index, WIG-PALIWA (sectoral index) and WIGdiv (until December 16th, 2016).

PGNiG stock price vs. WIG20 and WIG-Paliwa

PLN



Source: Warsaw Stock Exchange, www.gpw.pl

The PGNiG stock price movements ranged between -13% (lowest price: PLN 4.47 on January 14th, 2016) and +12% (highest price: PLN 5.76 on July 13th, 2016) from the 2015 closing price (PLN 5.14 on December 31st, 2016). For comparison purposes, fluctuations of the WIG20 index ranged between -10% (lowest value: 1674.57 points on January 20th, 2016) and +7.5% (highest value: 1,999.3 points on March 30th, 2016). Compared with 2015, both the PGNiG stock and the WIG20 index fluctuated within a much narrower range. The main reasons behind their changes included:

- fluctuations in crude oil prices globally (historical lows in the first quarter, upsurge in the fourth quarter);
- declining prices on PPX (the average spot price of gas on PPX in 2016 fell 24% compared to 2015);
- ongoing deregulation of the gas market in Poland.

In the first quarter of 2016, the PGNiG stock slid to the year's low of PLN 4.45 (on January 14th, 2016). The beginning of the year saw a massive slump in crude oil prices. The price per barrel on the Intercontinental Exchange (ICE) and London Metal Exchange (LME) fell below USD 30 – a level unseen in some 12 years. With the gas price equally depressed, this signalled a possible deterioration in the performance of the Exploration and Production segment. For all that, at the end of Q1 2016 the PGNiG stock price on the Warsaw Stock Exchange rallied – closing at PLN 5.32 on March 31st, 2016. Although in Q4 2015 PGNiG's net loss was slightly higher than the market consensus, analysts appreciated the Company's strong balance sheet and dividend capacity.

In Q2 2016, the PGNiG stock price was highly volatile – on June 16th, 2016, it fell to the quarterly low of PLN 4.83, to surge to the quarterly high of PLN 5.60 only two weeks later (June 30th, 2016). The Company's performance in Q1 2016, especially in the Trade and Storage segment, was well received by analysts and investors. A major increase in the PGNiG stock price in late June was driven, among other factors, by URE's decision on a lower-than-expected reduction in the PGNiG Obrót Detaliczny Sp. z o.o. retail tariff until the end of 2016. Therefore, the robust performance of the Trade and Storage segment was expected to continue in H2. Furthermore, on June 28th, 2016, the Annual General Meeting of PGNiG passed a resolution on the distribution of net profit for 2015. The dividend amount was PLN 1.062bn (PLN 0.18 per share).

In early Q3 2016, the upward trend continued, with the stock price peaking for the year at PLN 5.76 on July 13th, 2016. After that date, the trend reversed and in September 2016 the price sank below PLN 5 again. The first major plunge took place following the release of the Company's selected operating data estimates for H1 2016. Some analysts and investors were slightly disappointed with lower oil sales by the PGNiG Group and a high share of gas from Gazprom in PGNiG's basket. The stock price fell also after the Management Board's decision to repurchase shares.

The downward trend continued throughout most of Q4 2016, bringing the PGNiG stock back to the year's lows (PLN 4.57 at the close of trading on November 14th, 2016). Following the OPEC deal to cut oil production, the trend reversed again in late 2016 and the PGNiG stock price rebounded to PLN 5.6 on December 13th, driven mainly by increases in oil and gas prices. During the key week of negotiations by OPEC members, the crude oil price per barrel on ICE rose by over 13% (Brent crude monthly futures contract price at the close of trading on November 28th vs December 2nd, 2016).

On December 30th, 2016 (the last trading day of the year), the PGNiG stock price closed at PLN 5.63.

The price was nearly 89% above the issue price of 2005 and 28% above the closing price on the first day of listing. Factoring in the dividends of PLN 1.46 per share paid in 2005–2016, investors who acquired PGNiG shares at the issue price and held them until the end of 2016 saw a profit of 138%.

Performance of the PGNiG stock vs. WSE indices

Index / PGNiG stock price*	Value/price as at Dec 30, 2015	Value/price as at Dec 30, 2016	2016 low	2016 high	PGNiG's weight in the index as at Dec 30, 2016
WIG	46,467 points	51,754 points	42,152 points	51,754 points	3.3%
WIG20	1,859 points	1,948 points	1,675 points	2,000 points	5.2%
WIG30	2,076 points	2,243 points	1,879 points	2,244 points	4.8%
WIG-Poland	47,412 points	52,584 points	43,016 points	52,584 points	3.4%
WIG-Paliwa	4,468 points	5,669 points	3,950 points	5,702 points	22.8%
RESPECT Index	2,269 points	2,516 points	2,066 points	2,519 points	9.0%
PGNiG	PLN 5.14	PLN 5.63	PLN 4.47	PLN 5.76	-

Source: Warsaw Stock Exchange, www.gpw.pl

* PGNiG stock price and index values based on closing prices, excluding the ex-dividend day effect.

Rates of return on WSE indices vs. PGNiG stock in 2016 and from PGNiG's IPO

Index / PGNiG stock price*	Rate of return in 2016	Rate of return from PGNiG's IPO[1] to Dec 30 2016
WIG	11.4%	-20.7%
WIG20	4.8%	55.8%
WIG30	8.1%	-11.7%[2]
WIG-Poland	10.9%	60.6%
WIG-Paliwa	26.9%	59.2%[3]
RESPECT Index	10.9%	151.6%[4]
PGNiG	9.5%	47.8%[5]

Source: Warsaw Stock Exchange, www.gpw.pl

* Rates of return do not include dividends paid in 2005–2016.

[1] Closing price on September 23rd, 2005.

[2] Calculated in relation to the reference value of the index (reference date: September 23rd, 2013).

[3] Calculated in relation to the reference value of the index (reference date: December 30th, 2005).

[4] Calculated in relation to the reference value of the index (reference date: December 30th, 2008).

[5] Relative to the issue price of PLN 2.98, PGNiG shares yielded a rate of return of 89%.

Financial metrics and trading multiples

Financial metrics*	Unit	2016	2015	2014	2015/2016 change (%)
Net profit attributable to owners of the parent company	PLNm	2,351	2,134	2,823	10.2%
Earnings per share*	PLN	0.40	0.36	0.48	11.1%
Stock price at the close of trading on the last trading day of the year	PLN	5.63	5.14	4.45	9.5%
Average stock price in the year	PLN	5.16	5.94	4.85	-13%
Number of shares outstanding	million shares	5,778	5,900	5,900	-
Capitalisation at year-end	PLNm	32,532	30,326	26,255	7.3%
Average daily trading volume	million shares	4.9	4.7	3.9	4.3%
Average daily trading value	PLNm	25.5	27.9	18,8	-8.6%
Dividend amount***	PLNm	1,062	1,180	885	-10%
Trading multiples**					
P/E at average stock price	-	12.88	16.41	10.14	-22.7%
P/E at year-end	-	13.85	14.21	9.30	-2.5%
P/BV at year-end	-	1.02	0.99	0.87	3%
EV/EBITDA	-	5.53	5.02	4.39	10.2%
Dividend per share***	PLN	0.18	0.2	0.13	-10%

Source: Warsaw Stock Exchange, www.gpw.pl

*Attributable to holders of ordinary shares in the parent company (in PLN).

** Prices at close.

*** Dividend from previous year's profit.

Treasury shares

The Extraordinary General Meeting held on August 25th, 2016 authorised the Management Board to repurchase Company shares for retirement. The authorisation to repurchase up to 129,870,129 ordinary bearer shares, for an aggregate amount of up to PLN 700m, was in force until December 31st, 2016.

In 2016, PGNiG repurchased 121,685,143 book-entry ordinary bearer shares with a par value of PLN 1.00 per share:

- on September 7th, 2016, PGNiG repurchased 92,764,327 shares which were acquired at the price of PLN 5.39 per share;
- on November 14th, 2016, PGNiG repurchased 28,920,816 shares which were acquired at the price of PLN 5.00 per share.

Investor Relations

Investor relations are gaining in importance as an area of business activities of public companies. Their growing role stems from the dynamic development of the Polish capital market, as confirmed by a consistent year-on-year increase in assets of the Polish and foreign investment funds, as well as stable numbers of listed companies (487 as at the end of 2016) and investment accounts registered in Poland (1.4m). Statistical data confirms that the Warsaw Stock Exchange is an attractive investment venue not only for institutional investors but also for several hundred thousand retail investors.

The strengthening of the Polish capital market is also supported by successful implementation of new legal and regulatory requirements for issuers. Since July 3rd, 2016, capital market players have been required to

Market Abuse Regulation (MAR) - Regulation (EU) No 596/2014 of European Parliament and of the council of 16 April 2014 on market abuse (market abuse regulation).

See also: eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0596&from=PL

See also: www.en.pgnig.pl/investor-relations

See also: www.zse.seg.org.pl/en

comply with the MAR. Acting in cooperation with the Polish Financial Supervision Authority and other bodies, the issuers had to face the challenge of adapting to the new regulations and effectively fulfilling disclosure requirements applicable to listed companies (current and periodic reporting). The PGNiG Group has implemented internal rules to assist its employees in identifying the events the information on which may be deemed inside information and thus is subject to public announcement.

In 2015 and 2016, the PGNiG Group took steps to further improve the Company's corporate website, with a particular focus on its investor relations sections. The website features current and periodic reports, information on the Group's strategy, PGNiG's updated investor presentations, with a brief and accessible summary of the PGNiG Group's equity story, as well as the telephone and email contact details of the PGNiG Investor Relations Department.

Investors appreciated the top quality of our investor relations service: in 2016, the Company was awarded in the 9th edition of the Golden Website Award programme (assessing website operation in 2015), in the 'Polish Companies in the WIG20 and mWIG40 Indices' category. An analysis of scores achieved for the individual assessment criteria in the second stage of the programme shows that PGNiG's website was assigned the largest number of maximum scores. The Company received the maximum scores for clarity of communication and content, intuitive and easy site navigation, ergonomics and aesthetic design. In March 2017, the PGNiG Group was shortlisted for the final stage of the 10th edition of the programme (assessing website operation in 2016).

In 2016, the PGNiG Group's representatives held several dozen meetings with investors and stock analysts. The Company also actively communicated with retail investors. Key initiatives addressed to this investor group included development of dedicated educational materials building the investors' knowledge of the Company and the gas market (e.g. the annual report accessible online) and publication of records of teleconferences for stock analysts held by representatives of the PGNiG Management Board.

Shareholding structure

As at December 31st, 2016, PGNiG's share capital was approximately PLN 5.78bn and comprised 5,778,314,857 shares with a par value of PLN 1 per share. Series A shares were ordinary bearer shares and each share conferred the right to one vote at the General Meeting. The State Treasury remains PGNiG's majority shareholder.

On June 26th, 2008, the disposal by the State Treasury Minister of one PGNiG share in accordance with general rules triggered the eligible employees' rights to acquire gratuitously a total of up to 750,000,000 PGNiG shares. The start date for executing agreements on the acquisition of gratuitous Company shares was April 6th, 2009 and the rights to acquire gratuitous PGNiG shares by eligible employees expired on October 1st, 2010. As at December 31st, 2016, nearly 60,000 eligible employees subscribed for 728,294,000 shares. The gratuitous Company shares acquired by eligible employees were locked up until July 1st, 2010, whereas trading in gratuitous shares acquired by members of the Company's Management Board was restricted until July 1st, 2011.

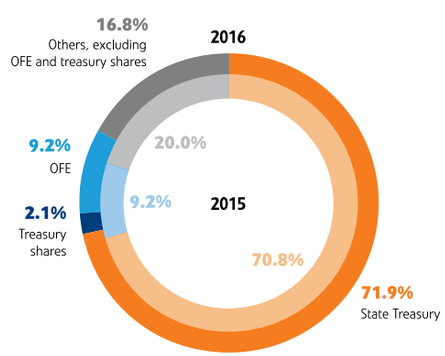
At the end of March 2016, the State Treasury sold 25,063,197 shares in PGNiG to Towarzystwo Finansowe Silesia Sp. z o.o.

Shareholding structure as at the end of 2016

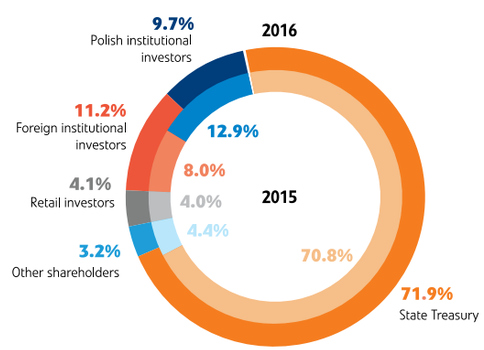
Shareholder	Number of shares/ voting rights attached to the shares as at Dec 31, 2015	Percentage of share capital/total voting rights at the GM as at Dec 31, 2015	Change in 2016	Number of shares/ voting rights attached to the shares as at Dec 31, 2016	Percentage of share capital/total voting rights at the GM as at Dec 31, 2016
State Treasury	4,178,771,608	70.83%	(25,065,451)	4,153,706,157	71.88%
Others, including:	1,721,228,392	29.17%	(96,619,692)	1,624,608,700	28.12%
- OFEs (open-end pension funds)	543,721,767	9.22%	(11,331,352)	532,390,415	9.21%
Total	5,900,000,000	100.00%	(121,685,143)	5,778,314,857	100.00%

Institutional investors, primarily open-end pension funds (OFE), pension fund management companies and Polish and foreign mutual funds, held over one-fifth of all shares issued by PGNiG. Nearly 10% of the Company shares were in the portfolios of Polish investors, while more than 11% of the shares were held by foreign institutions – mainly from Europe and the United States. As regards European investors, most PGNiG shares were held by UK entities (over 2%).

Shareholding structure as at the end of 2015 vs 2016

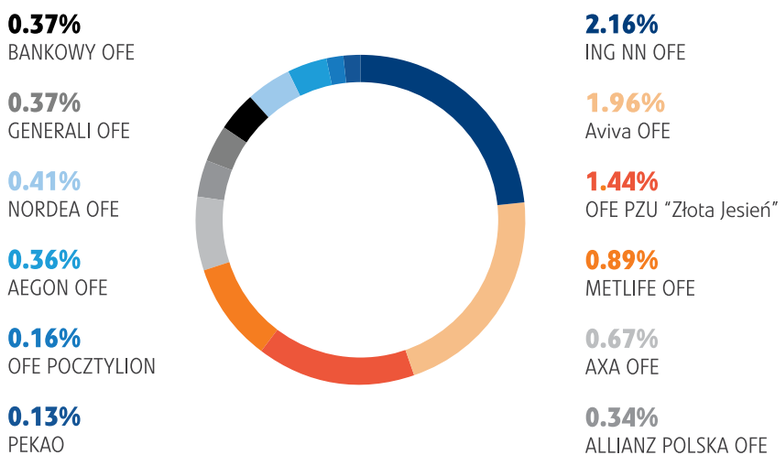


Shareholding structure by investor type



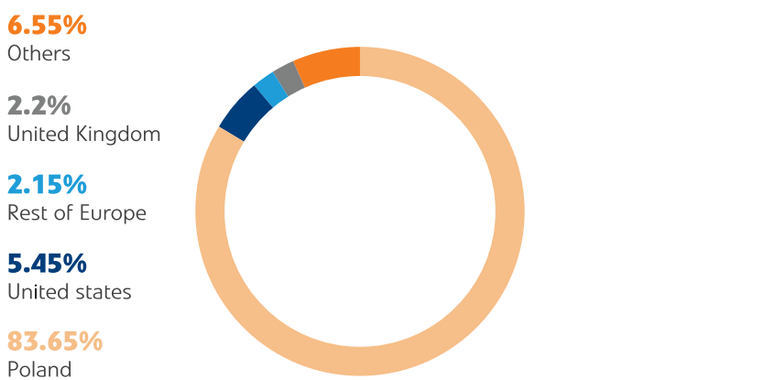
Substantial holdings of PGNiG shares were included in the portfolios of open-end pension funds, which as at December 30th, 2016 held more than 9% of PGNiG's equity, valued at just under PLN 3bn. Compared with 2015, their shareholdings were practically unchanged (down by less than 1%). Based on the closing price on the last trading day in 2016, the value of PGNiG shares held by open-end pension funds increased more than PLN 200m relative to 2015.

Percentage of PGNiG's share capital held by open-end pension funds as at the end of 2016

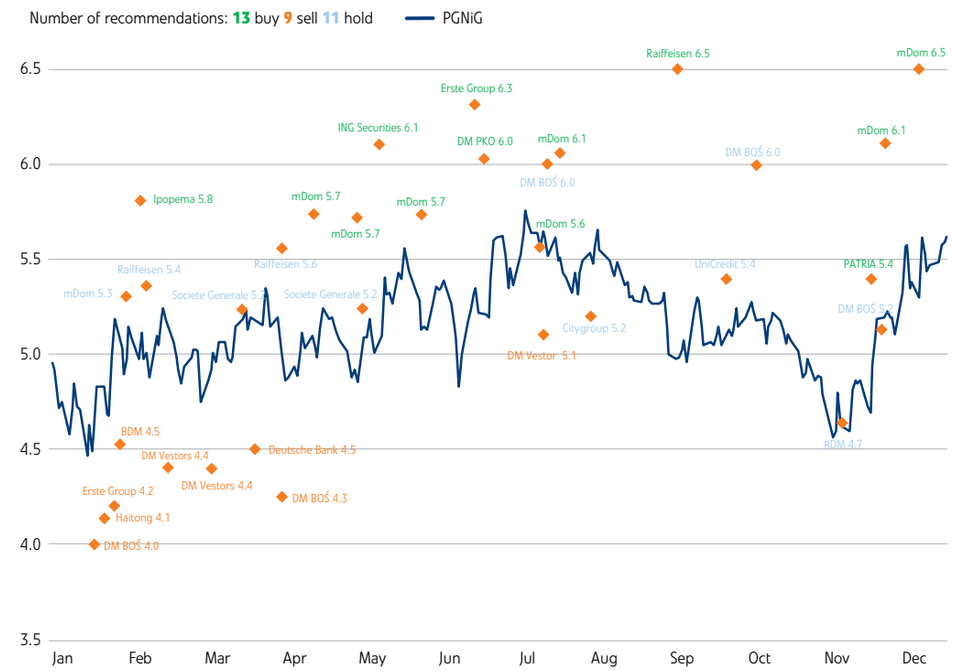


The funds holding the largest equity interests in PGNiG were those managing the largest portfolios of future pensions, that is Nationale-Nederlanden, AVIVA and PZU Złota Jesień. The share of open-end pension funds in the PGNiG shareholder base increased significantly from the IPO in 2005, when it represented 3.5% of the share capital (valued at PLN 711m). Pension funds are typically long-term investors whose equity portfolios are characterised by low turnover, especially with respect to large dividend-paying companies, such as PGNiG. They have a stabilising effect on the Company's shareholding structure while limiting its free float, which can translate into lower trading volumes. In the case of PGNiG shares, the daily trading volume averaged PLN 25.5m in 2016, which is a good result considering the low free float.

Shareholding structure by geography



Analysts recommendations with target price in 2016



Relative to 2015, the Company's coverage by equity analysts shrank noticeably (by over 33% year on year). But, importantly, there was an increase in 'buy' recommendations (from 9 in 2015 to 13 in 2016), with a spectacular drop in 'sell' recommendations (from 29 to just 9).

Dividend

The PGNiG Group's Strategy for 2014–2022 and the new PGNiG Group Strategy for 2017-2022 provides for the distribution of up to 50% of consolidated net profit as dividend, with the proviso that in recommending dividend payments the PGNiG Management Board must always take into account the PGNiG Group's current financial standing and investment plans. PGNiG will recognise net profits of its subsidiaries in the consolidated financial statements net of any dividends paid by the subsidiaries, which may result in postponing the achievement of the planned level of dividend payments by one year.

Dividend paid

	2015	2014	2013	2012	2011
Dividend for the financial year (PLNbn)	1.06	1.18	0.89	0.77	-
Dividend per share (PLN)	0.18	0.20	0.15	0.13	-
Average annual stock price (PLN)	5.94	4.85	5.83	4.06	3.97
Dividend yield	3.03%	4.12%	2.57%	3.20%	-

Strategy

PGNiG Group Strategy for 2017-2022

Mission statement

We are a trustworthy supplier of energy for households and businesses

Trustworthy: the customers can depend on premium quality and reliability of our services

Energy supplier: our customers are offered a full range of energy products (gas + electricity + heat + other/services)

Households and businesses: we care for and value all our customers: households, businesses, and institutions

Vision

We are a responsible and effective provider of innovative energy solutions

Responsibly: we act transparently, in line with the principles of corporate social responsibility

Effectively: we have implemented process and cost optimisation measures

Innovative solutions: we are an innovation leader in the energy sector

Primary objective

Increasing the PGNiG Group's value and ensuring its financial stability

Value growth : our primary ambition is to create added value for our shareholders and customers

Financial stability: we seek to secure long-term financial stability and creditworthiness

On March 13th, 2017 the PGNiG Supervisory Board approved the new "PGNiG Group Strategy for 2017–2022 (extended until 2026)". The new strategy was drafted in response to multiple changes in the internal and external environment of the PGNiG Group.

The key external changes were of a macro-economic nature (e.g. falling crude oil and natural gas prices), but they were also related to other market developments such as fiercer competition on the Polish gas market, the need to diversify gas imports from 2022 onwards (expiry of the Yamal contract), and changes in the regulatory regime (gradual exemption from the obligation to seek tariff approval, unpredictable future of the support mechanism for power generation beyond 2018). Following an analytical review, the key macroeconomic assumptions underlying the strategic forecasts were updated, including those related to gas, oil and electricity prices. Also, the Group's new strategic objectives and ambitions until 2022 were formulated.

One major internal change driven by the adoption of the new strategy is the PGNiG Group's new the Balanced Scorecard (BSC) approach to strategic management based on sustainable strategic management. Its purpose is to balance financial, operating and growth goals from four key 'perspectives' (finance, customers, processes and resources and growth).

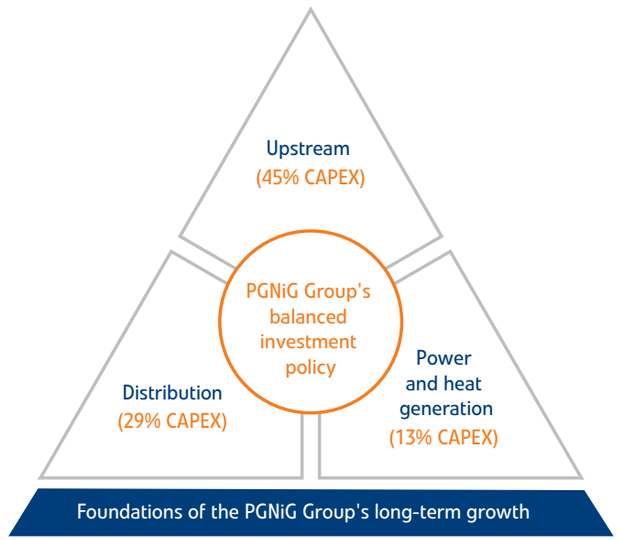
The outcome is a new approach to defining the main strategic objectives with targets and ambitions being set at the Group level and then cascaded down to the Group's key business divisions.

The Group's Strategic Objectives

The PGNiG Group's strategy defines its new overriding objective of growing value and securing financial stability through sustainable development by making investments that offer higher yields (by earmarking roughly 45% of the group's overall capex for upstream projects) and by focusing on regulated businesses that offer considerable investment safety (by earmarking roughly 42% of total capex for gas distribution, heat and power generation).

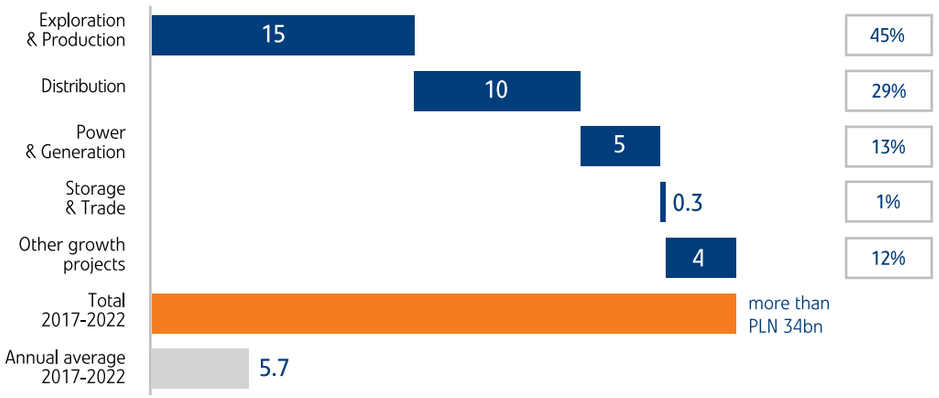
Priority areas of strategic investments and development

Additionally, ca. PLN 4bn of capex will be allocated to other growth projects, primarily in distribution, trading, heat and power generation. The Company plans for total capex to exceed PLN 34bn in 2017–2022.



Capital expenditure (CAPEX) for 2017-2022

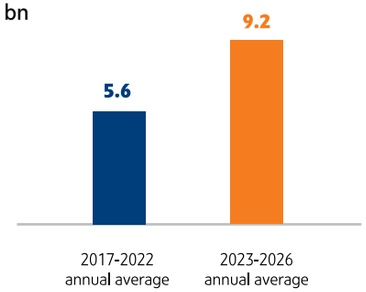
PLN bn



The investment programme should deliver a cumulative EBITDA of ca. PLN 33.7bn over 2017–2022, driving the long-term growth of the Group's EBITDA in 2023–2026 to an annual average of ca. PLN 9.2bn. At the same time, the net debt to EBITDA ratio should stay below 2.0 in this period while maintaining the Group's current dividend policy of paying up to 50% of the Group's consolidated net profit*. The PGNiG Management Board always takes into account the PGNiG Group's current financial standing and its investment plans before giving dividend payout recommendations.

EBITDA for 2017-2022

PLN bn



Ambitions in key business areas

Our Strategy identifies seven key business areas with the following strategic objectives and ambitions in 2017–2022:

barrel of oil equivalent (1 barrel is equal to approximately 0.136 tonnes or 159 litres).

Exploration & Production
Increase hydrocarbon reserves and production

- Increase documented hydrocarbon reserves by 35% (to 1.208 mm boe in 2022);
- Increase annual hydrocarbon production by 41% (to 55 mm boe in 2022).

Wholesale
Diversified and competitive gas supply portfolio

- Diversified gas supply portfolio after 2022;
- Increasing the overall volume of natural gas sales by 7% (to 178 TWh in 2022);
- Cumulative natural gas sales volume on wholesale markets in Poland and abroad 1000 TWh.

Retail
Maintaining current market position and maximising margins

- Maximising retail margins;
- Maintaining the total volume of retail gas sales at ca. 67-69 TWh/year.

Storage
Secure access to storage capacities

- Securing access to storage capacities adjusted to current demand;
- Improve storage efficiency.

Distribution
Faster gas network roll-out

- More than 300 thousand new service lines in 2017–2022;
- Raise the annual growth rate measured by the number of service lines by 17%;
- Increase gas distribution volume by 16% (to 12.3 bcm in 2022).

Power & Heat Generation
Increase power and heat production volumes

- Increase power and heat sales volume by 20% (to 18 TWh in 2022).

Corporate Centre
Effective business model, development of R&D&I and CSR

- Effective execution of R&D&I projects and enhancing the PGNiG Group's image;
- Operational efficiency improvement across the PGNiG Group.

Strategy implementation in 2016

Challenges

The PGNiG Group's activities depend strongly on external factors. Key challenges facing the Group in 2016:

1. Developments in the global fuel and energy markets
Notably the slump in oil and gas prices and rapid expansion of the LNG market.

The Polish gas market evolved as steep price declines materialised elsewhere in Europe. Moreover, European market gas prices have virtually ceased to move in parallel with petroleum prices: this trend has been observed for the past several years. Gas spot prices in Germany and other European markets have tumbled by more than 40%, thereby making gas imports to Poland much more attractive than the PGNiG SA tariff.

Falling oil prices also led to major implications for the Group. The flip side of lower gas procurement costs under long-term contracts making imports a more attractive source of supply takes the form of upending the economics of international upstream projects with a predominant share of oil in their total reserves. Consequently, the international exploration and production segment took a hit to its valuation.

Global LNG infrastructure has been expanding rapidly in recent years. On one hand, new export-focused projects have come on line (liquefaction terminals), mainly in North America and Australia. On the other hand, import capacities (regasification terminals), mainly in Europe have grown. The outcome is a glut on the global LNG markets, pushing prices down in the direction of global price convergence.

As a participant of the global LNG market, PGNiG will be able to take advantage of favourable pricing terms and secure additional gas supplies for Poland. Since the LNG supply is abundant, gas trading on spot markets using short-term and medium-term contracts has gained in importance. Moreover, the destination clause is losing relevance, the number of market players is on the rise and the global LNG fleet is becoming more available.

2. Progressing market deregulation
As the obligation to sell a specific portion of gas on the power pool has come into force, PGNiG is compelled to sell high-methane gas on commodity exchanges or other regulated markets. The process of deregulation coupled with the obligation of selling gas on the power pool poses two major risks: significant customer churn and lower storage revenues.

PGNiG has also had to adjust its contracts with customers to accommodate the liberalised market in terms of contracted capacity, volumes contracted per gas year and the supplier switching process.

3. Need to change the mix of imported gas sources
The Group's current mix of gas supply sources was structured to cover the entire demand for natural gas in Poland. However, considering the risk of losing a part of the Group's market share and given the insufficient diversification of supplies, the Group's gas portfolio may be unbalanced. Currently, the PGNiG Group's gas supply mix is largely made up of contracts priced partly by reference to the prices of oil products (Yamal and Qatar Contracts). The differences in the pricing formulas used by PGNiG versus its competitors may exert some price pressure.

Therefore, it has become imperative for the Group to explore opportunities to diversify gas supply and analyse feasibility. With the Yamal Contract nearing expiry, it must build a flexible portfolio of supply sources for Poland beyond 2022.

4. Policy and regulatory changes
PGNiG's regulatory environment is undergoing significant changes, particularly in the taxation of hydrocarbon production, the obligation to sell gas on the power pool and the uncertainty surrounding the support model for gas-fired cogeneration. All of these factors adversely affect the Group's segment revenues.

Implementation

To address the challenges facing the PGNiG Group in the coming years, in early 2016 we revised and updated our strategy. On April 4th, 2016, the PGNiG Supervisory Board approved the PGNiG Group's updated Strategy for 2014–2022. Following review and verification, we updated the macroeconomic, market and business framework and we redefined our strategic ambitions. As a result, we modified our strategic initiatives and added some new ones.

The updated Strategy continues to focus on the following four key business areas:

- maintaining stable trading volumes (retail and wholesale);
- maximising cash flows in infrastructure and generation For more information, see Sections 5.3.2. and 5.4.2;
- strengthening and transforming exploration and production For more information, see Section 5.1.2;
- laying foundations for value chain growth.

The updated Strategy contemplates a slight increase in the Group's EBITDA, our principal performance measure, to over PLN 7bn in 2022.

In the period covered by the Strategy, capital expenditure on organic growth and acquisitions was maintained at PLN 40bn–50bn, with the net debt to EBITDA ratio comfortably below 2.0 in 2022 and the current dividend policy upheld.

In 2016, the Group delivered on its strategic objectives in each business area.
Key achievements in 2016:

For more on Trade and Storage segment, see p. 82

1. Maintaining stable trading volumes (retail and wholesale)

- **Diversification of supply sources – the Norwegian Corridor**
  - PGNiG, supported by the Polish government, is holding talks with Norway and Denmark about connecting the Polish gas system with the Norwegian Continental Shelf.
- **Diversification of supply sources – LNG terminal**
  - PGNiG received 9 LNG deliveries under a long-term contract with Qatargas. Additionally, as part of short-term balancing, PGNiG purchased LNG on the spot market in Norway (Statoil contract).
- **LNG trading office**
  - opened for business in early 2017. It will be ready to operate by the end of Q1 2017. Ultimately, the London office will be the main trading office for short- and medium-term contracts for liquefied gas.
- **Yamal contract**
  - arbitration - PGNiG is taking steps to bring its long-term contract with Gazprom in line with prevailing

For more on Exploration and Production segment, see p. 66

Shale gas - a type of unconventional gas, produced from sedimentary shale rock located deep underground.

For more on Distribution segment, see p. 98

PGNiG Upstream Norway AS - formerly PGNiG Upstream International AS.

For more on Generation segment, see p. 106

conditions on the European market. On February 1st, 2016, the Group filed a claim against OAO Gazprom and OOO Gazprom Export in arbitration proceedings pending before the Arbitration Institute in Stockholm.

- **New gas contracts**
  - The Group's gas customer profile grew as PGNiG expanded its footprint in neighbouring countries. On August 4th, 2016, the Group signed an agreement with Ukraine's ERU Trading for natural gas supplies to industrial customers. PGNiG also entered into new gas sale contracts in Poland as the outcome of constantly striving to employ a high quality customised sales approach.
- **Customer offer**
  - The Group is evolving to meet the needs and expectations of its end users by offering them discount schemes. They are appreciated by its largest customers and have delivered superb results.

2. Maximising cash flows in infrastructure and generation

- **Distribution**
  - Higher distributed gas volume (to ca. 11 bcm in 2016) by ramping up new connections);
  - PSG's new strategy's primary objectives are (i) to increase the distributed gas volume, (ii) attract new customers, (iii) connect many more communes and municipalities to the mains gas network;
  - PSG's intends to align its organisational structure to Poland's administrative division to simplify interactions with local governments and facilitate access to PSG's services.

- **Generation**
  - On April 28th, 2016, PGNiG TERMIKA acquired a 100% equity stake in Przedsiębiorstwo Energetyki Cieplnej S.A. in Jastrzębie Zdrój;
  - On August 11th, 2016 it acquired a shareholding in Spółka Energetyczna Jastrzębie S.A. from Jastrzębska Spółka Węglowa S.A.

  The PGNiG Group's strategy for the generation business is to expand its share in the heat generation and distribution market. With these acquisitions, the PGNiG Group expanded its business into new geographical markets in Poland.

3. Strengthening and transforming exploration and production

- **Exploration & Production in Poland**
  - maintain stable natural gas and crude oil production in Poland;
  - discover reserves of new hydrocarbon deposits;
  - explore and appraise shale gas deposits in the most promising concessions. Work was discontinued in late 2016 because the initial estimates and forecasts of shale gas potential did not pan out.

- **Exploration & Production abroad**
  - In 2016, PGNiG Upstream Norway AS acquired five new exploration concessions on the Norwegian Continental Shelf. One of the Group's key operating objectives is to ramp up hydrocarbon production. In connection with the proposed construction of the Norwegian Corridor and the Baltic Pipe (giving Poland access to gas from Norwegian fields), the PGNiG Group's assets would ultimately help it generate natural cross-segment synergies, thereby leveraging the Group's resources;
  - PGNiG began to drill a third well on the Rehman field in Pakistan (Rehman-2) with its primary goal being to increase natural gas production. As the next stage of exploration in Pakistan, in April 2016 a 3D seismic dataset was acquired to help the Group make informed decisions on where to drill boreholes in 2017;
  - Following the lifting of sanctions imposed on Iran, PGNiG is looking into a possible return. On November 5th, 2016 PGNiG and the National Iranian Oil Company signed a letter of intent for cooperation in Teheran on the Soumar oil field.

4. Laying foundations for value chain growth

- **Efficiency Improvement Programme**
  the PGNiG Group continued its efforts to reduce cost base and improve the cost discipline under the Efficiency Improvement Programme. Cost savings generated in 2016 amounted to PLN 830m, 5% above the target, on enhanced organisational and process-related efficiencies across the Group.
- **Disposal of non-core properties and companies**
  one of the Group's key strategic initiatives is to dispose of its non-core properties. In 2016, aggregate proceeds from property sales exceeded PLN 41m (vs the planned PLN 33m).
- **Research, Development and Innovation**
  in 2016, the PGNiG initiated changes in its research and development (R&D) area. In particular, efforts were launched to formulate a new, extended R&D&I strategy, covering research, development and innovation.

Capital expenditures in 2016

In 2016, the PGNiG Group's capital expenditures incurred for property, plant and equipment and intangible assets totaled PLN 3.0bn, down by ca. 10% year on year. The tables below present the Company's and the Group's CAPEX by segment.

Capital expenditures on property, plant and equipment by PGNiG Group in 2016

	PLNm	2016	2015
I.	Exploration* and Production, including:	1,254	1,437
1	Norway	343	395
2	Pakistan	98	54
3	Libya	6	10
II.	Trade and Storage	192	233
III.	Distribution	1,109	1,193
IV.	Generation	438	454
V.	Other segments	9	7
VI.	Total capital expenditures (I-V)	3,003	3,324

* Capital expenditures include expenditures on geophysical surveys and drilling, as well as capitalised borrowing costs.

Research and development

In 2016, the Group significantly intensified its research, development and innovation activities. Its R&D&I efforts produced the following results:

- formulation of a new R&D&I strategy for the PGNiG Group;
- implementation of 14 R&D&I initiatives focused mainly on streamlining the processes of selecting innovative projects, but also on improving project assessment, innovation-related decision making, and implementation;
- agreement between PGNiG, Operator Gazociągów Przemysłowych Gaz-System S.A. and the National Centre for Research and Development to create INGA (Innovative Gas), a joint venture. This joint venture involves a dedicated mechanism for financing R&D efforts, whereby the National Centre for Research and Development and selected industrial partners will support pursuit of the country's Research Agenda. The Research Agenda includes the R&D themes that are most relevant for the PGNiG Group in hydrocarbon exploration and production, gas storage, gas networks, use and new applications of gaseous fuels, and environmental protection;
- joining the International Centre for Excellence on Coal Mine Methane and launching the GEO-METAN R&D project on pre-mining coal bed methane drainage;
- organisation of three sessions with micro and small enterprises and startups as part of the Innovative Thinking Workshop (ITW) initiative to spur new solutions for PGNiG Group member companies;
- launch of a series of Innovation Competitions to foster employee-led innovation;
- second edition of the 'Innovative Youth for PGNiG' competition for young scientists as well as graduate and post-graduate students, to find and attract innovative R&D projects relevant for PGNiG's business; launch of the InnVento.pl startup incubator in December 2016;
- joining the MIT Enterprise Forum Poland startup accelerator;
- start of the 'PGNiG Polish Innovations' project at universities, involving visits of PGNiG representatives to universities and presentation of our potential and opportunities to cooperate in R&D&I.

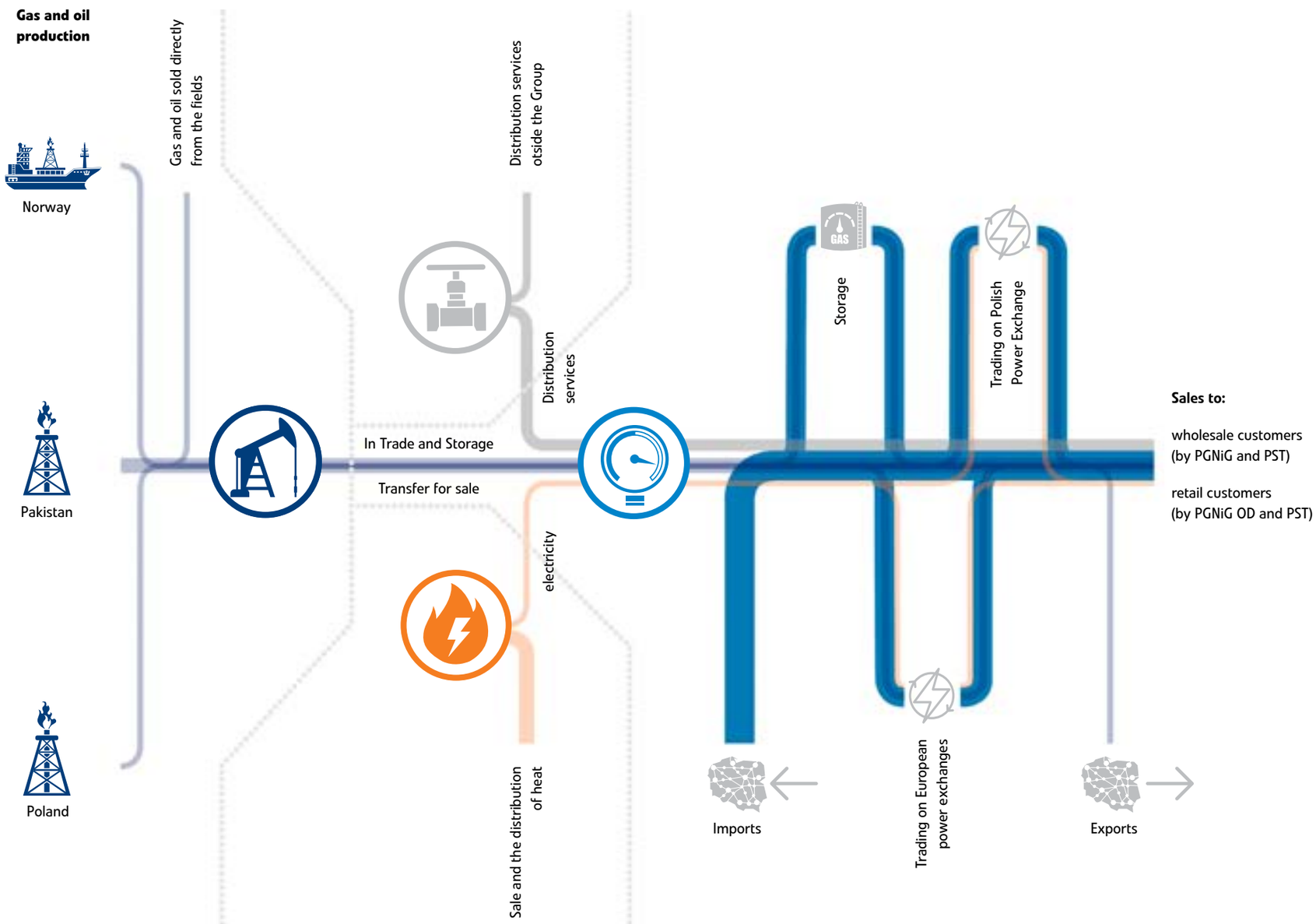
In 2017, we will continue to intensify our R&D&I efforts as part of the Innovation Factory comprising a system of practices and activities enabling efficient selection, pursuit and implementation of R&D&I projects. In order to maintain a balanced portfolio of innovative projects, the PGNiG Group intends to carry out several dozen such projects in 2017.

As part of its research, development and innovation activities, the Group also pursues projects focused on power efficiency management. R&D&I efforts in this area will be redoubled in 2017.

The PGNiG Group intends to spend ca. PLN 680m on research, development and innovation in 2017–2022 (more than PLN 100m per year, on average).

Business model

PGNiG Group's business model



PGNiG Group key companies

PGNiG

Exploration and Production

PGNiG SA (exploration and production activities)

Exalo Drilling SA

- Oil Tech International F.Z.E. [United Arab Emirates]
- Poltava Services LLC [Ukraine]

GEOFIZYKA Kraków SA w likwidacji (in liquidation)

GEOFIZYKA Toruń SA

PGNiG Upstream Norway AS [Norway]

Polish Oil and Gas Company - Libya B.V. [The Netherlands] *Libya

Trade and Storage

PGNiG SA (trade and storage activities)

Gas Storage Poland Sp. z o.o.

PGNiG Obrót Detaliczny Sp. z o.o.

PGNiG Finance AB [Sweden] *entire Europe

PGNiG Supply & Trading GmbH [Germany]

- PST Europe Sales GmbH [Germany]
- XOOL GmbH [Germany]

Distribution

Polska Spółka Gazownictwa Sp. z o.o.

- Powiśle Park Sp. z o.o.
- GAZ Sp. z o.o.

Generation

PGNiG TERMIKA SA

- Przedsiębiorstwo Energetyki Cieplnej S.A.
- Spółka Energetyczna „Jastrzębie" S.A.

Other segments

PGNiG SA (other activities)

BSiPG Gazoprojekt S.A.

Geovita S.A.

PGNiG Serwis Sp z o.o.

PGNiG Technologie S.A.

Company name – PGNiG's indirect subsidiary.
[country] – country of registration (if different from Poland).
* Principal place of business (if different from the country of registration).

Operations in 2016

- PGNiG Group's presence
- PGNiG foreign branches and representative offices

Total gas sales outside the PGNiG Group

mcm

	2016	2015	2014	2013	2012
High-methane gas (E)	22,899	21,653	17,322	14,970	13,723
Nitrogen-rich gas (Ls/Lw* as E equivalent)	1,373	1,295	1,252	1,202	1,156
TOTAL (as E equivalent)	24,273	22,948	18,574	16,173	14,879

* Types of nitrogen-rich gas.

Exploration and Production

Exploration and Production

The segment's business focuses on extracting hydrocarbons from deposits and preparing them for sale. It comprises the entire process of oil and gas exploration and production, from geological analyses, to geophysical surveys and drilling work, to field development and hydrocarbon production. The work is conducted by the segment on its own or jointly with partners, under joint operations agreements.

Segment's companies: PGNiG SA, PGNiG Upstream Norway AS, Polish Oil and Gas Company – Libya BV, EXALO Drilling SA, GEOFIZYKA Toruń Sp. z o.o., GEOFIZYKA Kraków Sp. z o.o. in liquidation.

See also: www.exalo.pl/en

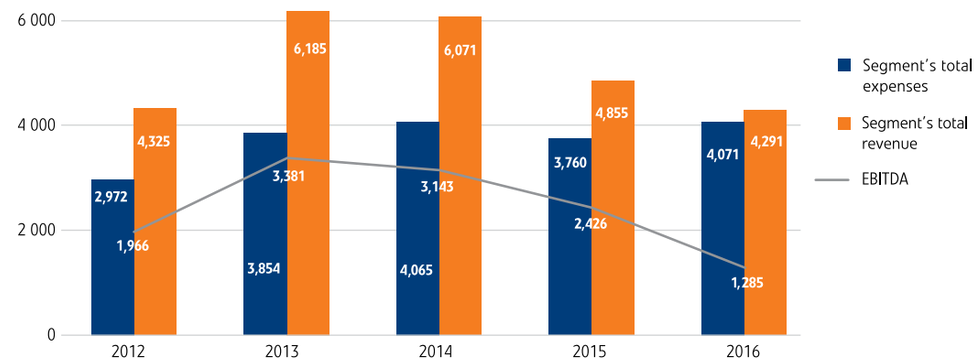
Segment's figures

At the end of 2016, the Exploration and Production segment reported an operating profit of PLN 219m, a decrease of PLN 875m relative to 2015. At PLN 1,285m, EBITDA was also lower than the year before, by PLN 1,140m (47%). The segment's revenue fell by PLN 564m (12%) year on year, to PLN 4,290m. The revenue decline reflected the 3% drop in oil sales volumes and lower crude oil prices (in Polish złoty terms, the average quarterly price of Brent in 2016 was approximately 12% lower than in 2015). Crude oil sales volumes were down in 2016, mainly as a result of longer scheduled maintenance shutdowns in Norway (in the third quarter) and unscheduled stoppages for repairs (in the fourth quarter). The PLN 311m increase in the Exploration and Production segment's operating expenses (up 8%) was caused by higher impairment losses on non-current assets, which in 2016 amounted to PLN 771m, compared with PLN 555m a year earlier. The segment's expenses were also affected by lower depreciation and amortisation charges, down from PLN 1,331m in 2015 to PLN 1,066m in 2016. The decline resulted mainly from the revaluation of reserves on the Norwegian Continental Shelf, which reduced depreciation rates applied to producing assets.

For more on operation in Norway, see p. 70

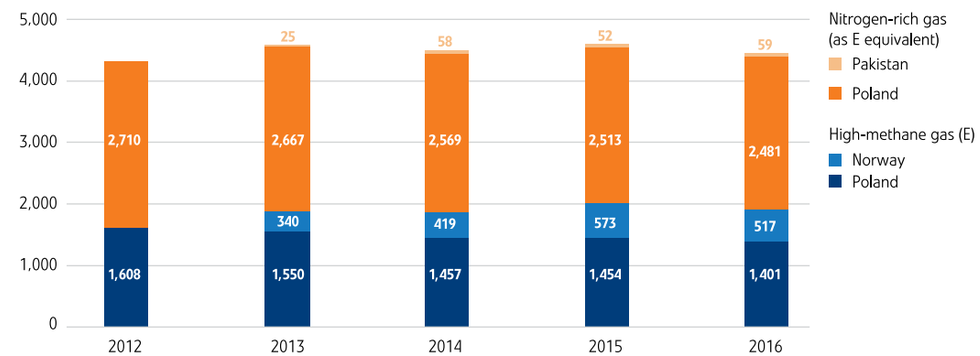
Segment's financial highlights

PLNm



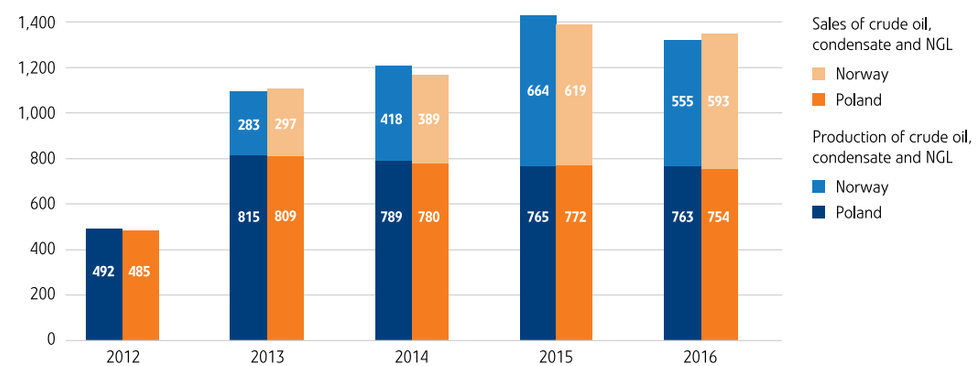
Natural gas production by the PGNiG Group

mcm



Crude oil, condensate and NGL, PGNiG Group

'000 tonnes



Operations in 2016

Operations in Poland

The PGNiG Group is the leader of the Polish hydrocarbon exploration and production market. The company accounts for 90% of total gas production. With its oil production volume of 750,000 tonnes in 2016, PGNiG Group accounts for 20% of total oil production in Poland.

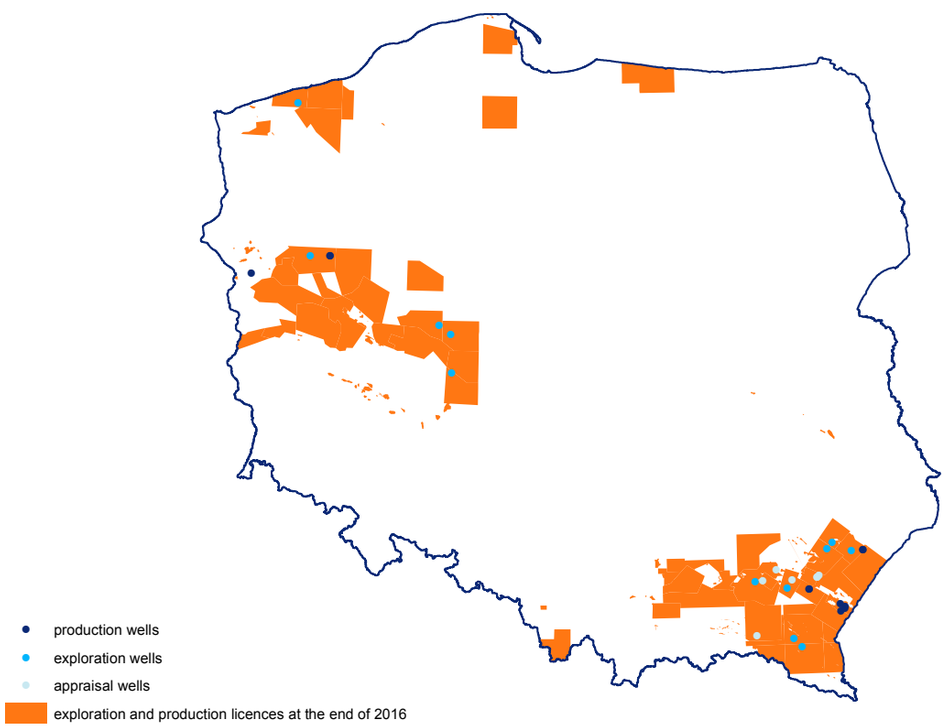
As at December 31st, 2016, PGNiG held 48 licences for exploration and appraisal of crude oil and natural gas deposits. In 2016, PGNiG was involved in crude oil and natural gas exploration and appraisal projects in the Carpathian Mountains, Carpathian Foothills and Polish Lowlands, both on its own and jointly with partners. Drilling work in areas covered by licences awarded to PGNiG was performed on 19 boreholes, including 12 exploration and 7 appraisal wells. As at the end of December 2016, formation test results were obtained from 14 boreholes (10 exploration and 4 appraisal wells), including 2 where drilling was completed in 2015.

In 2016, 12 wells, including 8 exploration and 4 appraisal wells, were drilled with positive results. 2 exploration wells failed to yield a commercial flow of hydrocarbons and were abandoned.

In 2016, 9 production wells were classified as positive. At the same time, 3 wells were abandoned.

In 2016, workovers, enhanced recovery treatments and tests were performed on 4 research (core) boreholes, 3 exploration wells, 2 appraisal wells and 4 production wells.

Map of licences and boreholes



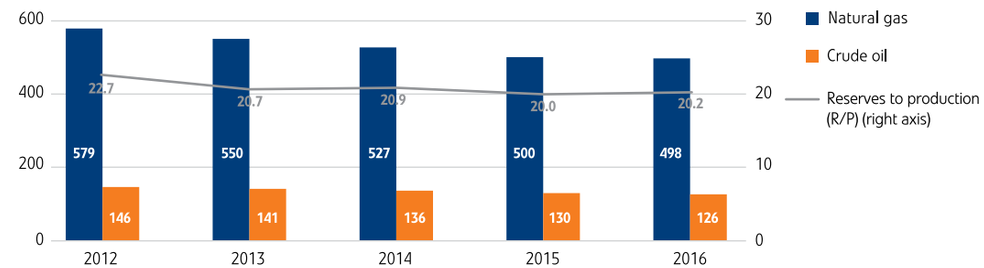
No. of production facilities

	Sanok	Zielona Góra
Gas production facilities	18	11
Oil production facilities	5	2
Oil and gas production facilities	13	5
Total	36	18

In 2016, PGNiG conducted joint operations with other entities in licence areas awarded to PGNiG, FX Energy Poland Sp. z o.o., LOTOS Petrobaltic SA and ORLEN Upstream Sp. z o.o. Furthermore, PGNiG collaborated with other entities in exploration work carried out in Pakistan and Norway.

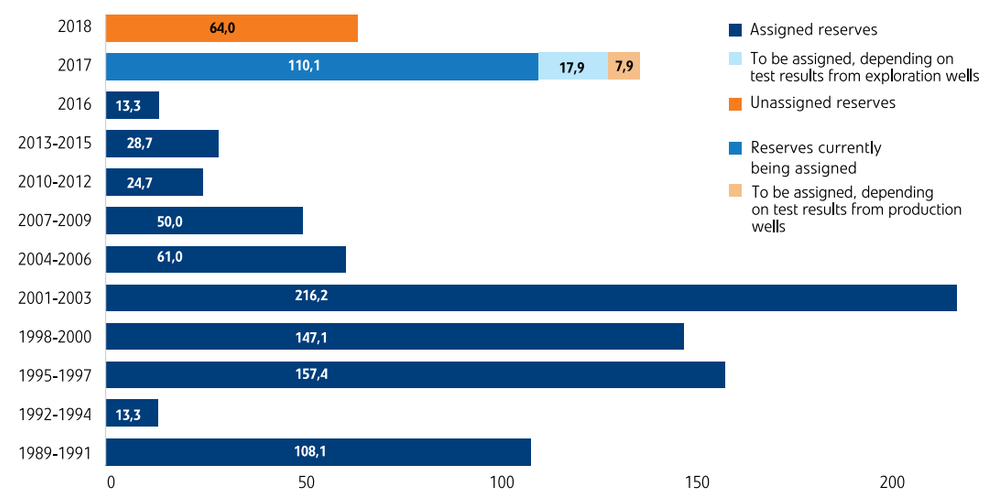
Recoverable reserves in Poland in 2012–2016

mm boe



Proved and unproved reserves in 1989-2018 in Poland

mm boe



Seismic 2D - reflection seismology surveys consisting in registration of seismic waves generated from a point and recorded along a designated line.

Seismic 3D - reflection seismology surveys consisting in registration of seismic waves generated from a poont and recorded over a designated area.

Coal bed methane - form of natural gas extracted from coal beds.

1 barrel is equal to approximately 0.136 tonnes or 159 litres.

See also: www.geofizyka.pl

Daily Rate - the rates a drilling contractor receives for a drilling rig from an oil company or operator.

Sales of key products

The main products sold by the Trade and Storage segment are crude oil, high-methane gas and nitrogen-rich gas. Other products, obtained in the process of crude refining, include crude condensate, sulfur and propane-butane. Some of the produced nitrogen-rich gas is further treated into high-methane gas at the Odolanów and Grodzisk Wielkopolski nitrogen rejection units. Apart from high-methane gas, the cryogenic processing of nitrogen-rich gas yields such products as liquefied natural gas (LNG), gaseous and liquid helium and liquid nitrogen.

In crude oil trading, in 2016 PGNiG continued its policy of trading with major Polish and foreign players in the fuel sector.

Rail deliveries of crude oil (64% of sales) were made to the refinery of the LOTOS Group in Gdańsk and to Orlen Południe's Trzebinia Production Plant (the ORLEN Group). In 2016, crude oil was also delivered by road – to Orlen Południe's Jedlicze Production Plant (6% of sales), and via the PERN pipeline – to TOTSA TOTAL Oil Trading S.A. (30% of sales).

In 2016, Brent crude traded at USD 43.47/bbl on average, with the prices fluctuating from USD 28/bbl in January to USD 55/bbl in December.

Seismic surveys

In 2016, GEOFIZYKA Toruń, GEOFIZYKA Kraków and other companies acquired 168.5 km of 2D seismic data and 576.7 km^2 of 3D seismic data. The largest 2D and 3D projects in 2016 included Korczowa 2D (76.5 km), Hoczew-Lutowiska 2D (60.9 km), Przemyśl 3D (164.6 km^2) and Wańkowa--Bandrów 3D (120.5 km^2).

Exploration for shale gas

Even though the exploration for unconventional shale gas deposits in Poland has not been successful, we have gained skills in using new technologies to drill and access formations previously considered unproductive, mainly because of very poor reservoir properties.

The geological conditions in Poland create a need to explore for hydrocarbons in formations where no large-scale extraction has taken place so far, mainly due to technological constraints. Knowledge gained during the search for shale gas deposits can be drawn on to facilitate the exploration and extraction of tight gas and coal bed methane. The projects currently under way in the Carpathian Mountains (e.g. Siedleczka – tight gas) and in Upper Silesia (Gilowice – coal bed methane) are good examples in this respect. It ought to be noted that the opening of new horizons in the Siedleczka and Kramażówka projects has brought measurable effects, namely an increase in gas reserves.

The widespread use of directional and horizontal drilling, combined with advanced methods by means of which access can be gained to formation areas with low or very low permeability, offer opportunities for acquiring new areas for petroleum prospecting in Poland. The daily rate system adopted for drilling works has attracted to Poland the most advanced technologies. By opening to a wide market of services, PGNiG specialists were able to learn about the technologies and acquire skills to use them in practice.

Foreign operations

Norway

PGNiG UN holds interests in exploratory and production licences on the Norwegian Continental Shelf, in the Norwegian Sea, in the North Sea and in the Barents Sea. Jointly with partners, the company has been producing hydrocarbons from the Skarv, Morvin, Vilje and Vale fields and working on the development of the Snadd and Gina Krog fields. In the other licence areas, the company is engaged in exploration projects. The company's main asset is the Skarv field, which has been developed using a floating production, storage and offloading (FPSO) vessel. The FPSO is owned by the licence holders, including PGNiG UN, and is expected to continue is operations for the next 20 years. The other fields (Morvin, Vilje and Vale) comprise a group of wells connected to the existing production infrastructure.

In 2016, the company produced a total of 555 thousand tonnes of crude oil with condensate and NGL (measured as tonnes of crude oil equivalent) and 517 mcm of natural gas from the Skarv, Morvin, Vilje and Vale fields. Production from the deposits was higher than initially planned. Greater output was achieved mainly thanks to the high efficiency of the production facilities. In addition, the larger output from the Skarv field was achieved through the use of a technique of injecting natural gas into the deposit to improve oil recovery.

In 2016, PGNiG UN and its partners continued the development of the Gina Krog and Snadd fields. In the Gina Krog field, exploration wells were being drilled. The Samsung shipyard in South Korea completed the construction of components of surface infrastructure for receiving oil and gas, which were subsequently transported to Norway and installed over the Gina Krog field. The field is now being prepared for production launch, which is scheduled for 2017. In 2016, a development concept for the Snadd field was selected. The preferred scenario provides for drilling three new production wells and launch of production in 2020.

Jointly with its partners, PGNiG UN also continued work on its other exploration licence areas. For example, the company was evaluating the prospectivity of the PL702, PL703, PL707, PL756 and PL799 licence areas. Based on the results of geological and economic analyses, a decision was made to relinquish the PL702, PL707, PL756 and PL799 licences, with no wells drilled.

In 2016, further APA 2015 rounds (Awards in Predefined Areas) and the 23rd Licence Round were concluded; PGNiG UN was awarded interests in five new exploration licences.

Within two to three years, the licence partners will perform geological and geophysical investigations allowing them to make precise estimates of the hydrocarbon potential of the licences. After that period, drill-or-drop decisions will be made.

As at December 31st, 2016, PGNiG UN held interests in 17 exploration and production licences on the Norwegian Continental Shelf, in two of them as the operator. On January 17th, 2017, PGNiG UN was awarded two more licences by the Norwegian government in the APA 2016 round and granted operatorship of one of them. The licence partners were given two years to acquire seismic data and carry out geological and geophysical surveys, with drill-or-drop decisions due afterwards.

The awarded licences have significant gas potential, which fits in with plans envisaging gas imports from Norway to Poland. Both licences are located close to existing production and pipeline infrastructure, which will make project work much simpler and faster.

Floating Production, Storage nad Offloading Unit - a floating vessel used for offshore production of hydrocarbons, and for storage and offloading of the produced oil.

APA - Awards in Predefined Areas.

See also: www.npd.no/en/Topics/Production-licences/Theme-articles/Licensing-rounds/

boe - barrel of oil equivalent (1 barrel is uqal to approximately 0.136 tonnes or 159 litres).

Skarv and Snadd	
PGNiG's interest	11.92%
Partners	AkerBP (Operator 24%), Statoil (36%), EON (28%)
Reserves as at end of the year	51.1mm boe (net for PGNiG UN)
2016 output	14.2 thousand boe (net for PGNiG UN)

Morvin	
PGNiG's interest	6%
Partners	Statoil (Operator 64%), Eni (30%)
Reserves as at end of the year	1.8mm boe (net for PGNiG UN)
2016 output	1.2 thousand boe (net for PGNiG UN)

Vale	
PGNiG's interest	24.24%
Partners	Centrica (Operator 50%), Lotos (25,8%)
Reserves as at end of the year	2.3mm boe (net for PGNiG UN)
2016 output	1.4 thousand boe (net for PGNiG UN)

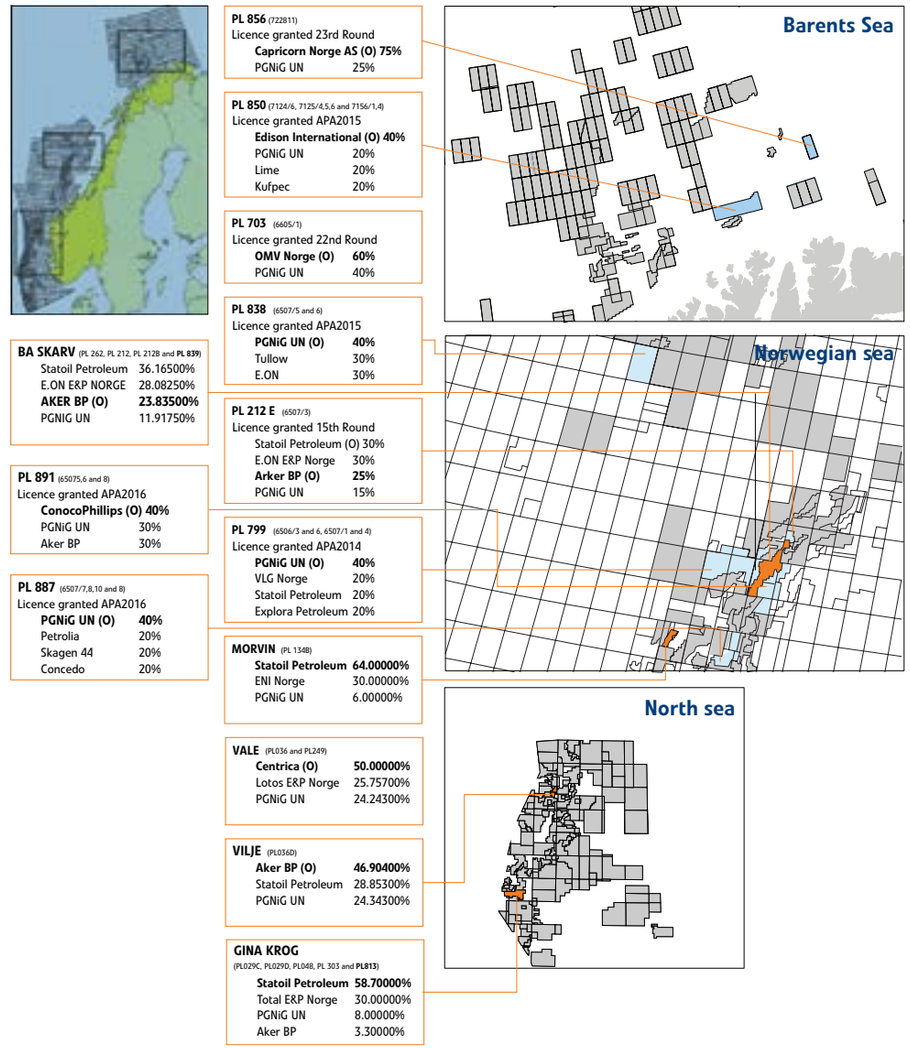
Vilje	
PGNiG's interest	24.24%
Partners	AkerBP (Operator 47%), Statoil (29%)
Reserves as at end of the year	4.6mm boe (net for PGNiG UN)
2016 output	3.4 thousand boe (net for PGNiG UN)

Gina Krog	
PGNiG's interest	8%
Partners	Statoil (Operator 58.7%), Total (15%), KUFPEC (15%), AkerBP (3.3%)
Reserves as at end of the year	18.3mm boe (net for PGNiG UN)
2016 output	Planned to be launched in 2017

Crude oil is sold directly from the fields to Shell International Trading and Shipping Company Ltd (from the Skarv, Vilje and Vale fields) and to TOTSA Total Oil Trading S.A. (from the Morvin field). All fields except for Vilje also produce associated gas, which is transferred via a gas pipeline mainly to Germany, where it is collected by PGNiG Supply & Trading GmbH. PGNiG UN's key sales markets are Norway, Germany and the UK.

For more on PGNiG Supply & Trading, see p. 88

PGNiG UN's license portfolio in January 2017



Pakistan

PGNiG is engaged in exploration work in Pakistan under an agreement for hydrocarbon exploration and production in the Kirthar licence area executed between PGNiG and the government of Pakistan on May 18th, 2005. Work in the Kirthar block is conducted jointly with Pakistan Petroleum Ltd. (PPL), with production and expenses shared proportionately to the parties' interests in the licence: PGNiG (operator) – 70%, PPL – 30%. Exploration activities within the licence area have resulted in the discovery of two gas deposits – Rehman and Rizq.

Natural gas reserves: 11.3 bcm (Rehman) and 3.8 bcm (Rizq)

In line with the concept providing for simultaneous development of the Rehman and Rizq fields, the drilling of Rehman-2 was completed in November 2016, with Rehman-3 spudded on November 17th. 2016 saw further progress in the construction of pipeline infrastructure, which was used to enable production from Rizq-1 as of November 7th. Rizq-1 is producing natural gas as part of an extended well testing programme and the gas is sold to the Pakistani gas system. The same pipeline will be used to make the Rehman-2 well available for production. Gas from the Rehman and Rizq fields is produced via facilities located in the Rehman field. In mid-2016, preparatory work began for drilling four new wells (two production wells, one appraisal well and one exploration well). As part of further exploration and documentation work, work on a new 3D seismic survey was completed. The Company also continued production from the Rehman-1 and Hallel X-1 wells.

In 2017 in Pakistan, PGNiG will continue drilling the Rehman-3 well and will commence drilling the Rehman-4 and Rizq-2 wells. In the following years, under the Kirthar licence, the Company will perform work to gradually expand the capacity of the production installations; further drilling work will also be performed on the Rehman and Rizq fields. In addition, PGNiG plans to continue exploration work within three potential fields: N2, W1 and W2. PGNiG is seeking to secure an exploration licence in the Baran Block, adjacent to the Kirthar licence area.

See also: www.pogc.ly/libya

Exploration and Production Sharing Agreement - agreement concluded in 2008 between POGC Libya and the Government of Libya for exploration work in the Murzuq petroleum basin in Libya (license No. 113).

Libya

Due to a rapid deterioration of the security situation in Libya in mid-2014, on August 12th, 2014 POGC Libya gave notice of a force majeure to the National Oil Corporation (NOC) and started to scale back its operations in the country. In November 2015, POGC Libya entered into an Interim Agreement with NOC, under which the parties agreed that the EPSA will not expire even if the force majeure continues for more than two years after its notification. In 2016, steps were taken to stabilise the situation in Libya by engaging the international community in coordinating the peace process aimed at electing a new unity government.

Throughout 2016, POGC Libya made efforts to reduce the impact of the force majeure on the project. The efforts were pre-approved by NOC and involved analysing seismic data and verifying the prospectivity of the LC113 licence.

Germany

Work was continued within a subdivision of the Lubben licence area in east Germany (Brandenburg) under a joint operations agreement of August 4th, 2015. PGNiG's (36% interest) project partners are Central European Petroleum Gmbh (39% interest and operatorship) and Austria's Rohöl-Aufsuchungs AG (25% interest). In the first half of 2016, drilling of the Markische Heide-1 exploration well was completed and the acquired data was analysed to identify a potential prospect. Given major differences in the interpretation of seismic data and the increased exploration risk, PGNiG decided to withdraw from the project.

Iran

On November 5th, 2016, a Memorandum of Understanding and a Confidentiality Agreement were signed with National Iranian Oil Company (NIOC) concerning joint operations on the Soumar oilfield owned by NIOC's subsidiary Iranian Central Oil Fields Company. By the end of March 2017, PGNiG is to prepare a development concept for the field based on data supplied by its Iranian partner. After the concept is approved by NIOC and a relevant consent is secured, the parties will be able to proceed to negotiate a potential contract. In Teheran PGNiG SA and National Iranian Oil Company signed a letter of intent concerning their collaboration on the Soumar oil field, with in-place resources put at approximately 475 mm boe.

Seismic surveys

In 2016, seismic data acquisition was carried out by PGNiG Group in Hungary, Italy, Algeria, Mozambique, Tunisia, Egypt and Morocco. Processing and interpretation activities were conducted in Gabon, Germany, France, Belgium, Italy, Algeria, Switzerland, Pakistan, India, Spain and Columbia. In 2016, the Group also worked on projects related to well logging and measurement of gas drilling parameters in Germany.

Segment's strategy

The main objective in this segment is to maintain stable production of natural gas and crude oil in Poland and achieve an increase of approximately 50–55 million boe in hydrocarbon production from Polish and foreign sources by 2022. In 2016, the PGNiG Group produced a total of 4,458 mcm of natural gas (measured as high-methane equivalent), of which output from domestic deposits was 3,882 mcm and output from foreign deposits was 576 mcm. Moreover, 1,118 thousand tonnes of crude oil was extracted (including condensate and NGL), of which 763 thousand tonnes was produced from domestic deposits and 555 thousand tonnes from foreign deposits.

NGL, natural gas liquids - components of natural gas that are separated from the gas state in the form of liquids.

In Poland, PGNiG worked intensively to discover and assign reserves to new deposits of hydrocarbons. 13.3 mm boe of reserves were documented in 2016, based on discoveries made in previous years. Furthermore, 10 new deposits were discovered, with reserves to be assigned in the following years.

As at the end of 2016, the PGNiG Group had total gas reserves of 609 million boe, of which 498 million boe were reserves in Poland and 111 million boe were foreign reserves. The Group's oil and NGL condensate reserves were 161 million boe, including 126 million boe in Poland and 35 million boe abroad.

Together with the Polish Geological Institute – National Research Institute, PGNiG continued a research project into the application of fracturing technology for pre-mining extraction of coal bed methane.

See also: www.pgi.gov.pl/en

Key investment projects and CAPEX

In 2016, PGNiG's capital expenditures in the Exploration and Production segment amounted to PLN 830m, 16% less than in 2015. As regards exploration, capital expenditures were mainly related to drilling of appraisal wells (PLN 55m) and exploratory wells (PLN 239m), of which PLN 57m was attributable to the Wysin and Lubocino wells and PLN 26m – to the Tyczyn well. PLN 94m was spent on seismic and geophysical work, with PLN 66m of that amount allocated to 3D seismic surveys.

Expenditures on production in 2016 included PLN 210m related to drilling of production wells and PLN 178m spent on field development. Key production projects included

drilling of wells on and development of the Przemyśl field (PLN 56m), development of the Radoszyn field (PLN 37m), drilling of wells on and development of the Kamień Mały field (PLN 25m) and recovery of helium from natural gas on the Kościan-Brońsko field (PLN 24m).

In 2016, capital expenditures in Norway totalled PLN 343m. In 2016, PGNiG UN and its partners continued the development of the Gina Krog and Snadd fields. Exploration and production wells on the Gina Krog field are drilled with the use Maersk, a new drilling rig placed in service in October 2015. Furthermore, in 2016 a major part of the work to construct a production platform was completed. Production from Gina Krog is scheduled to commence in 2017.

In 2016, capital expenditures incurred in Pakistan totalled PLN 98m and was 81% higher than in 2015.

Recoverable reserves - values corresponding to probability (respectively 90%, 50% and 10%) that the actual volume of estimated gas reserves is larger than the estimate.

Probability that the risk will materialise:
●○○ low
●●○ moderate
●●● high

Risk materiality level:
●○○ low
●●○ moderate
●●● high

The risk comparison (2016 vs 2015)
↗ rise
→ stable
↘ fall

Risks

Resource discoveries and estimates

●●● ●●○ ↗ Poland
●○○ ●●● → Norway

The main risk inherent in exploration activities is the risk of failure to discover hydrocarbons, i.e. exploration risk. This means that not all identified leads and prospects actually have deposits of hydrocarbons which can qualify as an accumulation.

Reserves estimates and production projections may be erroneous due to imperfections inherent in the applied equipment and technology, which affect the quality of the acquired geological information. Irrespective of the methods applied, data on the volume and quality of commercial reserves of crude oil and natural gas is always an estimate. Actual production, income and expenses relating to a given deposit may significantly differ from the estimates. The weight of this risk is further increased by the fact that in the full business cycle the period from start of exploration to the launch of production from a developed field takes six to eight years, while the production lasts from 10 to 40 years. Formation characteristics determined at the stage of preparing the relevant documentation are reviewed after production launch. Each downgrade of the size of reserves or production quantities may lead to lower revenue and adversely affect the PGNiG Group's financial performance.

The risk is managed by analysing the chances of success of exploratory projects and by estimating the reserves under various scenarios (P90, P50 and P10) which represent the expected probability distribution of the size of reserves.

Tight gas - natural gas trapped in isolated pores of low permeability rocks such as sandstones or carbonates.

Exploration for unconventional deposits of gas

●○○ ●●● ↘

The risk associated with exploration for unconventional deposits of gas in Poland relates to the lack of confirmed presence of shale gas and tight gas. Exploration for shale gas has now been closed and the experience gained from such projects will allow PGNiG to minimise risks associated with exploration for tight gas. Even if the existence of in-place tight gas resources is confirmed, production may prove uneconomic due to insufficient recovery rates and high investment expenditures necessary to drill wells and construct production facilities. Another material factor is the difficulty of accessing unconventional gas plays given the environmental regulations and the requirement to obtain the landowners' consent for access to the area.

Competition

●●● ●○○ ↘ Poland
●○○ ●●○ → Norway

Both in Poland and abroad there is a risk of competition from other companies seeking licences for exploration and appraisal of hydrocarbon deposits, although it should be noted that this risk has significantly diminished in the Polish market over the past year. Certain competitors of the PGNiG Group, especially global players, enjoy strong market positions and greater financial resources than those available to the Group. Thus, it is probable that such companies would submit their bids in tender procedures and be able to acquire promising licences, offering better terms than the Group could offer given its financial and human resources. This competitive advantage of oil majors is particularly important on the international market.

Delayed work

●●● ●●● ↗ Poland
●●○ ●●○ → Norway

Under the applicable Polish laws and regulations, the process of obtaining a licence for exploration and appraisal of crude oil and natural gas reserves lasts from one to one and a half years. In foreign markets such procedures may even take up to two years from the time the winning bid is awarded until the actual contract is ratified. Prior to the commencement of field work, it is also required to make a number of arrangements, for instance to obtain legal permits and approvals for entering the area, and to meet the environmental protection requirements and, in some cases, requirements related to the protection of archaeological sites. It is also required to hold tenders to select a contractor. All this delays the execution of an agreement with the contractor by another few months. Frequently the waiting time for customs clearance of imported equipment is very long.

Further, PGNiG's obligation to comply with the Public Procurement Law frequently protracts tender procedures. Notices of appeal and complaints submitted by bidders lead to lengthy court proceedings and, consequently, to delays in implementing an entire project. A protracting project exacerbates the risk related to estimation of capital expenditures.

The risk is managed through ongoing monitoring of the project status and by taking action by the licence Operator whenever any issue arises.

Cost of exploration

●●● ●●○ ↗

Capital intensity of an exploration project depends on prices of energy and materials. Cost of exploratory work is especially sensitive to steel prices, which are passed onto prices of casing pipes and production tubing used in drilling. An increase in prices of energy and materials translates into higher costs of exploratory work. Profitability of foreign exploration projects also depends to a significant extent on prices of oil derivative products and on exchange rates. To reduce drilling costs, in 2011 PGNiG introduced the daily rate system into its procedure for selecting drilling contractors and paying for their work.

Safety, environmental protection and health regulations

●●● ●●○ ↘ Poland
●●● ●●○ → Norway

Ensuring compliance with environmental laws in Poland and abroad may lead to a significant increase in the Group's operating expenses. Currently, PGNiG incurs significant capital expenditures and costs to ensure compliance of its operations with the ever more complex and stringent regulations concerning safety and health at work and environmental protection. The Act of May 18th, 2005 Amending the Natural Environment Protection Law and Certain Other Acts (Dz.U. No. 113, item 954 of June 27th, 2005) introduced more stringent regulations governing projects which might affect Natura 2000 sites. It also imposed more stringent obligations with regard to operations in habitats of protected species of plants and animals Also in countries where PGNiG is engaged in exploration activities, a trend towards tightening environmental regulations is observed.

Upstream operations at sea entail a

Natura 2000 - a network of specific types of natural habitats and wildlife species which are considered to valuable and endangered at the European level, covering almost 20% of Poland's onshore territory.

significant risk of environmental pollution in the event of an oil spill. The risk is monitored on an ongoing basis and various barriers and technical solutions are put in place to minimize it.

Unforeseen events

●●○ ●○○ ↘

Hydrocarbon deposits developed by PGNiG are usually located at great depths, which involves extremely high pressures and, in many cases, the presence of hydrogen sulphide. Consequently, the risk of hydrocarbon blowout or leakage is very high, which in turn may pose a threat to people (employees and local population), natural environment and production equipment.

Other changes in laws and regulations

●●● ●●● ↗

In some countries, exploration and production activities may be hindered by frequent and unexpected changes in legislation, which may create particularly serious risks in countries with authoritarian regimes.

Political and economic situation – PGNiG Group

●●○ ●○○ ↘

Some countries where the PGNiG Group is conducting exploration are threatened by armed conflicts and terrorist attacks, which may lead to limitation, suspension or even discontinuation of such activities.

The PGNiG Group's operations are also exposed to the risk of social or political unrest in some regions. Changes of governments may result in withholding issuance of petroleum licences. Those countries are also at risk of internal conflicts and civil unrest due to poverty and demographic issues.

In certain countries, operations of exploration companies may be hindered by the absence of adequate infrastructure, which may be an obstacle in transporting equipment, personnel and materials to the sites. Problems may also arise in providing supplies and ensuring appropriate health care. These risks may lead to limitation or suspension of the Company's exploration activities.

Development prospects

In each of 2017 and 2018, PGNiG plans to produce 3.8 bcm of natural gas (measured as high-methane equivalent) and 745,000 and 840,000 tonnes of crude oil, respectively. Once new wells on the Barnówko-Mostno-Buszewo and Lubiatów-Międzychód-Grotów fields come on stream, the oil production volume will grow in 2018. Plans for the upstream area in Poland include development and tie-in of 22 new wells and expansion of two facilities, in Dębno and Grodzisk, in 2017.

On the Norwegian Continental Shelf, PGNiG UN, as a project partner, will continue to produce hydrocarbons from the Skarv, Morvin, Vilje and Vale fields and will proceed with the development of the Snadd and Gina Krog fields. PGNiG UN will also work towards ensuring stable, predictable and long-term gas supplies to Poland. These efforts will include analysis of infrastructure scenarios for transmission of Norwegian gas to Poland, but also potential acquisitions of gas fields in Norway. Based on the interests currently held in the Norwegian fields, the production volume is projected to reach 0.5 bcm of gas and 571 thousand tonnes of oil (including NGL) in 2017 and 0.5 bcm of gas and 579 thousand tonnes of oil (including NGL) in 2018.

PGNiG UN also intends to acquire new licence areas by participating in annual APA licensing rounds and in regular licensing rounds held every two to three years. The company may seek to acquire new licence areas through farm-in (purchase of interests from other companies) or farm-down (exchange of interests with other companies) arrangements. In the future, the company may participate, as a partner, in drilling projects in deep-sea waters (below 1,000 m) and in the Arctic Zone through its interests in the PL703 licence within the Vøring Basin in the Norwegian shelf, where the sea depth exceeds 1,000 m, and in two licences (PL850 and PL 856) in the Barents Sea.

As regards seismic surveys, in 2017 acquisition is planned of 2D seismic data (two projects) and 3D seismics (one project) in Poland and of 2D seismic data (two projects in Mozambique and Myanmar) and 3D seismic data (eight projects in Germany, Austria, Egypt, Tunisia, Algeria, Myanmar and Italy) abroad.

Trade and Storage

Trade and Storage

Underground gas storage facilities - storage facilities located in two different types of geological structures - salt caverns (underground gas storage cavern facilities) or partly depleted oil or gas reservoirs.

See also: ipi.gasstoragepoland.pl/en/home/

The principal activity of the segment is trade in natural gas. In Poland, where the PGNiG Group is the largest natural gas supplier, the segment sells natural gas produced from domestic fields or imported. Through PGNiG Sales and Trading GmbH (wholesale) and PST Europe Sales GmbH (retail sale), the PGNiG Group is also developing its natural gas business (both wholesale and sales to end users) in Germany and Austria. The segment also trades in electricity, certificates of origin for electricity and CO_2 emission allowances. The segment operates seven underground gas storage facilities (Brzeźnica, Husów, Mogilno, Strachocina, Swarzów, Wierzchowice and Kosakowo).

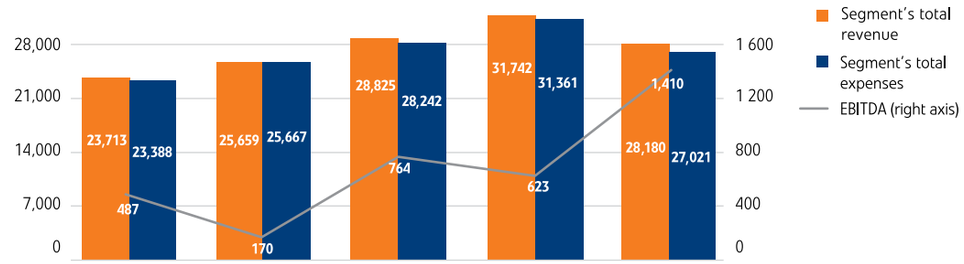
Segment companies: PGNiG S.A., PGNiG Obrót Detaliczny Sp. z o.o., PGNiG Sales and Trading GmbH, PST ES, Gas Storage Poland Sp. z o.o.

Segment's figures

In 2016, the Trade and Storage segment's operating profit was PLN 1,158m, up PLN 776m, having more than doubled on the previous year. At PLN 1,410m, EBITDA was higher than in 2015, by PLN 787m. The segment's revenue reached PLN 28,179m, down by PLN 3,564m (or 11%) year on year. However, operating expenses were reduced by PLN 4,339m (14%), to a total of PLN 27,022m, contributing to the segment's improved performance. The segment's result was attributable to low prices of oil bringing down the cost of gas procurement under PGNiG's key long-term contract and, consequently, translating into higher margins. Thanks to the efforts aimed at making prices more flexible, operating profit doubled despite several tariff reductions. As the end of 2016, approx. 2.2 bcm of gas was held in underground storage – roughly 24% more than as at the end of 2015.

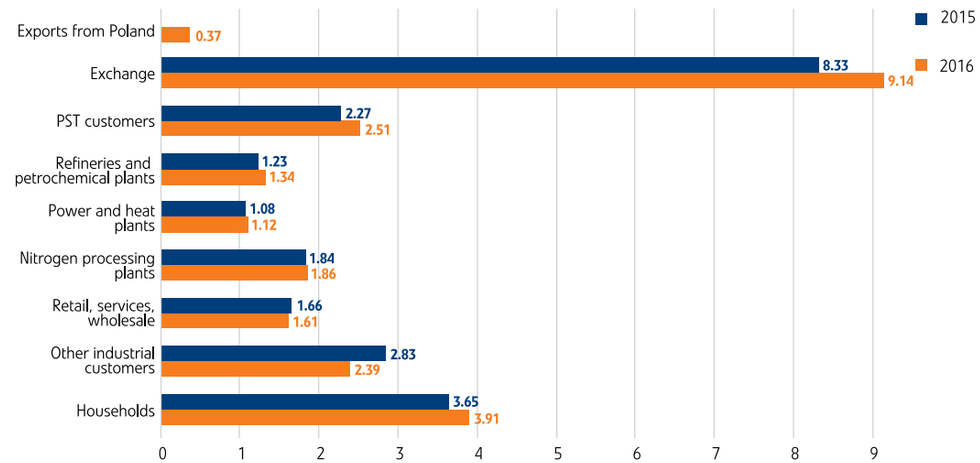
Segment's financial highlights

PLNm



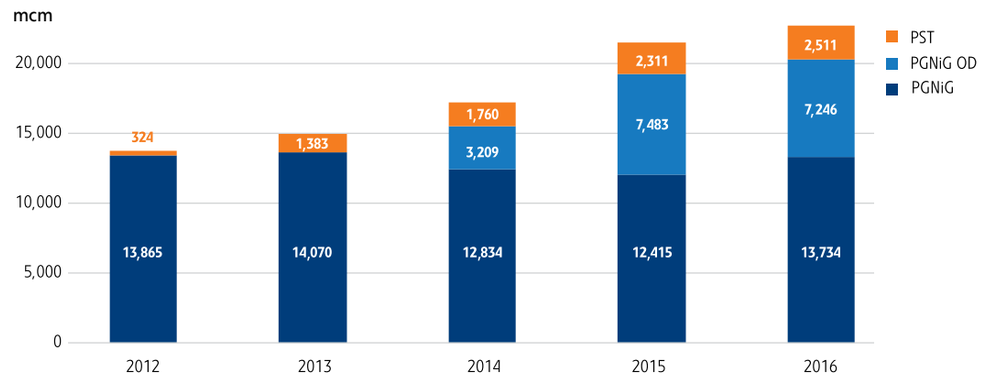
PGNiG Group's gas sales volumes by customer group

bcm



Natural gas sales in Poland outside the PGNiG Group from segment

mcm



Operations in 2016

Trade in Poland

The principal activity of the segment is trade in natural gas in Poland. On August 1st, 2014, the structure of the PGNiG Group changed: retail operations were separated from the wholesale gas business, the latter remaining with PGNiG. Retail customer service was transferred to PGNiG OD, a new company.

Wholesale market

Gas imports
In 2016, PGNiG bought natural gas mainly under the long-term agreements and contracts as well as short-term gas supply agreements with suppliers specified below:

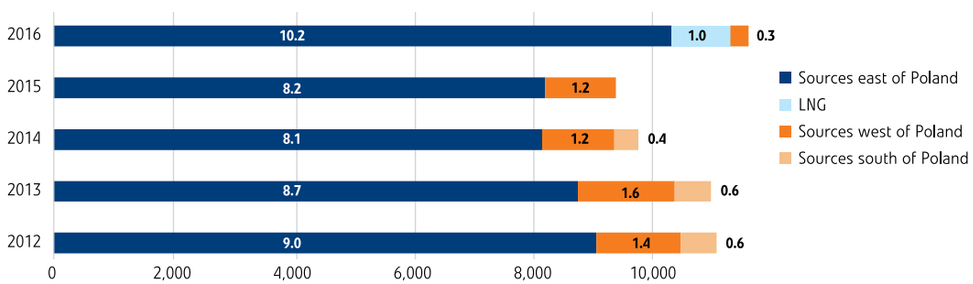
- Russian OOO Gazprom Export for sale of natural gas to the Republic of Poland, dated September 25th, 1996, effective until 2022 (the Yamal Contract);
- Qatar Liquefied Gas Company Limited (3) for sale of liquefied natural gas, effective until 2034 (the Qatar Contract);
- German VNG-Verbundnetz Gas AG (agreement was valid on October 1st, 2016).

Renegotiation of price terms under the Contract with OOO Gazprom Export
In 2016, PGNiG continued its efforts to revise the price terms under the Yamal Contract as part of a procedure formally launched on November 1st, 2014. Having failed to achieve an understanding with the supplier within the time frame provided for in the contract, on May 13th, 2015 PGNiG instigated arbitration proceedings, in accordance with the contract. The subject matter of the dispute is a revision of the price terms under the contract for gas supply to Poland. In the course of the arbitration proceedings, on February 1st, 2016, PGNiG filed with the Arbitration Court a claim against OAO Gazprom and OOO Gazprom Export. The arbitration proceedings are expected to conclude in the third quarter of 2017.

LNG supplies
The first LNG supplies necessary in the cool-down and start-up of the LNG Terminal in Świnoujście were delivered in December 2015 and February 2016. In January 2016, PGNiG, Operator Gazociągów Przesyłowych Gaz-System S.A. and Polskie LNG S.A. began testing the delivery of gas from the President Lech Kaczyński LNG Terminal in Świnoujście into the Polish transmission system. Pursuant to the agreement with Polskie LNG S.A. of December 28th, 2015, PGNiG purchased gas from the start-up process and fed it into the transmission system. In connection with a delay in the launch of the LNG Terminal, on October 21st, 2015 PGNiG and Qatargas signed the Supplemental Agreement to amend the terms of LNG supplies in the first half of 2016. On June 1st, 2016, the LNG Terminal in Świnoujście became operational, enabling commercial deliveries of LNG to Poland, the first of which, under the Qatar Contract, arrived at the terminal on June 17th, 2016. In 2016, PGNiG received a total of seven LNG shipments under the contract. Additionally, PGNiG purchased on the spot market 136,000 cm of LNG, equivalent to 84 mcm of grid gas, from Norway's Statoil ASA. The LNG shipment arrived in Świnoujście on June 25th, 2016. In 2016, PGNiG imported a total of approximately 1.8 mcm of LNG (i.e. approximately 1.04 bcm of gas after regasification), of which 0.85 bcm was fed into the Polish transmission system.

Imports of natural gas to Poland in 2015 and 2016

bcm



Expiry of the agreement with VNG AG
From January 1st, 2016 until October 1st, 2016, when the agreement expired, natural gas purchased from VNG-Verbundnetz Gas AG was sold in the German market under an agreement with PGNiG Supply & Trading GmbH.

Sales of gas
In Poland in 2016, the largest amounts of natural gas were sold to the PGNiG Group's industrial customers, accounting for about 31% of the total sales volume. The largest Polish customers in this group include: Grupa Azoty S.A., PKN Orlen S.A., PGE Polska Grupa Energetyczna S.A., KGHM Polska Miedź S.A. and Grupa Lotos S.A.

Key natural gas sale agreements executed in 2016

Grupa Azoty
On April 13th, 2016, PGNiG entered into a framework agreement for the sale of gas fuel and bilateral contracts with Grupa Azoty S.A. and its subsidiaries. The framework agreement was executed for an indefinite term and defines the general terms of cooperation between the parties. Individual contracts, concluded for varying periods (with the longest-lasting contract expiring on September 30th, 2019), define commercial terms of gas supplies to each of the Grupa Azoty S.A. companies. The estimated aggregate value of the framework agreement and the individual contracts is approximately PLN 3.3bn and the maximum volume of supplies over the entire term of the agreement is 4.5 bcm.

EDF Gaz Toruń
On June 22nd, 2016, PGNiG signed contracts with EDF Gaz Toruń Sp. z o.o. and EDF Toruń S.A. for the supply of gas to EDF's new CHP plant in Toruń. The aggregate volume of contracted gas is approximately 355 mcm.

PGE Górnictwo i Energetyka Konwencjonalna
On August 30th, 2016, PGNiG and PGE Górnictwo i Energetyka Konwencjonalna SA executed gas sale contracts with an estimated value of PLN 2bn. The contracts are effective until October 1st, 2019, with an option to extend them until January 1st, 2023. The total volume of supplies may reach about 2.2 bcm.

PKN Orlen
On September 30th, 2016, PGNiG and PKN Orlen S.A. signed a new contract for gas supplies to the ORLEN Group. The five-year contract is valid from October 1st, 2016 until September 30th, 2021 (five gas years), and its value is estimated at more than PLN 7bn.

ERU Trading and NAK Naftogaz of Ukraine
As part of a strategy to intensify its activity on foreign markets, PGNiG executed separate Framework Agreements with NAK Naftogaz of Ukraine on July 12th, 2016 and ERU Trading on July 21st, 2016, under which natural gas was supplied through the Polish-Ukrainian border. The total volume of gas supplied from July to the end of 2016 was approximately 370 mcm.

In 2016, sales on the Polish Power Exchange (PPX) accounted for the largest portion of the PGNiG Group's total gas sales. The Group sold 114 TWh of the fuel on PPX in 2016, a year-on-year increase of 7%. Significantly higher volumes (up 87%) were sold on the Day-Ahead Market. The table below presents the volumes of gas sold by PGNiG on PPX in 2016 and 2015 on the Commodity Futures Instruments Market, the Day-Ahead Market and on the Intraday Market for natural gas (data by delivery dates).

PGNiG Group's gas sales volume on the Polish Power Exchange

TWh

	2016	2015
Total – Commodity Futures Instruments Market (natural gas)	78.7	79.5
Total – Day-Ahead and Intraday Market (natural gas)	19.1	9.3
TOTAL – Polish Power Exchange	97.8	88.8

To meet the obligation to sell 55% of the gas fed into the national transmission system through the exchange market, PGNiG has adopted a pricing policy covering all natural gas-linked instruments on PPX, both on the futures and day-ahead markets, allowing it to offer natural gas to other market participants at prices corresponding with those on deregulated wholesale, exchange and OTC markets in Western and Northern Europe.

Competition

In the business customer segment, PGNiG's main competitors operating directly in Poland include PGE Polska Grupa Energetyczna SA, DUON (Fortum Holdings), Hermes Energy Group S.A., RWE Polska S.A., TAURON Polska Energia S.A. and PKN ORLEN S.A. Competitors step up gas sales by strengthening their sales force, improving on the flexibility of their offering and price hedging mechanisms as well as bundling gas and electricity. In 2016, in response to customer expectations to link the prices of supplied gas with prices on gas exchanges, PGNiG continued its '2015/2016 Price Deregulation' discount scheme. Also, a large number of customers decided to sign new agreements with PGNiG to replace existing ones. Under the new agreements, customers can purchase PGNiG's products more flexibly and execute procurement contracts for entire corporate groups. PGNiG offers contracts where price-setting mechanisms link gas prices to market indices.

Sales of electricity

In 2016, PGNiG engaged in wholesale trading in electricity and related products in Poland and Germany. In Poland, the Company traded on the OTC market and on PPX. PGNiG also provided services to PGNiG OD and PGNiG TERMIKA under a commercial balancing agreement as the entity responsible for balancing, working directly with the power transmission system operator. Apart from electricity, the trade portfolio includes related products, such as property rights and carbon emission allowances. PGNiG's Wholesale Trading Division is responsible for optimising the prices of electricity procured for customers and for own needs as well as for sales of electricity from PGNiG's own generating units. Total trading volume in 2016 was more than 5.8 TWh.

Retail market

The focus of PGNiG OD's business is on the sale of natural gas (high-methane and nitrogen-rich gas), electricity, compresed natural gas (CNG) and liquefied natural gas (LNG).

Gas procurement

High-methane gas is procured from three main sources:

- PPX;
- PGNiG, under an OTC agreement providing for delivery to a virtual trading point in the transmission network operated by Gaz-System (agreement for the balancing of supplies);
- PGNiG, under an OTC agreement providing for delivery to a physical trading point in Słubice.

The largest share in the total volume of purchased high-methane gas was attributable to transactions on PPX. Moreover, in 2016 the company reached an operational capacity allowing it to enter into transactions on the OTC market via the brokerage platform operated by InfoEngine S.A., to be launched in early 2017. Nitrogen-rich gas and LNG are purchased under a bilateral agreement with PGNiG. Given the rapid changes on the retail gas market, PGNiG OD structures its gas supply portfolio by signing contracts on an ongoing basis. Thanks to such fuel procurement policy, the company has a competitive and flexible product offering.

Year	Customers changing their gas supplier
2012	210
2013	429
2014	7,007
2015	23,742
2016	47,688

Source: URE

Sales of gas

PGNiG OD's business customers (contracted capacity above 110 kWh/h) include entities which require process gas and businesses buying gas for heating. The largest group of customers by number are businesses operating in the retail and services segment, whereas industrial customers lead in terms of gas volumes received. As at the end of December 2016, PGNiG OD provided its services to 25.8 thousand customers (gas meter points), from tariff groups with contracted capacity above 110 kWh/h. Gas consumption in that customer group reached 30.9 TWh, including 28.5 TWh of high-methane gas and 2.3 TWh of nitrogen-rich gas, representing 94% and 6%, respectively, of the total volume. Customers consuming lower volumes of gas (tariff groups 1–4) purchase gas used mainly for cooking, water and space heating and – to a lesser extent – in manufacturing. As at the end of December 2016, the company supplied gas to 6.79 million group 1–4 customers, who over the entire year consumed 46.35 TWh of gas, including 43.61 TWh of high-methane gas and 2.74 TWh of nitrogen-rich gas.

Competition

In 2016, PGNiG OD saw intensified competitor activity in gas sales. According to URE's data, licences to trade in gas fuels were held by 191 entities. These include both strong companies with a European reach (using the financial potential and know-how of their head offices) as well as local players. Local sellers include both companies specialised in the sale of energy products and businesses (for instance telecoms operators) whose core product range is supplemented by gas. Aggressive pricing policy, especially in the business customer segment, was the main competition tool in 2016. Attractive product bundles (mainly gas and electricity deals) were also commonly used.

Marketing policy with respect to business customers (contracted capacity >110 kWh/h)

2016 was marked by aggressive customer acquisition efforts by competitors and, on the other hand, growing market awareness among customers. In response to competitive pressures, PGNiG OD pursued an active pricing policy aimed at offering competitive prices and analysing contracts on a case-by-case basis. The company markedly expanded its product mix. It continued to run its promotional schemes ('Flexible Price' and 'Constant Savings for Business'), while larger customers were offered new products – priced based on individual consumptions profiles.

In the third quarter of 2016, the company launched a range of products for the most demanding customers, with gas prices linked to prices on energy exchanges. Additionally was implemented of Biznes24, a modern online platform designed to facilitate customers' access to information on payments and their past gas and electricity consumption volumes. The platform also serves as an effective channel for communicating with customers, which attractively presents the company's promotional offers. The effects of its marketing policy in 2016 included the execution of a record contract with Ceramika Paradyż, under which 1.3 TWh of gas is to be supplied from October 2016 to September 30th, 2018. Another major contract was concluded with Philips Lighting, which is to receive 260 GWh in the period from October 2016 to September 2017.

Marketing policy with respect to retail customers (contracted capacity <110 kWh/h), customer service and sale channels

In March and April 2016 PGNiG OD launched a discount scheme 'Savings for you and your business W4' dedicated to the W-4 tariff group customers. The scheme was available to both existing and new gas fuel buyers. Under

See also: bip.ure.gov.pl/bip/taryfy-i-inne-decyzje/paliwa-gazowe

a twelve-month forward contract, customers were offered an attractive price and a fixed price guarantee until contract expiry. Benefits for the company included stable revenue and more effective gas contracting on the PPX.

In 2016, PGNiG OD stepped up its work on the development of e-channels (e-customer service, e-invoice), but also – catering for the needs of customers who prefer more traditional forms of communication – opened five Premium customer service offices at shopping centres in Kraków, Katowice and Poznań and at two locations in Warsaw.

EFET - framework for agreements, an example of the standard contract for the energy market.

National Balancing Point (NBP) - British gas hub, a virtual natural gas trading in United Kingdom.

Sales of electricity

On September 1st, 2016, PGNiG OD launched a comprehensive dual-fuel plan for households and small businesses – the 'PiG Package' (electricity and gas package). The deal is particularly attractive to customers with active gas supply contracts, as they pay no subscription fees and their bills are reduced. In addition to the non-subscription fees they receive a lower sales price (guaranteed for 12 months) and no penalties for early contract termination.

In 2016, PGNiG OD continued to supply electricity to business customers. The main product is based on a fixed price mechanism, while larger customers are also offered individual pricing terms. In Q4 2016, the company launched innovative electricity schemes for its most demanding customers providing for tranche- or index-based purchases. According to URE, in 2016 more than 86 thousand customers (consumers and entities not classified as consumers)

PEGAS - European Energy Exchange (EEX) and Powernext.

Trade abroad

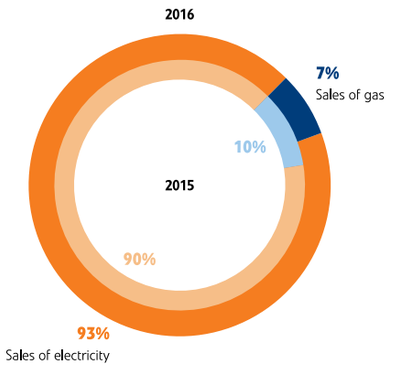
Through PGNiG Sales and Trading GmbH (wholesale) and PST ES, the PGNiG Group is also developing its natural gas business (both wholesale and sales to end users) in Germany and Austria. In 2016, PGNiG launched its operations in Ukraine, thus entering a new significant market. PGNiG's increased activity on foreign markets included gas supplies to ERU Trading and NAK Naftogaz of Ukraine.

Exchange and OTC wholesale trading

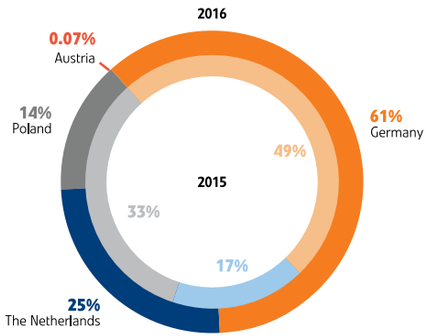
PST is an active player on organised markets (exchanges) and in OTC trading; it trades with over 50 counterparties under EFET or similar standardised contracts. The company operates in Germany and its neighbouring countries, Austria and the Netherlands. PST registered for trading on the UK gas market (NBP) and launched its operations there in August 2016. PST has also registered its activity in the Czech Republic and Poland. PST is ready to engage in trading on the Czech market if such demand arises from customers or to support liquidity. PST is fully prepared to launch trading operations in Poland if such need arises from the PGNiG Group. PST is also a registered supplier on the Danish and Slovak markets. The presence on both these markets will be exploited if new business opportunities emerge (e.g. to supply gas from Slovakia to Ukraine). PST is a market maker on the PEGAS exchange for the GASPOOL gas hub market area. PST continues to trade in electricity (and emission certificates) on the EEX and in gas on the PEGAS and ICE Index markets. It can also trade on the PPX under a contract with a broker.

PST's commodity trading portfolio was expanded with its entry on the global LNG market, including an analysis of the company's potential operations in the small-scale LNG sector (LNG as fuel for lorries). To support its trading activity on the global LNG market, a decision was made for PST to open a branch in London, the UK. The branch was registered in 2016 and became operational in February 2017.

PST's sales structure by product



Structure of PST's sales outside the PGNiG Group by country



Retail sales

In 2015, PST spun off its retail operations and gas and electricity are sold to end users in Germany and Austria through its newly established subsidiary, (PST ES). The target customer group includes small and medium-sized enterprises as well as households with standard consumption profiles. The restructuring and adjustment of the portfolio resulted in a contraction of the end user portfolio (mainly management of receivables – monitoring of customers defaulting on their monthly payments) and in a substantially improved margin per customer.

The overall size of the portfolio (existing and newly acquired customers) stabilised at the year's beginning and started to grow in Q2 2016 thanks mainly to new customers newly by the company's marketing partner Premio through its telemarketing platform. In 2016, PST ES signed 60.5 thousand new end user agreements. The majority of customers who signed an agreement in 2016 will receive supplies in 2017 and partially in 2018.

Key services provided to PGNiG Group entities

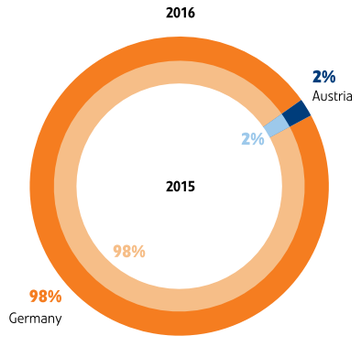
PST's key contracts effective in 2016 included a contract for the management of commercial storage capacity for own needs at gas storage facilities in the Netherlands (with a working capacity of 250 GWh) and Austria (with a working capacity of 17 GWh). The objective of the contract is to optimise the growing end-user demand for gas in winter and the trading portfolio.

Under its current contracts, PST supplies natural gas to PGNiG on the Polish-German and Polish-Czech borders, thus securing diversification of supply sources.

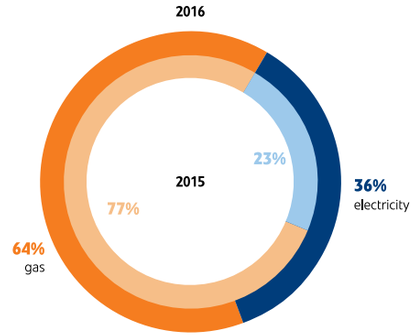
PST has also a contract in place with PGNiG UI for the purchase of gas produced from the Norwegian Skarv field since 2013 and from the Vale and Morvin fields since 2015. In addition, the company provides access to the market to 100 industrial producers of energy from biogas (E2M) and helps optimise PGNiG's portfolio by trading on Western European markets. PST actively manages gas supply interruptions in real time, on a 24x7 basis, with a view to minimising PGNiG UN costs.

Energy2market (E2M) - electricity trade point in Leipzig.

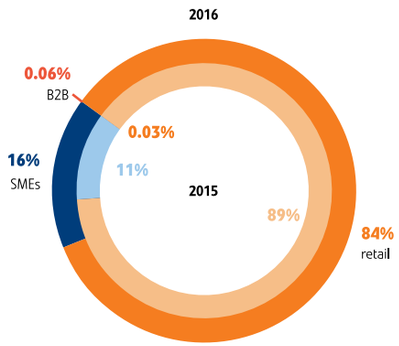
Structure of PST customers by country



Structure of PST customers by product



Structure of PST customers by type of customer



Storage

The Trade and Storage segment uses for its own needs the working capacities of the Wierzchowice, Husów, Strachocina, Swarzów and Brzeźnica underground gas storage facilities as well as the Mogilno and Kosakowo underground cavern facilities. A part of the working capacity of the Mogilno facility, which was made available to Gaz-System S.A. The capacities of gas storage facilities are managed by GSP.

GSP - Gas Storage Poland.

GSP conducts activities in two principal areas:

- regulated activities comprising the provision of gaseous fuel storage services at storage facilities owned by PGNiG as well as operation of the Mogilno and Kosakowo underground gas storage caverns;
- non-regulated activities comprising the provision of services related to design, construction and extension of underground gas storage facilities.

Short-term peak fluctuations in demand for natural gas are balanced by supplies from the Mogilno and Kosakowo facilities, where gas is stored in worked-out salt caverns. The capacities of the Wierzchowice, Husów, Strachocina, Swarzów and Brzeźnica facilities are used to balance out changes in demand for natural gas in the summer and winter seasons, to meet the obligations under take-or-pay import contracts, to ensure the continuity and security of natural gas supplies and to meet the obligations under gas supply contracts with customers. GSP as the storage system operator, additionally provides storage services are provided under standard storage service agreements (SSSA).

GSP's services are provided using the following Storage Facilities (SF) and Groups of Storage Facilities (GSF):

- Kawerna GSF (comprising the Mogilno CUGSF and Kosakowo CUGSF, located in worked-out salt caverns);
- Sanok GSF (comprising the Husów UGSF, Strachocina UGSF, Swarzów UGSF and Brzeźnica UGSF, located in partly depleted gas reservoirs);
- Wierzchowice UGSF.

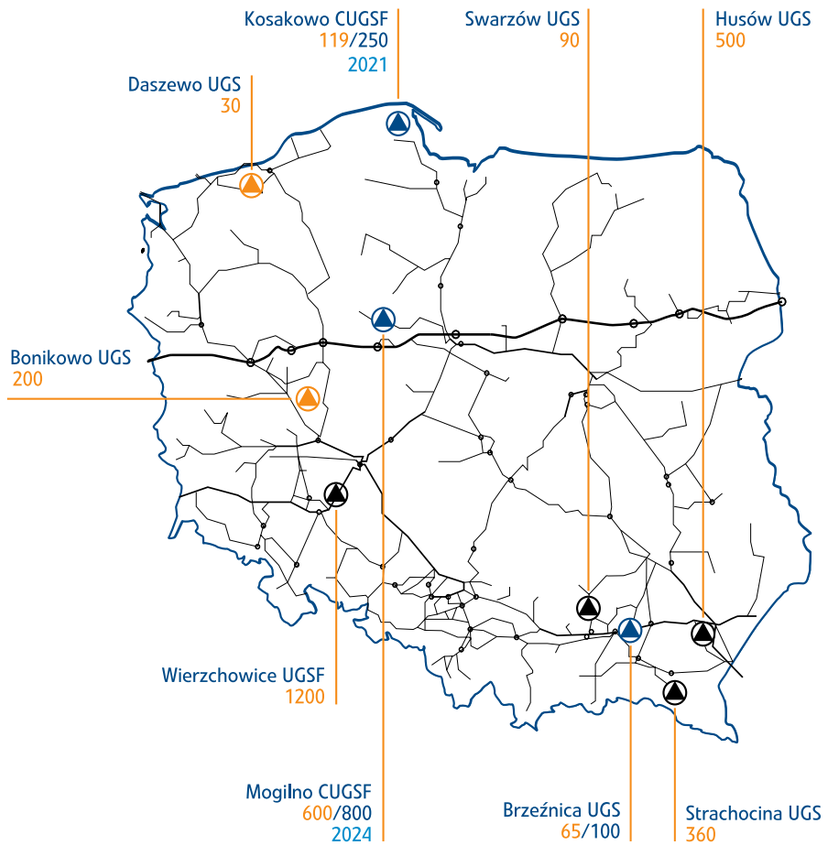
In the reporting year 2016, GSP offered the following gas fuel storage services:

- packaged services and stand-alone services;
- provided on a firm or interruptible basis;
- long-term services and short-term services and single-day services (injection or withdrawal capacity for 1–24 hours, on an interruptible basis);
- extension/reduction of the scope of services provided.

As at December 31st, 2016, GSP provided a total of 5,757 storage capacity packages, including 2,192 packages of services provided on a firm basis and 3,565 packages on an interruptible basis. As at December 31st, 2016, 97% of the storage capacities were reserved for PGNiG, 2% for external customers, with the remaining 1% of total capacities idle. As at December 31st, 2016, the PGNiG Group had a total working storage capacity of 2,928.7 mcm (32 128 GWh), of which 2,888.5 mcm (31 687 GWh) was made available on a TPA basis or to Gaz-System under a long-term contract.

Take-or-pay - a type of contract under which a party agrees to collect the entire volume ordered or its part and pay compensation to the supplier if it fails to collect a part of the volume ordered.

Third Party Access (TPA) - the principle that the owner/operator of infrastructure has the obligation to make this infrastructure available to third parties enable them to provide supplies to their own customers.



Existing UGS

UGS for nitrogen-rich gas

UGS being extended

65 /100 Working capacity - current/after extension (mcm)

2016 Estimated time of completion

Segment's strategy

Sales

The Group's portfolio of gas customers grew as PGNiG expanded its presence in the neighbouring countries. PGNiG also entered into new contracts for the sale of gas in Poland, which were an effect of the Company's consistent pursuit of its policy of high quality customised sales. PGNiG keeps changing to meet the needs and expectations of end users, offering them discount schemes, which were well received by the largest customers and delivered the expected results. On September 1st, 2016, PGNiG launched dual fuel (electricity and gas) plans for households. From September to December 2016, PGNiG OD successfully met its dual fuel sales targets, with more than 13,100 new customer contracts by the year end. The growing effectiveness of the sales force and the constantly expanding product mix helped PGNiG to acquire new and win back old business customers (a total of 1,312 in 2016).

Diversification of supply sources

PGNiG seeks to ensure technical possibilities for sourcing gas from markets other than east of Poland. The Company's key objectives include security of gas supplies and finding new sources and directions of gas imports, including via the LNG Terminal and the Norwegian Corridor.

As part of its diversification efforts, PGNiG, supported by the Polish government, is holding talks with Norway and Denmark about connecting the Polish gas system with the Norwegian Continental Shelf. Such connection would enable delivery of natural gas from the upstream assets already held by PGNiG in Norway and would ultimately help achieve natural synergies between individual segments of the PGNiG Group. Notably, PGNiG has by now secured a long-term, diversified portfolio of gas production assets in Norway, which it will be able to exploit until 2030. In 2016, PGNiG entered the LNG wholesale market as gas was first delivered to the Terminal in Świnoujście under a long-term contract with Qatargas. PGNiG reserved approximately 60% of the Świnoujście Terminal capacity. In another step to consolidate its position on the gas supply market, on June 28th, 2016 PGNiG set up an LNG trading office in London. Ultimately, the London office is to become the PGNiG Group's international LNG competence centre and the main trading office for short- and medium-term contracts for liquefied gas.

Storage

A strategic objective set for GSP is to ensure equal and non-discriminatory access to storage facilities to all interested entities. Therefore, GSP offers all the available storage capacities as required under Regulation of the European Parliament and of the Council on conditions for access to the natural gas transmission networks, in accordance with the Rules of Storage Services and the relevant tariff. As the PGNiG Group is responsible for national energy security, GSP increases the TPA storage capacities once successive stages of the UGSF expansion project (carried out by PGNiG) are completed. In 2016, additional storage capacities of 126.45 mcm and 6.6 mcm, respectively, were made available at the Mogilno and Kosakowo cavern facilities.

Key projects and capital expenditures

In 2016, a new storage chamber (K-5) was placed in service at the Kosakowo CUGSF. After the President of URE issues a decision to amend the licence, the working capacity of that storage site will increase to 145.5 mcm. The target working capacity of the Kosakowo CUGSF, following completion of the still ongoing construction project, will be 250 mcm. Steps were also taken to secure administrative decisions necessary to further expand the Kosakowo CUGSF's working capacity to 655.7 mcm. In 2016, acting on behalf of and for PGNiG, GSP obtained a decision issued on July 21st, 2016 by the Regional Director for Environmental Protection in Gdańsk, specifying the environmental conditions to be met by the project 'Extension of the working capacity of the Kosakowo Cavern Underground Gas Storage Facility to 655.7 mcm, including construction of storage chambers, a leaching installation, surface infrastructure and internal pipelines'. Also in 2016, the extension of the Brzeźnica UGSF's working capacity was completed; after the President of URE issues a decision to amend the licence, its working

Probability that the risk will materialise:
●○○ low
●●○ moderate
●●● high

Risk materiality level:
●○○ low
●●○ moderate
●●● high

The risk comparison (2016 vs 2015)
↗ rise
→ stable
↘ fall

capacity will increase to 100.0 mcm.

In February 2016, GSP made available, for third-party access, new storage capacities at the Kawerna GSF achieved through the extension of the Mogilno CUGSF and Kosakowo CUGSF and through geological processes in the salt dome on the Mogilno CUGSF site. Third-party access has been provided under contracts for long-term storage service or short-term storage service on an interruptible basis, in packages, flexible packages or as stand-alone services.

Risks

Administrative regulation of natural gas prices and deregulation of the Polish gas market

●●● ●●● →

Gas trading on the exchange market has been excluded from the tariff regime. Prices of gas paid by end users are also expected to be gradually liberalised as the process of deregulation advances. The first customer groups in respect of which the tariff requirement will be disapplied are wholesale customers and the largest business customers. As regards gas trading on the Polish Power Exchange or direct sales to customers at prices similar to those quoted on the exchange, there is a risk that revenues from such sales will be lower than gas procurement costs due to the growing disconnect between the market prices of gas and of petroleum products, to which gas prices under the long-term import contracts continue to be linked. The obligation to submit gas fuel tariffs for approval by the President of URE adds to that risk, since tariffs are crucial to the Company's ability to generate revenue sufficient to cover its reasonable costs and deliver a return on capital employed. As a consequence, revenue is subject to forecasting risk. Inaccurate estimates of costs (particularly the cost of gas purchase) may result in a risk of miscalculation of selling prices and charges, which may adversely affect financial results.

Competition

●●● ●●● →

Competitors seek to increase gas fuel sales by offering competitive prices of the fuel or dual fuel (gas and electricity) deals. In response to changes taking place on the natural gas market in Poland, the PGNiG Group introduced a number of discount schemes.

Take-or-pay gas supply contracts

●●● ●○○ →

PGNiG is a party to two long-term take-or-pay contracts for gas supply to Poland – the Yamal Contract and the Qatar Contract. Assuming that PGNiG's customer portfolio remains unchanged, the volume of gas imports specified in the take-or-pay contracts will limit its purchases of spot gas, which are currently most attractive in price terms. If PGNiG loses its market share, there is a risk that the Company would be forced to look for new ways to utilise the surplus volumes of gas in its portfolio.

Disruptions to gas supplies from countries east of Poland

●●○ ●○○ →

Given the continuing political instability in Ukraine and experience from late 2014 and early 2015, a risk of limitations in gas supplied by OOO Gazprom Export cannot be discounted.

Development prospects

Development prospects in Poland

Procurement of natural gas

In the long term, PGNiG will focus on meeting its obligations under the long-term contracts with Gazprom Export and Qatargas with respect to the minimum offtake volumes. If an unforeseen surge in demand occurs, the Company will purchase natural gas under short-term contracts from the neighbouring countries or on the LNG market, wherever more favourable prices are available.

Business development in the CNG and LNG segments

New offers have been prepared for customers, with prices based on a flexible market-linked formula, and work commenced to investigate the possibilities of linking the offered LNG/CNG price to prices of petroleum fuels. Moreover, the following initiatives are under way:

- Small LNG Regasification Facilities for businesses – construction of LNG stations to serve business customers if the expected consumption volume and profile guarantees economic viability of the project;
- LNG bunkering – activity in the market of LNG supply for use by ships, including submission of an application for EU co-financing under the Connecting Europe Facility;
- CNG stations for municipal transport – selective approach to customers, maintaining the existing stations and new projects subject to economic viability.

Storage

With respect to the Kosakowo CUSGF expansion, work will continue on construction of five Cluster B chambers and leaching of the K-6, K-8 and K-9 caverns. The contractual deadline for completion of all works related to the construction of the five Cluster B chambers falls in 2021. Further steps will be taken to secure administrative decisions necessary to expand the Kosakowo CUGSF's working capacity to 655.7 mcm.

Development prospects abroad

PST is planning to further expand its business, focused on selling electricity and gas to end customers and in wholesale. In the retail area, the company will be seeking to considerably expand its customer base. Furthermore, PST entered into cooperation with Premio Energie GmbH as its trading partner. Under the arrangement, Premio Energie will offer exclusively PST products as their sole reseller. As part of its trading activity, besides being an active player in OTC and exchange markets, PST intends to develop a business model based on cooperation with municipal entities as well as gas and electricity trading companies, by offering them standard and structured trading products and auxiliary services related to trading (for instance balancing services).

Further automation of processes is planned as part of the trading operations in order to ensure compliance with the requirements imposed by institutions whose role is to implement the REMIT (Regulation on Wholesale Energy Market Integrity and Transparency) and EMIR (European Market Infrastructure Regulation). In retail sales, PST's IT systems and internal processes are of vital importance from the point of view of retail sale objectives.

As part of its strategy to increase activity on foreign markets, PGNiG intends to continue its natural gas sales operations in Ukraine. PGNiG is also keeping a close eye on the negotiations between Gaz-System and Ukrtransgaz concerning extension of the interconnector capacity between Poland and Ukraine.

CNG - compressed natural gas, natural gas compressed to a pressure of 20-25 MPa.

REMIT - Regulation (EU) No. 1227/2011 of the European Parliament and of the Council of October 25th 2011 on wholesale energy market integrity and transparency, which is binding on all participants of the electricity and natural gas wholesale market.

See also: REMIT PGNiG - https://komunikaty.pgnig.pl/Remit?lang=en

Distribution

Distribution

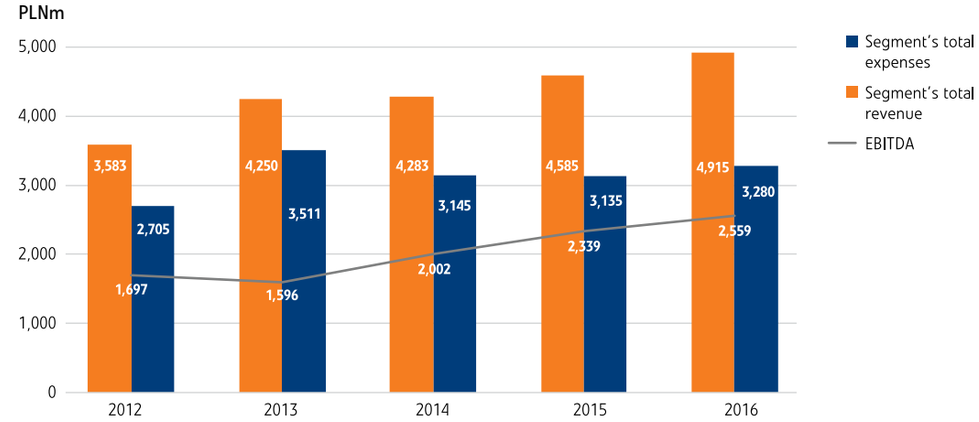
The segment's principal business activity is the transmission of high-methane and nitrogen-rich gas as well as of small amounts of coke-oven gas, over the distribution network to retail and corporate customers. The segment is also engaged in extending and upgrading the gas network and connecting new customers. Gas distribution services are rendered by Polska Spółka Gazownictwa Sp. z o.o. (PSG). As the Distribution System Operator, the company conducts its business in all provinces of Poland. As the owner of approximately 96% of Poland's distribution network and nearly 99% of the gas service lines, PSG enjoys a dominant market share.

See also:
www.psgaz.pl

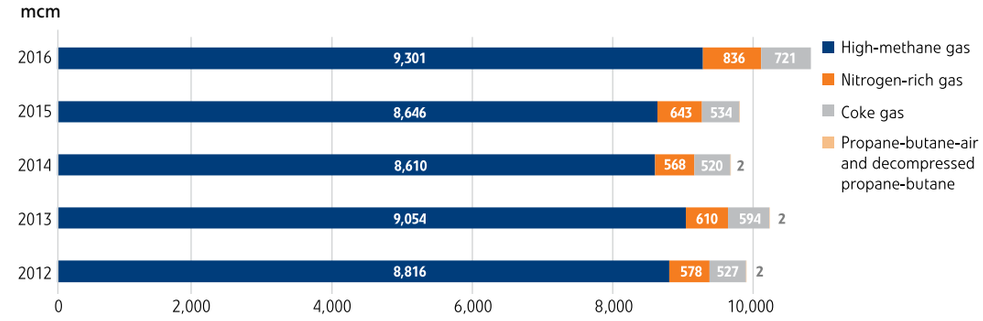
Segment's figures

The Distribution segment's operating profit in 2016 increased 13% year on year, to PLN 1,635m, while EBITDA came in at PLN 2,559m, up by PLN 221m year on year. The improvement resulted primarily from higher revenue from distribution services (up 7% yoy), with distribution volumes reaching 10.9 bcm (up 11% yoy). Expenses incurred in 2016 increased by PLN 145m (or 5%) compared to 2015.

Segment's financial results

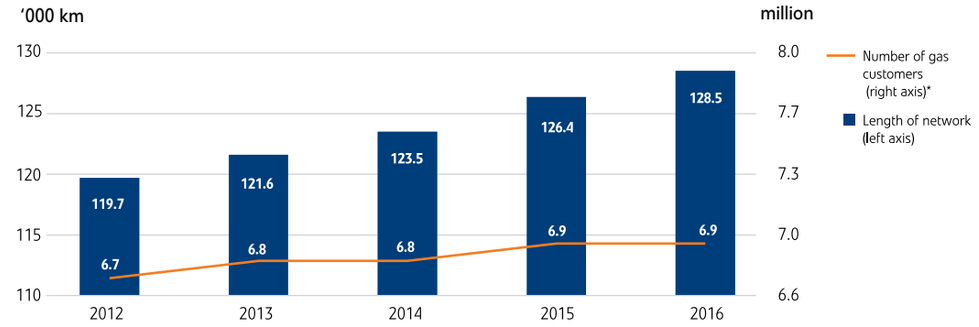


Volume of gas transmitted via the distribution system



Geographical coverage in terms of the number or area of communes/municipalities with mains gas connection: 59.78%.

Length of network (excluding service lines) and number of gas customers



* Customer – anyone receiving or drawing gas fuel under an agreement with a gas supplier.

Operations in 2016

Operational activity

In 2016, as part of customer connection services, PSG issued approx. 127 thousand grid connection conditions (up by approx. 20% from 2015) and executed more than 64 thousand agreements for connection to the mains gas network (up by approx. 30% from 2015).

Starting from January 1st, 2017, a new three-tier organisational structure was introduced, comprising the head office, 17 gas distribution branches, 167 local gas utilities and 67 service points. PSG's organisational structure corresponds to the administrative division of Poland, which will simplify interaction with local governments and facilitate access to PSG's services.

PSG's mission is to provide gas fuel distribution services to all gas fuel consumers and traders (while ensuring that all of them receive equal treatment) on the terms and conditions and to the extent defined in the Energy Law. Distribution services are provided on the basis of relevant distribution agreements. In 2016, PSG executed in total 21 distribution agreements and two Interoperator Distribution Agreements. In the same period, about 62 thousand gas fuel buyers changed their supplier.

In 2016, all settlements between PSG and its customers were based on Tariff No. 3 for Gas Fuel Distribution Services and LNG Regasification Services, as amended by the President of URE on December 16th, 2015, and then on June 9th, 2016. As a result of the amendments, the tariff validity term was extended until December 31st, 2016. Rates of distribution and regasification service charges remained unchanged.

Regasification - the process of conversion of gas from liquid to gaseous form by heating.

Segment's strategy

While pursuing its mission of the National Gas Distribution System Operator, PSG has been building its portfolio of development initiatives in such a way as to support its dedicated values highlighted in PSG's strategy for 2016–2022, namely:

1. Value building;
2. Continuous improvement of operational efficiency;
3. Search for and implementation of innovative solutions and technologies;
4. Taking up new market challenges.

PSG's new strategy primarily assumes an increase in the volume of distributed gas and the number of new customers as well as a meaningful increase in the number of communes and municipalities connected to the mains gas network across the country.

Key investment projects and CAPEX

In 2016, PSG's total CAPEX ran to PLN 1.1bn. The focus areas of CAPEX, which accounted for the largest share of the funds spent, were:

- projects to enhance gas fuel sales through network extension and construction of new connections (PLN 551m);
- projects to upgrade the gas network due to its technical condition, depreciation of network infrastructure and potential threat to the security of gas supply (PLN 305m);
- purchase of new measurement devices (gas meters) to be installed on the premises of new customers, or to replace existing meters after their certificates expire (PLN 108m).

Other initiatives included implementation of a new PSG organisational structure, optimisation of processes, developing a concept for a Management Information System as well as a number of IT projects and projects related to application of LNG technologies in gas fuel distribution (including a project to build a plant that would manufacture installations and equipment used in construction of LNG regasification stations).

Furthermore, PSG has been engaged in a regulatory/cost benchmarking project pursued jointly with selected European distribution network operators, projects in the area of gas transport as well as infrastructure projects, aimed at implementing guidelines designed to improve the operational safety and quality of gas networks.

PSG is strongly committed to connecting new customers and upgrading the gas network to ensure the security and reliability of gas supply, which in the future will translate into a sustainable revenue stream from gas distribution services.

Risks

Risk associated with lack of long-term regulatory policy

●●● ●●● →

Poland has no long-term tariff policy for natural gas distribution operators that would outline detailed rules and methodologies for determining the level of regulatory revenue acceptable to the regulator. The prevailing practice consists in determining short-term tariffs based on annual negotiations with the President of URE. This solution gives the President of URE much room for discretion in the process of evaluating costs incurred by the Distribution System Operator, its capital expenditures and regulatory value of its assets, which is a source of uncertainty as to the amount of revenue and profit that may be generated.

Risk of PSG's major customers reconnecting to the transmission network operated by OGP Gaz-System

●●● ●●○ →

In view of the growing competition in the sector, there is a risk that PSG's large customers may opt for reconnecting directly to the gas transmission network operated by Gaz-System. Customers justify their intention to reconnect by the need to cut costs. The departure of some customers would mean a loss of transferred gas volumes and thus also of revenue from sale of distribution services and, as a consequence, the need to cover any resulting excess of costs over revenue, for instance by increasing tariff rates.

Claims raised by property owners

●●○ ●●○ →

PSG is facing excessive financial claims raised by the owners of land where the gas network was developed in the past. Transmission easement serves as a basis for determining the extent of the use of third-party property by a transmission company, for which fair consideration is due to the owner. The owners' claims give rise to additional, frequently considerable costs, and thus may adversely affect the financial performance of the segment.

Sources of gas supply for the distribution system

●●● ●●○ →

PSG's distribution network is connected to the transmission system operated by Gaz-System, which is its main source of gas supplies. The transmission system's limited capacity in terms of volume and pressure of supplied gas hinders, or sometimes renders impossible, further development of the gas grid within the PSG's key areas of operation.

Substitution

●●● ●●○ →

The strong competitive position of substitute energy sources (coal, wood) in some areas where PSG operates hampers growth in demand for natural gas as a fuel. Continuing low prices of coal, hydrocarbons (fuel oils, heating oils) and other energy carriers used for municipal heating are hardly an incentive (in particular for households) to switch to environmentally friendly gas fuel.

Probability that the risk will materialise:
●○○ low
●●○ moderate
●●● high

Risk materiality level:
●○○ low
●●○ moderate
●●● high

The risk comparison (2016 vs 2015)
↗ rise
→ stable
↘ fall

Dwindling average gas consumption among small customers

●●● ●●● →

The decline is largely attributable to the improving energy efficiency (thermal modernisation) of buildings, reduced usage of individual gas-fired boilers for heating water and migration. Thermal modernisation of buildings includes thermal insulation of outer walls, replacement of windows, use of condensing boilers, automated control of heating systems and installation of solar panels. All this translates into a decrease in the average volume of gas fuel supplied to small customers and consequently erodes revenue from distribution services. This is a material risk for PSG, despite more than 80 thousand new customers acquired every year (mainly households), as total volumes of gas distributed in the segment have been falling.

Unstable gas demand in the power generation sector

●●● ●●○ →

The growing competitiveness of natural gas may encourage its use for power generation purposes, which would increase the distribution volumes and revenue from PSG's core operations. In the event of a sudden increase in demand for natural gas, the distribution network may be unable to handle supplies due to its limitations, which can be removed by expanding the distribution system's entry points and/or constructing new gas lines.

Legislation

●●● ●●● →

The complex provisions of the Construction Law and regulations governing construction projects impose the obligation to prepare extensive project and legal documentation, which is an integral part of any development process. The need to prepare such documentation extend the time needed for project preparation and thus may significantly delay its completion, exposing PSG to the risk of cost overruns caused by potential delays in contract performance as well as the risk of a decline in revenues.

Development prospects

As regards development of natural gas distribution and new services, PSG is planning to pursue its Strategy for Development of the PSG Distribution Network in 2017–2026 and prepare a Draft Development Plan for 2018–2022. Specific projects will include extending the functionality of the gas distribution system using the Power to Gas (P2G) technology. The P2G process involves conversion of surplus electricity into hydrogen (H_2) and, following methanation, into synthetic natural gas (SNG). Indirect (low-emission) energy carriers may be stored in the gas grid, which has large storage capacities and high flexibility, and then be used in accordance with the business needs of customers, e.g. to generate power in fuel cells or high-efficiency gas turbines. The gas grid will become a sub-system of the future integrated and convergent Smart Power Grid.

Description of planned investment projects:

Project category	Expenditures in 2017 (PLNm)
Gas mains and service line extensions	774
Network upgrades	463
Other	432
Total	1,669

Based on the Strategy for Development of the PSG Distribution Network in 2017–2026, which is currently under preparation, PSG will continue to pursue gas network construction and expansion projects, including with large-scale application of LNG technologies. In the coming years, the company intends to implement an investment model that would promote growth in the volume of transported gas and accelerate its key investment projects.

PSG is monitoring the market for ground-breaking technology innovations in the energy sector as well as administrative incentives introduced to support the development of low-emission energy generation relying on environmentally friendly sources. Examples of such administrative incentives include the Clean Transport Promotion Package, which comprises three documents: the Plan for Development of an Electric Vehicle Network, the National Framework Policy for Development of Alternative Fuel Infrastructure and the Act Establishing a Low-Emission Transport Fund. Pending implementation of the Clean Transport Promotion Package, PSG is engaged in cooperation between the PGNiG Group and fuel sector operators focused on developing the alternative fuel infrastructure and will create conditions in which vehicle users can be provided with an appropriate offering with respect to CNG/LNG filling.

Generation

Generation

See also: www.termika.pgnig.pl/en

High-efficiency cogeneration - concurrent generation of heat and electric energy, delivering primary energy savings of more than 10%.

The segment's principal line of business is the production of heat and electricity as well as the execution of major natural gas-fired projects in the power sector. PGNiG TERMIKA SA is the Group's competence centre for heat and electricity generation and for the execution of heat and power projects.

The company's main revenue sources are sales of heat, electricity, system services and certificates of energy origin. The installed capacity of the company's generating assets is 4.6 GW of achieved thermal power and 1 GW of achieved electrical power, which satisfies approximately 70% of the heat demand on the Warsaw metropolitan market. PGNiG TERMIKA is also a producer and supplier of heat and the owner of heat sources and heat networks in Pruszków, Komorów and Piastów.

It is the largest producer of electricity and heat from high-efficiency cogeneration and the ninth largest electricity producer in Poland, with an 11% share in all heat generated by licensed domestic producers.

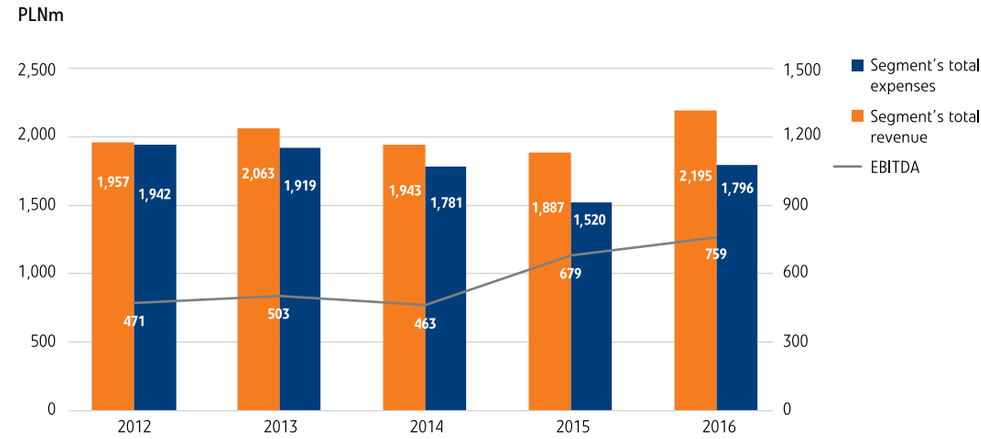
In 2016, Przedsiębiorstwo Energetyki Cieplnej S.A. of Jastrzębie Zdrój (PEC) and Spółka Energetyczna Jastrzębie S.A. (SEJ) were included in the Generation segment.

Segment's figures

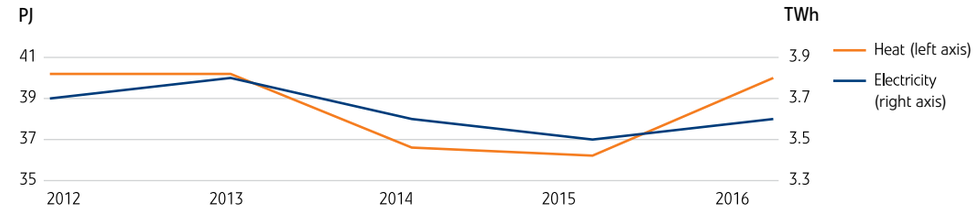
The segment's operating profit for 2016 was PLN 400m, up PLN 33m year on year. EBITDA was reported at PLN 759m, up PLN 80m, or 12%, year on year. The segment generated revenue of PLN 2,195m – PLN 308m more than in 2015, with the acquisition of PEC and SEJ assets contributing additional PLN 181m to the 2016 revenue.

The segment's performance was driven up by higher revenue achieved on increased sales volumes of heat (+10.4%), higher tariffs and a slight increase in electricity sales volumes (+3.3%), with electricity price down. The result was further improved by lower coal prices (including transport charges) and a shift in the fuel mix consumed towards biomass. Also coal and fuel oil consumption was reduced in 2016.

Segment's financial results



Heat and electricity sales volumes from own generation sources



Achievable capacity by licence/plant/branch

Generating unit	Heat [MW]	Electricity [MW]	Cooling [MW]	Compressed air capacity [thousand cm/h]
PGNiG TERMIKA	4,648	1,015	-	-
Siekierki CHP Plant	2,068	620	-	-
Żerań CHP Plant	1,580	386	-	-
Pruszków CHP Plant	186	9	-	-
Kawęczyn Heating Plant	465	-	-	-
Wola Heating Plant*	349	-	-	-
PEC	255	2	-	-
Żory Heating Plant	87	-	-	-
Wodzisław Śląski Heating Plant	57	2	-	-
Racibórz Heating Plant	91	-	-	-
Knurów Heating Plant	16	-	-	-
Jastrzębie Heating Plant	0,5	-	-	-
Rybnik Heating Plant**	4	-	-	-
SEJ	505	130	15	423
Zofiówka Branch	235	64	-	135
Moszczenica Branch	156	38	-	-
Pniówek Branch	72	14	15	191
Suszec Branch (Suszec site)	39	11	-	97
Suszec Branch (Częstochowa site)	2	3	-	-

* Excluding K1; K1 is covered by the Wola Heating Plant licence.

** The boiler station at ul. Karłowicza in Rybnik was closed in September 2016 The nameplate thermal capacity of the Rybnik Heating Plant as at December 2016 is the sum of capacities of the boiler stations at ul. Obywatelska 5 and at ul. Mościckiego 5D.

Operations in 2016

Operational activity

PGNiG TERMIKA

The company's main competitors in local heat markets are district heating network operators and independent heat sources or small boiler stations serving a limited number of customers. A large portion of demand for heat in Poland is still covered by small-sized off-grid sources. Even in large urban areas with extensive heating infrastructure, many consumers are supplied by stand-alone sources or small local boiler stations.

The largest customer for heat produced by PGNiG TERMIKA, with a 93.9% share in the volume of heat produced, is Veolia Energia Warszawa S.A. Electricity is mostly sold to PGNiG (98.4%). The length of PGNiG TERMIKA's Pruszków and Warsaw heat networks is 74 km and 6.1 km, respectively.

In 2016, PGNiG TERMIKA completed a series of projects that are key to delivering its strategic goals. One of them is to ensure that district heating remains the most affordable building heating option in the Warsaw area. Moreover, in pursuit of geographical expansion of its heat network and generation business, PGNiG TERMIKA acquired PEC and SEJ.

PEC

PEC operates heat systems (mainly heat networks and several local heat sources) in eight municipalities: Jastrzębie-Zdrój, Czerwionka-Leszczyny, Knurów, Kuźnia Raciborska, Pawłowice, Rybnik, Wodzisław-Śląski and Żory. PEC comprises six heating plants operating local heating systems. Its networks are approximately 288 km long. Total capacity contracted with all PEC plants is approximately 445 MWt. PEC operates 14 heating plants and one CHP plant with total capacities of approximately 255 MWt and 2 MWe. Heat from its own sources accounts for 41% of total heat sales.

PEC is the PGNiG TERMIKA Group's first large heat network operator, with a customer base of 2,150, including mainly housing cooperatives in Jastrzębie Zdrój, Rybnik, Żory, Racibórz, Wodzisław Śląski and Knurów, with total heat consumption of 1.4 PJ. The company serves both large business customers, small businesses and households.

SEJ

The principal business of SEJ is the production of electricity, heat, cooling and compressed air for JSW's coal mines. Its CHP plants are located close to the mines. SEJ operates five plants with a total capacity of 130.1 MWe, 504.66 MWt, 422.5 thousand cm/h of compressed air and 14.8 MWc. SEJ is a leader in the production of heat and cooling for mine ventilation in a trigeneration process from coal mine methane. For this reason, SEJ is the PGNiG TERMIKA Group company responsible for expanding the Group's industrial power generation business and in the future will oversee its operations.

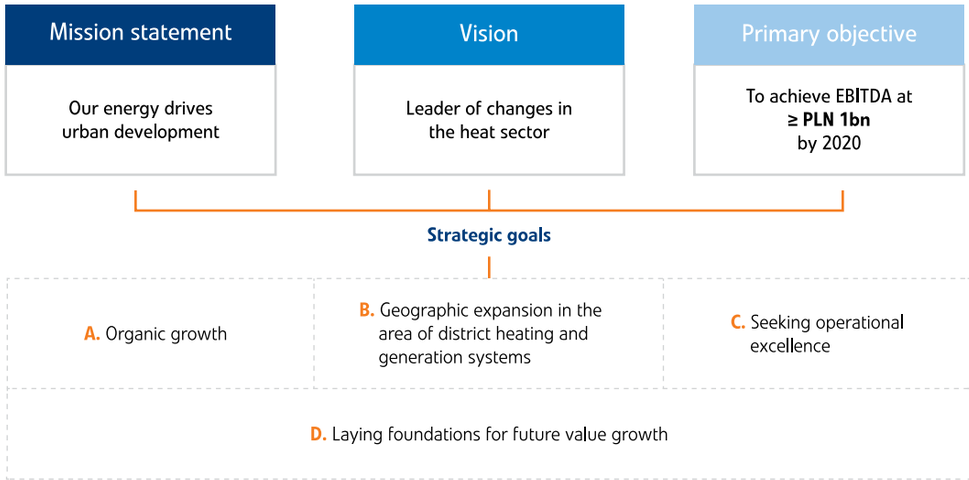
SEJ sells energy to 186 customers, the largest of them being JSW S.A. (electricity, heat, cooling and compressed air), PEC (heat), TAURON Polska Energia S.A. (electricity), Koksownia Częstochowa NOWA Sp. z o. o. (electricity and heat) and Spółka Restrukturyzacji Kopalń S.A. (heat).

Segment's strategy

The PGNiG Group's strategy for the generation business is to expand its share in the heat generation and distribution market. On April 28th, 2016, PGNiG TERMIKA acquired a 100% interest in PEC of Jastrzębie Zdrój and on August 11th, 2016 acquired a shareholding in SEJ from Jastrzębska Spółka Węglowa S.A. With these acquisitions, the PGNiG Group expanded its business into new geographical markets in Poland. PEC and SEJ operate in the promising heat markets of Upper Silesia. The PGNiG Group is building a strong group of companies around PGNiG TERMIKA, offering significant growth potential that will create value for the entire Group.

Aspiracje PGNiG TERMIKA do 2022 r:

- increase EBITDA to PLN 1bn by 2020;
- implement the Capital Investment Plan to ensure that generation assets comply with current and future environmental requirements;
- secure a leading position among Poland's heating companies in terms of network infrastructure;
- facilitate regulatory and market change in the sector;
- achieve market benchmarks for organisational efficiency in Poland.



Key projects and capital expenditures

PGNiG TERMIKA

In order to meet the more stringent emission requirements, PGNiG TERMIKA is gradually modernising its generating assets. In 2016, capital expenditures of the Generation segment amounted to PLN 273.7m, of which approximately PLN 41.5m was spent on environmental protection projects.

Construction of a CCGT unit at the Żerań CHP plant (Żerań CCGT)

The first phase of a four-phase project to alter the cooling water system was completed. Designs were made for a project to adapt and connect the existing equipment of the Żerań CHP Plant to PSE SA's new switchgear; a building permit was obtained for the project. In line with the procedure timetable, on February 16th, 2017 tenders were opened in a second tendering procedure for the delivery and installation of a CCGT unit at the Żerań CHP plant. Tenders were submitted by two consortia: the GE Power Sp. z o.o./General Electric International, Inc. and Mitsubishi Hitachi Power Systems Europe GmbH/ Mitsubishi Hitachi Power Systems Ltd/Mitsubishi Hitachi Power System Europe Ltd/Polimex Mostostal S.A. The final award decision will be made after the tenders have been reviewed and evaluated.

Construction of a CCGT unit in Stalowa Wola

Construction of the project was not completed to schedule. Accordingly, PGNiG and TAURON Polska Energia S.A. made a decision to restructure the project. An agreement on key preconditions for the project restructuring was signed in October 2016, aligning ECSW's existing commercial agreements to the expected start date of commercial operation and current market conditions. A survey of the project's status ended in 2016. The project will be resumed by a specialised firm, responsible for supporting its coordination on an EPCM (Engineering, Procurement and Construction Management) basis. Preparations are ongoing for the launch of an EPCM contract award procedure. In 2016, the project sponsors PGNiG and TAURON Polska Energia S.A. provided an approximately PLN 25m loan to fund ECSW's day-to-day operations.

Other important investment projects in 2016

- conversion of the K1 boiler in the Siekierki CHP Plant to biomass combustion – licences to generate electricity and heat from biomass in a hybrid system were secured;
- construction of a peak-load boiler house at the Żerań CHP Plant – tender documents were prepared for a limited scope of work for the gas-fired boiler house at the Żerań CHP Plant. A second tendering procedure was announced in October. The process is currently underway;
- construction of a 5 MWe/8 MWt gas-fired CHP plant in Przemyśl (Przemyśl CHP Plant) – design work was in progress. A building permit and grid connection conditions were obtained for the project. Work began to design a pipeline for carrying fuel from PGNiG's local natural gas extraction facilities. The plant is scheduled to come on stream in the third quarter of 2018.

PEC

Total capital expenditure on property, plant and equipment incurred in 2016 was PLN 10.2m. The key CAPEX projects involved the construction (PLN 4.3m), upgrade and reconstruction (PLN 3.0m) of heating network main and branch lines.

SEJ

Total capital expenditure on property, plant and equipment incurred from the SEJ acquisition date to the end of 2016 was PLN 59m, with most of the funds spent on the construction of a CFB cogeneration unit with a gross installed capacity of approximately 75 MWe at the Zofiówka CHP Plant.

Risks

Support for cogeneration

●●● ●●● ↗

The system of cogeneration support in the form of certificates of origin will only remain in effect until the end of 2018. The need to develop a new system supporting high-efficiency cogeneration, designed with a view to increasing electricity output, has been included in the Polish Energy Policy until 2050. For PGNiG TERMIKA, there is a serious threat that 2019 could mark the beginning of revenue decline. In Poland, work is currently under way to develop a power capacity market that would ensure additional revenues for cogeneration units after 2022. According to estimates, such revenues will not fully offset losses resulting from the lack of support for cogeneration. In addition, there is a risk of postponed introduction or even rejection of the capacity market solutions in the process of seeking their approval by the European Commission.

More stringent gas and dust emission standards

●●○ ●●○ →

2016 was the first year of application of the tighter emission requirements under the Industrial Emissions Directive (IED). Another step in making emission standards for the power segment more rigorous is expected in 2021, as a consequence of the Best Available Technology Conclusions for the power industry coming into force under the already effective IED. In their investment plans, companies should take into account the need to meet the emission and technological requirements set out in the draft BAT Conclusions – for new build and modernisation projects.

Maintaining share in the municipal heat market

●●○ ●●○ ↘

Following expansion of the Warsaw municipal waste incineration plant, the quantity of heat supplied to the city's municipal network will increase. As a result, PGNiG TERMIKA's share in total heat supplies to the Warsaw municipal network will fall from the current 99%, to 96% in 2020.

IED - directive 2010/75/EU of the European Parliament and of the Council of November 24th 2010 on industrial emissions (integrated pollution prevention and control).

BAT - Best Available Technology, reference document for LCP (Large Combustion Plant).

Probability that the risk will materialise:
●○○ low
●●○ moderate
●●● high

Risk materiality level:
●○○ low
●●○ moderate
●●● high

The risk comparison (2016 vs 2015)
↗ rise
→ stable
↘ fall

Development prospects

The largest projects planned for 2017 at PGNiG TERMIKA include the 450 MWe CCGT and peak demand boiler house projects at the Żerań CHP Plant. The projects will contribute to delivery of the strategic objectives to preserve leadership in the heat generation market in the Warsaw area, to improve return on assets and to diversify the fuel mix (coal, natural gas, biomass, alternative refuse-derived fuels). In the domestic market, the company will consider heat system acquisitions and projects to apply gas-fired technologies in heat generation, industrial power generation and distributed generation based on coal mine gas, including for the health and wellness/utilities sectors.

PEC's future projects will be focused on ensuring security of heat supply to all PEC customers and on expanding the local heat market.

SEJ's largest projects scheduled for 2017 include moving forward on the CFB cogeneration project with a gross installed capacity of around 75 MWe at the Zofiówka CHP Plant; relocation of two gas engines from the Suszec CHP Plant to Zofiówka; modernisation of the compressor facility at Zofiówka; improving compressed air generation efficiency; and replacement of absorption chillers at the Pniówek CHP Plant to improve cooling generation efficiency.

Financial results

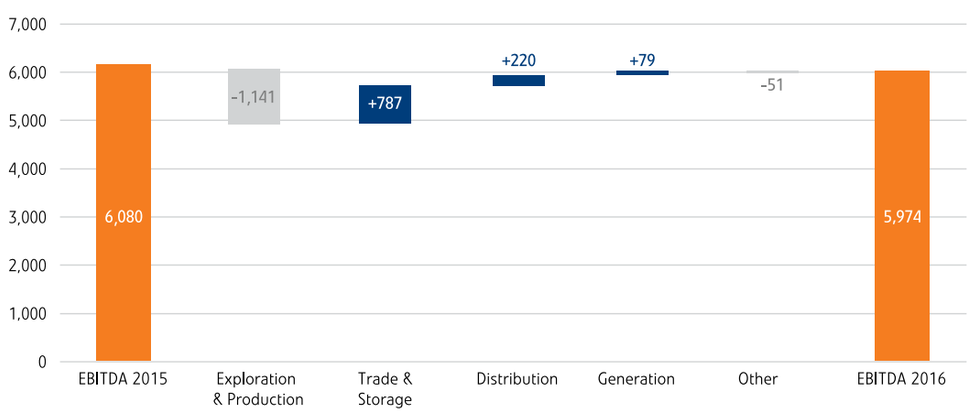
Consolidated financial statements

In 2016, the PGNiG Group generated revenue of PLN 33,196m, down PLN 3,268m (or 9%) from the year before when it reached PLN 36,464m. With operating expenses lower by 10% and amounting to PLN 29,836m, the PGNiG Group generated a consolidated operating result (EBIT) of PLN 3,360m (up 2% yoy). The operating result before depreciation and amortization (EBITDA) was PLN 5,974m, i.e. slightly lower, by PLN 105m (or 2%), than the year before. This level of performance was achieved despite the low prices of crude oil on the global markets and despite the low prices of gas in Central Europe in a situation of ongoing deregulation of the gas market in Poland.

The Group's sales activities coupled with lower temperatures resulted in a 6% increase in the volume of gas sold by the PGNiG Group from 23 bcm in 2015 to 24.3 bcm in 2016.

Changes in EBITDA 2015 vs. 2016

PLNm



The consolidated financial statements for the financial year ended December 31st, 2016 are available on the website www.en.pgnig.pl/investor-relations/reports/periodic-reports. Opinion of the independent auditor with the report supplementing the auditor's opinion of consolidated financial statements for the financial year ended 31 December 2016 is included in the consolidated annual report PGNiG Group 2016.

Financial highlights of PGNiG Group

as at December 31st 2016

PLNm	2016	2015	Change y/y
Revenue	33,196	36,464	(3,268)
Total operating expenses, including	(29,836)	(33,174)	3,338
Depreciation and amortisation	(2,614)	(2,790)	176
Operating profit	3,360	3,290	70
Profit before tax	3,210	3,014	197
Net profit	2,349	2,136	213
Cash flows from operating activities	5,922	7,271	(1,349)
Cash flows from investing activities	(3,842)	(3,147)	(695)
Cash flows from financing activities	(2,269)	(829)	(1,440)
Net increase/(decrease) in cash and cash equivalents	(189)	3,282	(3,471)

PLNm	2016	2015	Change y/y
Total assets	49,672	48,292	1,380
Non-current assets	36,236	35,643	593
Current assets, including	13,436	12,649	787
Inventories	2,510	2 229	281
Total equity and liabilities	49,672	48,292	1,380
Total equity	32,016	30,741	1,274
Total non-current liabilities	7,303	11,262	(3,959)
Total current liabilities	10,353	6,289	4,064
Total liabilities	17,656	17,551	105

Consolidated statement of profit or loss

for the year ended December 31st 2016

PLNm	2016	2015
Revenue from sale of gas	26,429	30,263
Other revenue	6,767	6,201
Revenue	33,196	36,464
Cost of gas sold	(18,320)	(22,005)
Other raw materials and consumables used	(2,427)	(2,211)
Employee benefits expense	(2,573)	(2,714)
Transmission services	(1,106)	(1,156)
Other services	(1,412)	(1,235)
Taxes and charges	(765)	(628)
Other income and expenses	(332)	(515)
Work performed by the entity and capitalised	868	953
Recognition and reversal of impairment losses on property, plant and equipment and intangible assets	(1,155)	(873)
Operating profit before depreciation and amortisation (EBITDA)	5,974	6,080
Depreciation and amortisation	(2,614)	(2,790)
Operating profit (EBIT)	3,360	3,290
Net finance costs	(76)	(225)
Profit/(loss) from equity-accounted investees	(74)	(51)
Profit before tax	3,210	3,014
Income tax	(861)	(878)
Net profit	2,349	2,136
Net profit attributable to:		
Owners of the parent	2,351	2,134
Non-controlling interests	(2)	2
Weighted average number of ordinary shares (million)	5,867	5,900
Basic and diluted earnings per share (PLN)	0.40	0.36

Profitability

as at December 31st 2016

PLNm	2016	2015
EBIT operating profit	3,360	3,290
EBITDA operating profit + depreciation/amortisation	5,974	6,080
ROE net profit to equity at end of period	7.3%	6.9%
Net margin net profit to revenue	7.1%	5.9%
ROA net profit to assets at end of period	4.7%	4.4%

Liquidity

as at December 31st 2016

	2016	2015
Current ratio current assets to current liabilities (net of employee benefit obligations, provisions and deferred revenue)	1.5	2.5
Quick ratio current assets less inventories to current liabilities (net of employee benefit obligations, provisions and deferred revenue)	1.2	2.0

Debt

as at December 31st 2016

	2016	2015
Debt ratio total liabilities to total equity and liabilities	35.5%	36.3%
Debt/equity ratio total liabilities to equity	55.1%	57.1%

Consolidated statement of comprehensive income

for the year ended December 31st 2016

PLNm	2016	2015
Net profit	2,349	2,136
Exchange differences on translating foreign operations	23	15
Hedge accounting	783	(431)
Revaluation of financial assets available for sale	2	-
Deferred tax	(149)	82
Other comprehensive income subject to reclassification to profit or loss	659	(334)
Actuarial losses on employee benefits	(29)	(35)
Deferred tax	5	2
Share of other comprehensive income of equity-accounted investees	(2)	-
Other comprehensive income not subject to reclassification to profit or loss	(26)	(33)
Other comprehensive income, net	633	(367)
Total comprehensive income	2,982	1,769
Total comprehensive income attributable to:		
Owners of the parent	2,984	1,767
Non-controlling interests	(2)	2

Consolidated statement of cash flows

for the year ended December 31st 2016

PLNm	2016	2015
Cash flows from operating activities		
Net profit	2,349	2,136
Depreciation and amortisation	2,614	2 ,790
Current tax expense	861	878
Net gain/(loss) on investing activities	884	578
Other non-monetary adjustments	368	430
Income tax paid	(611)	(833)
Movements in working capital	(543)	1,292
Net cash from operating activities	5,922	7,271
Cash flows from investing activities		
Payments for acquisition of tangible exploration and evaluation assets under construction	(713)	(986)
Payments for other property, plant and equipment and intangible assets	(2,255)	(2,168)
Payments for shares in related entities	(1,027)	(59)
Other items, net	153	66
Net cash from investing activities	(3,842)	(3,147)
Cash flows from financing activities		
Payment for treasury shares	(645)	-
Increase in debt	451	1,948
Proceeds from derivative financial instruments	89	84
Decrease in debt	(1,021)	(1,578)
Dividends paid	(1,062)	(1,180)
Payment for derivative financial instruments	(78)	(81)
Other items, net	(3)	(22)
Net cash from financing activities	(2,269)	(829)
Net cash flows	(189)	3,295
Cash and cash equivalents at beginning of period	6,021	2,726
Foreign exchange differences on cash and cash equivalents	(4)	(1)
Cash and cash equivalents at end of period	5,832	6,021

Consolidated statement of financial position

for the year ended 31st December 2016

PLNm	2016	2015*	2014*
ASSETS			
Property, plant and equipment	33,149	32,967	33,528
Intangible assets	1,079	1,138	1,113
Deferred tax assets	100	42	58
Equity-accounted investees	1,229	840	856
Other assets	679	656	642
Non-current assets	36,236	35,643	36,197
Inventories	2,510	2,229	3,189
Receivables	4,288	3,379	4,241
Derivative financial instruments	623	709	567
Other assets	129	146	132
Cash and cash equivalents	5,829	6,022	2,728
Assets held for sale	57	164	147
Current assets	13,436	12,649	11,004
TOTAL ASSETS	49,672	48,292	47,201
EQUITY AND LIABILITIES			
Share capital and share premium	7 518	7 640	7,640
Accumulated other comprehensive income	(4)	(637)	(270)
Retained earnings	24,499	23,733	22,794
Equity attributable to owners of the parent	32,13	30,736	30,164
Equity attributable to non-controlling interests	3	5	5
TOTAL EQUITY	32,016	30,741	30,169
Financing liabilities	1,346	5,799	5,069
Employee benefit obligations	702	565	604
Provision for well decommissioning costs	1,641	1,540	1,580
Other provisions	198	188	223
Grants	815	843	843
Deferred tax liabilities	1,932	1,557	1,525
Other liabilities	669	770	815
Non-current liabilities	7,303	11,262	10,659
Financing liabilities	5 006	583	769
Derivative financial instruments	346	1,165	593
Trade and tax payables [A]	3,179	2,765	3,306
Employee benefit obligations	334	352	284
Provision for well decommissioning costs	20	33	28
Other provisions	560	661	692
Other liabilities	908	730	701
Current liabilities	10,353	6,289	6,373
TOTAL LIABILITIES	17,656	17,551	17,032
TOTAL EQUITY AND LIABILITIES	49,672	48,292	47,201

[A] Including income tax of PLN 180m (2015: PLN 53m).
* Restated.

Consolidated statement of changes in equity

PLNm, for the year ended December 31st 2016

	Equity attributable to owners of the parent											
	Share capital and share premium, including:			Accumulated other comprehensive income:								
	Share capital	Share premium	Treasury shares	Exchange differences on translating foreign operations	Hedging reserve	Revaluation of financial assets available for sale	Actuarial gains/(losses) on employee benefits	Share of other comprehensive income of equity-accounted investees	Retained earnings	**Total**	Equity attributable to non-controlling interests	**Total equity**
As at Jan 1, 2015	5,900	1,740	-	(66)	(216)	-	12	-	22,794	**30,164**	5	**30,169**
Net profit	-	-	-	-	-	-	-	-	2,134	**2,134**	2	**2,136**
Other comprehensive income, net	-	-	-	15	(349)	-	(33)	-	-	**(367)**	-	**(367)**
Total comprehensive income	-	-	-	15	(349)	-	(33)	-	2,134	**1,767**	2	**1,769**
Dividend	-	-	-	-	-	-	-	-	(1,180)	**(1,180)**	-	**(1,180)**
Changes in the Group	-	-	-	-	-	-	-	-	(15)	**(15)**	(2)	**(17)**
As at Dec 31, 2015	5,900	1,740	-	(51)	(565)	-	(21)	-	23,733	**30,736**	5	**30,741**
Net profit	-	-	-	-	-	-	-	-	2,351	**2,351**	(2)	**2,349**
Other comprehensive income, net	-	-	-	23	634	2	(24)	(2)	-	**633**	-	**633**
Total comprehensive income	-	-	-	23	634	2	(24)	(2)	2,351	**2,984**	(2)	**2,982**
Dividend	-	-	-	-	-	-	-	-	(1,062)	**(1,062)**	-	**(1,062)**
Acquisition of treasury shares	-	-	(645)	-	-	-	-	-	-	**(645)**	-	**(645)**
Cancellation of treasury shares	(122)	-	645	-	-	-	-	-	(523)	**–**	-	**–**
As at Dec 31, 2016	5,778	1,740	-	(28)	69	2	(45)	(2)	24,499	**32,013**	3	**32,016**

Operating segments

PLNm, for the year ended December 31st 2016

2016	Sales to external customers	Inter-segment sales	Total revenue	EBITDA	Depreciation and amortisation	EBIT (operating profit)	Recognition and reversal of impairment losses on property, plant and equipment and intangible assets	Profit/(loss) from equity-accounted investees	Expenditure on acquisition of property, plant and equipment and intangible assets	Property, plant and equipment	Workforce*
Exploration and Production	2,776	1,515	4,291	1,285	(1,066)	219	(1,089)	(53)	(1,314)	12,881	7,720
Trade and Storage	27 740	440	28,180	1,410	(252)	1 158	(28)	-	(121)	4,227	3,520
Distribution	1,078	3,837	4,915	2,559	(924)	1 635	(4)	-	(1,123)	12,765	10,846
Generation	1,472	723	2,195	759	(360)	399	(16)	(21)	(391)	3,378	1,870
Other Segments	130	110	240	(61)	(14)	(75)	(18)	-	(9)	110	1,315
Total	33,196	6,625	39,821	5,952	(2,616)	3,336	(1,155)	(74)	(2,958)	33,361	25,271
Reconciliation with consolidated data			(6,625)	22	2	24	-	-	(10)	(212)	
Total			33,196	5,974	(2,614)	3,360	(1,155)	(74)	(2,968)	33,149	

*Excluding the workforce of equity-accounted investees.

Operating segments

PLNm, for the year ended December 31st 2015

2015	Sales to external customers	Inter-segment sales	Total revenue	EBITDA	Depreciation and amortisation	EBIT (operating profit)	Recognition and reversal of impairment losses on property, plant and equipment and intangible assets	Profit/(loss) from equity-accounted investees	Expenditure on acquisition of property, plant and equipment and intangible assets	Property, plant and equipment	Workforce*
Exploration and Production	3,148	1,707	4,855	2,426	(1,331)	1,095	(839)	-	(1,460)	13,378	8,903
Trade and Storage	31,274	468	31,742	623	(242)	381	(3)	(51)	(171)	4,290	3,462
Distribution	654	3,931	4,585	2,339	(889)	1 450	(2)	-	(1,180)	12,573	10,678
Generation	1,215	672	1,887	679	(312)	367	(30)	-	(353)	2,840	1,071
Other Segments	173	152	325	12	(18)	(6)	1	-	(7)	133	1,305
Total	36,464	6,930	43,394	6,079	(2,792)	3,287	(873)	(51)	(3,171)	33,214	25,419
Reconciliation with consolidated data			(6 930)	1	2	3	-	-	17	(247)	
Total			36,464	6,080	(2,790)	3,290	(873)	(51)	(3,154)	32,967	

*Excluding the workforce of equity-accounted investees.

Projected future financial standing

In the coming periods, the financial standing of the PGNiG Group will be materially affected by changes in the prices of hydrocarbons on global commodity markets and fluctuations in foreign exchange rates. These factors will be of particular importance for the PGNiG Group's performance in the Exploration & Production and Trade & Storage segments.

Any changes in crude oil prices affect revenues of the Group members engaged in crude production and sale, and determine the demand for seismic and exploration services offered by the Group companies. Rising crude oil prices have a positive effect on the results generated by the Exploration and Production segment. Long-term forecasts of crude oil prices strongly influence projected cash flows from production assets and as a consequence entail the need for revaluation of property, plant and equipment.

On the other hand, in view of the fact that the prices of gas purchased by PGNiG under the Yamal and Qatar Contracts are linked to prices of crude oil, rising crude prices have just the opposite effect on the results generated by the Trade and Storage segment. Any increase in crude oil prices translates into a higher cost of gas purchased by PGNiG.

The PGNiG Group's financial results will also be materially affected by the situation on the domestic currency market. Any strengthening of the złoty against foreign currencies (primarily the US dollar) will have a positive effect on the performance of the Trade and Storage segment by driving down PGNiG's gas purchase costs, although it must be noted that the effect of exchange rate fluctuations is mitigated by the PGNiG Group's hedging policy.

The PGNiG Group's financial results will also be affected by the position of the President of URE regarding the level of gas fuel sale and distribution tariffs and heat sale tariffs. In addition, the progressing deregulation of the gas market in Poland will continue to put pressure on the performance of the PGNiG Group's Trade and Storage companies engaged in the provision of gas sale services. Competition for customers has prompted the launch of a number of discount schemes dedicated to customers buying gas from the Group and the change in pricing terms to reflect market prices. These factors may have an adverse effect on the profitability of the Trade and Storage segment by eroding its margins.

However, the PGNiG Group companies have put in place a number of initiatives to improve efficiency. These initiatives focus, without limitation, on optimisation of the cost base and are expected to have a favourable effect on the PGNiG Group's financial results.

In the case of the Generation segment, the Group's performance will also be considerably affected by support programmes for electricity from high-efficiency cogeneration and renewable sources. Legislative changes in this area and fluctuations in market prices of certificates of origin (both red and green) will have a bearing on the segment's financial position. Another key factor affecting the performance of the Generation segment relates to prices of fuels used in the production of heat and electricity.

In the coming quarters, the Group intends to maintain a high level of capital expenditures. Spending will focus primarily on projects involving maintenance of hydrocarbon production rates as well as projects in the exploration for and appraisal of crude oil and natural gas deposits and the development of the power generation segment.

Corporate Social Responsibility

Corporate Social Responsibility

Ethics

The ethics programme in place aims to ensure ethical conduct and strengthen PGNiG's corporate culture by identifying behaviours the Company wants to encourage as well as those that are not tolerated in the organisation. Standards of conduct are laid down in the PGNiG Code of Ethics and in the Code of Best Practice for PGNiG Group Managers.

The PGNiG Code of Ethics consists of the Statement of Values and the Ethical Standards Code. The Statement of Values sets out the moral principles and ethical ideals to foster development of an ethical environment and mutual trust at PGNiG. The Ethical Standards Code spells out specific rules of conduct for PGNiG employees which are in line with declared corporate values and best industry practices from around the world.

As stipulated in the ethics programme, the presented values and ethical principles must be fully upheld by every PGNiG employee in the course of their professional duties. The Code allows the Group companies to further improve their best practices and ethical standards based on their own judgement, in accordance with the specific nature of their market sectors, conditions in which they operate in various countries and prior experience.

Promotion of ethical behaviour at PGNiG is a duty of the Ethics Officer who also monitors compliance with the Code of Ethics by receiving and assessing ethics violation reports and works with the Ethics Committee and ethics officers of the PGNiG Group companies. Altogether, there are eight ethics officers at the PGNiG Group.

No breaches of ethical conduct rules were reported to the Ethics Officer of PGNiG in 2016.

Environmental protection

Well and extraction pit abandonment

Abandonment of wells and boreholes is performed in accordance with the Geological and Mining Law and applicable secondary legislation. Abandoned wells are permanently marked in the field, in accordance with the Regulation of the Minister of Economy of April 25th, 2014 on specific requirements for the operation of mining facilities producing minerals through wells, the Regulation of the Minister of Economy of June 12th, 2002 on mining rescue, and with the 'Mine Operations Manager Guidelines on securing, temporary plugging and abandonment of boreholes and wells'.

Environmental protection in drilling operations

Environmental protection initiatives connected with drilling for both conventional and unconventional hydrocarbons are carried out in accordance with the applicable Polish and EU laws, as well as internal good practice documents.

Land reclamation and surveying of non-productive assets

On September 1st, 2016, a regulation of the Minister of Environment was adopted concerning the procedure of assessing soil contamination, which necessitated a new approach towards planned remediation of the soil-water environment on non-producing assets where municipal gas production from hard coal in the past caused changes in the environment and local pollution. As part of a remediation plan, priority must be given to tests assessing the state of the environment as well as development of cheaper and more effective methods of removing pollutants. Tests conducted to date may no longer be used to support applications for approval of remediation plans. Tender documentation was drafted for the first two properties: Barlinek and Szprotawa, where in-situ bioremediation is planned. The tender procedures are pending. It is expected that the planned biological remediation methods will deliver environmental benefits, considerably reduce costs of bringing the properties into compliance with applicable standards, and will make it possible sell the properties in future without any risk.

Additionally, monitoring was conducted of the soil-water environment of the reclaimed landfill site in Zabrze-Biskupice and a property in Zabrze.

Underground gas storage facilities

Environmental protection initiatives carried out in the vicinity of the Kosakowo Cavern Underground Gas Storage Facility (CUGSF) involved continued land and sea monitoring to assess the project's environmental impacts during its construction and operation, as part of two programmes: the environmental monitoring programme of May 2009 and the basic and emergency control programme for the Kosakowo CUGSF of April 2014.

The programmes cover monitoring of underground and surface water, soil, tightness of the storage facility, vertical earth surface movements, the impact of discharged brine on waters of the Puck Bay, as well as the technical condition and proper operation of the installation for discharging brine from leached caverns to the Puck Bay. The surveys and observations conducted so far indicate that the construction and operation of the Kosakowo CUGSF do not have any negative impacts on the environment.

Monitoring activities are also conducted by personnel of the Mogilno CUGSF; detailed analyses of water and soil samples were carried out by an accredited laboratory, tests were performed by the AGH University of Science and Technology in Kraków to monitor the tightness of the Z-8 and Z-11 caverns, and chromatographic analysis of gas from five control wells was carried out by PGNiG Branch-Central Measurement and Testing Laborator. The surveys and observations conducted so far indicate that the construction and operation of the Mogilno CUGSF do not have any negative impacts on the environment.

Gas emissions, generation of waste and by-products

In 2016, PGNiG TERMIKA emitted:

- 10,764 tonnes of SO_2;
- 5,429 tonnes of NOx;
- 628 tonnes of dust.

SO_2 - sulfur dioxide.

The emission volumes were lower than in previous years thanks to a wide-ranging investment programme involving construction and upgrade of flue gas desulfurisation units, construction of NOx reduction units, and modernisation of dust removal units. In 2016, the Siekierki CHP Plant operated a biomass-fired unit (converted from a coal-fired boiler), which contributed to a reduction of pollutant emissions and helped lower CO_2 emissions in 2016, to 5,478,745 tonnes. In 2016, PGNiG TERMIKA discharged 155.9 mcm of spent cooling water and 1.6 mcm of wastewater into surface water.

CO_2 - carbon dioxide.

The volume of ash and slag generated in 2016 was 536 thousand tonnes, including 53 thousand tonnes of ash classified as a by-product. Also, 59 thousand tonnes of gypsum was generated as a by-product from the flue gas desulfurisation units. All this waste and by-products were transferred for recycling (production of cement and building materials, mining, road engineering and land reclamation).

CO_2 emissions from installations covered by the 2016 EU ETS for PGNiG*

Installation	National Allocation Plan (KPRU) No.	Emission allowances [Mg]*	Emissions in 2016 [Mg]	balance [Mg]
Mogilno CUGSF	PL- 898-08	5,917	15,477	(9,560)
PGNiG Odolanów Branch	PL-562-05	5,957	10,075	(4,118)
PGNiG Odolanów Branch	PL-950-08	15,092	18,489	(3,397)
Lubiatów Oil and Gas Production Facility	PL-1070-13	42,351	56,207	(13,856)
Wierzchowice UGSF	PL-1072-13	0	6,552	(6,552)
Kosakowo CUGSF	PL-1076-13	0	3,630	(3,630)
PGNiG, Zielona Góra Branch, Dębno Oil and Gas Production Facility	PL-563-05	26,340	29,629	(3,289)
Total		95,657	140,059	(44,402)

* Preliminary data.

Employees

The PGNiG Group is one of the largest employers in Poland. It employs individuals with extensive experience and high qualifications, but is also the first employer for many young people. This human capital is the key resource enabling the Group to provide its customers with the highest quality service, achieve international successes and pursue a wide investment program.

In 2016, the PGNiG Group's headcount was 25,271. This represents a change of 148 in employment levels from the Group's 2015 headcount of 25,419.

In the Exploration and Production segment, a significant drop in employment was recorded. Relative to December 31st 2015, the number of employees fell by 1,183 (or 13%), owing mainly to the following processes:

- employment restructuring at EXALO Drilling SA caused by the company's difficult ecnomic situation, where 800 employees (25%) were made collectively redundant;
- ongoing liquidation of GEOFIZYKI Kraków Sp. z o.o., where 219 people (or 26%) were made redundant;
- Voluntary Redundancy Programme launched and implemented by PGNiG to optimise its workforce. Under the programme, 164 employees departed, the majority of them from the hydrocarbon production branches.

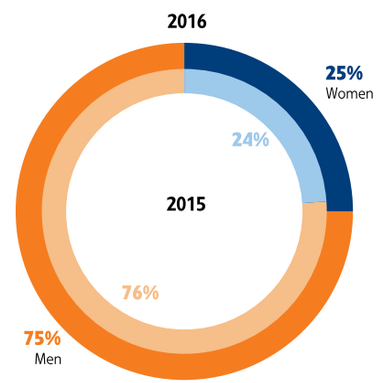
In the Generation Segment, the headcount increased by 799 (or 75%), which was attributable to the inclusion of Przedsiębiorstwo Energetyki Cieplnej S.A. in Jastrzębie-Zdrój and Spółka Energetyczna Jastrzębie S.A. in the PGNiG Group.

Workforce in the Distribution segment grew by 168 (or 2%) in connection with the structural reorganisation of the business of Polska Spółka Gazownictwa Sp. z o.o., resulting in a higher number of local gas utilities and service points.

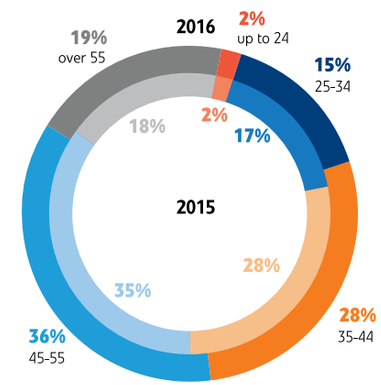
Employment in the PGNiG Group by segment

	2016	2015	2014	2013	2012
Exploration and Production	7,720	8,903	10,221	10,754	10,990
Trade and Storage	3,520	3,462	3,929	4,070	4,397
Distribution	10,846	10,678	12,173	13,050	13,255
Generation	1,870	1,071	1,068	1,066	1,069
Other Activities	1,315	1,305	1,605	1,990	2,327
TOTAL	25,271	25,419	28,996	30,930	32,038

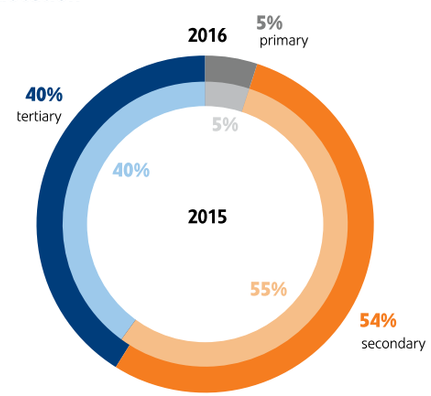
Gender



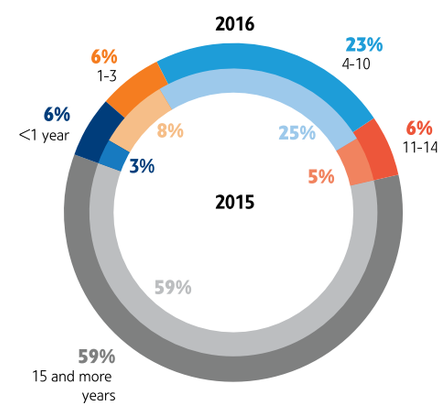
Age



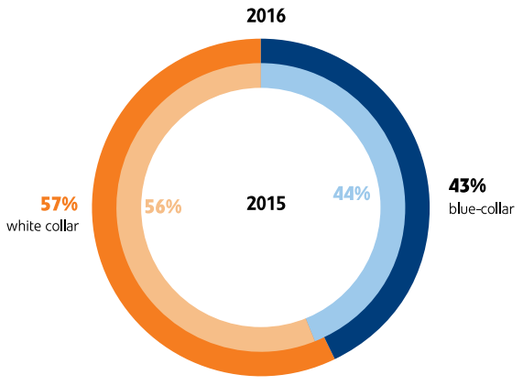
Education



Years of service



Job type



Workforce turnover – new hires/departures (by age and gender)

Age	Number of new hires		Number of departures	
	Women	Men	Women	Men
Up to 24	40	239	12	193
25–34	228	579	145	707
35–44	160	551	194	611
45–55	58	304	133	558
Over 55	13	103	169	638
Total	499	1,776	653	2,707

Parental leaves

In 2016, the rate of return to work at the PGNiG Group was 92.8%.

The rate of return to work for employees who took parental leave is the quotient of:

- number of staff who maintained their jobs/ continued work after return from parental leave in 2016;
- number of staff who returned to work after parental leave in 2016.

Parental leave is any leave to which an employee may be entitled after child birth/adoption, including maternal, additional maternal, paternal and childcare leave.

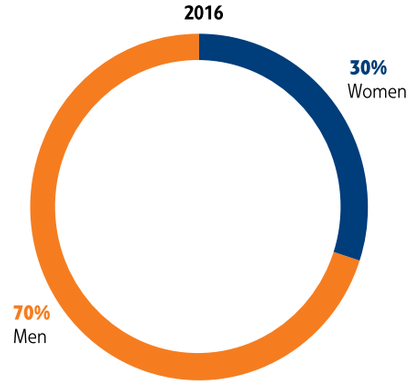
Training and development programmes

The training management system in place is a vital tool in developing human resources. Our employees are given opportunities to improve their professional qualifications through a range of training programmes, postgraduate studies, trade conferences, seminars and symposia, and also through occupational training.

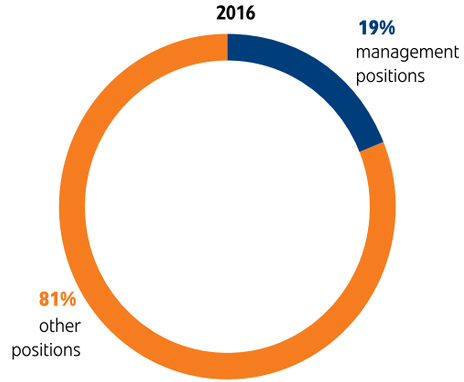
In June 2016, the Talent Identification System was launched as a first step in the establishment of the Future Leaders Academy. The aim is to identify high-potential employees (talent), who might later be included in the Future Leaders Academy development programme preparing them to perform other (also managerial) functions in the organisation.

Number of training hours per PGNiG employee in 2016: 32.

Number of training hours, by gender



Number of training hours, by type of job



Employee performance assessment

Twice a year, employees are evaluated based on the Performance Assessment System in place. In the process, particular emphasis is placed on targets assigned to individual employees, which are linked to strategic objectives of the PGNiG Group. It allows employees to discuss the needs and challenges associated with their positions, and is a source of feedback on both their achievements and potential issues in professional development.

In 2016, all PGNiG employees were subject to performance assessment.

In 2016, 85.5% of PGNiG Group employees were subject to performance assessment.

Student internships and work placement programmes

PGNiG offers a number of work placement initiatives and competitions. Its internships are attractive opportunities to gain professional experience, develop new skills and learn more about working in the industry. In 2016, PGNiG had in place the following internships and work education programmes:

GeoTalent

It is a proprietary education and internship programme for students of the AGH University of Science and Technology in Kraków, the Faculty of Geographical and Geological Sciences of the Adam Mickewicz University in Poznań, and the Faculty of Geology of the Warsaw University. It seeks to identify and attract the best students and graduates who want to pursue their professional careers in the oil and gas industry. GeoTalent comprises workshops, competitions for students, the Mentoring Programme, the Ambassadorial Programme, GeoTournament, the Summer Internship Programme, and other similar initiatives. A total of 57 interns completed paid placements with PGNiG from June 2016.

Energy for the Future

'Energy for the Future' is an internship programme run jointly with two other groups under the Ministry of Energy's patronage. It aims to find the most talented students and graduates of faculties relevant to the Polish energy sector. Each participating student will have a chance to gain hands-on experience and skills in the areas of interest. Currently, the number of interns enrolled is 21.

Energy Academy

For several years now, PGNiG has participated in the Energy Academy education project, run by the Lesław Paga Foundation, as a sponsor of paid internships for students planning their professional careers in the energy sector. In 2016, PGNiG signed graduate work placement agreements with three interns of the Foundation.

EU co-financed internship programmes

In 2016, PGNiG first offered paid internships for participants of university internship programmes co-financed from EU aid funds under the Knowledge–Education–Development Operational Programme. In Q3 and Q4 2016, there were six interns enrolled.

Deposits of Career

The 'Deposits of Career' programme offers students and graduates of all faculties (except oil and gas engineering, covered by GeoTalent) an opportunity to gain professional experience. Its participants can complete an internship and take part in educational events to support career building.

Internships are also offered by PGNiG outside the programmes discussed above. In 2016, 382 persons, including 360 students and 22 academics, took advantage of internship and work placement opportunities at PGNiG.

Recruitment

PGNiG's recruitment policy is focused on employing top-class specialists whose expertise and competence, combined with the experience and professionalism of the Company's other staff, will ensure continuity and high standard of business processes. Priority in filling vacancies at the PGNiG Group is given to internal recruitment, to best use the potential of the current employees.

Cooperation with trade unions

There are a number of trade unions active at PGNiG. Considerable importance is attached by the Company to maintaining constructive links with the trade unions, making sure that social dialogue is based on the independence of all parties, legal compliance, as well as trust, willingness to compromise, and adherence to rules.

In 2016, the Company worked with the trade unions on a regular basis, in accordance with the agreements concluded and the labour law. There were 24 meetings between the Company and trade unions over the period, at which participants discussed staff-related matters and individual segments of the PGNiG Group's business, including a revision of the strategy for 2014–2022. As regards changes in remuneration terms, in 2016 the Company, acting pursuant to Art. 44.2 of the Collective Bargaining Agreement, was holding pay negotiations, which however did not end in any agreement with the trade unions. Therefore, the Company made a unilateral decision on remuneration rules in 2016. The new arrangements led to a 4.8% pay increase in 2016, and employee benefits were also paid in the form of pre-paid vouchers. There were no collective redundancies or disputes at PGNiG in 2016. The Company's Bargaining Labour Agreement, dated July 8th, 2009, was not terminated or suspended.

Occupational health and safety

Main OHS tasks performed in 2016:

- determination of the circumstances and causes of work accidents, preparation of a lesson learnt report from that investigation and monitoring of its implementation;
- update of the occupational risk assessment for the Geology and Hydrocarbon Production Branch together with the physician providing preventive medical care to employees;
- development of PGNiG staff's OHS competences through introductory training in OHS, fire safety and first aid procedures;
- implementation of a procedure for reimbursement of the cost of corrective eyeglasses for PGNiG employees using screen monitors at work;
- implementation of the decision on rules of providing and settling the cost of meals and drinks for PGNiG employees;
- Participation in and supervision of evacuation drills on the Head Office premises.

Accident reporting facilitates analysis of the causes of injuries and diseases arising from accidents at work, helping to work out and adopt preventative measures. As a result, it helps raise the staff's awareness and foster a work safety culture. Below are presented 2015 and 2016 accident statistics for PGNiG and the following companies of the PGNiG Group: GEOFIZYKA Kraków, GEOFIZYKA Toruń, EXALO Drilling, PGNiG TERMIKA, PGNiG Serwis, GEOVITA SA, Gas Storage Poland, PGNiG Technologie Sp. z o.o., PGNiG Obrót Detaliczny Sp. z o.o., PSG and Polski Gaz TUW.

Year	Total accidents	Casualties	Group accidents	Serious accidents	Fatalities	Occupational diseases	Days lost/days of absence
2015	225	229	6	1	1	2	11,763
2016	210	214	3	1	0	4	11,278

Sponsorship and charity

For many years, PGNiG has been involved in a wide range of sponsorship activities, with a major focus placed on sports, culture and education. In November 2004, the Company established the PGNiG Ignacy Łukasiewicz Foundation, of which it is the sole founder and donor.

PGNiG Ignacy Łukasiewicz Foundation

The mission of the Foundation is to conduct public benefit activities, in particular by promoting and supporting culture as an element of the national heritage, including theatrical plays, musical performances and film screenings in Poland and abroad, scientific and technical research, with a focus on particular achievements in the area of fundamental and technical sciences, R&D activities, and protection of historical buildings and monuments, including in particular those relating to the gas industry.

In 2016, the Foundation focused on two proprietary programmes – 'To Be Like Ignacy' and 'We Warm up Polish Hearts', and supported a number of initiatives falling within the scope of its mission. It donated funds to the Ignacy Łukasiewicz Museum of Oil and Gas Industry Foundation in Bóbrka, to support the museum's activities.

Education

The PGNiG Ignacy Łukasiewicz Foundation has long supported initiatives promoting science, education and history, which resulted in a project aimed at promoting science and commemorating Ignacy Łukasiewicz, a petroleum industry pioneer in Poland and the world. Run in cooperation with with PGNiG, 'To Be Like Ignacy' is a programme aimed at promoting science among primary school children and, at the same time, teaching them about the life of Ignacy Łukasiewicz. Its main element is a website featuring an interactive comic strip, educational videos showing scientific experiments and an adventure game.

As part of the programme, the Foundation holds a competition called 'Ignacy's School of Science', with more than 150 schools from all over Poland having enrolled to win the Ignaś statuettes. The competition seeks to award schools with the most interesting science clubs set up specifically for the purpose of the project. To assist teachers in running such clubs, the Foundation prepared lesson scenarios for grades 0–3 and 4–6. The programme is run under the honorary patronage of the Speaker of the Sejm and the Ministry of National Education. The official media partner of 'To Be Like Ignacy' is TVP ABC.

Sports

PGNiG is strongly committed to sponsoring sports. The Company provides comprehensive support to one leading professional sport, namely handball. It is worth noting that the growing professionalism of handball games, commitment of players and the dynamic nature of handball have stirred up Poles' interest in the sport. This creates an excellent opportunity to uphold and further strengthen our corporate image as a modern and dynamic company. Together with the Ministry of Sports and Tourism, PGNiG launched a dedicated website, www.klubiks.pl, and published a

course book on sports marketing for small and medium-size sports clubs. In recognition of the initiatives undertaken in 2016, PGNiG was named the 'Sponsor of the Year' in the 82nd prestigious poll organised by the Przegląd Sportowy daily and the Polish Television.

Culture

PGNiG's patronage for the Television Theatre is a fine example of how to tap the potential of economic patriotism by combining culture and business. The three-year long partnership between PGNiG and the Polish Television was the Company's largest and most prominent investment in Polish culture in 2016. In this way, PGNiG confirmed its commitment to shaping and promoting events, projects and phenomena that represent Poland's high culture and popularise national history. One of the key cultural events sponsored by the Company was the Gala Concert in memory of the legendary Polish composer and musician Przemysław Gintrowski.

'We Warm Up Polish Hearts' is a motto of the Foundation's and PGNiG's joint project to raise historical awareness among Poles, preserve national identity and commemorate Polish heroes. As part of the programme, the Foundation supports educational and film-making projects, initiatives to aid war veterans and a variety of cultural activities. A particular focus is placed on reviving the memory and history of the so-called cursed or indomitable soldiers, heroes that fell into oblivion for decades. Under the programme, more than 36 projects for almost 2 million recipients have been implemented or supported by the Foundation. They included 10 film productions, six musical projects (two records were released), seven educational projects and 10 historical awareness projects.

Under the 'We Warm Up Polish Hearts' programme run together with the PGNiG Ignacy Łukasiewicz Foundation, the Company co-financed the production of Konrad Łęcki's feature film 'Wyklęty' (The Cursed), to premiere in 2017. PGNiG is also the Main Sponsor of the 8th Film Festival 'Non-humble, Indomitable, Cursed'.

CSR events in 2016

The CSR activities focused on continued efforts to implement PGNiG's previous Sustainable Development and Social Engagement Strategy and included work on updating that strategy. Projects were pursued for both the Company's internal and external stakeholders. These included meetings devoted to CSR matters and promotion of responsible business practices in the sector, various workshops for children and employees as well as community-building initiatives.

Key CSR projects implemented in 2016 included:

- meeting of representatives of the energy industry's largest players under the name of 'Energy Sector Round Table'. The event was devoted to corporate social responsibility and sustainable development challenges faced by the sector and was organised to share experience and good practice. The 'Energy Sector Round Table', moderated by the Responsible Business Forum, was attended by Jacqueline Kacprzak, advisor to the Minister of Development and Beata Wereszczyńska-Dembska, Director of the Strategy and Social Communication Department at URE;
- 'Pogoń for Pogoń' programme, promoting PGNiG in an innovative way as a socially responsible business, which builds and strengthens community relations, fosters patriotic attitudes among youth and popularises sports through education among the youngest children. The project is a joint initiative of PGNiG and the Minister of Energy, Krzysztof Tchórzewski. Under the programme, the Pogoń Siedlce and Pogoń Lwów football clubs and the communities of both cities work together towards educating children and youth in history and sports. Considering PGNiG's business presence in Ukraine, it was only natural for the Company to engage in work towards building social relations there, including stronger ties with the Polish community living in Ukraine;

'We Warm Up Polish Hearts' programme

- activities under the Ethics Programme Management System, which promotes ethical behaviour at the PGNiG Group and provides a framework for resolving disputes in labour matters. Through communication efforts, the number of ethics officers in PGNiG Group companies has grown and cooperation between them has strengthened. In addition, the management staff were trained in the issues of mobbing and ethics in the workplace;
- updating the CSR Strategy for the PGNiG Group. Work on the revised strategy will be concluded in the first half of 2017.

Polish National Team during Mens' Handball World Championship in France

Corporate Governance

Management Board

Piotr Woźniak
President of the Management Board

Mr Piotr Woźniak graduated from the University of Warsaw in 1980 with a degree in geology. Until 1989, he was an assistant at the Geological Institute in Warsaw. In 1990–1991, he served as an adviser to the Minister of Agriculture and to the Minister of Industry. He was the Trade Commissioner of the Republic of Poland in Canada in 1992–1996. In 1998–2000, Mr Woźniak was an adviser on infrastructure to the Polish Prime Minister. He served as a member of the PGNiG Supervisory Board in 1999–2000 and Vice President of the Management Board from June 2000. In the 2002–2006 term, he was a member of the Warsaw City Council, and in 2005–2007 he was the Minister of Economy. From December 2011 to December 2013, Mr Woźniak served as the Deputy Minister of Environment and Chief State Geologist. He is a lecturer at the Łazarski University and at the Warsaw School of Economics and a member of the Council of the Maria Grzegorzewska University in Warsaw. From December 2009, he served as the Chairman, and as of March 2014 the Deputy Chairman of the Administrative Board of the Agency for the Cooperation of Energy Regulators (ACER). On December 4th, 2015, the Minister of State Treasury appointed Piotr Woźniak as member of the Supervisory Board of PGNiG SA. On December 11th, 2015, the PGNiG Supervisory Board delegated Piotr Woźniak, member of the PGNiG Supervisory Board, to temporarily perform the duties of President of the PGNiG Management Board from December 11th, 2015 to March 11th, 2016. On February 11th, 2016, Mr Wozniak was appointed President of the Management Board of PGNiG SA for the term of office ending December 30th, 2016.

On December 19th, 2016, he was appointed President of the Management Board of PGNiG SA for the three-year term of office beginning December 31st, 2016.

The President directs the Management Board's meetings and coordinates the work of Management Board members in all areas of the PGNiG Group's activity and performs any other activities which are within the President's powers in accordance with the Company's internal regulations. The President also supervises and coordinates the Company's operations with respect to internal control and audit functions, in accordance with commonly accepted standards of internal audit, HR strategies, remuneration and working time systems, employment and payroll policy, cooperation with trade unions, the Employee Council and other employee organisations in respect of the Company and the PGNiG Group, protection of confidential information, protection of personal data, defence, protection of the Company's facilities, management of the PGNiG Group, including exercise of corporate supervision at the PGNiG Group, establishment of new companies within the PGNiG Group to pursue new projects undertaken as part of the PGNiG Group's strategy, preparing and implementing privatisation plans for companies where PGNiG is a shareholder, developing and overseeing implementation of the PGNiG Group's Strategy, optimising the PGNiG Group's structure, policy, objectives and projects related to hydrocarbon exploration and production in Poland and abroad, overseeing all licencing processes related to hydrocarbon exploration, appraisal and production as well as the storage of waste matter in rock mass and non-reservoir storage of substances in accordance with the geological and mining law, development of technical assumptions and regulations, norms and standards applicable in the area of oil drilling, operation and safety of production systems and underground storage facilities, standardization and oversight of uniform quality systems within the Company, acquisition of foreign upstream assets, planning, development and operation of the Company's IT systems, implementation of the PGNiG Group's strategic objectives at the Group companies in the areas of IT development and management, comprehensive legal support protecting PGNiG's legal interests, uniform application of general laws, including EU laws, issuance of official orders and circulars for the Company, organisational and technical support of the Company's governing bodies, operations of the Geology and Hydrocarbon Production Branch, the PGNiG Branches in Odolanów, Sanok and Zielona Góra, Well Mining Rescue Station in Kraków and the Company's foreign branches and foreign representative offices in Moscow.

Radosław Bartosik
Vice President of the Management Board,
Chief Operating Officer

Mr Radosław Bartosik graduated from the Faculty of Drilling, Oil and Gas of the AGH University of Science and Technology in Kraków. He also completed a number of post-graduate courses, e.g. in business management, marketing and electricity, heat and gas market. Radosław Bartosik holds an MBA degree and passed the examination for candidates for members of the supervisory boards of state-owned companies. He is a qualified technical supervisor of mining operations. Save for a four-year interval, Radosław Bartosik has worked for the PGNiG Group since 1997. He started his career with PGNiG in the Zielona Góra Branch, where he gained professional experience first working in oil and gas production facilities and then as Marketing Specialist and head of the Contracts and Tenders Department. In 2006, he was appointed Economic and Commercial Director. Three years later he moved to Warsaw, where he became Deputy Director of PGNiG's Branch Operator Systemu Magazynowania (currently Gas Storage Poland sp. z o.o., a subsidiary of PGNiG SA). He was also a Chief Specialist for EU Funds at the PGNiG Head Office. Until the end of 2016, Radosław Bartosik was Deputy Economic Director at the Warsaw Branch of Polska Spółka Gazownictwa Sp. z o.o..

On December 19th, 2016, he was appointed Vice President of the Management Board, Chief Operating Officer, for the three-year term of office beginning December 31st, 2016.

Vice President of the Management Board, Chief Operating Officer, supervises and coordinates the Company's operations in the area of corporate social responsibility (CSR), the Company's and the PGNiG

Group's procurement strategy, management of the Company's assets (excluding network assets, extraction assets and underground gas storage facilities), including the Company's real estate, creation and implementation of sponsorship policy and the Company's brand image in Poland and abroad as well as cooperation with transmission and distribution system operators.

Łukasz Kroplewski
Vice President of the Management Board, Development

Mr Łukasz Kroplewski holds MA degrees in law and in administration. He gained professional experience by serving in public administration and taught intellectual property law at the Koszalin University of Technology. He has close ties with the HR industry, where he worked from 2005 holding managerial positions. He has provided legal and business consultancy support to corporations. Since 2009, he has been a member of the Self-Government Board of Appeals and is one of the founders of the Mediation Centre at the Association of Merchants and Entrepreneurs in Koszalin, where he works as a mediator. Łukasz Kroplewski is a member of the UNECE Group of Experts on Coal Mine Methane. In July 2016, he was appointed Vice President of the Chamber of the Natural Gas Industry, an association of gas industry operators. Thanks to Łukasz Kroplewski's efforts, PGNiG joined the International Centre of Excellence on Coal Mine Methane (ICE-CMM). On February 11th, 2016, Mr Kroplewski was appointed Vice President of the Management Board of PGNiG SA, Development, for the term of office ending December 30th, 2016.

On December 19th, 2016, he was appointed Vice President of the Management Board, Development, for the three-year term of office beginning December 31st, 2016.

The Vice President of the Management Board for Development supervises and coordinates the Company's operations in the area of innovation and development projects involving PGNiG SA, analysing and monitoring opportunities to obtain EU funding for the Company's operations, oversight of standardisation efforts at the Company, development of technical assumptions, rules, norms and standards for the gas area, overseeing operations of the Central Measurement and Testing Laboratory and of the PGNiG foreign representative offices in Kiev and Vysokoye.

Michał Pietrzyk
Vice President of the Management Board, Finance

Mr Michał Pietrzyk is a graduate of Finance and Banking at the Kraków University of Economics, he completed a post-graduate course in law for managers at the Kozminski University. He started his professional career in 1995 in the banking sector. With the PGNiG Group since 2003, he first worked as Head of the Treasury Department of PGNiG SA and from 2006 to 2016 as Deputy Head of the Economic Department. In February 2016, Mr Pietrzyk became the Head of PGNiG's Economic Department.

On December 19th, 2016, he was appointed Vice President of the Management Board, Finance, for the three-year term of office beginning December 31st, 2016.

The Vice President of the Management Board for Finance supervises and coordinates the Company's operations in respect of its strategic economic and financial objectives, preparation and implementation of the Company's Business Plan, economic and financial evaluations and analyses of development and investment projects, planning and overseeing financial aspects of the investment policy, monitoring the use of financial resources allocated to production, investment and repair work, the Company's internal settlement procedures, financing operations of PGNiG S.A., cash flows of the PGNiG Group, budgeting, controlling the Company's costs and revenue, its credit policy, tax policy and tax liabilities, financial risk management, economic and financial analyses of new capital projects, implementation and development of accounting procedures, defining the rules for and overseeing of the preparation of financial statements as well as investor relations.

Maciej Woźniak
Vice President of the Management Board, Trade

Mr Maciej Woźniak is a graduate of the Cracow University of Economics (holding a master's degree in economics) and the National School of Public Administration. He also completed a post-graduate course in property valuation at the Warsaw University of Technology. He is a member of the Polish Civil Service Corps. In 2011, he participated in the International Visitor Leadership Program run by the US Department of State. In 2003–2008, he worked at the Ministry of Finance and at the Ministry of Economy, where he led the Oil and Gas Department and was responsible for implementation of the act on mandatory oil, gas and fuels stocks and for securing Poland's accession to OECD's International Energy Agency based in Paris. After it joined the IEA, he represented Poland at IEA Governing Board meetings a number of times. He also coordinated preparations ahead of implementation of the second package of the EU gas market liberalisation legislation and participated in the EU's work on the third package. In 2008–2010, he was Prime Minister's chief adviser on energy security and secretary of the Prime Minister's interdepartmental energy security policy team. He represented Poland in the V4 High-Level Group on Energy and the EC's Group for the Baltic Energy Market Interconnection Plan. He supervised the pre-construction phase of the Świnoujście LNG Terminal project. He was on the team negotiating the intergovernmental gas supply contract between Poland and Russia. He resigned from the position of Prime Minister's adviser only after the contract was signed in November 2010. In 2011–2013, he advised the Environment Minister and Chief Geologist on the geological and mining law reform. He sat on the Supervisory Boards of Operator Logistyczny Paliw Płynnych and Wielkopolska Spółka Gazownictwa and served as Chairman of the Supervisory Board of the Provincial Fund for Environmental Protection and Water Management of Warsaw. On February 11th, 2016, Mr Woźniak was appointed Vice President of the Management Board of PGNiG SA, Trade, for the term of office ending December 30th, 2016.

On December 19th, 2016, he was appointed Vice President of the Management Board, Trade, for the three-year term of office beginning December 31st, 2016.

The Vice President of the Management Board for Trade supervises and coordinates the Company's operations in respect of developing a regulatory policy in consultation with government authorities, EU authorities and industry organisations, planning and implementing the Company's trade policy, particularly in respect of natural gas and electricity sales, including the execution and settlement of contracts for the supply of natural gas, electricity and other products, guiding the development of the gas market, natural gas import policy, also in respect of supply diversification, establishing and maintaining long-term relationships with foreign companies, international organisations and foreign government authorities with respect to trade relations, monitoring and analysis of foreign markets, collaboration with Operator Gazociągów Przesyłowych Gaz-System SA, Polskie LNG SA, the Maritime Office in Szczecin and Zarząd Portów Morskich Szczecin i Świnoujście (administrator of sea ports in Szczecin and Świnoujście) in respect of importing LNG to Poland, planning, executing and settling contracts for the provision of gas transmission and distribution services for PGNiG S.A., preparing periodic gas fuel balance reports in accordance with contracts and gas sale plans, periodic settlements of gas deliveries, information services, including the receipt of information on events and crises in all areas of the Company's business, the

Company's tariff policy, cooperation with the Energy Regulatory Office (URE) in respect of preparing draft tariffs and prices of PGNiG's products and services, obtaining licences, the Company's information policy and corporate communication, operations of the Wholesale Trading Division and operations of the Company's foreign representative office in Brussels.

Magdalena Zegarska
Vice President of the Management Board

Ms Magdalena Zegarska graduated from the University of Environmental Sciences in Radom. She completed an MBA oil and gas course and holds a certificate of completion of studies in Management of Large Enterprises from the School of Management and Marketing of the Business Initiatives Association in Warsaw. She completed numerous training programmes and courses in psychology of team management as well as a course for supervisory board members, completed with a passed exam before the State Treasury Commission. From 2011 to 2014, she served as Secretary of the Employee Council of the second term of office, and from 2010 to 2014 as Secretary of the Coordination Committee of the NSZZ Solidarność trade union at PGNiG. In 2014–2017, she served as a Member of the PGNiG Supervisory Board, as the Board's Secretary and as Deputy Chair of the Audit Committee.

She joined PGNiG in 1998 as an employee of Mazowiecka Spółka Gazownictwa and then worked at the Mazovian Trading Division. From 2013, she held various positions at the Retail Trading Department, Infrastructure Department and Asset and Administration Department of the PGNiG Head Office. At the Asset and Administration Department she was Deputy Director. Since January 2016, she has been the Representative of the PGNiG Management Board for Quality, Health, Safety and Environment (QHSE) Management. From April 2016 to March 2017, she served as Deputy Director of the QHSE Department, delegated to direct the work of the Department. She has received honorary awards for outstanding service to the Oil Mining and Gas Sector and the Mazovian Trading Division. She is a Grade III Mining Director.

On March 6th, 2017, Magdalena Zegarska was appointed as Vice President of the Management Board.

Until March 6th, 2017, the position was held by Waldemar Wójcik.

The Vice President of the Management Board elected by employees supervises and coordinates the Company's operations in the area of occupational health and safety and fire safety.

The division of authority between members of the PGNiG Management Board is regulated under Resolution No. 128/2017 of the Management Board of Polskie Górnictwo Naftowe i Gazownictwo S.A. in Warsaw dated March 13th, 2017.

Supervisory Board

Bartłomiej Nowak
Chairman of the Supervisory Board

Mr Bartłomiej Nowak specialises in energy law, business law, competition law and EU law. In 2007–2009, he worked for Directorate-General for Transport and Energy of the European Commission and as an adviser to the President of the Energy Regulatory Office. In 2010–2014, he was an adviser at the Kancelaria Domański Zakrzewski Palinka sp.k. law firm and member of the Supervisory Board of PTE WARTA S.A. Since 2009, he has worked for the Leon Kozminski University of Warsaw, initially as Assistant Professor and then Professor at the Law College as well as Vice-Rector for Economic and Social Studies. Bartłomiej Nowak is a member of the Scientific Boards of the Aviation Institute, Electron Technology Institute and the National Centre for Nuclear Research.

Wojciech Bieńkowski
Deputy Chairman

Mr Wojciech Bieńkowski is a professor of economics and international economic relations at the Łazarski University of Warsaw, where he heads the US Economy and Transatlantic Relations Institute. For eight years (until July 2015), Mr Bieńkowski was also Dean of the University's Faculty of Economics and Management. Previously, he worked at the Warsaw School of Economics, where he obtained a PhD degree and habilitation. He spent many years as visiting fellow, including at Harvard (twice) and other leading universities in the US, Japan and Europe. Mr Bieńkowski's academic achievements cover the fields of economic politics, competitiveness and comparative analysis of the effectiveness of social and economic systems. He authored or co-authored many academic papers published by recognised academic publishing houses at home and abroad. He has gained professional experience as head of international cooperation at the National Fund for Environmental Protection and Water Management and as supervisory board member at BOŚ, Famur, PAIiIZ, Elektrownie Szczytowo-Pompowe (currently PGE) and the Polish-American Corporation for Technology Transfer (PAKTO).

Sławomir Borowiec
Secretary

Mr Borowiec graduated from the AGH University of Science and Technology in Kraków (Faculty of Drilling, Oil and Gas) in 1992 and in the same year joined Zielonogórski Zakład Górnictwa Nafty i Gazu. In 2001, he graduated from The Jacob of Paradyż University of Applied Sciences in Gorzów Wielkopolski – Institute of Management and Finance, where he completed studies in Management and Marketing. In 2014, he earned a degree from the Koszalin University of Technology, where his principal field of study was Accounting – Accounting of Business Entities. At present, he is Head of the Administrative Centre for Oil and Gas Production Facilities in Drezdenko. Mr Borowiec is also a licensed Mine Operations Manager. In 2002, he passed an examination for candidates to supervisory boards of state-owned companies and in 2010 he received a title of Grade II Mining Director.

Mateusz Boznański
Member

Mr Mateusz Boznański graduated from the Faculty of Law, Administration and Economics of the University of Wrocław. In 2002–2006, he completed legal training as an attorney-at-law at the Regional Bar Association in Wrocław. Since April 2007, he has worked as an attorney-at-law in his own law firm; in 2011–2015, he has also been a partner in a law partnership. In the course of his professional career, Mr Boznański has gained considerable experience in the provision of services to commercial-law companies (both Polish and foreign-owned) and to local government bodies. As part of his duties, he has provided legal advice to capital groups across Poland, in particular with respect to civil, labour, EU and commercial law. He provides ongoing legal advisory services with respect to construction law and related legal areas for companies operating in the property development sector. He also specialises in cases related to the protection of personal rights, acting as an attorney in major court trials. He has participated in bankruptcy proceedings of entities operating in the property development sector. Mr Boznański has also provided legal services as an attorney in proceedings before courts of general jurisdiction, as a lawyer in criminal proceedings, including with respect to criminal economic law and criminal fiscal proceedings. He was (in 2010–2013) and, since 2013 to date, has been a member of the Human Rights Committee at the Polish Bar Council. Since 2013, he has been a member of the Audit Committee at the Regional Bar Association in Wrocław.

Mr Mateusz Boznański has represented that he meets the independence criteria defined in Art. 36 of the Company's Articles of Association.

Andrzej Gonet
Member

Mr Andrzej Gonet graduated with honours from the Faculty of Drilling, Oil and Gas of the AGH University of Science and Technology in Kraków in 1975. He was then employed at the Faculty of Drilling, Oil and Gas, where in 1980 he defended with honours his doctoral thesis and in 1989 received the higher academic qualification of Doctor of Science. In 1998, he was awarded professorship and is now employed as a full professor at the AGH University of Science and Technology. He has completed several post-graduate programmes run by the AGH University of Science and Technology, Jagiellonian University and Polish Academy of Sciences as well as a course for candidates to supervisory boards of state-stock companies. He was a member of the Supervisory Boards of ZUN Sp. z o. o. of Krosno (2000–2002) and PNiG Sp z o. o. of Kraków (2011–2013). Mr Gonet has authored or co-authored over 300 publications, 260 unpublished research papers, 29 approved and submitted patents and 8 licences. He is a certified environmental impact assessment expert of the Kraków Province Governor, expert of the Polish Association of Oil and Gas Industry Engineers and Technicians and has extensive professional experience gained in Poland and abroad. He has been a consultant and reviewer of many scientific papers and research projects. He is a member of the Drilling and Borehole Mining Section of the Mining Committee of the Polish Academy of Sciences. Throughout his professional career he has held various positions, including head of the Drilling Department, Deputy Director of the Institute of Drilling, Oil and Gas, two terms of office as Vice-Dean and Dean of the Faculty of Drilling, Oil and Gas of the AGH University of Science and Technology, in which function he serves for the third term. In addition, Mr Andrzej Gonet was a co-founder of the PWSZ Krosno State College, where he has served as Vice-Rector and Rector.

Piotr Sprzączak
Member

Mr Piotr Sprzączak is a graduate of the Maria Curie-Skłodowska University of Lublin and the National School of Public Administration of Warsaw. He began his professional career in 2011 at the Oil and Gas Department of the Ministry of Economy and then the Ministry of Energy. He is currently Head of the Infrastructure Department at the Ministry of Energy. His main professional focus is on matters related to security of natural gas supplies to Poland. As part of his professional duties, he negotiates EU laws and drafts legislation concerning security of gas supplies. He also coordinates activities related to Poland's membership in the EU and international organisations, energy agreements of which it is a signatory as well as activities related to international cooperation. In 2011–2014, he was involved in preparing and updating the assessment of risk related to security of gas supplies, a prevention plan and an emergency response plan.

Ryszard Wąsowicz
Member

Mr Ryszard Wąsowicz graduated from the School of Law and Public Administration in Rzeszów with a Bachelor's Degree in Administration – Human Resources Management (continuation – Master's Degree programme). He started his professional career in 1978 at Sanocki Zakład Górnictwa Nafty i Gazu, working at the Husów gas extraction facility. In 1990–1992, he was a member of the Employee Council at Sanocki Zakład Górnictwa Nafty i Gazu, and in 1992–1996, for two (the fifth and sixth) terms of office, he was a member of the Employee Council at PGNiG SA. Until 1998, he was a member of the Consulting Board at PGNiG. In 1998, he completed a course for supervisory board members and passed a state exam before the State Treasury Commission. Since 1990, he has been delegated to work in trade union bodies. Mr Wąsowicz was nominated to the Supervisory Board of PGNiG by the President of the Trade Union of Workers of the Mining and Oil Industries (NSZZ Górników – Naftowców). On May 15th, 2014, he was appointed to the PGNiG Supervisory Board as a member elected by the employees.

Anna Wellisz
Member

Ms Anna Wellisz is a graduate of the University of Warsaw. She has completed a postgraduate doctoral course at the Institute of Philosophy and Sociology of the Polish Academy of Sciences and a postgraduate course in Management at the Warsaw School of Economics. Holding a PhD in the humanities, she has received scholarships from Fondation Intellectuelle Européenne and the Czesław Miłosz Foundation. She is also a mediator licensed by the Minister of Family, Labour and Social Policy. In the early 1990s, having defended her doctoral thesis, Ms Wellisz carried out academic research, principally into mass social movements, and then began to work as a consultant. As an expert at the NSZZ Solidarność Mazowsze Region's Consulting and Negotiation Office, she provided advice to company committees. As a partner of Grupa Gospodarcza Sp. z o.o., she was responsible for organisation, marketing and management projects as well as regional restructuring and company restructuring programmes. From 1996, Ms Wellisz occupied various management positions, working as Marketing Director at the Centrum Prywatyzacji Foundation, HR Deputy Director for employment policy and professional development at Polskie Sieci Elektroenergetyczne SA and CIECH SA's Deputy Director of the Management Board Office (later the Owner Supervision and HR Policy Office). In 2001, she moved to New York to serve as First Secretary of the Economic and Trade Department of the Consulate General of the Republic of Poland. Since 2006, she has occupied various supervisory management positions in public administration – initially at the Ministry of Economy and then, since 2008, at the Ministry of Science and Higher Education. During her employment at the Ministry of Economy, she served on the Supervisory Board of Spółka Restrukturyzacji Kopalń S.A. and Węglozbycie S.A. Ms Wellisz is currently Deputy Director at the Department of Science of the Ministry of Science and Higher Education.

Until March 5th, 2017, Ms Magdalena Zegarska served as Member and Secretary of the Supervisory Board.

On March 6th, 2017, Mr Sławomir Borowiec assumed the position of Secretary of the Supervisory Board.

Compliance policy

See also:
www.knf.gov.pl/Images/Funkcja_compliance_tcm75-42022.pdf

Compliance is to be understood as conformity with:

- legal, regulatory and technical requirements binding on the Company as a business entity;
- ethical standards based on codes of best practice, commitments and other forms of self-limitation adopted by the Company,

jointly referred to as 'compliance standards'.

The separation of a compliance function is typical for developed organisations conducting their business in a complex legal environment. As far as compliance is concerned, it is necessary to remember of the risk of non-compliance, i.e. the risk of infringement of compliance standards and its negative consequences. Violation of applicable laws may have adverse effects on many areas:

- the financial area, in the form of fines, damages, compensations and other liabilities that may arise for the Company;
- the Company's public image, the loss of which can be reflected in financial losses (e.g. in the case of environmental pollution);
- the Company's operations;
- the Company's value to stakeholders and shareholders (onerous sanctions imposed by the regulator or certain abusive practices may lead to a fall of the share price).

Non-compliance risk management system – compliance at PGNiG

The formal basis for introduction of the compliance function at the Company is its compliance programme. From among the various available solutions, the Company has adopted the one assuming that:

- compliance is a special element of PGNiG's risk management, which is clearly demonstrated by implementation of the compliance function as part of the non-compliance risk management system;
- the Management Board appoints a Compliance Officer, responsible for coordination and information;
- aking into consideration the wide scope of the Company's activities, each area at risk of non-compliance was assigned a non-compliance risk area manager (leader);
- ultimately, responsibility for non-compliance risk management and performance of duties arising from the compliance programme lies with the risk owner (acting with the relevant non-compliance risk area manager, as applicable).

The compliance programme provides for certain regular obligations, such as periodic reporting on compliance standards, non-compliance risks (with their assessment as to materiality and probability of occurrence) and risk response (risk management method and cost of response).

Every employee, partner or stakeholder can report suspected misconduct or abuse through the 'compliance line' established under the programme.

Competition law

The Company has in place an antitrust and regulatory procedure, which every employee is obliged to follow.

A violation of antitrust law may result in serious consequences for the Company and in some cases may involve liability on the part of persons managing the Company (particularly in the case of entering into cartel agreements or other antitrust agreements, failure to perform the antitrust authority's decisions, or absence of an obligatory notice of intended concentration, i.e. merger or acquisition).

Sector regulations – REMIT

Regulation on Energy Market Integrity and Transparency (REMIT) entered into force on December 28th, 2011. The regulation is binding in its entirety and directly applicable in all Member States, i.e. it does not require implementation into a Member State's legislation, and applies not only to Member States, but to all entities concerned.

REMIT provides for an obligation of public disclosure of inside information. Additional requirements coming into force upon adoption by the European Commission of the so-called implementing acts include an obligation to register as a market participant in a register maintained by the national regulatory authority, an obligation to disclose information on transactions and orders to trade (transaction reporting) as well as disclosure of fundamental data.

Investor relations and financial markets regulations

As a share issuer listed on the stock exchange, PGNiG is obliged to comply with the disclosure obligations under Polish laws: the Commercial Companies Code, the Public Offering Act, the Act on Trading in Financial Instruments, the Accountancy Act and the Regulation on current and periodic information, as well as EU laws: the Market Abuse Regulation and the Transparency Directive.

The Company and the PGNiG Group have adopted a procedure for complying with the disclosure obligations of a public company, which every employee is required to follow.

Adopted corporate governance standards

See also: www.en.pgnig.pl/corporate-governance

The PGNiG Group takes care to comply with corporate governance standards. We are honest and fair to our shareholders, treat them all on equal terms and make every effort to establish and maintain the best possible relations between our investors and governing bodies.

General Meeting

The General Meeting is PGNiG's supreme governing body, through which shareholders exercise their corporate rights, including examination and approval of the Directors' Report and the adoption of decisions on the amount, form and payment date of dividends. The General Meeting grants its vote of approval to members of the other governing bodies of PGNiG, appoints members of the Supervisory Board and makes decisions concerning the Company's assets.

Supervisory Board

The Supervisory Board exercises continuous supervision over all areas of the Company's activities, in accordance with the Rules of Procedure for the Supervisory Board. It is composed of five to nine members (including one independent member) appointed by the General Meeting of PGNiG for a joint three-year term. The State Treasury is entitled to appoint and remove one member of the Supervisory Board, as long as it remains a shareholder of PGNiG. On a Supervisory Board composed of up to six members, two of them are elected by PGNiG employees. Where the Supervisory Board comprises seven to nine members, there are three members elected in this manner.

Management Board

The Management Board is an executive body managing the affairs of PGNiG and representing it in all matters in and out of court. The Management Board is composed of between two to seven members, with the number defined by the Supervisory Board. Members of the Management Board are appointed for a joint three-year term. Powers of the Management Board include all matters connected with the management of the affairs of PGNiG, where such matters are not explicitly reserved for other governing bodies by applicable laws or provisions of the Articles of Association. The Management Board operates in accordance with applicable laws and regulations, in particular the Commercial Companies Code, as well as the provisions of the Company's Articles of Association and the Rules of Procedure for the Management Board.

Audit Committee

The Audit Committee has operated as a standing body of the Supervisory Board since November 27th, 2008. It is composed of at least three members of the Supervisory Board, including at least one member independent from PGNiG or any entity significantly affiliated with PGNiG and appointed by the General Meeting pursuant to PGNiG's Articles of Association. Such a person must be competent in accounting and finance matters. Members of the Audit Committee are appointed by the Supervisory Board.

Appointment and removal of Management Board members

Pursuant to the Articles of Association, individual members of the Management Board or the entire Management Board are appointed and removed by the Supervisory Board. A member of the Management Board is appointed following a recruitment and selection procedure carried out pursuant to the Regulation of the Polish Council of Ministers of March 18th, 2003 concerning recruitment procedures for members of management boards of certain commercial-law companies (Journal of Laws No. 55, item 476, as amended). This procedure does not apply to Management Board members elected by employees.

As long as the State Treasury holds Company shares and the Company's annual average headcount exceeds 500, the Supervisory Board appoints to the Management Board one person elected by the employees, to serve for the Management Board's term of office. A person is considered to be a Management Board candidate elected by the employees if, during the election, 50% of valid votes plus one were cast in favour of that person, with the reservation that the election results are binding on the Supervisory Board if at least 50% of the Company's employees participated in the election.

Management Board members are appointed for a joint term of three years. A member of the Management Board may resign from his or her position by delivering a notice to that effect to the Supervisory Board, with a copy to the State Treasury (represented by the minister competent for matters pertaining to the State Treasury). To be valid, the resignation must be submitted in written form, or otherwise will be ineffective towards the Company.

The Management Board member elected by the employees may also be removed upon a written request submitted by at least 15% of the Company's employees. The Supervisory Board orders the voting and its results are binding on the Supervisory Board if at least 50% of the Issuer's employees participate in the ballot and if the percentage of votes cast in favour of the removal is not lower than the majority required for the election of a member of the Management Board by the employees.

Information for shareholders concerning General Meetings

A shareholder or shareholders representing at least five percent of the share capital may request that certain matters be placed on the agenda of the General Meeting. Any such request should be sent to the Company in the Polish language, in writing, or in electronic form to the following email address: wz@pgnig.pl. The request should contain grounds or a draft resolution concerning the proposed agenda item and should be submitted to the Company's Management Board not later than 21 days before the scheduled date of the General Meeting. The shareholder or shareholders should prove that they are entitled to exercise this right by submitting relevant documents in writing.

Any shareholder or shareholders representing at least five percent of the Company's share capital may, before the date of the General Meeting, submit to the Company draft resolutions concerning items which have been or are to be placed on the General Meeting's agenda, in a written or electronic form to the email address: wz@pgnig.pl. Any such draft resolutions should be in the Polish language, in the form of a Word file. The shareholders should prove eligibility to exercise this right by submitting relevant documents in writing.

During the Company's General Meeting, each shareholder may submit draft resolutions for the items on the agenda. Such draft resolutions should be in the Polish language.

Shareholders may participate in the General Meeting

in person or by proxy. Pursuant to Art. 412[1].2 of the Commercial Companies Code, powers of proxy for participation in a General Meeting of a public company and exercise of voting rights must be granted in writing. Powers of proxy should be granted in writing or in electronic form and should be in the Polish language. They may be sent to the Company prior to the General Meeting in electronic form as a PDF file (scanned document) to the email address: wz@pgnig.pl. While at the General Meeting, all shareholders and proxies should carry valid identity documents.

Given that the Company does not provide for the possibility of participating in the General Meeting by electronic means (including taking the floor at the General Meeting using means of electronic communication) or exercising voting rights by postal ballot or by electronic means, no proxy ballot forms will be published.

See also: www.gpw.pl/lad_korporacyjny_na_gpw

Representatives of legal persons should have on them the original or a copy (certified by a notary public) of an excerpt from the relevant register (issued within the last three months), and if their right to represent the legal person does not follow from the relevant register entry – they should have on them written powers of proxy (the original or a copy certified by a notary public) along with the original or a copy (certified by a notary public) of the excerpt from the relevant register which must be valid as at the date of granting the powers of proxy.

The General Meeting may be attended only by persons who are Company shareholders on the record date, i.e. 16 days prior to the General Meeting.

Persons entitled to participate in the General Meeting may obtain the full text of documents to be submitted to the General Meeting, along with draft resolutions and comments of the Management and Supervisory Boards, from the Company's registered office. Such persons may obtain copies of the Directors' Report on the Company's operations and of the Company's financial statements as well as a copy of the Supervisory Board's report and the auditor's opinion, no later than 15 days prior to the General Meeting, while copies of recommendations and proposals concerning other items of the agenda begin to be distributed a week before the General Meeting.

In accordance with Art. 407.1 of the Commercial Companies Code, the list of shareholders entitled to participate in the General Meeting is available for inspection at the Company's registered office in Warsaw, ul. Marcina Kasprzaka 25, for three weekdays prior to the date of the General Meeting.

Information concerning the General Meeting is available on the Company's website at: www.pgnig.pl in the 'General Meeting – Information for shareholders' section.

Best practices

The Best Practice for GPW Listed Companies 2016 was developed by experts representing different groups of capital market participants grouped in the GPW Corporate Governance Consultation Committee. The rules and regulations ought to apply to the issuers of shares admitted to trading on GPW's regulated market.

As a listed company, PGNiG abides by the Best Practices principles, whereby PGNiG is required to publish, on an annual basis, A Statement on Compliance with the Corporate Governance Principles. The Statement is available on the Company's website at: www.pgnig.pl in the 'Corporate Governance – Best Practices' section.

Converters and dictionary

	1 bcm of natural gas	1m tonnes of crude oil	1m tonnes of LNG	1PJ	1m boe	1TWh
1 bcm of natural gas	1	0.90	0.73	38	6.45	10.97
1m tonnes of crude oil	1.113	1	0.81	42.7	7.33	11.65
1m tonnes of LNG	1.38	1.23	1	55	8.68	14.34
1 PJ	0.026	0.23	0.019	1	0.17	0.28
1m boe	0.16	0.14	0.12	6.04	1	1.70
TWh	0.091	0.089	0.07	3.6	0.59	1

EBITDA – earnings before interest, taxes, depreciation and amortization.
EBIT – earnings before interest and taxes.
ROE – return on equity, net profit to equity at end of period.
ROA – return on assets, net profit to assets at end of period.
P/E – price/earnings ratio, share price/net earnings per share attributable to owners of the parent company.
P/BV – price/book value ratio, share price/book value per share.
EV/EBITDA – enterprise value/EBITDA, market capitalisation at close of trading on last session day in financial year + net debt at end of financial year/earnings before interests and taxes in financial year + total depreciation and amortisation in financial year.
Dividend per share – dividend for previous financial year/number of shares outstanding.

Contact

Contact

Head Office
25 M. Kasprzaka
01-224 Warsaw
Tel. +48 22 589 45 55
www.pgnig.pl

PR Department
Tel. +48 22 589 44 49
media@pgnig.pl

Marketing Department
Tel. +48 22 691 45 92

Investor Relations Team
Tel. +48 22 589 46 51, +48 22 589 46 71,
+48 22 589 43 22
ri@pgnig.pl
www.ri.pgnig.pl

Wholesale Trade Branch in Warsaw
25 M. Kasprzaka
01-224 Warsaw
Tel. +48 22 589 44 25
sekretariat.ooh@pgnig.pl

Geology and Hydrocarbon Production Branch in Warsaw
25 M. Kasprzaka
01-224 Warsaw
Tel. +48 22 589 43 65
d@pgnig.pl
www.ogie.pgnig.pl

Central Measurement and Research Lab in Warsaw
25 M. Kasprzaka
01-224 Warsaw
Tel. + 48 22 632 23 68, +48 22 691 85 07-10
clpb@pgnig.pl
www.clpb.pgnig.pl

Branch in Sanok
12 H. Sienkiewicza St.
38-500 Sanok
Tel. +48 13 465 21 00
sanok@pgnig.pl
www.sanok.pgnig.pl

Branch in Zielona Góra
15 Bohaterów Westerplatte St.
65-034 Zielona Góra,
Tel. +48 68 329 14 00
zielonagora@pgnig.pl
www.zielonagora.pgnig.pl

Branch in Odolanów
148 Krotoszyńska
63-430 Odolanów
Tel. +48 62 736 44 41
odolanow@pgnig.pl
www.odolanow.pgnig.pl

Well Mining Rescure Station in Kraków
25A Sołtysowska
31-589 Kraków
Tel. +48 12 644 51 54, +48 12 695 188 498
rsgo@pgnig.pl
www.rsgo.pgnig.pl

Branch KPMG Mogilno in Palędzie Dolne
88-314 Palędzie Dolne
Tel. +48 22 860 05 75

Operating Branch in Pakistan
House No 2, Street 40, Sektor F.6/1
Islamabad 44000, Pakistan
Tel. +92 51 265 45 91

Representatives:

Representative in Brussels
6 Rond Point Schuman
1040 Brussels, Belgium
Tel. +32 2 2347980
brussels@pgnig.pl

Representative in Moscow
St. Wawilowa House No. 79, Sector 1, Office No. 5
ул. Вавилова д. 79, кор. 1, офис № 5
117335 Moscow/Москва, Russia/Россия
Tel. +7 (495) 775 38 56
moscow@pgnig.pl

Representative in Kiev
31b Rustaweli St., No. 16
вул. Ш. Руставелі 31 – б, кв. № 16
01 333 Kiev/м. Київ, Ukraina/Укр
Tel./Fax. +380 44 284 34 01
kiev@pgnig.pl

Representative in Belarus
225081 Brzesk District
Region Kamieniec
village Makarowa, Republic of Belarus
„Wysokoje" Gas Measurement Station
Tel./Fax. +375 163 171 368

PGNiG Supply & Trading Trading Office in London
48 Dover St.,
Mayfair,
London W1S
info@pst-energie.com