



**PGNiG**

Polskie Górnictwo Naftowe  
i Gazownictwo SA

# Country Gas Industry Report - POLAND

UN Economic and Social Council  
Economic Commission For Europe  
Committee on Sustainable Energy

Working Party on Gas  
20th Session  
Geneva, 19 – 20 Jan. 2010

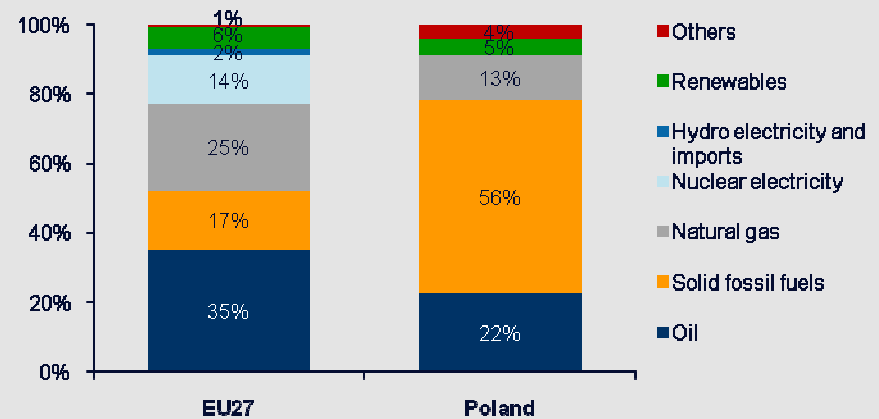
# Agenda

- 1. Polish Gas Market & PGNiG Role**
- 2. Polish Market During Economic Crisis**
- 3. Environmental & Other Issues That Have Impact on Gas Industry Operations**
- 4. Plans for Future**

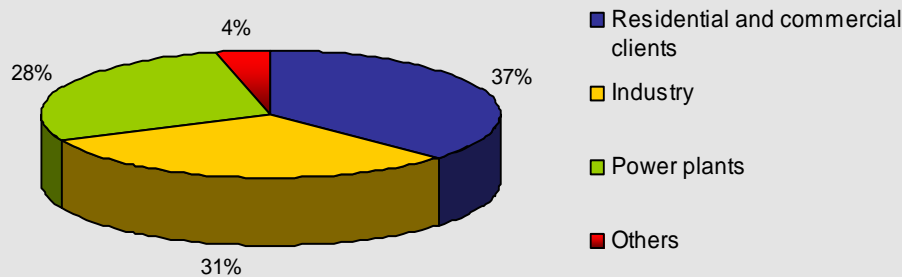
# Gas Market in Poland

- Poland is consuming 14 bcm (the same level as Romania and 3 times less than Spain or the Netherlands);
- Gas share in Polish energy market is much lower than an average in the EU (13% against 25%);
- It is a consequence of the extensive usage of coal (hard/brown) as the source of primary energy;

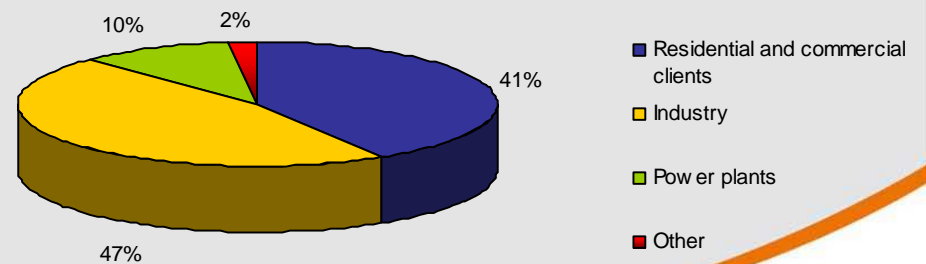
Primary energy consumption by fuel in 2008\*



EU27 natural gas sales by sector in 2008\*



PGNiG natural gas sales breakdown in H1 2009

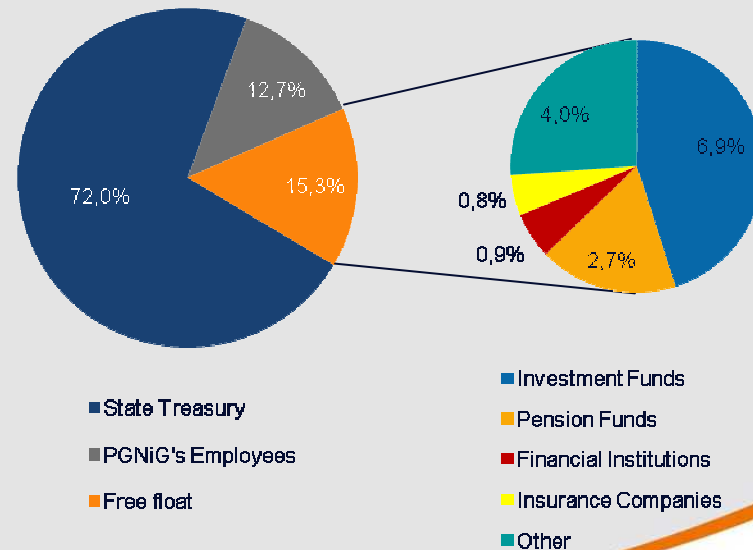


# Overview of PGNiG Business

**PGNiG is the leading oil and gas company in Poland**

Trade	E & P	Storage	Distribution
Gas sales – 13,9 bcm (2008) Gas import –10,3 bcm (2008)	Gas production – 4,1 bcm /a Oil production – 496 mtons /a	7 UGS (100% market) Capacity – 1,63 bcm (2008)	6 distribution companies 6,6 mln of end customers

- Vertically integrated business (excluding TSO)
- Listed on Warsaw Stock Exchange since September 2005 (the biggest IPO of 2005)
- Between April and August 2009 ca. 12% of stock capital has been transferred from the State Treasury to entitled employees. The process will limit State Treasury shareholding from 84% to 72% of capital.
- Market capitalization of USD 7.3 bln\*

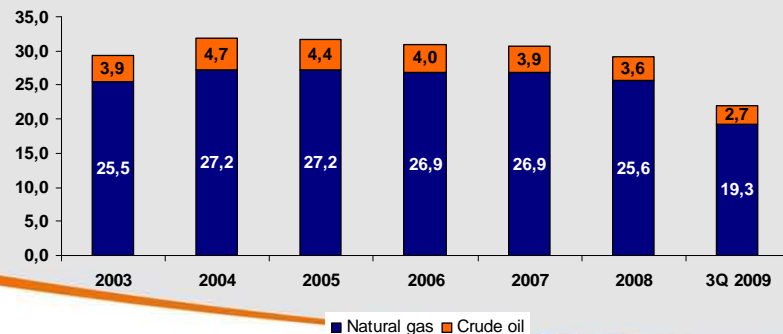


\* PGNiG = 3.65 PLN; USD/PLN = 2.95

# Exploration and Production in Poland

- The leading Polish onshore E&P player
  - PGNiG is a dominant producer of gas and crude oil in Poland
- Strong resource potential
  - documented gas reserves **588 mboe** (93.5 bcm)
  - documented oil reserves **156 mboe** (21.4m tonnes)
- Good RRR and R/P ratios\*
  - RRR = **0.82**
  - R/P = **25.6**
- Oil & gas exploration and appraisal concessions in Poland
  - PGNiG - 77 concessions (little above 50% of concessions)
  - 13 foreign companies – 76 concessions

Annual gas and crude oil production (mboe)

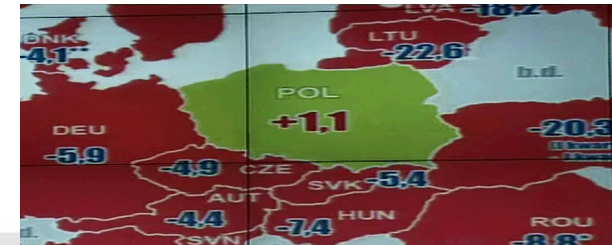


## PGNiG gas exploration & production concessions



- PGNiG's licences
- Licences, which PGNiG is applying for
- Other company's licences

# Polish Market During Economic Crisis



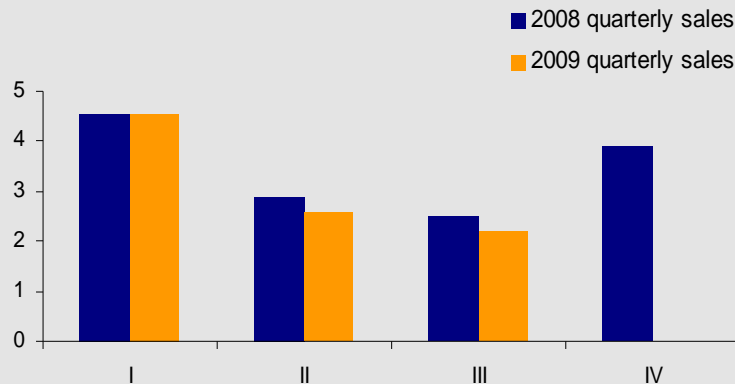
Poland: the green island on the red sea of recession

- Q2 2009: GDP 1,1%
- Q3 2009: GDP 1,7%
- Forecast: Q4 2009: GDP 2,5%
- GDP for total 2009: 1,5% growth, while EC and foreign banks prognosis for Poland was GDP below 0.

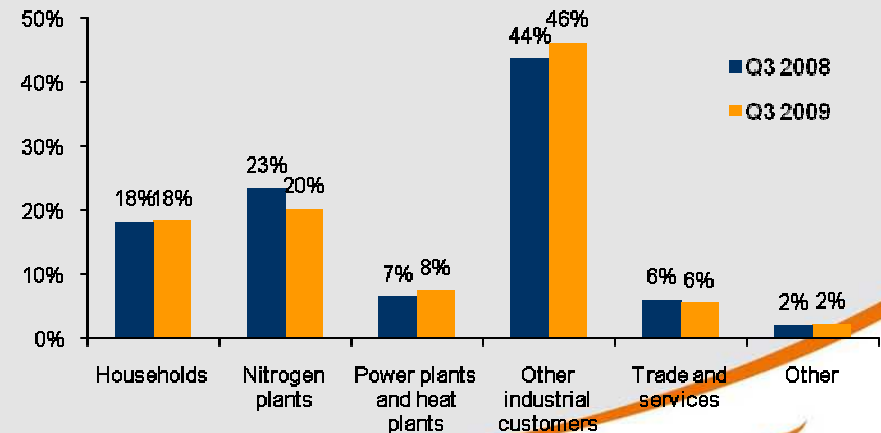
- Decline in the sales volume is an effect of lower demand for natural gas, both from industrial customers (mainly nitrogen plants), and from households (higher temperatures in September 2009 compared with September 2008);
- A drop in the volume of gas sales caused a decrease in the revenue from gas sales.

Source: Ministry of Finance

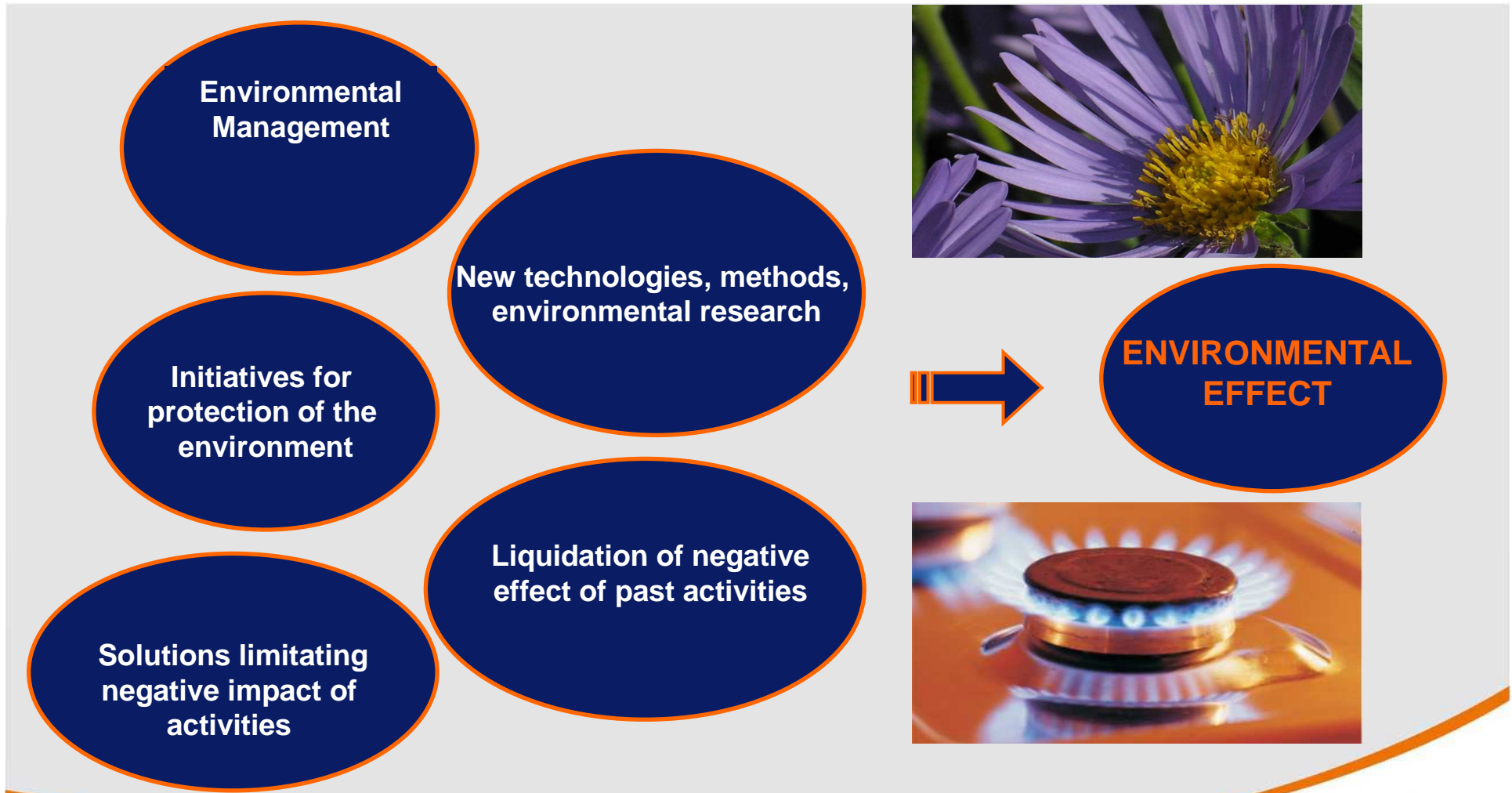
Natural gas sales 2008-09 / bcm



PGNiG natural gas sales breakdown in Q3 2009



# Environmental Policy



**ENVIRONMENTAL EFFECT**



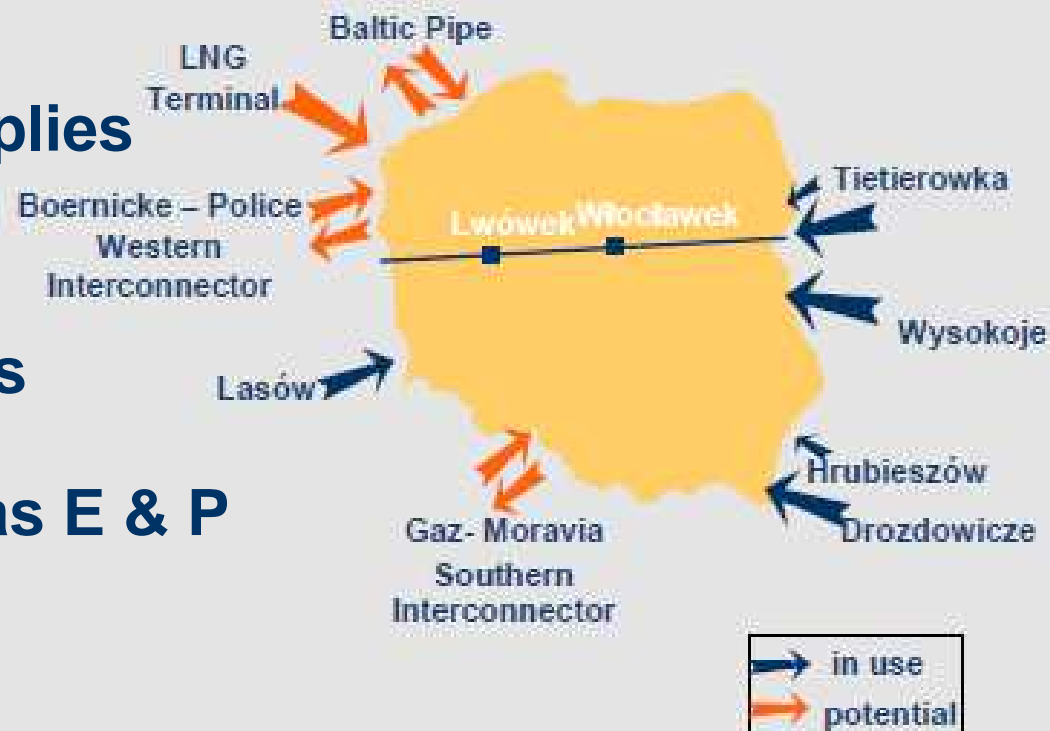
# Other Issues That Have Impact on Gas Industry Operations and Practice

- **PGNiG activity aiming change in the Polish gas market structure. Competitiveness is to be increased by building new necessary infrastructure:**
  - Additional UGS capacity
  - Regasification terminal at Świnoujście
  - Expanding interconnectors with Germany, Czech Republic and Denmark
- Polish internal law: incentives aiming stimulation for expanding infrastructure
  - Eg.: art. 45 cl. I of „Energy Law”: a company dealing within energy sector which sets up tariffs for gas fuels is authorized to reassure the cost recovery of justified activity with justified return on capital involved in that activity.
- Governmental activity is supported by **Operational Programme Infrastructure and Environment (OPI&E)**: an integral perspective on problems of the basic infrastructure which includes technical infrastructure and principal elements of the social infrastructure.
  - *Priority Axis X – Energy Security, including diversification of the energy sources*



# Plans for the Future

- **Diversification of Gas Supplies**
  - LNG
  - Interconnectors
- **Underground Gas Storages Expansion**
- **Development of Oil and Gas E & P Activities**
- **Power Generation**



# LNG Deliveries to Poland

## Basic facts concerning LNG project

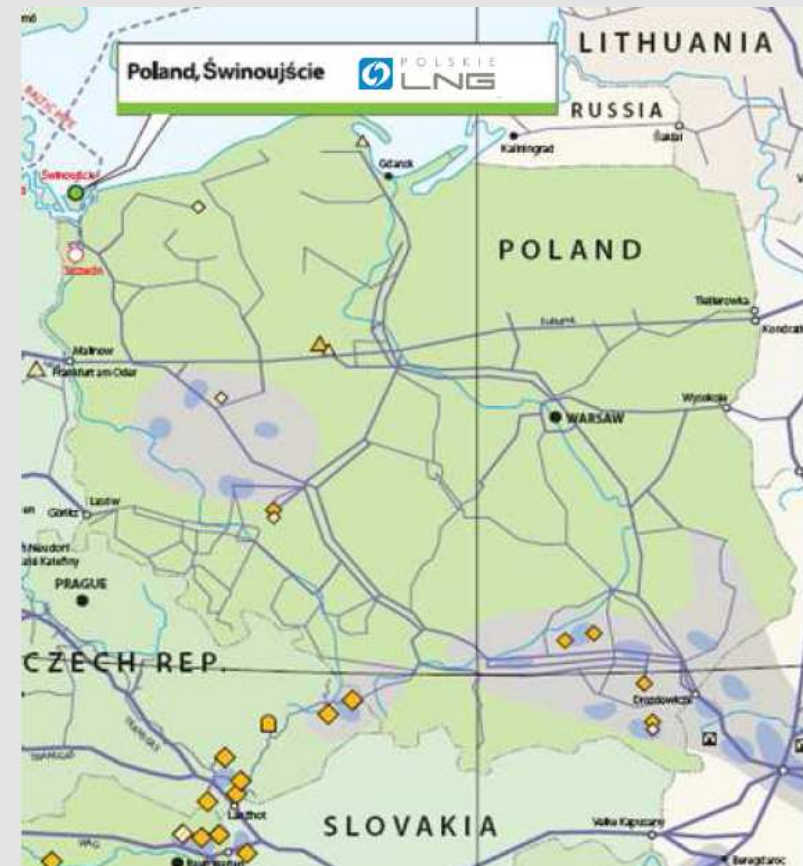
Location of terminal: Świnoujście  
Estimated cost: EUR 600m  
Capacity of terminal: 5.0 bcm/a

LNG tanks capacity: 2 x 160,000 m<sup>3</sup>  
Project completion: 1Q 2014

**TSO Gaz-System/Polskie LNG - companies responsible for LNG terminal construction.**

## Sourcing LNG to Poland – PGNiG

- On 29 June PGNiG and Qatargas announced the signing of SPA for LNG supply from Qatar to Poland;
- Details: one million ton LNG annually (ca.1,45 bcm); 20 year long term agreement (start in 2014); deliveries with Q-Flex class of vessels;
- PGNiG is considering supplementing long term contracts with short-term spot purchases.



Source: GLE LNG map

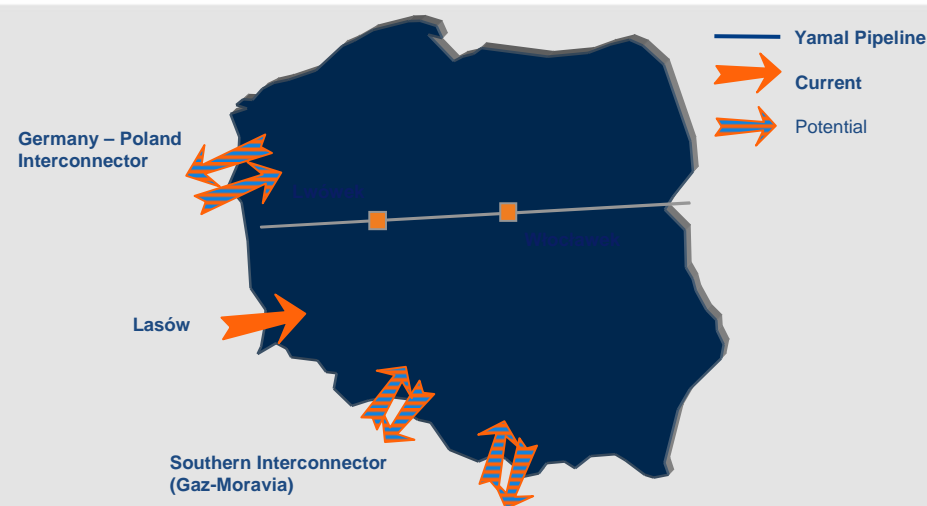
# Interconnectors – Enhancing European Network

## Germany - Poland

- The project carried out by InterTransGas GmbH (PGNiG 50% and VNG 50%);
- The possibility of gas flow into both directions;
- Initial capacity up to 3 bcm/a;
- Pipeline DN 700, L = 140-160 km, MOP 10/8,4 MPa;
- Two compressor stations – one near to Boernicke and second in Hintersee.

## Interconnector „Gaz-Moravia”

- The potential use of interconnection built to connect Polish and Czech transmission systems near Cieszyn;
- The possibility of gas import ca. 0,5 bcm/a starting 2010/2011.



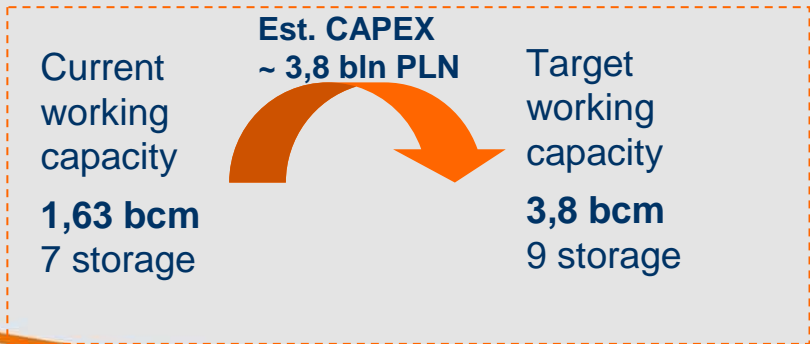
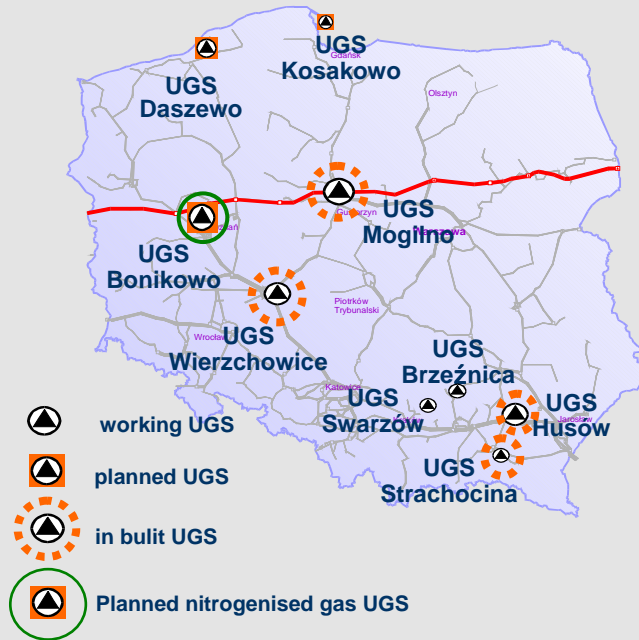
## Lasów

- OGP Gaz System works on the expansion of Lasów cross-border point, to increase the possibility of gas delivery from Germany. Until the end of 2011 OGP Gaz-System plans to increase technical gas delivery capacity from current 0,9 bcm to 1,5 annually.



# Expansion of Underground Gas Storage Facilities

## UGS – construction and extension



## Details

### Main Goals

- Optimization of the seasonal gas sales;
- Protection of customers against transmission system failures;
- Financial advantages – arbitrage between summer and winter seasons.

### Timeframe

- **2010** – Completion of construction of UGS Bonikowo;
- **2011** – Completion of extension of UGS Strachocina and UGS Husów;
- **2012** – Completion of extension of CUGS Mogilno
- **2015** – Completion of extension of UGS Wierzchowice and completion of construction of CUGS Kosakowo;
- UGS construction in Poland is supported by EU financial help.

# Exploration and Production Works Worldwide

## Pakistan

- Explorations works in the area of Kirthar block (since May 2005);
- PGNiG owns 70% interest in this block with the remaining 30% held by Pakistan Petroleum Ltd.;
- In the year 2008 PGNiG made complex geological and seismic data interpretation, and in 2009 begun drilling works.

## Egypt

- Agreement for exploration works on 4,4 ths km<sup>2</sup> Bahariya Block - Western Desert (May 2009);
- 2008 works: reprocessing and 2D seismic interpretation (1,450 km);
- In 2009-2010 the Company will conduct 2D seismic research (1,350 km) and will make two exploratory wells 2,500 meters deep;
- June 2009: opening of PGNiG branch in Cairo.

## Libya

- In February 2008, POGC-Libya B.V. signed the Exploration and Production Sparing Agreement (EPSA) with the Libyan state-owned National Oil Corporation (NOC);
- EPSA covers the area of License 113 within the Murzuq Basin;
- In 2008 - 09 PGNiG conducted reconnaissance in the concession area, and in 2009 begun seismic and cartographic works.

## Denmark

- 2007: PGNiG signed Memorandum of Understanding with Danish company Willumsen Exploration Consultants Aps for 40% share take-over in onshore license 1/05 in Denmark;
- 2008: PGNiG conducted exploration works on the licence's area;
- 2009: PGNiG increased its share in the licence to 80%. Moreover the Company opened its branch in Denmark, which will lead this project;
- In the years 2009 and 2010 PGNiG will conduct 2D/3D seismic works and drilling hole.

## Norway

- Establishment of „PGNiG Norway”
- Acquisition of fields Skarv, Snadd and Idun:
  - Completion of 16 oil&gas exploration drills (start: 2009/10);
  - Construction of Floating Production Storage and Offloading (FPSO);
  - Annual production from NCS after 2011: 0,5 bcm of natural gas and 0,4 million tons of oil and NGL.
- Acquisition of prospecting licenses PL350, PL419, PL512, PL558 in partnerships with world known IOCs/NOCs;
  - Acquisition of seismic data, geological and geophysical record, reprocessing of 3D seismic data and evaluation of the license prospectivity.

# Power Generation – PGNiG Energia

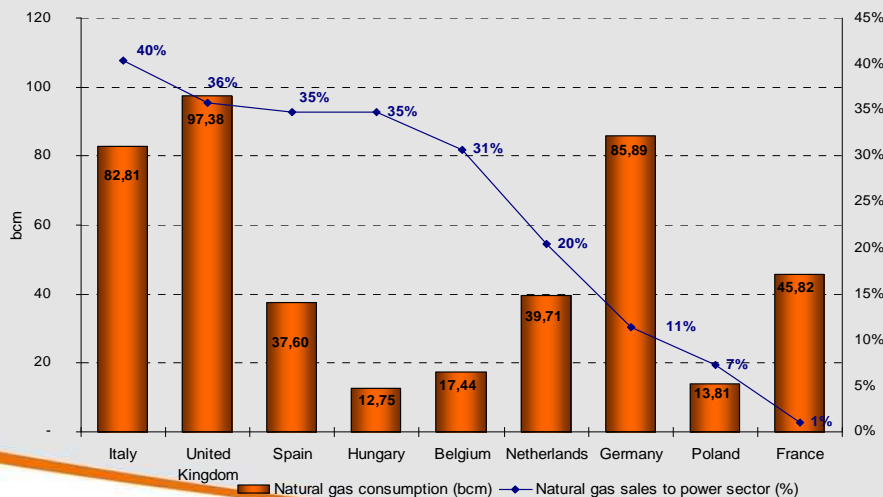


## Gas consumption for power generation

- Share of sales to power plants in total gas sales is currently very low in Poland;
- Power plants depend on hard and brown coal;
- Power plants demand significant modernization;
- Impressive field for investment and growth of gas sales.

By 2015 PGNiG plans to have at least 300 MW of its own production capacity.

## Gas sales to power plants (2007)\*



## PGNiG Energia

- PGNiG Energia – new company that will help to transform the Group into diversified energy corporation. PGNiG Energia will engage in projects related to:
  - Construction of power units;
  - Investment in gas-fired cogeneration plants;
  - Biogas projects;
  - Trading on the wholesale electricity market.

## New investments in power sector

Investment projects with the involvement of PGNiG	Electric Power (MWe)	Expected to be launched	Expected gas consumption per year
EC Stalowa Wola Project	400	2013	580 mln m <sup>3</sup>
ProGaz Gdańsk Project	230	2013	300-350 mln m <sup>3</sup>
Tarnów Project	200	2014	300-350 mln m <sup>3</sup>



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**Thank you for your attention.**