



EXPLORATION AND PRODUCTION

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In the Exploration and Production segment, the PGNiG Group conducts geophysical and geological research, exploration of reserves and production of natural gas and crude oil from the reserves, direct sales of natural gas and purchase of licences domestically and abroad.

Exploration Work and Geophysical Prospecting

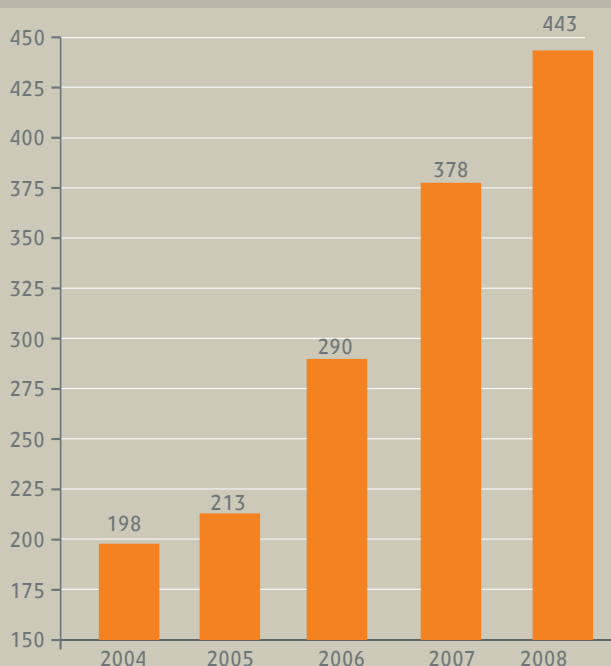
The PGNiG Group conducts exploration and prospecting work domestically and abroad. Its work in that area involves mainly exploration of geological structures for hydrocarbon reserves in the form of natural gas and crude oil. The exploration and prospecting of reserves comprise a study of historical data, geological analyses, as well as geophysical and drilling research. The work is conducted by PGNiG SA, as well as three exploration and drilling companies (PGNiG Kraków sp. z o.o., PNiG Jasło sp. z o.o. and PNiG NAFTA sp. z o.o.), two geophysical companies providing services in the area of field seismics, processing and interpretation of seismic data and geophysical measurements (Geofizyka Kraków sp. z o.o. and Geofizyka Toruń sp. z o.o.), and two service companies providing specialist service necessary for the execution of exploration and production tasks as well as for the purposes of hole mining (Poszukiwania Naftowe Diament sp. z o.o. and Zakład Robót Górniczych Krosno sp. z o.o.). All these companies are members of the PGNiG Group.

PGNiG SA conducts exploration and production work in Poland within the established areas of the Company's operations and areas covered by new licences. The largest number of licences are located in the Małopolska (Carpathian) and Wielkopolska Oil Provinces. Work is conducted in the three regions: the Carpathians, Carpathian Foreland and Polish Lowlands.

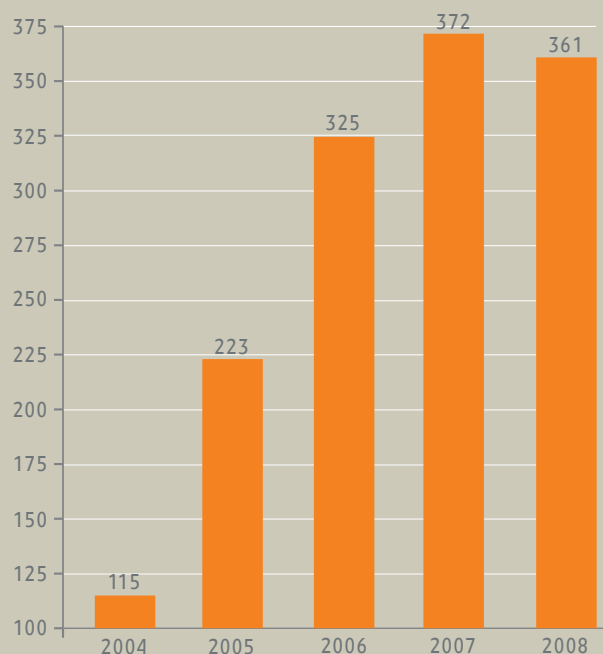
In 2008, a total of 65.347 km of drillings were made in Poland. The drilling work covered 35 boreholes, including 24 exploratory boreholes and 11 prospecting boreholes. At six of the boreholes, drilling commenced in 2007. Until the end of 2008, drillings were completed at 27 boreholes, including 18 exploratory boreholes and nine prospecting boreholes). From among 29 boreholes with known deposit-related results (including two where drilling was completed in 2007), 11 (ten gas boreholes and one crude oil borehole) were classified as positive, while 17 other boreholes were classified as negative, with the one remaining gas borehole classified as positive. Gas boreholes are located in the Carpathian Foreland and Polish Lowlands, while the oil borehole in the Polish Lowlands. Furthermore, a total of 1.54 ths. km of 2D seismic surveys and 603 km² of 3D seismic surveys were performed within these areas.

Currently, the Group is also involved in various exploration and geophysical projects outside of Poland. In the Kirthar Block in Pakistan, exploration work is conducted jointly with Pakistan Petroleum Ltd. (the Group holds a 70% working interest in the licence, while the Pakistani company holds the remaining 30%). In 2008, seismic data was analysed (161.7 km of 2D seismic shot), based on which it was decided that an exploration well in the southern part of the block would be drilled. The project is scheduled to commence in H1 2009. In Libya, Block 113 was prepared for work. The block, with the area of 5,494 km², lies at the border between the Murzuq and Gadamesh basins, close to the state border with Algeria. In Denmark, under Licence 1/05, in which PGNiG SA holds a 40% interest, the execution of the exploration programme commenced. PGNiG SA also awaits the approval of the Production Sharing Agreement, under which work will be conducted in the Bahariya block with the area of 4,414.4 km², located in the Western Desert in Egypt.

PGNiG GROUP'S REVENUE FROM EXPLORATION SERVICES IN 2004-2008 [PLN M]



PGNiG GROUP'S REVENUE FROM GEOPHYSICAL AND GEOLOGICAL SERVICES IN 2004-2008 [PLN M]



The exploration companies have also undertaken steps designed to acquire new exploration and licence areas. PGNiG SA conducted talks relating to a buy-back contract for the operation of the Lavan field and acquisition of partial interests in exploration licences in Tunisia and Morocco.

Production

Production of natural gas and crude oil in Poland is carried out by two of PGNiG SA's branches, the Zielona Góra Branch and the Sanok Branch. In 2008, the companies of the PGNiG Group produced a total of 31.2m boe of hydrocarbons, of which 88% was natural gas and 12% – crude oil. This translates into a total of 4.1 bcm of natural gas (27.6m boe) and 498 ths. tonnes of crude oil and condensate (3.6m boe).

The Zielona Góra Branch produces crude oil and nitrogen-rich natural gas at 20 mines (including 12 gas mines, and 8 oil and

gas mines), while the Sanok Branch produces high-methane natural gas, nitrogen-rich natural gas and crude oil at 46 mines (including 26 gas mines, and 20 oil mines and oil and gas mines). In 2008, PGNiG SA produced a total of 4.1 bcm of natural gas (with 2.3 bcm produced by the Zielona Góra Branch and the balance by the Sanok Branch).

Part of the nitrogen-rich gas produced from the mines in the western Poland is processed in the Odolanów nitrogen removal facility. This is where low-methane natural gas is treated using a technology based on cryogenic processes. By removing nitrogen, high-methane gas (0.88 bcm in 2008), gaseous and liquid helium, liquid nitrogen, as well as (since 2002) LNG are produced.

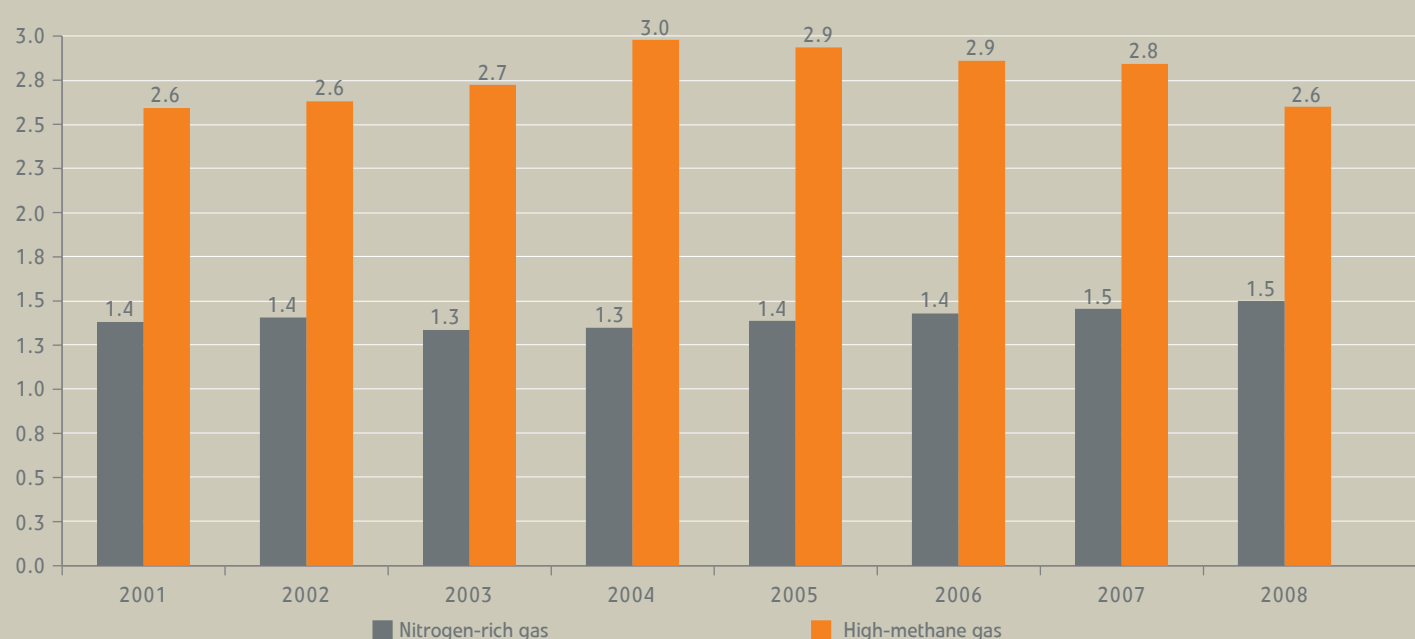
Crude oil is produced mainly by the Zielona Góra Branch at three Mine Centres: Gorzów Wielkopolski, Karlino and Grodzisk Wielkopolski. This branch produces from the largest reserve, the Barnówko-Mostno-Buszewo reserve (BMB), near Gorzów Wielkopolski, and the

PRODUCTION OF OTHER PRODUCTS IN 2005–2008

Product	Unit	2005	2006	2007	2008
Sulphur	ths. tonnes	21.2	20.7	23.3	21.3
Propane-butane (LPG)	ths. tonnes	16.0	17.1	18.2	17.4
Helium	mcm	2.7	2.4	2.3	2.2
LNG	mcm*	17.6	19.9	21.7	20.1

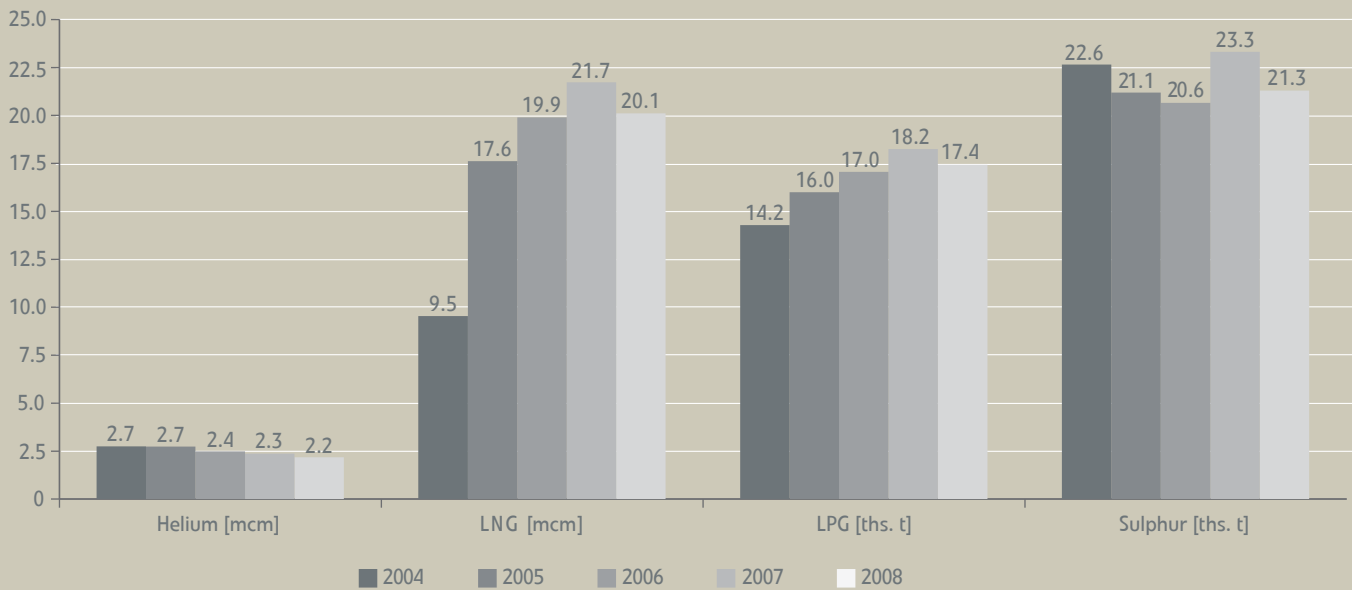
* As equivalent of high-methane natural gas in normal conditions.

PRODUCTION OF HIGH-METHANE AND NITROGEN-RICH GAS IN 2001–2008 [BCM]*



* Including the production of the Odolanów Nitrogen Removal Facility.

PRODUCTION VOLUME OF HELIUM, LNG*, LPG AND SULPHUR IN 2004–2008

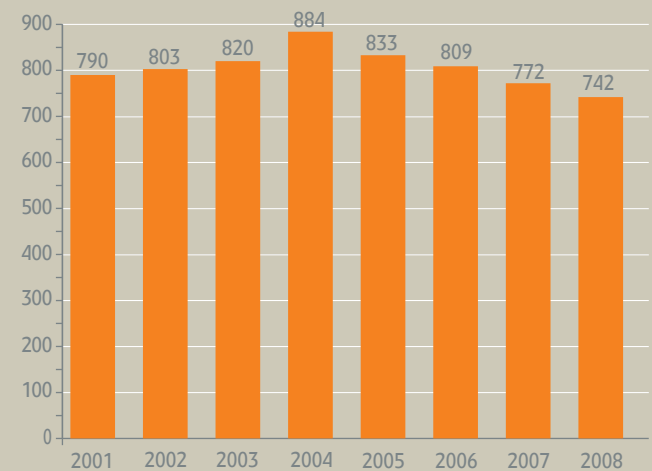


* As equivalent of high-methane natural gas in normal conditions.

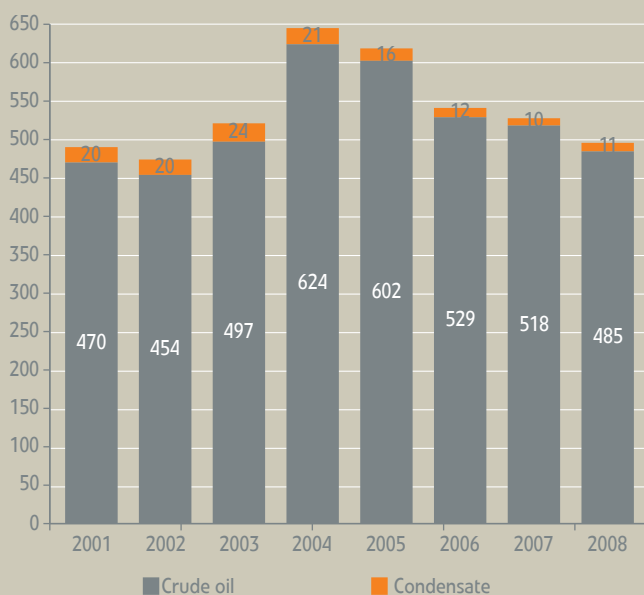
smaller ones including Górzycza, Buk or Lubiszyn. The total oil and condensate output in 2008 was 498 ths. tonnes, of which 452 ths. tonnes were attributable to the Zielona Góra Branch (including 376 ths. tonnes from the BMB reserve), and 46 ths. tonnes to the Sanok Branch. Compared with 2007, oil and condensate production dropped by 6%, from 528 ths. tonnes.

PGNiG SA plans to increase its oil output by developing and starting production from the Lubiatów-Międzychód-Grotów reserves (LMG) in 2013. The Company is also carrying on other projects designed to acquire new producing reserves.

RESERVES OF NATURAL GAS AND CRUDE OIL IN 2001–2008 [MBOE]



PRODUCTION OF CRUDE OIL AND CONDENSATE IN 2001–2008 [THS. TONNES]



Reserves

As at the end of 2008, the documented reserves of natural gas amounted to 93.3 bcm (high-methane equivalent), while the reserves of crude oil were estimated at 21.2m tonnes. The total reserves, expressed as barrel of oil equivalent, were 742m at the end of 2008. The size of the reserves was favourably assessed by the Mineral Reserves Commission and approved by the Minister of Environment. In 2008, the reserves fell by 2% year on year, driving down the reserve/production ratio from 25.8 in 2007 to 25.2. This means that with the current level of crude oil and natural gas production (excluding newly discovered resources), the reserves will be sufficient for 25 years of production.

In 2009, the Company plans to document the increases in producing reserves (over the respective figures as at December 31st 2008) totalling 9.2 bcm of natural gas (high-methane gas equivalent) and 230 ths. tonnes of crude oil.

Non-Regulated Sales of Crude Oil and Natural Gas

The sales of natural gas directly from deposits, through a dedicated pipeline, and the sales of crude oil are performed by the Exploration and Production segment and are not subject to regulation by the URE. Crude oil is sold to:

- foreign customers, to whom it is delivered via pipelines under renewable annual contracts (43% of total sales);
- customers in Poland, to whom it is delivered by road tankers and railway tank cars (57% of total sales).

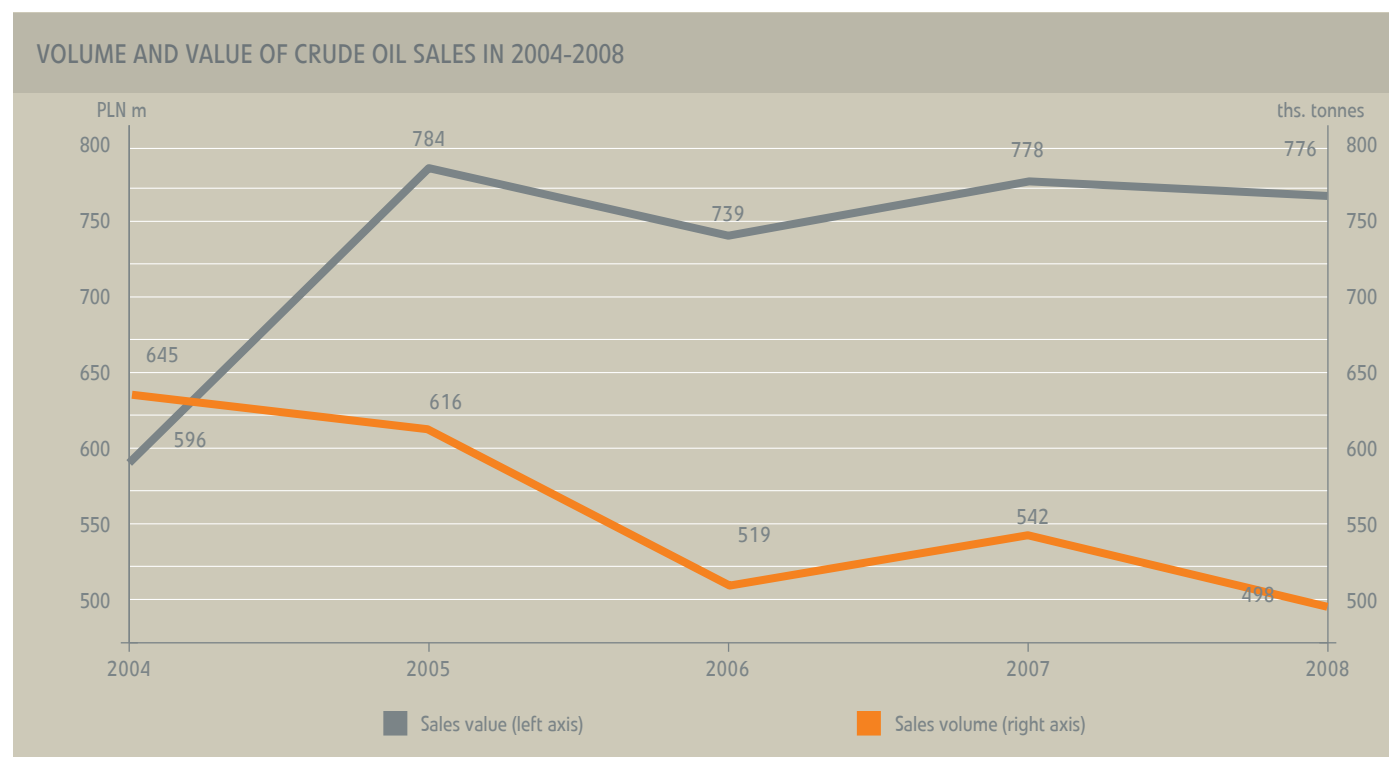
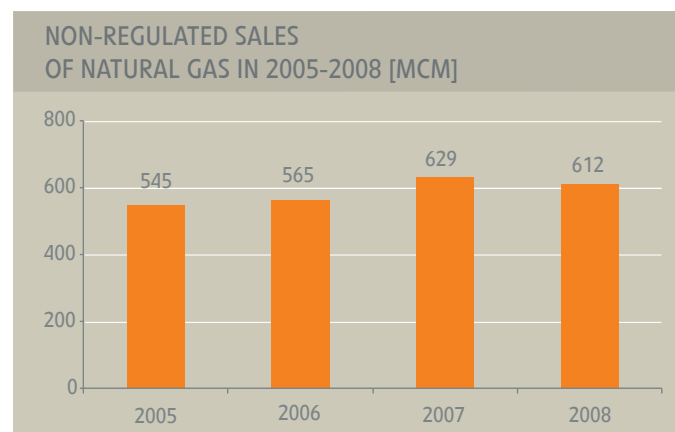
The pipeline oil sales (via the Druzhba pipeline) are made to major PGNiG SA customers, namely Total Oil Trading SA, BP Oil International Ltd. and ESKO. Most of the oil sold domestically is delivered to the ORLEN Group (the refineries in Jedlicze and Trzebinia). The rest is sold to local and direct customers of the production branches. In 2008, PGNiG SA revenue from sales of crude oil and condensate was similar to that recorded in 2007 and amounted to PLN 779m. In 2008, PGNiG SA sold a total of 489 ths. tonnes of crude oil and condensate, that is by 8% less than in 2007.

Non-regulated sales of gas are made by way of direct deliveries from PGNiG SA deposits (rather than via the transmission system). Sales transactions are executed on free-market terms, and the terms of delivery (including the gas price) are each time individually agreed upon with the customers and vary on a case-by-case basis.

In 2008, PGNiG SA sold directly from its deposits 612 mcm of gas, i.e. 3% less than in 2007. Direct sales represented 4% of total natural gas sales. Both high-methane and nitrogen-rich gas is sold this way, with 47.3 mcm and 564 mcm, respectively, sold in 2008.

PGNiG SA's main customers purchasing natural gas were industrial enterprises, such as the Zielona Góra or Gorzów Wielkopolski CHP plants, Zakłady Azotowe (nitrogen plant) in Tarnów-Mościce, or Arctic Paper Kostrzyń. Their share in the volume of direct sales amounted to 85.9%. Direct sales are made mainly to customers who are located close to the mines and do not have access to the transmission or distribution system. Direct sales enable PGNiG SA to economically use deposits of gas which does not meet the quality standards of gas sold via networks and to attract customers who otherwise could not be served for technical or economic reasons.

Besides the non-regulated sales of natural gas and crude oil, PGNiG SA sells other products, namely helium, LNG and LPG.



Sales of Other Products in 2005–2008

Product	Unit	2005	2006	2007	2008
Sulphur	ths. tonnes	21.2	20.0	23.4	20.3
Propane-butane (LPG)	ths. tonnes	16.0	16.9	18.4	17.4
Helium	mcm	2.7	2.4	2.4	2.2
LNG	mcm	17.6	19.9	21.2	19.8

* Sale of LNG is based on weight units (tonnes or kg) but the register is made in cu. metres.

Investment Projects – Development of Reserves

The Group is implementing an investment programme designed to increase natural gas production capacities in a long term. The programme provides for the development of new fields and boreholes, modernisation and extension of the existing gas mines, construction of new and extension of the existing underground gas storage facilities. The Group will also carry out work aimed at maintaining the current levels of hydrocarbon production from the operated fields.

Development of Documented Reserves

In order to increase production, PGNiG SA plans to develop and exploit further documented natural gas fields, including Wielichowo-Ruchocice, Roszków and Międzychód (nitrogen-rich gas fields in western Poland), as well as Łukowa, Jasionka (II Phase), Kupno, Pilzno (II Phase), Rudka (II Phase) (high-methane gas fields in the Carpathian Foreland). Capital expenditure for reserve exploration totalled PLN 362.1m, including PLN 211.7m spent mainly on boreholes classified as positive or boreholes on which the drilling has not been completed yet.

Barnówko-Mostno-Buszewo (BMB) Project

The aim of the project is to maintain oil production rates from the exploited reserves at current levels and to achieve incremental production rates from new reserves which are just beginning to produce. Due to changes in geological conditions of the fields the total expenditure on the project was increased to approximately PLN 120m.

Lubiatów-Międzychód-Grotów (LMG) Project

In August 2008, a PLN 1.4 bcm contract was signed with a consortium led by PBG SA for the execution of the "Lubiatów-Międzychód-Grotów Project". The objective of the investment project is to develop the Lubiatów-Międzychód-Grotów reserves with view to increasing the production of crude oil. A significant increase in oil production is planned for 2013, following the development of and launch of production from the LMG field. The annual production is estimated at approximately 0.9m tonnes.

Originally, the project was to be launched in 2006. However, the Regional Court of Warsaw issued an order cancelling the tender process for development of the LMG reserves, which delayed the contractor selection by about two years.

Grodzisk Wielkopolski Project

The year 2010 is to see the completion of construction of the nitrogen removal facility in Grodzisk Wielkopolski, with a processing capacity of up to 500 mcm of fed gas. The goal behind the project is to create the second, after the Odolanów Branch, regulatory facility connecting the nitrogen-rich gas production system with the transmission system for high-methane natural gas. The project includes the development of the Wielichowo, Ruchocice, Jabłonna and Paproć gas fields. The total value of the project is estimated at PLN 440m, of which PLN 68m was expensed in 2008.

Presence on the Norwegian Continental Shelf (NCS)

The PGNiG Group's involvement in projects on the Norwegian Continental Shelf since 2006 is in line with its strategy designed to increase the reserves of crude oil and natural gas outside of Poland.

Acquisition of interests in the exploration and production licences in Norway is a long-term investment meant to ensure diversified sources of natural gas supplies and thereby increase the security of gas supplies to Poland. In 2007, PGNiG SA acquired a ca. 12% interest in the unitised development area (business unit) Skarv comprising the Skarv and Idun fields located within the area of licences PL 212, PL 212B, PL 262 and PL 159. Moreover, the Company purchased 15% of the adjacent exploratory areas 212E, Snadd S, Snadd N and Grasøl.

The implementation (development) phase of the project has formally commenced. Gas and oil production is due to be launched in the second half of 2011. Based on data approved by the Norwegian Petroleum Directorate, aggregate proved producing reserves of all the fields, corresponding to the acquired interest in the licence, are estimated (as at December 31st 2008) at:

- 41.5 bcm of natural gas;
- 16.5 bcm of crude oil and condensate;
- 5.4 bcm of NGL.

The fields are operated by BP Norge and its partners: E.ON Ruhrgas Norge and StatoilHydro.

At the beginning of 2009, PGNiG SA decided to acquire further exploration licences on the Norwegian Continental Shelf. PGNiG Norway acquired a 30% interest in licence PL 350 (operated by E.ON Ruhrgas Norge) and a 25% interest in licence PL 419 (operated by Nexen Exploration Norge). The area covered by licence PL 350 is located in close proximity to the earlier purchased Skarv and Idun fields. Seismic shots and analyses, as well as geophysical and geological interpretations have already been performed for the areas covered by the licences. Drilling of exploratory boreholes is currently planned. The cost of a borehole is estimated between USD 50m and USD 80m. PGNiG Norway would incur the part of the costs proportional to its interests in the licences. The Group's involvement in the projects on the Norwegian Continental Shelf enables it to fully exploit the tax incentive system, including accelerated depreciation (over six years), a special investment relief and instant reimbursement of 78% of cost of exploration.

