

Overview of the Polish gas sector

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I. Natural gas supply structure – domestic production and imports

In 2006 total gas consumption in Poland reached 13,9 bcm, including 30,8% from national sources. Comparing to 2005 total gas consumption grew by 0,9%, import by 3,5% and national production decreased by 1%.

Table 1. Direction of supplies

| DIRECTION OF SUPPLIES | 2006 [MILLION CU.M] | 2005 [MILLION CU.M] |
|---------------------------------------|--------------------------------|--------------------------------|
| Domestic production | 4277 | 4318 |
| Gas imports, of which: | 10029 | 9690 |
| -Jamal contract | 6840 | 6340 |
| -other | 3189 | 3350 |
| Purchases from other domestic sources | 74 | 20 |
| Change in stocks | -474 | -242 |
| Total | 13906 | 13786 |

Source: ERO Activity Report 2006

National extraction was supplemented by import supplies. Like in the previous years the rest of the gas supplies derived from imports, mainly from Russia, countries of Central Asia, Norway and Germany. The volume of supplies in 2006 grew by over 130 MCM, i.e. by 1% compared to 2005. The share of deliveries under medium-term contracts dropped in comparison with 2005 and in 2006 they accounted for almost 32% of all gas imports. The share of different countries in the volume of natural gas imports by POGC in 2006 is as follows:

Table 2. Supplies in 2006

| COUNTRY | SHARE IN BALANCE [%] | SHARE IN IMPORT [%] |
|--|---------------------------------|--------------------------------|
| The Russian Federation | 48,9 | 68,9 |
| Central Asia Countries (Uzbekistan Turkmenistan, Kazakstan) | 16,1 | 22,7 |
| Germany | 3,5 | 4,9 |
| Norway | 2,5 | 3,5 |
| Other (Ukraine, the Czech Republic) | n. s. | n.s. |
| Total | 100 | 100 |

Source: ERO Activity Report 2006

II. Gas demand structure

The Polish gas market is dominated by one supplier and one seller – the Polish Oil and Gas Company. The shares of other market participants do not exceed 0,7%. In 2006 natural gas sales by POGC Capital Group maintained at the level of the former year and accounted for 13,352.3 mcm of high-methane gas equivalent. The largest consumers of POGC – the fertilizer plants – decreased their gas consumption in 2006 by over 55 mcm, i.e. by 2.3% compared to 2005. In the power sector, the sales volume went down by approx. 121 mcm, i.e. by nearly 11 % of the 2005 figure. The demand for natural gas from big consumers with consumption over 25 mcm per year grew by over 126%, i.e. nearly by 936.8 mcm compared to 2005. The increase in gas sales volume was also observed in case of household consumers.

Table 3. Gas sales volume of POGC Capital Group

| CONSUMER GROUP | 2006 [MILLION CU.M] | 2005 [MILLION CU.M] |
|----------------------------------|------------------------------------|------------------------------------|
| Total | 13 352,3 | 13350,4 |
| 1. Industry, included: | 8 090,2 | 8 041,3 |
| Nitro fertilizer factories | 2 399,3 | 2 455,1 |
| Combined heat and power stations | 1 013,1 | 1 133,7 |
| Heat stations | 237,1 | 288,9 |
| Other small customers | 657,4 | 1 937,8 |

| | | |
|---|---------|---------|
| consumption less than 1 mcm per year | | |
| Other mid-size customers (consumption over 1 mcm to 25 mcm per year) | 2 104,5 | 1 483,7 |
| Other big consumers, consumption over 25 mcm per year | 1 678,9 | 742,1 |
| 2. Trade and services | 1 333,6 | 1 445,0 |
| 3. Household consumers | 3 801,5 | 3 734,7 |
| 4. Export | 40,6 | 41,8 |
| 5. OGP Gas-System SA | 86,3 | 87,6 |

Source: POGC

In 2006 sales to consumers directly connected to the high-pressure network were fulfilled directly by POGC whereas sales to those connected to the distribution network were executed by the Gas Distribution Companies of POGC and by independent suppliers.

Generally speaking, besides the POGC Capital Group there are only few local companies active in the sector. They perform trade and distribution activity together. The biggest independent distributor of natural gas in Poland is G.EN. GAZ ENERGIA SA, with the sales of 72,4 mcm. The second biggest is Media Odra Warta Sp. z o.o. (MOW). Its sale reached 41,7 mcm in 2006. Moreover, the sale of KRI Sp z o.o. reached 15,6 mcm, and LNG – 11,1 mcm. The sale of the local distributor called Gaz Technologia i Energia Sp. z o.o. accounted for 8,2 mcm. Some of gas sold by independent distributors was delivered by intermediary of POGC.

III. Reserves

The volume of proven and probable gas reserves in Poland at the end of 2006 accounting for about 110 BCM was positively verified by the Mineral Reserves Commission and accepted without qualification by the Minister of the Environment. This correspond to 0.2 % of the European proven and probable gas reserves, which are estimated at 54 TCM.

Nearly 70% of the gas deposits are located in the lowland in the north-west Poland. The gas fields in the Carpathian Foothills contain high-methane gas, while the fields in the Polish Lowland contain mainly low-methane gas. This kind of gas is supplied to local gas networks or undergoes nitrogen removal process to obtain high-methane gas, which is then delivered to the national grid.

IV. Liberalization

An implementation of the rule for the Third Party Access is a prerequisite for the introduction of competition mechanisms. In relation to it, a list of necessary actions to be undertaken was defined in order to introduce TPA. It included inter alia: unbundling activities of the TSO and DSO from other activities, settlement of not discriminative rules of access to infrastructure, investments necessary to adjust the system to market rules (metering equipment, introduction of data collection and exchange system, increasing the transmission and storage capacity).

a) Unbundling

The liberalisation of the Polish gas sector is underway. One of the most important condition for liberalization is effective unbundling of transpotr activities. The TSO and DSO which are in the structure of a vertically integrated company are obliged to implement legal, organizational and accounting separation, however legal separation of DSOs was required from July 1st 2007. This duty does not refer to gas DSOs if the number of customers connected to the grid is not higher than 100 000 customers and yearly sales do not exceed 100 mcm.

In the case of TSO not only legal separation, but also ownership separation was implemented - from April 28th 2006 the owner of 100% of shares of TSO has been the State Treasury. This company is not a part of a vertically integrated undertaking. Thus its independence from company dealing with trade in gas was guaranteed.

In case of DSO (six big distribution companies belonging to POGC) the legal separation of distribution activity from trade took place. It was accomplished in July 2007.

It was followed by organizational unbundling that took place in 2006. Within the frames of this action, the company was reorganized. The units performing operator's functions were separated. In December 2006 after accomplishing that process 6 big distribution companies belonging to POGC were appointed DSOs.

Also one independent local distributor was granted the status of DSO.

b) Grid codes

One of the conditions of liberalization is a settlement of the rules for access to the transmission system. Such rules were adopted in June 2006 when a grid code of Transmission System Operator - OGP Gaz-System SA. - was introduced. It guarantees that access to network is not limited only to one company, which was the case until 2006.

The main purpose of the Code was to establish not discriminative rules of using the network, common for all market participants. The Grid Code underpins the objective activity of the operator and equal access to the network. The most important parts of the grid code refer to entering into transmission contract, capacity allocation procedures, principles of balancing and management of system congestions.

c) Investments necessary to adjust the system to market rules.

Apart from the regulations, an adjustment of existing infrastructure to market requirements is also necessary. The following tasks are imposed on the operators of the systems: furnishing the networks with metering equipment, development the system for data acquisition and exchange as well as upgrading the gas network and the cross-border interconnections to the demanded capacity and shape.

The system of the market information exchange is to be built, in order to provide reliable and accurate information on time.

V. Security of supply

The main direction of gas supplies is the import from Russia. However the necessity to diversify the directions of supplies was commonly recognized. It became obvious that assurance of long term security and continuity of gas supplies is closely connected with intensive activities of the state on diversification of gas supplies. Simultaneously

development of new technologies requires the construction of proper technical infrastructure, facilitating import of LNG, also by sea, from sources not accessible by land pipelines.

Governmental declarations, plans as well as legal and operational documents set the background for necessary investment aimed at increasing the security of supply. They include inter alia the following documents:

- the ordinance of the Council of Ministers on minimum level of diversification and gas supplies from abroad,
- Energy policy of Poland up to 2025, paper accepted by the Council of Ministers,
- Report of Minister of Economy on results of supervision in the area of security of gas supply,
- Announcement of Minister of Regional Development on the list of individual projects for Operational Programme Infrastructure and Investment for years 2007-2013.

The governmental strategy was recognized by EC, which on 7 December 2007 approved an operational programme in Poland for the period 2007-2013, entitled the "Infrastructure and Environment Operational Programme". This programme involves Community support for Poland with the total budget of over € 1 billion for security of supply projects in energy sector, including gas. The EC stated that ensuring security of supply in the energy sector is a crucial target at EU and national level and therefore it will be possible to support sector investments targeting security of supply. Mentioned support refers inter alia to gas transmission pipelines as well as to gas storage facilities and LNG terminal.

VI. Major gas projects

The following groups of projects are mentioned in development plans, however not all were qualified to operational programmes:

a) LNG Terminal in Świnoujście.

The first deliveries of LNG to the terminal are planned for the year 2011 with regasification capacity of 2.5 billion cu. m of gas per annum. The regasification capacity of the terminal will be developed by stages to reach the target capability of receiving up to 7.5 bcm of natural gas per year from the terminal by the year 2020. POGC set up a company – PLNG - to build the terminal and, subsequently, to provide the regasification service. The company is based in Świnoujście and controlled by POGC.

b) Expansion of storage capacity

POGC has six underground gas storage facilities co-operating with transmission system, with total working capacity of 1. 660 BCM. When referred to the total sales volume of 13.4 BCM in 2006 (converted to high –methane gas volumes), this corresponds to 11,9 % of the annual gas consumption in Poland or 43 days of the average consumption.

Company is implementing a programme to increase the capacity up to 2.6 bcm by 2012, so that it corresponds to approx. 17% of the domestic gas consumption. The task covers enlargement of 3 underground gas storage facilities (Mogilno, Wierzchowice, Strachocina) and building a new one (Kosakowo).

The development is shown below:

Table 4. Development of gas storage facilities co-operating with the transmission system

| Lp. | Name | Type | Storage capacity 2006 [mcm] | Storage capacity 2012 [mcm] |
|--------------|------------------|-------------------------------------|-----------------------------|-----------------------------|
| 1 | UGS Husów | storage in an exhausted gas deposit | 400 | 400 |
| 2 | UGS Wierzchowice | storage in an exhausted gas deposit | 575 | 1200 |
| 3 | CUGS Mogilno | storage in a salt deposit | 380 | 442 |
| 4 | UGS Swarzów | storage in an exhausted gas deposit | 90 | 90 |
| 5 | UGS Brzeźnica | storage in an exhausted gas deposit | 65 | 65 |
| 6 | UGS Strachocina | storage in an exhausted gas deposit | 150 | 330 |
| 7 | CUGS Kosakowo | storage in a salt deposit it | - | 50 |
| Total | | | 1 660 | 2577 |

Source: POGC

c) Investment of the OGP Gaz-System SA.

The most important investments for years 2007-2010 realised by the TSO are: Gas pipeline Włocławek-Gdynia, Gas pipeline Szczecin-Gdańsk, Gas pipeline UGS Mogilno – Odolanów, Gas Pipeline Piotrków Trybunalski – Tworóg, Gas pipeline Szczecin – Lwówek, Gas pipeline Niechorze – Płoty and Gas pipeline Świnoujście – Szczecin. They are intended to support expanded storage facilities and new routes of supplies as well as eliminate network congestions.

d) Connection with a Scandinavian system

Another project that will have a positive impact on the diversification of the structure of gas supply to Poland concerns the efforts aimed at establishing a connection with the North Sea fields. In 2006, POGC started negotiations aimed at the acquisition of 15% interests in exploration and production licences in Skarv and Snadd fields in the Norwegian Continental Shelf from Mobil Development Norway A/S and ExxonMobil Production Norway Inc. The relevant conditional agreement was signed on 28 February 2007. The first oil and gas production from these fields is expected in mid 2011.