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Poland

Key Oil Data

-	1985	1990	1995	2000	2005	2008	2009	2010
Production (kb/d)	4.0	3.0	6.0	14.5	28.0	28.0	25.2	20.1
Demand (kb/d)	316.9	283.0	317.6	411.3	470.9	534.0	534.9	560.7
Motor gasoline	68.4	71.5	101.5	115.6	92.8	96.9	97.5	94.7
Gas/diesel oil	116.2	104.3	105.1	149.1	195.2	241.0	244.5	265.5
Residual fuel oil	66.1	51.7	45.4	40.6	36.6	30.7	29.5	30.8
Others	66.2	55.5	65.6	106.0	146.3	165.4	163.4	169.8
Net imports (kb/d)	312.9	280.0	311.6	396.8	442.9	506.0	509.7	540.6
Import dependency	98.7%	98.9%	98.1%	96.5%	94.1%	94.8%	95.3%	96.4%
Refining capacity (kb/d)	-	-	352	382	350	493	493	507
Oil in TPES	12.4%	12.6%	15.7%	21.4%	23.1%	25.1%	25.6%	-



End-Month Total Oil Stock Levels¹ - Five Year Range

Key Natural Gas Data

	1985	1990	1995	2000	2005	2008	2009	2010 *
Production (mcm/y)	6 743	4 095	5 066	5 224	6 057	5 750	5 862	6 084
Demand (mcm/y)	12 554	12 096	11 774	13 346	16 231	16 288	15 845	17 196
Transformation	1 103	833	153	947	2 076	1 924	1 961	-
Industry	7 406	6 060	5 164	5 517	6 381	6 569	5 963	-
Residential	2 617	3 995	5 138	4 083	4 280	4 125	4 275	-
Others	1 428	1 208	1 319	2 799	3 494	3 670	3 646	-
Net imports (mcm/y)	5 811	8 001	6 708	8 122	10 174	10 538	9 983	11 112
Import dependency	46.3%	66.1%	57.0%	60.9%	62.7%	64.7%	63.0%	64.6%
Natural Gas in TPES	7.1%	8.7%	9.0%	11.1%	13.1%	12.8%	12.7%	-
* / / / / / / / /	1 11 15 1							

* based on monthly data submissions to the IEA.





1 - Primary oil stocks on national territory; these exclude utility stocks and including pipeline and entrepot stocks where known. 2 - Stocks held on national territory, as reported to the IEA in monthly data submissions.

OVERVIEW

Oil remains the second biggest energy source in Poland, representing 26% of the country's total primary energy supply (TPES) in 2009. Poland's oil demand increased from 411 kb/d in 2000 to 535 kb/d in 2009, with an annual average growth rate of 3%. The transport sector accounted for around 60% of the total oil consumption in Poland in 2009. With a small indigenous oil production, almost all of the crude oil used in Poland is imported. Poland's oil imports in 2009 were 558 kb/d, consisting of 407 kb/d crude oil, 26 kb/d NGLs and feedstock, and 125 kb/d refined products. Russia is the single largest source of crude oil imports and provided about 94% of the total in 2009. Crude oil imports from Russia are via the Druzhba pipeline. In 2009, some 57% of the refined product imports came from former USSR, while about 42% of refined products were imported from OECD Europe. There are six refineries in Poland, with a total primary distillation capacity of around 580 kb/d. PKN Orlen and Grupa Lotos account for almost the entire Polish refining industry.

Poland meets its stockholding obligation to the IEA and the EU by holding 14 days of government stocks and by placing a stockholding obligation on industry. All liquid fuel producers and importers are obliged to hold 76 days of stock levels based on their production or imports of crude oil and liquid fuels from the previous calendar year. Under the direction of the Ministry of Economy, the Material Reserve Agency (MRA) manages the state-owned oil emergency reserves and also monitors the stockholding obligation on industry. The use of emergency oil stocks is central to Poland's emergency response policy. Demand restraint is considered as secondary response measure which might be introduced in a long-lasting and severe crisis.

The share of natural gas in the country's TPES stood at 13% in 2009. Gas demand steadily increased from 13.3 BCM (36.6 MCM/d) in 2000 to 15.8 BCM (43.4 MCM/d) in 2009, with an annual average growth rate of some 2%. Poland produced some 5.9 BCM (16 MCM/d) of natural gas in 2009, which accounted for some 37% of the country's demand. Poland's total natural gas imports in 2009 amounted to some 10 BCM (27.3 MCM/d). Russia has been the principal source of natural gas imports, accounting for 82% of the total gas imports in 2009.

Diversification of supply sources and routes, development of natural gas infrastructures for such diversification, expansion of underground storage capacity and increase of domestic gas production are the key elements of Poland's gas security policy. Energy enterprises running a business of international gas trading and importers are obliged to maintain 20 days of compulsory gas stocks in Poland in 2011. Compulsory stock levels will increase to 30 days from October 2012.

The Minister of Economy is authorised to decide on the use of compulsory stocks. GAZ-SYSTEM (TSO of natural gas) is responsible for conducting a withdrawal of compulsory gas stocks, in coordination with the Storage System Operator (PGNiG). The maximum withdrawal rate from domestic storage facilities is some 37 MCM/d, equivalent to some 78% of average gas demand in 2009. Gas-fired power plants are not legally required to hold back-up fuel stocks on site.

1. Energy Outlook

Oil remains the second biggest energy source in Poland, whose share in the country's total primary energy supply (TPES) steadily increased from 13% in 1990 to 26% in 2009, with the gradual decrease of coal's share in TPES from 76% in 1990 to 54% in 2009. The share of natural gas in the country's TPES slightly increased from 9% in 1990 to 13% in 2009.

According to the 2009 governmental document Energy Policy of Poland until 2030, Poland's TPES will reach 119 Mtoe in 2030, which is about 26% increase from 94 Mtoe in 2009. The combined shares of oil and gas in the TPES are anticipated to remain flat at around 40% in the coming 20 years.



Source: Energy Balances of OECD Countries, IEA

In Poland, coal is the principal source of fuel for electricity generation, representing 90% of the total in 2009. The share of natural gas as fuel for electricity generation stood at merely 2% in 2009.



Source: Energy Balances of OECD Countries, IEA

2. Oil

2.1 Market Features and Key Issues

Oil reserves and domestic production

Poland does not have significant proven reserves of crude oil, and indigenous crude oil production is very small. In 2009, Poland produced 25 kb/d of crude oil, which covered some 5% of the country's total oil demand.

Oil demand

Poland's oil demand increased from 411 kb/d in 2000 to 535 kb/d in 2009, with an annual average growth rate of 3.0%.

The transport sector accounted for around 60% of the total oil consumption in Poland in 2009. In terms of oil demand by product, demand for diesel increased by 83% in the period between 2000 and 2009, while demand for gasoline declined by 16% in the same period. The use of LPG has risen over the past decade, as this fuel became more competitive relative to gasoline. Demand for LPG almost doubled from 35 kb/d in 2000 to 71 kb/d in 2009.

Oil Demand in 2009 (kb/d)					
LPG and Ethane	71				
Naphtha	26				
Gasoline	97				
Kerosene	11				
Diesel	218				
Heating/other Gasoil	26				
Residual Fuels	30				
Other Products	56				
Total Products	535				



Oil Consumption, by Product

Imports/exports and import dependency

Poland's oil imports in 2009 were 558 kb/d, consisting of 407 kb/d crude oil, 26 kb/d NGLs and feedstock, and 125 kb/d refined products. Russia is the single largest source of crude oil imports and provided about 94% of the total in 2009. Crude oil imports from Russia are via the Druzhba pipeline. In 2009, the remaining portions of crude oils were imported from Algeria (2.7% of the

Source: Monthly Oil Statistics, IEA

total), the United Kingdom (1.7%) and Norway (1.5%). Crude oil is imported by refiners mainly based on the commercial long-term contracts.

In 2009, roughly 57% of the refined product imports came from former USSR, such as Russia (26%), Lithuania (12%) and Kazakhstan (10%), while some 42% of refined products were imported from OECD Europe, including Germany (26%) and Slovak Republic (8%).

Poland exported about 50 kb/d of oil in 2009, consisting of 5 kb/d of crude oil and 45 kb/d of refined products. Most of crude oils were exported to Germany, while some 70% of refined products were exported to OECD Europe, such as Denmark, Germany and Czech Republic.



Oil company operations

Poland has a dense network of fuel stations owned by Polish companies PKN Orlen S.A., and Grupa LOTOS S.A., as well as stations belonging to foreign companies such as BP, Shell, Statoil and Lukoil and independent operators. The total number of fuel stations amounted to about 6 700 in 2009, out of which some 3200 were owned by independent operators. At the end of 2009, the shares of PKN Orlen and Grupa Lotos in the total number of fuel stations in Poland were 26% and 5%, respectively.

2.2 Oil supply infrastructure



Refining

There are six refineries in Poland, with a total primary distillation capacity of around 580 kb/d (28 million tons per year). PKN Orlen and Grupa Lotos account for almost the entire Polish refining industry.

Plock Refinery, which is owned by PKN Orlen and located in the central region of the country, has a total crude distillation capacity of 355 kb/d. Grupa Lotos possesses Gdansk Refinery, the second biggest refinery (216 kb/d) in Poland. These two major refineries account for over 95% of the country's total refining capacity. Both Plock Refinery and Gdansk Refinery process mainly REBCO (Russian Export Blend Crude Oil).

The remaining four refineries are located in the southern part of Poland and have very small processing capacities. Two of them (in Jasło and Czechowice) are no longer operational.

In 2009, the four operating refineries (in Plock, Gdansk, Jedlicze and Trzebinia) processed around 467 kb/d of crude oil (including NGL and feedstocks). In the same year, the composition of production from these refineries was gasoline (22%), gas/diesel oil (44%), residual fuel oil (10%), naphtha (65) and LPG (2%).

Ports and Pipelines

There are three oil port terminals in Poland. The main oil port terminal is in Gdansk and has a capacity of about 700 kb/d (34 Mt/yr). Naftoport Ltd. owns and operates the four jetties in Gdansk Port. Some 67% of the Naftoport's shares are held by PERN. The remaining portions are held by PKN Orlen (some 18%), Grupa Lotos (some 9%) and others.

In 2009, over 9.1 Million tons of crude oils and fuels were loaded and discharged at Naftoport's jetties in Port Gdansk, of which 7.0 Mt were crude oils. Gdansk Port is used primarily for exports of Russian crude oils. Additionally there are two small oil terminals for imports of oil products; Gdynia Port (with a capacity of 3.5 Mt/yr or 70 kb/d) and Szczecin (1.5 Mt/yr or 30 kb/d).

The Druzhba and the Pomeranian are the main pipelines for transporting crude oil in Poland. These two pipelines supply Russian crude directly to the refineries at Plock and Gdansk, to Naftoport for exports and transit volumes on to the German refineries at Schwedt and Spergau.

The Polish branch of the Druzhba pipeline is composed of two main sections of pipelines. The eastern section spans from the Belarus border in Adamowo to Plock, which has a nominal capacity of some 870 kb/d (43 Mt/yr), however, with usage of Drag Reducing Agent (DRA) it can transport up to 1 mb/d (50 Mt/yr). A third line, which is under construction, will help to keep the capacity of the eastern section on the level of 1 mb/d (50 Mt/yr) with a significant reduction in operating costs. The western section of the Druzhba pipeline links Plock to the German border in Schwedt, which has a capacity of some 545 kb/d (27 Mt/yr).

The Pomeranian Pipeline can transport crude oil in two directions between Gdansk and Plock. In the direction from Gdansk to Plock, the line has a capacity of 0.6 mb/d (30 Mt/yr), while the capacity is 0.45 mb/d (22 Mt/yr) in the opposite direction. This is the route for the Russian oil destined for the refinery in Gdansk and also for export through Naftoport.



Storage capacity

In June 2010, Poland possessed a total storage capacity of 72.7 million barrels. Roughly 60% of the total storage capacity is used for crude oil.

In terms of crude storage capacity by owner, 60% of the total storage capacity was owned by PKN Orlen. The remaining portions were held by PERN (34%) and Grupa Lotos (6%). Concerning product storage capacity, OLPP, a part of PERN Group, is the biggest storage capacity holder (49%), which is followed by PKN Orlen (33%) and Grupa Lotos (14%).

PERN plans to expand its total storage capacity by some 21.4 million barrels by 2013, through constructing additional crude storage depots in Plock, Gdańsk and Adamowo.

In response to the expected increase of demand for storage capacities, PERN and Grupa Lotos are considering building underground salt caverns for crude oil and fuel storage in the Pomorski region near Gdansk. The caverns are projected to have a total capacity of some 38 million barrels.

2.3 Decision-making Structure for Oil Emergencies

The Minister of Economy is responsible for Poland's energy security policy, including oil emergency response policy. The Governmental Group on Energy Emergency Management serves as the core body of the Polish National Emergency Strategy Organisation (NESO). The Group is headed by the Deputy Minister of Economy and is composed of representatives from the relevant ministries and governmental entities such as Energy Regulatory Authority and Material Reserve Agency.

In the event of a domestic supply disruption, the response action is undertaken upon request of voivods (local authorities), producers or traders of fuels or an eligible entity. Each request is evaluated by the Department of Oil and Gas of the Ministry of Economy, which proposes to the Minister appropriate response measures to be taken. During a global supply disruption, the Minister of Economy will make the political decision to participate in an IEA collective action and on emergency response measures.

2.4 Stocks

Stockholding Structure

Poland meets its stockholding obligation to the IEA and the EU by holding 14 days of government stocks and by placing a stockholding obligation on industry. Industry's obligation has been progressively increased in anticipation of IEA membership (which took place in September 2008), rising from 66 days at end 2006 to 76 days by the end of 2008.

All liquid fuel producers and importers are obliged to hold minimum stock levels based on their production or imports of crude oil and liquid fuels during the previous calendar year. Some 130 companies had stockholding requirements at the end of 2009.

Under the direction of the Ministry of Economy, the Material Reserve Agency (MRA) manages the state-owned oil emergency reserves and also monitors the stockholding obligation on industry. The MRA is required to hold oil stocks equivalent to no less than 14 days of net imports.

Furthermore, the Act 16 February 2007 obliges producers and traders to gradually increase their mandatory stocks of LPG up to the levels corresponding at least to 3 days of production/import by end 2007, to 20 days by end 2010 and to 30 days by the end of 2011.

The Administration is considering moving towards abolition of the obligation to maintain physical stocks by producers and traders in exchange for a fee allocated to the deliberate maintenance of those stocks through the Material Reserves Agency. It is envisaged that two parallel systems of stockholding – the current and new ones – will be in place during a ten-year of transitional period.

Crude or Products

At the end of December 2010, the Material Reserve Agency held some 8.2 mb of government stocks, which were equivalent to 13% of the country's total stocks (15 days of 2009 net imports). 87% of the public stocks were maintained in the form of crude oil, while the remainder was in middle distillates (12%) and motor gasoline (1%).

Industry stocks (mandatory and commercial) in Poland at the end of December 2010 stood at some 57 mb,



which equated to 87% of the country's total stocks (110 days of 2009 net imports). At that time, 55% of total industry stocks were in crude oil, while major remaining portions were in middle

distillates (27%), motor gasoline (13%) and residual fuel oil (1%). Obligatory industry stocks may be commingled with operational and commercial stocks.



Location and Availability

Source: Monthly Oil Statistics, IEA

Poland has no bilateral agreements on stockholding with other countries. No amount of public stocks is allowed to be held outside the territory of Poland.

The public stocks of crude oil are held mainly in storage tanks rented from PERN, with some amounts in the salt dome storage facilities of PKN Orlen. Public gasoline and diesel oil stocks are held in storage rented from OLPP.

Monitoring and Non-compliance

As for monthly reports on oil stocks, oil companies with stockholding obligations need to submit data on the quantity of stocks and their location (in the breakdown by fuels) to the Material Reserve Agency (MRA). Non-compliance with this reporting obligation is subject to financial penalties. The MRA submits the consolidated data to the Department of Oil and Gas of the Ministry of Economy on a monthly basis, which data is cross checked with results of monthly statistics surveys collected by the EMA.

Stock Drawdown and Timeframe

The use of emergency oil stocks is central to Poland's emergency response policy. The Minister of Economy is authorised to decide on the release of government stocks or mandatory industry stocks.

Public stocks could be made available to the oil industry through a number of options, including auction, tender or sales to specific entities, although the eligible companies are not identified in advance. In case of releasing state stocks of crude oil, refiners may be required to process crude oil for products according to instructions of the Ministry.

Industry stocks would be made available either by the reduction of minimum stockholding obligation or by instructing industry to make a compulsory stockdraw.

In the event of a threat to the oil security in Poland, upon a proposal of the Minister of Economy, the Council of Ministers may, by way of regulation, include commercial stocks owned by producers and traders in compulsory stocks. Commercial stocks are estimated to stand at around 10-12 days of domestic consumption.

Financing and Fees

Government stocks are financed from the state budget. The average maintenance costs for government stocks (8 mb) in 2009 was some 3.4 Euros per barrel. No financial assistance or public

funding is provided to industry to meet emergency reserve requirements. The average maintenance cost for obligatory industry stocks (some 40 mb) in 2009 was estimated at roughly 7 Euros per barrel.

3. Other Measures

3.1 Demand Restraint

Demand restraint is considered as a secondary response measure which might be introduced in a long-lasting and severe crisis. The decision-making procedure of demand restraint measures is expected to be longer and more complex than that of stock release, as introduction of these demand restraint measures needs the ordinance of the Council of Ministers.

Poland's demand restraint measures would range from light-handed measures to compulsory measures. Light-handed measures include information campaigns to promote eco-driving and use of public transport. Compulsory measures include restrictions on the trade in fuels through limiting the maximum quantity of fuels sold by the filling station, the maximum quantity of fuels which a consumer may purchase in a single transaction and the opening hours of petrol stations for fuels sales, as well as restrictions on fuel consumption through speed limits, limiting or ban on distribution of fuels in canisters, driving ban, rationing of fuels, etc.

Demand restraint measures are not planned to be implemented in a pre-crisis situation or in the early stage of a crisis, due to the restrictive nature of the measures. No automatic triggers exist to implement specific demand restraint measures.



3.2 Fuel Switching

Short-term fuel switching from oil to other fuels is not considered as an emergency response measure in Poland, as such fuel switching capacity in the transformation sector is estimated to be

¹ Total Consumption (including refinery consumption), does not include international marine bunkers.

insignificant. The share of oil as fuel for power generation in Poland was only 1.5% in 2008. The Administration does not have a specific policy or legislation to promote short-term fuel switching in an emergency.

3.3 Others

Due to the small indigenous oil production (less than 5% of total demand) and lack of spare crude oil production capacity, surge production of oil is not considered as an emergency response measure in Poland.

4. Natural Gas

4.1 Market Features and Key Issues

Gas reserves and domestic production

According to the BP Statistical Review of World Energy 2010, Poland possessed 110 BCM of proven reserves of natural gas at the end of 2009, which would be sufficient for approximately 27 years at the current production rates.

Poland produced some 5.9 BCM² (16 MCM/d) of natural gas in 2009, which accounted for some 37% of the country's demand. The Polish Oil and Gas Company (PGNiG) is the dominant producer of gas and crude oil in Poland, representing 98% of domestic gas production from conventional gas deposits.

A huge potential of unconventional gas is expected to be in place in Poland. Preliminary estimates suggest that Poland could have between 1.4 to 3 trillion cubic meters of unconventional gas. If the shale gas resources are confirmed, theoretically their large scale exploitation has the potential to change the energy landscape in Poland.

Gas demand

The gas demand steadily increased from 13.3 BCM (36.6 MCM/d) in 2000 to 15.8 BCM (43.4 MCM/d) in 2009, with an annual average growth rate of some 2%. The daily gas consumption in January 2010 averaged at 71.2 MCM/d.

In the governmental policy document "Energy Policy of Poland until 2030", gas demand is forecast to increase by 18% in 2020 and by 43% in 2030, respectively, compared with 2010.

² Natural gas production and consumption data in the IEA publications differ from the data in Polish sources because of methodological differences. For example, domestic gas production reported in Polish sources is 4.1 BCM in 2009, compared to 5.9 BCM reported according to the IEA methodology. In this document, in principle, natural gas data on production, consumption and imports based on the IEA methodology are used for consistency.



Source: Natural Gas Information, IEA

Gas imports

Poland's total natural gas imports in 2009 amounted to some 10 BCM (27.3 MCM/d). Virtually all imported gas is supplied through pipelines by PGNiG except for very small quantities of liquefied natural gas (LNG) transported by PGNiG's competitors by road in tanks (14 thousand tonnes in 2009).

Russia has been the principal source of natural gas imports. The share of Russian gas in the total gas imports stood at 82% in 2009, while gas imports from Germany accounted for 11% in 2009.

In October 2010 the long-term contract between PGNiG and Russia's Gazprom of 1996 was amended. Under this new contract arrangement, Gazprom will increase gas supply to Poland to 10.5 BCM in 2011 and 11 BCM from 2012. The supply contract will end in 2022. The destination clause forbidding re-export of Russian gas to other countries was removed from the contract.



Source: Natural Gas Information, IEA

Gas Company Operations

PGNiG has a main position in both upstream and downstream sectors. It is practically the only importer of gas: it has booked nearly 100% of transmission capacity at all entry points. Being also the major domestic gas producer (98% of domestic production), it effectively controls the wholesale gas market.

Moreover, PGNiG is the only owner and operator of the underground gas storage (USG) capacity - so far no other company has decided to develop an UGS in Poland. The regulator appointed PGNiG as the Storage System Operator for its USG facilities for 27 years in 2008.

As part of the market reform, the gas transmission assets of the incumbent PGNiG were ownership unbundled. An independent transmission system operator (TSO) fully owned by the state - OGP GAZ-SYSTEM - was established in 2004. In 2007, six regional distribution companies were legally unbundled from PGNiG and granted the status of Distribution System Operators.

PGNiG is a leader on the retail market: several other companies (including G.EN Gaz Energia, CP Energia, EWE Polska, Enesta SA and KRI SA) have entered the market but their total market share was about 2% in 2009.

4.2 Natural gas supply infrastructure





Ports and Pipelines

Poland is a key transit country for Russian gas to Western Europe through the Yamal pipeline. The Polish gas system is connected with the European gas network system but mostly along the East-West direction.

There are four key entry points through which natural gas is imported into the transportation system of Poland; they are Lasów (from Germany), Drozdowicze (from Ukraine), Wysokoje (from Belarus) and Kondratki (from Belarus; Yamal pipeline). The Polish gas transmission system currently includes 9 768 km of pipelines, 14 compressor stations and 854 gas stations.

Third party access to the Yamal pipeline is not offered, which has been subject of EC objections. The new transit deal signed in October 2010 made OGP GAZ-SYSTEM the operator of the Yamal pipeline in Poland. The EC approved this agreement but highlighted the need to ensure that GAZ-SYSTEM provides access to the Yamal pipeline on a non-discriminatory basis. Flow of gas through this pipeline is possible only in the East-West direction.

Poland's first LNG terminal is planned to be constructed at Świnoujście. Polskie LNG S.A., a 100% subsidiary of the OGP GAZ-SYSTEM S.A., is to construct, own and operate the LNG terminal. In the first stage of operation, the LNG terminal will enable the re-gasification of 5 BCM (13.7 MCM/d) of natural gas annually. In the next stage, it will be possible to increase the dispatch capacity up to 7.5 BCM/yr (20.5 MCM/d), depending on gas demand. In 2009, Qatargas and PGNiG signed a Sales and Purchase Agreement for LNG supply from Qatar. Under the agreement, Qatargas will supply 1.5 BCM per annum of LNG to PGNiG under a 20 year long-term agreement, starting from 2014.

Storage

There are eight underground gas storage facilities in operation in Poland. Their full capacity (1 838 MCM) equates to 41 days of the average gas demand in 2009 and 67 days of the average gas imports in 2009. The maximum withdrawal rate of these storage facilities is some 37 MCM/d, which covers some 78% of average gas demand in 2009 and 49% of the average daily demand in January 2010.

PGNiG owns all the Polish underground gas storage facilities. Except the portion (50 MCM) made available to OGP GAZ-SYSTEM, PGNiG is the only user of the gas storage facilities in Poland. PGNiG plans to expand the storage capacity from the current level of 1.8 BCM to 2.7 BCM by 2012 and to 3.2 BCM by 2015.

4.3 Emergency Policy for Natural Gas

Diversification of supply sources and routes, development of natural gas infrastructures for such diversification (including construction of an LNG terminal and interconnectors), expansion of underground storage capacity, increase of domestic gas production and acquisition of shares in gas resources outside Poland are the key elements of Poland's gas security policy.

Under the Act of 16 February 2007, energy enterprises running a business of international gas trading and importers are obliged to maintain compulsory gas stocks within the territory of Poland, in storage installations connected to the gas system. The Act stipulates a gradual increase of compulsory stocks according to the following schedule:

15 days of imports

- from April 2007 to 30 Sep. 2009; 11 days of imports
- from 1 Oct. 2009 to 30. Sep. 2010;
- from 1 Oct. 2010 to 30. Sep. 2012; 20 days of imports
- from 1 Oct. 2012 to; 30 days of imports

These mandatory stocks of natural gas are required to be stored in installations that enable delivery of the entire inventory of these stocks to the gas transmission system within 40 days. The mandatory gas stocks in Poland are commingled with commercial stocks. The amount of mandatory gas stocks is reviewed by the President of the Energy Regulatory Office on the basis of transport forecast for the nearest year. The costs incurred by enterprises/importers to fulfil the obligation are considered as the justified costs of their operations and could be included in tariffs.

In 2009, PGNiG was the only company that had to maintain compulsory gas stocks in volumes determined by the President of the Energy Regulatory Office. To open the Polish gas market to competition and to align the Polish system with the EU directives, the Polish government envisages the following revisions to the Act:

- Allowing maintaining compulsory stocks of natural gas in storage facilities located outside the territory of Poland in other EU countries;
- Raising thresholds allowing to apply for a decision of the Minister of Economy granting exemption from the obligation of maintaining compulsory stocks; and
- Granting the right to apply for exemption from the obligation of maintaining compulsory stocks to entities which have yet to import natural gas
- Introduction of exemption from stockholding obligation for companies importing natural gas for their own usage

The amendment of the Act is expected to be adopted by the Parliament in second half of 2011.

Strategic Gas Stocks and Drawdown

Compulsory gas stocks are held at the disposal of the Minister of Economy. These stocks may be released by the operators of the gas transmission system or of the consolidated gas systems immediately after receiving a permission of the Minister of Economy.



Emergency Response Measures

In case disruptions occur in the supply of natural gas to the gas transmission system of Poland, the following procedures are envisaged to be taken in phases.

In the initial stage of a gas emergency (Phase I), trade enterprises and/or importers will secure additional supplies of natural gas from other sources or directions on a commercial basis, and/or will reduce gas supply to major consumers according to the agreements with them. PGNiG has some contracts with natural gas consumers, which allows it to impose restrictions for commercial reasons. Such interruptible contracts provide for requirement to notify the client at least 8 hours in advance, before the agreed restriction level starts to be implemented.

If the TSO assesses that the measures introduced in Phase I are insufficient to eliminate the threat to security of natural gas supply in Poland, the Minister of Economy will decide on the use of compulsory stocks (Phase II). OGP GAZ-SYSTEM (TSO) is responsible for conducting the withdrawal of compulsory gas stocks, in coordination with the Storage System Operator, PGNiG.

If the measures taken in Phase I and II do not restore the state of Poland's natural gas security, the TSO will notify the Minister of Economy of the need to impose restrictions on the use of natural gas (Phase III). According to the regulation of the Council of Ministers of 19 September 2007, households and other customers with total contracted capacity from the exit point of less than 417 cubic m³/h are not subject to restrictions. The restrictions will be imposed on the basis of plans, which are elaborated by TSO, DSOs and enterprises fulfilling the role of network operators, and need to be approved by the President of Energy Regulation Office.

If the response measures of Phase I to III turn out to be insufficient, the Council of Ministers can include commercial stocks present in storage facilities throughout the country into the compulsory stocks of natural gas (Phase IV).

Fuel Switching

The Polish Administration does not have any legal authority or policy to promote fuel switching away from natural gas in an emergency. Gas-fired power plants are not legally required to hold certain amount of back-up fuel stocks on site.

³ Demand used here is monthly gross inland deliveries (observed) as reported in the MOS.

INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA), an autonomous agency, was established in November 1974. Its primary mandate was – and is – two-fold: to promote energy security amongst its member countries through collective response to physical disruptions in oil supply, and provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy for its 28 member countries and beyond. The IEA carries out a comprehensive programme of energy co-operation among its member countries, each of which is obliged to hold oil stocks equivalent to 90 days of its net imports. The Agency's aims include the following objectives:

Secure member countries' access to reliable and ample supplies of all forms of energy; in particular, through maintaining effective emergency response capabilities in case of oil supply disruptions.

- Promote sustainable energy policies that spur economic growth and environmental protection in a global context – particularly in terms of reducing greenhouse-gas emissions that contribute to climate change.
 - Improve transparency of international markets through collection and analysis of energy data.
 - Support global collaboration on energy technology to secure future energy supplies and mitigate their environmental impact, including through improved energy efficiency and development and deployment of low-carbon technologies.
 - Find solutions to global energy challenges through engagement and dialogue with non-member countries, industry, international organisations and other stakeholders.

IEA member countries:

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> The European Commission also participates in the work of the IEA.

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