PGNiG

DIRECTORS' REPORT ON THE OPERATIONS OF PGNIG SA AND PGNIG GROUP GROUP FOR 2020

2020

THE PGNIG GROUP **IN 2020**

PLN 39.2 bn
IN REVENUE

PLN 7.3 bn
IN NET PROFIT

PLN 62.9 bn
IN TOTAL ASSETS

PLN 13.0 bn
IN EBITDA

4.
POLAND'S FOURTH LARGEST COMPANY LISTED ON THE WSE*

24.6 thousand
EMPLOYEES

PLN 9.6 bn
IN EBIT

PLN 32.0 bn
IN MARKET CAPITALISATION

PLN 24.5 m
IN AVERAGE DAILY TRADING VALUE

*IN TERMS OF MARKET CAPITALISATION AS AT DECEMBER 30TH 2020.

EXPLORATION AND PRODUCTION

PLN 927 m
EBITDA

~930.9 m boe
OIL AND GAS RESERVES

1.3 m tonnes
CRUDE OIL, CONDENSATE AND NGL PRODUCTION

200+
NUMBER OF PRODUCTION LICENCES

4.5 bcm
NATURAL GAS PRODUCTION

TRADE AND STORAGE

PLN 9,580 m
EBITDA

9.7 bcm
VOLUME OF GAS SOLD VIA POLPX

30.7 bcm
VOLUME OF THE GROUP'S GAS SALES (TO NON-PGNIG GROUP CUSTOMERS)

14.8 bcm
NATURAL GAS IMPORTS

3.1 bcm
SEGMENT'S OWN STORAGE CAPACITIES

DISTRIBUTION

PLN 2,157 m
EBITDA

1,666
NUMBER OF MUNICIPALITIES WITH ACCESS TO GAS SUPPLIES

7.3 m
NUMBER OF CUSTOMERS

11.6 bcm
VOLUME OF GAS DISTRIBUTED (IN NATURAL UNITS)

195.2 thousand km
DISTRIBUTION NETWORK LENGTH (INCLUDING CONNECTIONS TO END CUSTOMERS)

GENERATION

PLN 930 m
EBITDA

5.2 GW_t
THERMAL POWER

38.9 PJ
HEAT OUTPUT

1.2 GW_e
ELECTRIC POWER

3.6 TWh
ELECTRICITY OUTPUT

Financial highlights of the PGNiG Group

Table 1 Financial highlights of the PGNiG Group for 2019–2020

	PLNm		EURm			
	2020	2019	2020	2019	Change (%)	Change y/y
Revenue	**39,197**	**42,023**	**8,761**	**9,769**	**(7%)**	**(2,826)**
Total operating expenses	(29,612)	(39,575)	(6,619)	(9,200)	(25%)	9,963
Operating profit before interest, taxes, depreciation and amortisation (EBITDA)	13,009	5,504	2,908	1,279	136%	7,505
Depreciation and amortisation expense	(3,424)	(3,056)	(765)	(710)	12%	(368)
Operating profit	9,585	2,448	2,142	569	292%	7,137
Profit before tax	9,025	2,159	2,017	502	318%	6,866
Net profit	7,340	1,371	1,641	319	435%	5,969
Net cash from operating activities	14,118	4,938	3,155	1,148	186%	9,180
Net cash from investing activities	(6,254)	(6,152)	(1,398)	(1,430)	2%	(102)
Net cash from financing activities	(3,653)	327	(817)	76	(1,217%)	(3,980)
Net increase/(decrease) in cash and cash equivalents	4,211	(887)	941	(206)	(575%)	5,098
	December 31st 2020	**December 31st 2019**	**December 31st 2020**	**December 31st 2019**	**Change (%)**	**Change y/y**
Total assets	62,871	59,185	13,624	13,898	6%	3,686
Non-current assets	46,243	43,939	10,021	10,318	5%	2,304
Current assets, including	16,628	15,246	3,603	3,580	9%	1,382
Inventories	2,684	4,042	582	949	(34%)	(1,358)
Total equity and liabilities	62,871	59,185	13,624	13,898	6%	3,687
Total equity	44,125	38,107	9,562	8,948	16%	6,018
Total non-current liabilities	11,666	10,378	2,528	2,437	12%	1,288
Total current liabilities	7,080	10,700	1,534	2,513	(34%)	(3,620)
Total liabilities	18,746	21,078	4,062	4,950	(11%)	(2,332)

Selected financial data of PGNiG

Table 2 Financial highlights of PGNiG for 2019–2020

	PLNm		EURm			
	2020	2019	2020	2019	Change (%)	Change y/y
Revenue	**21,237**	22,615	**4,747**	5,257	**(6%)**	**(1,378)**
Total operating expenses, including	(13,342)	(22,229)	(2,982)	(4,795)	(35%)	7,284
Operating profit before interest, taxes, depreciation and amortisation (EBITDA)	8,714	1,241	1,948	288	602%	7,473
Depreciation and amortisation expense	(819)	(856)	(183)	(199)	(4%)	37
Operating profit	7,895	386	1,765	90	1,935%	7,507
Profit before tax	8,490	1,989	1,898	462	327%	6,501
Net profit	6,909	1,748	1,544	406	295%	5,161
Net cash from operating activities	9,394	1,989	2,100	462	372%	7,405
Net cash from investing activities	(2,794)	(2,256)	(624)	(524)	24%	(538)
Net cash from financing activities	(3,591)	(52)	(803)	(12)	6,806%	(3,539)
Net increase/(decrease) in cash and cash equivalents	3,009	(319)	672	(74)	(1,043%)	3,328
	December 31st 2020	**December 31st 2019**	**December 31st 2020**	**December 31st 2019**	**Change (%)**	**Change y/y**
Total assets	43,746	41,044	9,480	9,638	7%	2,702
Non-current assets	30,737	28,885	6,661	6,783	6%	1,852
Current assets, including	13,009	12,159	2,819	2,855	7%	850
Inventories	2,070	3,230	449	758	(36%)	(1,160)
Total equity and liabilities	43,746	41,044	9,480	9,638	7%	2,702
Total equity	36,230	30,618	7,851	7,190	18%	5,612
Total non-current liabilities	3,871	3,315	839	778	17%	557
Total current liabilities	3,645	7,111	790	1,670	(49%)	(3,466)
Total liabilities	7,516	10,426	1,629	2,448	(28%)	(2,909)

EUR/PLN mid exchange rates quoted by the National Bank of Poland:
Average exchange rate in 2020: 4.4742; 2019: 4.3018;
Exchange rate at year-end 2020: 4.6148; 2019: 4.2585.

CALENDAR OF EVENTS **2020**

Q1

1. **Jan 21 2020**
   Three new licences for PGNiG UN in APA 2019 licensing round
2. **Mar 19 2020**
   3.5% increase in PSG Distribution Tariff prices and network fee rates
3. **Mar 20 2020**
   COVID-19 epidemic declared in Poland
4. **Mar 30 2020**
   PGNiG wins in arbitration proceedings against Gazprom concerning Yamal Contract gas pricing

Q2

5. **May 29 2020**
   PGNiG reserves additional regasification capacity at LNG terminal in Świnoujście
6. **Jun 2 2020**
   Gazprom files for annulment of final ruling in arbitration proceedings concerning Yamal Contract gas pricing
7. **Jun 15 2020**
   PGNiG and PAO Gazprom / OOO Gazprom Export execute annex to Yamal Contract. PGNiG receives refund of approximately USD 1.5 bn
8. **Jun 16 2020**
   President of URE reduces price of gas fuel in PGNiG OD Retail Tariff by 10.6%
9. **Jun 16 2020**
   PGNIG enters into exclusive negotiations with Tauron Polska Energia S.A. concerning acquisition of 100% of shares in TAURON Ciepło
10. **Jun 24 2020**
    Annual General Meeting resolves to pay PLN 520m dividend

Q3

11. **Jul 23 2020**
    PGNiG executes cooperation and non-disclosure agreement with PKN Orlen concerning due diligence and notification of intended concentration
12. **Sep 3 2020**
    A Letter of Intent was signed with PKN Orlen to analyse the feasibility of joint projects to build a gas-fired power plant and a biogas plant
13. **Sep 21 2020**
    PGNiG UN updated its gas production forecast

Q4

14. **Oct 21 2020**
    Approval of agreement with Ørsted Salg & Service A/S for purchase of natural gas
15. **Nov 2 2020**
    Submission of request to renegotiate the contract price of natural gas supplied by PAO Gazprom and OOO Gazprom Export
16. **Dec 17 2020**
    President of URE reduces price of gas fuel in PGNiG OD Retail Tariff by 4.5%
17. **Dec 22 2020**
    Execution of investment agreement governing cooperation in construction of power generation unit at the Ostrołęka C Power Plant

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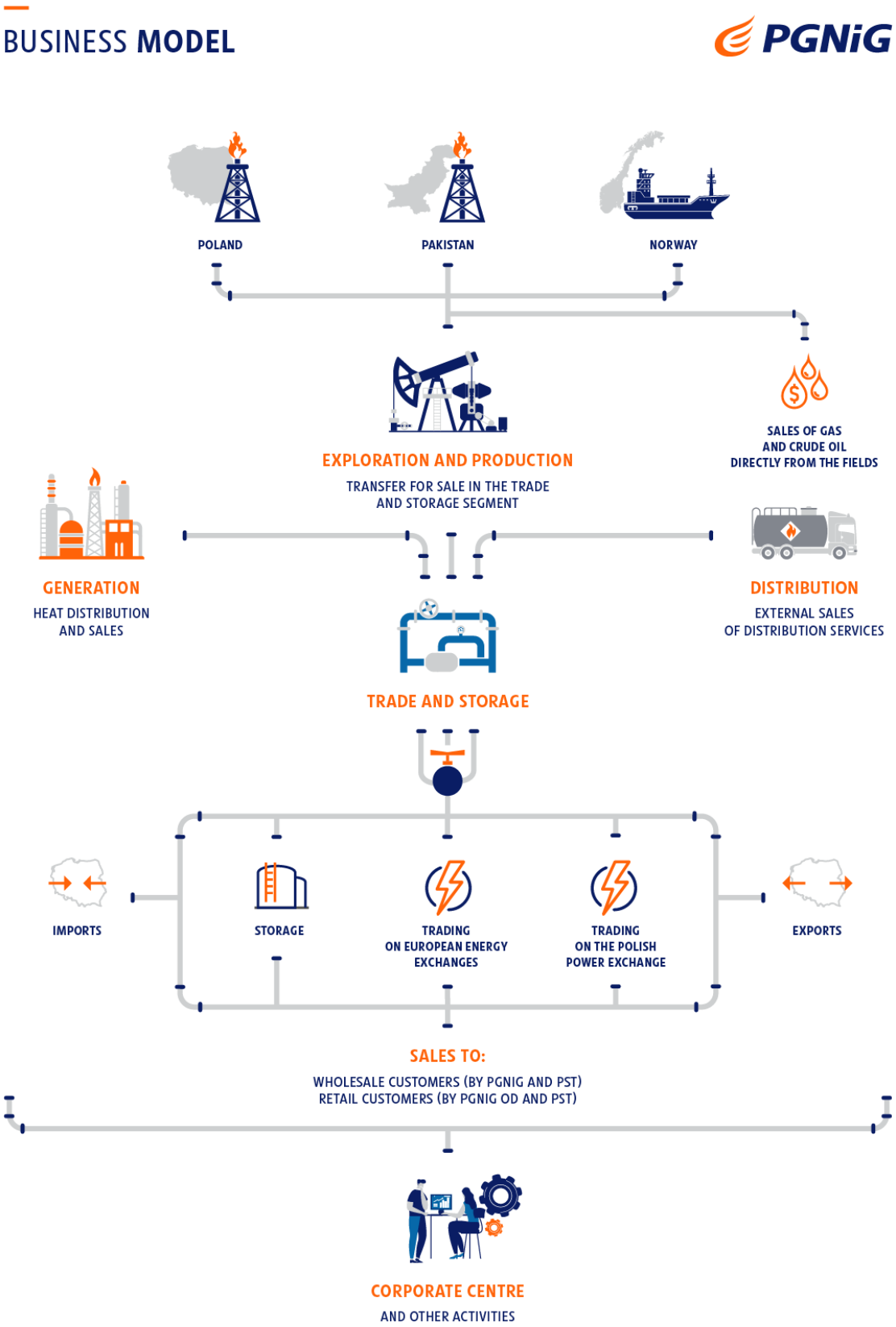
1. Business model and organisation of the PGNiG Group

1.1 PGNiG Group's business and business model

Figure 1 PGNiG Group's business model



1.2 Organisation of the PGNiG Group

As at December 31st 2020, the following companies were consolidated using the full method: PGNiG as the parent company and 23 subsidiaries. PGNiG comprises the Wholesale Trading Branch, Geology and Hydrocarbon Production Branch (Sanok Branch, Zielona Góra Branch, Odolanów Branch), Central Measurement and Research Laboratory, Well Mining Rescue Station, and Foreign Branches (the Operator Branch in Pakistan and the United Arab Emirates Branch).

1.3 Shareholding structure and PGNiG on the WSE

1.3.1 Shareholding structure

As at December 31st 2020, the share capital of PGNiG was approximately PLN 5.78bn.

Table 3 Shareholding structure at the end of 2020

Shareholders	Number of shares/voting rights as at December 31st 2019	Ownership/voting interest as at December 31st 2019	Change in 2020	Number of shares/voting rights as at December 31st 2020	Ownership/voting interest as at December 31st 2020
State Treasury	4,153,706,157	71.88%	-	4,153,706,157	71.88%
Others, including:	1,624,608,700	28.12%	-	1,624,608,700	28.12%
- OFE1)	612,178,537	10.59%	+58,068,390	670,246,927	11.60%
Total	5,778,314,857	100.00%	-	5,778,314,857	100.00%

1) Data based on OFEs' annual asset structure statements as at December 30th 2020.

For information on shares in PGNiG and its related companies held by members of the Management and Supervisory Boards, see Section 8.4.

Chart 1 Shareholding structure comparison

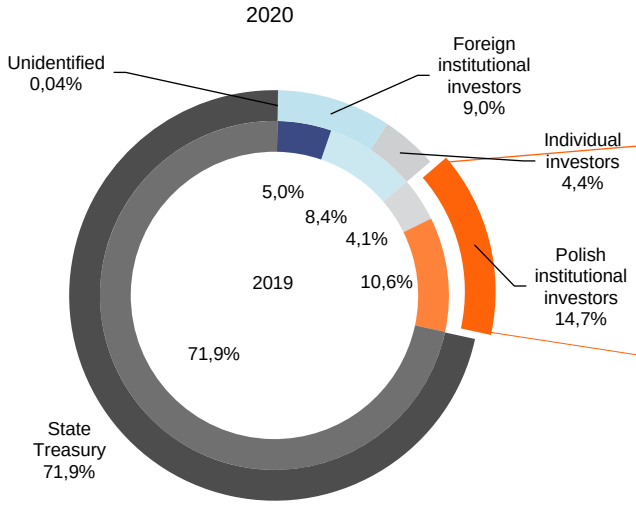


Chart 2 Percentage of PGNiG share capital held by Polish institutional investors at year end 2020

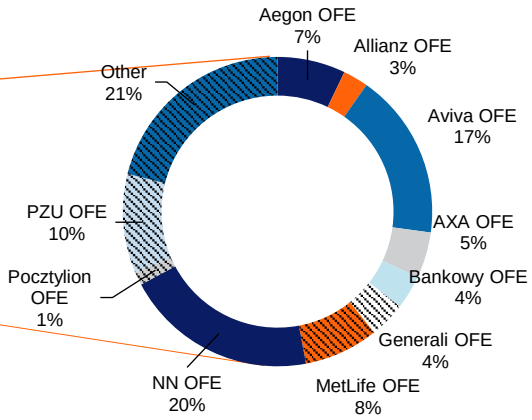


Chart 3 Share of foreign institutional investors in free float

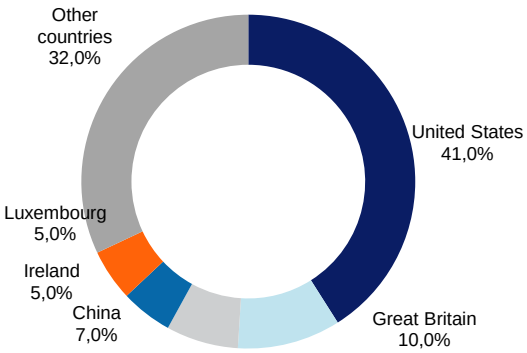
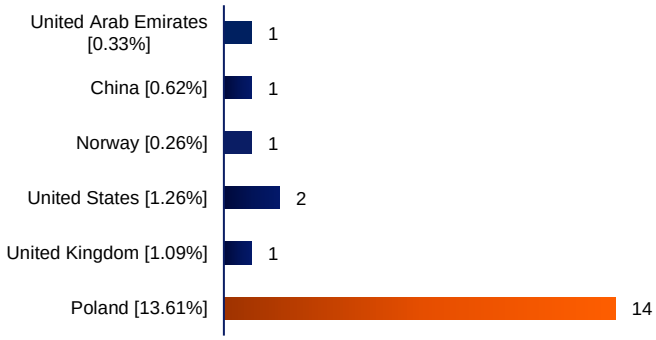


Chart 4 Geographical structure of the 20 largest institutional investors*



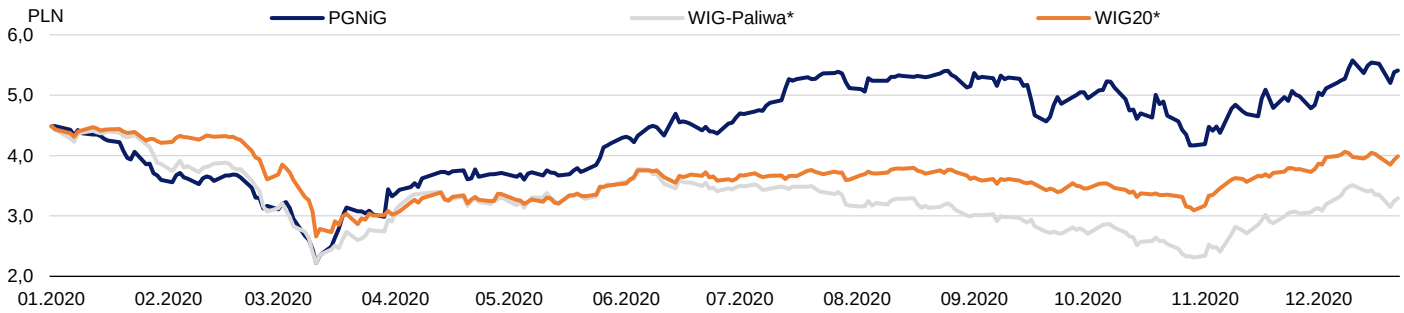
Source: In-house analysis based on data as at December 31st 2020 from Krajowy Depozyt Papierów Wartościowych S.A.
** [%] interest in the PGNiG shareholding structure.*

1.3.2 Price performance of the PGNiG shares

Since September 23rd 2005, the PGNiG shares have been listed in the continuous trading system of the main market on the Warsaw Stock Exchange. The issue price per share in the Company's public offering was PLN 2.98. In 2020, PGNiG shares were included in the following indices: WIG, WIG20, WIG30, WIG-Poland, WIG-ESG, WIGdiv, WIG-PALIWA sectoral index and WIG.MS-PET macrosectoral index.

In 2020, the annual rate of return on Company shares, net of dividend, was 24%. Over the same period, the sectoral index WIG PALIWA and the blue-chip index WIG20, yielded rates of return of -25% and -10%, respectively. The PGNiG share price movements ranged from -50% (the lowest closing price of PLN 2.22 on March 12th 2020) and +27% (the highest closing price of PLN 5.58 on December 11th 2020) from the 2020 average closing price of PLN 4.40. To compare, the range of movements of the WIG20 index was from -27% (year low of 1,305.73 points on March 12th 2020) to +23% (year high of 2,200.10 points on January 2nd 2020).

Chart 5 PGNiG share price vs WIG20 and WIG-Paliwa



Source: WSE – Warsaw Stock Exchange.
** Rebased to PGNiG share price.*

1.3.3 Stock exchange indicators

Table 4 PGNiG share data for 2017-2020

Key metrics	Unit	2020	2019	2018	2017	2020/2019 change (%)
Net profit attributable to owners of the parent	PLNm	7,340	1,371	3,209	2,923	435%
Earnings per share[1]	PLN	1.27	0.24	0.56	0.51	429%
Share price at the close of the last session of the year	PLN	5.54	4.33	6.91	6.29	28%
Average stock price in the year[2]	PLN	4.40	5.59	6.12	6.33	(21%)
Number of shares outstanding	million shares	5,778	5,778	5,778	5,778	-
Capitalisation at year end	PLNm	32,023	25,019	39,928	36,346	28%
Average daily trading volume	million shares	5.83	5.02	3.90	3.50	16%
Average daily trading value	PLNm	24.45	27.62	24.20	21.70	(11%)
Dividend[3]	PLNm	520	1,040	-	1,156	(50%)
Stock ratios[2]						
P/E at average share price	-	3.46	23.56	11.02	12.52	(85%)
P/E at year end	-	4.36	18.25	12.44	12.44	(76%)
P/BV at year end	-	0.73	0.66	1.09	1.08	11%
EV/EBITDA	-	2.69	5.22	5.58	5.59	(48%)
Dividend per share[3]	PLN	0.09	0.18	-	0.20	(50%)

Source: WSE
1) Attributable to holders of ordinary shares in the parent.
2) Share price at close.
3) Dividend from previous year's profit.
P/E at average share price = average share price in financial year / net earnings per share attributable to owners of the parent
P/E at year end = share price at close of trading on last session day in financial year / net earnings per share attributable to owners of the parent
P/BV at year end = share price at close of trading on last session day in financial year / book value per share
EV/EBITDA = market capitalisation at close of trading on last session day in financial year + net debt at end of financial year / operating profit (earnings before interest, taxes, depreciation and amortisation) in financial year + total depreciation and amortisation in financial year
Dividend per share = dividend for previous financial year / number of shares outstanding

1.3.4 PGNiG Investor Relations

In 2020, in the performance of its disclosure obligations, PGNiG published 68 current reports, including reports on: amendments to the Yamal contract, trade contracts, acquisition processes, administrative decisions, as well as operating and financial results.

The Company held four public teleconferences (for analysts and investors) and press conferences following each release of its periodic reports. It also prepared an integrated report for 2019, presenting a wealth of information on the oil and gas market and the PGNiG Group growth initiatives. In 2020, representatives of PGNiG held close to 50 meetings with investors and stock analysts, mostly in the form of video conferences and investor conferences in Warsaw.

In October 2020 PGNiG received the 1st Grand Prize in "The Best Annual Report 2019" competition, distinctions for the Best Corporate Report in the “Manufacturers” category, as well as a distinction for the very strong progress in integrated reporting. As a result, the company joined the “Best of the Best” group of entities whose financial reporting is a benchmark and may serve as an example of good practices in communication with stakeholders. The competition was organised by the Institute of Accountancy and Taxes.

PGNiG was again recognised in the IR Excellence Programme – the PGNiG Investor Relations team received top marks in the survey organised by the Warsaw Stock Exchange.

INVESTOR CALENDAR 2021

Q1

Mar 16–17 2021
PKO BP – CEE Capital Markets Conference

Mar 25 2021
Issue of the annual report for 2020

Q2

Apr 12–14 2021
Raiffeisen – Virtual Zürs Institutional Investor Conference

May 20 2021
Issue of the Q1 2021 report

Q3

Aug 19 2021
Issue of the H1 2021 report

Sep 06–07 2021
Pekao BP – 18th Annual Emerging Europe Investment Conference

Sep 26–28 2021
PKO BP – Investor's Day: CEE Metals & Energy

Q4

Nov 18 2021
Issue of the Q3 2021 report

Dec 7–10 2021
Wood&Company – WOOD's Winter Wonderland EME Conference

1.3.5 Dividend policy

The PGNiG Group's Strategy for 2017–2022 provides for 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 condition and investment plans.

On June 24th 2020, the PGNiG General Meeting resolved to pay dividend for the financial year 2019, totalling PLN 520,048,337.13, i.e. PLN 0.09 per share. The dividend record date and the dividend payment date were set for July 20th 2020 and August 3rd 2020, respectively.

Table 5 Dividend from net profits for 2014–2019

	2019	2018	2017	2016	2015	2014
Dividend for financial year (PLNbn)	0.52	1.04	-	1.16	1.06	1.18
Dividend per share (PLN)	0.09	0.18	-	0.20	0.18	0.20
Average annualised share price (PLN)	4.40	6.12	6.33	5.16	5.94	4.85
Dividend yield	2.05%	2.94%	-	3.88%	3.03%	4.12%

Since its IPO, PGNiG has paid a total dividend of PLN 1.08 per share. The absolute rate of return on the shares since the IPO, including dividends, was 122% as at the end of 2020.

2. Strategy of the PGNiG Group

2.1 Mission and vision

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 Increase the PGNiG Group's value and ensure 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

2.2 Key challenges

The PGNiG Group's operations strongly depend on external factors which also pose challenges for the Group, including:

- Developments in the global fuel and energy markets, including depressed oil and gas prices, and rapid expansion of the LNG market

In 2020, changes in the Polish gas market were accompanied by a decrease in gas prices on European markets (the average gas price was 34% lower on the average price in 2019). Gas prices in Poland were strongly correlated with those in Germany and on the European markets in general.

Despite the spread of the COVID-19 pandemic, the PGNiG Group's financial and operating performance improved in 2020. Both in Poland and Europe the decline in gas consumption by sectors affected by COVID-related restrictions was offset by increased consumption by the energy sector, which took advantage of the lower gas prices. As a result, demand for gas in Poland and in Europe was higher than in 2019.

LNG infrastructure – both export capacities (liquefaction plants, mainly in North America and Australia) and import capacities – continue to expand rapidly on the global market. Earlier predictions of a significant oversupply of LNG in the market did not materialise. As a participant in the global LNG market, PGNiG will be able to optimise its long-term gas portfolio and secure additional gas supplies to Poland to address spikes in demand or take advantage of price opportunities (optimisation of gas supplies from other directions).

Additionally, the correlation between market prices of gas and oil products has been weakening for several years, and the year-on-year decline in crude oil prices in 2020 was reflected in the PGNiG Group's financial performance, i.e.: on the one hand, lower cost of gas under long-term contracts made imports of the commodity more attractive, but on the other hand, it adversely affected the economics of foreign upstream projects with a higher share of crude oil in the output (mainly sales of crude oil produced in Norway), which put a negative pressure on the valuation of the foreign Exploration and Production segment.

The price of crude oil was affected, among other things, by declining demand depressed by the COVID-19 pandemic and related restrictions imposed in many countries. Another factor was the price war between Russia and Saudi Arabia, whose aim was to lower oil prices and limit competition. The end of 2020 brought optimism to the markets, with the December average price of a barrel of Brent crude reaching its highest level since February.

- Need to change the mix of imported gas sources

The PGNiG Group's portfolio of gas supply sources is designed to fully cover the gas requirements in Poland both from the Group and the Group's customers, and comprises mainly long-term import contracts (the Yamal and Qatar contracts).

In 2020, the Group pursued its strategy to diversify import sources, raising the share of gas sourced from suppliers west and south of Poland (based on market prices of gas at relevant hubs) and LNG (spot deliveries and long-term contracts), while reducing the share of gas supplies from countries east of Poland.

In view of the Yamal contract expiring after 2022, it is particularly important for the PGNiG Group to develop alternative routes for natural gas supplies to Poland, mainly from the northern direction via the planned Baltic Pipe gas pipeline. It is also the Group's objective for the period beyond 2022 to optimise the use of the LNG terminal in Świnoujście, and to this end PGNiG expanded its LNG portfolio through a number agreements with US partners, providing for gas deliveries.

- Weather conditions, in particular average temperatures in winter

The higher average monthly temperatures, in particular in the heating season, translate into lower sales and distribution volumes of natural gas and heat for district heating purposes.

- Policy and regulatory changes

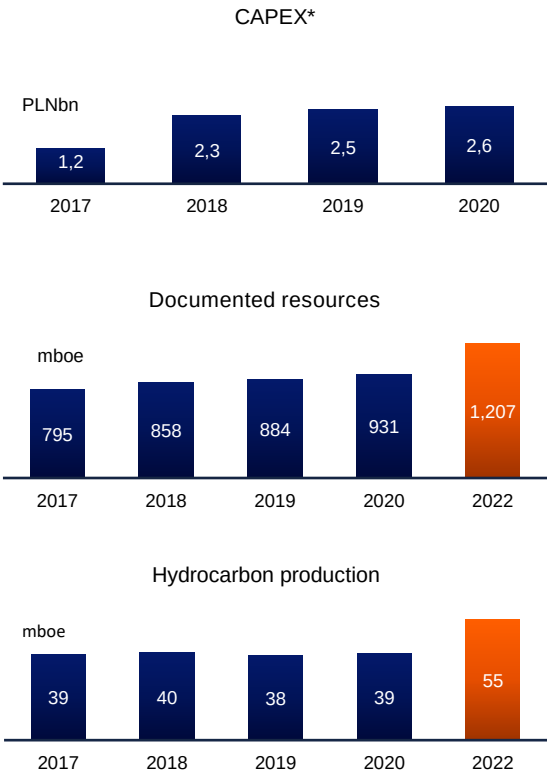
The regulatory environment in which the PGNiG Group operates is subject to regular and substantial changes, in particular with respect to taxation of hydrocarbon production and the exchange sale requirement.

2.3 PGNiG Group Strategy for 2017−2022 with an Outlook until 2026

The PGNiG Group's Strategy for 2017–2022 with an Outlook until 2026 was adopted by the PGNiG Supervisory Board on March 13th 2017. The pursuit of sustainable development as the Group's priority will be driven by parallel investments in riskier business areas yielding relatively high rates of return (upstream) and in regulated areas offering considerable safety of the investments (gas distribution, power and heat generation). The PGNiG Group implements an ambitious investment programme, which is to lay foundations for a long-term and stable growth in value.

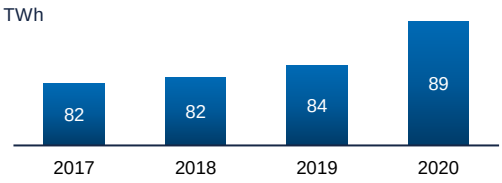
2.3.1 Objectives and ambitions for 2017−2022 Implementation of the Strategy in 2017–2020

Table 6 Objectives, ambitions and implementation of the Strategy in 2017-2020

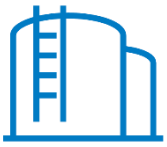
Segment	Ambitions	Objectives	Execution
Exploration and Production	Increase hydrocarbon reserves and production	Expand the documented resource base by ca. 35% Increase hydrocarbon production by ca. 41% Significantly reduce unit cost of exploration and appraisal activities Maintain unit cost of hydrocarbon development and production	
Trade and Storage	Retail: Maintain current market position and maximise margins	Maximise retail margins while maintaining the total volume of retail gas sales at ca. 67–69 TWh/year	

** CAPEX including expenditure on acquisition of hydrocarbon deposits.*

Volume of natural gas sales by PGNiG OD



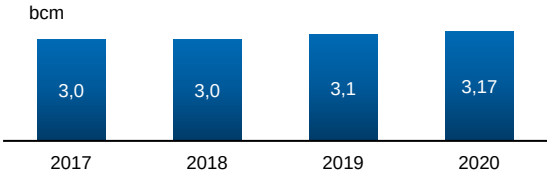
Trade and Storage



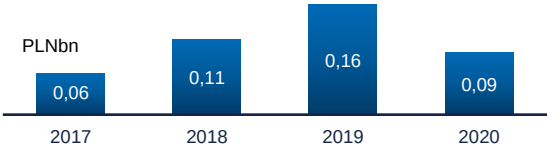
Storage: Ensure availability of storage capacities

Ensure availability of storage capacities adjusted to actual demand and improve storage efficiency

Storage capacities



CAPEX



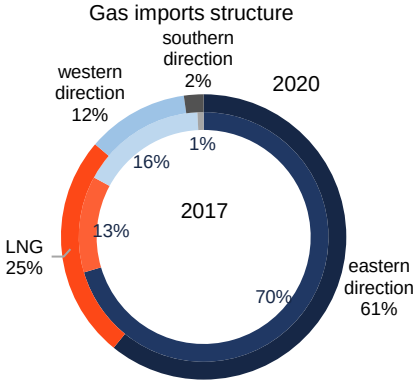
Trade and Storage

Wholesale trade: Diversified and competitive gas supply portfolio

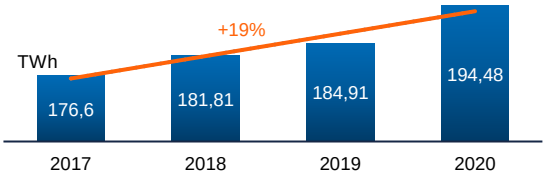
Build a diversified and competitive gas supply portfolio beyond 2022

Increase total volume of natural gas sales by ca. 7%

Gas imports structure



Volume of sold gas by PGNiG and PST



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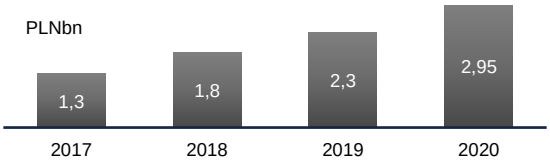


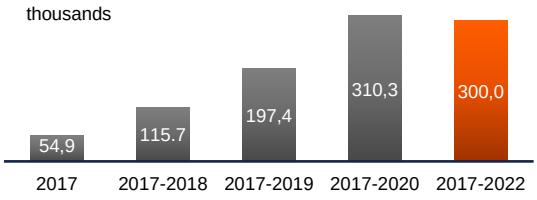
Distribution

Step up gas network roll-out in Poland

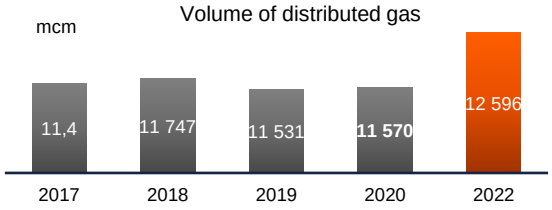
Construct more than 300 thousand new gas service lines

Increase gas distribution volumes by ca. 16%

Number of new gas service lines



Volume of distributed gas



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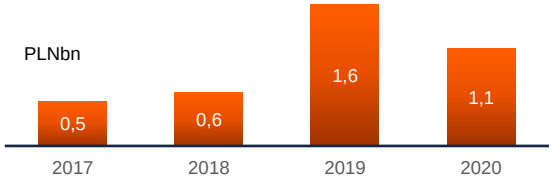
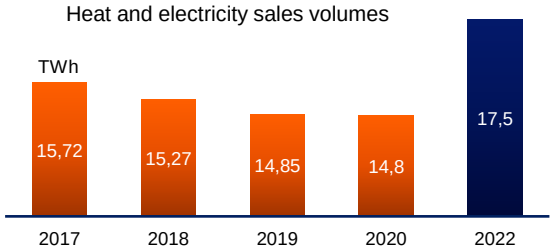


Generation

Increase energy generation volumes

Increase power and heat sales volumes by ca. 20%

Heat and electricity sales volumes



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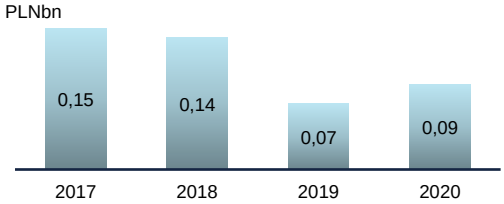


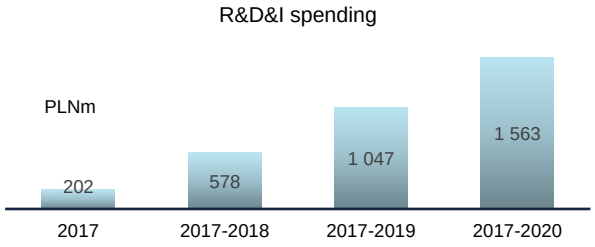
Corporate Centre

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

Increase involvement in and effective execution of R&D&I projects (target outlays of ca. PLN 680m)

Improve operational efficiency across the PGNiG Group

Enhance the Group's image



Capital expenditure in 2017–2020 totalled PLN 21.5bn, representing approximately 63% of the 2017−2022 CAPEX plan.

Exploration and Production

In 2020, implementation of the Strategy in the areas of building a base of documented hydrocarbon reserves, developing the discovered domestic deposits, and producing hydrocarbons from Polish fields proceeded in accordance with the assumptions. PGNiG conducted activities under its exploration and production licences located mainly in the provinces of Szczecin, Poznań, Rzeszów and Kraków, and continued its exploration for and appraisal of crude oil and natural gas deposits.

Given the limited capacity for growth in discoveries of new hydrocarbon reserves and little prospects of finding unconventional reserves in Poland, the Group is also looking for ways to increase its hydrocarbon reserves and step up production abroad. The Group remains committed to carrying out production projects which will yield equity gas on the Norwegian Continental Shelf, in order to directly transport the gas to Poland.

In 2020, in the pursuit of the strategic objective of scaling up hydrocarbon production outside Poland, PGNiG UN took steps to acquire nine new fields. As a result of the investments made, the company also achieved a significant increase in proven reserves in Norway, which rose from 169.4 mboe at the beginning of the year to 214 mboe by the end of 2020.

PGNiG also conducts exploration work in Pakistan. In 2020, the drilling, testing and tying-in of production wells was completed and work was underway to expand the capacity of the production facilities.

Trade and Storage

Wholesale

In view of the expiry of the Yamal contract in 2022, the Group seeks to achieve real diversification of its gas supply portfolio. In this respect, the Group's key activities include:

- Supporting the Baltic Pipe project by entering into transmission contracts – the Group's strategic objective is to build a mix of gas supply sources that would be available via the Baltic Pipe, to enable gas imports from new directions and at market prices, thus ensuring flexibility of the gas supply portfolio beyond 2022;
- Developing LNG trading and logistic competencies on the global market – this will help the PGNiG Group create a more flexible gas supply portfolio beyond 2022 as the Group will be able to swiftly balance its gas imports. PGNiG has signed long-term contracts for the supply of liquefied natural gas to Poland which are to be performed after 2022.
- Expanding the resource base in Poland and abroad – by developing and maintaining high gas production levels in Poland and investigating potential for acquiring gas from new directions with a view to strengthening the Company's competitive position beyond 2022.

In 2020, PGNiG's sales of natural gas in Poland totalled over 190 TWh. The Group is aspiring to further increase its natural gas trading volumes in Poland and on international markets. The Group intends to continue efforts to strengthen its presence in the markets of Central and Eastern Europe, including the Ukrainian market, one of the most promising in the region.

Retail

In implementing the Strategy guidelines, a number of initiatives, projects and operational activities are carried out to support achievement of the strategic objectives in all four defined areas: implementation of a margin defence strategy, optimisation and digitisation of customer service processes, development of product offering, and development of energy consultancy activities.

To achieve the strategic objectives set out in the defined areas, PGNiG OD carries out projects and operational activities in the following areas: new billing system, development of the product offer (including LNG bunkering services, photovoltaic solutions, additional/non-energy products) and development of customer service tools.

Storage

In order to secure availability of the target storage capacities, in 2020 GSP worked on the construction of the Kosakowo CGSF, consisting of five chambers in Cluster B, which are to be filled with gas and put into operation in 2021, which will increase the working capacity to 250 mcm of gas.

Distribution

Working towards its strategic objectives, PSG continued activities which in 2020 led to the execution of more than 113 thousand connection contracts and supply of 11.57 bcm of natural gas to customers. By the end of 2020, over 208 thousand decisions defining the terms of connection were issued (an increase of 17% year on year) and 112,9 thousand service lines with a total length of 1,118.7 km were built.

The 'Programme for accelerating investments in Poland's gas network' announced in 2018 provides that by 2022 around 90% of all Poles will live in municipalities connected to the gas grid. As part of the Programme, 71 new municipalities were connected to the distribution network. In addition, the distribution network is being extended to underserved areas, and gas is being supplied to customers using the liquefied natural gas (LNG) technology (island gasification). By the end of 2020, 37 commissioning certificates were signed for new LNG stations.

Generation

The strategic vision for PGNiG's power and heat generation business is to effectively expand the generation capacities and provide district heating distribution services. The PGNiG Group also intends to increase heat sales and distribution volumes by acquiring district heating assets and expanding its generation business across Poland. In 2020, the PGNiG Group's strategy for the power and heat generation business was pursued through participation in acquisition projects on the Polish district heat market and the implementation of strategic investments in the existing assets to meet the more stringent industrial emission standards, BAT (best available technology) criteria, and requirements of the climate policy.

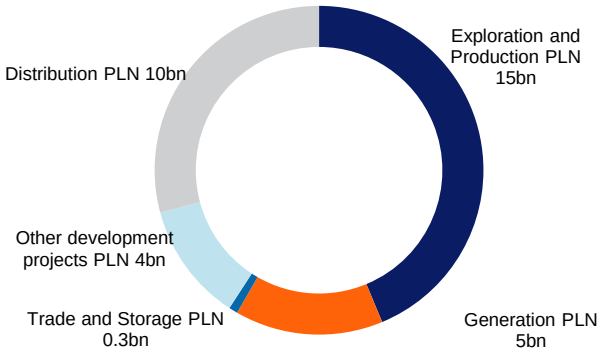
Other growth projects

In 2020, the PGNiG Group monitored the implementation of 150 R&D&I projects. The total amount of expenditure incurred by the Group on the projects was approximately PLN 515m. In 2020, innovation and development projects were underway, competencies in the following key areas gradually developed: Renewable energy sources, Alternative fuels, Energy Efficiency, and InnVento Startup Centre.

2.3.2 Investment projects in 2017−2022

The Strategy assumes that the total CAPEX will exceed PLN 34bn in 2017−2022. Average annual capital expenditure will amount to ca. PLN 5.7bn: The investment programme should deliver cumulative 2017−2022 EBITDA of ca. PLN 33.7bn, driving long-term growth of the Group's EBITDA in 2023−2026 to the annual average of ca. PLN 9.2bn. At the same time, the net debt to EBITDA ratio should stay below 2.0 over the Strategy term, with the current dividend policy providing for distribution of up to 50% of the Group's consolidated net profit upheld.

Chart 6 Planned CAPEX in 2017−2022*



** CAPEX including expenditure on acquisition of hydrocarbon deposits.*

2.3.3 Capital expenditure in 2021

The Group intends to maintain a high level of capital expenditure in 2021. 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 development of the power generation segment.

Table 7 Planned capital expenditure* on the PGNiG Group's property, plant and equipment in 2021

Capital expenditure* on property, plant and equipment by the PGNiG Group		2021**
I.	Exploration and Production, including:	2,421
1	Poland (PGNiG)	959
2	Norway	989
3	Pakistan	94
II.	Trade and Storage	233
III.	Distribution	2,388
IV.	Generation	1,978
V.	Other Segments	244
VI.	Total capital expenditure (I-V)	7,265

** Including capitalised borrowing costs.*
*** Planned expenditure does not include expenditure on potential acquisitions.*

Exploration and Production

Working towards its strategic objective of increasing total hydrocarbon production, PGNiG will continue to develop and tie in wells in Poland at the Zielona Góra and Sanok Branches. In 2021, PGNiG plans to produce in Poland 3.8 bcm of natural gas (measured as high-methane gas equivalent), and 0.677m tonnes of crude oil and condensate.

PGNiG UN plans to acquire new licence areas by participating in the annual APA licensing rounds and normal licensing rounds, as well as by purchasing new licence areas from other oil companies in areas of interest to the company *(farm in*) or by swapping shares between its own licences and areas of interest to the company *(swap, farm down*).

In Pakistan, completion of reservoir testing, drilling and tie-in of additional production wells and capacity expansion of production facilities are scheduled for 2021. In addition, seismic surveys will continue to be carried out, with the results to be used as the basis for drilling exploratory wells in the future.

For more information, see section 4.1.5.

Trade and Storage

In the medium to long term, PGNiG will focus on the performance of obligations under its long-term contracts with respect to minimum offtake volumes (Yamal contract) and contracted LNG volumes. Furthermore, as a result of completion of the Baltic Pipe project, PGNiG will be able to secure contracts for gas supplies from the Norwegian Continental Shelf (from its own fields as well as from imports).

In retail, projects will be implemented in 2021 to develop customer service tools, including the upgrade of BOK 2.0 at further locations, continued development of the eBOK platform, and development and optimisation of the Contact Centre operations. Also, the following projects are planned for 2021: instalment sales of commodity products, expansion of the CNG and LNG infrastructure (CNG stations, LNG bunkering services, cryogenic tankers) and development of a new business line (photovoltaics).

PST will continue to develop its business in key areas of the Group's strategy, including in particular LNG trading, supply of hydrocarbons from the Norwegian and Danish continental shelf area, and gas trading in on the markets of Central and Eastern Europe.

GSP will carry out works on construction of the Kosakowo storage facility, i.e. five chambers in cluster B, which will be commissioned in 2021.

For more information, see section 4.2.

Distribution

PSG intends to maintain the high level of expenditure on network expansion, connection of new customers and reconstruction and upgrading of the gas network. Investment outlays on grid upgrades are to satisfy the growing needs to ensure security of gas supply and operation of the gas network, including pipelines, service lines, as well as points, units and stations.

In the short term, PSG is taking steps to build a gas network and connect new customers, while in the medium term PSG will reconstruct, modernise and build a new gas network to maintain the security and continuity of gas supplies. The company performs multi-faceted analyses on the preparation of gas infrastructure for the distribution of renewable gases. For more information, see section 4.3.3.

Generation

In 2021, the PGNiG TERMIKA Group will continue work on its projects, including at the Żerań and the Stalowa Wola CHP plants. In addition, the company will also engage in the construction of a 75 MWe multi-fuel unit and preparations for the construction of a gas-steam unit at the Siekierki CHP Plant, as well as acquisitions in the power and district heat sectors.

The year 2021 will also see implementation of such projects as supply of heat for the town of Rybnik, integration of the heating systems of the Zofiówka CHP plan and the Pniówek CHP plant, as well as intensified acquisition of new customers for central heating and domestic hot water. PGNiG TERMIKA EP is taking steps to expand the heat market, particularly in the large agglomerations of Jastrzębie-Zdrój and Żory.

For more information, see section 4.4.2.

Other growth projects

In 2021, steps will be taken primarily to ensure efficient implementation of new business products at the PGNiG Group, based on business concepts, implementation plans and financial models prepared in 2020. New projects will also be gradually identified and pursued in key development areas: Renewable Energy Sources (including development of photovoltaic offering and construction of own RES portfolio), alternative fuels and energy efficiency. For more information, see section 4.5.2.

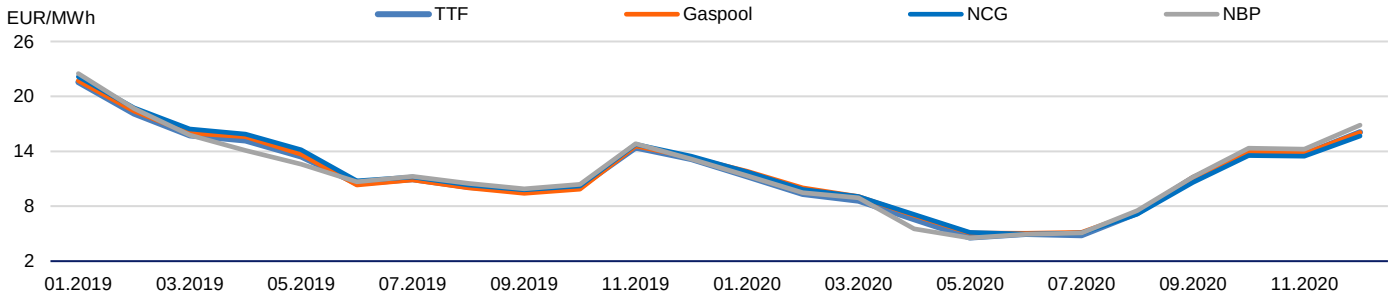
3. Business environment

3.1 Market overview

3.1.1 Gas market in Europe and globally

In 2020, natural gas prices in Europe fell on average by 34% year on year (based on prices recorded at TTF, GASPOOL, NCG and NBP, and on the Polish Power Exchange), from EUR 14.61/MWh in 2019 to EUR 9.61/MWh. The largest price declines were recorded in Germany (NCG) and the Netherlands (TTF) – on average by more than 31% – and the smallest in Poland (by approximately 26%).

Chart 7 Average monthly spot prices of natural gas at selected European hubs



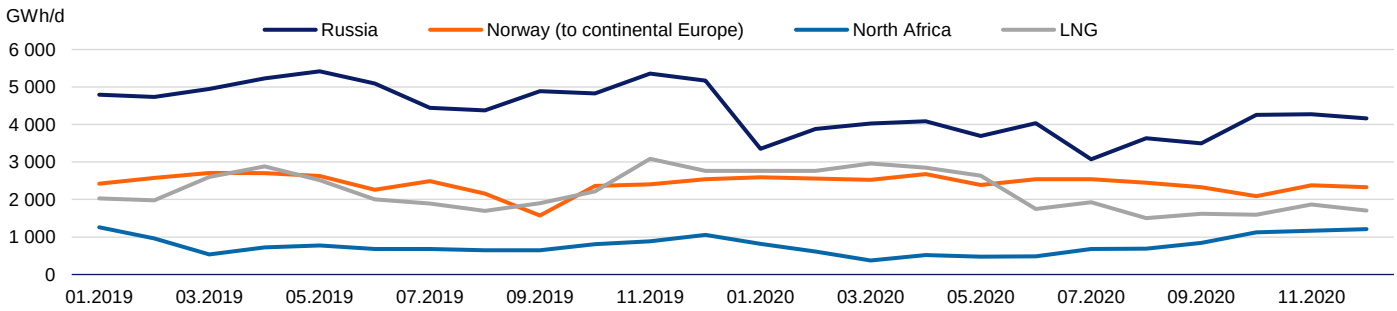
Source: In-house analysis based on ICE data.

In Europe, the air temperatures in winter were on average above the typical range for the season, which depressed the demand for gas used for heating purposes. LNG imports to Europe decreased by 8.1% year on year as a result of very low prices on the European market, which made LNG imports unprofitable for part of the year. LNG exports from the United States to Europe were even below the long-term break-even point. This changed towards the end of the year when prices in Asian markets increased strongly, resulting in most shipments reaching the Asian market. The increase in demand in Europe, which coincided with sharply reduced LNG imports, led to a very high price increase, with the average spot price on the TTF at 4.58 EUR/MWh in May and 15.98 EUR/MWh in December (an increase of 249%).

Gas inventories in European storage declined in the second half of 2020. The low volume of LNG imports, the price of which also began to rise sharply, pushed up prices on the European market, encouraging investors to draw gas from storage.

Q4 saw an increase in gas prices in Europe, resulting in a 15.5% year-on-year increase in the average gas price at the Dutch TTF hub during the period. The price increases were supported by higher electricity generation from gas-fired assets – gas demand from the power segment was 11.3% lower in the corresponding period of 2019.

Chart 8 Main sources of gas imports to Europe



Source: In-house analysis based on Thomson Reuters data.

The total volume of natural gas imported to Europe in 2020 was 3,900 TWh, of which 38% (1,489 TWh, 152.4 bcm) came from Russia. The share of pipeline gas imports from Russia in 2020 fell by 45% (from 2,065 TWh, 211.4 bcm in 2019). Norway was the second largest supplier of gas in Europe, with 1,156 TWh (118.33 bcm) or 30% of total gas supply. Imports from North Africa were 275 TWh (28.2 bcm, 7% of total supplies), while LNG deliveries to European terminals were 979.7 TWh (100.3 bcm, 25% of the imported volume).

LNG

Global LNG trade increased by 0.2% year on year, to over 484 bcm of regasified gas. The low increase relative to 2019 (0.9 bcm) was caused by very low gas prices in the first half of the year. The largest increase in exports in 2019-2020 was in the United States, by 15.7 bcm, while the largest increase in imports in percentage and value terms was in China, by 9.1 bcm (11.1%) compared with 2019.

Table 1 LNG demand and supply in 2019 and 2020, in bcm, after regasification

Supply	2020	2019	Change (%)
Europe	4.6	6.6	(30.30%)
including Norway	4.32	6.47	(33.23%)
Asia and Pacific	214.1	217.4	(1.52%)
including Australia	105.25	104.48	0.74%
North and South America	85.26	73.44	16.09%
including United States	65.65	49.97	31.38%
Africa	54.59	59.18	(7.76%)
Middle East	125.57	126.55	(0.77%)
including Qatar	105.54	105.56	(0.02%)
Globally	484.12	483.21	0.20%

Demand	2020	2019	Change (%)
North and South America	19.65	23.05	(14.75%)
Europe	117.96	119.15	(1.00%)
Middle East	9.79	9.85	(0.61%)
North-East Asia	271.35	262.88	3.22%
including China	91.28	82.19	11.06%
Globally	418.75	479.32	(12.64%)

Source: In-house analysis based on Thomson Reuters data.

3.1.2 Gas market in Poland

The growing demand for natural gas in Poland is met by domestic production and imports. Gas is transported to Poland via an extensive transmission network, with LNG-derived gas additionally fed into the network since 2016. Gas is traded on the Polish Power Exchange, and distributed physically to end users through distribution and transmission networks. The last component of the national gas system is gas storage facilities.

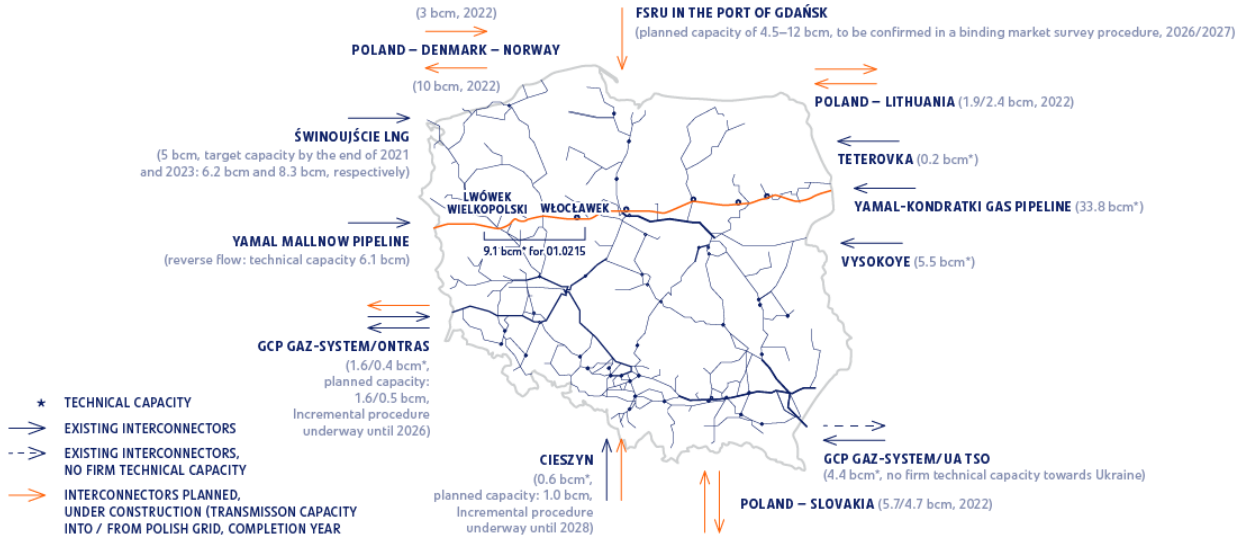
Gas demand in Poland and its structure

Consumption of high-methane grid gas in Poland in 2020 (excluding gas fuel supplied on the OTC and PPX markets) was ca. 193.1 TWh. Compared with 2019, the volume grew by 9.6 TWh, or 5.3% year on year. The increase in consumption was driven by an increase in gas consumption by customers connected to the transmission network (+12.2% y/y), largely driven by increase in take-up of gas by gas-fired generation units. The demand from the distribution network also increased (+2.7% y/y), led in part by the expansion of the gas network.

Transmission system

GAZ-SYSTEM manages the transmission network and supplies gas to distribution networks and end customers connected to the transmission system. The transmission network comprises the Transit Gas Pipeline System and the National Transmission System (high-methane gas [E group] and nitrogen-rich gas [Lw subgroup]).

Figure 2 The transmission system and existing and planned strategically important cross-border entry points into the transmission system



Source: GAZ-SYSTEM and European Network of Transmission System Operators for Gas (ENTSOG).

The Baltic Pipe

The Baltic Pipe is a strategic infrastructure project aimed at creating a new gas supply corridor on the European market. It is to enable the transmission of gas directly from deposits located in Norway to markets in Denmark and Poland, as well as to consumers in the neighbouring countries. The annual transmission capacity of the Baltic Pipe will reach up to 10 bcm to Poland and up to 3 bcm to Denmark and Sweden.

GAZ-SYSTEM and Energinet, operators of the Polish and Danish transmission systems who are implementing the project, made a final investment decision in 2018. Preparatory work for the construction continued in 2020. Environmental decisions, planning permits and construction permits for individual elements of the planned infrastructure have been obtained. The construction work is expected to take place between 2020 and 2022. Gas transmission is scheduled to commence on October 1st 2022.

LNG terminal

In May 2020, PGNiG signed a contract with Polskie LNG of the GAZ-SYSTEM group for the reservation of additional regasification capacities under the Open Season procedure in view of the expansion of the President Lech Kaczyński LNG Terminal in Świnoujście. Under the agreement, the Company reserved additional capacity of approximately 1.2 bcm of gas per annum in 2022-2023 (transitional service) and approximately 3.3 bcm of gas per annum in 2024-2038 (basic regasification service), which together with the previously reserved capacity will increase the import capacity to 6.2 bcm and then to 8.3 bcm of gas per annum. In addition, PGNiG reserved additional services to be provided in the period specified for the main regasification service.

Imports

In 2020, the volume of imported gas fuel to Poland fell by 181.8 TWh year on year (a decrease of about 1.9 TWh, or about 1.1%), with supplies from the east rising by 1%, while supplies from the EU fell by almost 13.1%. Most of the imports (about 55%) came from the eastern direction.

Table 2 Gas flows at Poland's gas grid entry/exit points

Entry/exit point (in TWh)	2020	2019	Change (%)
Supplies from EU	42.40	48.79	(13.09%)
including Lasów, Gubin (GCP)	7.34	3.97	84.89%
including Cieszyn	3.6	4.7	(23.40%)
including Mallnow	31.46	40.12	(21.58%)
Supplies from across Poland's eastern border	99.77	98.75	1.03%
including Drozdovitse	40.89	41.96	(2.55%)
including Teterovka	0.9	0.86	4.65%
including Kondratki	27.54	23.9	15.23%
including Vysokoye	30.44	32.04	(4.99%)
LNG regasification	39.59	36.16	9.49%
Exports to Ukraine (mainly Hermanowice)	15.50	14.99	3.39%
Total imports	181.76	198.69	(1.06%)
Net imports	166.26	168.71	(1.45%)

Source: In-house analysis based on ENTSOG data.

In 2020, the volume of gas regasified at the LNG terminal in Świnoujście increased by 9.5% on 2019 as a result of spot purchases and deliveries under a long-term contract with Cheniere.

In 2020, PGNiG received a total of 18 LNG shipments under the long-term contracts with Qatargas. The volume of LNG imports from Qatar amounted to 1.64m tonnes, i.e. approximately 25.01 TWh or 2.28 bcm of natural gas after regasification. In 2020, PGNiG purchased gas under 13 spot contracts; its volume totalled 0.80m tonnes, i.e. ca. 12.18 TWh or 1.11 bcm of natural gas after regasification. The sources of spot supplies were Norway (4 deliveries), the US (7 deliveries), Trinidad and Tobago and Nigeria (1 delivery each). The deliveries were made with the support from the London LNG trading office (PST). In 2020, PGNiG also took delivery of LNG shipments under a long-term contract with Cheniere Marketing International and a medium-term contract with Centrica.

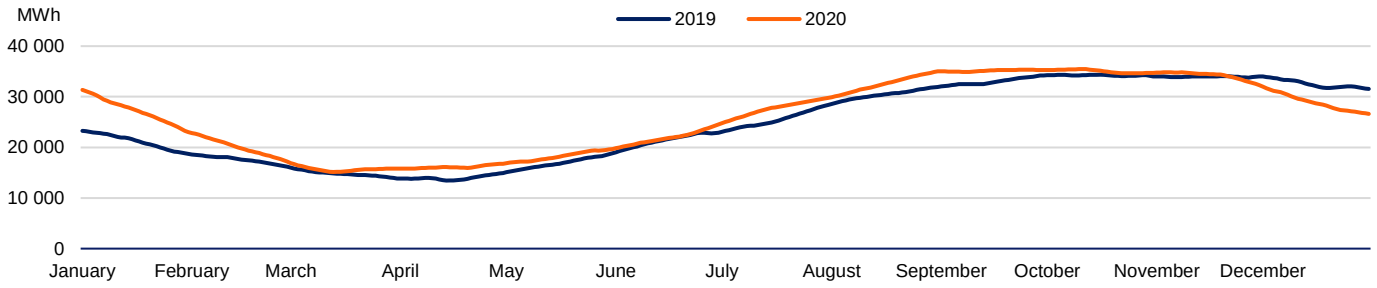
Throughout the year, PGNiG imported 35 shipments of LNG via the LNG terminal, with a total volume of 2.70m tonnes, i.e. approximately 3.76 bcm of regasified natural gas.

Gas storage

In 2020, the average daily withdrawal of gas from Polish storage over the withdrawal periods (January-March, November-December) was 182 GWh, representing increase of 89% on the previous year. In the summer season (April-September) of 2020, gas was injected into storage at an average rate of 122 GWh/day, that is 12 GWh/day less year on year.

At the end of 2020, Polish gas storage facilities were filled to approximately 74% of capacity, an 18 p.p. decrease on year-end 2019. Other European markets also saw lower inventory levels at storage facilities: in Germany, the storage facilities were filled to 73.1% of capacity, compared with 97% as at the end of 2019.

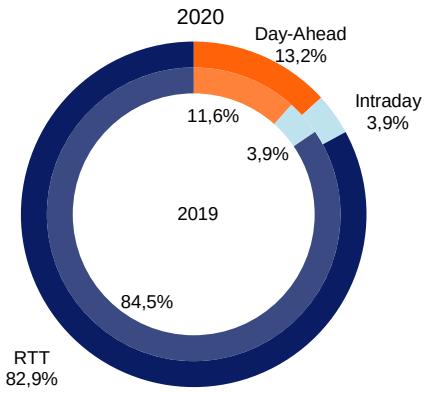
Chart 9 Levels of gas in storage in Poland in 2019–2020



Source: In-house analysis based on Gas Infrastructure Europe and Gas Storage Europe data.

Polish Power Exchange

Chart 10 Contracts traded on the PPX in 2019 and 2020

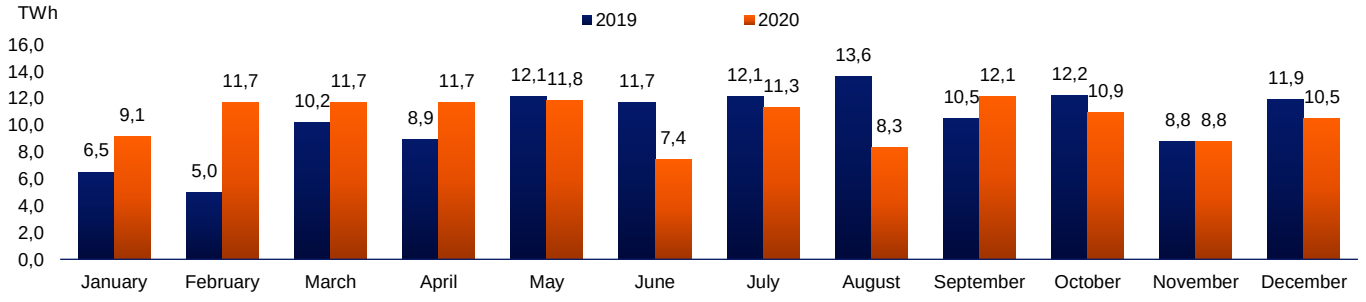


PGNiG is the leader of gas trading on the PPX. According to PPX data, in 2020 the total gas trading volume was 151.1 TWh, of which 125.3 TWh was traded on the commodity futures market (RTT). This means that almost 83% of gas trades in 2020 were executed under contracts with maturities of a year, season (summer, winter), quarter, month, and week.

In 2020, the Polish Power Exchange reported a record-high result in the history of its gas trading, and the total volume of gas trades grew by 3.4% relative to 2019. Record high trading volumes in 2020 were seen both on the Day-Ahead Market and the Intraday Market, at 19.9 TWh (a 17.6% increase y/y) and 5.9 TWh (a 3.3% increase y/y), respectively; the volume on RTT also increased, by 1.5% y/y.

Source: In-house analysis based on PPX data.

Chart 11 Commodity futures (RTT) trading volume on the PPX in 2019 and 2020 (TWh)



Source: In-house analysis based on PPX data.

3.2 Regulatory environment

The tables present the provisions of Polish and European laws which are of key importance to the PGNiG Group's operations.

3.2.1 Regulatory environment in Poland

Table 8 Changes in Polish regulations and their impact on the PGNiG Group

	Scope of the changes	Effect of the changes on the PGNiG Group
Energy Law	• In 2020, the amended rules for connecting new customers to district heating networks came into force. • The Polish Energy Law was adapted to the developments in the prosumer electricity market. • The EU legislation on interconnector pipelines was implemented in 2020. • In view of the COVID-19 epidemic, the application of the supply	The amendments are neutral for the Group's business, except for the amendment concerning connection of new customers to district heating networks, whose impact is negative.
Act on Mandatory Stocks	In 2020, amendments to the rules for determining the level of mandatory oil stocks came into force.	The amendments have no effect on the activities of the PGNiG Group.
Act on Electromobility	• In 2020, due to the COVID-19 epidemic, the deadline for construction of the minimum number of compressed natural gas (CNG) refuelling points was extended until March 31st 2021. • The amended legislation additionally permits compressed natural gas (CNG) refuelling points already in operation to be counted towards the total number of planned points. • Another regulation amended in 2020 now provides for a possibility to consult preliminary designs of LNG bunkering points with the Director of the Transport Technical Inspection.	The amendments have positive effect on the activities of the PGNiG Group.
Energy Efficiency Act	In 2020, work began on amending the Energy Efficiency Law, but no amendments were enacted before the year-end.	
Capacity Market Act	In 2020, the collection of the power fee was postponed from October 1st 2020 to January 1st 2021.	The effect of the amendment is neutral to activities of the PGNiG Group.
Act on the Promotion of Electricity from High-Efficiency Cogeneration	The formal requirements for participation in the support scheme were amended in 2020.	The effect of the amendment is neutral to activities of the PGNiG Group.
Diversification Regulation	In 2020, the Diversification Regulation was not amended.	
System Regulation	In 2020, the System Regulation was not amended.	
Tariff Regulation	In 2020, the Tariff Regulation was not amended.	

3.2.2 European regulatory environment

Table 9 Changes in European regulations

	Scope of the changes	Effect of the changes on the PGNiG Group
Gas Directive (Directive 2009/73/EC)	In 2020, the Gas Directive was not amended. PGNiG took active steps to ensure that the amendments enacted in 2019 are correctly implemented and applied by Germany (for more information, see Section 8.4).	
European funds	• European Regional Development Fund (ERDF) and Cohesion Fund (CF) In 2020, negotiations (the so-called trilogues of the European Commission (EC), the Council of the European Union (CJEU), and the European Parliament (EP)) on the ERDF/ESF regulation were concluded. It was agreed that investments related to the use of natural gas could be financed from ERDF/CF under certain conditions and that the allocation of funds would vary between Member States (for Poland, a maximum level of 1.55% of the ERDF/CF funds allocated to Poland was allowed). Fossil fuels were excluded from the scope of support with the exception of: natural gas substitution of solid fuels in district heating systems; extension/modernization of natural gas	The regulations agreed in 2020, but pending formal adoption, provide for conditional funding opportunities for investments in the natural gas sector and provide for support for RES and low carbon and renewable gases (hydrogen, biomethane)

networks on condition that the investment adapts the network to the use of renewable and low-emission gases; clean vehicles within the meaning of Directive 2009/33/EC. Hydrogen, biomethane and RES projects as well as CCS/CCU technologies will be eligible for funding. The exclusion of 'fossil fuel processing' from ERDF and CF support means that blue hydrogen production is unlikely to be supported from these funds.

- Just Transformation Fund (JTF)

In 2020, the negotiations on the regulation establishing the Just Transition Fund were concluded. The Fund will not support investment in the production, processing, transport, distribution, storage or combustion of fossil fuels and is limited to coal regions. Hydrogen, biomethane and RES projects as well as CCS/CCU technologies will be eligible for funding. The exclusion of "fossil fuel processing" from the scope of JTF support means that blue hydrogen production is unlikely to be supported from this fund. Access to the full amount of the JTF is conditional on commitment to the EU's 2050 climate neutrality target. Rules contained in the Territorial Fair Transition Plan and the relevant operational programme will be crucial to eligibility for support from this Fund.

- Recovery and Resilience Facility (RRF)

In 2020, negotiations on the regulation establishing the RRF were concluded. In practice, the extent of support for gas projects from this instrument will depend primarily on the content of the technical guidelines on the DNSH (do no significant harm) principle prepared by the EC, and on the outcome of negotiations between Poland and the EC on the National Reconstruction Plan. Support will be available for replacement of district heating systems (transition from coal to gas), distribution and transport of natural gas to replace coal, high-efficiency co-generation and district heating. Hydrogen, biomethane and RES projects as well as CCS/CCU technologies will also be eligible for funding.

- InvestEU

In 2020, negotiations on the regulation establishing the InvestEU programme were concluded. In the Sustainable Infrastructure window, sustainable investments in energy infrastructure will be supported. Priority will be given to RES projects, but support for natural gas infrastructure has not been explicitly excluded from the scope of support. It may potentially include investments in high-efficiency cogeneration, alternative fuel infrastructure and critical infrastructure. Hydrogen, biomethane and RES projects as well as CCS/CCU technologies will also be eligible for funding.

- Connecting Europe Facility (CEF)

The Regulation establishing the CEF was agreed in 2019, but following decisions taken at the European Council summit in July 2020, some aspects of the compromise are again discussed. Decisions are expected in early 2021. The PGNiG Group was not a direct beneficiary of the funds under the Facility, but the development of interconnections financed with such funds had a positive effect on the operations of the PGNiG Group. The CEF is designed to support infrastructure projects that form part of the so-called supply corridors allowing diversification of natural gas supplies to the European Union. The scope of supported projects will depend on the final content of the Regulation on guidelines for trans-European energy infrastructure [2020/0360 (COD)].

The European Green Deal Communication

- European climate legislation

In March 2020, the European Commission presented a proposal for a regulation establishing a framework for achieving climate neutrality – European Climate Law [2020/0036 (COD)]. The Commission proposed to set the objective for the EU to become climate-neutral by 2050. In addition, the Commission is to explore options for a new 2030 target of 50-55% reduction in greenhouse gas emissions compared to 1990 levels (the current target is 40%). The relevant communication from the Commission was issued on September 17th 2020 [COM(2020) 562]. In its position adopted in October 2020, the European Parliament (EP) supported the goal of climate neutrality, and advocated for targets at the level of Member States. The EP additionally proposed an obligation for Member States to achieve negative net emissions after

The legislative acts proposed by the European Commission are likely to pose challenges for the PGNiG Group.

2050. For the 2030 emissions reduction target, the EP proposes that the target be increased to 60%. Both the EU Council's and the EP's positions also envisage an intermediate target for 2040. In the general approach developed in December 2020, the EU Council supported the EU's 2050 climate neutrality target and advocated an increase to at least 55% of the 2030 target for greenhouse gas emissions reduction. Both the EU Council's and the EP's positions also envisage an intermediate target for 2040.

- TEN-E Regulation

The European Commission (EC), as part of its ongoing review of Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure (TEN-E Regulation) [2020/0360 (COD)], published a draft review of the Regulation on December 15th 2020. According to the presented draft, natural gas transmission, LNG and storage infrastructure will not be further supported under the TEN-E policy and natural gas projects are not foreseen to qualify for the Projects of Common Interest (PCI) status and therefore, according to the EC draft, they will not be able to apply for CEF funding either. The draft currently provides for hydrogen and smart gas grid projects to apply for the PCI status.

- EU hydrogen strategy

On July 8th 2020, the EC published a Hydrogen Strategy for a Climate Neutral Europe [COM (2020) 301]. The development of hydrogen technology is set to be the key area for delivering the energy transition. Hydrogen is expected to contribute to reducing greenhouse gas emissions by the EU economy in a cost-effective manner. Investment in hydrogen technology is also expected to foster sustainable growth and job creation, which is crucial as Europe recovers from the crisis caused by COVID-19. Hydrogen is to be essential not only for the energy sector but also for sectors where emissions are difficult to reduce, such as manufacturing, heavy transport, sea transport and aviation. The Hydrogen Strategy classifies hydrogen into renewable (green) hydrogen – produced by electrolysis using energy from RES, and low carbon (blue) hydrogen – produced using fossil fuels with the involvement of greenhouse gas capture (CCS) technology. The European Commission intends to promote renewable hydrogen in its strategy.

- EU strategy for the integration of the energy system

On July 8th 2020, the EC adopted the EU strategy for energy system integration [COM(2020)299]. The strategy is an integral part of the European Green Deal and is intended to contribute to the achievement of the EU's climate neutrality objective. The EC Strategy proposed, among other things, to adapt the existing regulatory framework for the gas market, in particular with a view to integrating new gases into the market. Among other things, the strategy calls for the creation of a comprehensive terminology and a European certification scheme for renewable and low-carbon gases based on life-cycle greenhouse gas savings. In addition, the Commission proposed a revision of the Energy Taxation Directive and the extension of the EU ETS to include further sectors.

- European Commission preparatory work

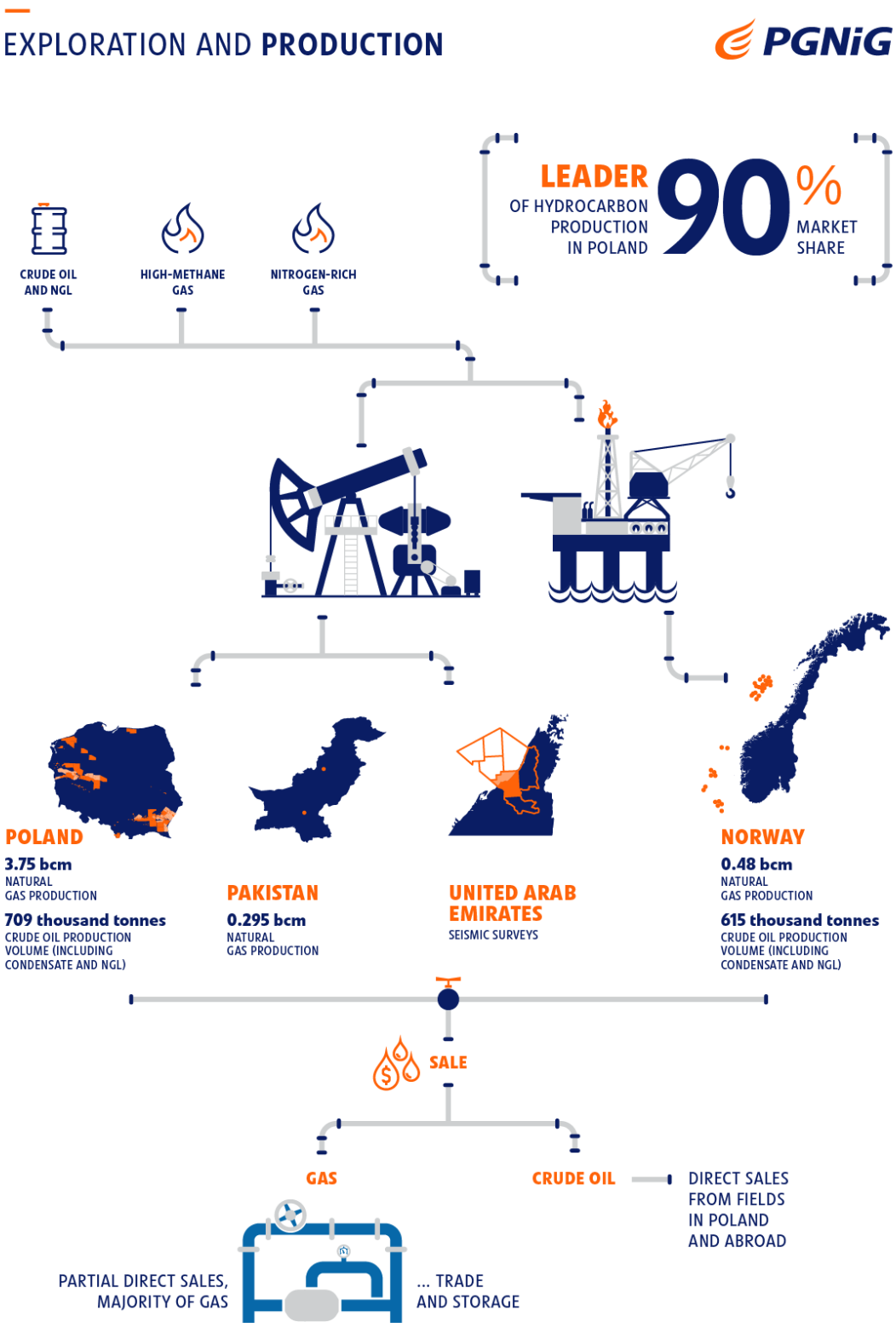
In 2020, the EC carried out preparatory work on: the revision of the Industrial Emissions Directive - IED [2010/75/EU], the revision of the Directive establishing a scheme for greenhouse gas emission allowance trading within the Community - EU ETS [2003/87/EC]; revision of the Directive to promote the use of renewable energy sources [2018/2001]; revision of the Energy Efficiency Directive [2012/27/EU]; revision of the Energy Taxation Directive – ETD [2003/96/EC]; revision of the guidelines on state aid for environmental protection and energy – EEAG [2014/C 200/01]; the planned mechanism for adjusting prices at borders to take account of CO_2 emissions. The EC is considering bringing forward a legislative initiative in this regard. The purpose of the mechanism would be to reduce the risk of carbon leakage and to more accurately reflect the emissions associated with imports of non-EU products. PGNiG participated in public consultations on the abovementioned initiatives.

Sustainable Finance Package	Regulation (EU) 2020/852 of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment (the "Taxonomy Regulation") was adopted on June 18th 2020. The purpose of the Regulation is to establish the criteria and framework for the creation of a single classification system for environmentally sustainable economic activities. It is intended to provide a regulatory focus for investments in sustainable activities in the European Union. The criteria and technical standards contained in the delegated act for activities making a significant contribution to climate change mitigation and adaptation will be the instrument for assessing investments for the purpose of qualifying for sustainable funding. It is crucial to maintain natural gas related activities as temporary activities within the technical criteria. In November 2020, the EC published a draft of the delegated regulation. The project consultations were concluded on December 18th 2020. The delegated act is expected to be adopted in the second quarter of 2021. The proposed wording of the delegated regulation significantly restricted the possibility of financing gas-related projects and using natural gas as a bridging fuel for the energy transition. PGNiG presented its position in public consultations.	At this stage, the impact of the regulation on the PGNiG Group's business should be assessed as neutral, but if adopted, the content of the delegated act may have an adverse effect on the PGNiG Group's activities.
Clean Energy for All Europeans package	In 2020, no changes were made to the Clean Energy for All Europeans package. Achievement of the objectives set out in the European Green Deal Communication is likely to require a revision of the objectives set out in the package.	Any revision of the package may pose challenges for the PGNiG Group.
EU Strategy to reduce methane emissions	On October 14th 2020, the European Commission published the EU Strategy to reduce methane emissions [COM(2020) 663]. In the document, the European Commission announces legislative proposals planned for 2021 on mandatory measurement and verification of methane emissions based on the OGMP 2.0 methodology, the obligation to introduce LDAR (detection and repair of methane leakage sites) programmes for all natural gas infrastructure and any other infrastructure for the production, transport and use of natural gas. Legislative proposals may also include a ban on routine methane release operations and flaring.	Legislative proposals to reduce methane emissions may involve challenges for the PGNiG Group.
NC CAM Regulation	In 2020, the NC CAM Regulation was not amended.	
EU ETS	In 2020, the Directive establishing a scheme for greenhouse gas emission allowance trading within the Community [2003/87/EC] was not amended. In December 2020, a draft Commission Implementing Regulation amending the benchmarks for the allocation of free emission allowances in the period 2021-2025 pursuant to Article 10a (2) of Directive 2003/87/EC was published. The amendments proposed by the European Commission may reduce the allocation of free emission allowances to the heating sector.	Revision of the EU ETS and the implementing regulation in the proposed form may have an adverse effect on the PGNiG Group's business
GAS SOS Regulation	In 2020, the Regulation on measures to ensure security of natural gas supply (SoS) was not amended.	
TAR NC Regulation	In 2020, the NC TAR Regulation was not amended.	

4. Operating activities in 2020

4.1 Exploration and Production

The segment's operations involve exploring for and extracting natural gas and crude oil from deposits, and include geological surveys, analysis of geophysical data, drilling, and development of and production of hydrocarbons from gas and oil fields. Its core activities are carried out in Poland, Pakistan, the United Arab Emirates and on the Norwegian Continental Shelf, while support activities are conducted worldwide. The segment also relies on storage capacities available at the Bonikowo and Daszewo UGSFs.



4.1.1 Key operating metrics

Table 10 Volume of PGNiG Group's natural gas production by country

mcm	2020		2019		2018	2017	2016
	PGNiG Group	PGNiG	PGNiG Group	PGNiG	PGNiG Group	PGNiG Group	PGNiG Group
Poland	3,746	3,746	3,815	3,815	3,808	3,839	3,881
high-methane gas (E)	1,337	1,337	1,337	1,337	1,296	1,315	1,400
nitrogen-rich gas (Ls/Lw as E equivalent)	2,409	2,409	2,478	2,478	2,512	2,524	2,481
Other countries	773	295	674	193	738	697	576
Norway (high-methane gas (E))	478	-	481	-	538	548	517
PGNiG Pakistan Branch (nitrogen-rich gas (Ls/Lw as E equivalent))	295	295	193	193	200	149	59
TOTAL (measured as E equivalent)	4,520	4,041	4,489	4,008	4,546	4,536	4,458

Table 11 Volumes of E&P segment's natural gas sales to non-PGNiG Group customers by country

mcm	2020		2019		2018	2017	2016
	PGNiG Group	PGNiG	PGNiG Group	PGNiG	PGNiG Group	PGNiG Group	PGNiG Group
Poland	667	667	679	679	684	676	707
high-methane gas (E)	25	25	25	25	26	30	53
nitrogen-rich gas (Ls/Lw as E equivalent)	642	642	654	654	658	646	645
Other countries	295	289	192	192	199	149	82
Norway (high-methane gas (E))	7	-	-	-	-	-	24
PGNiG Pakistan Branch (nitrogen-rich gas (Ls/Lw as E equivalent))	289	289	192	192	199	149	58
TOTAL (measured as E equivalent)	962	956	871	871	883	825	790

Table 12 Crude oil production and sales volumes* at the PGNiG Group (including condensate and NGL)

thousand tonnes	2020		2019		2018	2017	2016
	PGNiG Group	PGNiG	PGNiG Group	PGNiG	PGNiG Group	PGNiG Group	PGNiG Group
Crude oil production*	1,324	709	1,216	776	1,345	1,257	1,318
in Poland	709	709	776	776	818	787	763
in Norway	615	-	440	-	527	470	555
Crude oil sales*	1,332	713	1,210	771	1,411	1,271	1,347
including oil produced in Poland	713	713	771	771	818	792	754
including oil produced in Norway	619	-	439	-	593	479	593

** Including condensate and NGL.*

Table 13 Production volumes for other products

thousand tonnes	2020		2019		2018	2017	2016
	PGNiG Group	PGNiG	PGNiG Group	PGNiG	PGNiG Group	PGNiG Group	PGNiG Group
Propane-butane	36	36	39	39	39	37	37
LNG	20	20	20	20	21	22	26
mcm							
Helium	3	3	3	3	3	3	3

Table 14 Sales volumes for other products

thousand tonnes	2020		2019		2018	2017	2016
	PGNiG Group	PGNiG	PGNiG Group	PGNiG	PGNiG Group	PGNiG Group	PGNiG Group
Propane-butane	36	36	39	39	39	37	37
LNG	20	20	20	20	21	17	22
mcm							
Helium	3	3	3	3	3	3	3

4.1.2 Operations in Poland

The exploration and production activities in Poland are carried out by PGNiG, with the involvement of its subsidiaries Exalo Drilling and Geofizyka Toruń. The Geology and Hydrocarbon Production Branch serves as the competence centre for geological exploration, geological work, investments in well mining facilities, and hydrocarbon production. It oversees the production of crude oil and natural gas, underground storage of waste, and underground non-reservoir storage of gas for production purposes. The PGNiG structure includes three leading domestic branches, located in Sanok, Zielona Góra and Odolanów, and two foreign branches: Operator Branch in Pakistan and the branch in the United Arab Emirates.

Licences in Poland

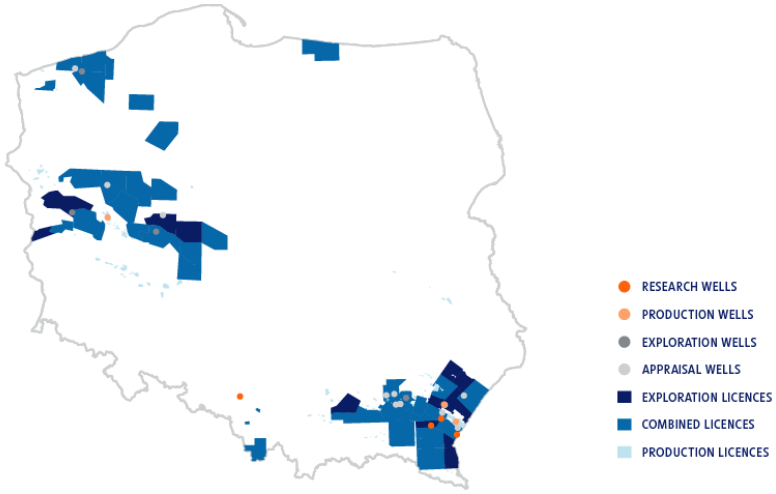
As at 1 January 2020 PGNiG held 48 licences: 13 licences for exploration for and appraisal of oil and gas deposits and 35 combined licences (for exploration, appraisal and production). As at December 31st 2020, PGNiG held 47 licences: 11 licences for exploration for and appraisal of oil and gas deposits and 36 combined licences (for exploration, appraisal and production). In the reporting period, one exploration and appraisal licence expired.

In 2020, the Group had 28 proceedings at the Ministry of Climate and Environment for obtaining, amending or converting licences (of which 15 are still pending). Another 30 proceedings involved geological work plans (seven proceedings are still pending).

As at December 31st 2020, PGNiG held 201 licences, including 189 production licences, three underground waste storage licences and nine underground gas storage licences. In the first half of 2020, PGNiG was granted four new production licences (Potok Górny, Połęcko, Czarna Wieś, Wielichowo W), 4 licences were amended, 5 licences were terminated, and proceedings were pending in respect of 7 licences.

Operations under licences held by PGNiG

Figure 3 PGNiG's licences and wells in 2020



Source: In-house analysis based on data from the Geology and Hydrocarbon Production Branch.

In 2020, PGNiG continued crude oil and natural gas exploration and appraisal projects in the Carpathian Mountains, Carpathian Foothills, Sudetian Monocline, and Polish Lowlands, both on its own and jointly with partners. Out of the 25 boreholes drilled in 2020, the target depth was reached by 24, including: 4 research, 3 exploration, 13 appraisal and 4 production wells.

As at the end of 2020, formation test results were obtained from 17 wells (1 test, 2 exploration, 10 appraisal and 4 production wells). The 17 wells with known formation test results included 13 positive wells (including 1 test well, 1 exploration, 7 appraisal and 4 production wells) and 4 dry wells (including 1 exploration well and 3 appraisal wells) that did not yield an industrial flow of hydrocarbons. In addition, 1 test well (due to their test nature, such wells are not subject to reservoir classification) and 2 appraisal wells were abandoned for technical reasons.

In 2020, workovers, formation tests and decommissioning operations were also performed on wells drilled in previous years, including on: four test wells (Jaworze Górne-1 – decommissioned, Kramarzówka-1K, Gilowice-1, Gilowice-3K), one of which is in trial production (Kramarzówka-1K), five appraisal wells (including one decommissioned well, three wells with field tests completed, pending further work, and one in trial production), and three production wells (including one decommissioned well, and two wells with completed development, pending production start).

In 2020, a total of 14 wells were tied-in the Sanok Branch, including: 12 wells on producing fields and two wells on the new Królewska Góra field, operated as part of the long-term test (Królewska Góra-1K, Królewska Góra-2K).

New wells brought on stream in the already producing fields by the Sanok Branch include: two wells in the Palikówka field (Palikówka-10K, Palikówka-13K), four wells in the Przeworsk field (Przeworsk-26, Przeworsk-27K, Przeworsk-28 and Przeworsk-29), operated as part of the long-term test, five wells in the Mirocin field (Mirocin-65, Mirocin-66K, Mirocin-67K, Mirocin-68K, and Mirocin-69K), operated as part of the long-term test, and one well in the Husów-Albigowa-Krasne field (Kraczkowa-3), also operated as part of the long-term test.

In the area of operations of the Zielona Góra Branch, one well (Dzieduszyce-11K) was tied-in in the Dzieduszyce field.

Table 15 PGNiG's production facilities

No. of production facilities	Sanok	Zielona Góra
Gas production facilities	18	10
Oil production facilities	5	1
Oil and gas production facilities	12	7
Total	35	18

Operations in licence areas conducted with partners

In 2020, in its licence areas PGNiG cooperated with other entities, including: LOTOS Petrobaltic S.A., ORLEN Upstream Sp. z o.o. and FX Energy Poland Sp. z o.o. (with effect from January 1st 2020, FX Energy Poland Sp. z o.o.'s interest was acquired by ORLEN Upstream Sp. z o.o.).

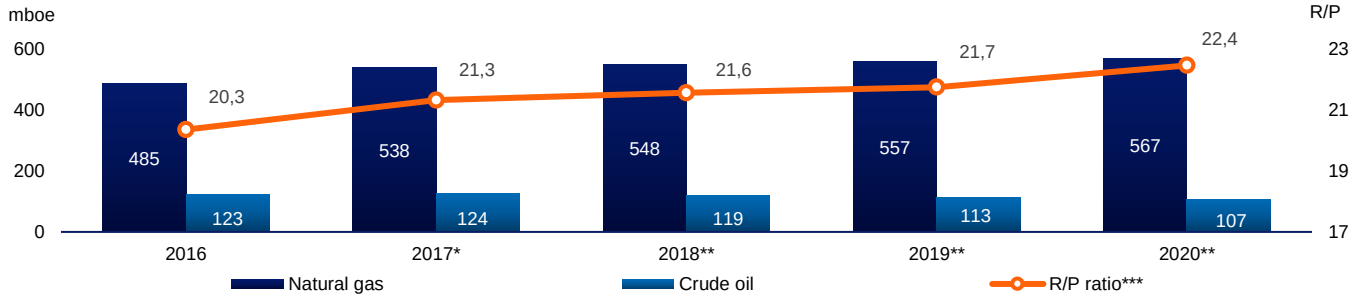
Under licences held by PGNiG, work was continued in the following areas:

- Płotki – under the joint operations agreement dated May 12th 2000; licence interests: PGNiG (operator) – 51%, FX Energy Poland Sp. z o.o. – 49%.
- Poznań – under the joint operations agreement dated June 1st 2004; licence interests: PGNiG (operator) – 51%, FX Energy Poland Sp. z o.o. – 49%.
- Bieszczady – under the joint operations agreement dated June 1st 2007; licence interests: PGNiG (operator) – 51%, Eurogas Polska Sp. z o.o. – 24%, and Energia Bieszczady Sp. z o.o. – 25%. On July 20th 2015, ORLEN Upstream Sp. z o.o. acquired a 49% interest in licence blocks and in parts of the blocks owned by Eurogas Polska Sp. z o.o. and Energia Bieszczady Sp. z o.o. On April 30th 2020, ORLEN Upstream terminated the 'Bieszczady' joint operations agreement.
- 'Sieraków' – under the joint operations agreement dated June 22nd 2009; licence interests: PGNiG (operator) – 51%, ORLEN Upstream Sp. z o.o. – 49%.
- Górowo Iławieckie – under the joint operations agreement dated December 31st 2014; licence interests: PGNiG (operator) – 51%, LOTOS Petrobaltic S.A. – 49%.

Recoverable reserves

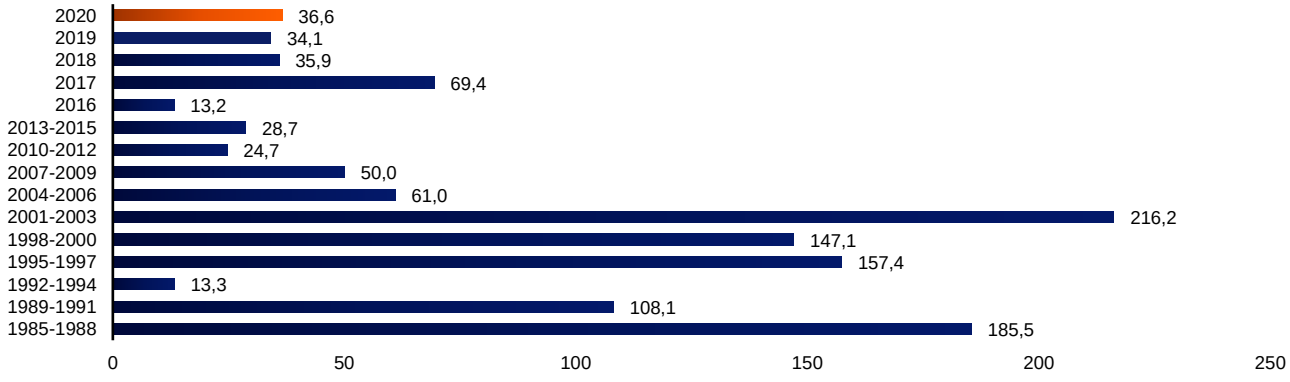
As at December 31st 2020, the total recoverable reserves (including reserves covered by geological prospecting documentation as well as clearance documentation submitted to the Ministry of Climate and Environment, pending approval by the Minister) were 14,667 thousand tonnes of crude oil and 87,923 mcm of natural gas (high-methane gas equivalent).

Chart 12 Recoverable reserves documented by PGNiG in Poland in 2016–2020 and the R/P ratio (mboe)***



** Includes reserve increase specified in the documentation approved by the Commission for Mineral Resources, pending approval by the Minister.*
*** Including reserves covered by the submitted geological prospecting documentation and clearance documentation, pending approval by the Minister.*
**** Ratio of the hydrocarbon reserves to the production volume.*

Chart 13 Recoverable reserves documented by PGNiG in Poland in 1988−2020 (mboe)



** Increase in recoverable reserves in 2020, including verification documentation.*

Use of the extracted hydrocarbons

The main products sold by the Exploration and Production segment are high-methane gas, nitrogen-rich gas and crude oil. Some of the produced nitrogen-rich gas is further treated into high-methane gas at the Odolanów and Grodzisk Wielkopolski nitrogen rejection units. Other products, derived from crude purification, include sulfur, and propane-butane.

Part of the natural gas extracted in Poland is sold directly from gas fields to non-PGNiG Group customers, and also within the PGNiG Group.

As regards trading in crude oil extracted in Poland, in 2020 PGNiG continued its trading partnerships with major Polish and foreign players in the fuel sector. Crude oil is delivered by rail to the Grupa LOTOS S.A. refinery in Gdańsk and to ORLEN Południe S.A.'s Trzebinia Production Plant (the ORLEN Group). Supplies to the ORLEN Południe S.A.'s Jedlicze Production Plant are delivered by road. Crude oil is also supplied, via the PERN pipeline, to TOTSA Total Oil Trading S.A.. PGNiG sells crude oil at market prices.

Competition

Domestic production of natural gas in Poland in 2020 was approximately 41.8 TWh, of which 0.7 TWh was produced by competitors of PGNiG. Their share in the production of natural gas in Poland is approximately 1.6%.

Key projects and investments in Poland

In 2020, PGNiG's capital expenditure in the Exploration and Production segment was approximately PLN 884m. The key exploration / appraisal / research projects in 2020 included:

- drilling of Nowe Sady 1 and Kramarzówka 3 test wells;
- drilling of Grochowce 1K and Kramarzówka 3H appraisal wells;
- drilling of Paproć-66H and Przemyśl-318K production wells.

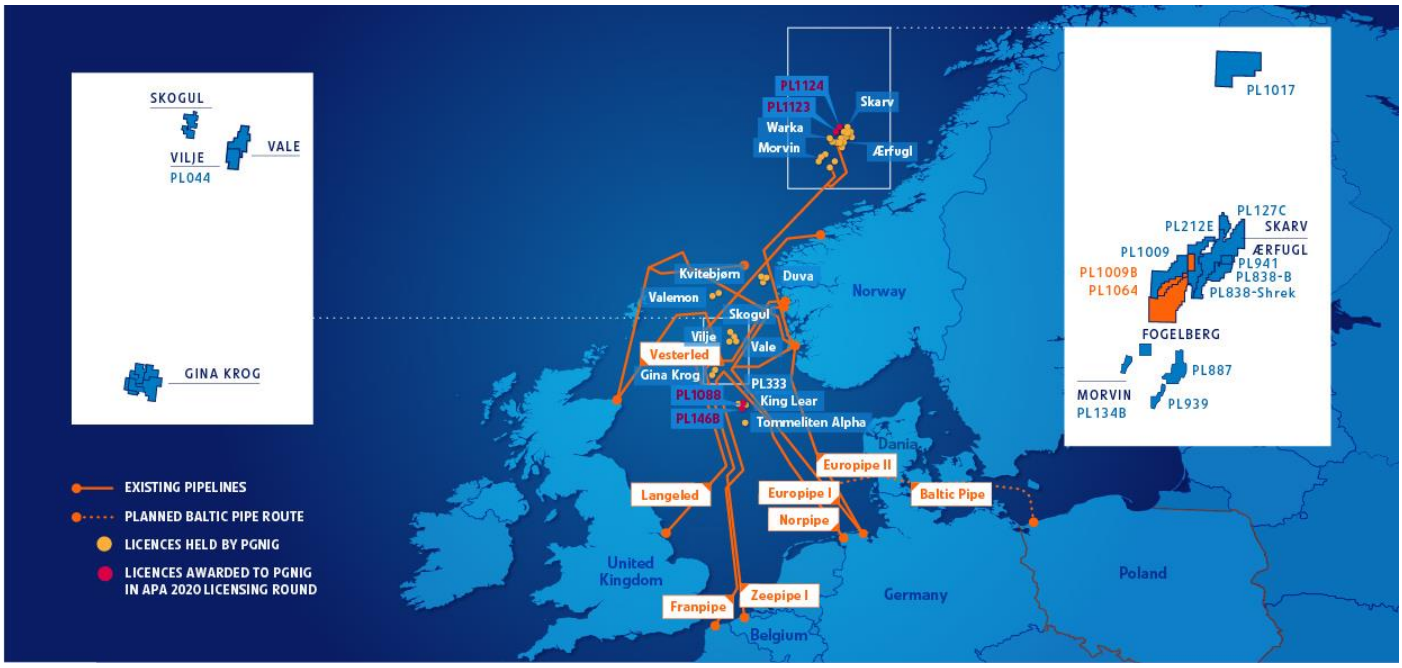
PGNiG's capital expenditure on exploration activities in Poland was approximately PLN 587m. The key projects in 2020 included:

- installation of additional compressor at the Żołynia facility;
- installation of booster compressor at KGZ Tarnów II;
- development of the Gilowice 3 pad;
- development of the Przemyśl 288K, 302K, 305K - Żurawica wells;
- installation of gas compressor at the Tarchał field;
- connection of the Mirocin 66K, 67K, 68K, 69K wells (Mirocin facility) – the project will be completed in 2021.

4.1.3 Foreign operations

Norway

Figure 4 PGNiG UN licences and fields



Source: In-house analysis based on PGNiG UN data.

PGNiG UN holds interests in production, and exploration and production licences on the Norwegian Continental Shelf in the Norwegian Sea and in the North Sea. Together with its partners the company produces hydrocarbons from the Skarv, Morvin, Vilje, Vale, Gina Krog, Skogul, Kvitebjorn and Valemon fields and works on the development of the Ærfugl, Duva and Snadd Outer fields. Development of the Tommeliten Alpha, Shrek, Alve Nord and King Lear fields is at the concept phase. In the other licence areas, the PGNiG UN is engaged in exploration projects and also works towards ensuring stable, predictable and long-term gas supplies to Poland. These efforts include involvement in the construction of infrastructure between Norway and Poland (the Baltic Pipe project), and also potential acquisitions of gas fields in Norway. For more information on the Baltic Pipe project, see Section 3.1.

In 2020, the company produced a total of 615 thousand tonnes of crude oil with condensate and NGL (measured as tonnes of crude oil equivalent), and 0.47 bcm of natural gas from the Skarv, Morvin, Vilje, Vale, Skogul, Ærfugl (phase 1) and Gina Krog fields. The production volume increased year on year as a result of the start of production from the Skogul and Ærfugl fields (phase 1).

In 2020, the company continued the development of the Ærfugl, Duva and Snadd Outer fields, in which PGNiG UN is a partner. The work in 2020 included assembly of production equipment and drilling of production wells. Aker BP is the operator of the Ærfugl and Snadd Outer fileds, while the Duva project is operated by Neptune. The first wells in the Ærfugl development began to produce hydrocarbons in 2020, while production from the Snadd Outer and Duva fields is scheduled to begin in 2021.

In January 2020, PGNiG UN completed the acquisition of 10% interests in licences PL636 and PL636C covering the Duva field. Neptune, with 30% interests, is the operator of licences PL636 and PL636C.

In February 2020, PGNiG UN purchased from Aker BP a 20% interest in the PL29B licence, representing 3.3% of the Gina Krog field, and an 11.9175% interest in the PL127C licence which covers the Alve Nord discovery. In the same transaction, PGNiG UN sold 5% of shares in the Shrek field (PL838 licence), thus reducing its interest in the asset from 40% to 35% and transferring the operator licence to Aker BP for the duration of the development work. The operators on the Gina Krog and Alve Nord fields are Equinor and Aker BP, respectively. The transaction was finalised in April 2020.

In September 2020, PGNiG UN purchased from Shell a 6.45% interest in the PL193, PL193B, PL193C and PL193D licence areas, including a 6.45% interest in the Kvitebjorn field and a 3.225% interest in the Valemon field. Equinor is the operator of both fields. The acquisition significantly contributed to PGNiG UN's strategic objective of increasing gas production from its own assets. The transaction was finalised at the end of December 2020.

As a result of the transactions, in 2020 PGNiG UN also achieved a significant increase in proven reserves, from 169.4 mboe at the beginning of the year to 214.1 mboe at the end of 2020. The increase in reserves, in addition to the acquisitions described above, was also driven by the recognition of the reserves of the Shrek field discovered by PGNiG in 2019 and the revaluation of reserves at the other fields held by PGNiG UN.

In January 2020, another APA 2019 (Awards in Pre-defined Areas) round was concluded, as a result of which PGNiG UN obtained interests in three exploration licences:

- The PL636C licence is an extension of the PL636 licence, whose area includes the Duva oil and gas field. The field's operator is Neptune Energy Norge (with a 30% interest), and the other partners are Idemitsu (30%) and Sval Energy (10%).
- The PL1009B licence is an extension of the PL1009 licence, where PGNiG UN, together with ConocoPhillips, discovered the Warka field in the second half of 2020. PGNiG UN has a 35% interest in the licence, and ConocoPhillips (with a 65% interest) is the operator.
- The PL1064 licence, in which PGNiG UN obtained a 30% interest, is located near the Skarv field in the immediate vicinity of the PL1009 and PL1009B licence areas. The operator is ConocoPhillips (40% interest) and the other partner, apart from PGNiG UN, is Aker BP (30%). A commitment to drill an exploration well has been made under the licence.

The new licences have significant gas production potential. All three licence areas are located close to the existing production and pipeline infrastructure, so if a decision to proceed with their development is made, the process will be much simpler and faster. The PL1009B and PL1064 licence areas are located near the Skarv field, the largest field in the PGNiG UN's asset portfolio, and near the Åsgard field, allowing the company to leverage its extensive experience in oil and gas exploration in this region.

In January 2021, another APA 2020 (Awards in Pre-defined Areas) round was concluded, as a result of which PGNiG UN obtained interests in four exploration licences:

- Licence PL146B (extension of the King Lear field). The licence operator is Aker BP (77.8%), with the remaining interest held by PGNiG UN (22.2%).
- The PL1088 licence is located in the North Sea in the immediate vicinity of the PL146 licence (King Lear). The ownership structure is identical to the ownership structure of the King Lear project. The licence operator is Aker BP (77.8%), with the remaining interest held by PGNiG UN (22.2%). The work programme includes geological and geophysical studies with the decision whether to drill an exploration well to be made within the next 2 years.
- The PL1123 licence, in which PGNiG UN obtained a 30% interest, is located near the Skarv field. The operator is ConocoPhillips (a 40% interest) and the other partner, apart from PGNiG UN, is Aker BP (30%). Also in this case, the shareholders have two years to decide whether to drill an exploration well.
- The PL1124 licence, in which PGNiG UN received 11.9175% interest, is located in the Norwegian Sea in the immediate vicinity of the Skarv field. Aker BP became the operator on the licence (a 23.835% interest), and the other partners are Equinor (36.165%) and Wintershall Dea (28.0825%). The shareholders have two years to decide whether to drill an exploration well.

All four licence areas are located close to the existing production and pipeline infrastructure, so if a decision to proceed with their development is made, the process will be simpler and faster. All four licences are also located in the immediate vicinity of the fields where PGNiG UN is already present (Skarv and King Lear). In case of commercial discoveries, potential connection of the licence areas to Skarv and King Lear would offer additional synergies in the form of incremental revenue derived from the provision of access to the existing infrastructure of the Skarv and/or King Lear fields.

Jointly with its partners, PGNiG UN also continued work in other exploration licence areas. In the second half of 2020, PGNiG UN participated in drilling two successful wells. Under the PL1009/PL1009B licence, in which PGNiG UN holds a 35% interest, the company drilled an exploration well and discovered the Warka field. Preliminary estimates show reserves of between 50-189 mboe. Located in the Norwegian Sea, the PL1009/PL1009B licence area is directly adjacent to the Skarv and Ærfugl fields, in which PGNiG UN holds 12% interests as a partner. Currently, drilling of appraisal wells is planned as part of the discovery. The second well was drilled on the PL127C licence, in which the company holds 11.9175% interest; also in this case the presence of hydrocarbons was documented.

As at December 31st 2020, PGNiG UN held interests in 32 exploration and production licences on the Norwegian Continental Shelf, in two of them as the operator. At the beginning of 2021, the number of licences grew to 36, following resolution of the most recent licensing round (four licences).

Table 16 PGNiG UN deposits as at December 31st 2020

Licence	Operator	Interest	Type of deposit	Type of licence	Planned activities
PL029B (Gina Krog)	Equinor	20% (11.3% interest in the project)	Oil and gas field	Exploration/development	Production, exploration
PL029C (Gina Krog)		29.63% (11.3% interest in the project)			
PL036D (Vilje)	Aker BP	24.243%	Oil field	Production	Production
PL044	ConocoPhilips	30% for exploration (42.38% interest in Tommeliten Alpha)	Gas and condensate field	Exploration/development	Exploration/Preparation of a development concept
PL036 (Vale)	Spirit	24.243%	Gas and condensate field	Production	Production
PL249 (Vale)					

PL127C (Alve Nord)	Aker BP	11.9175%	Gas and condensate field	Exploration/development	Exploration/Preparation of a development concept
PL146 (King Lear) PL333	AkerBP	22.2%	Gas and condensate field	Exploration/development preparation	Preparation of a development concept
PL134B (Morvin) PL134C (Morvin)	Equinor	6%	Oil field	Production	Production, exploration
PL193 (Kvitebjorn) PL193B (Kvitebjorn) PL193C (Kvitebjorn)	Equinor	6.45%	Gas and condensate field	Production	Production, exploration
PL193D (Valemon)	Equinor	6.45% (3.225% in the project)	Gas and condensate field	Production	Production, exploration
PL212 (Skarv) PL212B (Skarv) PL262 (Skarv)	AkerBP	15% (11.9175% interest in the project)	Oil and gas field	Exploration/development/ production	Production, Ærfugl field development (production to commence in 2020)
PL212E (Snadd Outer)	AkerBP	15%	Gas and condensate field	Development	Project implemented jointly with Ærfugl development
PL433 (Fogelberg)	Spirit	20%	Gas and condensate field	Exploration/appraisal	Analysis of alternative development concepts
PL460 (Skogul)	Aker BP	35%	Oil field	Exploration/development	Production started in 2020
PL636 (Duva) PL636C	Neptune	30%	Gas and condensate field	Development	Development (production scheduled to start in 2021)
PL636B	Neptune	20%		Exploration	Decision on drilling to be made in 2021
PL838 (Shrek)	Aker BP	35%	Oil field	Exploration	Field discovered as a result of drilling a well in 2019, development studies
Op.PL838B	PGNiG	40%		Exploration	Decision on drilling to be made in 2021
PL939 (Egyptian Vulter)	Equinor	30%		Exploration	Drilling planned for 2021
PL941 (Gronlifielet)	AkerBP	20%		Exploration	DoD decision* in March 2021
PL1009 (Warka) PL1009B (Warka)	ConocoPhilips	35%		Exploration	Drilling of appraisal well planned
PL1017 (Copernicus)	PGNiG	50%	-	Exploration	DoD decision* in March 2021
PL1064 (Peder)	ConocoPhilips	30%		Exploration	Well to be drilled in 2022

**Drill-or-drop decision – a decision to either commit to drilling exploration wells or relinquish the licence*

Producing fields

The Skarv field was brought on stream in December 2012. Currently it is developed with 16 wells connected to five subsea templates, which can support a further seven wells, adding much flexibility to the Skarv operations going forward. The Skarv FPSO floating platform has an assumed long service life - the platform is an attractive production and transportation hub for further discoveries in the region.

Reserves at the end of 2020: approximately 16.5 mboe, including 10.6 mboe of natural gas and 5.9 mboe of crude oil and NGL

The Gina Krog field is an oil and gas field brought on stream in June 2017 with five wells. The number of wells has increased to 14, of which 4 are used to inject gas, thus allowing optimum recovery of crude oil reserves. The field was developed based on the construction of a new offshore rig and use of a 850,000 bbl floating vessel to store crude oil. From the vessel crude is transported by tankers (with intermediate reloading at sea). Raw natural gas is transmitted to the Sleipner platform, from which it is pumped to the Gassled pipelines. Condensate and NGL are shipped to processing plants in Kårstø, Norway. As a result of the 2020 transaction, PGNiG UN's interest in the project increased from 8% to 11.3%.

Reserves at the end of 2020: approximately 15.1 mboe, including 8.7 mboe of natural gas and 6.4 mboe of crude oil and NGL

The Vilje field is located in the central part of the North Sea, close to the Alvheim and Heimdal facilities. The field is developed with three subsea wells linked by pipeline to the Alvheim FPSO vessel.

Reserves at the end of 2020: approximately 3.3 mboe of crude oil

The Vale field is a gas and condensate field discovered in the North Sea in 1991. Despite the downtimes that occurred in 2018–2020, output from the Vale field is expected to rise in the coming years as a result of recent investments made in the Heimdal platform.

Reserves at the end of 2020: approximately 0.9 mboe, including 0.6 mboe of natural gas and 0.3 mboe of crude oil and NGL

The Morvin field was discovered in the Norwegian Sea in 2001. Hydrocarbons are produced through two subsea templates. The field is tied back to the Åsgard B platform.

Reserves at the end of 2020: approximately 1.7 mboe, including 0.7 mboe of natural gas and 1.1 mboe of crude oil

Skogul is on oil field situated in the North Sea near the Vilje field. The development plan covered drilling one well connected to the subsea facilities of the Vilje field, and then using the existing infrastructure, including the Alvheim FPSO platform. Production started in the first quarter of 2020.

Reserves at the end of 2020: approximately 2.1 mboe, including 0.2 mboe of natural gas and 1.9 mboe of crude oil

The Kvitebjorn field was discovered in 1994 and the decision to develop the asset was made in 2000. Production started in 2004. The development involved construction of a dedicated rig with a permanently drilling unit. This allows further wells to be drilled as part of the project. The acquisition by PGNiG UN of a 6.45% interest in the deposit was finalised at the end of December 2020.

Reserves at the end of 2020: approximately 11.6 mboe, including 9.4 mboe of natural gas and 2.1 mboe of crude oil

The Valemon field was discovered in 1985 and the investment decision was approved in 2011. Production started in 2015. The development consisted of erecting an unmanned platform with a simplified separation system. Pre-separated oil is transported to the Kvitebjorn platform, while gas is delivered to the Heimdal platform. At present, due to the planned decommissioning of the Heimdal platform, a project has been initiated to divert gas for further processing to the Kvitebjorn platform.

Reserves at the end of 2020: approximately 1.1 mboe, including 1.0 mboe of natural gas and 0.1 mboe of crude oil + NGL

Deposits in the phase of development or selection of development concept

Tommeliten Alpha is a gas and condensate discovery located in the North Sea in the immediate vicinity of the Ekofisk field. Its reserves are likely to prove higher than confirmed to date, while the PL044 licence offers considerable potential for further exploration work. According to the current schedule, first oil is expected in 2024.

Reserves at the end of 2020: approximately 58.4 mboe, including 40.7 mboe of natural gas and 17.8 mboe of crude oil + NGL

The Ærfugl and Snadd Outer fields are gas and condensate discoveries in the Skarv licence area. Six additional wells are currently being drilled in the field, of which three have already started production. Wells on both jointly developed fields will be tied, using the existing infrastructure, to the Skarv FPSO for further hydrocarbon transmission. The schedule calls for production from phase two development to commence in the fourth quarter of 2021.

Ærfugl reserves at the end of 2020: approximately 25.3 mboe, including 18.2 mboe of natural gas and 7.1 mboe of crude oil + NGL

Sandd Outer reserves at the end of 2020: approximately 4 mboe, including 3 mboe of natural gas and 1 mboe of crude oil + NGL

The Duva field is a 2,200 m deep gas and oil field with good reservoir characteristics. It is located in the northern part of the North Sea near the Gjøa field. Duva was discovered in 2016. Its development plan, approved in 2019, envisages the installation of a subsea foundation slab, prepared for tying in four production wells. The stream of hydrocarbons will be sent via subsea pipelines to the Gjøa platform in order to process and export the hydrocarbons.

As at the end of 2020, investment work to develop the field was under way. Production is scheduled to commence in 2021. Hydrocarbons from Duva will be produced by gradually lowering reservoir pressure. Initially, mainly crude oil will be extracted, and as of 2023 the share of natural gas in production will start to go up.

Reserves at the end of 2020: approximately 27.3 mboe, including 15.4 mboe of natural gas and 11.9 mboe of crude oil + NGL

King Lear is a gas and condensate discovery located in the North Sea. In 2020, work was underway on the development concept for the deposit. The investment process is planned for 2021–2024 with production to start in 2025. According to current data provided by the field's operator, once production starts, the gas output allocated to PGNiG UN should amount to approximately 0.25 bcm a year.

Reserves at the end of 2020: approximately 35.4 mboe, including 14.8 mboe of natural gas and 20.6 mboe of crude oil + NGL

The Shrek field is an oil discovery located in the immediate vicinity of the Skarv FPSO. The field was proven using the exploration well drilled in 2019 and operated by PGNiG UN. The operatorship was transferred to Aker BP for the duration of the development phase.

Reserves at the end of 2020: approximately 6.0 mboe, including 2.2 mboe of natural gas and 3.8 mboe of crude oil + NGL

Alve Nord was discovered in 2011. At present, Aker BP, the project operator, is preparing the field development concept. Production is expected to start in 2025.

Reserves at the end of 2020: approximately 5.3 mboe, including 3.5 mboe of natural gas and 1.8 mboe of crude oil + NGL

Exploration/appraisal prospects

Fogelberg is a condensate and gas prospect located in the Norwegian Sea, north-east of the Morvin field. In 2020, data sourced from the well in 2018 continued to be analysed, focusing mainly on the productivity of the field and determination of recoverable reserves.

The Warka field is an oil prospect located in the immediate vicinity of the Skarv FPSO. The field was proven through the exploration well drilled in 2020 by ConocoPhilips. According to preliminary calculations, the recoverable reserves in the Warka field in the PL1009/1009B licence areas are approximately 50–189 mboe, as confirmed by the Norwegian Petroleum Directorate (NPD). PGNiG UN holds a 35% interest in the discovery. At present, drilling of the appraisal well is planned to confirm the commercial viability of the discovery.

Sales of hydrocarbons

Crude oil is sold directly from the fields to Shell International Trading and Shipping Company Ltd. (crude from the Skarv Unit, Vilje, Vale, Skogul, Kvitebjorn, Valemon and Gina Krog 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 gas pipelines mainly to Germany, where it is received by PST, a PGNiG Group company.

Changes in the regulatory environment

In June 2020 the Norwegian Parliament approved temporary amendments to the tax law to support the oil industry and introduce incentives to invest on the Norwegian Continental Shelf. The amendments to tax laws have been effective as of January 1st 2020 and include:

- direct expensing of development capital expenditure incurred under the petroleum tax regime (56%) in the year in which the expenditure was made;
- uplift for the directly expensed investments of 24% of the investment – in the investment year (previously the uplift was 20.8%, spread over four years);
- the direct expensing and the uplift apply for all costs incurred in income years 2020 and 2021 and for all expenditure on new projects approved by the end of 2022;
- refund to oil producers of the tax value of losses for income years 2020 and 2021. Refunds are made from August 2020.

These amendments significantly affect the profitability of investment projects and accelerate the return on invested funds. The regulations have a positive effect on the rate of return on projects and the liquidity of PGNiG UN. They also encourage new investments on the Norwegian Continental Shelf.

In line with the recent amendments, favourable depreciation and expensing rules were also introduced for all new projects launched in 2020-22. Direct expensing of such investments may be claimed until and including the year of planned production or operation start-up. The amendments are beneficial for PGNiG UN, which is also planning new investments that could feed into the Baltic Pipe project.

Pakistan

Through its Operator Branch, PGNiG is engaged in exploration work in Pakistan under an agreement for hydrocarbon exploration and production in the Kirthar licence area. The work is conducted jointly with Pakistan Petroleum Ltd. (PPL), with production and expenses shared pro rata to the parties' interests in the licence: PGNiG (operator) – 70%, PPL – 30%. In addition, PGNiG acquired a 25% interest in the Musakhel exploration licence. The other shareholders are Pakistan Petroleum Limited (PPL) as the operator, with a 37.2% interest, as well as Oil and Gas Development Company Limited (OGDCL) and Government Holding Private Limited (GHPL), with 35.3% and 2.5% interests, respectively.

Reserves as at the end of 2020 (nitrogen-rich gas converted to high-methane gas, attributable to PGNiG): approximately 6.64 bcm (42.8 mboe), including the Rehman field 4.88 bcm (31.4 mboe) and the Rizq field 1.76 bcm (11.4 mboe)

Gas from the Rehman and Rizq fields is produced via facilities located in the Rehman field. PGNiG's share in the production from the Rehman and Rizq fields, carried out from ten wells in 2020, was approximately 295 mcm of gas (measured as high-methane gas equivalent). The Rizq-3 production well yielded reservoir test results (work started in July 2019) and the Rehman-7 well is in the reservoir testing phase. In total, more than 2.96 km were drilled in the Rehman-7 well.

As part of the continued exploration work, in 2020 the Pakistan Branch completed basic processing and reprocessing of 3D seismic imaging of the W1 prospect and 2D seismic imaging of the W2 prospect.

United Arab Emirates

In December 2018, PGNiG's bid for the acquisition of hydrocarbon exploration, appraisal and production rights in onshore block 5 in the Emirate of Ras Al Khaimah was selected. Following the selection of its bid, the Company acquired a 90% interest in the block, with an area of 619 km^2. Agreements between PGNiG and the Ras Al Khaimah Petroleum Authority and RAK GAS LLC were signed in January 2019. The PGNiG Branch was registered in the Emirate of Ras Al Khaimah, obtained a relevant licence to conduct operations, and commenced seismic surveys.

Acquisition of seismic data started in late 2019 and the process continued until May 2020. Since then, PGNiG has been processing and interpreting data to identify locations for drilling of the first exploration well. Work is also under way to acquire rights to subsequent blocks in the Ras Al Khaimah emirate.

Ukraine

In 2020, work continued to acquire an exploration licence in western Ukraine, near the Polish-Ukraine border. In October 2020, a non-binding agreement was signed with ERU (Energy Resources of Ukraine) setting out the terms and conditions for the acquisition of shares in a company holding rights to the licence. On December 31st 2020, PGNiG and ERU Management Services LLC submitted an application to the Office of Competition and Consumer Protection to establish a joint venture.

Libya

Due to mounting safety issues in Libya in early second half of 2014, PGNiG UNA gave notice of a force majeure to the National Oil Corporation (NOC). The political situation changed during 2020 and a peace agreement was signed between the parties to the conflict in October 2020. The Company continuously monitors political developments in Libya, particularly the security of its operations in the country.

Key projects and investments abroad

PGNiG's total expenditure on its upstream operations abroad was PLN 133m, of which capital expenditure incurred in Pakistan in 2020 was PLN 75m and in the United Arab Emirates - PLN 58m.

2020 was a record year for PGNiG UN in terms of its capital expenditure, which was approximately NOK 3.37bn (PLN 1.57bn). Net of acquisitions, capital expenditure in Norway in 2020 was approximately NOK 1.86bn (PLN 0.82bn). In 2020, the company was taking steps to maintain production from its current fields while maintaining a strong operating performance, by investing in:

- additional interests in licences PL636 and PL636B, both containing the Duva field;
- interests in the PL29B licence and in the PL127C licence, which covers the Alve Nord discovery, as well as additional shares in the Gina Krog project;
- interests in the PL193, PL193B, PL193C and PL193D licence areas, including shares in the Kvitebjorn field and the Valemon field.

4.1.4 Activities supporting the segment in Poland and abroad

Geophysical services and seismic surveys

Geofizyka Toruń provides geophysical, geological and drilling services in many foreign markets. In 2020, Geofizyka Toruń engaged in the following activities:

- seismic data acquisition in: Poland, Bulgaria, Croatia, Mozambique, Germany and the United Arab Emirates;
- seismic data processing and interpretation in: Poland, the Netherlands, Colombia, Mexico, Pakistan and the United Arab Emirates;
- well logging and well measurement services were rendered in Poland, Bulgaria, Germany and Norway.

As part of its core business, Geofizyka Toruń also conducts R&D&I work through various innovative projects, including development of a method for seismic data acquisition, processing and interpretation for large-volume seismic images using nodal systems.

In 2020, on the domestic market, surveys were mainly performed for the Geology and Hydrocarbon Production Branch of PGNiG and for ORLEN Upstream Sp. z o.o. In 2020, the company completed 22 km of 2D seismic and 872 km^2 of 3D seismic acquisitions in Poland for the Geology and Hydrocarbon Production Branch. In total, the company completed 555 km of 2D seismic and 2157 km^2 of 3D seismic during the year.

Drilling operations and well services

In 2020, the Geology and Hydrocarbon Production Branch carried out drilling operations on 25 wells with a total depth of 55.6 km.

EXALO, a subsidiary of PGNiG, offers well and drilling services both for the PGNiG Group and for third parties. It is one of the leading European onshore drilling companies. EXALO's most important contracts in 2020 included:

- for PGNiG: operation of the 2000 KM drilling rig and provision of oilfield services, including drilling; drilling services in Pakistan;
- for third-party customers: well drilling for customers in Pakistan, Chad, Kazakhstan, and provision of oilfield services in Ukraine under a drilling contract.

Underground gas storage facilities

The segment's operations are supported by two nitrogen-rich gas storage facilities (Daszewo UGSF and Bonikowo UGSF), whose main role is to regulate the operation of the nitrogen-rich gas system and store gas from nitrogen-rich gas production facilities.

The classification of these storage facilities is different from the high-methane gas storage facilities (which are part of the Trade and Storage segment) because of the different type of gas stored and their different function.

Table 17 Underground gas storage facilities

	Working capacity	Maximum withdrawal capacity	Maximum injection capacity
	mcm	mcm/d	mcm/d
Bonikowo	200	2.4	1.7
Daszewo	60	0.4	0.2

4.1.5 Development prospects and challenges for the future

Poland

In 2021, PGNiG plans to produce in Poland 3.8 bcm of natural gas (measured as high-methane gas equivalent), and 0.667m tonnes of crude oil and condensate.

Work planned for 2021 in the Sanok Production Branch includes:

- development and tie-in of the Brzyska Wola 2 and Dąbrowica Duża 3,6 - Żołynia wells;
- development of the following wells: Sędziszów (38K, 39K) OZG Sędziszów – KGZ Czarna Sędziszowska, Kramarzówka 1(K, 2H, 3H) – KGZ Tuligłowy, Korzeniówek 1 – KGZ Pilzno, Przemyśl (287K, 289K, 290 – KGZ Przemyśl Zachód, Przemyśl (303K, 304K) – KGZ Przemyśl Wschód, Rogoźnica (3K,4K,5K) – KGZ Zalesie, Nowe Sioło -1 i Mielniki-1 – KGZ Lubaczów, Przemyśl (299K, 308K) – KGZ Hurko, Przemyśl (291K, 292K, 316K, 317K, 318K) – Przemyśl Zachód;
- tie-in of the following wells: Jastrzębiec 2,3 – KGZ Tarnogród, Wielgoszówka 1K – KGZ Szczepanów, Draganowa 4K, OZG Draganowa – KRNiGZ Bóbrka – Równe;
- installation of an additional gas compressor at OZG Palikówka – KGZ Krasne.

The activities planned by the Zielona Góra Branch include:

- expansion of KRNiGZ Lubiatów to increase production output from the Międzychód field;
- expansion of KRNiGZ Dębno – development of the Różańsko field;
- development of the following fields: Kamień Mały, Babimost, Zbąszyń, Rokietnica (including construction of gas transmission pipeline from Grodzisk Wlkopolski to Kościan), Gryżyna, Czeszów;
- development of the following wells: Wielichowo-8, Koźminiec-1, Grotów (4K, 10 and 12K), Sieraków-2H, Chwalęcin-1K, Borowo-5, Granówko-1, Szczepowice-1, Turkowo-2, Brońsko-30, Paproć-66H;
- construction of a cogeneration source for KRNiGZ Dębno;
- upgrade of KRNiGZ Zielin;
- construction of a natural gas compressor station at OC KGZ Kościan-Brońsko.

PGNiG's production branches will also engage in other investment projects, focusing mainly on maintaining or ramping up hydrocarbon production. Such projects include, for instance, work related to the installation of gas compressors or upgrade of flowline systems or gas pipelines.

Norway

On the Norwegian Continental Shelf, PGNiG UN will continue, as a partner, to produce hydrocarbons from the Skarv, Ærfugl, Morvin, Vilje, Vale and Gina Krog, Skogul, Kvitebjorn and Valemon fields and will develop the Ærfugl Nord and Duva fields. Development of the Tommeliten Alpha, Shrek, Alve Nord and King Lear fields is at the concept phase. PGNiG UN also works towards ensuring stable, predictable and long-term gas supplies to Poland. These include both support for the construction of infrastructure to physically bring Norwegian gas to Poland and potential acquisitions of production and/or pre-production assets on the Norwegian Continental Shelf.

In 2021, the company plans to increase gas production/exports by starting production at the Ærfugl (phase 2) and Duva fields, as well as expanding exploration activities at licences PL939 (drilling of exploration wells) and PL1009 and PL1064 (preparing for drillings scheduled for 2022).

Pakistan

Appraisal and production work is scheduled for 2021 to complete reservoir testing and tie-in the Rehman-7 development well, to drill the Rehman-8 development well, and to start drilling the Rizq-4 development well. In parallel with the drilling campaign, the PGNiG

Pakistan Branch will work on expanding the capacity of the production infrastructure and tying. As part of continued exploration work, the Pakistan Branch also intends to complete interpretation of 3D seismics from the W1 prospect and 2D seismics from the W2 prospect. Based on the results of this interpretation, preparatory work will be carried out for future exploration wells.

Seismic surveys are scheduled to commence on the Musakhel licence in 2021 to decide whether to proceed to the next exploration phase.

Ukraine

In 2021, the Group intends to acquire shares in ERU (Energy Resources of Ukraine) and commence operations in the country. There are also plans to start cooperation with Ukrgazgazania in Western Ukraine.

Geophysical services and seismic surveys

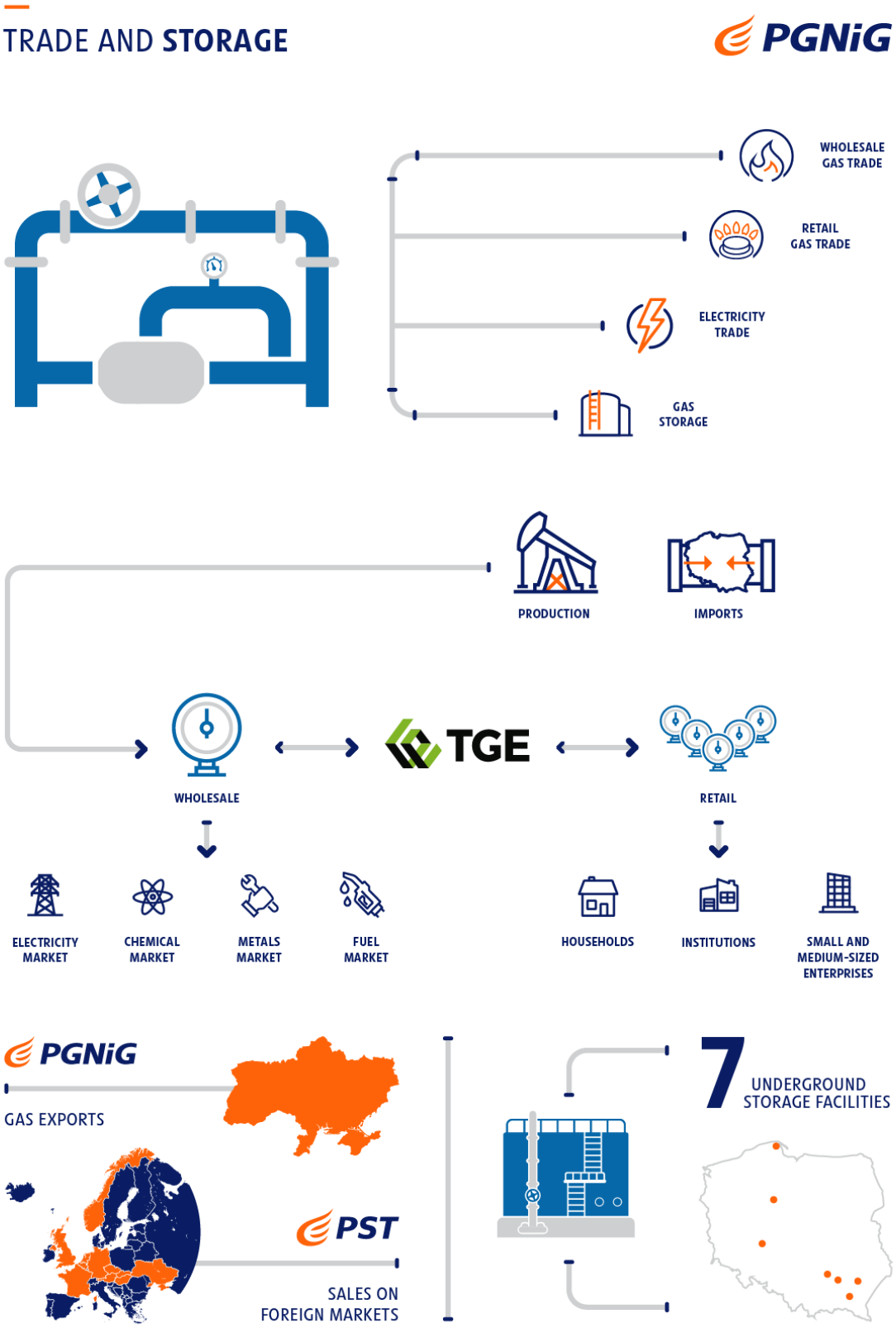
Given the potential decline in demand for hydrocarbon exploration in Poland and Europe due to the green transition process, Geofizyka Torun will continue market diversification efforts. The company will also offer new technologies and its own innovative solutions to acquire, process and interpret geophysical data. The company intends to maximise the use of its competencies and existing technology solutions for the decarbonisation of the energy sector and to expand its portfolio of services by targeting areas such as geothermal energy, carbon capture, storage and utilisation, and wind energy. It will also work towards strengthening its position in the market for onshore and offshore geological, drilling and geotechnical services.

Drilling operations and well services

EXALO sees potential for further growth in geothermal drilling and drilling for underground gas storage. It is planned to strengthen the company's position in the geothermal market, to continue building brand recognition as a contractor of this type of works, and to win new drilling contracts through increased competitiveness. Furthermore, in order to meet customers' expectations, EXALO has begun to participate in tenders for the provision of "turnkey" drilling services (comprehensive drilling of a well, from preparation of access roads and the drilling site, supply of necessary utilities and development of the well) in markets where equipment and operational facilities are available.

4.2 Trade and Storage

In Poland, where the PGNiG Group is the largest natural gas supplier, the segment sells natural gas produced from domestic fields as well as imported gas. Through PST, the PGNiG Group is developing its foreign operations. The segment also trades in electricity, certificates of origin for electricity, CO_2 emission allowances, and crude oil (since 2018, through PST). In order to conduct trading activities on the global LNG market, the company established a branch in London. The segment operates seven underground gas storage facilities and provides a ticketing service for gas storage to external customers.



4.2.1 Key operating metrics

Table 18 Volumes of natural gas sales to non-PGNiG Group customers in the Trade and Storage segment

mcm	2020		2019		2018	2017	2016
	PGNiG Group	PGNiG	PGNiG Group	PGNiG	PGNiG Group	PGNiG Group	PGNiG Group
High-methane gas (E)	29,930	17,769	29,031	16,464	27,440	22,818	21,596
Nitrogen-rich gas (Ls/Lw as E equivalent)	745	261	751	262	721	671	611
Total (measured as E equivalent)	30,675	18,030	29,782	16,726	28,161	23,489	22,207
including:							
PGNiG – Wholesale	*18,030*	*18,030*	*16,726*	*16,726*	*16,364*	*13,734*	*12,415*
PGNiG OD – Retail sale	*8,198*	-	*7,815*	-	*7,868*	*7,245*	*7,753*
PST – Wholesale/retail sale	*4,447*	-	*5,242*	-	*3,929*	*2,510*	*2,039*

Table 19 T&S segment's natural gas customers from outside the PGNiG Group – Poland

mcm	2020		2019	
	PGNiG Group	PGNiG	PGNiG Group	PGNiG
Households	4,354	0	4,152	0
Retail, services, wholesale	1,556	372	1,597	342
Nitrogen processing plants	2,526	2,519	2,272	2,264
Power and heat plants	1,542	1,161	1,927	1,749
Refineries and petrochemical plants	2,412	2,400	2,020	2,013
Other industrial customers	3,583	692	3,182	903
Exchange	9,742	9,647	9,061	8,910
Total T&S sales to non-PGNiG Group customers	25,715	16,791	24,211	16,181

Table 20 Volumes of natural gas sales to non-PGNiG Group customers outside Poland

mcm	2020	2019	2018	2017	2016
	PGNiG Group	PGNiG Group	PGNiG Group	PGNiG Group	PGNiG Group
PST	3,720	5,028	3,929	2,186	2,384
Exports from Poland and sales in Ukraine	1,239	544	451	728	370
Total (measured as E equivalent), including:	4,959	5,572	4,380	2,914	2,754

Table 21 Non-PGNiG Group gas customers outside of Poland

mcm	2020		2019	
	PGNiG Group	PGNiG	PGNiG Group	PGNiG
Households	18	-	32	-
Retail, services, wholesale	1,586	-	2,677	-
Other industrial customers	14	-	16	-
Exchange	2,105	-	2,303	-
Exports from Poland and sales in Ukraine	1,239	1,239	544	544
Total T&S sales to non-PGNiG Group customers	4,959	1,239	5,572	544

Table 22 PGNiG's electricity customer base in the T&S segment

	2020		2019	
	GWh	Share (%)	GWh	Share (%)
End users	0	0%	-	-
Trading companies	151	1%	492	6%
Balancing market	50	1%	353	5%
Exchange	8,875	90%	6,713	85%
Producers	832	8%	325	4%
Total PGNiG's sales	9,908	100%	7,883.0	100%

Table 23 Total working storage capacities and TPA working storage capacities

	Working storage capacities (mcm)		TPA working storage capacities (mcm)		TPA working storage capacities (GWh)	
	2020	2019	2020	2019	2020	2019
Kawerna Storage Facilities Group	825	825	810	813	8,883	8,915
Wierzchowice SF	1,300	1,200	1,300	1,200	14,264	13,166
Sanok Storage Facilities Group	1,050	1,050	1,050	1,050	11,521	11,521
Total	3,175	3,075	3,160	3,063	34,668	33,602

** Converted to gas with calorific value of 39.5 MJ/m^3.*

4.2.2 Wholesale business

4.2.2.1 Operations in Poland

PGNiG's activities include the wholesale of natural gas produced from domestic fields and imported via pipelines and by sea. Through its specialised unit, the Wholesale Trading Branch, it trades in natural gas, LNG, crude oil, electricity, CO_2 emission allowances, and property rights. The Wholesale Trading Branch is also responsible for the import policy and diversification of gas fuel supply sources to Poland.

As part of its business, PGNiG holds a licence to trade in gas fuels, trade in natural gas abroad, generate electricity, trade in electricity, liquefy natural gas, and regasify liquefied natural gas at LNG regasification plants.

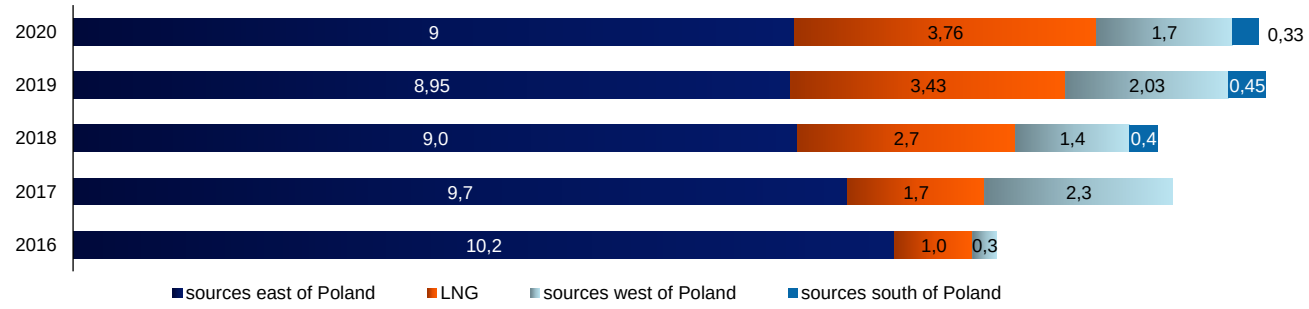
Gas imports

In 2020, PGNiG purchased natural gas mainly under the long-term agreements and contracts specified below:

- Contract with PAO Gazprom/OOO Gazprom Export, for sale of natural gas to the Republic of Poland, dated September 25th 1996, effective until 2022 (the Yamal contract);
- Contract with Qatar Liquefied Gas Company Limited (3) for sale of liquefied natural gas, dated June 29th 2009, effective until 2034 (the Qatar contract), and supplementary agreement to the long-term agreement of March 2017 (effective from the beginning of 2018 to 2034);
- Contract with Cheniere Marketing International, LLP for sale / purchase of liquefied natural gas, dated November 8th 2018, effective until 2042.

Deliveries were also made under medium- and short-term grid and LNG supply contracts (including a 5-year contract, the execution of which began in 2018, for the delivery of nine shipments of liquefied natural gas from Centrica LNG Company Limited).

Chart 14 Imports of natural gas to Poland in 2016–2020 (bcm)



In 2020, the imported gas volume was 162.2 Twh (14.8 bcm). Gas purchases from the eastern direction increased slightly, with 0.5 TWh (about 0.05 bcm) more gas purchased from this direction relative to 2019. LNG deliveries increased significantly, from 37.6 TWh (3.43 bcm) in 2019, to 41.2 TWh (3.76 bcm) in 2020.

Following the conclusion of long-term contracts for the purchase of LNG at U.S. terminals in previous years, in 2020 PST chartered two tankers from the Norwegian shipowner Knutsen OAS Shipping to collect LNG contracted on a free-on-board basis. The two modern vessels, with a capacity of 174,000 m^3 each, will become operational in 2023. The acquisition of the vessels will increase the flexibility of LNG purchases and sales and is another step towards developing the PGNiG Group's trading activities on the global market. For more information, see Section 4.2.2.2.

PGNiG actively supports all efforts aimed at the construction of an infrastructural connection that would give Poland direct access to gas from North Sea fields. In January 2018, contracts were concluded for the provision of gas transmission services in the period from October 1st 2022 to October 1st 2037, as part of the 2017 Open Season procedure of the Baltic Pipe project, concerning gas transmission from Norway to Poland via Denmark. Conclusion of transmission contracts with transmission system operators, i.e. GAZ-SYSTEM and Energinet, with a total value of PLN 8.1bn, was the last stage of the Open Season 2017 procedure. For more information on the Baltic Pipe project, see Section 3.1.2.

Renegotiation of price terms under the contract with OOO Gazprom Export

On March 30th 2020, the Arbitration Court of Stockholm issued a final arbitration award whereby the pricing formula for the gas supplied by PAO Gazprom/OOO Gazprom Export under the Yamal contract was changed, including through its significant and direct linking to the prices of natural gas on the European energy market. Pursuant to the Yamal contract and the final judgment, the new contract price is applicable to gas supplies made from November 1st 2014, i.e. the date PGNiG formally requested that the contract price be renegotiated.

On June 5th 2020, an annex to the Yamal contract was signed between PGNiG and OOO Gazprom Export. In the annex, the parties confirmed the rules of applying the pricing formula for gas supplied under the Yamal contract as specified in the final award of the Arbitration Court in Stockholm. The annex also sets out the terms of mutual settlements between the parties of the financial consequences of applying the new pricing formula for the period November 1st 2014 − February 29th 2020. These included payments of approximately USD 1.6bn by Gazprom and approximately USD 90m by PGNiG, resulting in a net receivable to PGNiG of approximately USD 1.5bn.

On July 1st 2020, PGNiG received the entire amount of the refund from Gazprom. On July 2nd 2020, PGNiG made the agreed payment to Gazprom.

The prices under the Yamal contract may continue to change as both PGNiG and Gazprom filed requests for their renegotiation in November and December 2017, respectively. In addition, on November 1st 2020, PGNiG submitted a further request to Gazprom to

reduce the contract price. Then, on November 9th 2020, Gazprom submitted a request to PGNiG to negotiate price increase. In the opinion of the Company, Gazprom's claims are unfounded. PGNiG remains in contact with the supplier regarding these matters.

PAO Gazprom/OOO Gazprom Export filed two petitions with the Stockholm Court of Appeals: The first petition, of October 2nd 2018, to revoke the Arbitration Court's ad hoc partial award of June 29th 2018. The Stockholm Court of Appeals, by its judgment of December 23rd 2020, dismissed the petition. The second petition, of May 29th 2020, for reversal of the final award issued by the Court of Arbitration. The case is pending.

LNG supplies

In 2020, PGNiG received a total of 35 LNG shipments to Poland, with a total volume of 2.70m tonnes, i.e. approximately 41.22 TWh or 3.76 bcm of natural gas after regasification, including:

- 18 shipments under long-term contracts with Qatargas, with the volume of LNG imports from Qatar totalling 1.64m tonnes, i.e. ca. 25.01 TWh or 2.28 bcm of natural gas after regasification;
- 13 spot deliveries;
- 2 shipments under the PGNiG Group’s medium-term contract with Centrica;
- 2 shipments under a long-term contract with Cheniere.

Sale of gas by PGNiG

Customers buy gas from PGNiG at market prices, in line with the formulas and pricing mechanisms set out in the contracts. The prices in contracts executed by PGNiG are established on a case-by-case basis using a uniform, objective pricing methodology. Settlements with customers are based on pricing formulas or fixed prices linked to exchange indices.

In 2020, PGNiG successfully continued its sales strategy and retained the customer base. The largest amounts of natural gas are sold in Poland to industrial customers, including: PKN ORLEN S.A., Grupa Azoty S.A, Grupa LOTOS S.A., PGE Polska Grupa Energetyczna S.A., KGHM Polska Miedź S.A. and the ArcelorMittal Group.

In June 2020, PGNiG and PKN ORLEN S.A. executed an annex to the contract for gas supplies to the PKN ORLEN Group, extending the contract term until December 31st 2022, with an option to extend the term by another 12 months until December 31st 2023. Also in December 2020, PGNiG and PKN ORLEN S.A. extended the term of the Individual Contract between the parties until December 31st 2027, with an option to extend the term until December 31st 2028, and amended the contract to cover supplies of gas to the planned Ostrołęka C Power Plant.

In 2020, PGNiG’s sales of high-methane grid gas in Poland amounted to 184.7 TWh (ca. 16.8 bcm). Year on year, the sales grew by 5.4%, from 175.3 TWh (16 bcm).

Sale of gas by PST

In 2018, PST opened a branch in Poland to establish relations with gas supply customers in Poland and subsequently across Europe, building on the existing relationships with subsidiaries of international companies based in the country. In 2019, a separate customer portfolio was transferred from PGNiG to PST (the last contract was transferred in January 2020).

As at December 31st 2020, PST supplied gas (E gas) to 20 customers (41 points of delivery in Poland). The customers of the Polish Branch of PST are the largest private businesses from the glass, ceramic, food and agricultural industries, receiving gas fuel for their own needs at physical points of delivery, as well as wholesale customers taking gas fuel at virtual or physical point of delivery for subsequent resale.

Exports

In 2020, PGNiG continued to sell natural gas to the Ukrainian market, mainly in cooperation with the ERU Group and other leading traders on the Ukrainian market. The sales to Ukraine totalled 1.24 bcm (13.6 TWh) of natural gas. Gas was sold both at the Polish-Ukrainian border and in the Ukrainian storage system under the Customs Warehouse Regime (CWR). The Company monitors growth opportunities on the Ukrainian market.

Gas sales on PPX

The volume of gas sold by PGNiG on PPX in 2020 (for delivery in 2020) was 105.8 TWh (9.52 bcm) and increased by approximately 8.1 TWh compared with the 2019 volume.

Small-scale LNG sales

In response to the growing market demand, in 2020 PGNiG continued the dynamic development of its small-scale LNG business, where gas is sold in the form of LNG transported by road tankers to regasification facilities or stations with no access to the distribution network. The volume of fuel delivered to end users in the form of liquefied natural gas is growing steadily. In 2020, 3,385 LNG tankers were loaded in Świnoujście (2019: 2,306). The aggregate amount of LNG the Company placed on the market was 80.1 thousand tonnes, of which 59.5 thousand tonnes was sourced through Świnoujście and 20.6 thousand tonnes from Odolanów and Grodzisk Wielkopolski. In total, in 2016-2020, the Company placed 278.7 thousand tonnes of LNG on the market, including 170.3 thousand tonnes from the LNG terminal in Świnoujście and 108.4 thousand tonnes from the Odolanów and Grodzisk plants. In addition, PGNiG has transshipped more than 4,000 tonnes of LNG onto tankers at the small-scale LNG terminal in Klaipėda since April 2020.

Sales of electricity

PGNiG's business on the electricity market primarily involves wholesale trading, to provide PGNiG Group companies with access to the market. Total sales of electricity to trading companies and on the Polish Power Exchange accounted for more than 90% of PGNiG's total electricity sales in 2020. PGNiG provided commercial balancing services to PGNiG TERMIKA and PGNIG TERMIKA EP, as well as commercial and technical operator services to PGNiG TERMIKA.

Capacity market

As a result of the auctions organised by Polskie Sieci Elektroenergetyczne S.A. in 2018, 2019 and 2020 (related to the implementation of the capacity market and the capacity obligation), PGNiG concluded the following agreements:

- power plant at the Wierzchowice storage facility – annual supply contracts for 2021–2025 (net capacity of 17 MW);
- Radoszyn-Lubiatów-Połęcko generating units complex – annual supply contracts for 2021–2023 (net capacity of 4.5 MW);
- Radoszyn-Lubiatów generating units complex – annual supply contract for 2024, net capacity of 3.5 MW.

Prospects for wholesale trade in Poland

PGNiG's medium- and long-term focus is to perform its long-term contract obligations concerning minimum offtake (Yamal contract) and contracted volumes of LNG, delivered on an ex-ship (Qatargas and Cheniere) and free-on-board basis (Venture Global LNG, Inc., Port Arthur LNG, LLC), taking into account that free-on-board contracts provide PGNiG with flexibility to sell LNG on foreign markets.

If an unforeseen increase in demand for gas fuels occurs, PGNiG will purchase natural gas under short-term contracts from the neighbouring countries or on the LNG market. The planned increase in the capacity of the LNG terminal in Świnoujście – to approximately 6.2 bcm in 2022 and 2023, and then to approximately 8.3 bcm from early 2024 – will enable increased volumes of LNG to be delivered to Poland.

As a result of investment decisions made by the transmission operators of Poland and Denmark, and thus the consent for joint execution of the Baltic Pipe project, PGNiG will be able to obtain contracts for gas supplies from the Norwegian Continental Shelf (from its own deposits and from imports).

4.2.2.2 Wholesale business abroad

Through PGNiG Supply & Trading GmbH, the PGNiG Group is developing its operations in Europe in three main areas: international LNG trading, access to the European gas market, including gas from the North Sea Continental Shelf, and wholesale on the markets of Central and Eastern Europe.

As part of its business, PST holds a licence to trade in gas fuels in Poland, Germany, the Netherlands, Belgium, Austria, Norway (Gassled System), the United Kingdom, France, the Czech Republic, Slovakia, Ukraine and Hungary. PST is an active player on organised markets (exchanges) and in OTC trading. It trades with over 150 counterparties under EFET (master agreements for trading in gas and electricity) or similar standardised contracts. In order to conduct trading activities on the global LNG market, the company has established a branch in London.

In order to be able to start receiving gas from fields on the Norwegian continental shelf, PST was registered with the Norwegian Gassled system operated by Gassco (Shipper Agreement). PST is also registered as a shiper (gas intermediary) and a participant in the gas storage system in Denmark, Slovakia and Hungary. PST is a market maker on the PEGAS exchange for the GASPOOL gas hub market area. It continues trading in futures contracts for Brent crude and gas in the US Henry Hub, through the following exchanges: ICE Futures Europe and ICE Futures U.S. It also sells electricity on the German market in exchange (EEX) and OTC transactions.

Chart 15 Sales of PST, including its subsidiaries, by product (in volume terms)

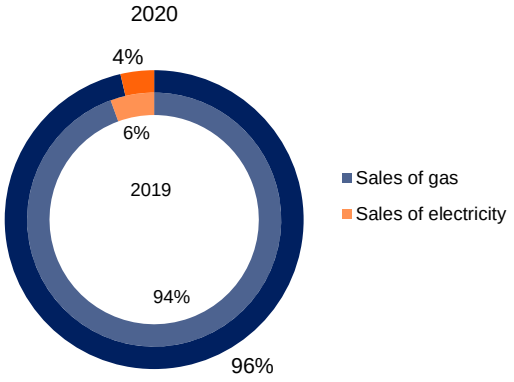
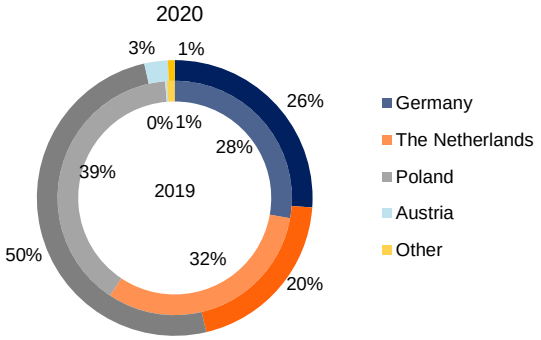


Chart 16 Sales of PST, including its subsidiaries, by country (in volume terms)



Product sales and activities in 2020

In 2020, PST sold 71.9 TWh of pipeline-supplied gas (including 11.6 TWh of gas from PGNiG UN and LOTOS Group S.A.), 13.2 TWh of LNG and 3.2 TWh of electricity in exchange and OTC transactions. Poland was PST's largest market for deliveries, where 50% of the volume was sold, while the German and Dutch markets accounted for 26% and 20% of sales respectively. The sales volumes (especially gas sales) declined year on year due to the COVID-19 pandemic.

In 2020, fourteen LNG shipments contracted by PST were received at the Świnoujście terminal. In 2019, PGNiG received 12 shipments at the Świnoujście terminal.

On October 1st 2019 PST began to receive gas from LOTOS Exploration & Production Norge AS, under a contract for supply of gas produced in license areas located on the Norwegian Continental Shelf (NCS). The volume of gas received under the contract in 2019 was 1.9 TWh, and 6.2 TWh in 2020. PST also receives gas produced by PGNiG UN on the German coast. In 2020, PST signed three additional contracts for the supply of gas from the NCS/Danish Continental Shelf (DCS) area. Gas deliveries from the new suppliers started in October 2020 (Aker BP) and December 2020 (DNO), and supplies from Ørsted partner will start in 2023.

Competition

PST's main competitors are major players in the energy market such as Shell, Total, RWE, Equinor, etc., who are concurrently active in network gas, LNG and electricity trading in all markets where PST is present.

Prospects for wholesale trade abroad

PST

Due to the persistence of the pandemic, PST expects reduced trading activity in the wholesale markets, which will mainly translate into a reduction in PST's proprietary trading activities.

Notwithstanding the temporary restrictions related to the pandemic, PST will continue to develop its business in the key strategic areas including, in particular, LNG trading, supply of gas from the North Sea and the Norwegian Sea area and gas trading in Central and Eastern European markets.

PST plans to expand its LNG business to include FOB deliveries both on the spot market and under medium-term contracts. The expansion of commercial and logistical competence in LNG freight management will allow the Group to further develop its LNG trading business to create opportunities to optimise long-term contracts from 2022 onwards. In order to fulfil the long-term FOB supply contracts, PST has executed contracts to charter two LNG vessels that will be able to receive and transport the contracted LNG volumes.

In preparation for the start of gas supplies to Poland via the Baltic Pipe, the company has increased its activity on the NCS and the DCS. The purpose of the activity is to enable natural gas supplies from the NCS and the DCS to Poland. PST is also starting to procure and sell natural gas liquids (propane / butane / paraffin / ethane) from its operations on the NCS.

PST is taking steps to develop its business in Central and Eastern Europe. Particularly important for PST is business expansion into and in markets which, thanks to the emerging gas infrastructure, will gain strategic significance for the Polish market directly, i.e. Slovakia, Ukraine and Lithuania, and indirectly, such as Hungary, Latvia and Estonia. Building competence and strengthening presence in the region will enable the company to gain an additional market for gas from the northern direction and optimise its gas portfolio using, among other things, the storage systems in Poland and Ukraine.

PGNiG

On November 29th 2019, PGNiG signed a five-year exclusive contract for the use of the low-scale LNG collection and handling station in Klaipėda. It is a major step in PGNiG's efforts to build competence and market position in the markets of Central and Eastern Europe and the Baltic Sea basin.

Through its presence in Klaipėda, PGNiG has also gained better access to the small-scale LNG market in the Baltic States, and increased competitiveness of its services for customers from the north-eastern Poland and Central and Eastern Europe. Since the start of operations on April 1st 2020, the Company has delivered to Klaipėda three shipments by sea, and 231 tanker trucks have left the terminal with a total freight of over 4.1 thousand tonnes of LNG, mostly intended for the Polish market.

In addition to the transshipment facilities, the terminal also offers bunkering of ships. This allows PGNiG to build competence in this area and in the future to make use of the potential of the Świnoujście terminal, which is being expanded.

4.2.3 Retail business

4.2.3.1 Retail business in Poland

On August 1st 2014, PGNiG OD was spun off from PGNiG to conduct retail sale of natural gas and provide retail customer services. PGNiG OD focuses on the sale of natural gas (purchased mainly on the PPX), electricity, compressed natural gas (CNG), and liquefied natural gas (LNG). As part of its business, PGNiG OD holds a licence to trade in gas fuels and in electricity.

Sources of gas

High-methane gas is procured from three main sources:

- Purchases of gas on the Polish Power Exchange (PPX).
- Purchases of gas under a bilateral contract, with deliveries to a virtual trading point in the transmission network operated by GAZ-SYSTEM;
- Purchase of gas under a bilateral contract executed with PGNIG, with deliveries to a physical trading point in Słubice.

The largest share in the volume of high-methane gas purchases is attributable to transactions on the PPX. Apart from natural gas, PGNiG's purchase portfolio also includes high-methane and nitrogen-rich gas, and liquefied natural gas (LNG). Nitrogen-rich gas and LNG are purchased under bilateral contracts with PGNiG.

Sales of gas

PGNiG OD's customer base includes consumers and non-consumers (including in particular small and medium-sized enterprises). Customers are classified into tariff groups based on the following criteria:

- Type of gas fuel received: high-methane gas or nitrogen-rich gas;
- Contracted capacity;
- Annual contracted volume – for customers with contracted capacity of not more than 110 kWh/h;
- Billing system – as per the billing frequency applicable to customers with contracted capacity of not more than 110 kWh/h.

Group 1-4 retail customers purchase gas used mainly for cooking and for water and space heating, as well as in shop-floor processes. Households are subject to a gas tariff approved by the President of URE. In 2020, PGNiG OD applied the following gas fuel trading tariffs:

- Tariff No. 8 for the period from January 1st 2020 to June 30th 2020 – the prices of gas fuel decreased by 2.9% on the previous tariff. The subscription fees remained unchanged.
- Tariff No. 9 in the period from July 1st to December 31st 2020 – the prices of gas fuel decreased by 10.6% on the previous tariff. The subscription fees remained unchanged.

On December 17th 2020, the President of URE approved PGNiG OD Gas Fuel Trading Tariff No. 10 for the period from January 1st to December 31st 2021. The prices of gas fuel for all tariff groups were reduced by 4.5%. The subscription fees remained unchanged.

In the first half of 2020, PGNiG OD acquired over 155.1 thousand new retail accounts in tariff groups 1–4 (both high-methane and nitrogen-rich gas). Business customers buy gas both for the purposes of their industrial processes and for heating, and are billed at prices set in the business tariff and in special offers.

Sales of other hydrocarbons

PGNiG OD offers a range of LNG and CNG products and services addressed to end users. The company's offer includes:

- Sale of CNG at CNG refuelling stations – to customers with CNG-fuelled car fleets;

- Sale of CNG along with infrastructure – a comprehensive service offered by PGNiG OD to transport companies, where gas fuel is delivered along with the necessary infrastructure;
- Sale of LNG fuel – to end users with own infrastructure for receipt of LNG deliveries (transport or manufacturing); Purchase of LNG and its transport to designated locations;
- Sale of LNG along with infrastructure – irrespective of how LNG is used by the end customer (transport or industry), a comprehensive service is offered where gas fuel is delivered along with the necessary infrastructure;
- LNG bunkering – in 2020, the development of LNG bunkering services was continued within PGNiG OD (a total of over 511 tonnes of LNG was sold for bunkering purposes). The service was implemented in ports under the authority of the Head of the Maritime Office in Szczecin, including Szczecin, Świnoujście and Police. Bunkering was carried out in the truck-to-ship technology, i.e. by using specialized cryogenic tankers directly from the quay.

With respect to sales of LNG, PGNiG OD focuses on industrial customers and the transport industry, while customers in the CNG segment are mainly municipal transport companies. Other CNG customers include commercial vehicles and retail customers. In 2020, contracts were concluded with LG Electronics of Biskupice Podgórne for the supply of LNG together with infrastructure, as well as with Miejskie Zakłady Autobusowe of Warsaw for the sale of LNG. CNG supply contracts were signed with urban sanitation companies (MPO) of Kraków and Warsaw, and the CNG supply contract with Miejskie Przedsiębiorstwo Komunikacyjne (municipal transport company) of Rzeszów was extended.

Business-to-customer sales policy (B2C)

The company has a limited ability to pursue an independent policy regarding sales of gas to retail customers due to the obligation to have its tariffs approved by the President of URE. The abolition of this obligation under current legislation is planned for January 2024.

The company is gradually expanding its offering to the retail base of more than 7 million accounts through sales of add-on products. In addition to the ‘Pomocna Ekipa' handyman service launched in 2019, the following products were marketed in 2020:

- ‘Na Zdrowie’ package, offering easy and prompt access to medical services,
- “Doradca Prawny dla Ciebie" and “Doradca Prawny dla Firmy” legal service packages, which provide access to legal advice and reimbursement of lawyer's fees.

Business-to-business sales policy (B2B)

The gas offering is based on special term-plans with fixed prices or variable prices indexed to selected stock exchange indices. Customers who do not wish to be bound by a fixed-term contract can opt for gas supplies based on the standard 'Gas for Business' price list used in open-term contracts.

The development of product offers and pricing plans is based on segmentation analyses (with particular emphasis on price elasticity) and customer demand communicated through the sales network. An important element of the process is the monitoring of competitors' activities and offers.

The company’s commercial policy results in a stable market share, which is due, among other things, to the level of customer satisfaction, a broad product portfolio and the service quality. There is also a parallel effect of the rising sales volume and growing margin on gas sales to business customers.

Gas fuel sales under emergency / standby / supplier of last resort procedures

In 2020, PGNiG OD acted as a ‘stand-by supplier' and ‘supplier of last resort' (in accordance with the Act Amending the Energy Law and Certain Other Acts of November 9th 2018). In 2020, following discontinuation of gas fuel supplies by E2 Energia Sp. z o.o., PGNiG OD ensured uninterrupted supply of gas fuel to the company’s customers. Customers taken over from other suppliers are billed at prices set in the retail tariff of PGNiG OD (consumers) or the ‘Gas for Business’ tariff (non-consumers), as applicable.

Sales of electricity

PGNiG OD’s customer base includes consumers and non-consumers who have concluded comprehensive service contracts for the supply of electricity or contracts for the sale of electricity. As of the end of 2020, the company supplied electricity to nearly 103 thousand delivery points.

In 2020, the electricity supply offering for businesses was modified both for larger customers (Tranche Product) and customers interested in simpler offers (fixed price under fixed-term price lists).

Competition

On the Polish natural gas retail market, the company competes with the largest electricity suppliers that expand their operations to include sale of natural gas. In 2020, PGNiG OD's main and most active competitors on the gas market were: Fortum; Enea, Energa Obrót, Axpo, Elektrix.

In the LNG retail market, the main competitors are: DUON Dystrybucja Sp. z o.o.; NOVATEK Polska Sp. z o.o.; CRYOGAS M&T POLAND S.A., BARTER Sp. z o.o., Shell Polska Sp. z o.o. and Gaspol S.A. According to available information, competitors are pursuing robust investment plans to expand their tanker fleets and equipment used in the LNG sales.On the LNG bunkering market, the most active competitors are DUON Dystrybucja sp. z o.o., Barter S.A., Cryogas sp. z o.o., Gascom sp. z o.o. and foreign entities, e.g. Nauticor and Gasum.

Prospects for retail trade in Poland

The company believes that there is growing potential for new gas applications in Poland and the associated market development opportunities. This is reflected in data showing the relatively low consumption of gas fuel in the country compared with other European economies. The growth prospects are driven by, among other things, the need to replace environmentally unfriendly heating systems in more than 3 million homes burning solid fuels. Natural gas is among the technologies supported by central and local government programmes (e.g. Clean Air). As a result, Poland is witnessing a gradual process of gasification and an increase in the share of gas in the generation of electricity and heat.

The importance of natural gas in road (LNG and CNG) and maritime (LNG) transport is expected to grow significantly, largely due to new EU regulations.

On the other hand, major technological advances, modern and energy-efficient building construction/insulation systems (and new standards in this respect), the turn towards renewable energy sources and new multi-family buildings typically without gas installations – have and will continue to have an impact on customers' expectations and the model of solutions offered to them. Natural gas is the main driver of the company's results, but the market is creating new opportunities to expand the range of offered products.

PGNiG OD, acting in accordance with the principles of sustainable development and in order to address customer needs and environmental challenges, is introducing solutions based on renewable energy sources and increasing energy efficiency. Thanks to the possibilities offered by LNG, PGNiG OD supports the process of national gasification by supplying fuel to island networks and develops the offer of LNG supplies for the shipping, manufacturing and transport industries. The company builds CNG/LNG fuel stations, launches new products (such as assistance service plans) and partners with local governments (e.g. under the "Switch to gas" programme of supporting transition to low-emission heat sources ones).

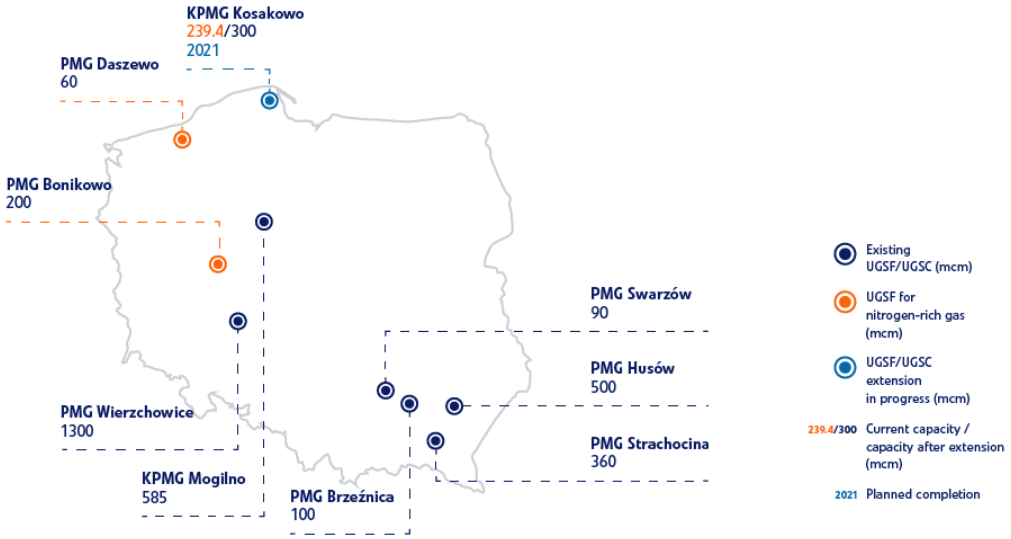
4.2.3.2 Retail business abroad

In the first part of 2020, sales of gas and electricity to end customers continued through PST's subsidiaries, i.e. PST Europe Sales GmbH and XOOL GmbH. Consistent with the change in the organisation's strategic objectives, a decision was made to restructure the business and sell the entire retail operations. The adopted approach was to sell the client portfolio of both subsidiaries, completed by December 31st 2020.

4.2.4 Storage

Gas Storage Poland (GSP) is engaged in storage of gas fuels in the following facilities owned by PGNiG: Husów UGSF, Wierzchowice UGSF, Strachocina UGSF, Swarzów UGSF, Brzeźnica UGSF, Mogilno CUGSF and Kosakowo CUGSF.

Figure 5 Underground gas storage facilities



Source: In-house analysis based on data from the Geology and Hydrocarbon Production Branch and Gas Storage Poland.

As part of its business, GSP holds a licence to store gas fuel in storage facilities. Settlements of gas fuel storage services are subject to the following tariffs:

- Gas fuel storage tariff No. 1/2019, effective until 6.00 am on June 1st 2020 – the average rates for storage services decreased by 6.3% on the previous tariff,
- Gas fuel storage tariff No. 1/2020, effective from 6.00 am on June 1st 2020 – the average rates for storage services decreased by 1.2% on the previous tariff.

UGSF Mogilno and UGSF Kosakowo are peak-load storage facilities created in salt caverns and may be used, among other things, to smooth short-term movements in demand for natural gas. The capacities of the Wierzchowice, Husów, Strachocina, Swarzów and Brzeźnica UGSFs 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.

As the storage system operator, GSP provides gas fuel storage services to storage facility users under standardised procedures, on a non-discriminatory, equal-treatment basis, to ensure the most efficient use of the storage capacities. Storage services are provided under standard storage service agreements (SSSA).

The product offering is based on the Storage Facilities (SF) and Storage Facility Groups (SFG), i.e.:

- Kawerna SFG (comprising Mogilno UGSF and Kosakowo UGSF),
- Sanok SFG (comprising Husów UGSF, Strachocina UGSF, Swarzów UGSF and Brzeźnica UGSF),
- Wierzchowice SF.

Third-party access (TPA) storage capacities

As at December 31st 2020, GSP had a total working storage capacity of 3,174.8 mcm, of which a total of 3,139.6 mcm was made available, on a TPA basis and to GAZ-SYSTEM, as part of long-term services; 20.0 mcm, out of 30.0 mcm, of working capacity was made available as part of short-term services, on an interruptible basis, due to technical conditions. In addition, GSP allocated 5.2 mcm of working capacity for the needs of the Mogilno CUGSF's and Kosakowo CUGSF's technological units.

Ticketing service – PGNiG

PGNiG offers a ticketing service which allows gas importers and traders to meet their gas-stocking obligations in accordance with the applicable Polish regulations. The Company performed ticketing service contracts concluded for the gas year 2019/2020 with six energy companies; in the gas year 2020/2021, the services are provided to four energy companies. The total volume of gas stocks held by PGNiG for other entities was over 370 GWh of natural gas in the 2019/2020 gas year and over 300 GWh of natural gas in the 2020/2021 gas year.

As part of the ticketing service, PGNiG maintains gas stocks in gas storage facilities operated by GSP.

Key investment projects and capital expenditure in the storage area

In 2020, construction of cluster B was continued at the Kosakowo CGSF with a view to obtaining additional working capacities.

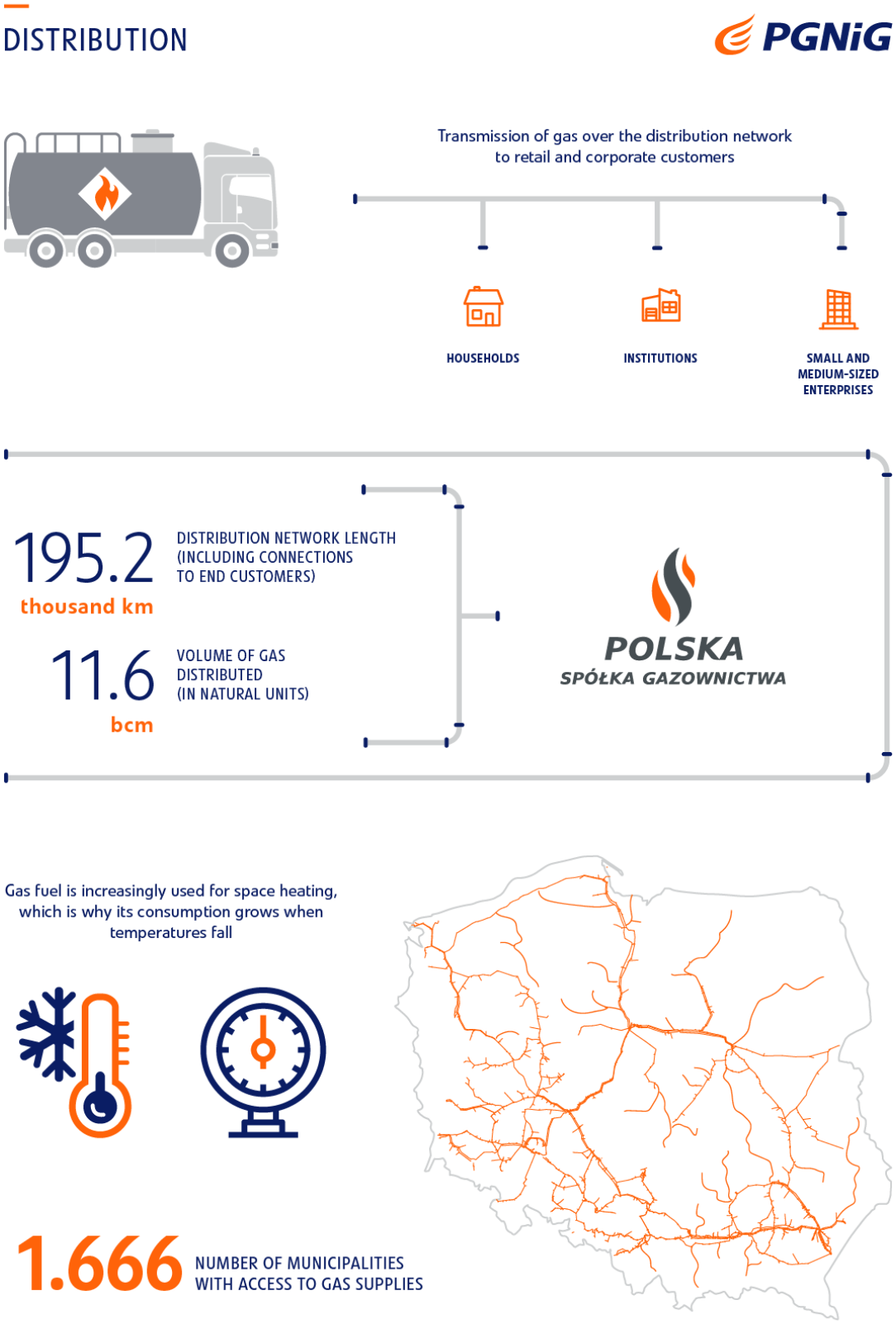
Development prospects and challenges for the future

In accordance with the schedule for the 'Kosakowo CGSF – Construction of Five Caverns, Cluster B' project, in 2021 the construction of the K-7 and K-10 chambers at the Kosakowo CGSF will be continued to expand the storage capacities. The contract for the project provides for the completion of all the works in 2021. Upon completion of the construction of cluster B, the active capacity will be increased to at least 250 mcm.

GSP also plans to expand its storage business, in particular storage of energy (in the form of hydrogen), hydrogen, biomethane and liquid fuels, in order to broaden its customer base and secure new revenue streams. The offered services will include preparation, execution and supervision of underground energy and fuels storage projects and subsequent offering of the storage capacities.

4.3 Distribution

The segment's principal business activity consists in the delivery 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. Natural gas distribution is the responsibility of PSG. As the Distribution System Operator, the company operates in all regions of Poland. Being the owner of the majority of Poland's gas distribution network and gas service lines, PSG enjoys a dominant market share.



4.3.1 Key operating metrics

Table 24 Volume of distributed gas (high-methane gas, nitrogen-rich gas)

mcm in natural units	2020	2019	2018	2017	2016
Total volume of distributed gas	11,570	11,531	11,747	11,645	10,858
- including high-methane gas	10,194	9,976	9,918	9,797	9,301
- including nitrogen-rich gas	1,061	1,048	971	989	836

Table 25 Length of distribution networks

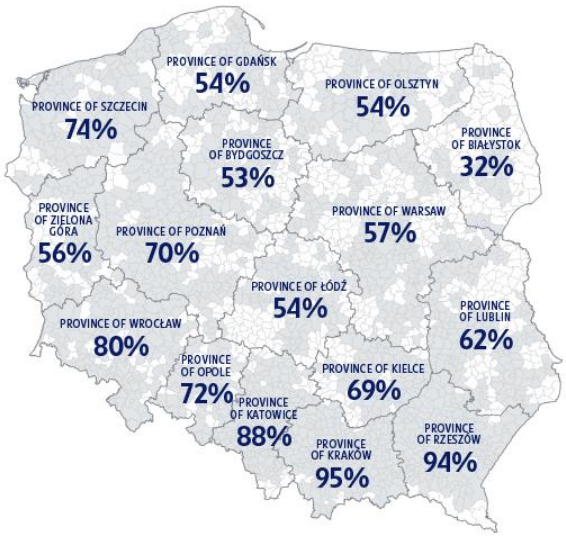
thousand km	2020	2019	2018	2017	2016
Length of distribution networks	195	191	186	183	180

In 2020, 71 new municipalities were connected to the gas grid. Thus, the geographical coverage in terms of the number of municipalities connected reached 67.26% (1,666 out of 2,477).

4.3.2 Activities in 2020

The mission of PSG as the distribution system operator is to provide gas fuel distribution services to all gas fuel consumers and traders (while ensuring that all of them receive equal treatment) in accordance with the provisions of the Energy Law. PSG provides the distribution services under relevant distribution contracts. In 2020, PSG executed seven distribution contracts and nine Interoperator Distribution Agreements. In the same period, approximately 31 thousand customers switched gas suppliers.

Figure 6 Municipalities where PSG provides gas fuel distribution services



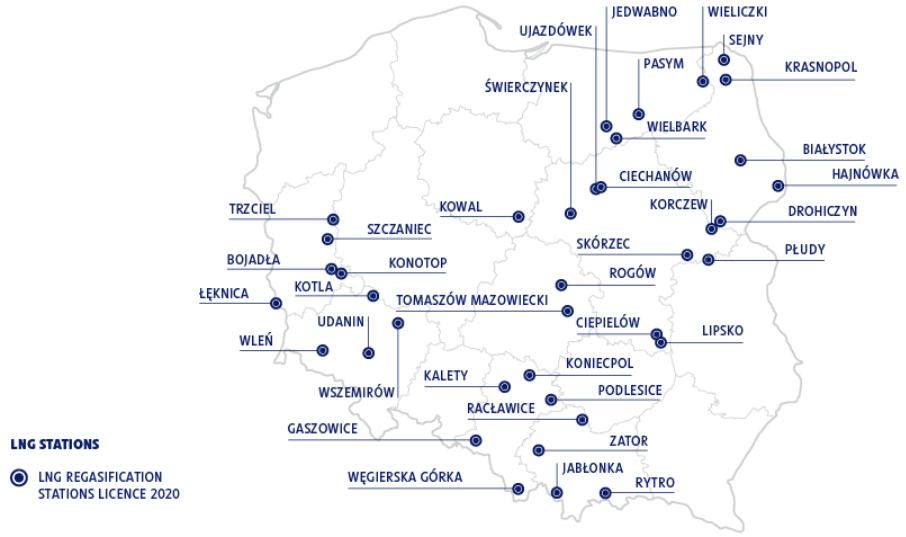
Source: In-house analysis based on PSG data.

PSG's activities resulted in the execution of over 110.800 connection contracts in 2020, providing for 124.800 new connections to the gas grid. In 2020, PSG planned to build over 84.4 thousand new service lines. By the end of the year, nearly 222.4 thousand decisions defining the terms of connection were issued (and increase of 7% year on year) and 112.9 thousand service lines with a total length of 1,118.7 km were built.

In 2020, PSG commissioned 37 LNG regasification stations, including temporary and network support units. First permanent LNG regasification units were commissioned in the Łódź and Bydgoszcz provinces. In 2020, PSG obtained 35 liquefaction and regasification licences, and the total number of licences held by PSG at year-end 2020 was 52.

The volume of gas distributed using LNG regasification stations (including units stations supporting the distribution system) was 157.7 GWh (an increase of approximately 42% y/y) and the number of single distribution orders for the year was 21,562 (an increase of approximately 3% y/y).

Figure 7 LNG regasification stations in Poland with licence issued in 2020



Source: In-house analysis based on PSG data.

Chart 17 Volume of gas transmitted via the distribution system (mcm)

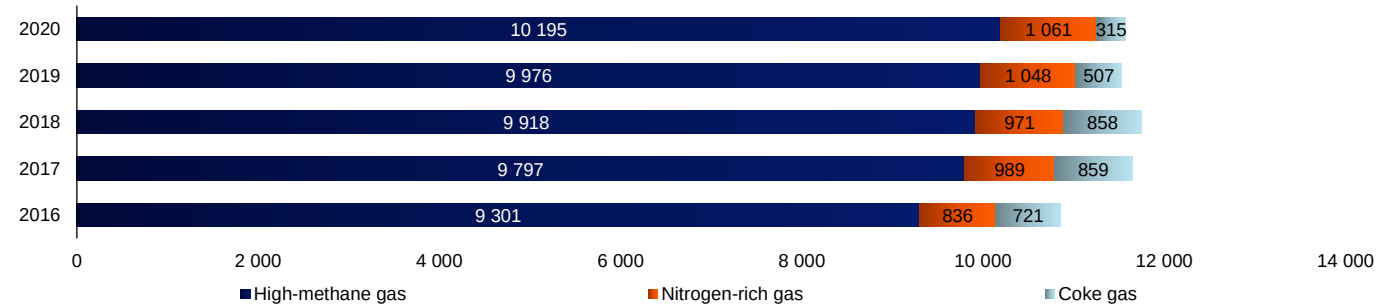
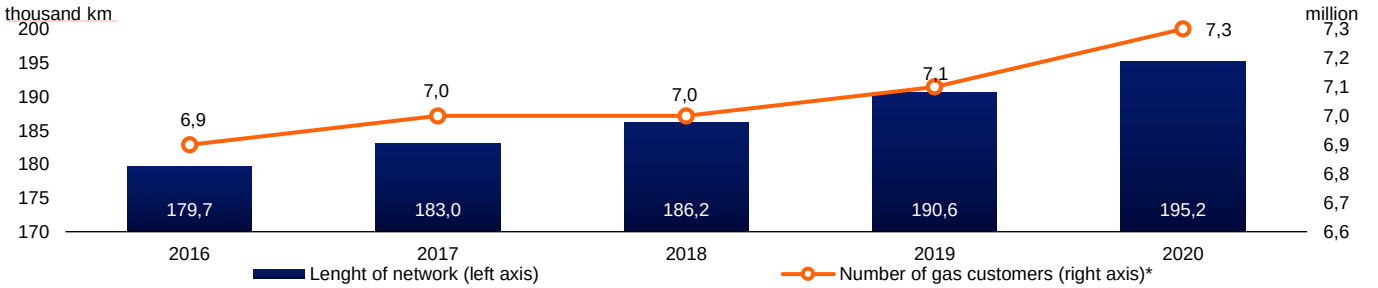


Chart 18 Length of own network, including service lines (thousand km) and number of customers (million)



** Customer − anyone receiving or drawing gas fuel under contract with a gas supplier.*

A significant event that had an impact on the fulfilment of the company's operator obligations was the execution by PSG, as the seller of last resort, of comprehensive gas fuel supply contracts in the name and on behalf of end customers for 535 exit points, following discontinuation of gas fuel supply by E2 Energia sp. z o.o. to customers connected to the distribution network.

PSG's business is heavily regulated, with licensing of gas fuel distribution and LNG regasification services, and the obligation to have distribution tariffs approved by the President of URE. In 2020, the following tariffs were in force:

- Tariff No. 7, effective from March 15th 2019 to April 2nd 2020; the tariff reduced the average distribution fee by 5% relative to the previous tariff.
- Tariff No. 8, effective from April 3rd 2020 to January 31st 2021; the tariff increased the average distribution fee by 3.5% relative to the previous tariff.

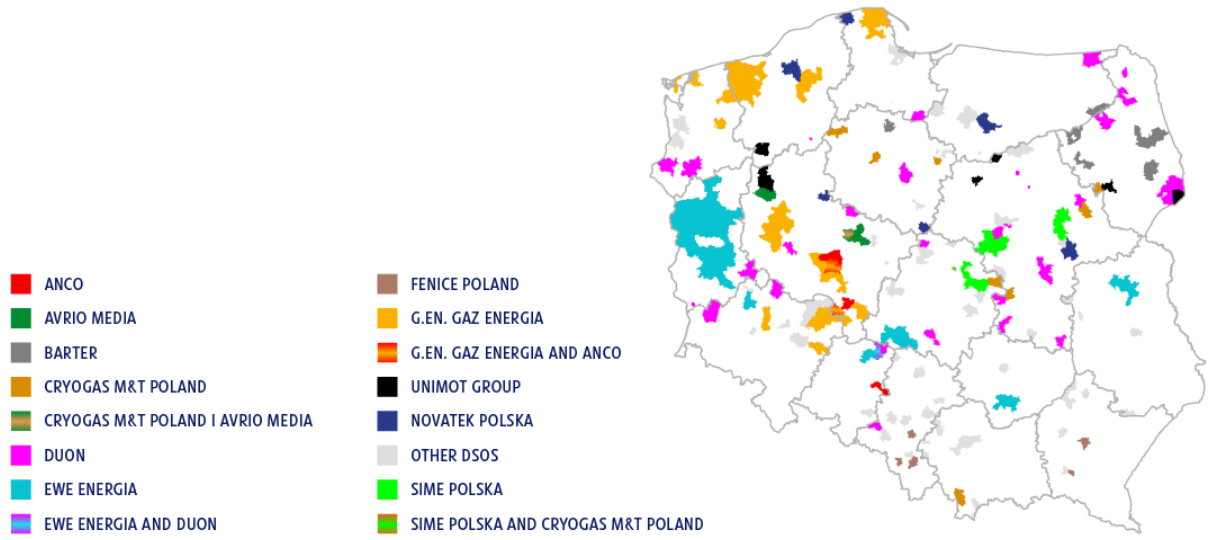
Competition

There are 52 competing DSOs (Distribution System Operators) on the Polish gas distribution market, including:

- 19 entities for whom DSO activities are their core business, including 4 entities operating in closed distribution zones;
- 33 entities engaging in DSO activities outside their core business, including 29 entities operating in closed distribution zones.

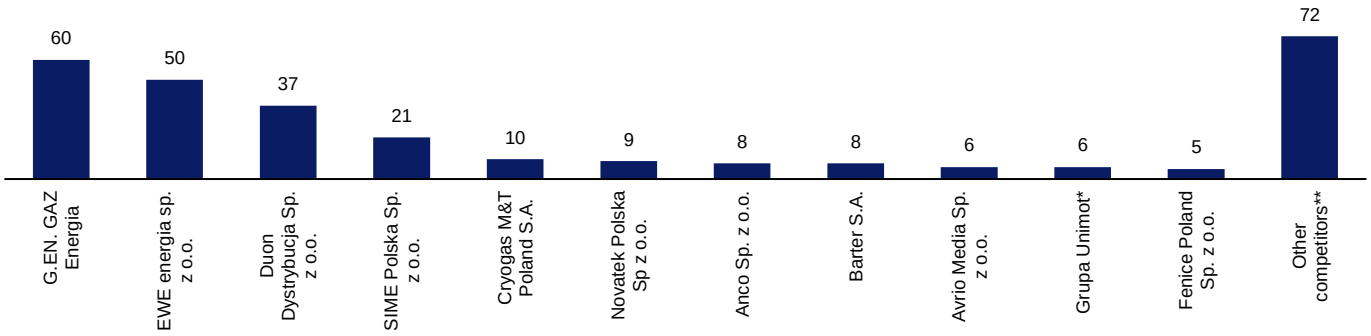
In total, competing DSOs and entities engaged in LNG regasification (without a gas distribution licence) operate in 278 municipalities; competing DSOs and PSG operate in 133 municipalities.

Figure 8 Operating areas of competitors in Poland



Source: In-house analysis based on PSG data.

Chart 19 Number of municipalities where competitors operate



** UNIMOT System Sp. z o.o. and Blue LNG Sp. z o.o.*
*** Other DSOs operating in two or fewer municipalities.*

Companies with the greatest impact on the distribution market in Poland include entities that have (mainly independent of PSG) entry points to their own distribution systems, including LNG regasification stations, and operate in approximately 40% of municipalities where PSG's direct competitors are present. These include: DUON Dystrybucja Sp. z o.o.; GAZ ENERGIA Sp. z o.o., Novatek Polska. Other competitors are active on local markets or expand at smaller rates.

Key projects and investments

In 2020, the total capital expenditure incurred in the Distribution segment was approximately PLN 2.95bn. PSG spent around PLN 1.86bn on expanding the network and connecting new customers. Another PLN 0.81bn was spent on reconstruction and modernisation of the gas network, of which nearly PLN 0.23bn on replacement and certification of gas meters and components of metering systems.

In 2020, PSG pursued projects supporting implementation of the PGNiG Group Strategy for 2017−2022 in the area of distribution, aimed at putting in place technological and organisational solutions in customer service, meter reading, and billing of distribution services.

As a gas distributor, PSG additionally engages in a range of activities to combat smog and air pollution. In 2020, a number of environmental initiatives continued to be implemented in cooperation with local authorities. These included:

- the 'Inactive service lines' project aimed at mobilising customers who have non-operational gas connections, especially in areas with a high level of low-stack emissions (smog);
- 'Connect, because every breath matters' – an educational and promotional project intended to raise awareness of the risks to human health presented by air pollution and to promote gas fuel as an environmentally-friendly alternative to solid fuels.

In 2020, PSG continued its efforts to secure financing under the EU 2014–2020 financial framework. As part of Measure 7.1. – Development of intelligent storage, transmission and distribution systems, Priority axis VII – Improvement of energy security, PSG entered into agreements with the Oil and Gas Institute – National Research Institute, providing for co-financing of investment projects. The expected total cost of ten projects exceeds PLN 675.2m, VAT inclusive (with the amount of subsidies in excess of PLN 257.4m). The total length of the distribution pipelines to be built or upgraded under the projects is approximately 489 km.

In 2020 PSG executed a grant agreement with the National Centre for Research and Development for the implementation of an R&D project carried out in consortium with Kielce University of Technology. The project is expected to deliver a new precise technology for assessing the technical condition of gas pipelines using acoustic methods and GPR surveys. PSG is constantly looking at possibilities of obtaining funding for new development initiatives. The company participates in preparations to obtain funding and secure the interests of the gas industry in the new EU perspective for 2021-2027. In this respect, PSG collaborates with PGNiG, the Chamber of the Natural Gas Industry and the competent ministries.

In 2020, efforts were continued to develop the R&D&I functions at PSG and improve the innovation potential of the company. The PSG Innovation System was launched with the aim of acquiring innovative solutions to support PSG's core business and to increase employee involvement in the company's development. As a result of the system's operation, 20 proposals were submitted by PSG employees, out of which five were recommended for implementation.

PSG actively participates in innovation programmes. Some of the most important R&D projects implemented in 2020 included:

- Pilot implementation and testing of different technologies for data transmission from gas meters with a telemetric module;
- efforts to develop the requirements for injecting combustible dopant gases, including hydrogen, into the PSG network;
- testing of a system with extended gas flow measurement range under varying thermodynamic conditions;
- implementation of an EU co-funded project entitled "Innovative System for Automatic Identification and Location of Gas Infrastructure Defects using the Phenomenon of Acoustic Emission (SIildig AE)".

4.3.3 Development prospects and challenges for the future

In the short term, PSG is taking steps which, through the roll-out of the gas network and connection of end customers (mainly as part of "network densification", i.e. connection of new service lines to the existing gas network), are part of the anti-smog measures. In parallel, PSG participates in the 'Connect, because every breath matters' campaign.

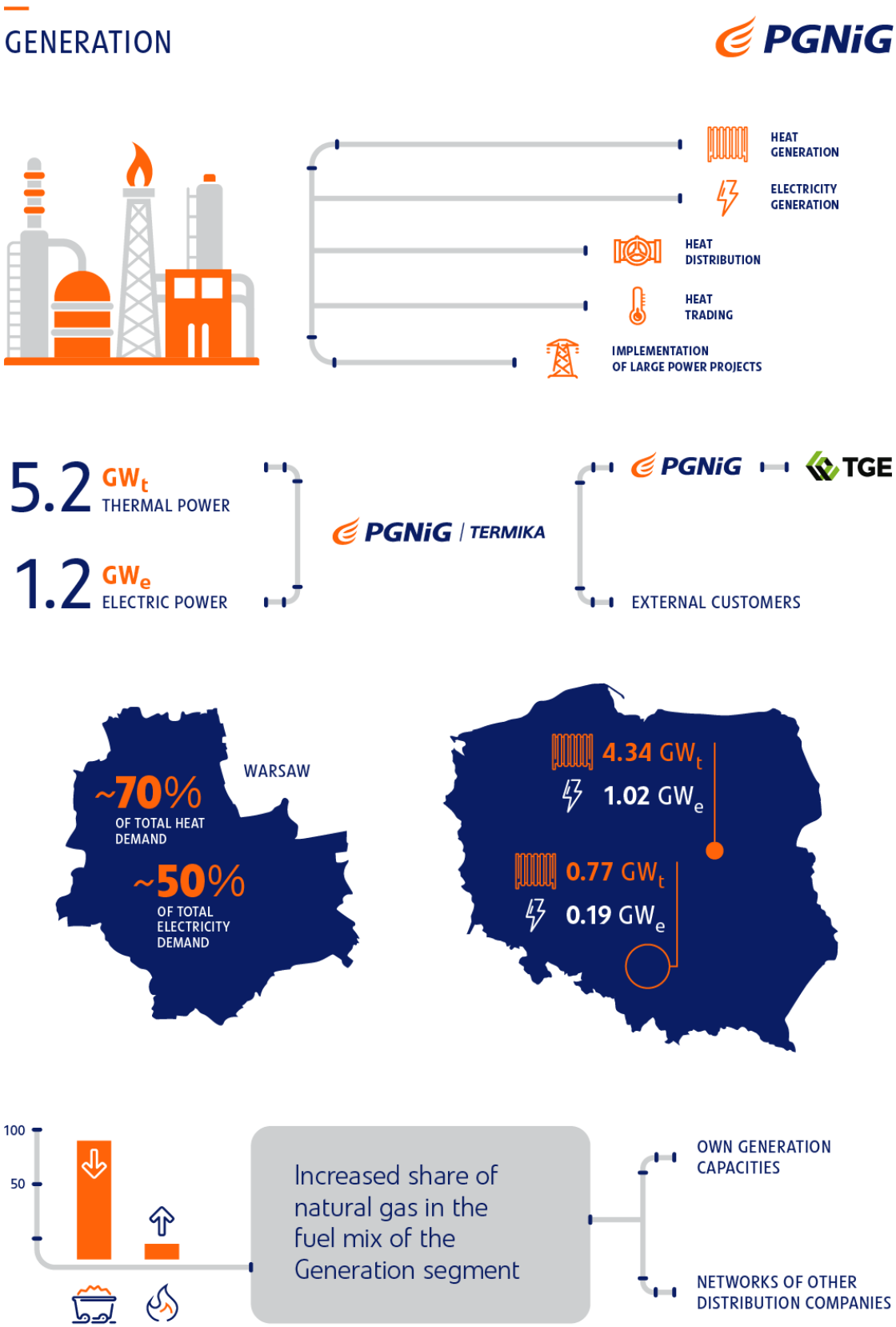
In the medium term, PSG takes steps to convert, modernise and build a new gas network in order to maintain the security and continuity of gas fuel supplies and the long-term capacity to connect new industrial customers, including in particular district heating accounts below 50 MW. This is in line with the arrangements set out in the MCP Directive, which strengthens the emission standards of certain pollutants into the air from medium-sized combustion sources. These arrangements indicate that existing installations with a capacity greater than 5 MW have until 2025 to comply with the new emission standards, and those with a capacity of up to 5 MW – until 2030. Switching to gaseous fuel, by connecting to the gas network, represents an opportunity for these facilities to reduce harmful emissions.

The business potential is recognised in the development of the market for new renewable gas products and the target volumes of these gases to be transported, which can offset (to an extent dependent on economic and regulatory factors) the declining energy significance of natural gas in the "Green Deal" economy. Therefore, PSG is conducting multi-faceted analyses to prepare the gas infrastructure for the distribution of renewable gases. The company actively participates in initiatives coordinated by the Ministry of Climate and Environment such as establishing a partnership to develop the biogas and biomethane sector and conclude a sector-wide alliance, or establishing a partnership to build a hydrogen economy and conclude a sector-wide hydrogen alliance.

PSG also engages in cooperation with the PGNiG Group and entities from the fuel sector to develop a business model which, taking into account the prevailing market conditions and the policy of the state, will enable the development of alternative fuel infrastructure and create conditions to offer vehicle users a viable CNG refuelling option.

4.4 Generation

The segment's principal business consists in the production of heat and electricity, distribution of heat, and delivery of large natural gas-fired projects in the power sector. The relevant competence centre at the PGNiG Group is the PGNiG TERMIKA Group, including PGNiG TERMIKA (and its subsidiaries) and PGNiG TERMIKA EP (and its subsidiaries).



4.4.1 Key operating metrics

Table 26 Volumes of regulated sales outside the PGNiG Group of heat (TJ) and total electricity from own production (GWh)

(TJ)	2020	2019	2018	2017	2016
Total heat sales volumes from own generation sources	38,940	39,263	40,659	42,611	39,527
at PGNiG TERMIKA	36,495	36,880	38,290	40,037	38,780
at PGNiG TERMIKA EP*	2,445	2,383	2,369	2,574	747
(GWh)					
Total electricity sales volumes from own generation sources	3,638	3,948	3,974	3,882	3,604
at PGNiG TERMIKA	3,202	3,493	3,535	3,593	3,466
at PGNiG TERMIKA EP*	436	455	439	289	138

** The data for 2016 represents sales volumes generated by PEC and SEJ. As of 2017, the data represents sales volumes generated by PGNiG TERMIKA EP (which comprises PEC and SEJ).*

Table 27 Maximum capacity by licence / plant / branch

Generating unit	Heat [MW]	Electricity [MW]	Cooling [MW]	Compressed air capacity ['000 m^3/h]
PGNiG TERMIKA	4,346	1,015	-	-
Siekierki CHP plant	2,068	620	-	-
Żerań CHPP*	1300	386	-	-
Pruszków CHP plant	164	9	-	-
Kawęczyn heat plant	465	-	-	-
Wola heat plant	349	-	-	-
PGNiG TERMIKA EP	773	185	17	240
Zofiówka Branch	279	113	-	117
Moszczenica Branch	4	2	-	-
Pniówek Branch	121	39	-	-
Suszec Branch (Suszec site)	72	14	17	123
Suszec Branch (Częstochowa site)	38	11	-	-
Wodzisław Branch (Wodzisław Śląski site)	3	3	-	-
Wodzisław Branch (Niewiadom site)	55	2	-	-
Racibórz Branch (Racibórz site)	3	-	-	-
Racibórz Branch (Kuźnia Raciborska site)	87	-	-	-
Żory Branch (Żory site)	4	-	-	-
Żory Branch (Czerwionka-Leszczyny site)	87	-	-	-
Distribution Office	15	-	-	-

* In EC Żerań permanent withdrawal of four coal-fired water boilers WP120 (9, 10, 11, 12) for decommissioning to adapt the plant to the new emission requirements; change of heat generation licence to include decommissioning of K9, K10 – pending at URE (the licence approved by the decision of December 7th 2018 continues in force); three gas-fired water boilers of 130 MW each in the process of commissioning.

4.4.2 Activities in 2020

PGNiG TERMIKA S.A. is the Group's competence centre for heat and electricity generation as well as execution of heat and power projects. PGNiG TERMIKA's core business is the generation of heat and electricity from cogeneration sources.

The main sources of the company's revenue are sales of heat, electricity and grid services. The installed capacity of PGNiG TERMIKA's generating assets is 4.3 GW of thermal power and 1 GW of electric power, which satisfies most of the heat demand on the Warsaw market and almost the entire demand of the district heating network. PGNiG TERMIKA is also a producer and supplier of heat and the owner of heat sources and heat networks in the towns of Pruszków and Piastów and in the Michałowice municipality.

The company is one of the largest Polish producers of electricity and heat from high-efficiency cogeneration sources.

The core business of PGNiG TERMIKA Energetyka Przemysłowa S.A. is generation and distribution of electricity, compressed air and cold, as well as heat generation, distribution and trading. PGNIG TERMIKA EP is the PGNiG TERMIKA Group's competence centre for industrial power generation and use of methane captured from coal seam demethanation. The company operates generation assets with a total capacity of ca. 773 MWt and 185 MWe, and approximately 311 km of heat networks. It is present in the municipalities of Jastrzębie-Zdrój, Czerwionka-Leszczyny, Knurów, Racibórz, Kuźnia Raciborska, Pawłowice, Rybnik, Wodzisław-Śląski, Żory and Częstochowa, and sells its products mainly to housing cooperatives and mines.

The PGNiG TERMIKA Group takes steps to modernise its old and environmentally inefficient generation assets to meet environmental regulations, stricter industrial emissions standards and BAT (best available technology) criteria. The key investment projects underway in 2020 included the performance of the contract to construct a CCGT unit and a peak-load boiler house at the Żerań CHP plant and an investment programme to upgrade the Pruszków CHP plant. In August 2019, an environmental permit was issued for the construction a multi-fuel unit at the 75 MW Siekierki CHP plant.

In 2020, PGNiG TERMIKA supplied heat to two municipal networks: the Warsaw heating network, owned by Veolia Energia Warszawa S.A., and its own heating network, covering Pruszków, Piastów, and Michałowice. The heat output in Warsaw in 2020 corresponded to the requirements set out in the annual agreement with Veolia Energia Warszawa S.A. under the multi-year contract for the sale of heat from PGNiG TERMIKA S.A. generating facilities, effective until August 31st 2028. The company also used Veolia's network to supply heat to its own end customers, based on a transmission contract (those customers are billed on different terms as they are classified in PGNiG TERMIKA's separate tariff group – 'OKW').

In 2020, negotiations were conducted on a long-term lease of the Zasanie Heat Plant in Przemyśl. Combined with a currently constructed CHP plant, the acquisition would secure control of all generation units supplying the district heating network in Przemyśl. The average annual output of the Zasanie heating plant is over 550 TJ. The acquisition is expected to be completed in the first half

of 2021. The company intends to approach local authorities and municipal companies with a proposal of cooperation based on the Przemyśl model, i.e. long-term lease of heating assets.

PGNiG TERMIKA holds licences for electricity generation, heat generation, heat transmission, and electricity trading. In 2020, PGNiG TERMIKA S.A. applied the following tariffs for heat generated at the Żerań CHP plant, Siekierki CHP plant, Pruszków CHP plant, Wola heating plant and Kawęczyn heating plant, and for transmission and distribution of heat via the heating networks in the Pruszków area (supplied from Pruszków CHP plant's own heat generating source), as well as in the Annopol, Chełmżyńska, Jana Kazimierza, Marsa Park and Marynarska areas. The following tariffs were in force in 2020:

- tariff effective from September 1st 2019 to August 31st 2020, resulting in a 7.29% increase in average prices;
- tariff adjustment effective from July 1st 2020 to August 31st 2020, resulting in a 12.97% increase in prices of energy from cogeneration sources;
- tariff effective from September 1st 2020 to August 31st 2021, resulting in a 3.21% increase in average prices.

PGNiG TERMIKA EP holds licences for: generation of electricity, generation of heat, transmission and distribution of heat, trading in heat, trading in electricity and distribution of electricity. The following tariffs applied in 2020:

- tariff effective from January 1st 2020 to June 30th 2020 for from PGNiG TERMIKA EP's heat generating sources;
- tariff effective from July 1st 2020 to December 31st 2020 for heat from PGNiG TERMIKA EP's generating sources, resulting in a 11.64% increase in average prices, and for distribution services, resulting in a 3,64% increase in average prices. The tariff remains effective until June 30th 2021;
- tariff effective from January 1st 2020 to June 30th 2020 for electricity distribution services;
- tariff effective from July 1st 2020 to December 31st 2020 for electricity distribution services. The tariff remains effective until June 30th 2021.

In 2020, another main auction of the capacity market was held for deliveries in 2025 and an additional auction for quarterly deliveries in 2021. As a result of the three main auctions organised by Polskie Sieci Elektroenergetyczne S.A. in 2018, the auctions in 2019 and 2020 and the additional auctions in 2020, PGNiG TERMIKA and PGNiG TERMIKA EP concluded the following contracts:

- CCGT unit at the Żerań 2 CHP plant: a 17-year supply contract for 2021–2037 (net capacity of 433.3 MW);
- Units No. 7 and No. 8 at the Siekierki CHP plant: annual supply contracts for 2021–2024 (total net capacity of 140 MW);
- Units No. 9 and No. 10 at the Siekierki CHP plant: annual supply contract, limited due to emission requirements, for delivery from January 1st 2025 to June 30th 2025 (total net capacity 140 MW);
- Units No. 7 and No. 8 at the Siekierki CHP plant: supply contracts for deliveries in the first and fourth quarter of 2021 (total net capacity of 43 MW);

PGNiG TERMIKA units made available to PGNiG S.A:

- Żerań 1 CHP plant: supply contracts for deliveries in the first and fourth quarters of 2021 (net capacity of 140MW);
- Units No. 9 and No. 10 at the Siekierki CHP plant: supply contracts for deliveries in the first quarter of 2021 (total net capacity of 171 MW);
- Moszczenica CHP plant unit: annual supply contracts for 2021–2022 (net capacity of 7 MW), and for 2023 (6.4 MW);
- Wodzisław – Częstochowa CHP plant unit: annual supply contracts for 2021–2023 (net capacity of 1.2 MW);
- Moszczenica – Wodzisław CHP plant unit: annual supply contract for 2024 (net capacity of 8 MW);
- CFB unit at the Zofiówka CHP plant: an annual supply contract for 2024 (net capacity of 65.1 MW).

Furthermore, in 2018 the Stalowa Wola CHP plant (CCGT unit construction project implemented by PGNiG TERMIKA and TAURON Polska Energia S.A.) signed a seven-year supply contract for 2021–2027 (net capacity of 386 MW).

Competition

Heat

In the area of heat generation, PGNiG TERMIKA operates on markets limited by the boundaries of two separate municipal heating networks: in the capital city of Warsaw and in Pruszków, Piastów and Michałowice. The shares in the heat production markets in Warsaw and Pruszków make PGNiG TERMIKA a natural monopolist in these areas. An important area of competition is the sale of heat to end customers, where business is conducted on a TPA basis (third party access).

Electricity

PGNiG TERMIKA sells electricity almost exclusively on the wholesale market (with an only marginal share of sales to end customers). In 2020, as in previous years, the main players on the wholesale market were three groups of companies: PGE Polska Grupa Energetyczna S.A., TAURON Polska Energia S.A, and ENEA S.A., which account for some 67% of total installed capacity and whose electricity outputs represent approximately 70% of the total production in Poland. The PGE Group holds the largest share in electricity

generation. Given their shares in the wholesale market, the above entities certainly have a major impact on the development of energy prices in futures contracts.

Key projects and investments

PGNiG TERMIKA and PGNiG TERMIKA EP's capital expenditure in 2020 totalled approximately PLN 1,076m (including PLN 500m on CO_2) and was incurred to upgrade and construct generating units.

Żerań CCGT

One of the key capex projects in 2020 was the construction of a 450 MW CCGT unit at the Żerań CHP plant (Żerań CCGT). In the reporting period, mechanical assemblies were carried out for the main technological equipment (gas and steam turbine sets, recovery boiler), parts of technological pipelines, internal installations and external networks, and secondary steel structures.

In March 2020, the consortium consisting of: Mitsubishi Hitachi Power Systems Europe GmbH, Mitsubishi Hitachi Power Systems Ltd., Mitsubishi Hitachi Power Systems Europe Ltd. and Polimex-Mostostal S.A. declared force majeure related to the increase in the number of COVID-19 infections. In early October 2020, the contractor formally demanded that the contract price be increased and the completion date be extended citing changes in the law effective as at September 30th 2020, enacted to counter effects COVID-19. Subsequently, in December 2020, the contractor updated its claim and presented a new contract schedule, with the commissioning deadline set as September 30th 2021.

In 2020, some of the tasks associated with the CCGT Żerań construction were also completed, including modernisation of the cooling water system, construction of the cooling water discharge pipeline from the unit, and modernisation of the water preparation station.

The planned capital expenditure totals approximately PLN 1.6bn.

Stalowa Wola CHP plant

Another project continued in 2020 was the construction of a 450 MW CCGT unit at the Stalowa Wola CHP plant. In 2020, work continued to complete the construction of the CCGT unit and a back-up heat source at ECSW.

The gas turbine was synchronised with the power grid on March 4th 2020, and the steam turbine was synchronised on August 21st 2020. The CCGT unit was commissioned on September 30th 2020. Optimisation works and unit operation tests agreed with Polskie Sieci Elektroenergetyczne S.A. continued until the end of 2020.

On November 5th 2020, the company obtained a licence for electricity generation, followed by a licence for heat generation on December 16th 2020. The application process for electricity trading licence is pending, with the granting of the licence by the URE expected in 2021.

Ostrołęka CCGT

On December 22nd 2020, PGNiG, Energa S.A. and Polski Koncern Naftowy ORLEN S.A. signed an investment agreement for cooperation in the construction of a gas-fired generation unit at Ostrołęka CCGT. The purpose of the agreement is to set out the terms of cooperation between the parties, in particular within the framework of the special purpose vehicle established to construct of a gas-fired generation unit Ostrołęka CCGT. PGNiG will take a 49% interest in the SPV's target share capital, with the remaining shares to be acquired by PKN ORLEN S.A. and Energa S.A. which will participate in the financing of the project pro rata to their equity interest. On February 24th 2021, the parties to the agreement submitted an application to the UOKiK for approval of formation of the joint venture.

Pruszków CHP plant

As part of the Pruszków CHP modernisation project in 2020, the coal handling infrastructure, two water boilers, and the environmental protection system were upgraded. A detailed concept and tender materials were prepared for selecting contractors to carry out projects planned for 2020-2022, including the construction of two coal-fired boilers, an oil-fired boiler house (with a light oil tank) and gas engines with a total capacity of up to 12 MWe. Tenders were launched for construction of the oil boiler housing and construction of the coal-fired boiler house. A tender for the construction of gas engines is being prepared.

Renewable Energy Sources (RES)

As part of the development of its own RES sources, the company is continuing the project for the construction of a photovoltaic installation at C Kawęczyn and the search for a partner to develop a feasibility study for the construction of an innovative floating photovoltaic farm on the Moszna reservoir has begun.

PGNiG TERMIKA EP's investments

The most important investments carried out at PGNiG TERMIKA EP in 2020 included:

- project related to the supply of heat from own generation sources to the town of Rybnik;
- expansion and upgrade of district heating networks in Jastrzębie-Zdrój, co-financed with assistance funds;

- construction of engine power generators fired with gas captured from demethanation processes at hydrocarbon extraction facilities at the Zofiówka Branch;
- adaptation of the WP-70 boiler at the Zofiówka Branch to the requirements of the BAT Conclusion, under which a temporary derogation was granted until the end of 2023;
- adaptation of the CFB-275 boiler at the Zofiówka Branch to the hydrochloride (HCl) emission requirements.

Equity investment in Polska Grupa Górnicza S.A. (PGG)

In 2020, PGG faced a number of challenges, the most serious of which were the collapse in coal sales and the COVID-19 coronavirus pandemic. All key components of PGG's financial result deteriorated significantly. On September 25th 2020, an agreement was signed between the government and the miners unions on the transformation of the Polish hard coal mining industry, which sets out, among other things, the general schedule of decommissioning of individual mines. The parties set 2049 as the cut-off date for the closure of mines. It was further agreed that a social agreement would be drawn up to guide the functioning of the hard coal mining sector. It will be submitted to the European Commission and is necessary in order to obtain the approval for granting state aid. PGG is also actively working to raise funds under the Polish Development Fund's Financial Shield for Large Companies programme. In 2020, as a result of impairment testing of PGG shares, PGNIG TERMIKA recognised impairment losses totalling PLN 800m. The current carrying amount of PGG shares held by PGNiG TERMIKA is PLN 0. For more information, see section 5.2.2.

4.4.3 Development prospects and challenges for the future

PGNiG TERMIKA will proceed with its strategic projects and will actively seek acquisition opportunities in the power and heating area. The company intends to markedly scale up the volume of electricity sales by implementing projects aimed at building new, cost-effective generation capacities and upgrading existing sources using low-carbon technologies..

In 2021, the PGNiG TERMIKA Group will continue work on projects to build a CCGT unit at the Żerań CHP plant, a CCGT unit at the Stalowa Wola CHP plant, a peak-load boiler house at the Żerań CHP plant, and a 75 MWe multi-fuel unit at the Siekierki CHP plant, and will make preparations for the construction of a CCGT unit at the Siekierki CHP plant.

Capital expenditure planned for 2021 in the area of environmental initiatives will include a programme to adapt fluidised boilers at the Żerań CHP plant to the BAT Conclusions, adaptation of the Kawęczyn heat plant to the BAT Conclusions, a programme to adapt Emitter 5 at the Siekierki CHP plant to new dust emission requirements (the programme covers the construction of a bag filter on the K11 boiler and upgrade of absorbers 1) and 2), construction of an SCR unit for the K16 boiler at the Siekierki CHP plant, and upgrade of the Pruszków CHP plant.

In December 2018, the Act on the Promotion of Electricity from High-Efficiency Cogeneration was enacted. The entry into force of the legislation, together with a package of implementing regulations, will make it possible for PGNiG TERMIKA's planned new gas-fired projects to apply for participation in the new support system, which will replace the existing one, based on certificates of origin and described in the Energy Law. As a result of the implementation of the power market system and the auctions held, additional revenue has been secured and will be generated in 2021-2037.

The company will pursue an investment programme, including upgrades to its existing generation assets, aimed at building new high-efficiency and cost-effective generation capacity using low-carbon technologies adapted to increasingly stringent environmental requirements. Steps will be taken to expand the company's business and R&D&I projects focusing on the use of hydrogen in the energy sector, the construction of electricity batteries and the increased use of renewable energy sources in power generation.

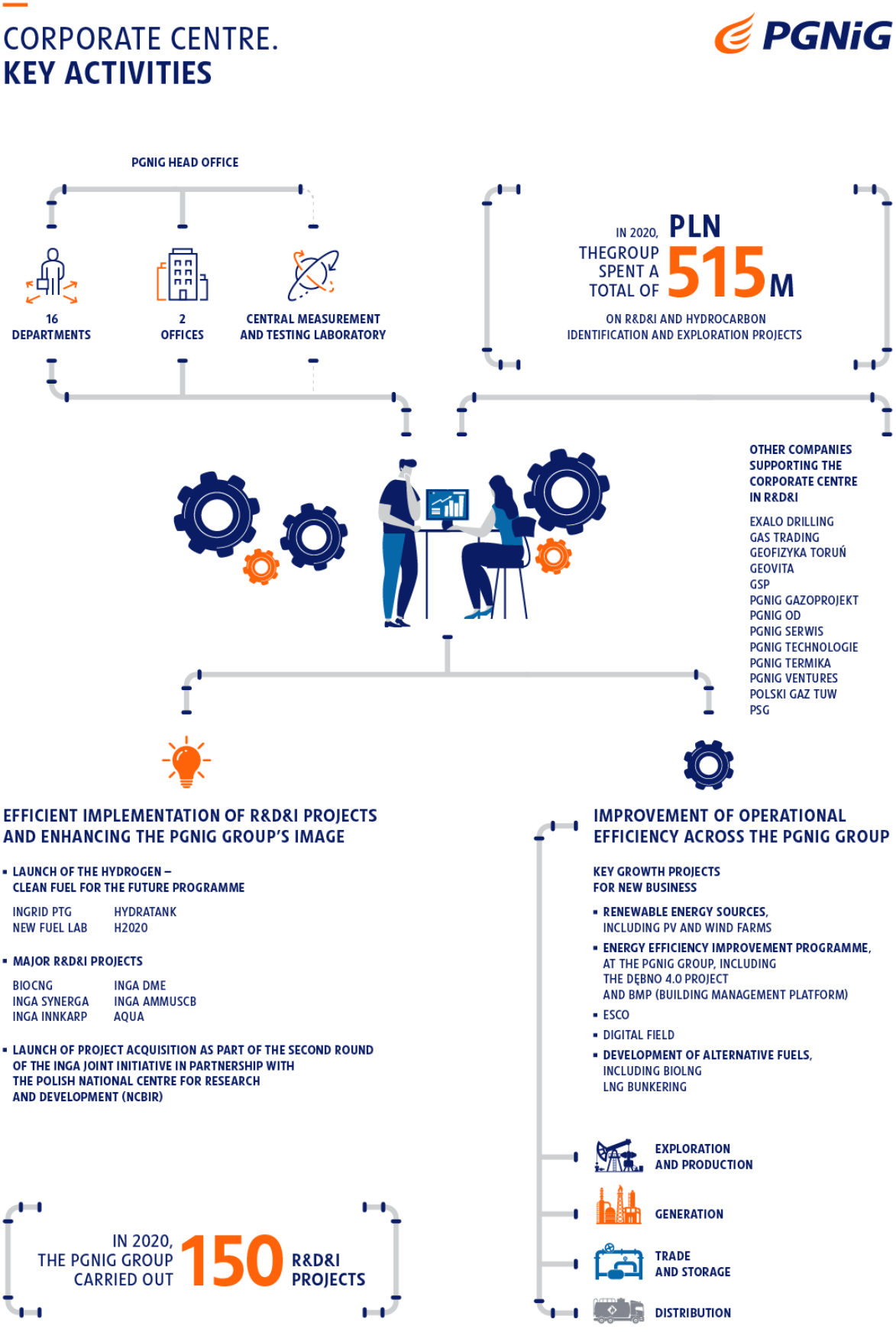
In the coming years, the company also intends to continue its efforts to acquire businesses operating in the area of heat distribution and heat and electricity generation, and to improve its business efficiency through the use of modern production and assets management methods.

The objectives of PGNiG TERMIKA EP in 2021 include: continuation of the project to secure heat supplies for the town of Rybnik and the project to integrate the heating systems of the Zofiówka CHP plant and the Pniówek CHP plant, as well as efforts to intensify acquisition of new customers for central heating and domestic hot water. The company is taking and will continue to take steps to significantly expand the heat market, including year-round sales of domestic hot water, particularly in the large agglomerations of Jastrzębie-Zdrój and Żory. In the long term, the company recognises the enormous potential of thermal waste conversion and therefore intends to analyse this area of potential activity.

The key challenges to the PGNiG TERMIKA Group's strategic plans include:

- implementing an investment plan that will ensure compliance of generation assets with current and future environmental requirements;
- increasing heat sales and distribution volumes by acquiring district heating assets and expanding generation business across Poland;
- increasing electricity sales volume by implementing investment projects aimed at building new, cost-effective generation capacities and upgrading the existing sources with the use of low-emission technologies.

4.5 Other Activities



4.5.1 PGNiG Group support companies and secondary business activities

4.5.1.1 Activities in 2020

PGNiG Technologie

PGNiG Technologie is active mainly on the domestic oil and gas market and, to a lesser extent, on foreign markets. Its business covers three main areas: gas pipelines and gas infrastructure, exploration and production, and storage of gas. With regard to the first area, the company provides construction and assembly services and supplies finished products used in the construction, extension and repair of gas networks and gas infrastructure. Its operations in the exploration and production area consist in the provision of construction and assembly services as well as finished products dedicated for hydrocarbon production and exploration. In the storage business, PGNiG Technologie provides products and services relating to the development, repair and operation of gas storage facilities.

In 2020, as part of its business diversification efforts, the company began executing orders in new areas of thermal and gas-fired power generation and the supply of compressor sets. In 2020, PGNiG Technologie provided its services to PGNiG Group companies and third parties, including: GAZ-SYSTEM, ORLEN Upstream Sp. z o.o and DC Goryzonty i MHWirth AS. For PGNiG TERMIKA, the company delivered gas infrastructure for the peak load boiler plant at the Żerań CHP plant.

PGNiG Serwis

The principal business of PGNiG Serwis sp. z o.o. is the provision of comprehensive finance and accounting services, HR and payroll services, ICT services, direct physical security services, technical security services, property management, and management of adjacent areas for the PGNiG Group companies.

Gazoprojekt

Its business consists in preparation of pre-design and design documentation for the gas, fuel and energy as well as general construction sectors. After a period of high demand for design services for large strategic projects from the company's main customers, i.e. PERN S.A., OGP Gaz-System S.A. and PSG, the market is now saturated, with construction projects in the execution phase. Due to the situation on the fuel market, the segment of storage and distribution of liquid fuels shows some potential for new projects. Work is also under way on the construction of underground gas and/or oil storage facilities.

Given the number and nature of the tenders in which the company participated in 2020, it is important to note that efforts were focused on large, strategic projects executed by Polish companies, as well as smaller projects that were expected to generate higher margins.

Geovita

Geovita’s business involves leisure-related activities, spa treatment services, health protection, medical rehabilitation, and provision of conference and training services. The company’s facilities are located in Dąbki, Mrzeżyno, Dźwirzyno, Jadwisin near Serock, Płotki near Piła, Gronów near Łagów, Jugowice, Lądek-Zdrój, Zakopane, Wisła, Złockie near Muszyna, Krynica-Zdrój, Czarna near Ustrzyki Dolne and Kraków. In 2020, the restructuring process initiated in 2017 was continued with a view to increasing the company’s value. However, the impact of the COVID-19 pandemic severely limited further restructuring opportunities, resulting in the temporary suspension of business activities.

Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych (Polski Gaz TUW, mutual insurance company)

Polski Gaz TUW offers insurance cover to PGNiG Group companies, including: property, motor and third-party liability insurance, legal protection as well as insurance guarantees. It also provides insurance cover to third parties, especially from the power sector. In 2020, the company continued cooperation with the PGNiG Group companies in relation to insurance contracts.

The key project completed in the reporting period involved operational launch of Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych na Życie, a subsidiary of Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych, whose main focus in the initial period of operation is and will continue to be offering Employee Pension Plans in the form of unit-linked group life insurance. Polski Gaz TUW na Życie formally began its activities in December 2019, with actual operations starting in 2020.

Polski Gaz TUW launched two insurance products, marketed in the PGNiG OD network, i.e. “Doradca Prawny dla Ciebie" and “Doradca Prawny dla Firmy” legal service packages, which provide access to legal advice and reimbursement of lawyer's fees. Both products are available at PGNiG OD's customer service offices across Poland.

PGNIG Ventures

PGNiG Ventures' strategy is to invest in companies with growth potential or those that are in the rapid growth phase and demonstrate continued ability to growth. In 2020, the company launched a programme to search for targets meeting the investment criteria, which will enable it to estimate the scope and level of investments in 2021. By the end of 2020, PGNiG Ventures had identified and prepared documentation for 6 projects in such areas as cyber security, electric vehicle charging systems and photovoltaic systems.

Development prospects and challenges for the future

PGNiG Technologie

In 2021–2023, the company will focus on growth within its existing markets. This will involve in particular activities relating to projects and deliveries for the hydrocarbon production industry. Within the Oil & Gas sector, business development efforts have been made to build new competencies in acquiring contracts for delivery of gas compressor sets and gas-fired power generation facilities.

To expand its current project portfolio and order book, the company will take steps to secure contracts in the gas transmission and distribution market and to develop export sales of finished goods (Norway, Ukraine).

PGNiG Serwis

In 2021, PGNiG Serwis intends to continued its activities towards implementation of the Group’s strategic plans. PGNiG Serwis sees opportunities in the demand for optimisation measures and reduction of operating costs, which is facilitated by the company taking over support functions and services for more companies in the PGNiG Group. PGNiG Serwis also intends to expand its personal and property security business, IT support and property management services.

Gazoprojekt

A substantial drop in the number of orders for large strategic projects is expected in 2021, with a simultaneous decrease in pricing levels compared to the prices offered in 2019 and 2020. The nature of the projects will change, with smaller and less significant projects prevailing. A potentially positive change may be seen in the gas power and district heating sectors, but this will largely depend on the country's energy policy and also on the EU’s approach to this type of investments.

New trends in the company's market include investments in low-carbon technologies such as hydrogen, power to gas, biomethane and geothermal projects. This is an opportunity for technological and market development within and outside the PGNiG Group. Intensification of activities in this area is one of the key elements of the 2021-2023 strategy prepared and adopted by the company.

Geovita

In the near future, Geovita will continue its restructuring efforts as regards cost optimisation, efficiency improvement across all business areas, and divestments of unprofitable assets.

Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych (Polski Gaz TUW, mutual insurance company)

The challenges facing Poland Gaz TUW in 2020 were the operational launch of its subsidiary Polski Gaz TUW na Życie, and the taking over by the new company of the management of assets accumulated in the Group companies’ Employee Pension Plans. According to its strategy for 2021-2025, Polski Gaz TUW will continue to operate as a subsidiary of PGNiG providing it with end-to-end and effective insurance services.

PGNiG Ventures

PGNiG Ventures expects to continue its equity investments in 2021 and beyond. Accordingly, it plans to prepare investment documentation for two to four projects in the third and fourth quarters of 2021, with a view to making further investments in the first quarter of 2022.

4.5.2 Research, development and innovation. PGNiG Corporate Centre

The area's main task is to build an efficient organisational and management model for R&D&I activities at the PGNiG Group. To this end, three key strategic aspirations were set, that is, increasing commitment to and efficiency in the execution of R&D and innovation projects, improving the PGNiG Group's operating efficiency, and building the Group's image. The Corporate Centre comprises the PGNiG Head Office with 16 Departments and two Offices.

At the PGNiG Head Office, the R&D&I activities (solution identification, development, implementation/commercialisation), including cooperation with research and development institutions, as well as intellectual property matters are managed by the Research and Innovation Department The relevant organisational units are the Research and Innovation Department, the Business Development Department, and Central Measurement and Research Laboratory (CLPB).

4.5.2.1 Activities in 2020

Research and Innovation Department

In 2020, the Department oversaw work on 150 research, development and innovation projects. In 2020, the PGNiG Group spent a total of approximately PLN 515m on R&D&I and hydrocarbon identification and exploration projects, of which at the PGNiG Group companies: approximately PLN 151m, at PGNiG: approximately PLN 364m (including approximately PLN 30m on R&D&I projects and approximately PLN 334m on hydrocarbon identification and exploration projects (at the Geology and Production Branch)).

Under the INGA (INnovative GAs) joint venture, implemented in partnership with the National Centre for Research and Development (NCBiR) and GAZ-SYSTEM S.A., work continued on the execution of eight research and development projects selected in the first competition round, focused on two areas of the Group's business: „Exploration for, production of hydrocarbons and production of gas fuels" and „Gas networks".

In connection with the periodic review of R&D&I projects in terms of their business viability, in December 2020 corporate decision was made to early close three R&D projects (SILESIAFRAC, COKEPROP, MIGASLIDRILL) implemented in the INGA NPD concerning the demethylation of mines or coal seams implemented in the "Exploration, extraction of hydrocarbons and production of gaseous fuels" area and one project in the "Gas networks" area (VELA-GAZ). The decision was based on the recommendations of the projects' main users, i.e. PGNiG's Geology and Exploration Department and PSG, which reported a real risk that the projects would not be commercially viable and would not yield business benefits, which is required of any R&D&I projects financed from both own funds and from public funds provided by the NCBiR.

Two exploration and production projects (SYNERGA and INNKARP), one post-mining methane recovery project (AMMUSCB), and one alternative fuels project (DME) continue. Call for proposals in the second round of the INGA joint initiative was launched in the first quarter of 2020. The total budget of projects proposed to the PGNiG Group in the first and second round of INGA was PLN 266m. The objective of the INGA Joint Undertaking is to promote long-term innovation and competitiveness of the PGNiG Group companies in Poland and on the global market through targeted and commercialisation-oriented implementation of R&D projects and partnerships with research institutes.

Among the major achievements was the launch by the Department of Research and Innovation, in May 2020, of a hydrogen programme entitled 'Hydrogen – a Clean Fuel for the Future. Building Hydrogen Competences at the PGNiG Group'. The programme is part of the PGNiG Group's Strategy for 2017-2022. Its objective is to start implementation (pilots/demonstrations) of hydrogen technologies in specific areas of the PGNiG Group's business, including in particular in the distribution segment as well as the storage and production segment, on the basis of identified technological competencies and experience gained through successive R&D&I projects. The programme also aims to involve a team of specialists from all areas of the PGNiG Group's business where a business case for implementing hydrogen technologies can be identified. Co-operation between stakeholders from different areas of the Company's operations, while creating a single, coherent value chain, will contribute to the PGNiG Group's commitment and increased responsibility for development and innovation growth, reduce project implementation costs, improve profitability of potential investments, and enhance the allocation of capital (financial, material and human).

The following projects are pursued under the programme: InGrid, PtG – an island research network to add green hydrogen to natural gas and to test the impact of hydrogen on the gas infrastructure of the distribution network; New Fuel Lab – expanding CLPB's laboratory competence to include alternative fuel quality testing; and Hydra Tank – construction of a research hydrogen refuelling station. Another strategic hydrogen project, H2020, was launched in the third quarter of 2020. The project is carried out by GSP and focuses on large-scale hydrogen storage in the Mogilno and Kosakowo salt caverns. As part of the Programme, PGNiG is initiating further ventures related to the development of the Company's proprietary hydrogen technologies (such as fuel cells or hydrogen-fuelled engines). Activities in the Programme also include efforts not directly related to R&D&I projects. In September 2020, PGNiG joined the Hydrogen Europe Association, and in October – the European Clean Hydrogen Alliance (ECH2A). These are key platforms for broad cooperation in the development of the entire hydrogen value chain to build a hydrogen ecosystem in Europe over three decades.

In the Exploration and Production area, the AQUA project was launched in the third quarter of 2020, with the objective to investigate the feasibility of producing geothermal energy from existing (negative) oil wells and to verify the viability of using wells nearing depletion for geothermal energy extraction purposes.

In 2020, the R&D&I area initiated a systemic approach to securing preferential financing across the Group. Procedures were developed to organise the identification of aid programmes, the division of responsibilities when applying for preferential funding, and the external communication with competent ministries. As a result, the Group companies continuously verify the sources of financing in the current and future EU financial perspectives and initiate application procedures for the most interesting R&D&I and investment projects.

Activities were also continued within the PGNiG Group's Strategic Projects Committee for the Research, Development and Innovation Area. The Committee is an important forum for strategic R&D&I activities, knowledge exchange and discussions to achieve synergies in key business areas.

In 2020, four new patent decisions were obtained for applications resulting from ongoing R&D projects.

Business Development Department

In 2020, the Business Development Department worked on a total of 21 development projects, focusing on the following four key areas: Renewable Energy Sources, Alternative Fuels, Energy Efficiency and the Inn-Vento Start-up Centre.

Renewable Energy Sources (RES)

In 2020, the "Photovoltaics Business" project was established, as part of which, in the first stage, analytical work was carried out and a long-term business development plan (with economic parameters) for the use of photovoltaic technologies at the PGNiG Group was prepared. As part of the developed concept, a business model was prepared, assuming PGNiG's entry into the prosumer photovoltaic market in Poland for retail and institutional customers, and implementation of this model was initiated.

In parallel, the "Photovoltaic Installations" project was established, as part of which an inventory was made of roofs and own land that meet the criteria for the construction of photovoltaic installations and farms at PGNiG and the PGNiG Group. Also the first photovoltaic installation was built and put into operation on PGNiG's properties. A concept for the development of large-scale photovoltaic farm projects has also been developed, involving the conditional acquisition of special purpose vehicles developing such projects. Technical and commercial criteria for target projects were formulated and preliminary discussions were initiated with developers of such projects.

The "WIND" project was also launched, focusing on measures to achieve economic benefits and diversify the Group's revenue streams through PGNiG's entry into a new RES business segment, i.e. wind farm. The project explores acquisition opportunities for ready-to-build and operational wind farms, and as a result, PGNiG has started selective acquisition processes that will continue in 2021.

Alternative Fuels

In 2020, looking for new business development opportunities in the area of alternative fuels, with a focus on the use of LNG, bioLNG, and CNG:

- the first stage of the "Magellan" project was completed, which involved analysis of the shipping market and development of a business model aiming at building the LNG bunkering segment;
- the "Gepard" project was launched to expand of PGNiG's LNG and CNG product offer for heavy road transport. Key milestones of Phase I were completed, including the analysis of the LNG and CNG market with recommendations for strategic options;
- the first stage of the "bioLNG TANK" project was completed, which involved the development of a plan to implement an innovative concept for the production of bioLNG based on the integration of a parameterisation and liquefaction station with an agricultural biogas plant for the effective conversion of an energy carrier from agricultural biogas to bioLNG. Several scenarios for the development of the project were prepared based on results of the first stage.

In addition, in the "Geo-Methane II" project, a final decision was taken in July 2020 to cease work at the Budryk stream, and in view of the inability to carry out work also in the other streams (Bielszowice/ PGG, Brzeszcze/ Tauron Wydobycie, Murcki-Staszic/PGG, Pniówek and Szczygłowice/ JSW); a decision was made to work towards closing the project.

Energy Efficiency

In 2020, work was completed on the "ESCO" project - a business concept was developed for solutions and products for the energy-related services market (in particular, energy management solutions), as well as an implementation plan and economic parameters for possible entry models of the PGNiG Group in individual market segments for current and potential customers of the PGNiG Group.

In 2020, a programme entitled "Improvement of Energy Efficiency at the PGNiG Group" was launched to coordinate measures aimed at achieving benefits in energy management at the PGNiG Group. Under the Programme, the first systemic solutions were launched whose expected effect will be to improve the energy efficiency. These include the 'Debno 4.0' project, launched in 2020, which involves implementing a system for monitoring and managing utilities at the Dębno Oil and Natural Gas Extraction Facility; as well as the "BMP (Building Management Platform)" project to prepare and implement the concept of a platform for monitoring and systemic management of energy at the Company’s Head Office.

PGNiG was certified in 2020 for implementing an Energy Management System compliant with the ISO:50001:2011 standard. The Energy Management System documentation was updated to meet the requirements of the ISO 50001:2018 standard.

InnVento Startup Centre

In 2020, InnVento's activity focused on cooperation with the Huge Tech accelerator, operator of the IDEA Global acceleration programme, co-financed with public funds (Measure 2.5 POIR Acceleration programmes). As part of this cooperation, PGNiG can carry out pilot projects with selected startups in business areas that have been identified as promising for the implementation of technologies from small technology companies. In 2020, three pilots were ultimately implemented in PGNiG in the following areas:

- development of a prototype platform supporting the process of safety analyses;
- implementation of a system for measuring body temperature using thermal imaging cameras;

- development of a prototype platform for automatic pre-measurement and inspection of PV installations using drones and advanced mathematical terrain models.

In addition, another 6 technological solutions were identified, which will be analysed in terms of their test implementation at the PGNiG Group, i.e.:

- a cyber security tool for centralised vulnerability management;
- a system compliant with the RED II Directive, for billing, balancing and management of electricity intended for energy clusters and operators of other similar energy subsystems;
- use of maize cob cores in the production of energy, heat and CO_2 for industrial applications as a new source of renewable energy;
- use of satellite data to analyse the quantity and quality of biomass in the form of birch and energy willow on contracted land;
- video/chatbots for the Contact Centre;
- software for data reconciliation and cleaning in different billing systems.

PGNiG Central Measurement and Testing Laboratory (CLPB) Branch

The main objective of CLPB is to maintain and increase its market position as a leading calibration and testing laboratory accredited by the Polish Centre of Accreditation and a verification point for measuring equipment and systems used in the natural gas industry as well as a natural gas quality control laboratory for all types of natural gases and its forms (CNG, LNG). In this area, CLPB continues to provide services such as testing the correctness and reliability of natural gas quality and quantity measurements, testing of metering equipment and systems, and preparation of technical analyses, opinions and technical expertise. Its services include validation of gas chromatographs for the purposes of natural gas settlements, calibration of measurement systems at gas infrastructure units, etc. CLPB's key customers are both internal and external customers from Poland, Including the PGNiG Group companies, GAZ-SYSTEM, EuRoPolGaz S.A. and Polskie LNG S.A. as the largest accounts

The Branch provides metrology services for natural gas quality measurement equipment and quality assessment of natural gas. The largest customers in this respect are PGNiG Branches, PSG and GAZ-SYSTEM, as well as industrial companies using natural gas in their business.

In order to enhance efficiency and the ability to take on new R&D challenges, a new dedicated unit was established within the Branch in 2020, namely the Research, Development and Innovative Technology Office. The key projects launched by the Office are:

- the New Fuel Lab project to expand the laboratory facilities at the Physico-Chemical Measurement Unit of the Central Measurement and Testing Laboratory Branch to include new work stations and test-benches for new fuel gases (hydrogen, biomethane)
- the Bio-CNG project: The Use of Biodegradable Fraction of Municipal Waste in Energy Production is a circular economy initiative to develop technologies for efficient preparation, processing and management of the organic fraction of municipal waste, and to devise formulas for development of large-scale projects based on research concepts applied throughout the Initiative.

4.5.2.2 Development prospects and challenges for the future in research, development and innovation area

Research and Innovation Department

PGNiG's activities are primarily aimed at strengthening the PGNiG Group's position in the area of hydrogen technologies, executing and commercialising further R&D projects, actively acquiring and implementing innovative projects, and adapting the Group's model of R&D&I activities to the evolving market environment and the Group's strategic objectives. At the same time, new business areas that can increase the competitiveness of companies and strengthen their market position will be constantly analysed. These activities will be implemented over two time horizons:

Short-term horizon (until end 2021):

- strengthening the PGNiG Group's position in the area of hydrogen technologies through such measures as development of the PGNiG Group Hydrogen Strategy and, based on that strategy, initiating further projects and expanding the Group's competence in the area of alternative fuels;
- launch of pilot microcogeneration units based on fuel cells;
- launch of a PV unit with power storage facility in Odolanów;
- as part of the H2020 project: launch of a complete measurement vehicle capable of testing infrastructure containing hydrogen and natural gas-hydrogen mixtures;
- pilot project combining 3D scanning technology with equipment/infrastructure passporting functionality;
- launch of projects in new, attractive business-relevant areas for the PGNiG Group, including digitisation. The planned areas of implementation of digitisation projects at the PGNiG Group will include support for production management, implementation of decision-support functions, and optimisation through transformation of processes. Digital technologies

and projects will cover such areas as process automation, application of artificial intelligence and machine learning tools, and offering new services using digital tools. Development-oriented and innovative digital projects are characterized by a shorter implementation times than other types of projects and therefore can yield business or process efficiency gains more quickly;

- signing contracts to implement R&D projects selected in the 2nd call for proposals of the INGA WP;
- transfer of completed R&D projects (e.g. EkoHead and MiniDrill initiatives) for implementation/commercialisation;
- stepping up efforts to apply for assistance funds for the Group's R&D&I and investment projects;
- development of R&D&I project management methodology.

Medium-term horizon (2022–2023):

- growth and expansion in the hydrogen technology market, including in PtG energy storage, hydrogen storage;
- Digitalisation Programme including digital innovation projects – e.g. big data analytics or decision support algorithms (artificial intelligence, machine learning) and process automation – developed, tested and implemented in all areas of the PGNiG Group's value chain;
- commercialisation/implementation into the PGNiG Group's business of the results of R&D projects, including products and technologies developed from INGA projects – verified on an ongoing basis in terms of the commercialisation viability.

Business Development Department

In 2021, steps will be taken primarily to ensure efficient implementation of new business products at the PGNiG Group, based on business concepts, implementation plans and financial models prepared in 2020. New projects will also be gradually identified and developed.

RES

In the area of renewable energy, in 2021 PGNiG will implement its concept to enter the prosumer photovoltaic market based on the developed business model, which will expand PGNiG's offer for residential and institutional customers. Efforts will be stepped up to build and operate a portfolio of renewable electricity sources, including in the photovoltaics segment: development of photovoltaic installations on own land, acquisitions of photovoltaic farms and development of large-scale photovoltaic farm projects in accordance with the developed business concept. In the wind farm segment: acquisition of wind farm projects: ready for construction and operational wind farms.

Alternative Fuels

The second stage of the “Magellan” project is planned to be completed by the end of 2021, which includes developing the infrastructure through procurement of innovative equipment that meets the actual needs of the shipping market, based on MTTS solutions (Multiple Truck-to-Ship, a multiplying technology that increases the volume and speed of bunkering). Also, the TANK BioLNG project is planned to be implemented in 2021-2022.

Energy Efficiency

In the Energy Efficiency area, in 2021:

- the Group companies will gradually implement energy-related products developed in the ESCO project, including the Stop SMOG project;
- the PGNiG Group's Energy Efficiency Improvement Programme will be progressively implemented, including launch of a system for monitoring and managing utilities at the Dębno Oil and Natural Gas Extraction Facility as part of the Dębno 4.0 project, and commencement of work on a monitoring and energy management system platform at the Company's Head Office (BMP – Building Management Platform project);
- it is planned to obtain ISO 50001:2018 certification for the Energy Management System.

InnVento Startup Centre

In 2021, the PGNiG Group plans to increase the scale of test projects with start-ups, building on cooperation with external partners (accelerators). To this end, steps will be taken to identify and verify the technological and business needs of PGNiG and key Group companies, as well as to support effective management of such projects within the PGNIG Group.

Central Measurement and Testing Laboratory

In 2021, CLPB plans to expand its measurement and testing activities by acquiring new customers, expanding the service offer, increasing the use of its expertise potential and existing infrastructure, and to intensify marketing efforts through such activities as campaigns targeted at entities that use infrastructure requiring certification. Other business development initiatives will include building CLPB’s competences and infrastructure to offer qualitative and quantitative testing and analytical services for alternative fuels.

Short-term plans provide for expanding CLPB's competences to include analysis and quality testing of hydrogen as a low-emission vehicle fuel. Currently, there is no such laboratory in Poland, and the prospect of organising one becomes a very important element in the development of CLPB in the context of the emerging market for hydrogen fuel, as well as the quantitative and qualitative testing of natural gas-hydrogen mixtures and biomethane.

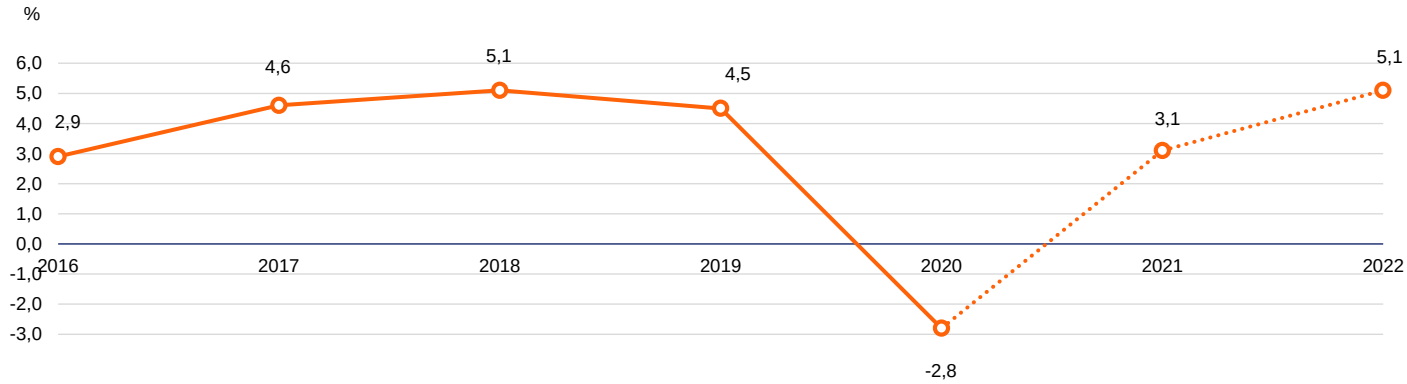
2021 is expected to see the launch of innovative hydrogen technology projects as part of the Hydrogen Programme in order to acquire broadly-defined know-how related to the operation of small-capacity co-generation systems based on fuel cells, and to implement gas engine technologies for safe and low-emission combustion of natural gas-hydrogen mixtures.

5. Financial condition of the PGNiG Group and PGNiG in 2020

5.1 Macroeconomic environment

5.1.1 Economic situation and exchange rates

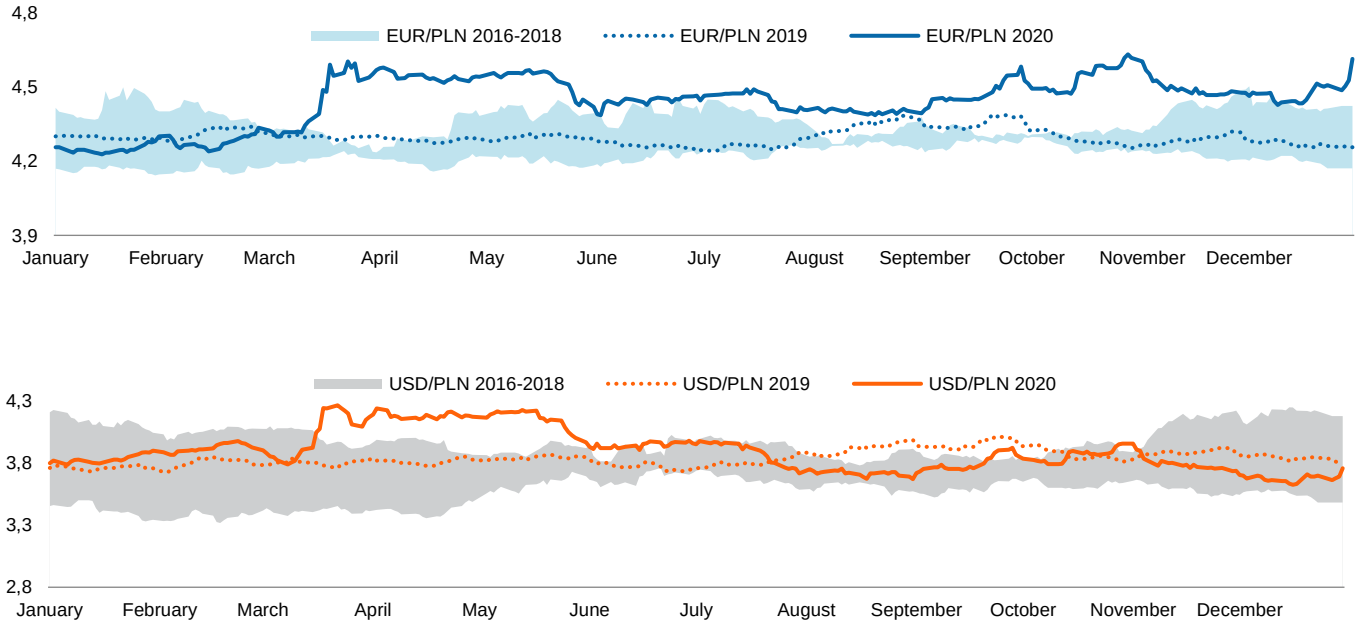
Chart 20 Gross Domestic Product (GDP) yoy (%) in 2016–2020 and forecast for 2021-2022



Source: In-house analysis based on data published by the Central Statistical Office and the European Commission.

In 2020, Poland's GDP fell by -2.8% y/y. As a result of the COVID-19 coronavirus pandemic, the Polish economy faced declining investment activity (-10.9% p.p.) and lower household consumption (-3.2% p.p.). On the other hand, an increase in the level of government spending (0.7 p.p.) and a positive foreign trade balance (0.4 p.p.) helped keep the Polish economy in relatively good shape compared with other European Union countries - according to European Commission data, the recession in Poland was among the lowest, with only Lithuania recording a smaller decline in economic activity (down by -0.9% y/y). Despite the significant downturn, European Commission analysts forecast that the Polish economy should return to pre-pandemic levels in 2021, with GDP expansion forecast at 3.1% y/y.

Chart 21 EUR/PLN and USD/PLN exchange rates



Source: In-house analysis based on data published by the National Bank of Poland (NBP).

The USD and EUR exchange rates are a significant indicator for the PGNiG Group, mainly because of their impact on gas procurement costs in the Trade and Storage segment. The dollar exchange rate mainly affects settlements with gas suppliers in long-term contracts and oil revenue, while the euro exchange rate affects gas purchases from the western direction.

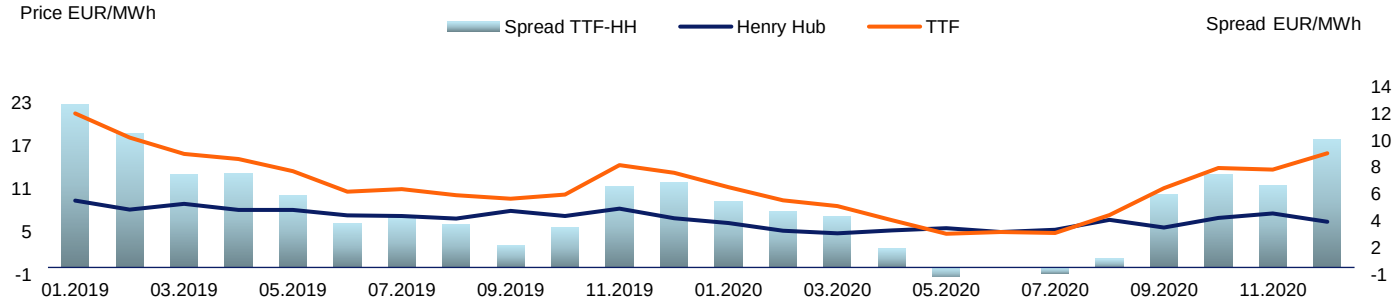
5.1.2 Trends in the natural gas market

Gas prices in Europe and globally

In 2020, prices of natural gas in Europe fell significantly relative to prices quoted at the US Henry Hub. The average natural gas price on the TTF Holdings Hub during this period was EUR 9.35/MWh - a decrease of more than 30% y/y. Comparing the same periods,

natural gas prices at the Henry Hub fell by EUR 1.98/MWh to average EUR 5.84/MWh. The average price of gas in the United States was down 25.3% at that time. The spread between those two trading points shrank by almost 39.1% last year, by EUR 2.25/MWh, to an average of EUR 3.51/MWh in 2020. The largest price spread of EUR 9.58/MWh was recorded in December.

Chart 22 Average monthly front month gas contract at Henry Hub and TTF

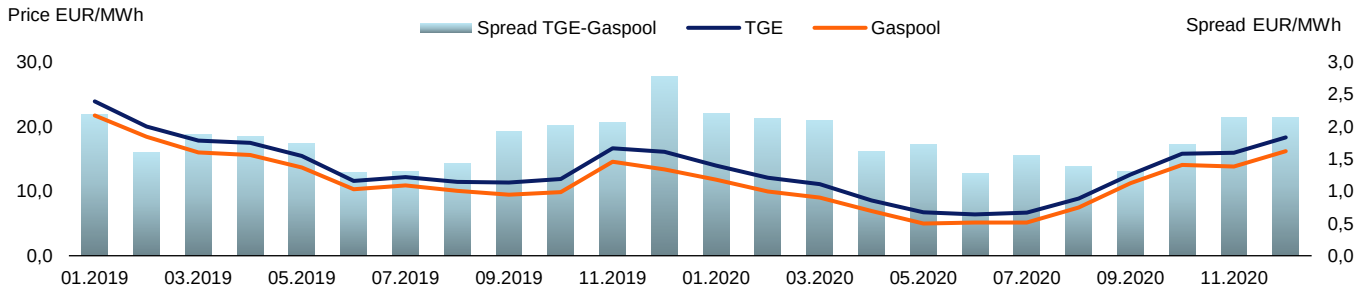


Source: In-house analysis based on NYMEX and ICE data.

Gas prices in Poland

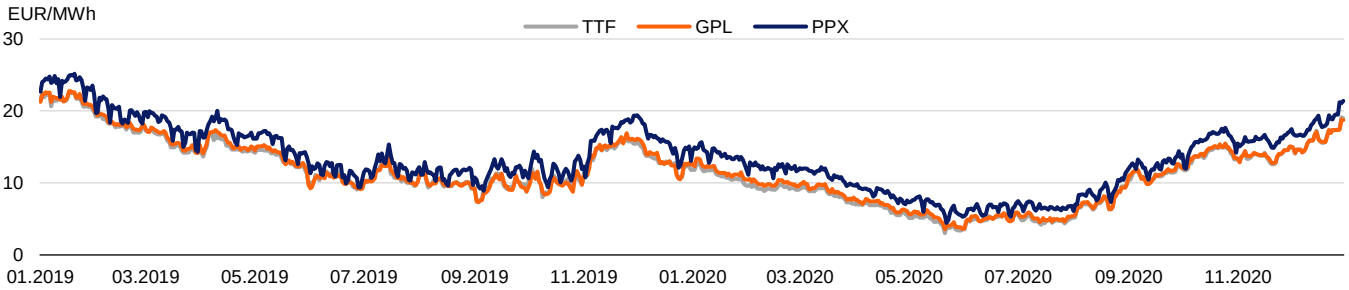
In 2020, the weighted average spot price (on the Day-Ahead and Intraday Market) of gas in Poland was PLN 50.60/MWh, down by PLN 15.86/MWh on 2019. Gas prices in Poland were strongly correlated with those in Germany and on the European markets in general. The average spread between the spot prices (for Day Ahead products) on the PPX and GASPOOL in 2020 was EUR 1.77/MWh.

Chart 23 Average monthly spot prices of natural gas in Poland and Germany in 2019 and 2020



Source: In-house analysis based on POLPX and EEX data.

Chart 24 Spot price of gas on PPX, TTF and GPL in 2019 and 2020.



Source: In-house analysis based on POLPX and EEX data.

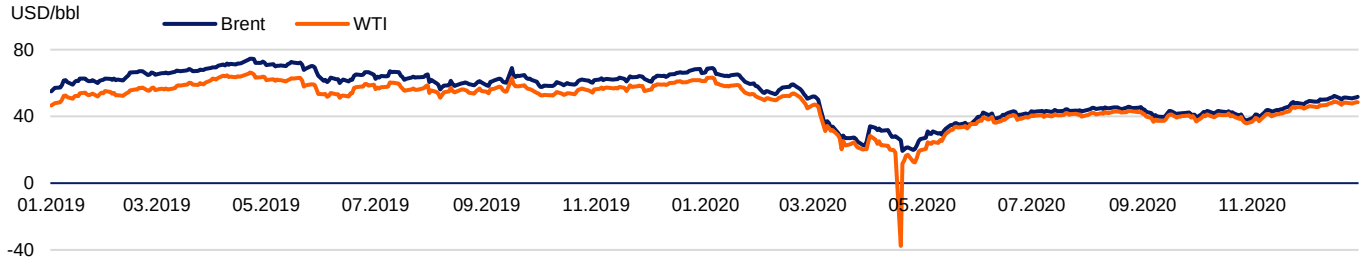
The situation on the natural gas market in Europe and globally has a bearing on the PGNiG Group's financial results, mainly due to its impact on both income and expenses of the Trade and Storage segment.

5.1.3 Trends on the crude oil market

Oil prices collapsed in the first quarter of 2020. The coronavirus pandemic led to the imposition of restrictive measures in many countries, leading to a fall in demand. Towards the end of the quarter, a price war between Russia and Saudi Arabia also began, the aim of which was to drive down oil prices. In the second quarter, the two sides came to an agreement, but demand fell even more sharply (especially in April) which led to very significant oversupply. The parties' agreement to cut production meant that the situation in the oil market gradually improved throughout the rest of the year.

In the third quarter, the average monthly price was in a narrow range of USD 40-45/bbl, and in November and December the prices rebounded. News of the emergence of a vaccine for the coronavirus and the ordering by many countries of bulk quantities of the vaccine translated into a rise in the price of Brent crude oil, which reached USD 50 per barrel, its highest level since February.

Chart 25 Brent and WTI prices, month ahead contracts in 2019 and 2020



Source: In-house analysis based on ICE and NYMEX data.

Average oil demand in 2020 fell 8.86% from the previous year, at 92.22m barrels per day. Oil demand among the world's largest non-OECD (Organisation for Economic Cooperation and Development) consumers fell by 6.28%. Other Asian countries also saw a decline in demand. The global oil supply was reduced in 2020 by 6.31% year on year. The output from the OPEC group fell most sharply, by 11.72%. Only China increased production, by 0.82%, while the countries of the former Soviet Union reduced their supply by 1.15%.

Table 28 Global oil demand

million bbl/d **Demand**	**2020**	**2019**
OECD	41.93	47.52
including United States	*18.20*	*20.70*
Non-OECD	50.29	53.66
including China	*14.30*	*14.76*
Globally – total	92.22	101.18

Source: in-house analysis based on EIA data.

Table 29 Global oil supply

m bbl/d **Supply**	**2020**	**2019**
OECD	30.67	31.66
including United States	*18.58*	*19.47*
Non-OECD	63.59	68.95
including China	*4.93*	*4.89*
including FSU countries	*14.63*	*14.80*
including OPEC	*30.57*	*34.63*
Globally – total	94.25	100.60

Source: in-house analysis based on EIA data.

Table 30 Crude oil supply and demand balance

m bbl/d **Surplus/deficit**	**2020**	**2019**
Globally – total	0.36	(0.42)

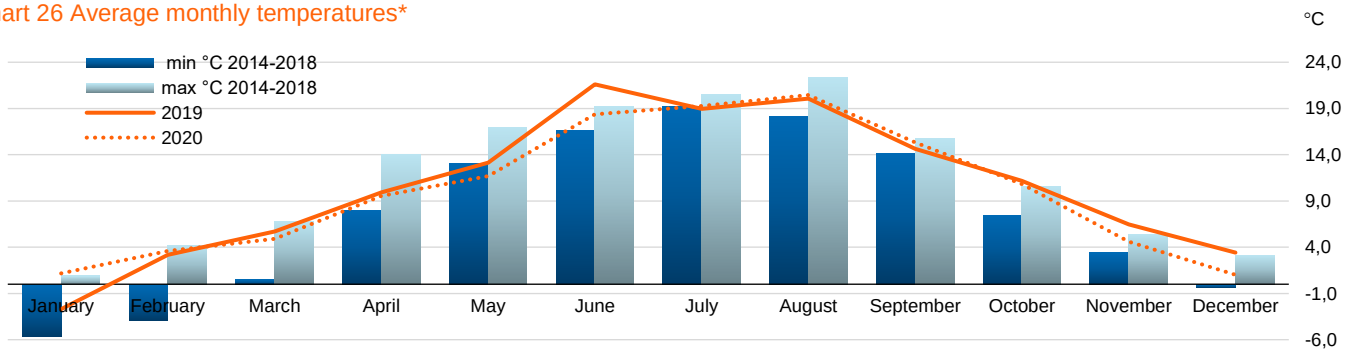
Source: in-house analysis based on EIA data.

The situation on the oil market in Europe and globally has a bearing on the PGNiG Group's financial performance, mainly due to its impact on the Exploration and Production segment (chiefly sales of crude produced in Norway) and the cost of gas imports in the Trade and Storage segment.

5.1.4 Average monthly temperatures

In the winter months, the air temperature in 2020 was above the seasonal average, at 4°C in the first quarter and 6.5°C in the fourth quarter, compared with 3°C and 7°C, respectively, in 2019. In the spring and summer season, air temperatures stayed around 15°C in the second quarter and 18°C in the third quarter, compared with 16.5°C and 18°C, respectively, in 2019. Air temperatures are an important indicator for the Group given their impact on the operating performance of the Trade and Storage, Distribution and Generation segments.

Chart 26 Average monthly temperatures*



** Reference point for temperature measurement: Rzeszów.*
Source: In-house analysis based on Wholesale Trading Branch data.

5.2 Financial condition of the PGNiG Group in 2020

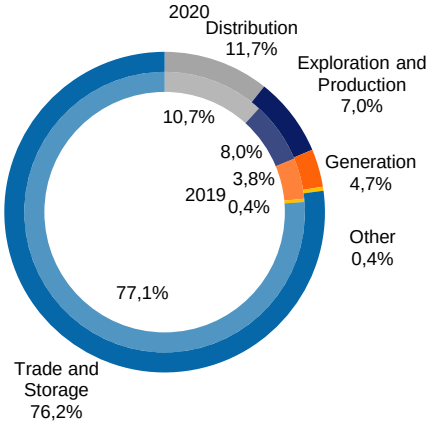
Table 31 Financial highlights of the PGNiG Group in 2018–2020

PGNiG Group	2020	2019	2018	2020/2019 change (%)	2020/2019 change
Revenue	**39,197**	**42,023**	**41,234**	**(7%)**	**(2,826)**
Total operating expenses	(29,612)	(39,575)	(36,839)	(25%)	9,963
Operating profit before interest, taxes, depreciation and amortisation (EBITDA)	13,009	5,504	7,115	136%	7,505
Depreciation and amortisation expense	(3,424)	(3,056)	(2,720)	12%	(368)
Operating profit	9,585	2,448	4,395	292%	7,137
Profit before tax	9,025	2,159	4,502	318%	6,866
Net profit	7,340	1,371	3,209	435%	5,969
Net cash from operating activities	14,118	4,938	5,814	186%	9,180
Net cash from investing activities	(6,254)	(6,152)	(4,704)	2%	(102)
Net cash from financing activities	(3,653)	327	237	(1,217%)	(3,980)
Net increase/(decrease) in cash and cash equivalents	4,211	(887)	1,347	(575%)	5,098
	December 31st 2020	**December 31st 2019**	**December 31st 2018**	**2020/2019 change (%)**	**2020/2019 change**
Total assets	62,871	59,185	53,271	6%	3,686
Non-current assets	46,243	43,939	38,898	5%	2,304
Current assets, including	16,628	15,246	14,373	9%	1,383
Inventories	2,684	4,042	3,364	(34%)	(1,358)
Total equity and liabilities	62,871	59,185	53,271	6%	3,686
Total equity	44,125	38,107	36,632	16%	6,018
Total non-current liabilities	11,666	10,378	7,255	12%	1,288
Total current liabilities	7,080	10,700	9,384	(34%)	(3,620)
Total liabilities	18,746	21,078	16,639	(11%)	(2,332)

5.2.1 Consolidated statement of profit or loss

Revenue

Chart 27 Revenue in 2019–2020 by business segment



E&P : revenue from sales of type E and type Ls/Lw gas down PLN -596m (-19%) y/y and revenue from sales of crude oil and condensate down PLN -662m (-29%) y/y.

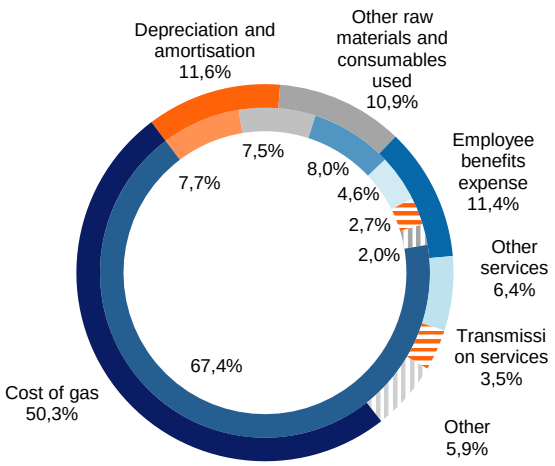
T&S: revenue from sales of gas down -10% y/y (PLN -2,890m).

Distribution: revenue from distribution services higher by 4% (PLN 181m), with a 3.5% increase in the distribution tariff.

Generation: 10% y/year increase in revenue from sales of heat (PLN 139m), with the average air temperature lower by 0.4ºC y/y and 1% (323GJ) decrease in volumes of heat sales; revenue from sales of electricity from own generation down -4% y/y (PLN -35m), with sales volumes down -8% (by -311 GWh).

Operating expenses

Chart 28 Operating expenses in 2019–2020



Significant decrease in gas costs by 44% y/y (by PLN 11.8bn), mainly due to change of price under the annex to the Yamal contract with PAO Gazprom/OOO Gazprom Export – gas costs for 2014-2019 adjusted downward by PLN 4,915m.

Increase in consumption of other raw materials and consumables by PLN -247m y/y (-8%), including electricity for commercial purposes by PLN -327m y/y (-22%).

Employee benefits expense up by -7% yoy (PLN -213m), driven mainly by higher employee benefits in the Distribution segment.
Cost of 8 dry wells and seismic surveys totalled PLN -198m in 2020 vs PLN -258m (10 dry wells) in 2019.
Recognition of impairment loss on non-current assets in 2020: PLN -1,588m, vs 2019: PLN -400m.
Effect of reversal of a gas inventory write-down at PLN +358m. In 2019, recognition of gas inventory write-downs at PLN -258m.
Depreciation of PLN -3,424m in 2020, PLN -573m in Norway.

EBITDA

Chart 29 EBITDA bridge in 2019–2020

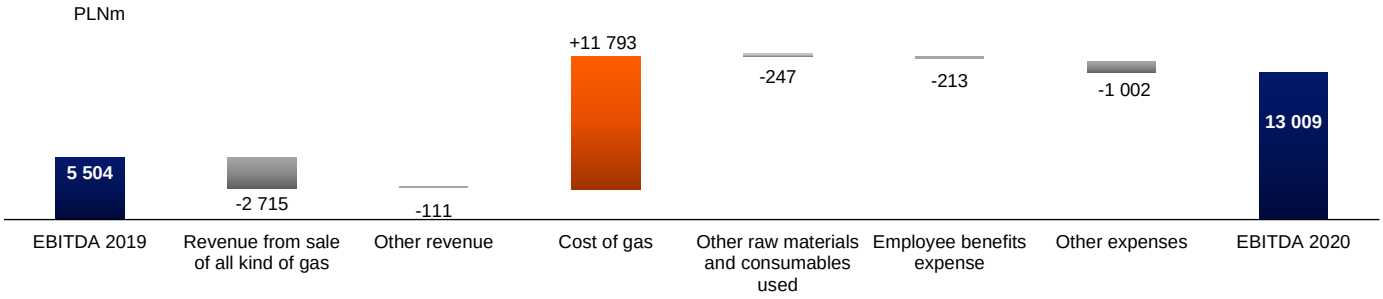
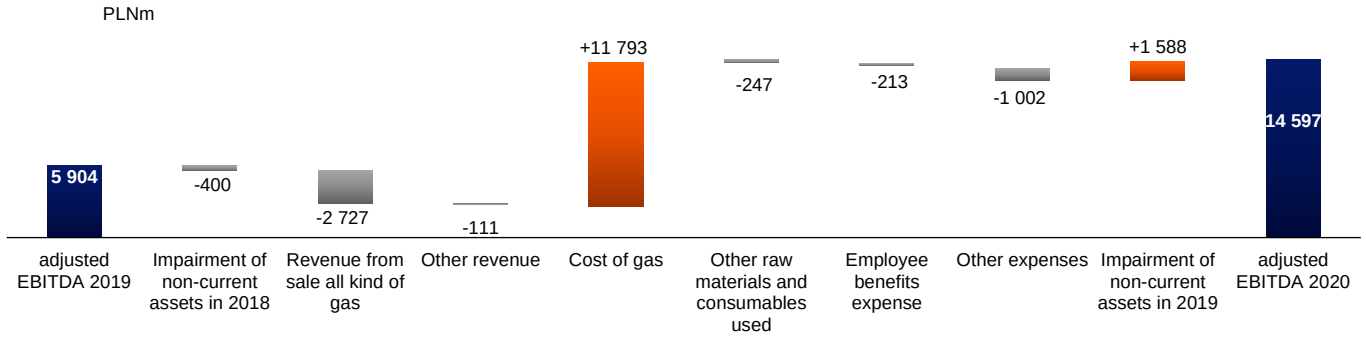


Chart 30 Adjusted EBITDA bridge in 2019–2020



Net finance costs and net profit or loss

In 2020, net finance costs were PLN 35m and included mainly interest on lease liabilities (PLN -75m), exchange differences (PLN 47m) and other net finance costs (PLN 50m).

After accounting for profit or loss on equity-accounted investments of PLN -595m (of which PLN -612m is the effect on the consolidated net profit or loss of the PGNiG Group of accounting for PGG shares using the equity method) and tax expense of PLN -1,685m, the Group's net profit for 2020 was PLN 7,340m, having increased by PLN 5,969m year on year.

For detailed notes on finance income and costs (Note 3.4) equity-accounted investees (Note 2.4) and income tax (Note 4.1), see the consolidated financial statements of the PGNiG Group for 2020.

5.2.2 Overview of segment results

Chart 31 EBITDA bridge in 2019–2020

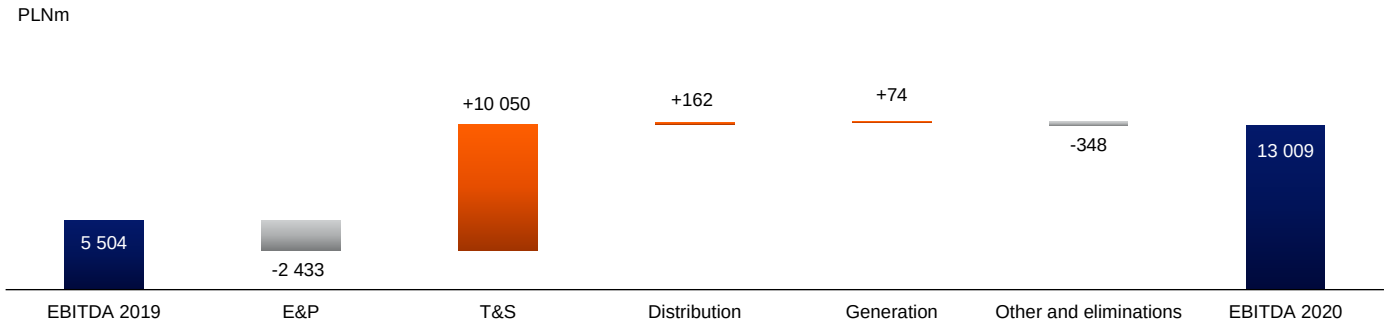
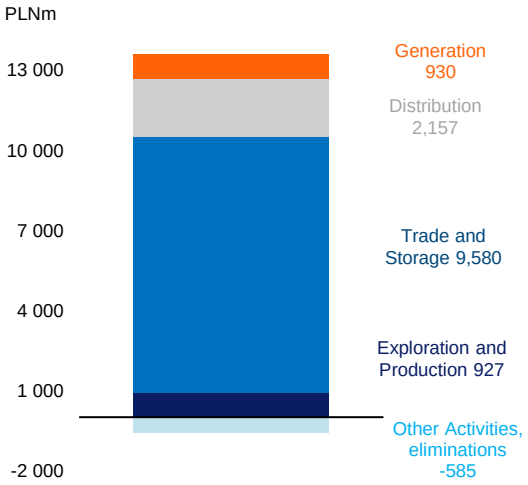


Chart 32 EBITDA in 2020 by business segment



Exploration and Production (E&P)

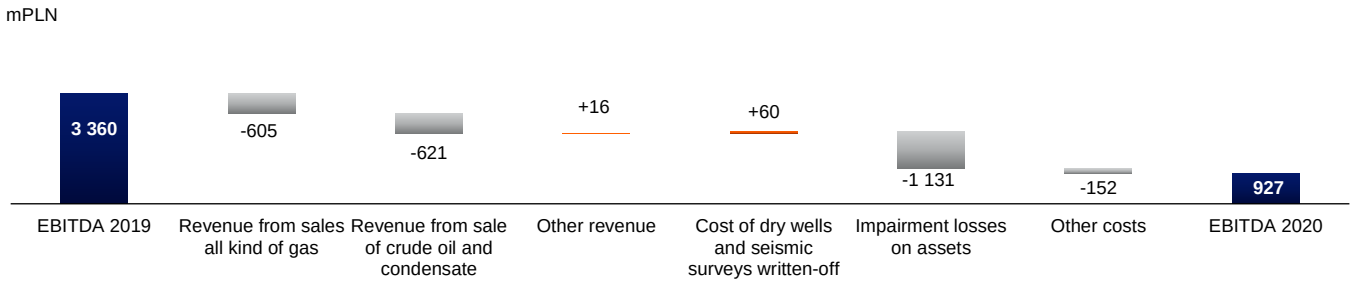
Table 32 Revenue in the Exploration and Production segment in 2018–2020

	2020	2019	2018
Revenue from non-PGNiG Group customers	2,754	3,351	3,795
Inter-segment revenue	1,858	2,471	3,876
Total revenue, including	4,612	5,822	7,671
- high-methane and nitrogen-rich gas	2,490	3,086	4,536
- crude oil, condensate and NGL	1,491	2,112	2,554
- geophysical, geological and drilling services	227	277	275

Table 33 Operating expenses in the Exploration and Production segment in 2018–2020

	2020	2019	2018
Total expenses	(4,933)	(3,518)	(3,714)
- depreciation and amortisation expense	(1,248)	(1,056)	(1,063)
- raw materials and consumables used	(313)	(356)	(380)
- employee benefits expense	(910)	(890)	(867)
- services	(618)	(590)	(667)
- transmission services	(210)	(223)	(261)
- cost of dry wells and seismic surveys written-off	(198)	(258)	(687)
- impairment of non-current assets	(1,485)	(354)	203
- work performed by the entity and capitalised	494	488	506
- other expenses, net	(445)	(279)	(498)

Chart 33 E&P segment's EBITDA bridge in 2019–2020



- revenue from sales of crude oil and condensate down PLN -621m (-29%) y/y, on lower sales volumes in Poland (-8% y/y) and Norway (41% y/y), and a -34% y/y decrease in the average oil price in USD (USD 42/bbl).
- crude oil and NGL production volumes in Norway up 40% y/yr, to 615 thousand tonnes;
- revenue from sales of gas down PLN -605m (-19%) y/y, driven by a -25% decline in EUR-denominated gas prices on the PPX Day-Ahead Market (TTF);
- cost of dry wells and seismic surveys written off: PLN -198m in 2020 vs PLN -258m in 2019;
- recognition of impairment losses on non-current assets: PLN -1,485m in 2020 vs PLN -354m in 2019;
- overlift/underlift in Norway in 2020 – effect on profit or loss for 2020: PLN 16m. In 2019, the effect of overlift/underlift on profit or loss was PLN -12m.

Table 34 Capital expenditure in the Exploration and Production segment in 2019–2020

	Capital expenditure* on property, plant and equipment made by the PGNiG Group	2020	2019	2018
	Exploration and Production, including:	2,557	2,508	2,232
1	Norway	1,572	1,414	1,149
2	Pakistan	75	136	94
3	Libya	4	4	9

** Including capitalised borrowing costs.*

For more information on key investment projects and expenditure in the segment, see Section 4.1.3. Key projects and investments.

Table 35 PGNiG UN's financial performance

PGNiG UN (NOKm)	2020	2019	2018
Revenue	2,180	2,358	3,569
EBITDA	436	1,515	2,247
EBIT	(945)	721	1,343
Net profit/loss	(183)	143	157
Total assets	15,219	13,244	10,145
Equity	1,711	1,894	751

Trade and Storage (T&S)

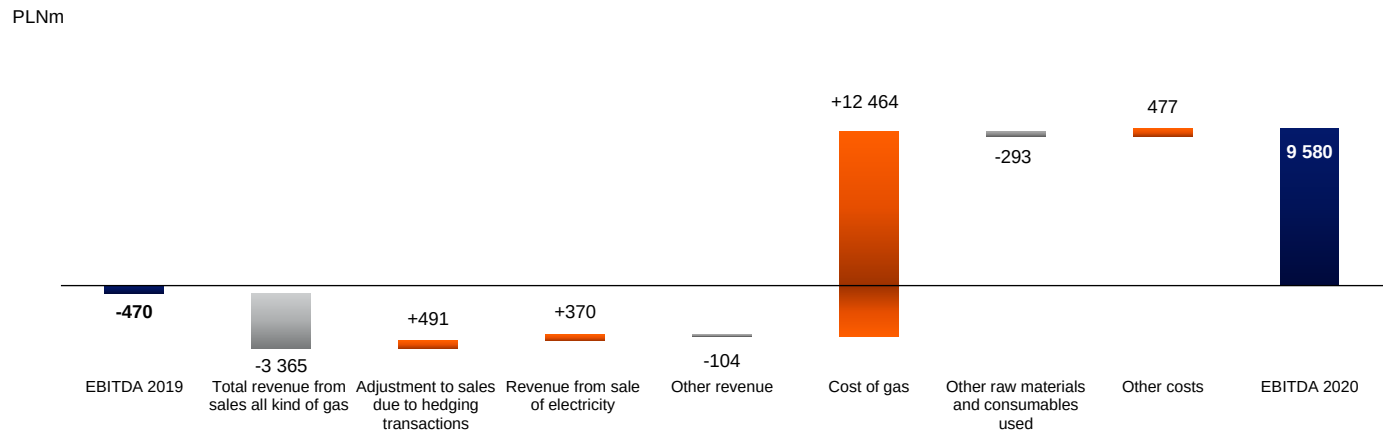
Table 36 Revenue in the Trade and Storage segment in 2018–2020

	2020	2019	2018
Revenue from non-PGNiG Group customers	29,850	32,415	31,038
Inter-segment revenue	793	835	666
Total revenue, including	30,643	33,250	31,704
- high-methane and nitrogen-rich gas,	25,951	29,334	29,503
- electricity	2,858	2,488	2,010

Table 37 Operating expenses in the Trade and Storage segment in 2018–2020

	2020	2019	2018
Total expenses	(21,285)	(33,934)	(32,741)
- depreciation and amortisation expense	(223)	(214)	(189)
- raw materials and consumables used	(19,499)	(31,669)	(30,940)
- employee benefits expense	(441)	(401)	(384)
- services	(824)	(745)	(707)
- transmission services	(171)	(175)	(143)
- recognition and reversal of impairment losses on property, plant and equipment and intangible assets	(5)	(5)	-
- work performed by the entity and capitalised	28	22	29
- other expenses, net	(150)	(747)	(406)

Chart 34 T&S segment's EBITDA bridge in 2019–2020



- operating expenses on gas reduced as a result of recognition of the effect of settlement under the annex to the Yamal contract of PLN 5,689m (approximately PLN 4,915m relates to gas costs in 2014-2019) and net exchange gains on accounting for mutual settlements (approximately PLN 300m);
- revenue from sales of type E and type Ls/Lw gas (including the effect of hedging transactions) down PLN -2.9bn y/y (-10% y/y);
- net gain/(loss) on settlement of hedging instruments designated for hedge accounting of PLN +1,062m in 2020 vs PLN +571m in 2019 recognised in gas inventory as reduction in gas costs by PLN +286m (2019: PLN +97m);
- slightly higher volumes of gas imports to Poland y/y from countries east of Poland (2020: 9.00 bcm vs 2019: 8.95 bcm), higher LNG import volumes (0.33 bcm y/y) and lower from western sources (2020: 1.71 bcm vs 2019: 2.03 bcm);
- total revenue from sales of electricity: PLN 2.86bn, increase by PLN 370m (15%) y/y, with cost of energy for trading higher by PLN -288m (-12%) y/y;
- effect of reversal of a gas inventory write-down at PLN +358m. In 2019, recognition of gas inventory write-downs at PLN -256m;
- effect of recognition of a provision for energy efficiency buy-out price: PLN -233m in 2020 vs PLN -196m in 2019.

Capital expenditure made in 2020 on PGNiG Group's property, plant and equipment in the Trade and Storage segment was PLN 90m.

For more information on key investment projects and expenditure in the segment, see Section 4.2.3. Key projects and investments.

Table 38 PGNiG OD's financial performance

PGNiG OD (PLNm)	2020	2019	2018
Revenue	9,667	10,965	9,097
EBITDA	930	561	76
EBIT	897	534	67
Net profit/loss	721	425	54
Total assets	3,107	3,445	3,183
Equity	1,475	1,188	809

Table 39 PST Group's financial performance

PST Group (EURm)	2020	2019	2018
Revenue	1,036	1,671	1,531
EBITDA	3	3	0
EBIT	2	2	0
Net profit/loss	0	0	(1)
Total assets	233	350	418
Equity	6	6	6

Distribution

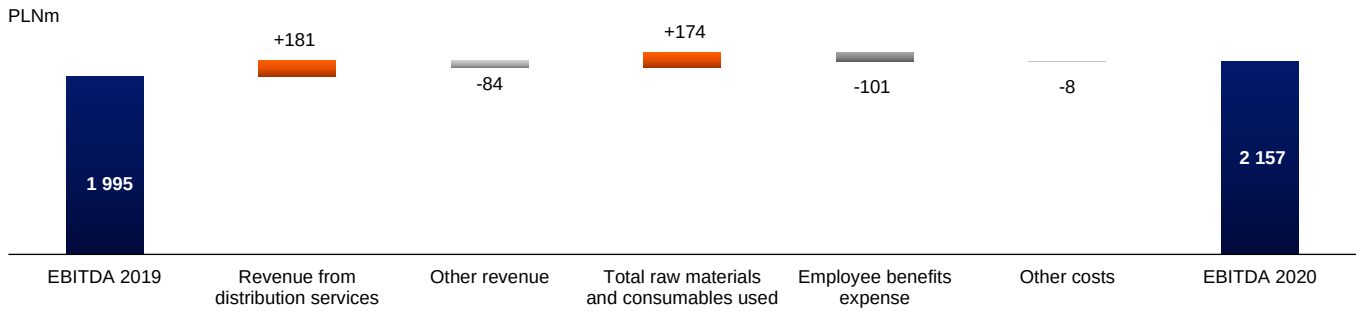
Table 40 Revenue in the Distribution segment in 2018–2020

	2020	2019	2018
Revenue from non-PGNiG Group customers	4,603	4,481	4,604
Inter-segment revenue	81	106	323
Total revenue, including	4,684	4,587	4,927
- distribution services	4,389	4,208	4,414

Table 41 Operating expenses in the Distribution segment in 2018–2020

	2020	2019	2018
Total expenses	(3,621)	(3,607)	(3,469)
- depreciation and amortisation expense	(1,094)	(1,015)	(927)
- raw materials and consumables used	(72)	(246)	(436)
- employee benefits expense	(1,495)	(1,394)	(1,177)
- services	(233)	(250)	(259)
- transmission services	(667)	(655)	(635)
- recognition and reversal of impairment losses on property, plant and equipment and intangible assets	(5)	6	(2)
- work performed by the entity and capitalised	367	346	288
- other expenses, net	(422)	(399)	(321)

Chart 35 Distribution segment's EBITDA bridge in 2019–2020



- stable gas distribution volumes of 11.57 bcm, with average air temperatures lower by 0.4 °C y/y;
- revenue from distribution services higher by PLN 181m (4%) y/y, due to a higher tariff as of April 3rd 2020 (increase of approximately 3.5% on the previous tariff).
- net income/expenses of system balancing: PLN +29m in 2020, compared with PLN -30m in 2019.
- employee benefits expense higher by PLN -101m (+7%) y/y due to higher salaries and wages and other components of remuneration, i.e. bonuses and social security contributions.

Capital expenditure incurred in 2020 on PGNiG Group's property, plant and equipment in the Distribution segment was PLN 2,945m.

For more information on key investment projects and expenditure in the segment, see Section 4.3.2. Key projects and investments.

Table 42 Financial results of PSG Group

PSG Group (PLNm)	2020	2019	2018
Revenue	4,684	4,587	4,927
EBITDA	2,126	1,953	2,337
EBIT	1,018	924	1,398
Net profit/loss	738	671	1,110
Total assets	19,754	17,564	15,149
Equity	12,406	11,686	12,088

** Includes adjustment to bring the Company's financial results in line with the PGNiG Group's accounting policies. The adjustment adjusts the value of a building to the cost of the asset.*

Generation

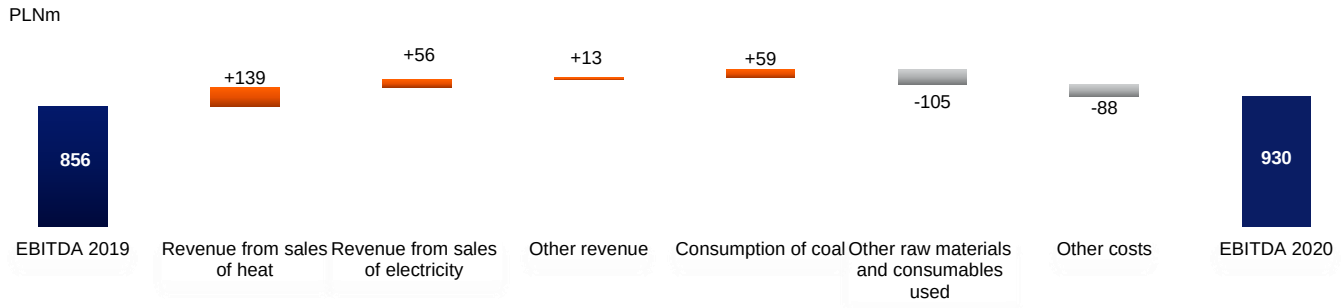
Table 43 Revenue in the Generation segment in 2018–2020

	2020	2019	2018
Revenue from non-PGNiG Group customers	1,844	1,606	1,617
Inter-segment revenue	929	959	770
Total revenue, including	2,773	2,565	2,387
- heat	1,469	1,330	1,322
- electricity	1,053	997	802

Table 44 Operating expenses in the Generation segment in 2018–2020

	2020	2019	2018
Total expenses	(2,638)	(2,417)	(2,072)
- depreciation and amortisation expense	(795)	(707)	(472)
- raw materials and consumables used	(1,166)	(1,120)	(1,034)
- employee benefits expense	(234)	(219)	(205)
- services	(207)	(195)	(191)
- recognition and reversal of impairment losses on property, plant and equipment and intangible assets	-	-	16
- work performed by the entity and capitalised	-	-	1
- other expenses, net	(232)	(176)	(186)

Chart 36 Generation segment's EBITDA bridge in 2019–2020



- revenue from sales of electricity generated from the segment's own sources lower by 4% y/y, at PLN 910m, with market prices rising and with sales volumes lower by -311 GWh (-8% y/y);
- higher revenue from sales of heat (10% y/y) at PLN 1.47bn, with lower average at temperature and stable sales volumes (-1% y/y);
- costs of coal lower by -7% y/y, at PLN 815m in 2020, and cost of biomass higher by PLN 14m y/y;
- PLN -88m y/y increase in depreciation and amortisation expense (including on CO_2 approximately PLN -89m).

Capital expenditure made in 2020 on PGNiG Group's property, plant and equipment in the Generation segment was PLN 1,076m (including PLN 500m attributable to CO_2).

For more information on key projects and expenditure in the segment, see section 4.4.2. 'Key projects and investments'.

Table 45 PGNiG TERMIKA's financial performance

PGNiG TERMIKA (PLNm)	2019	2019	2018
Revenue	2,357	2,176	2,016
EBITDA	836	777	687
EBIT	150	147	286
Net profit/loss	(519)*	(89)	208
Total assets	6,533	6,876	5,949
Equity	2,612	3,133	3,415

** Impairment of shares held in PGG; in July and September, PLN -612m impairment losses were recognised.*

5.2.3 Fluctuations in financial performance

The sale, distribution and storage of gas fuels, as well as cogeneration of heat and electricity, which, in addition to hydrocarbon exploration and production, constitute the principal business of the PGNiG Group, are subject to significant seasonal fluctuations.

Revenue from sales of natural gas and heat in the winter season (Q1 and Q4) is substantially higher than in summer (Q2 and Q3). This is due to the seasonal changes in weather conditions in Poland, and the extent of the fluctuations is determined by temperatures – low in winter and higher in summer. Revenue from gas and heat sales is subject to much greater seasonal changes in the case of households, where gas and heat are used for heating, than in the case of industrial customers.

To ensure uninterrupted gas supplies in periods of peak demand and for reasons of security of the supplies, the underground gas storage facilities must be restocked in summer, and higher transmission and distribution capacities must be reserved for the winter season.

The performance of individual segments is also subject to significant fluctuations driven by changes in product prices. Moreover, the performance of the Exploration and Production segment reflects changes in hydrocarbon production profiles.

Chart 37 Fluctuations in PGNiG Group's revenue in 2019–2020

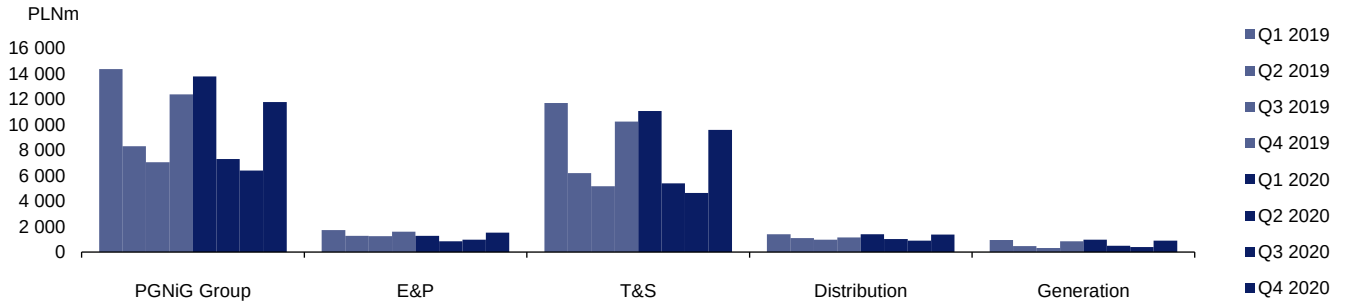


Chart 38 Fluctuations in PGNiG Group's EBITDA in 2019–2020

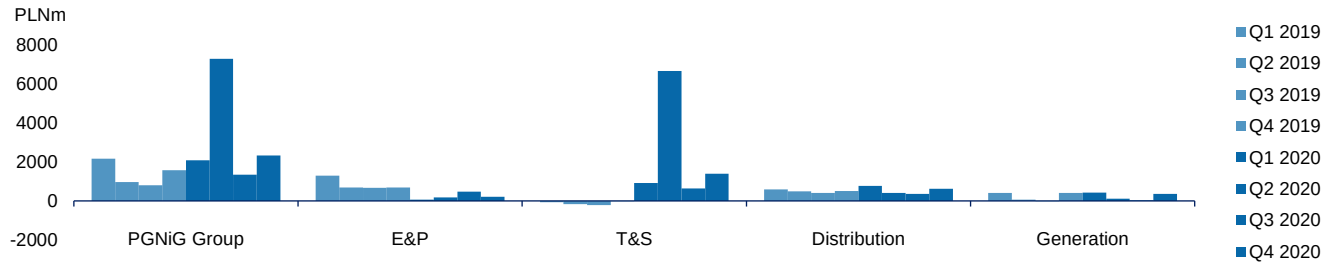


Table 46 Quarterly EBITDA and adjusted EBITDA by operating segments in 2020

	2020				
PLNm	PGNiG Group	Exploration and Production	Trade and Storage	Distribution	Generation
Q1 EBITDA	2,078	71	909	771	416
Adjusted Q1 EBITDA	*2,835*	*829*	*909*	*769*	*416*
Q2 EBITDA	7,274	173	6,646	405	117
Adjusted Q2 EBITDA	*7,371*	*267*	*6,647*	*408*	*117*
Q3 EBITDA	1,333	478	632	362	35
Adjusted Q3 EBITDA	*1,288*	*433*	*632*	*362*	*35*
Q4 EBITDA	2,324	207	1,392	618	362
Adjusted Q4 EBITDA	*3,104*	*883*	*1397*	*623*	*369*

Table 47 Quarterly EBITDA and adjusted EBITDA by operating segment in 2019

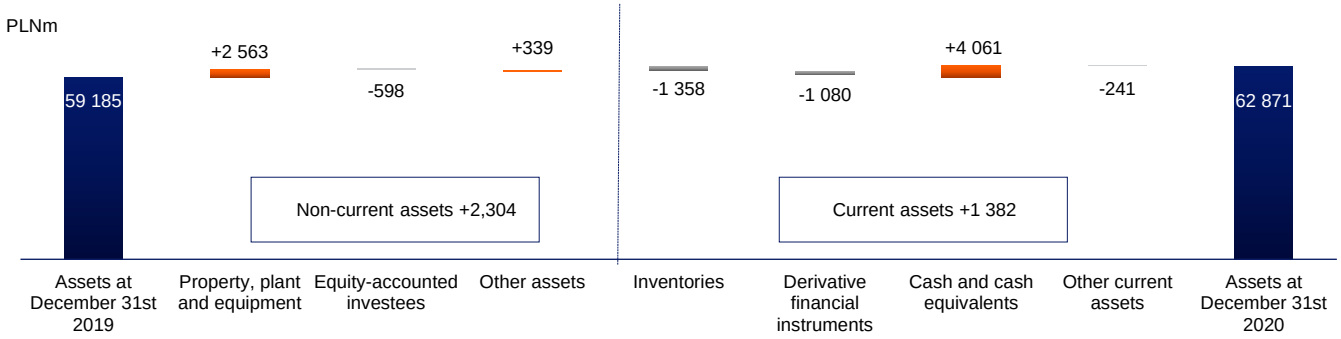
	2019				
PLNm	PGNiG Group	Exploration and Production	Trade and Storage	Distribution	Generation
Q1 EBITDA	2,218	1,298	(71)	633	400
Adjusted Q1 EBITDA	*2,200*	*1,280*	*(71)*	*632*	*400*
Q2 EBITDA	962	692	(162)	491	62
Adjusted Q2 EBITDA	*1,202*	*898*	*(160)*	*487*	*62*
Q3 EBITDA	803	676	(221)	415	(19)
Adjusted Q3 EBITDA	*755*	*630*	*(221)*	*414*	*(19)*
Q4 EBITDA	1,521	694	(16)	456	413
Adjusted Q4 EBITDA	*1,747*	*906*	*(14)*	*457*	*413*

5.2.4 Consolidated statement of financial position

As at December 31st 2020, total assets recognised in the consolidated statement of financial position were PLN 62,871m, having increased by PLN 3,686m (approximately 6%) on the end of 2019.

Assets

Chart 39 Selected items of the statement of financial position – Assets



Property, plant and equipment represent the largest item of the PGNiG Group's assets. As at December 31st 2020, property, plant and equipment amounted to PLN 42,565m, having increased by PLN 2,563m (6%) relative to December 31st 2019. Equity-accounted investees fell by PLN -598m (or -38%) year on year, mainly as a result of remeasurement of the investment in Polska Grupa Górnicza S.A.

As at the end of 2020, the PGNiG Group's current assets were PLN 16,628m, having increased by PLN 1,382m (9% y/y), with a 134% year-on-year increase in cash and cash equivalents (PLN 4,061m). At year-end 2020, inventories fell by PLN 1,358m (-34%) year on year, to PLN 2,684m.

Equity and liabilities

Chart 40 Selected items of the statement of financial position – Equity and liabilities

The main source of financing for the PGNiG Group's assets is equity, whose value at the end of 2020 was PLN 44,125m, which represents an increase of PLN 6,018m (16% y/y) relative to 2019. The change in equity was mainly attributable to net profit earned in the reporting period - retained earnings increased by PLN 6,842m y/y, and hedging reserve grew by PLN 755m yoy.

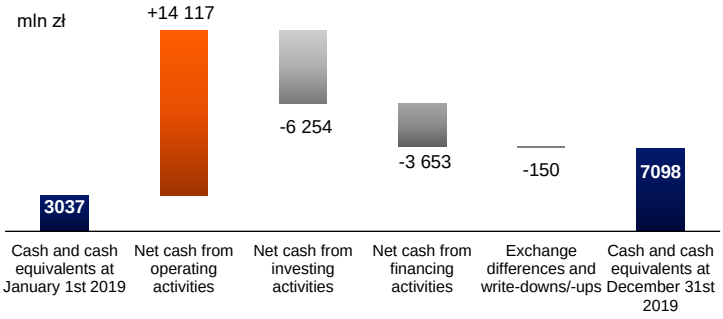
As at the end of 2020, non-current liabilities were PLN 11,666m, having increased by PLN 1,288m (12% y/y) on December 31st 2019. The change in non-current liabilities is attributable, among other things, to an increase in the provision for decommissioning, restoration and rehabilitation costs - an increase of PLN 731m (29% y/y) in 2020.

As at December 31st 2020 the PGNiG Group had current liabilities of PLN 7,080m, that is less by PLN -3,620 (-34%) year on year. The decrease was mainly attributable to a PLN -2,920m decrease in debt (-90% y/y).

For the full version of the consolidated statement of financial position, see the consolidated financial statements of the PGNiG Group for 2020.

5.2.5 Consolidated statement of cash flows

Chart 41 Selected items of the statement of cash flows



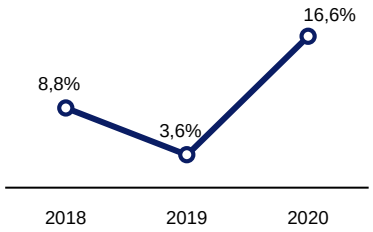
PGNiG Group capital expenditure in 2020 by segment: Exploration and Production: PLN 2.6bn; Trade and Storage: PLN 0.1bn; Distribution: PLN 2.95bn and Generation: PLN 1.1bn.

Dividends paid of PLN 520m (PLN 0.09 per share)

For the full version of the consolidated statement of cash flows, see the consolidated financial statements of the PGNiG Group for 2020.

5.2.6 Profitability ratios

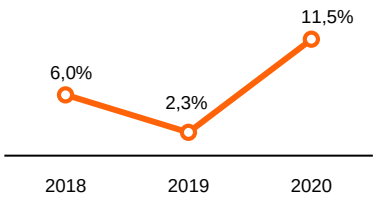
Chart 42 ROE



ROE: net profit to equity at end of period

The year-on-year rise of the ROE and ROA ratios in 2020 was due to the increase in net profit for the year as a result of signing the annex to the Yamal contract.

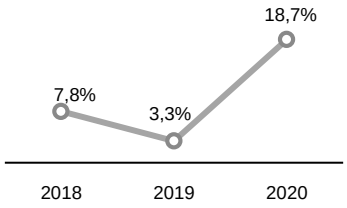
Chart 43 ROA



ROA: net profit to assets at end of period

The year-on-year rise of the ROE and ROA ratios in 2020 was due to the increase in net profit for the year as a result of signing the annex to the Yamal contract.

Chart 44 Net margin



Net margin: net profit to revenue.

The year-on-year rise of the ROE and ROA ratios in 2020 was due to the increase in net profit for the year as a result of signing the annex to the Yamal contract.

5.2.7 Anticipated financial condition and trends on key product markets

PGNiG Group's anticipated financial condition

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 a material driver of the PGNiG Group's performance in the Exploration and Production and Trade and Storage segments. Any changes in hydrocarbon prices affect revenues of the Group entities engaged in production, and determine the demand for seismic and exploration services offered by the Group companies. Rising gas and crude oil prices have a positive effect on the performance of the Exploration and Production segment. Long-term forecasts of hydrocarbon prices strongly influence projected cash flows from production assets, and as a consequence entail the necessity of revaluation of property, plant and equipment.

On the other hand, since the prices of gas purchased by PGNiG under the Yamal and Qatar contracts are linked to prices of crude oil, the effect of rising oil prices on the performance of the Trade and Storage segment is opposite to the effect that rising oil prices have on the performance of the Exploration and Production segment. Any increase in crude oil prices translates into higher cost of gas purchased by PGNiG. This relationship was significantly limited in the case of the Yamal contract thanks to the ruling of the Arbitration Court in Stockholm in favour of PGNiG concerning the pricing formula used in the Yamal contract. The PGNiG Group's financial results will also be influenced 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 procurement costs, although it must be noted that the effect of exchange rate fluctuations is mitigated by the PGNiG Group's hedging policy.

Another factor with a bearing on the PGNiG Group's financial condition is the President of URE's decisions on 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 selling gas. In view of the competition for customers, the Group offers discount schemes to customers and adjusts 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, among other things, on optimisation of the cost base and are expected to have a positive effect on the PGNiG Group's financial results.

In the Generation segment, financial results will be considerably influenced by the support programmes for electricity produced from high-efficiency cogeneration sources and renewable sources. Changes in the market prices of CO_2 emission allowances will have an increasing effect on the PGNiG Group's financial condition in the segment. Another key driver of the segment's performance is prices of the fuels used to produce heat and electricity.

Outlook for the oil, gas, electricity and CO_2 emission allowances market

In early 2021, the United States Energy Information Administration (EIA) published its 2021 Brent crude price forecast, which puts the average month-ahead contract price for Brent at USD 52.75/bbl. Based on EIA's projections, WTI will trade at USD 49.75/bbl. EIA explains that the absence of major price changes is due to the balancing effects of high inventories and the expansion of COVID-19 vaccination programmes, which are expected to bring demand back to the level seen in 2019. Despite the continued shortage of crude on the markets, the low price is attributed to the increasing supply from OPEC+ countries.

In the longer term, oil prices may be driven by the global economic situation and the United States' domestic energy policy. Higher hydrocarbon prices in 2021 could lead to recovery of much of the production that was halted due to sharp declines in the second quarter of 2020. However, the weak global economy may still make these prices insufficiently attractive and access to finance for new projects may prove difficult.

The price of Brent crude in 2021 will be vulnerable to decisions by OPEC+ countries, which are currently keeping supply cuts high, but resurgent demand could prompt the group to increase production to maintain or increase market share. A slow increase in supply could push the price above USD 60 per barrel of Brent crude, but this would give a strong supply boost to non-OPEC+ countries in 2022. In the long term, the likely scenario is a consistent but not very dynamic increase in prices as a result of rising global demand, which will lead to pressures for oil to be obtained from sources that are increasingly expensive to maintain.

According to analysts, the price of natural gas in Europe will remain at a similar average level to that seen in 2020, but with a smaller price amplitude throughout the year. Increased shale gas production in North America and Australia and the launch of new natural gas liquefaction plants will bring LNG production back to rapid growth. In 2021, liquefaction capacities of approximately 133 TWh are planned to be put into service, of which 69 TWh will be located in the United States. In a positive scenario of the world recovering from the pandemic, this expansion will not result in price falls due to the relatively low filling of European storage facilities and rising demand in Asia. LNG regasification terminals with a total capacity of 982.8 TWh are also expected to be commissioned or extended in 2021. On the European market, the coming into operation of the Nord Stream 2 gas pipeline may provide a negative price impulse. Higher and diversified import capacities may lead to smaller price differences between the summer and winter seasons.

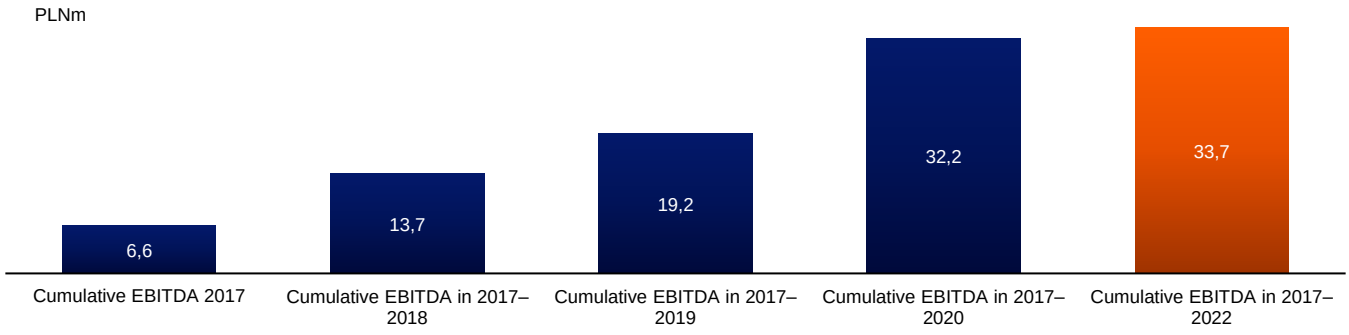
The price of CO_2 emission allowances (EUAs) will mainly depend on the cost of gas-fired generation and the efficiency of renewable energy sources. The current situation, with high winter gas prices (which encourage coal burning) and low RES generation, has pushed EUA prices above EUR 30/t CO_2. The European Union employs a mechanism to limit the supply of certificates each year. The smaller amount of EUAs available to EU Member States is intended to discourage them from producing electricity from conventional sources. Member States' efforts to dynamically increase the share of RES in the national energy mix may halt the increase in certificate prices over the next few years, but analysts expect a stable, strong increase after 2025.

Based on analysts' forecasts, in 2021 electricity prices in Poland will not be higher than the average prices in 2020. Commissioning of new RES generation capacities and stable EUA certificate prices may depress electricity prices in the short term. However, the slower pace of change in the Polish energy mix may lead to higher energy prices, especially after the EU's 2025 targets are met. The rising cost of CO_2 emission certificates could have a very strong impact on the price, especially if the reduction in coal generation is not significant.

5.2.8 Financial and operating forecasts

The Company does not publish performance forecasts. In the strategy released in 2017, the Company announced its plans to generate cumulative Group EBITDA of approximately PLN 33.7bn in 2017–2022 thanks to an investment programme. As at the end of 2020, cumulative EBITDA reached PLN 32.2bn, representing 96% of the target to be achieved by 2022.

Chart 45 PGNiG Group's cumulative EBITDA in 2017–2020 and the strategic target for 2022



On January 27th 2021, PGNiG published its oil and gas production forecasts for 2021–2023.

Table 48 Natural gas production forecast for 2021–2023*

bcm	2021	2022	2023
Poland	3.8	3.8	4.0
Other countries, including:	1.2	1.4	1.3
- Norway	*0.9*	*1.1*	*1.0*
- Pakistan	*0.3*	*0.3*	*0.3*
Total	5.0	5.2	5.3

** Converted to gas with a calorific value of 39.5 MJ/m³.*

Natural gas production in Poland should remain stable over the years to come. The expected decrease in gas production volumes in 2021 is due to the lengthened project timelines caused by the pandemic, and in 2022 – due to an extended shutdown of the Lubiatów facility. Production is expected to increase in 2023 following completion of capex projects involving development of new fields and connection of new wells.

Lower gas production forecasts in Pakistan are due to delays in construction of technical facilities and the local lockdown caused by the pandemic situation. Growth in gas production in Norway in 2021–2023 will be driven by the acquisition of the Kvitebjørn and Valemon fields, and by the planned launch of production from the Snadd Outer, Duva and other wells drilled on the Ærfugl structure.

Table 49 Crude oil production forecast, including condensate and NGL, for 2021–2023

thousand tonnes	2021	2022	2023
Poland	667	612	616
Other countries, including:	633	918	771
- Norway	*633*	*918*	*771*
Total	1,300	1,530	1,387

The 2021 oil production forecasts reflect a number of factors, including the postponement of a project to develop the Kamień Mały field from 2020 to 2022 and lower oil output at the Lubiatów facility. Production volumes are expected to fall in 2022–2023 as a result of a planned extended shutdown of the Lubiatów facility related to its expansion and connection of the Międzychód-8h well in 2022. The planned extended shutdown of the Dębno facility related to its expansion will affect oil production volumes in 2023.

Over the forecast period 2021–2022, the natural decline in oil production will decelerate, as a consequence of the acquisition of the Kvitebjørn and Valemon fields, and of the planned launch of production from the Snadd Outer, Duva, Gråsel and other wells drilled on the Ærfugl structure. In addition, work is being planned to boost production from the Morvin field. The decline in production volumes in Norway expected in 2023 is due to natural depletion. However, the Company is taking steps to acquire new oil and gas reserves in Norway.

5.2.9 Management of financial resources and liquidity of the PGNiG Group

Borrowings and debt securities

On October 28th 2020, PGNiG executed Annex 1 to the PLN 5bn Notes Programme Agreement of December 21st 2017 with the following issue arrangers: ING Bank Śląski S.A., Bank Polska Kasa Opieki S.A., Bank Handlowy w Warszawie S.A. and Bank BNP Paribas Bank Polska SA. Annex 1 aligns the Programme with the current legal framework and extends the Programme until October 28th 2025. Under the Programme, PGNiG may issue fixed- or floating-rate notes with maturities of up to 10 years or zero-coupon notes as part of a public or private offering. The notes may be introduced to trading on the Catalyst multilateral trading facility. Proceeds from the notes will be used to satisfy the PGNiG Group's day-to-day financial needs related to the implementation of its strategy. No securities were issued under the Programme in the reporting period.

Table 50 PGNiG Group's key credit facility agreements as at December 31st 2020

Bank	Maximum debt amount under the agreement (million)	Currency	Interest rate type	Facility type	Maturity date
Syndicate of eight banks	500	USD	variable	working capital/ investment facility	June 30th 2026
Bank Gospodarstwa Krajowego	271	PLN	variable	long-term facility	August 27th 2027
Pekao S.A.	75	PLN	variable	overdraft facility	July 16th 2021
Bank Gospodarstwa Krajowego	45	PLN	variable	investment facility	December 31st 2023
Pekao S.A.	20	PLN	variable	overdraft facility	June 27th 2025
Deutsche Bank	35	EUR	variable	short-term working capital overdraft facility	on demand
PKO Bank Polski	20	EUR	variable	short-term working capital overdraft facility	March 31st 2021
Bank Gospodarstwa Krajowego Pekao S.A. ING Bank Śląski S.A. PKO BP S.A. Caixa Bank S.A. Polish Branch BNP Paribas Bank Polska S.A. Societe Generale S.A. Santander Bank Polska S.A. Intesa Sanpaolo S. P. A	10,000	PLN	variable	syndicated loan	June 24th 2024

For detailed information on loans advanced by PGNiG to its subsidiaries and other related entities, see Note 7.4 to the separate financial statements of PGNiG for 2020.

Issues of securities and use of proceeds

In 2020, the PGNiG Group could issue notes under one programme. For detailed information on the effective terms and utilisation of the programme, as well as debt under securities in issue, see Note 5.2 to the consolidated financial statements of the PGNiG Group for 2020.

As at December 31st 2020, PGNIG had no outstanding debt under notes issued to other PGNiG Group members.

Financial instruments

Table 51 Summary of main financial assets by category

Item	Item referenced in Note	2020				2019			
		Financial assets at amortised cost	Financial assets at fair value through profit or loss	Financial instruments designated for hedge accounting	Total	Loans and receivables at amortised cost	Financial assets at fair value through profit or loss	Financial instruments designated for hedge accounting	Total
Receivables	Trade receivables	4,449	-	-	4,449	4,511	-	-	4,511
Derivative financial instruments		-	1,004	449	1,453	-	1,539	1,088	2,627
Cash and cash equivalents		7,098	-	-	7,098	3,037	-	-	3,037
Total		**11,547**	**1,004**	**449**	**13,000**	**7,548**	**1,539**	**1,088**	**10,175**

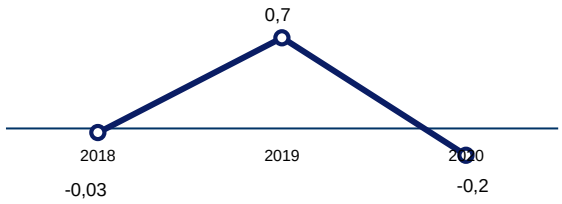
Table 52 Summary of main financial liabilities by category

Item	Item referenced in Note	2020				2019			
		Financial liabilities at amortised cost	Financial liabilities at fair value through profit or loss	Financial instruments designated for hedge accounting	Total	Financial liabilities at amortised cost	Financial liabilities at fair value through profit or loss	Financial instruments designated for hedge accounting	Total
Financing liabilities	Bank borrowings	1,995	-	-	1,995	4,893	-	-	4,893
	Debt securities	-	-	-	-	-	-	-	-
Trade and tax payables	Trade payables	1,199	-	-	1,199	1,608	-	-	1,608
Derivative financial instruments		-	780	618	1,398	-	991	305	1,296
Total		**3,194**	**780**	**618**	**4,592**	**6,501**	**991**	**305**	**7,797**

For detailed information on financial instruments, see Note 7.1 to the consolidated financial statements of the PGNiG Group for 2020.

Debt ratios

Chart 46 Net debt/EBITDA

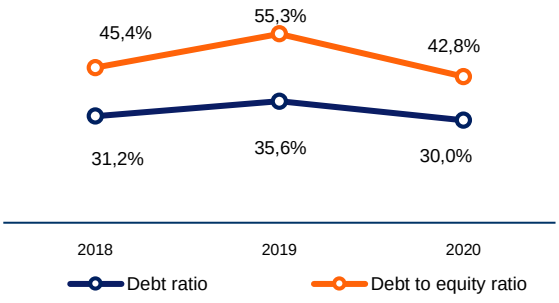


Net debt is defined as the total amount of existing bank borrowings (both short-term and long-term), debt securities, lease liabilities and liabilities under non-bank borrowings, less cash and cash equivalents and cash classified as non-current assets.

For the purposes of the PGNiG Group's debt analysis the Management Board uses the net debt/EBITDA ratio. In accordance with the Strategy, this ratio should not exceed 2.0.

In 2020, the ratios decreased due to the lower amount of liabilities and the higher EBITDA.

Chart 47 Debt ratio; debt to equity ratio



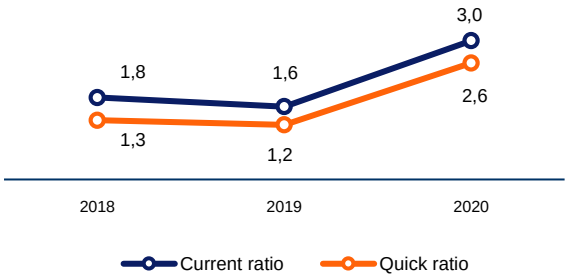
Total debt ratio: total liabilities to total equity and liabilities

Debt to equity ratio: total liabilities to equity

In 2020, the ratios decreased due to the lower amount of liabilities.

Liquidity ratios

Chart 48 Current ratio and quick ratio



Current ratio: current assets to current liabilities (net of employee benefit obligations, provisions and deferred income)

Quick ratio: current assets less inventories to current liabilities (net of employee benefit obligations, provisions and deferred income)

In 2020, the ratios increased due to the lower amount of current liabilities.

Assessment of financial resources management and the feasibility of investment plans

The PGNiG Group actively manages its financial resources by optimising both its debt structure and financing costs. PGNiG Group companies adapt the form of financing to its purpose (operating or investing activity) and to its term. The forms of financing available to PGNiG Group companies include credit facilities, finance leases and intra-Group loans advanced by PGNiG.

An important tool improving the efficiency of financial resources management is the liquidity management system in which the balances of specified bank accounts of PGNiG and its subsidiaries can be aggregated (cash pooling). Thanks to the cash pooling system within the Group, cash of entities with excess liquidity is used to finance the operations of entities recording cash deficits. The result is improved efficiency of cash management within the PGNiG Group, but also a material reduction in interest expenses incurred by companies financing their cash deficits through the system.

While assessing the efficiency of financial resources management, a noteworthy fact is the optimum diversification of the portfolio of financial institutions. It should also be noted that, thanks to the diversity of available financing sources and liquidity management tools at the PGNiG Group, the Group companies are able to timely fulfil their financial obligations.

The Group has a stable financial position, with cash flows and available sources of financing enabling it to carry out its planned investment projects. The PGNiG Group manages its capital expenditure structure depending on the market situation, and focuses on the most efficient investment projects. For information on key investment projects planned for the coming years, see Section 2.3.3 , Capital expenditure in 2021.

Sureties, guarantees and other contingent assets and liabilities

As at December 31st 2020, guarantees and sureties were the most significant item of the PGNiG Group's contingent liabilities, with the total value disclosed in the consolidated statements at PLN 4.8bn (PLN 3.8bn as at December 31st 2019).

The largest guarantee was issued by PGNiG to the Norwegian government for PGNiG UN's work on the Norwegian Continental Shelf, for the total amount of PLN 2.9bn at year-end 2020 (PLN 2.7bn at year-end 2019).

Guarantee and surety agreements concluded in the reporting period, for a total amount of PLN 1.42bn, were primarily intended as security for gas supplies.

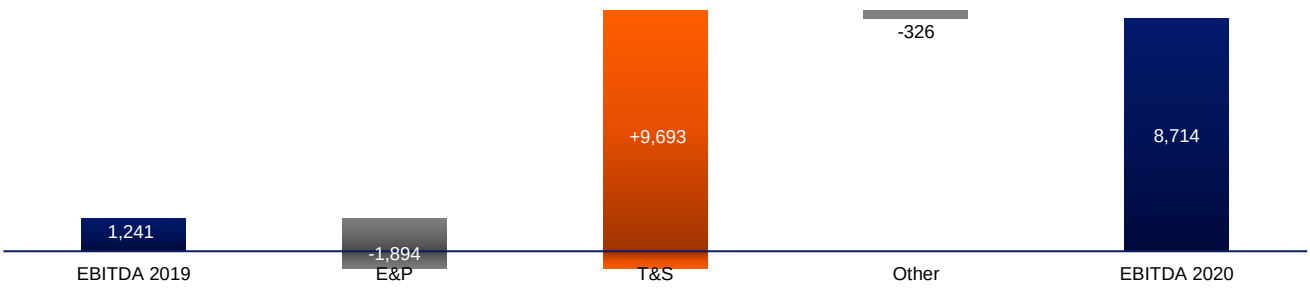
5.3 Financial condition of PGNiG in 2020

Table 53 PGNiG's financial data for 2018–2020

PGNiG	2020	2019	2018	2020/2019 change	2020/2019 change (%)
Revenue	21,237	22,615	22,344	(1,378)	(6%)
Total operating expenses, including	(13,342)	(22,229)	(20,505)	8,887	(40%)
Operating profit before interest, taxes, depreciation and amortisation (EBITDA)	8,714	1,241	2,637	7,472	602%
Depreciation and amortisation expense	(819)	(856)	(798)	37	(4%)
Operating profit	7,895	386	1,839	7,509	1,945%
Profit before tax	8,490	1,989	3,677	6,501	327%
Net profit	6,909	1,748	3,289	5,161	295%
Net cash from operating activities	9,394	1,989	2,658	7,405	372%
Net cash from investing activities	(2,794)	(2,256)	644	(538)	24%
Net cash from financing activities	(3,591)	(52)	(138)	(3,539)	6,806%
Net increase/(decrease) in cash and cash equivalents	3,009	(319)	3,164	3,328	(1,043%)
	December 31st 2020	**December 31st 2019**	**December 31st 2018**	**2020/2019 change**	**2020/2019 change (%)**
Total assets	43,746	41,044	36,993	2,702	7%
Non-current assets	30,737	28,885	25,742	1,852	6%
Current assets, including	13,009	12,159	11,251	850	7%
Inventories	2,070	3,230	2,691	(1,160)	(36%)
Total equity and liabilities	43,746	41,044	36,993	2,702	7%
Total equity	36,230	30,618	28,833	5,612	18%
Total non-current liabilities	3,871	3,315	2,551	556	17%
Total current liabilities	3,645	7,111	5,609	(3,466)	(49%)
Total liabilities	7,516	10,426	8,160	(2,910)	(28%)

In 2020, PGNiG reported EBITDA of PLN 8,714m, PLN 7,473m more year on year. Changes in EBITDA by segment are presented in the chart below.

Chart 49 PGNiG's EBITDA bridge in 2019–2020



The EBITDA increase (PLN +9,693m) in the Trade and Storage segment was mainly attributable to PGNiG winning the arbitration proceedings before the Arbitration Court of Stockholm in the dispute concerning the price terms of the Yamal contract. The award issued in the proceedings obliged Gazprom to pay back to PGNiG the overpaid amounts for the purchase of high-methane gas in 2014−2020. The segment's EBITDA also benefited from a change in inventory write-downs.

The decrease in EBITDA (PLN -1,894m) in the Exploration and Production segment is primarily attributable to a lower result on sales of gas and crude oil due to lower unit selling prices caused by the decline in commodity prices on global exchanges. The segment's EBITDA was also adversely affected by a change in gas inventory write-downs. The decrease in EBITDA (PLN -326m) in the other segments was mainly attributable to foreign exchange gains and losses.

Financial ratio analysis

Profitability

Chart 50 ROE and ROA

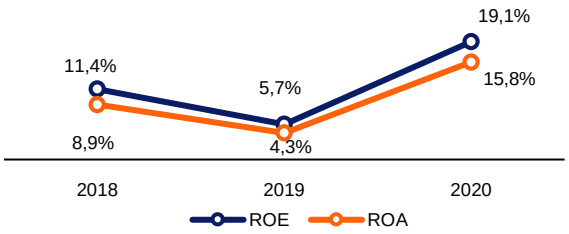
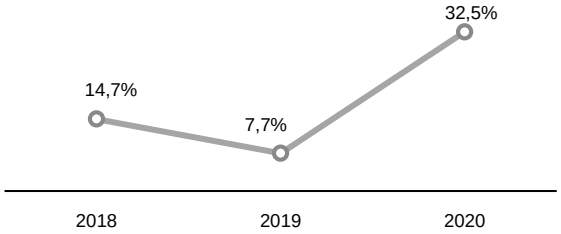


Chart 51 Net margin



ROE: net profit to equity at end of period

ROA: net profit to assets at end of period

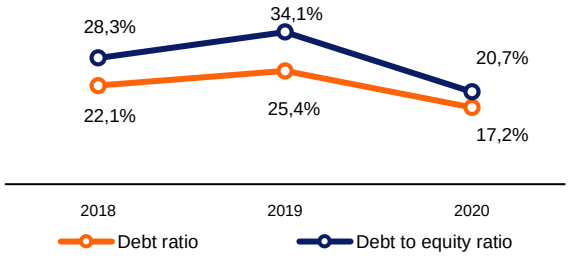
The year-on-year rise of the ROE and ROA ratios in 2020 was due to the increase in net profit for the year as a result of PGNiG winning the dispute with Gazprom.

Net margin: net profit to revenue

The year-on-year rise of net margin in 2020 was due to the increase in net profit for the year as a result of PGNiG winning the dispute with Gazprom.

Debt ratios

Chart 52 Debt ratio and debt to equity ratio



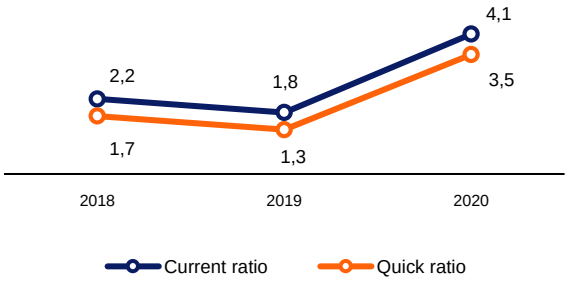
Total debt ratio: total liabilities to total equity and liabilities

Debt to equity ratio: total liabilities to equity

In 2020, the ratios decreased due to the lower amount of liabilities.

Liquidity ratios

Chart 53 Current ratio and quick ratio



Current ratio: current assets to current liabilities (net of employee benefit obligations, provisions and deferred income)

Quick ratio: current assets less inventories to current liabilities (net of employee benefit obligations, provisions and deferred income)

In 2020, the ratios increased due to the lower amount of current liabilities.

Table 54 PGNiG's capital expenditure in 2018–2020

	Capital expenditure* on property, plant and equipment made by PGNiG	**2020**	**2019**	**2018**
I.	Exploration and Production, including:	884	997	989
1	Exploration	587	614	764
	including expenditure on dry wells	*39*	*109*	*99*
2	Production	297	384	225
II.	Trade and Storage	67	93	87
1	Trade	31	62	0
2	Storage facilities used by the Trade and Storage segment	37	31	87
III.	Other Segments	75	49	138
IV.	Total capital expenditure (I+II+III)	1,026	1,140	1,213

** Including capitalised borrowing costs.*

6. Corporate governance

6.1 Adopted code of corporate governance

6.1.1 Statement of compliance with corporate governance standards

In 2020, PGNiG complied with the set of corporate governance standards laid down in the 'Best Practice for GPW Listed Companies 2016' (the "Code of Best Practice"), adopted by the WSE Supervisory Board in its Resolution No. 26/1413/2015 of October 13th 2015.

The amended text of the Code is available on the Warsaw Stock Exchange's corporate governance website at www.gpw.pl/dobre-praktyki and on the Issuer's website at www.pgnig.pl/pgnig/lad-korporacyjny/dobre-praktyki

In accordance with the Code of Best Practice, PGNiG:

- ensures proper communication with investors and analysts by pursuing a transparent and effective information policy. To this end, it offers easy and equal access to information by using various communication tools – in this respect, the company does not comply with principle I.Z.1.15 only;
- is managed by the management board, whose members act in the interest of PGNiG and are responsible for its activities. It is the management board's responsibility to lead the company, to be involved in setting and achieving its strategic goals, and to ensure that the Company is efficient and safe;
- is supervised by an effective and competent supervisory board. Members of the supervisory board act in the interest of PGNiG and are guided in their conduct by the independence of their opinions and judgments. In particular, the supervisory board gives its opinion on the company's strategy and verifies the work of the management board with respect to achieving the set strategic objectives, and monitors the company's results; – in this area, the Company departs only from principle II.Z.7;
- maintains effective internal control, risk management and compliance systems, as well as an effective internal audit function appropriate to the size of the company and the type and scale of its operations;
- encourages shareholder engagement with the company. The general meeting respects the rights of shareholders and seeks to adopt resolutions without infringing on the legitimate interests of particular groups of shareholders – in this respect, the company does not comply with recommendation IV.R.2 only;
- has clear procedures in place to prevent conflicts of interest and entering into transactions with related parties where a conflict of interest may arise. The procedures provide for ways to identify, reveal and manage such situations;
- has a remuneration policy in place to determine the form, structure, and method of determining the remuneration of members of the company's governing bodies and key managers – in this respect, the company does not comply with recommendation IV.R.4 only.

6.1.2 Information on non-compliance with corporate governance principles

Since the application of the Best Practices at the organisation, PGNiG has gradually reduced the scope of non-compliance with the detailed rules laid down in the document. In 2016, the Company did not apply four principles and two recommendations. In 2020, the Company did not comply with two principles and two recommendations of the Code of Best Practice. Reasons for the non-compliance are presented below.

Table 55 Reasons for non-compliance with the principles and recommendations of the Code of Best Practice

Disclosure policy and investor communication I.Z.1.15	Content of the principle: A company should operate a corporate website and publish on it, in a legible form and in a separate section, in addition to information required under the legislation: information about the company's diversity policy applicable to the company's governing bodies and key managers; the description should cover the following elements of the diversity policy: gender, education, age, professional experience, and specify the goals of the diversity policy and its implementation in the reporting period; where the company has not drafted and implemented a diversity policy, it should publish the explanation of its decision on its website. Reason for non-compliance: The key criteria taken into account in the process of recruitment and selection of candidates to positions in the Company's key governing bodies are mainly professional experience and education. The Company has not developed a diversity policy for its key managers.
Management and Supervisory Board – II.Z.7	Content of the principle: Annex I to the Commission Recommendation referred to in principle II.Z.4 applies to the tasks and the operation of the committees of the supervisory board. Where the functions of the audit committee are performed by the supervisory board, the foregoing should apply accordingly.

	Reason for non-compliance: An Audit Committee operates as a standing committee of the Supervisory Board. Pursuant to the Best Practice for WSE Listed Companies, the Issuer should apply the rules laid down in Annex I to Commission Recommendation of February 15th 2005 on the role of non-executive or supervisory directors of listed companies and on the committees of the (supervisory) board. The Issuer has implemented all the requirements to ensure that the Audit Committee participates in the oversight of the Issuer's activities except: the rule laid down in section 4.3.2 of Annex I, pursuant to which the management should inform the audit committee of the methods used to account for significant and unusual transactions where the accounting treatment may be open to different approaches; Given the way in which the Audit Committee currently operates, the Issuer does not consider it necessary to introduce very detailed regulations specifying the operation of the Committee, including the implementation of the recommendation specified in section 4.3.2. Annex I to the European Commission Recommendation The Issuer will take appropriate steps in the future, if justified by the actual manner of operation of the Audit Committee.
General Meeting and shareholder relations IV.R.2;	Content of the recommendation: If justified by the structure of shareholders or expectations of shareholders notified to the company, and if the company is in a position to provide the technical infrastructure necessary for a general meeting to proceed efficiently using electronic communication means, the company should enable its shareholders to participate in a general meeting using such means, in particular through: 1) a real-time broadcast of the general meeting; 2) real-time bilateral communication where shareholders may take the floor during a general meeting from a location other than the general meeting; 3) exercise of the right to vote during a general meeting either in person or through a proxy. Reason for non-compliance: The Company decided not to apply the recommendation as the current shareholding structure and the high shareholder representation at the General Meeting do not indicate any need to enable its shareholders to participate in the General Meeting using electronic means of communication. The Company does not rule out introducing such a possibility in the future.
Remuneration VI.R.4.	Content of the recommendation: The remuneration levels of members of the management board and the supervisory board and key managers should be sufficient to attract, retain and motivate persons with skills necessary for proper management and supervision of the company. Remuneration should be adequate to the scope of tasks delegated to individuals, taking into account additional functions, for instance on supervisory board committees. Reason for non-compliance: The Company follows recommendation VI.R.4 on the remuneration levels of the Management Board members and key managers. The recommendation cannot be implemented by the Company with respect to members of its Supervisory Board, as their remuneration is regulated by generally applicable laws, namely the Act on Rules for Remunerating Persons Managing Certain Companies of June 9th 2016 (Dz.U. of 2017, item 2190).

6.1.3 Shareholders with major direct or indirect holdings of Company shares

In 2020, the State Treasury, represented by the Minister of State Assets (ul. Krucza 36/Wspólna 6, 00-522 Warsaw), was the only shareholder holding more than 5% of the Company's share capital.

Table 56 Shareholding structure of PGNiG as at December 31st 2020

	Number of shares	Ownership interest	Number of votes at the General Meeting	Percentage voting interest in the Company
State Treasury	4,153,706,157	71.88%	4,153,706,157	71.88%
Other shareholders	1,624,608,700	28.12%	1,624,608,700	28.12%
Total	5,778,314,857	100.00%	5,778,314,857	100.00%

6.1.4 Holders of shares conferring special control rights; description of the special control rights

Pursuant to the Articles of Association, for as long as the State Treasury holds Company shares, the State Treasury, represented by the entity authorised to exercise rights conferred by the shares held by the State Treasury, has the right to appoint and dismiss one member of the Supervisory Board.

Further, pursuant to the Articles of Association, the State Treasury (as a shareholder) approves in writing: (i) any changes to the material provisions of existing trade contracts for natural gas imports to Poland, as well as execution of such contracts, and (ii) the implementation of any strategic investment projects or the Company's involvement in investment projects which may, permanently or temporarily, impair the economic efficiency of the Company's business activities, but which are necessary to ensure Poland's energy security.

Irrespective of the State Treasury's ownership interest in the Company, the State Treasury has the right to demand that the General Meeting (GM) be convened and that particular matters be placed on its agenda.

6.1.5 Restrictions on voting rights at PGNIG

Under PGNiG's Articles of Association, the voting rights of the Company's shareholders have been restricted so that no shareholder (except as specified below) can exercise at a GM more than 10% of the total voting rights existing as at the date of the GM, with the proviso that this restriction is deemed non-existent for the purposes of determining the obligations of buyers of major holdings of shares. The voting rights restrictions do not apply to shareholders who were holders of shares conferring more than 10% of total voting rights at the Company on the date of the GM's resolution imposing the restrictions, and to shareholders acting together with shareholders holding shares conferring more than 10% of total voting rights under agreements on voting in concert.

For the purpose of the voting rights restrictions, votes of shareholders bound by a parent-subsidiary relationship are aggregated and if the aggregated number of votes exceeds 10% of total voting rights in the Company, it is subject to reduction.

6.1.6 Restrictions on transfer of ownership rights to issuer securities

Under Art. 13.24 of the Act on State Property Management of December 16th 2016 (Dz.U. of 2016, item 2259, as amended), Company shares held by the State Treasury may not be disposed of.

6.1.7 Rules governing amendments to the Company's Articles of Association

Pursuant to the Commercial Companies Code and the Company's Articles of Association, amendments to the Articles of Association are introduced by virtue of resolutions adopted by the GM with the required majority of votes, and must be recorded in the business register. Any amendment to the Articles of Association must be submitted by the Management Board to the registry court within three months from the date on which the GM adopted the resolution introducing the amendment. The consolidated text of the Articles of Association is drawn up by the Management Board and then approved by the Supervisory Board.

On July 22nd 2020, the amendments to the Company's Articles of Association adopted by Resolution No. 23/2020 of the Annual GM of PGNiG of June 24th 2020 were recorded in the court register.

6.1.8 Operation and principal powers of the PGNIG General Meeting, shareholder rights and the procedures for exercising those rights

The General Meeting (GM) operates in accordance with the provisions of the Commercial Companies Code, the Articles of Association and the Rules of Procedure for the GM. The Rules of Procedure for the General Meeting include in particular the rules of conducting meetings and adopting resolutions. The Rules of Procedure for the GM are available on the Company's website at www.pgnig.pl.

6.1.9 Convening and cancelling the General Meeting

The Annual General Meeting (GM) is convened by the Management Board once a year, no later than within six months from the end of a financial year. Shareholders representing at least 50% of the share capital or at least 50% of the total voting power may convene an Extraordinary GM.

The Supervisory Board may convene an Annual GM if the Management Board fails to do so within the time limit specified in the Commercial Companies Code or the Articles of Association, or an Extraordinary GM, if the Supervisory Board deems it advisable.

GM are convened by publishing a notice on the Company's website and in any other form prescribed for the purposes of current disclosures under the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organised Trading, and Public Companies. The notice should be published at least 26 days before the date of the GM.

The GM convened on the initiative of the Management Board may be cancelled by the Management Board for a good reason.

6.1.10 Key powers of the General Meeting

The GM is the Company's constitutive body. In addition to any matters related to the Company's activities and matters specified in applicable laws, the GM resolves on:

- Review and approval of the financial statements for the preceding financial year and the Directors' Report on the Company's operations;
- Approval of performance of duties by members of the Company's governing bodies;
- Distribution of profit or coverage of loss;

- Determination of the dividend record date or a decision on payment of dividend in instalments;
- Appointment and removal of Supervisory Board members;
- Review and approval of the Group's consolidated financial statements and the Directors' Report on the Group's operations for the preceding financial year;
- Suspension of members of the Management Board from their duties, or their removal from office;
- Disposal or lease of the Company's business or its organised part, or creation of limited property rights therein;
- Increase in or reduction of the Company's share capital;
- Issue of convertible bonds or bonds with pre-emptive rights, issue of subscription warrants;
- Acquisition of the Company's own shares for the purpose of offering them to the Company's employees or to persons who were employed by the Company or its related entities for at least three years;
- Mandatory buy-back of shares;
- Creation, use and liquidation of capital reserves;
- Use of statutory reserve funds;
- Merger, transformation or demerger of the Company;
- Amendments to the Company's Articles of Association and changes in its business profile;
- Definition of the rules and amounts of remuneration of Supervisory Board members and the rules of remuneration of Management Board members.

6.1.11 Shareholder rights at General Meetings and the procedures for exercising those rights

Participation in the General Meeting

The rules governing participation in the PGNiG General Meeting (GM) are governed by the Rules of Procedure of the General Meeting, available on the Issuer's website at http://pgnig.pl/lad-korporacyjny/walne-zomadzenie/Rules.

The key rules of participation in the General Meeting:

- Each shareholder has the right to participate in GM.
- Only persons who have been the Company's shareholders for at least 16 days prior to the date of the GM (the record date for participation in the GM) are entitled to attend the GM. The record date for participation in the GM is the same for the holders of rights under bearer shares and under registered shares.
- Holders of rights under registered shares or provisional certificates as well as pledgees and usufructuaries holding voting rights are entitled to participate in the GM, provided that they are entered in the share register on the record date for participation in the GM.
- Shareholders may participate in the GM and exercise their voting rights in person, through a representative or through a proxy.
- At the GM, the Management Board is required to provide shareholders – at their request – with information on the Company if such information is needed to assess an item on the Meeting's agenda. The Management Board may refuse to provide information if this could adversely affect the Company, its affiliate, or its subsidiary company or cooperative, especially through disclosure of any technical, trade or organisational secrets.
- A shareholder may require that a list of shareholders be sent to him/her free of charge by email, may inspect the book of minutes or demand to be given copies of the resolutions of the GM certified as true copies by the Management Board.
- During the GM, any shareholder taking part in the GM may submit procedural motions.

Voting at the General Meeting

- One share confers the right to one vote at the GM.
- Votes at the GM are cast in an open ballot. A secret ballot is ordered when voting on the election or removal from office of members of the Company's governing bodies or on appointment of its liquidator, on bringing members of the Company's governing bodies or its liquidator to account, and on personnel matters. Furthermore, a secret ballot is ordered if at least one shareholder present or represented at the GM so demands.

6.2 Management and supervisory bodies at PGNIG S.A. and their committees

6.2.1 Management Board

Composition of the Management Board as at January 1st 2020:

- Piotr Woźniak − President,
- Maciej Woźniak – Vice President, Trade,
- Łukasz Kroplewski – Vice President, Development,
- Michał Pietrzyk – Vice President, Finance,
- Robert Perkowski – Vice President, Operations,
- Magdalena Zegarska – Vice President.

Following the expiry of the three-year joint term of office, on January 9th 2020 the Supervisory Board removed the following persons from the Management Board:

- Piotr Woźniak,
- Maciej Woźniak,
- Robert Perkowski
- Łukasz Kroplewski,
- Michał Pietrzyk.

On January 9th 2020, the Supervisory Board appointed the following persons to the Management Board:

- as of January 10th 2020 – Jerzy Kwieciński, as President,
- as of January 10th 2020 – Jarosław Wróbel, as Vice President, Trade,
- as of January 10th 2020 – Robert Perkowski, as Vice President, Operations,
- as of January 15th 2020 – Przemysław Wacławski, as Vice President, Finance,
- as of January 15th 2020 – Arkadiusz Sekściński, as Vice President, Development,

for a joint term of office ending on January 10th 2023.

On January 23rd 2020, the Supervisory Board reappointed Jarosław Wróbel from the position of Vice President, Trade, to the position of Vice President of the Management Board.

Following the expiry of the three-year joint term of office, on February 27th 2020 the Supervisory Board removed Magdalena Zegarska from the Management Board and reappointed her as Vice President of the Management Board, following re-election by PGNiG employees, for a joint term of office ending on January 10th 2023.

On October 21st 2020, Jerzy Kwieciński resigned as President of the PGNiG Management Board as of the end of October 22nd 2020. On October 28th 2020, the Supervisory Board appointed Jarosław Wróbel as acting President of the Management Board. On November 10th 2020, the Supervisory Board appointed Paweł Majewski as President of the Management Board as of November 12th 2020 for a joint term of office ending on January 10th 2023.

Composition of the Management Board as at December 31st 2020:

- Paweł Majewski – President,
- Robert Perkowski – Vice President, Operations,
- Arkadiusz Sekściński – Vice President, Development,
- Przemysław Wacławski – Vice President, Finance,
- Jarosław Wróbel – Vice President,
- Magdalena Zegarska – Vice President.

On February 17th 2021, Jarosław Wróbel resigned as Member and Vice President of the Management Board, with effect as of close of business day on March 1st 2021. On March 2nd 2021, the PGNiG Supervisory Board decided to appoint, as of March 16th 2021, Mr Artur Cieślik as Vice President of the Management Board, Chief Strategy and Regulation Officer, for the sixth term of office ending on January 10th 2023.

Paweł Majewski – President of the PGNiG Management Board

Paweł Majewski is a graduate of the Faculty of Law and Administration of the Jagiellonian University. He completed a postgraduate Executive Master of Business Administration (MBA) programme at Warsaw Management University. A manager with many years' experience in managing corporations, including state-owned companies. He has served as President of the Management Board of Grupa LOTOS S.A., Vice President of the Management Board of Huta Stalowa Wola S.A., Member of the Management Board of DO & CO Poland Sp. z o.o. and President of the Management Board of Airport Cleaning Service Sp. z o.o. He has many years of professional experience in leadership roles, for instance at PETROLOT Sp. z o.o. (currently ORLEN Aviation Sp. z o.o.), and as Director of the Variable Margin and Production Management Division at PGNiG TERMIKA S.A.

A member of the Supervisory Board of Polski Holding Nieruchomości S.A. He has served on the supervisory boards of ZEM Łabędy Sp. z o.o., Jelcz Sp. z o.o., Lotniczy Catering Service Sp. z o.o., and other companies.

The President of the Management Board supervises and coordinates the Company's activities, including with respect to:
1) HR strategies, pay schemes and working time;
2) employment and payroll policies;
3) protection of classified information;
4) protection of personal data;
5) defence, protection of the Company's facilities;
6) management of the PGNiG Group, including exercise of the owner's supervision within the PGNiG Group;
7) formation of new companies within the PGNiG Group to pursue new projects undertaken as part of the PGNiG Group's strategy;
8) optimisation of the PGNiG Group's structure;
9) internal control and audit functions, in accordance with generally accepted standards of internal audit;
10) comprehensive legal support to protecting PGNiG's legal interests;
11) issuance of official orders and circulars for the Company;
12) organisational and technical support of the Company's governing bodies;
13) corporate social responsibility (CSR);
14) development and implementation of the sponsorship policy and the policy of building the Company's image in Poland and abroad;
15) the Company's information policy and corporate communication;
16) planning and implementation of the Company's trade policy, particularly in respect of natural gas and electricity sales, execution and settlement of contracts for the sale of natural gas and electricity;
17) sales policy for gas, electricity and other products;
18) guiding the development of the natural gas market;
19) development of the natural gas import policy, also with respect to supply diversification;
20) monitoring and analysis of foreign markets and establishing relationships with foreign companies, international organisations and foreign government authorities with respect to trade relations;
21) cooperation with third parties with respect to trading in liquefied natural gas;
22) preparation of periodic gas fuel balance reports, consistent with gas sale contracts and plans;
23) periodic settlements of gas deliveries;
24) information services, including the receipt of information on events and crises in all areas of the Company's business;
25) operations of the Wholesale Trading Branch.

Artur Cieślik – Vice President of the Management Board, Chief Strategy and Regulation Officer

A graduate of the Faculty of Law, Canon Law and Administration at the Catholic University of Lublin, and the Faculty of Law and Administration of the University of Warsaw in partnership with the University of Florida Fredric G. Levin College of Law, Center for American Law Studies). Participant of Executive Master of Business Administration postgraduate studies organised by the University of Gdańsk in cooperation with the Gdańsk Foundation for Management Development and Porto Business School.

Lawyer and manager with over 20 years of professional experience gained working for capital market institutions, public companies and an international law firm.

He began his professional career in 1997 at the Legal Department of the Warsaw Stock Exchange, where he was employed until 2004. Lecturer at the Faculty of Law and Administration of the Lazarski University from 2000 to 2005. In 2004–2006, he held a post at SYGNITY S.A. Between 2006 and 2018, he worked with DENTONS Europe Dąbrowski i Wspólnicy sp.k., an international law firm, as Senior Associate and then Counsel. From 2018, he was involved with PKN ORLEN S.A., serving as Adviser to the Management Board and Executive Director for Strategy. From August 24th 2020 to March 15th 2021, he was Vice President of the Management Board, Chief Strategy and Development Officer of Grupa LOTOS S.A.

Vice President, Chief Strategy and Regulation Officer supervises and coordinates the Company's operations, including with respect to:
1) development and monitoring of implementation of the PGNiG Group's Strategy;
2) execution of projects and acquisitions of the PGNiG Group,
3) developing a regulatory policy in consultation with government authorities, EU authorities and industry organisations;
4) liaising with the Energy Regulatory Office (URE) in respect of preparing draft tariffs and prices of PGNiG S.A.'s products and services, and licences;
5) operation of the Company's foreign representative offices in Brussels, Moscow, Kiev and St. Petersburg;

6) management of the Company's underground gas storage assets;
7) building relations with the distribution system operator;
8) building relations with the storage system operator;
9) design and development of risk management principles at the Company;
10) process management.

Robert Perkowski – Vice President, Operations

Robert Perkowski is an economist (PhD in Economics) and member of the local government. He completed a post-graduate course in Management Analytics at Instytut Organizacji i Zarządzania w Przemyśle ORGMASZ (ORGMASZ Institute of Industry Organisation and Management), where he also completed International Doctoral Studies. His PhD programme was opened and conducted at the Institute of Economics of the Polish Academy of Sciences. He also completed a full-time MA programme at Independent University of Business and Public Administration in Warsaw, majoring in Marketing and Management, and in Finance and Banking. He authored more than a dozen research articles.

Mr Perkowski started his professional career in 2001 as an intern at the financial department of Dacon Corp. LTD at Queen's University in Canada. In 2002, he started working at the Ministry of Justice, where he was responsible for preparing draft financial plans for the Prison Service' wages. In 2006–2018, he was Mayor of the town of Ząbki. He also served as President of the Polish Local Governments Association (*Związek Samorządów Polskich*), provided training services and was a member of municipality and county councils.

Vice President, Chief Operating Officer, supervises and coordinates the Company's activities, including with respect to:
1) the procurement strategy of the Company and of the Group;
2) policy, objectives and programmes related to hydrocarbon exploration and production;
3) overseeing all licensing processes related to hydrocarbon exploration, appraisal and production, as well as storage of waste matter in rock mass and non-reservoir storage of substances in accordance with the geological and mining law;
4) development of technical assumptions, rules, norms and standards applicable in the area of oil drilling;
5) operation and safety of production systems;
6) standardisation of uniform quality systems at the Company;
7) implementation of the PGNiG Group's strategy objectives at PGNiG S.A. and the Group companies with respect to foreign upstream acquisition processes,
8) operations of the Geology and Hydrocarbon Production Branch, excluding management of underground gas storage assets;
9) power generation;
10) natural gas and crude oil production;
11) underground waste disposal;
12) CO_2 storage;
13) underground storage of substances;
14) natural gas denitrification;
15) production of helium, liquefied natural gas (LNG), propane-butane gas mixture, hydrocarbon condensate and liquid foam;
16) management, control and operation of gas pipelines, mixing plants, reduction stations, metering and billing points;
17) direct off-grid sales of natural gas and other products and services of the PGNiG Branches in Odolanów, Sanok, Zielona Góra, and support for PGNiG's trade in the branches' products;
18) well workover, decommissioning, stimulation, measurement and testing;
19) operations of PGNIG S.A. Branches in Odolanów, Sanok and Zielona Góra, and of the Well Mining Rescue Station in Kraków;
20) operation of Foreign Branches.

Arkadiusz Sekściński – Vice President, Development

Arkadiusz Sekściński holds a PhD in social sciences (political science) from the University of Warsaw. He was the organiser of the Internal Security study programme focusing on Energy Security, and a lecturer in such subjects as "Poland's Energy Policy", "Energy Policies of Contemporary Countries", "Renewable Energy Sources" and "Planning and Financing Investment Projects in the Energy Sector". Author of research articles published in Polish and English. He holds a Master of Business Administration (MBA) degree from Łazarski University obtained as part of the Energy MBA Program.

He held a scholarship from the Foundation for the Development of the Education System (University of Bergen, Norway), the Leonardo da Vinci Programme (the Białystok Province Regional Office, Brussels, Belgium), the Socrates – Erasmus Programme (Kapodistrian University of Athens, Greece).

Mr Sekściński started his professional career in the energy sector in 2007, working as a consultant in companies providing advisory services to businesses operating in the heat and power sector. From 2011, he served as director and member of the Management Board of the Polish Wind Energy Association. In 2016, he joined PGE Energia Odnawialna S.A. where, as Vice President and acting President of the Management Board, he supervised investment projects, innovation, operation of generation assets, communication, human resources and security. He served as president of special purpose vehicles responsible for the construction of onshore wind farms and development of wind farm projects in the Baltic Sea. He was also Head of the Photovoltaic Development Programme at the PGE Group.

Vice President, Chief Development Officer, supervises and coordinates the Company's operations with respect to:
1) research, innovation and growth projects involving PGNiG S.A.,
2) analysing and monitoring opportunities to obtain EU funding for the Company's operations;
3) standardisation activities at the Company,
4) development of technical assumptions, rules, norms and standards for the gas area;
5) operations of the PGNiG Central Measurement and Testing Laboratory;
6) implementation of the objectives of the PGNiG Group's strategy at the PGNiG Group companies in the area of research, innovation and development projects and cooperation with start-ups,
7) development of retail products and services within the PGNiG Group,
8) energy efficiency and renewable energy at the PGNiG Group.

Przemysław Wacławski – Vice President, Finance

Przemysław Wacławski is a graduate of the Faculty of Management of the AGH University of Science and Technology in Kraków. Currently, he is taking the international FLEX Executive MBA course at MIP Politecnico di Milano in Italy, specialising in Digital Transformation.

In 2002–2006, he worked for Ernst & Young Audit, where he was engaged in such areas as financial auditing and due diligence processes. Between June 2006 and September 2010, he served as Head of Controlling Department and Head of Investment and Sales for the Balkan Market at Tele-Fonika Kable S.A. From October 2010, he was Member of the Management Board for Finance, and from February 2011 to May 2013 – President of the Management Board of TF Kable Fabrika Kablova Zajecar d.o.o. of Serbia. Between February 2013 and September 2018, Mr Wacławski served as Head of the Controlling Department at Tele-Fonika Kable S.A. During that period, he also served on the management boards of the Tele-Fonika Kable Group's foreign companies.

In October 2018, he was appointed Member of the Management Board for Finance at Unipetrol a.s., where he was in charge of the finance, supply chain management and IT divisions. He also supervised the Unipetrol Group's finance division.

The Vice President, Chief Financial Officer supervises and coordinates such areas of the Company's operations as:
1) implementation of the Company's strategic economic and financial objectives;
2) preparation and implementation of the Company's Business Plan;
3) economic and financial evaluations and analyses of expansion and investment projects;
4) planning and overseeing financial aspects of the investment policy;
5) monitoring the use of financial resources allocated to production, investment and repair work;
6) Company's internal settlement procedures;
7) PGNIG S.A.'s financing operations;
8) cash flows within the PGNiG Group;
9) budgeting and control of the Company's costs and revenue;
10) Company's credit policy;
11) Company's tax policy and tax liabilities;
12) financial risk management;
13) economic and financial analyses of new capital projects;
14) implementation and development of accounting procedures;
15) defining the rules of and overseeing the preparation of financial statements;
16) investor relations;
17) planning, development and operation of the Company's IT systems;
18) implementation of the PGNiG Group's strategic objectives at the Group companies in the areas of IT development;
19) IT management.

Magdalena Zegarska – Vice President of the Management Board

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 took 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 was Secretary of the Employee Council of the second term of office, and from 2010 to 2014 – Secretary of the Coordination Committee of the NSZZ Solidarność trade union at PGNiG S.A. In 2014−2017, she served as Member of the PGNiG Supervisory Board, the Supervisory Board Secretary and 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 Representative of the PGNiG Management

Board for the Quality, Health, Safety and Environment (QHSE) Management System. 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 holds the title of Grade III Mining Director.

Vice President of the Management Board elected by Company employees supervises and coordinates the Company's operations with respect to:
1) occupational health and safety, fire protection;
2) cooperation with trade unions, the Employee Council and other employee organisations where their operations relate to the Company and the PGNiG Group;
3) issue of shares to eligible Company employees;
4) management of the Company's assets, excluding network assets, extraction assets and underground gas storage facilities;
5) management of the Company's non-production assets, including property;
6) environmental protection;
7) development of social policy.

Rules governing the appointment and removal of members of the management board; powers of members of the management, in particular the power to make decisions on the issuance or buy-back of shares

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 applicable provisions of the Articles of Association and in compliance with the requirements for candidates laid down in Art. 22 of the Act on State Property Management of December 16th 2016 (Dz.U. of 2016, item 2259, as amended). The 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 a candidate to the Management Board 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 their position by delivering a notice to that effect to the Company, represented by another Management Board member or commercial proxy, with copies to the Chairman of the Supervisory Board and the minister competent for matters pertaining state assets. The resignation must be submitted in writing, or will otherwise 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 Company'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.

Pursuant to the Articles of Association, decisions on the issuance or buy-back of shares are adopted by the Company's General Meeting.

Rules governing the operation of the Management Board

The Management Board manages the Company's affairs and represents the Company in and out of court. The powers and responsibilities of the Management Board involve management of all of the Company's affairs, other than those which the law or the Company's Articles of Association reserve for the General Meeting or the Supervisory Board. In particular, the Management Board is responsible for preparing business plans, including investment plans, the strategy for the Company and the PGNiG Group, as well as long-term strategic plans, and submitting them to the Supervisory Board for approval.

The operation of the Management Board is defined in its Rules of Procedure, adopted by the Management Board and approved by the Supervisory Board. The Rules of Procedure for the Management Board are available on the Company's website at www.pgnig.pl/lad-korporacyjny/zarzad/regulamin

Management Board meetings and resolutions

In 2020, the Management Board held 52 meetings and passed 728 resolutions.

6.2.2 Supervisory Board and its committees

Composition of the PGNiG Supervisory Board from January 1st to December 31st 2020:

- Bartłomiej Nowak – Chairman of the Supervisory Board
- Piotr Sprzączak – Deputy Chairman of the Supervisory Board
- Sławomir Borowiec – Secretary of the Supervisory Board
- Piotr Broda – Member of the Supervisory Board
- Roman Gabrowski – Member of the Supervisory Board
- Andrzej Gonet – Member of the Supervisory Board
- Mieczysław Kawecki – Member of the Supervisory Board
- Stanisław Sieradzki – Member of the Supervisory Board
- Grzegorz Tchorek – Member of the Supervisory Board.

Supervisory Board and its committees

Bartłomiej Nowak – Chairman of the Supervisory Board

Bartłomiej Nowak completed management courses at the Kozminski University in Warsaw and is a graduate of the Faculty of Law and Administration of the University of Warsaw. Since 2009, he has held the degree of Doctor of Laws - European University Institute, and since 2013 - a Habilitated Doctor degree from the Institute of Legal Sciences of the Polish Academy of Sciences. 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 Polish Energy Regulatory Office (URE). In 2010–2014, he served as an adviser to 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. Member of the Scientific Council of the National Centre for Nuclear Research.

Bartłomiej Nowak has submitted a statement to the effect that he meets the independence criteria stipulated under Art. 129 of the Polish Act on Statutory Auditors, Audit Firms, and Public Oversight dated May 11th 2017 and under Commission Recommendation 2005/162/EC of February 15th 2005.

Piotr Sprzączak – Deputy Chairman of the Supervisory Board

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. As part of his job duties, he participates in the negotiation of EU legal acts, including amendments to the gas directive and the regulation concerning measures to safeguard security of gas supply, and in the development of the regulatory environment through the ‘Clean Energy for All Europeans’ package. He coordinates activities related to international cooperation and Poland's membership in the European Union and in international energy organisations and agreements. 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.

Sławomir Borowiec – Secretary of the Supervisory Board

Sławomir Borowiec graduated from the AGH University of Science and Technology in Kraków (Faculty of Drilling, Oil and Gas) in 1992. In the same year he 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 2004, 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 Centre for Oil and Gas Production Facilities. 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 the title of Grade II Mining Director.

Piotr Broda – Member of the Supervisory Board

Piotr Broda is a graduate of the Faculty of Foreign Trade of the Warsaw School of Economics and holder of an Executive MBA degree from the University of Minnesota. He gained professional experience working in leading financial institutions. In 1991, he joined Bank Austria Creditanstalt S.A. of Warsaw. He was Deputy Director of the Treasury Department (1995–1998), and then Director of the Treasury Department and Chairman of the Assets and Liabilities Committee (1998–2000). In November 2000, he was the manager of the Investment Team at Allianz S.A., and in 2002 he was appointed Deputy Director of the Financial Investment Office at PZU S.A. He continued employment with the PZU Group as Head of Debt Instruments and Derivatives Office and Vice President of the Management Board of PZU Asset Management S.A. (2008-2011), and then as Vice President of the Management Board of PZU TFI S.A. (in 2009-2013). For over 4 years (2013-2017) he was a member of the Management Board of TFI BGK S.A. Since July 2018, CFO of ElectroMobility Poland S.A. He has long-standing experience as member of supervisory boards, having served in 2002-2004 at PZU Asset Management S.A. and PZU NFI Management S.A., and in 2005-2006 at Lentex S.A. and in 2006-2007 at Jago S.A. As an expert at the Sobieski Institute, he has authored a number of publications on finance

Piotr Broda has submitted a statement to the effect that he meets the independence criteria stipulated under Art. 129 of the Polish Act on Statutory Auditors, Audit Firms, and Public Oversight dated May 11th 2017 and under Commission Recommendation 2005/162/EC of February 15th 2005.

Roman Gabrowski – Member of the Supervisory Board

Roman Gabrowski is a graduate of the Faculty of Electrical Engineering at the Wrocław University of Technology, where he specialised in applied automation, and the Wałbrzych Higher School of Management and Enterprise, where his principal field of study was strategic management. He additionally completed post-graduate studies in management of state-owned energy companies organised by the Warsaw University of Technology, and studies in business finance management at the Wrocław University of Economics (Faculty of Management and Computer Science). Mr Roman Gabrowski has gained professional experience working in managerial roles in the power industry, including entities of the Tauron Group. In 1993−1997, he served as Chairman of the Supervisory Board of ZE Wałbrzych S.A. In 1998−2002, he held the position of President of the Management Board at ZE Wałbrzych S.A., and in 2007−2008 at EnergiaPro Gigawat (currently Tauron Obsługa Klienta). In 2016–2019, he was President of the Management Board of Tauron Ekoenergia. He also served on the supervisory boards of a number of companies, including Jeleniogórskie Elektrownie Wodne (currently Tauron Ekoenergia) and Tauron Ekoserwis.

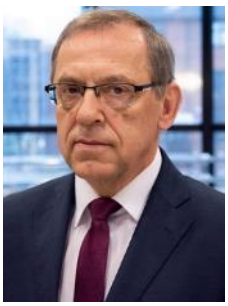
Andrzej Gonet – Member of the Supervisory Board

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 and in 1980 he defended with honours his doctoral thesis. In 1989, he was awarded a post-doctoral degree (*doctor habilitatus*) in 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-owned 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). Andrzej 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, which position he held for three terms. In addition, Andrzej Gonet was a co-founder of the PWSZ Krosno State College, where he has served as Vice-Rector and Rector.

Mieczysław Kawecki – Member of the Supervisory Board

Mieczysław Kawecki is a graduate of the AGH University of Science and Technology in Kraków, Master of Science in Engineering, with principal field of study: well operation. He completed post-graduate studies in underground gas storage, and graduated in Environment Protection in Economy from the AGH University of Science and Technology in Kraków. Mieczysław Kawecki is a licensed mine operations manager and Grade I Mining Director. He started his professional career in 1976 at Sanocki Zakład Górnictwa Nafty i Gazu, working at the Wańkowa crude oil extraction facility. In 1984, he was appointed manager of a new crude oil and natural gas extraction facility in Lublin, and in 1986 he became manager of the Wielopole crude oil extraction facility. From 1991 to 2017, he worked as manager of the Strachocina Underground Gas Storage Facility. Since 2017, Mieczysław Kawecki has managed the Underground Gas Storage Department of PGNiG's Sanok Branch. He is President of the Management Board of the Sanok Branch of the Polish Association of Oil and Gas Industry Engineers and Technicians (SITPNiG). In 1990–1992, he was a member of the Works Council at Sanocki Zakład Górnictwa Nafty i Gazu and a delegate to the General Assembly of Delegates of PGNiG Warszawa. He was a member of the Works Council of the 6th and 7th terms of office at PGNiG Warszawa from 1994 until it was transformed into a company. Until 1998, he was a member of the consulting group at PGNiG. From 2003 to 2005, Mieczysław Kawecki served as Chairman of the KADRA Trade Union at the Sanok Branch, and member of the Union Coordination Committee. He was a member and then Secretary of the Supervisory Board of PGNiG in 2005–2014.

Stanisław Sieradzki – Member of the Supervisory Board



Stanisław Sieradzki completed studies in stratigraphic and exploratory geology at the University of Wrocław. He also completed post-graduate studies in oil and gas engineering at the AGH University of Science and Technology in Kraków. Stanisław Sieradzki has worked for PGNiG since 1986, first as independent geologist, then specialist geologist in the Operational Geology Department, and later as Head of the Deposit Appraisal and Documentation Department at PGNiG's Sanok Branch. Upon establishment of the Geology and Hydrocarbon Production Unit, he was appointed Head of the Project Design Centre in Sanok. Currently, Mr Sieradzki holds the position of Deputy Head of the Project Design Department in Jasło, Sanok office. His work to date has focused chiefly on crude oil and natural gas exploration. Stanisław Sieradzki has received a number of qualifications, including a licence from the Minister of the Environment to perform, supervise and manage category 1 geological work in: exploration for and appraisal of crude oil and natural deposits; he is also a qualified senior technical supervisor of geological operations and mining geologist at facilities extracting mineral deposits through boreholes, licensed by the President of the State Mining Authority. He is also a certified internal management system auditor.

Grzegorz Tchorek – Member of the Supervisory Board

Grzegorz Tchorek graduated from the Faculty of Management of the University of Warsaw. In 2007, he received PhD degree and started working as an associate professor at the Faculty of Management of the University of Warsaw and as an adviser at the National Bank of Poland (from 2009). As an expert, he currently focuses on evaluating competitiveness of countries and businesses, global supply chains, and advancement of low-carbon technologies in Poland. He conducts research projects in the fields of electromobility, gas mobility, shared mobility and hydrogen technologies.

Grzegorz Tchorek has submitted a statement to the effect that he meets the independence criteria stipulated under Art. 129 of the Polish Act on Statutory Auditors, Audit Firms, and Public Oversight dated May 11th 2017 and under Commission Recommendation 2005/162/EC of February 15th 2005.

Powers of the PGNIG Supervisory Board

The Supervisory Board exercises ongoing supervision of the Company's activities in all areas of its operations, and presents its opinions on all matters submitted by the Management Board for consideration to the General Meeting (GM). The powers and responsibilities of the Supervisory Board include in particular:

- Assessment of the Directors' Report on the Company's operations and of the financial statements for the preceding financial year, in terms of their consistency with the accounting books, supporting documentation, and the actual state of affairs;
- Assessment of the Management Board's proposals concerning distribution of profit or coverage of loss;
- Submission to the GM of written reports on results of the activities referred to in items 1 and 2;
- Assessment of the consolidated financial statements with respect to their consistency with the accounting books, supporting documentation, and the actual state of affairs, as well as assessment of the Directors' Report on the Group's operations, and reporting to the GM on the results of these assessments;
- Appointment of an auditor to audit the financial statements;
- Approval of business plans, including investment plans;
- Approval of the strategy for the Company and the PGNiG Group and long-term strategic plans;

- Adoption of detailed rules governing the Supervisory Board's operation;
- Approval of the consolidated text of the Articles of Association, drawn up by the Company's Management Board;
- Approval of the Rules of Procedure for the Management Board;
- Appointment and removal of Management Board members;
- Definition of rules and amounts of remuneration for Management Board members, unless applicable mandatory provisions of law state otherwise.

Rules governing the operation of the Supervisory Board

The Supervisory Board operates in accordance with the rules set out in the Commercial Companies Code, the Articles of Association and the Rules of Procedure for the Supervisory Board. The Rules of Procedure for the Supervisory Board have been adopted by a Supervisory Board resolution and are available on the Company's website at http://pgnig.pl/lad-korporacyjny/rada-nadzorcza/regulamin.

The Company's Supervisory Board consists of five to nine members appointed by the General Meeting. One Supervisory Board member should meet the independence criteria specified in the Articles of Association. As long as the State Treasury holds Company shares, the State Treasury, represented by the minister competent for matters pertaining to state assets, has the right to appoint and remove one member of the Supervisory Board. If the Supervisory Board consists of up to six members, two members are appointed from among persons elected by the Company's employees and employees of all of its subsidiaries; if the Supervisory Board consists of seven to nine members, three members are appointed from among candidates elected by the employees.

Supervisory Board members are appointed for a joint term of office lasting three years.

Supervisory Board meetings are convened by the Chairman or Deputy Chairman of the Supervisory Board any time the Company's interest so requires, but no less frequently than once every two months.

The Supervisory Board or its members delegated to individually perform certain supervisory functions are authorised to supervise all areas of the Company's activity, and in particular to examine all of the Company's documents, demand that the Company's Management Board and employees produce reports and explanations, or review the Company's assets.

The Supervisory Board may appoint standing or ad hoc committees (established as needed), to act as the Supervisory Board's collective advisory and opinion-forming bodies.

Committees of the Supervisory Board

In 2020, there were two committees operating at the Company – the Audit Committee and the Strategy Committee.

Composition of the Audit Committee of the PGNiG Supervisory Board in 2020:

- Grzegorz Tchorek – Chairman of the Audit Committee
- Piotr Broda − Deputy Chairman of the Audit Committee
- Bartłomiej Nowak – Member of the Audit Committee.

In 2020, the composition of the Audit Committee did not change.

The Audit Committee is composed of at least three Supervisory Board members, of whom at least one has expertise and competence in accounting or auditing of financial statements.

All members of the Audit Committee submitted statements to the effect that they meet the independence criteria stipulated in Art. 129 of the Polish Act on Statutory Auditors, Audit Firms, and Public Oversight, of May 11th 2017, and Commission Recommendation 2005/162/EC of February 15th 2005. Two members of the Audit Committee have expertise and competence in accounting or auditing of financial statements:

Grzegorz Tchorek, Chairman of the Audit Committee, holds an MA in business management and marketing. He graduated from the Faculty of Management of the University of Warsaw, and holds a PhD in Economics in Management earned at the Faculty of Management of the University of Warsaw.

Piotr Broda, Deputy Chairman of the Audit Committee, is a graduate of the Warsaw School of Economics and holds an MA in economics/ foreign trade, with a specialisation in financial markets.

Bartłomiej Nowak, Member of the Audit Committee, has the expertise and skills required in the industry in which the Company operates. He holds a PhD in law from the Polish Academy Sciences (Institute of Legal Sciences), in business law, and a PhD in law from EUI FLORENCE. He was an adviser to the President of the Energy Regulatory Office (URE) in 2007−2009 and worked for Directorate-General for Transport and Energy of the European Commission in 2007–2008.

Rules governing the operation of the Audit Committee and its powers

The Audit Committee operates within the Supervisory Board as a standing committee, advising the Supervisory Board on matters for which the Board is responsible. Meetings of the Audit Committee are held as needed, but at least once every six months, and are convened by the Chair of the Committee. Every six months, the Audit Committee submits reports on its activities to the Supervisory Board. Each report is made available to the Company's shareholders at the next General Meeting.

The Audit Committee's responsibilities include in particular those set out in Art. 130 of the Act on Statutory Auditors, Audit Firms, and Public Oversight, of May 11th 2017, e.g.

- monitoring of:
  - the financial reporting process;
  - effectiveness of the internal control and risk management systems and the internal audit function, including with regard to financial reporting,
  - performance of financial audit tasks, including the audit of financial statements performed by an audit firm, with account taken of all conclusions and findings from an inspection of the audit firm by the Polish Audit Oversight Commission;
- oversight and monitoring of the statutory auditor's and the audit firm's independence in the context of fee caps on permitted non-audit services provided to the audited Company;
- informing the Supervisory Board or other supervisory or control body of the Company of the audit findings and explaining how the audit contributed to the reliability of the Company's financial reporting and what role the Audit Committee played in the audit;
- assessing the auditor's independence and approving the provision of permitted non-audit services by the auditor;
- developing a policy for selection of an audit firm to perform audits;
- developing a policy for the provision of permitted non-audit services by the audit firm, its related entities, or members of its network;
- establishing an audit firm selection procedure for the Company;
- submitting to the Supervisory Board or other supervisory or control body, or the governing body referred to in Art. 66. 4 of the Accounting Act of September 29th 1994, a recommendation referred to in Art. 16.2 of Regulation (EU) No 537/2014, in accordance with the policies referred to in items e and f;
- submitting recommendations to ensure the reliability of the financial reporting process at the Company.

Audit Committee meetings and resolutions

In 2020, the Audit Committee held ten meetings and passed six resolutions. At three of its meetings, the Audit Committee met with the auditor.

Rules for cooperation with audit firm

Following election made by the PGNiG Supervisory Board on December 20th 2018, PKF Consult Sp. z o.o. Sp.k. was appointed as the auditor to audit and review the financial statements of PGNiG and some of the subsidiaries as well as the consolidated financial statements of the PGNiG Group. The agreement was concluded on April 12th 2019 and covers the years 2019–2020.

In 2020, the audit firm provided the following permitted non-audit services to PGNiG:

- Review of the quarterly separate and consolidated financial statements for the periods ended March 31st 2020 and September 30th 2020.
- Review of the interim separate and consolidated financial statements for the six months ended June 30th 2020.
- Review, for the needs of banks providing financing to PGNiG, of agreed procedures concerning financial covenants specified in the credit facility agreements signed by PGNiG, as well as notes subscription agreements and the terms and conditions of such notes – for the 12 months ended December 31st 2019 and June 30th 2020.

On 20 May 2020, following the selection process carried out by the PGNiG Supervisory Board, a contract was concluded with PKF Consult Sp. z o.o. Sp.k. for the audit and review of financial statements of PGNiG and some of its subsidiaries, and consolidated financial statements of the PGNiG Group. The contract covers 2021-2022 and provides for the provision of the following services to PGNiG:

- Audit of full-year separate and consolidated financial statements,
- Review of quarterly separate and consolidated financial statements,
- Review of half-year separate and consolidated financial statements,
- Review, for the needs of banks providing financing to PGNiG, of agreed procedures concerning financial covenants specified in the credit facility agreements signed by PGNiG, as well as notes subscription agreements and the terms and conditions of such notes.

The Audit Committee also stated that the recommendation had been prepared following the procedure to select an audit firm, carried out by PGNiG in accordance with the proviso of the Public Procurement Law of January 29th 2004 (consolidated text: Dz.U. of 2019, item 1843), and the procedure meets the criteria set out in Art. 130.3 of the Act on Statutory Auditors, Audit Firms, and Public Oversight of May 11th 2017 (Dz.U. of 2019, item 1421).

Composition of the Strategy Committee

The Strategy Committee was established on January 23rd 2020 and was composed of:

- Piotr Sprzączak – Chairman of the Strategy Committee;
- Sławomir Borowiec – Member of the Strategy Committee;
- Roman Gabrowski – Member of the Strategy Committee;
- Mieczysław Kawecki – Member of the Strategy Committee;
- Stanisław Sieradzki – Member of the Strategy Committee;
- Grzegorz Tchorek – Member of the Strategy Committee.

In 2020, the composition of the Strategy Committee did not change.

The Strategy Committee is composed of at least three members of the Supervisory Board. The Chairman of the Strategy Committee and its other members are appointed by the Supervisory Board from among its members on a rotating basis.

Rules governing the operation of the Strategy Committee and its powers

The Strategy Committee provides support to the Supervisory Board in the performance of its tasks. Meetings of the Audit Committee are held as needed, but at least once every six months. The Strategy Committee submits an annual report on its activities to the Supervisory Board.

The tasks of the Strategy Committee are:

- Giving opinions and recommendations to the Supervisory Board on strategic proposals or information addressed to the Supervisory Board and requiring its approval or opinion, in particular concerning:
  - Strategies for the Company and the PGNiG Group, and long-term strategic plans;
  - Management objectives (MBOs) for members of the Company's Management Board;
  - Business plans, including investment plans;
  - Planned and actual investments and divestments;
  - Other strategic matters;
- performing any other tasks assigned by the Supervisory Board.

Strategy Committee meetings

In 2020, the Strategy Committee held five meetings.

6.3 Salaries and wages

6.3.1 PGNiG's remuneration policy

The key internal document governing the remuneration policy at PGNiG is the Collective Bargaining Agreement concluded with the trade unions on July 15th 2009. The remuneration system is additionally governed by internal rules implemented at individual organisational units and agreements with trade unions.

In line with the adopted remuneration policy, base pay rates are based on job grading. The rate depends on the qualifications required for a given job, type of work performed and professional experience.

The policy also provides for additional components of remuneration, the most important of them being: awards and bonuses, St. Barbara's Day awards, jubilee awards, retirement severance payments and annual bonuses.

6.3.2 Incentive scheme

At PGNiG, a bonus scheme is in place whose key components include:

- MBO (Management By Objectives) bonus for managers responsible for achieving PGNiG's key objectives. The amount of an MBO bonus depends on the quality and progress in the achievement of allocated objectives;
- Discretionary periodic bonus, which covers the remaining employees and is granted on a quarterly basis, based on discretionary assessment of an employee's performance by their superior;

- Discretionary task bonus, earmarked for employees excelling in their work for the Company (a special account placed at the disposal of the PGNiG Management Board);
- Discretionary project bonus, earmarked for employees who have been involved in the execution of project work; the bonus amount depends on the quality and progress in the execution of specific projects.

6.3.3 Employee benefits

PGNiG has in place an Employee Pension Plan within the meaning of the Act on Employee Pension Plans of April 20th 2004 (Dz.U. No. 116, item 1207). Every employee who has continuously worked for the Company for at least three months is eligible for the plan.

6.3.4 Remuneration policy for members of the management and supervisory bodies of PGNiG

The remuneration policy for members of the PGNiG Management Board and Supervisory Board was adopted by the PGNiG Annual General Meeting on June 24th 2020. Total remuneration of a member of the Management Board consists of a fixed component in the form of monthly base pay and a variable component representing additional remuneration payable for a given financial year. The monthly amount is determined by the Company's Supervisory Board, with the proviso that the Fixed Remuneration of the President and other members of the Management Board falls within the range of 7 to 15 times the reference salary within the meaning of Art. 1.3.11 of the Remuneration Act. The amount of Variable Remuneration depends on actual delivery of the Management Objectives and does not exceed 100% of the Fixed Remuneration.

Members of the Supervisory Board receive monthly remuneration. The remuneration is calculated as the product of the reference salary within the meaning of Art. 1.3.11 of the Act on Rules of Remunerating Persons Who Direct Certain Companies dated June 9th 2016, and a factor set in a separate General Meeting resolution. The multiplier is 1.7 for the Chairman of the Supervisory Board, 1.6 for the Deputy Chairperson of the Supervisory Board and Secretary of the Supervisory Board, and 1.5 for the other members of the Supervisory Board.

Table 57 Remuneration of members of the management and supervisory bodies of PGNiG in 2020

	January 1st–December 31st 2020		
Full name	**Total remuneration, additional benefits and bonuses paid and due in 2020 for holding key positions at PGNiG, including VAT**	**Total remuneration for holding key positions at subordinated entities in 2020, including VAT**	**Total remuneration in 2020**
	(PLN '000)		
Total remuneration of Management Board members, including:	5,912	398	6,310
Paweł Majewski − President[1])	108	14	122
Robert Perkowski – Vice President	1,221	258	1,479
Arkadiusz Sekściński – Vice President[2])	875	-	875
Przemysław Wacławski – Vice President[2])	916	126	1,042
Jarosław Wróbel – Vice President[3])	932	-	932
Magdalena Zegarska – Vice President	1,860	-	1,860
Persons no longer in office as at December 31st 2020:	4,988	2,148	7,136
Radosław Bartosik − Vice President[4])	471	409	880
Łukasz Kroplewski – Vice President[5])	947	-	947
Jerzy Kwieciński – President[3]) [6])	853	278	1,131
Michał Pietrzyk – Vice President[5])	765	535	1,300
Maciej Woźniak – Vice President[5])	947	-	947
Piotr Woźniak − President[5])	1,005	926	1,931
Total remuneration of Supervisory Board members, including:	767	-	767
Sławomir Borowiec	88	-	88
Piotr Broda	84	-	84
Roman Gabrowski	82	-	82
Andrzej Gonet	82	-	82
Mieczysław Kawecki	84	-	84
Bartłomiej Nowak	93	-	93
Stanisław Sieradzki	82	-	82
Piotr Sprzączak	89	-	89
Grzegorz Tchorek	83	-	83
Total remuneration of management and supervisory personnel	11,667	2,546	14,213

1) Serves as of November 12th 2020.
2) Serves as of January 15th 2020.
3) Serves as of January 10th 2020.
4) Served until January 16th 2019.
5) Served until January 9th 2020.
6) Served until October 22nd 2020.

Table 58 Remuneration of members of the management and supervisory bodies of PGNiG in 2019

Full name	January 1st–December 31st 2019 Total remuneration, additional benefits and bonuses paid and due in 2019 for holding key positions at PGNiG, including VAT	Total remuneration for holding key positions at subordinated entities in 2019, including VAT	Total remuneration in 2019
	(PLN '000)		
Total remuneration of Management Board members, including:	9,503	291	9,794
Piotr Woźniak − President	1,984	154	2,138
Łukasz Kroplewski – Vice President	1,846	-	1,846
Michał Pietrzyk – Vice President	1,843	137	1,980
Maciej Woźniak – Vice President	1,848	-	1,848
Robert Perkowski – Vice President	698	-	698
Magdalena Zegarska – Vice President	1,284	-	1,284
Persons no longer in office as at December 31st 2019:	965	14	979
Radosław Bartosik − Vice President[1)]	965	14	979
Total remuneration of Supervisory Board members, including:	695	-	695
Sławomir Borowiec	86	-	86
Piotr Broda	81	-	81
Roman Gabrowski	29	-	29
Andrzej Gonet	82	-	82
Mieczysław Kawecki	79	-	79
Bartłomiej Nowak	92	-	92
Stanisław Sieradzki	81	-	81
Piotr Sprzączak	86	-	86
Grzegorz Tchorek	79	-	79
Total remuneration of management and supervisory personnel	11,163	305	11,468

1) Served as member of the Management Board until January 16th 2019

6.4 Internal control and risk management systems used by the Company in the process of preparation of financial statements and consolidated financial statements

The Company's internal control system consists of:

- Group-wide uniform accounting policies on measurement, recognition and disclosure in accordance with the International Financial Reporting Standards (IFRS), as well as unified templates for separate and consolidated financial statements; Internal control mechanisms, including separation of duties, multi-stage data verification, accuracy reviews of data received, independent checks, etc;
- Internal operating procedures implemented under Orders of the President of the Management Board;
- Definition of accounting, financial reporting and tax settlement responsibilities at the Company, in the task book and in relevant rules approved by the Management Board and the Supervisory Board;
- Definition of rules on supervision of the flow of financial and accounting documents, including review of the documents in terms of form, substance and accounting correctness;
- Recording of economic events in an integrated finance and accounting system configured in compliance with the accounting policies in place at the Company, containing controls and checks ensuring data consistency and integrity, such as integrity checks, hardware checks, operating checks, and authority checks;
- An IT system supporting the consolidation process, enabling the Group to streamline the consolidation process at the level of financial and management reporting, and speed up the preparation of consolidated reports;
- Uniform rules and procedures for consolidating financial data, ensured through the use of unified reports, automatic validations of the consistency and completeness of reported data, as well as two-stage authentication and approval in the data consolidation system;
- Formalised procedure for the preparation of financial statements (scheduled tasks with individual deadlines and persons responsible);
- Multi-stage review and authorisation process for financial statements, involving the Supervisory Board;
- Assessment of current reporting risk by the PGNiG Group's Internal Audit and Control Department and the Security Department;
- Independent review of financial statements for reliability and accuracy by an independent external auditor;
- Progressive development of the Group's internal procedures and regulations designed to ensure uniformity of the reporting processes and their continuous improvement.

At the centre of the accounting and financial reporting controls is a fully integrated financial and accounting system. The system checks recorded transactions for correctness, but also identifies which users have entered and approved individual transactions. Access to financial information is restricted by an authorisation system. Access authorisation is granted based on an employee's function and responsibilities, and is subject to stringent controls.

An additional level of control was introduced to oversee the Group's financial statements by assigning the preparation of the Company's financial statements and the Group's consolidated financial statements to two separate Departments at the Company's Head Office; the financial statements are entered in the integrated IT system with the accounts of other consolidated entities. Data undergoing consolidation is automatically checked for correctness by automatic validation systems and is subject to logical verification procedures carried out by dedicated Group employees.

The PGNiG Group's accounting policies ensure compliance of the Company's accounting procedures and financial statements with the relevant regulations, in particular with the IFRS. The accounting policies are regularly updated to ensure their continuing compliance with amended regulations. The most recent update to the accounting policies was made in 2020.

To further mitigate the risks associated with financial reporting, financial statements are verified by an independent auditor every three months. The Company's auditor selection procedures ensure the auditor's independence in performing its duties (auditors are selected by the Supervisory Board acting on the Audit Committee's recommendation) and high standards of auditing services.

Full-year financial statements are audited, whereas Q1, H1 and Q3 statements are reviewed. The results of both processes are presented by the auditor to the Management Board and to the Supervisory Board's Audit Committee. In its operations, the Company manages its overall financial security using dedicated liquidity, financial risk, budget drafting and control management systems.

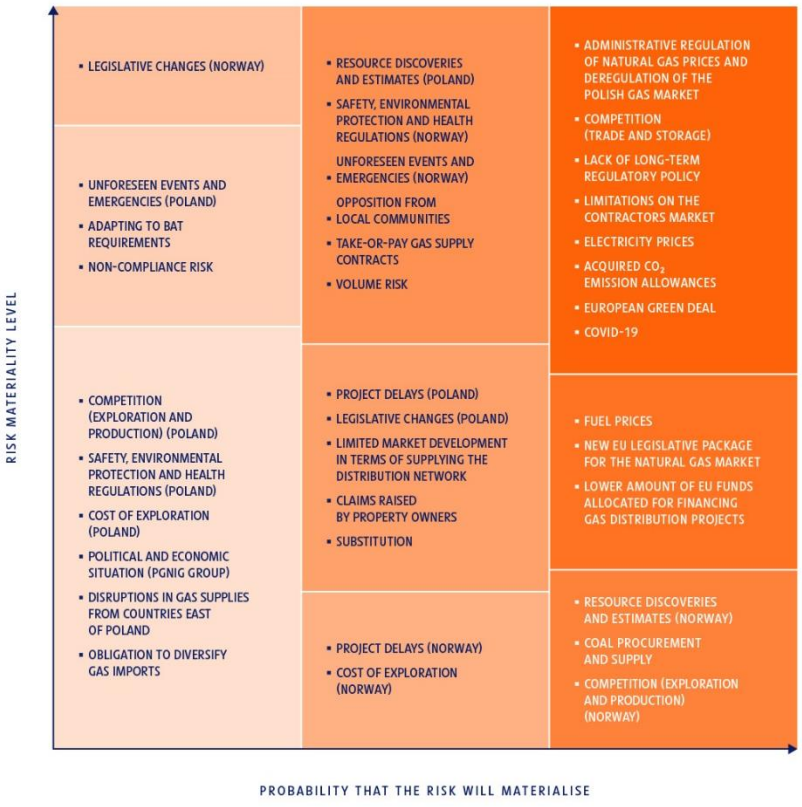
The financial reporting process is properly structured and includes controls to minimise the risk of error. It is also subject to ongoing management review, as well as periodic internal and external audits, which significantly protects the Company from serious irregularities in reporting.

6.5 Risk management

Based on an annual review of the internal control and risk management systems, the PGNiG Group does not operate a comprehensive corporate risk management system. At the PGNiG level, risk management processes are formalised and defined for key business areas. Risks are identified, addressed and assessed in accordance with the methodologies and assessment scales adopted in respective business areas. Risk management processes in particular areas are based on internally developed risk models and records, and risk management processes are identified and submitted for assessment to representatives of individual organisational units (management staff).

However, the Company recognises the need to develop a comprehensive and integrated risk management system. At the strategic level, the Company is pursuing a process mapping project across the PGNiG Group. It is expected that the project will also cover the defining and structuring of a process integrating risk management at the PGNiG Group level.

Figure 9 Risk matrix



Operational risks

Key: Risk materiality level: low ●○○ ; medium ●●○ ; high ●●●

Probability that the risk will materialise: low ●○○ ; medium ●●○ ; high ●●●

Yoy change in the risk level: increase ↗; decrease ↘; no change →

Table 59 Changes in and impact of material operational risks on the PGNiG Group

Risk	Description
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. In addition, the actual quantity and quality of accumulated hydrocarbons may differ from estimates. If the results of successful exploration in the form of new reserves do not balance production from existing fields, the recoverable reserves in the PGNiG Group's fields will gradually decrease as the production continues. 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 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. Any downward adjustment of the reserves or production volumes may lead to lower revenue and adversely affect the PGNiG Group's financial performance.
Competition In the Exploration and Production segment: Poland ●○○ ●○○ ↘ Norway ●○○●●● In the Trade and Storage segment ●●● ●●● →	In the Exploration and Production segment: 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 PGNiG, especially those active globally, enjoy strong market positions and have 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 PGNiG could offer given its financial and human resources. This competitive advantage of oil majors is particularly important on the international market. In the Trade and Storage segment: As in previous years, competitors seek to increase gas fuel sales by offering competitive prices of the fuel or dual fuel (gas and electricity) bundles. A noteworthy development is also the growing activity of large energy companies on the Polish natural gas market. Given the prevailing trend in supplier switch numbers (according to URE data), the number of people switching energy supplier should increase in the coming years.
Delays 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. All these factors create the risk of delays in the start of exploration work. The formal and legal obstacles, beyond PGNiG's control, include those related to: • local governments' failure to approve local zoning plans or amendments to those already approved; • obstacles in having investment projects incorporated into the local zoning plans; • requirement to obtain and comply with administrative or other formal and legal decisions, including environmental decisions or building permits; • amendments to the current investment project; • difficulties in obtaining the landowners' consent for access to the area. These factors materially delay investment activities and entering the area to commence construction work. Further, PGNiG's obligation to comply with the Public Procurement Law frequently protracts tender procedures. A protracting project exacerbates the risk related to estimation of capital expenditure.

Safety, environmental protection and health regulations Poland ●○○ ●○○ ↘ Norway ●●● ●●○ →	The need to ensure compliance with environmental laws in Poland and abroad may significantly increase the PGNiG Group's operating expenses. Currently, the Group incurs significant capital expenditure and costs to ensure compliance of its operations with the ever more complex and stringent regulations concerning safety and health at work, as well as environmental protection. Offshore upstream operations carry a significant risk of environmental pollution resulting from oil spills. The risk is monitored on an ongoing basis, and field operators have implemented a number of barriers and technical solutions to mitigate the risk.
Cost of exploration Poland ●○○ ●○○ ↘ Norway ●○○●●○	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. In order to reduce drilling work costs, in 2011 PGNiG introduced a daily rate system for selecting and paying contractors for these works.
Unforeseen events and emergencies Poland ●●○ ●○○ → Norway ●●● ●●○ →	Hydrocarbon deposits developed by the PGNiG Group are usually located at great depths, which involves extremely high pressures and, in many cases, the presence of hydrogen sulfide. Consequently, the risk of hydrocarbon blowout or leakage is very high, which in turn may pose a threat to people (employees and local population), the natural environment and production equipment.
Changes in legal regulation Poland ●●○ ●●○ → Norway ●●● ●○○ →	In some countries, exploration and production activities may be hindered by frequent and unexpected changes in legislation, which may give rise to particularly serious risks in countries with authoritarian regimes.
Political and economic situation PGNiG Group ●○○ ●○○ ↘	Some countries where the PGNiG Group is conducting exploration and production activities are threatened by 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. If these risks materialise, the Company's activities may be limited, suspended or discontinued. 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.
Opposition from local communities ●●● ●●○→	The protests of residents of areas where drilling operations were carried out focus, among other things, on noise emitted by the drilling equipment working around the clock, increased vehicle traffic and the destruction of roads, as well as concerns about environmental pollution (water, soil). Protests result in delays or suspension of drilling work, prolongation of administrative procedures and damage to the Company's image. In order to minimise the risk, the locations of wells are reviewed in terms of potential conflicts and dedicated information campaigns are conducted. It is increasingly more common that local communities expect to receive direct benefits.
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 have also been gradually liberalised as the process of deregulation advances. The first customer groups in respect of which the tariff requirement has been disapplied are wholesale and business customers. Currently, sales in Poland to the largest customers are done on market terms, either through POLPX or on the basis of market price indices. Due to the fact that the structure of sales is not perfectly matched by the structure of purchases (e.g. due to production of own source) and that prices in individual markets may vary, there is a risk of inaccurate estimation of income and expenses, which may adversely affect the financial results.

	Dependence of PGNiG OD's revenue on tariffs approved by the President of URE is the key factor affecting the company's regulated business. Tariffs are crucial to the company's ability to generate revenue that would cover its reasonable costs and deliver a return on the capital employed. Currently, a significant portion of that revenue depends on the selling prices of gas fuel and is regulated. Inaccurate estimates of demand for gas (affecting the accuracy of projected purchase volumes) and changes in prices of gas purchased on the Polish Power Exchange, which cannot be accurately projected, may have an adverse effect on the financial performance of PGNiG OD.
Disruptions in gas supplies from countries east of Poland ●○○ ●○○ ↘	There were no significant disruptions to natural gas supplies from the east in 2020. PGNiG was prepared to cope with reductions or interruption of natural gas supplies from Ukraine from January 1st 2020 due to the transit agreement between PAO Gazprom and NAK Naftogaz of Ukraine expiring at the end of 2019. Eventually the transit agreement between Russia and Ukraine was signed and the continuity of gas supplies was maintained.
Take-or-pay gas supply contracts ●●● ●●○ ↗	PGNiG is a party to long-term take-or-pay contracts for gas supply to Poland, and committed to duly discharging its obligations under those contracts. Assuming that PGNiG's customer portfolio remains unchanged, the volume of gas imports specified in the take-or-pay contracts will allow the Company to optimise its gas purchases under long-term and spot contracts, including for LNG. 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.
Limited market development in terms of supplying the distribution network ●●○ ●●○ →	Limitations at the entry points to the distribution system result from the limitations of the supply network and the insufficient capacity of gas stations. Consequently, the possibility of connecting new customers and gas network roll-out may be limited. In addition, end users may switch to direct or substitute competitors.
Lack of long-term regulatory policy ●●● ●●● →	The risk is related to the absence of long-term rules for determining the level of prices and charges in the distribution tariff. If the risk materialises, tariffs may be set at levels that do not secure the expected return on capital invested in the distribution of gas fuels and it may be difficult to obtain approval for each subsequent tariff. A measure to prevent the risk from materialising is to seek implementation of legal changes obliging the President of URE to establish a multi-year tariff regulation model, development of a regulatory-econometric model and a relevant agreement with the URE.
Claims raised by property owners ●●○ ●●○ →	The risk arises from failure to secure a permanent legal title to property at the stage of project execution and property owners' higher awareness of the related legal aspects. The consequences of materialisation of the risk include excessive (above market prices) claims made by property owners, increase in litigation, litigation costs, claims for removal or alteration of infrastructure, as well as provisions and claims related to extra-contractual use of property.
Substitution ●●○ ●●○ →	The substitution risk is associated with a potential lower cost of using alternative fuels and with unavailability or insufficient capacity of the gas network. The risk may arise from the inability to use a wide range of marketing tools due to the nature of the business (separation of distribution and sales operations), from the direction of changes in the national energy policy, and from fuel prices on commodity exchanges. Materialisation of the substitution risk may result in constraints for the roll-out of the programme to connect new areas to the gas network or may affect revenue and volume growth. It may also impair the efficiency of the networks built.
Lower amount of EU funds allocated for financing gas distribution projects ●●○ ●●● →	This risk may result from fund allocation priorities set by the institutions responsible for distribution of EU funding. Unfavourable fund allocation may result in unavailability of financing for submitted projects or in low efficiency of such projects.
Limitations on the contractors market ●●● ●●●→	This risk may result from an insufficient number of qualified contractors, deteriorated competitiveness in the contractors market, and increase in the cost of labour, materials and services. Should this risk materialise, implementation of planned investment processes may be slower than expected.

Electricity prices ●●● ●●● ↗	The volatility of electricity prices is one of the key risks affecting the financial results of the Generation segment. Sales of electricity are governed by rules that limit exposure to the volatility. Any negative impact of lower prices on financial results is limited by combining the sales with purchases of CO_2 emission allowances.
Prices of CO_2 emission allowances ●●● ●●● →	The Group purchases CO_2 emission allowances in quantities representing the difference between actual emissions and the emissions covered by free allowances it receives. Purchases of CO_2 emission allowances are made subject to specific rules, in particular with respect to the time horizon of the purchase transactions and focus on performance.
Fuel prices ●●○ ●●● ↘	In the Generation segment, coal and biomass are used mainly for heat and electricity production. Matching the timing of sales of electricity and certificates of origin with the timing of fuel purchases makes it possible to partly to mitigate the adverse impact of rising fuel prices on the Company's results.
Coal procurement and supply ●○○ ●●● ↘	Coal is purchased by the Company mostly under contracts executed in advance to ensure that strategic coal stocks are maintained above the level required by the Regulation of the Minister of Economy. Coal transport services are purchased in accordance with the Public Procurement Law.
Adapting to BAT requirements ●●○ ●○○ →	With installations adapted to meet the requirements expressly stated in the Industrial Emissions Directive (IED), the next step will be to ensure compliance with emission limits imposed under the decision establishing the BAT Conclusions for large combustion plants. The deadline for compliance is August 17th 2021 or, where an IED derogation applies to an installation, the end date of the relevant derogation period. An investment plan has been developed for the PGNiG TERMIKA to ensure that the emission and technology requirements defined in the BAT Conclusions are duly met. The process of obtaining amendments to integrated permits in connection with the adaptation to the BAT requirements is in the final stage. Also, the implementation of the BAT Conclusions is monitored on an ongoing basis and any doubts as to their interpretation are clarified.
Volume risk ●●● ●●○ →	The volume of sales of cogenerated heat and electricity depends on weather conditions in the heating period. Above-average air temperatures result in lower sales and consequently lead to lower financial results of the Generation segment. Due to the volume risk, production plans are adjusted to climate trends.

Regulatory risks

Table 60 Changes in and impact of material regulatory risks on the PGNiG Group

Risk	Description
Obligation to diversify gas imports ●○○ ●○○ →	The Council of Ministers' Regulation of April 24th 2017 on the minimum level of diversification of foreign sources of gas supplies prescribes the maximum share of gas imported from a single country in total gas imports in a given year. In 2017–2022, the share may not exceed 70%. In view of the solutions adopted in the Regulation, the regulatory risk of its breach is low, as is the probability of its materialisation.
European Green Deal ●●● ●●●	At the time of the issue of the Communication on the European Green Deal (EGD), a very ambitious climate agenda of the new European Commission (EC) was presented. In 2020, work continued at the EC on specific draft legislation implementing the EGD. The Communication explicitly states that the EC will seek to phase out financing of fossil fuel infrastructure and to reduce the use of fossil fuels in the long term, in line with the climate neutrality objective.
New EU legislative package for the natural gas market ●●○ ●●●	The EC is currently carrying out analyses to identify regulatory gaps for the natural gas sector. The potential new gas package is to consist of regulations on the operation of the natural gas market in the European Union, and rules designed to accelerate the decarbonisation of the EU's natural gas sector. In this respect, a proposal of regulations is expected which will probably provide for preferential treatment of decarbonised/renewable gases.

Non-compliance risk

Table 61 Changes in and impact of non-compliance risk on the PGNiG Group

Non-compliance risk ●○○ ●●○ →	PGNiG has an organisationally and functionally separated Compliance unit. In line with the compliance risk management model, each area at risk of non-compliance was assigned a dedicated compliance risk area manager (leader), who is in charge of ensuring that compliance standards are met. In 2020, the PGNiG Compliance Risk Management Procedure (the Compliance Programme) was adopted, which formalises the Company's compliance management model. Compliance risks (risks of breaching compliance standards) may arise in various areas and may materialise: • Immediately as fines, damages, compensation or other liabilities the Company may be required to pay, • as damage to the Company's image, which could also have its financial implications; • in the Company's operations • and as a factor affecting the value for stakeholders, including shareholders. As part of anti-corruption measures, the Company put in place the Anti-Corruption and Gift Policy of the PGNiG Group. In addition, the Ethics and Compliance Management System of the PGNiG Group was adopted, as a result of which the ethics and compliance areas were integrated in the Compliance Department. The Transparency Policy for Managers was introduced, with the principal objective of eliminating the risk of conflicts of interest and lack of transparency in decision-making processes within the Group. The Group also follows the PGNiG Group Code of Ethics, which is based on four values: quality, reliability, responsibility and partnership. The Procedure for Reporting Cases of Misconduct and Handling the Reports at PGNiG was also adopted, setting out the rules for reporting violations of laws, procedures and ethical standards by employees, as well as the procedure for handling such reports.

Financial risks

PGNiG and the PGNiG Group are exposed to financial risks, including in particular:

- Credit risk › For more information, see Note 7.3.1 to the consolidated financial statements of the PGNiG Group,
- Market risk › For more information, see Note 7.3.2 to the consolidated financial statements of the PGNiG Group,
- Liquidity risk › For more information, see Note 7.3.3 to the consolidated financial statements of the PGNiG Group.

7. PGNiG Group’s non-financial report

Pursuant to Art. 49b.9 of the Accounting Act of September 29th 1994, the Company announces that the PGNiG Group's non-financial report (“Non-Financial Report”) is published as a separate document forming an integral part of the 2020 consolidated annual report, and will be available at http://www.pgnig.pl.

The Non-Financial Report is prepared in accordance with Art. 49b and Art. 55 of the Accounting Act of September 29th 1994 (Dz. U. of 2019, item 351), which requires public-interest entities to disclose their non-financial data. The Report contains non-financial information on PGNiG and the PGNiG Group for the period January 1st – December 31st 2020, and covers all subsidiaries included in the consolidated financial statements of the PGNiG Group for 2020.

The information presented in the Non-Financial Report includes descriptions of the PGNiG Group's business model, business and CSR strategy, organisational culture management, as well as data on the PGNiG Group's impact, broken down into strategic, economic, environmental, social and ethical areas. The Non-financial Report presents, among other things, the importance of the PGNiG Group's activities for Poland’s economy and energy security, the Group’s R&D&I projects, engagement with local communities, sponsorship, charity and cultural initiatives, and activities aimed at fostering work ethics at the PGNiG Group.

8. Additional information on the PGNiG Group

8.1 Agreements executed by PGNiG Group companies

8.1.1 Agreements material to the operations of the PGNiG Group

Agreements material to the operations of the PGNiG Group executed in 2020 included:

- Regasification contract under the "LNG Terminal 2020 Open Season Procedure" (for more information, see Section 4.2.2.1),
- Annex to the Yamal contract between PGNiG and PAO Gazprom/OOO Gazprom Export (for more information, see Section 4.2.2.1),
- Contract with Ørsted Salg & Service A/S for the purchase of natural gas by PST (for more information, see Section 4.2.2.2),
- investment agreement on the rules governing cooperation in construction of gas-fired generation unit at the Ostrołęka C Power Plant (for more information, see Section 4.4.2),
- annex to Individual Contract for gas supplies to the PKN ORLEN Group (for more information, see Section 4.2.2.1).

8.1.2 Material related-party transactions

In 2020, PGNiG and its subsidiaries did not enter into any material transactions with related parties on other than arm's length terms. For detailed information on related-party transactions, see Note 8.4 to the consolidated financial statements of the PGNiG Group for 2020.

8.2 Litigation

Table 62 Litigation

Involved parties	Subject of the dispute	Description
Proceedings with respect to the obligation to sell natural gas through commodity exchange Parties to the proceedings: PGNiG, President of URE	failure to satisfy the exchange sale requirement in 2013 and 2014	On May 25th 2016, the President of URE resumed *ex officio* the proceedings to impose a fine on PGNIG S.A.. for its failure to meet the exchange sale requirement in 2013. On June 17th 2016, pursuant to Art. 56.6a of the Energy Law, the Company filed a motion that the President of URE refrain from imposing a penalty. As at the date of this Report, the proceedings were not concluded by the President of URE. On October 10th 2018, the Competition and Consumer Protection Court granted PGNIG S.A.'s appeal and reduced the administrative fine for failure to meet the exchange sale requirement in 2014 from PLN 15m to PLN 5m, and also cancelled the costs of first instance proceedings between the parties. On November 12th 2020, the Court of Appeals in Warsaw dismissed the Company's appeal. The ruling is final. The Company is awaiting service of the judgment with the statement of reasons and is considering taking further legal steps.
Anti-trust proceedings instigated on December 28th 2010 Parties to the proceedings: PGNiG, President of UOKiK	alleged abuse by PGNiG of its dominant position on the domestic natural gas wholesale market, which consisted in inhibiting trade in natural gas against the interests of trading partners or consumers and in impeding the development of market conditions necessary for the emergence or development of competition by refusing to sell gas fuel under a comprehensive supply contract to a business entity that intended to resell the gas	On June 8th 2017, the Court of Appeals in Warsaw reversed the ruling of the Competition and Consumer Protection Court of May 12th 2014 and remanded the case for re-examination by that court. On October 10th 2019, the Competition and Consumer Protection Court again upheld the decision of the President of UOKiK and again imposed a fine on the Company, changing its amount to PLN 5,508,000. The Company filed an appeal with the Court of Appeals on November 28th 2019.

Anti-trust proceedings instigated on April 3rd 2013 Parties to the proceedings: PGNiG, President of UOKiK	PGNiG's abuse of its dominant position on the domestic wholesale and retail gas fuel market, consisting in preventing the development of the conditions necessary for creation or growth of competition by: limiting business customers' ability to reduce contracted volumes of gas fuel and contractual capacity, limiting business customers' ability to resell gas fuel, requiring business customers to specify in the contract the maximum volume of gas fuel purchased by them for further resale, failure to grant wholesale customers the right to partially change sellers.	On September 20th 2018, PGNiG filed a cassation appeal. In a letter dated October 10th 2018, the President of UOKiK replied to the cassation appeal. On January 22nd 2020, the Supreme Court dismissed the Company's cassation appeal relating to the imposition of a fine of PLN 10.4m and the costs of proceedings awarded to the President of UOKiK in the amount of PLN 360.
NS2 AG derogation proceedings Parties to the proceedings: PGNiG, PST, NS2 AG, BNetzA, Higher Regional Court in Düsseldorf	Motion	On January 10th 2020, Nord Stream 2 AG applied to the German regulator BNetzA for derogation (exemption) from the provisions of the Gas Directive (2009/73/EC), as amended in 2019. The German company invoked Article 49a of the Directive despite failing to meet one of the conditions under the law regarding the need for the pipeline to be completed on May 23rd 2019 (the date of entry into force of the amendment). PGNiG S.A. and PST applied on February 19th 2020 to accede to the proceedings. On March 18th 2020, the German regulator granted the request. On May 15th 2020, the German regulator announced that it had rejected Nord Stream 2 AG's application. Consistent with the position presented by PGNiG S.A. and PST, BNetzA concluded that the pipeline was not completed on May 23rd 2019. On June 15th 2020, Nord Stream 2 AG appealed the decision of the BNetzA to the Higher Regional Court in Düsseldorf and subsequently filed a statement of reasons for the appeal on September 14th 2020. On July 30th 2020, PGNiG S.A. and PST filed a letter of accession to the case as active participants, and on January 14th 2021 they filed a pleading stating their position on the case.

Proceedings concerning the OPAL pipeline Parties to the proceedings: PGNiG, General Court of the European Union PST, General Court of the European Union	inadmissibility of complaint; award of injunctive relief (administration of injunctive relief)	The complaint and the request for injunctive relief have been filed with the General Court of the European Union against the European Commission's decision of October 28th 2016 whereby the Commission allowed a revision to the exemption of the OPAL pipeline from the common gas market regulations (especially with respect to the Third Party Access (TPA) principle), in accordance with the text of the administrative decision issued by the German regulator – Federal Network Agency (Bundesnetzagentur), subject to modifications referred to in the Commission's decision. On December 4th 2019, the Court of Justice of the European Union dismissed the appeals lodged by PST and PGNiG, upholding the decision of the General Court of the EU and referring only to formal issues and not to the substantive analysis of the case. On December 4th 2019, the Court of Justice of the European Union also dismissed the appeal lodged by the Republic of Poland in the PST case, indicating that the decision of the General Court of the EU is irrelevant to the case initiated based on the Republic of Poland's complaint under Case No. T-883/16. The complaint and the request for injunctive relief filed with the Higher Regional Court of Düsseldorf (Oberlandesgericht Düsseldorf) are primarily against the administrative settlement between the German regulator, OPAL Gastransport GmbH & Co. KG, OAO Gazprom and OOO Gazprom Export, specifying the revised conditions for exemption of the OPAL pipeline from the common gas market regulations (in particular the TPA principle). On January 9th 2019, the German Federal Network Agency (*Bundesnetzagentur*) resumed proceedings concerning a previous decision issued in 2009 on the terms of the regulatory exemption of the Opal gas pipeline, and at the same time it suspended the proceedings. On January 28th 2019, PGNiG and PST filed a request to join in the proceedings. In its reply of February 25th 2019, the German regulatory authority stated that the request would be examined after the pending court proceedings had been closed. On September 13th 2019, the Federal Network Agency (*Bundesnetzagentur*) obliged the transmission system operator Opal Gastransport GmbH's to reduce gas flows in the Opal pipeline, thus responding to the judgment of the General Court of the EU of September 10th 2019 in Case No. T-883/16 initiated by the complaint of the Republic of Poland, declaring invalidity of the European Commission's decision of October 28th 2016 on the rules for using the Opal pipeline. An appeal against the judgment was brought by the German government and the case is currently pending before the Court of Justice.

8.3 Detailed description of the PGNiG Group's structure and its changes

As at December 31st 2020, the PGNiG Group comprised 37 business entities, including:

- PGNiG as the parent,
- 34 production, trade and service subsidiaries and 2 mutual insurance companies, including:
  - 18 direct subsidiaries of PGNiG,
  - 18 indirect subsidiaries of PGNiG.

The parent

Name	Polskie Górnictwo Naftowe i Gazownictwo Spółka Akcyjna
Registered office	ul. Marcina Kasprzaka 25, 01-224 Warsaw, Poland
Court of registration	District Court for the Capital City of Warsaw, 16th Commercial Division (currently the Company is entered in the Business Register maintained by the District Court for the Capital City of Warsaw, 13th Commercial Division of the National Court Register)
NATIONAL COURT REGISTER (KRS) NO.	0000059492
Website	www.pgnig.pl
Investor Relations	ri@pgnig.pl

8.3.1

8.3.2 Detailed structure of the PGNiG Group

Table 63 List of the PGNiG Group subsidiaries as at December 31st 2020

No.	Company name	Share capital [in PLN, unless stated otherwise]	Value of shares held by PGNiG [in PLN, unless stated otherwise]	PGNiG's ownership interest (%, direct holdings)	PGNiG Group's ownership interest (%, direct and indirect holdings)
	Subsidiaries – first tier				
1	PGNiG GAZOPROJEKT S.A.	4,000,000	3,749,000	93.73%	93.73%
2	EXALO Drilling S.A.	981,500,000	981,500,000	100%	100%
3	GEOFIZYKA Toruń S.A.	75,240,000	75,240,000	100%	100%
4	Geovita S.A.	113,407,782	113,407,782	100%	100%
5	Gas Storage Poland Sp. z o.o.	15,290,000	15,290,000	100%	100%
6	PGNiG Obrót Detaliczny Sp. z o.o.	625,307,815	625,307,815	100%	100%
7	PGNiG Serwis Sp. z o.o.	9,995,000	9,995,000	100%	100%
8	PGNiG Technologie S.A.	272,727,240	272,227,240	100%	100%
9	PGNiG TERMIKA S.A.	1,740,324,950	1,740,324,950	100%	100%
10	Polska Spółka Gazownictwa Sp. z o.o.	10,488,917,050	10,488,917,050	100%	100%
11	PGNiG Supply & Trading GmbH	10,000,000 EUR	10,000,000 EUR	100%	100%
12	PGNiG Upstream Norway AS	1,100,000,000 NOK	1,100,000,000 NOK	100%	100%
13	PGNiG Upstream North Africa B.V.	20,000 EUR	20,000 EUR	100%	100%
14	GAS-TRADING S.A.	2,975,000	1,291,350	43.41%	79.58%[2)]
15	PGNiG Ventures Sp. z o.o.	1,240,000	1,240,000	100%	100%
16	PGNiG SPV 6 Sp. z o.o.	51,381,000	51,381,000	100%	100%
17	PGNiG SPV 7 Sp. z o.o.	250,000	250,000	100%	100%
18	Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych	40,000,000	40,000,000	100%	100%
	Subsidiaries – second tier				
19	PGNiG TERMIKA Energetyka Przemysłowa S.A.	370,836,300	370,836,300	-	100%[9)]
20	GAZ Sp. z o.o.	300,000	300,000	-	100%[3)]
21	PSG Inwestycje Sp. z o.o.	81,131,000	81,131,000	-	100%[3)]
22	Oil Tech International F.Z.E.	20,000 USD	20,000 USD	-	100%[4)]
23	EXALO DRILLING UKRAINE LLC	20,000 EUR	20,000 EUR	-	100%[4)]
24	PST Europe Sales GmbH	1,000,000 EUR	1,000,000 EUR	-	100%[5)]
25	Ośrodek Badawczo-Rozwojowy Górnictwa Surowców Chemicznych CHEMKOP Sp. z o.o.	3,000,000	2,565,350	-	85.51%[6)]
26	CIFL Sp. z o.o. w likwidacji (in liquidation)	1,360,000	1,360,000	-	100%[7)]
27	Gas-Trading Podkarpacie Sp. z o.o.	6,670,627	5,257,524	-	78.82%[8)]
28	PGNiG Serwis Doradztwo Ubezpieczeniowe Sp. z o.o.	5,000	5,000		100%[1)]
29	PGNiG TERMIKA Energetyka Rozproszona Sp. z o.o.	13,550,000	13,550,000		100%[9)]
30	PGNiG TERMIKA Energetyka Przemyśl sp. z o.o.	5,000	5,000	-	100%[9)]
31	Zakład Gospodarki Mieszkaniowej Sp. z o.o.	1,806,500	1,806,500	-	100%[4)]
32	Exalo Diament Sp. z o.o. w organizacji (in the process of formation)	5,000	5,000	-	100%[4)]
33	Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych na Życie	25,000,000	25,000,000	100%	100%[12)]
	Subsidiaries – third tier				
34	XOOL GmbH	500,000 EUR	500,000 EUR	-	100%[10)]
35	SEJ-Serwis Sp. z o.o.	200,000	200,000	-	100%[11)]
36	PST Verwaltungs GmbH	25,000 EUR	25,000 EUR	-	100%

1) PGNiG's interest held indirectly through PGNiG Serwis Sp. z o.o.
2) PGNiG's direct interest is 43.41%, with a 36.17% interest held indirectly through PGNiG SPV 6 Sp. z o.o.
3) PGNiG's interest held indirectly through Polska Spółka Gazownictwa Sp. z o.o.
4) PGNiG's interest held indirectly through Exalo Drilling S.A.
5) PGNiG's interest held indirectly through PGNiG Supply & Trading GmbH.
6) PGNiG's interest held indirectly through Gas Storage Poland Sp. z o.o.
7) PGNiG's indirect interest is 100%: 99.98% is held through PGNiG SPV 6 Sp. z o.o. and 0.02% through PGNiG Ventures Sp. z o.o.
8) PGNiG's interest held indirectly through GAS TRADING S.A.
9) PGNiG's interest held indirectly through PGNiG TERMIKA S.A.
10) PGNiG's interest held indirectly through PGNiG Supply & Trading GmbH and PST Europe Sales GmbH
11) PGNiG's interest held indirectly through PGNiG TERMIKA S.A. and PGNiG TERMIKA Energetyka Przemysłowa S.A.
12) PGNIG's interest held indirectly through Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych

8.3.3 Other ownership interests and organisational links

Table 64 List of the PGNiG Group jointly controlled entities and associates as at December 31st 2020

No.	Company name	Share capital [in PLN, unless stated otherwise]	Value of shares held by PGNiG [in PLN, unless stated otherwise]	PGNiG's ownership interest (%, direct holdings)	PGNiG Group's ownership interest (%, direct and indirect holdings)
	Jointly controlled entities and associates – first tier				
1	SGT EUROPOL GAZ S.A.	80,000,000	38,400,000	48.00%	51.18%[1)]
2	PFK GASKON S.A.	13,061,325	6,000,000	45.94%	45.94%
3	ZWUG INTERGAZ Sp. z o.o.	4,700,000	1,800,000	38.30%	38.30%
4	Dewon ZSA	11,146,800 UAH	4,055,205.84 UAH	36.38%	36.38%
	Jointly controlled entities and associates – second tier				
5	Zakład Separacji Popiołów Siekierki Sp. z o.o.	10,000,000	7,000,000	-	70%[2)]
6	Elektrociepłownia Stalowa Wola S.A.	28,200,000	14,100,000	-	50%[2)]
7	Polska Grupa Górnicza S.A.	3,916,718,200	800,000,000	-	20.43%[2)]
8	Polimex-Mostostal S.A.	473,237,604	78,000,048	-	16.48%[3)]
	Jointly controlled entities and associates– third and fourth tier				
9	Śląskie Centrum Usług Wspólnych Sp. z o.o.	10,835,000	2,213,591	-	20.43%[4)]
10	Gardia Broker Sp. z o.o.	55,000	11,237	-	20.43%[5)]

1) PGNiG's direct interest is 48.00%, with an indirect 3.18% interest held through GAS-TRADING S.A.
2) PGNiG S.A.'s interest held indirectly through PGNiG TERMIKA S.A.
3) PGNiG S.A.'s interest held indirectly through PGNiG Technologie S.A.
4) PGNiG S.A.'s interest held indirectly through PGNiG TERMIKA S.A. and Polska Grupa Górnicza S.A.
5) PGNiG S.A.'s interest held indirectly through PGNiG TERMIKA S.A., Polska Grupa Górnicza S.A. and Śląskie Centrum Usług Wspólnych Sp. z o.o.

Equity investments outside the group of related entities

In 2020, the PGNiG Group made no material equity investments outside the group of related entities. As at the end of 2020, the total par value of PGNiG's equity interests held outside the group of related entities was PLN 85.7m. At year-end 2020, the total par value of the PGNiG Group's (PGNiG's and the PGNiG Group companies') equity interests held outside the group of related entities was PLN 115.8m.

The increase in PGNiG's equity exposure outside the group of related parties relative to the end of 2019 is a result of the court declaring bankruptcy of GEOFIZYKA Kraków S.A. in liquidation on March 12th 2020, and subsequent reclassification of GEOFIZYKA Kraków S.A. in liquidation in bankruptcy as a non-related party. As at December 31st 2020, PGNiG's equity interest in GEOFIZYKA Kraków S.A. in liquidation in bankruptcy was PLN 64.4m.

8.3.4 Changes in the PGNiG Group structure

Table 65 Changes in the PGNiG Group shareholding structure in 2020

Type of change/transaction	Date	% Voting interest after the change/transaction
Share capital increase		
Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych na Życie	July 16th 2020	100%
PGNiG Ventures sp. z o.o.	November 4th 2020	100%
Change of company name		
from Górnośląska Spółka Brokerska Sp. z o.o. to Gardia Broker Sp. z o.o.	May 22nd 2020	20.43%
Company formation		
PGNiG TERMIKA Energetyka Przemyśl sp. z o.o.	December 4th 2020	100%
Exalo Diament Sp. z o.o.	December 22nd 2020	100%
Other changes		
Liquidation bankruptcy of GEOFIZYKA Kraków S.A. w likwidacji	March 12th 2020	0%
Free-of-charge acquisition of 100% shares in PST Verwaltungs GmbH by PST Europe Sales GmbH	September 17th 2020	100%

8.4 PGNiG treasury shares and shares in PGNiG Group companies held by members of the management and supervisory bodies

Table 66 PGNiG shares held by members of the management and supervisory bodies as at December 31st 2020

Full name	Position	Number of shares/voting rights as at December 31st 2019	Par value of shares (PLN)	Number of shares/voting rights as at December 31st 2020	Par value of shares (PLN)
Mieczysław Kawecki	Member of the Supervisory Board	9,500	9,500	9,500	9,500
Stanisław Sieradzki	Member of the Supervisory Board	17,225	17,225	17,225	17,225

As at the date of this Report, PGNiG was not aware of any agreements which could lead to future material changes in the equity interests held in the Company by its existing shareholders. In 2020, the Company did not acquire any of its own shares.

8.5 Employee share option plans control system

On June 26th 2008, the disposal by the Minister of State Treasury of one PGNiG share in accordance with general trading rules triggered the eligible employees' rights to acquire a total of up to 750,000,000 PGNiG shares free of charge. First share transfer agreements were executed on April 6th 2009 and the eligible employees' rights to acquire PGNiG shares free of charge expired on October 1st 2010. As at December 31st 2020, nearly 60 thousand eligible employees acquired 728,294 thousand shares. The

Company shares acquired by eligible employees free of charge were subject to a lock-up until July 1st 2010, while trading in shares acquired free of charge by members of the Company's Management Board was restricted until July 1st 2011.

By December 31st 2020, 728,293,842 PGNiG shares, representing 12.60% of the share capital and total voting rights in the Company, had been distributed among 59,256 of the 61,516 eligible employees.

8.6 Events subsequent to the reporting date

January 2021
January 8th – Registration of merger between PST Verwaltungs GmbH and PST Europe Sales GmbH
January 13th – Approval by the President of URE of 3.6% increase in average rates in PSG's distribution tariff
January 29th – Expiry of exclusive negotiation period for acquisition of TAURON Ciepło Sp. z o.o.
February 2021
February 10th – PGNiG's withdrawal from participation in acquisition of CEZ's Polish assets
February 17th – Resignation of Jarosław Wróbel as member of the PGNiG Management Board effective as of close of business on March 1st 2021
February 19th – Deletion of CIFL sp. z o.o. w likwidacji (in liquidation) from the Register of Businesses
March 2021
March 2nd – Registration of PGNiG TERMIKA Energetyka Przemyśl Sp. z o.o. in the National Court Register
March 2nd – Appointment of Artur Cieślik as Vice President of the PGNiG Management Board

Definitions

Abbreviations and acronyms	Meaning
Proper names of companies and branches	
PGNiG, the Company, the Issuer	PGNiG S.A. as the parent of the group of companies
PGNiG Group	The PGNiG Group consisting of PGNiG S.A. as the parent and the subsidiaries
CLPB	PGNiG Central Measurement and Testing Laboratory Branch
Stalowa Wola CHP plant	Elektrociepłownia Stalowa Wola S.A.
EXALO	EXALO Drilling S.A.
Gazoprojekt	PGNiG GAZOPROJEKT S.A.
Geofizyka Kraków	GEOFIZYKA Kraków Sp. z o.o. w likwidacji (in liquidation)
Geofizyka Toruń	GEOFIZYKA Toruń Sp. z o.o.
GEOVITA	GEOVITA S.A.
GSP	Gas Storage Poland Sp. z o.o.
OGiE	Geology and Hydrocarbon Production Branch of PGNiG
OOH	Wholesale Trading Branch of PGNiG
PGG	Polska Grupa Górnicza S.A.
PGNiG OD	PGNiG Obrót Detaliczny Sp. z o.o.
PGNiG Serwis	PGNiG Serwis Sp. z o.o.
PGNiG Technologie	PGNiG Technologie Sp. z o.o.
PGNiG TERMIKA	PGNiG TERMIKA S.A.
PGNiG TERMIKA EP	PGNiG TERMIKA Energetyka Przemysłowa S.A.
PGNiG UN	PGNiG Upstream Norway AS
PGNiG UNA	PGNiG UPSTREAM NORTH AFRICA B.V.
PGNIG Ventures	PGNiG Ventures Sp. z o.o.
Polski Gaz TUW	Polski Gaz Towarzystwo Ubezpieczeń Wzajemnych
PSG	Polska Spółka Gazownictwa Sp. z o.o.
PST	PGNiG Supply & Trading GmbH
PST ES	PST Europe Sales GmbH
Names of institutions, capital market entities and energy markets	
EIA	Energy Information Administration (US)
EEX	European Energy Exchange AG (Germany)
Henry Hub	Hub /price area in the United States
GASPOOL	GASPOOL Balancing Services GmbH – hub/price area in Germany
GAZ-SYSTEM	Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.
WSE	Warsaw Stock Exchange (Giełda Papierów Wartościowych w Warszawie S.A.)
ICE	Intercontinental Exchange – energy and commodity exchange
KRS	National Court Register
NCG	NetConnect Germany GmbH & Co. KG – hub/price area in Germany
NBP	National Balancing Point – hub/price area in the UK
OPEC	Organization of the Petroleum Exporting Countries
LNG terminal	the President Lech Kaczyński LNG Terminal in Świnoujście
POLPX	Polish Power Exchange (Towarowa Giełda Energii S.A.)
TTF	Title Transfer Facility – hub/price area in the Netherlands
URE	Polish Energy Regulatory Office

Units of measure	
bbl	1 barrel of crude oil
boe	barrel of oil equivalent;
km	linear kilometre
LNG	liquefied natural gas
Nm^3	normal cubic meter of gas
MWt	1 megawatt thermal
MWe	1 megawatt electrical
NGL	natural gas liquids - gas composed of molecules heavier than methane: ethane, propane, butane, isobutane, etc.
PJ	1 petajoule
TWh	1 terawatt hour
Economic and financial metrics	
EBIT	earnings before interest and taxes
EBITDA	earnings before interest, taxes, depreciation and amortisation
Adjusted EBITDA	EBITDA adjusted for impairment losses on non-current assets
EV	enterprise value
P/BV	price/book value
P/E	price/earnings
ROA	return on assets
ROE	return on equity
Net margin	net profit to revenue
Other	
HP	heat plant
CHPP	CHP plant
FPSO	Floating Production, Storage and Offloading
SFG	Storage Facilities Group
SF	storage facilities
KGZ	gas production facilities
CGSF	cavern gas storage facility
KRNiGZ	Oil and gas production facilities
EGM	Extraordinary General Meeting (of a joint stock company)
EGM	Extraordinary General Meeting (of a limited liability company)
UGSF	underground gas storage facility
WZ	General Meeting of Shareholders (of a joint stock company)
ZW	General Meeting of Shareholders (of a limited liability company)
Currencies used	
złoty, PLN	amounts expressed in the Polish zloty
euro, EUR	amounts expressed in the euro
US dollar, USD	amounts expressed in the US dollar
NOK	amounts expressed in the Norwegian crown
SEK	amounts expressed in the Swedish crown
UAH	amounts expressed in the Ukrainian hryvnia

Converters

Converters	1 bcm of natural gas	1m tonnes of crude oil	1m tonnes of LNG	1 PJ	1 mboe	1 TWh
1 bcm of natural gas	1	0.90	0.73	38	6.45	10.972
1m tonnes of crude oil	1.113	1	0.81	42.7	7.5 - 7.8*	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
1 mboe	0.16	0.128 - 0,133*	0.12	6.04	1	1.70
1 TWh	0.091	0.086	0.07	3.6	0.59	1

** The converter is different for crude oil produced in Poland and Norway.*

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9. Representation of the PGNiG Management Board and authorisation of the report

The Management Board of PGNiG represents that to the best of its knowledge this Directors' Report on the operations of PGNiG S.A. and the PGNiG Group gives a fair view of the Company's and the Group's condition and includes a description of key threats and risks.

PGNiG S.A. Management Board:

President of the Management Board	Paweł Majewski
Vice President of the Management Board	Artur Cieślik
Vice President of the Management Board	Robert Perkowski
Vice President of the Management Board	Arkadiusz Sekściński
Vice President of the Management Board	Przemysław Wacławski
Vice President of the Management Board	Magdalena Zegarska

Warsaw, March 23rd 2021

Translation

This document is an English version of the original Polish version. In case of any discrepancies between the Polish and English version, the Polish version shall prevail.