



**gig** Central Mining Institute, Katowice, Poland  
Experimental Mine „Barbara”

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# UPDATE ON CMM ACTIVITIES IN POLAND

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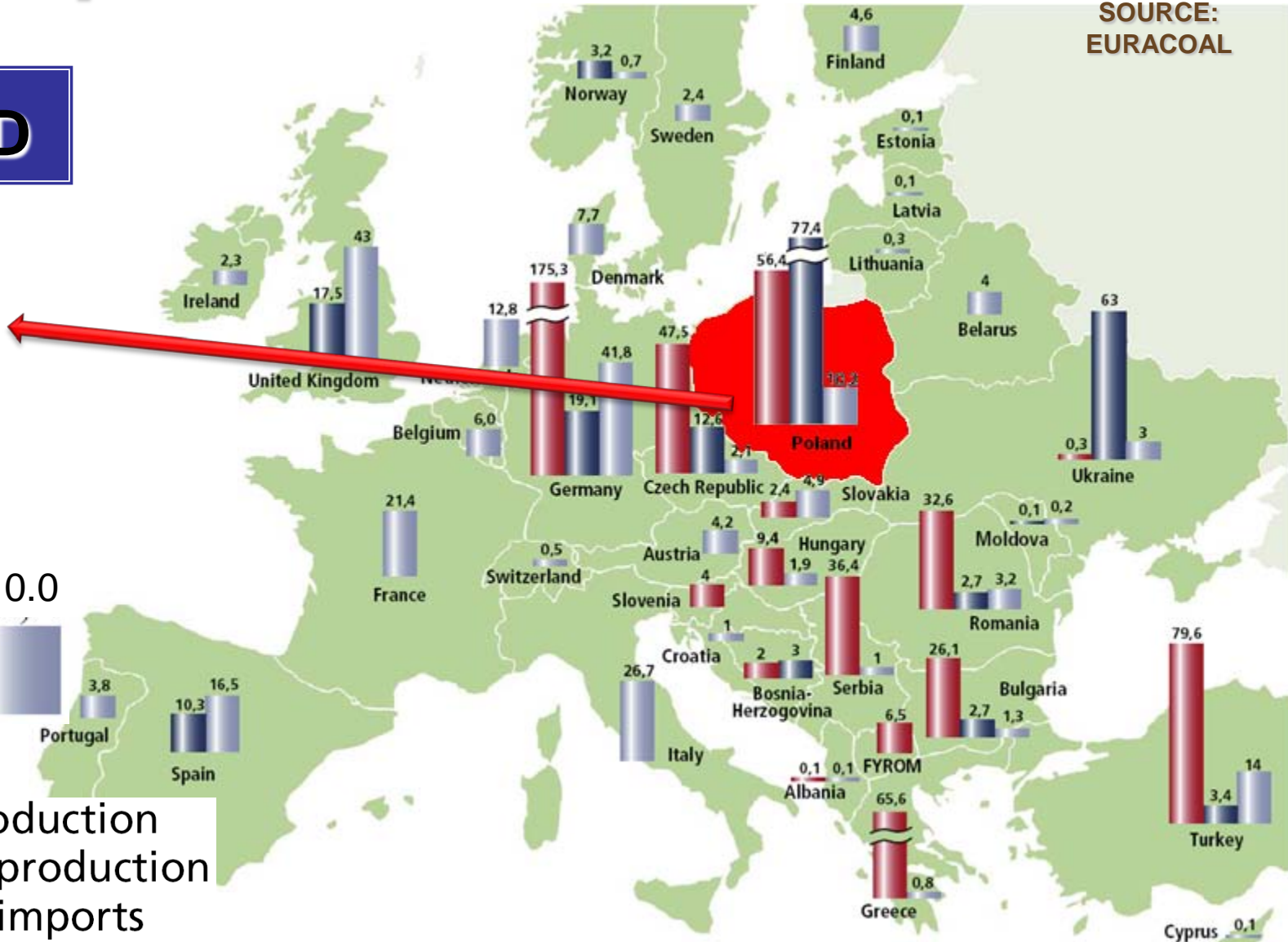
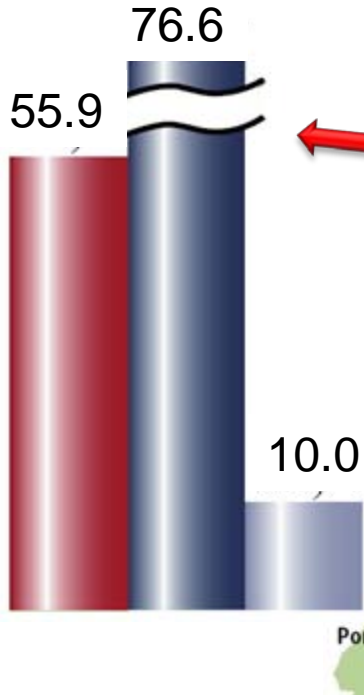
# Coal production and imports in Mt in 2010



SOURCE:  
EURACOAL

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## POLAND



- Lignite production
- Hard coal production
- Hard coal imports

# The role of coal in power generation in Poland

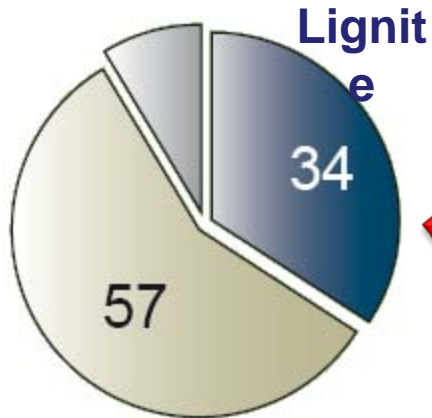


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SOURCE:  
EURACOAL

4

## POLAND



Hard coal

**Coal's share  
91%**

**EU 27  
Coal's share 29**

Legend: Lignite (dark blue), Hard coal (tan), Other (grey)



# Location of major Polish hard coal basins



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2008 DATA



\* completion of mining activities in 2000

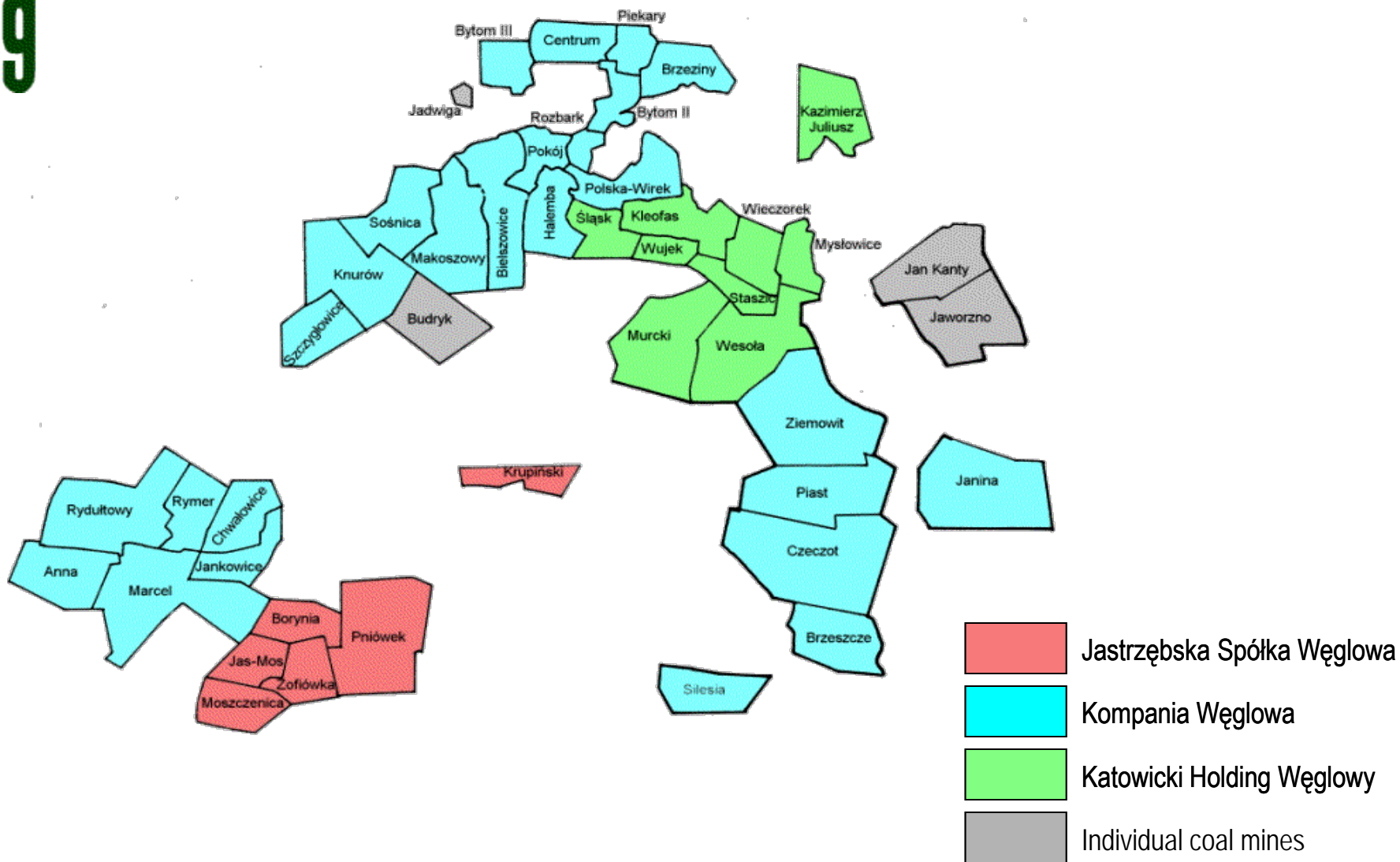
- ❖ RESOURCES:  
67 900 Mt
- ❖ BALANCED RESOURCES:  
43 201 Mt
- ❖ COMERCIAL RESOURCES:  
4 338 Mt

2010 DATA

- ❖ EMPLOYMENT  
114 089
- ❖ NUMBER OF MINES  
30
- ❖ HARD COAL COMPANIES
  - ❖ KOMPANIA WĘGLOWA
  - ❖ KATOWICKI HOLDING WĘGLOWY
  - ❖ JASTRZĘBSKA SPÓŁKA WĘGLOWA
  - ❖ POŁUDNIOWY KONCERN WĘGLOWY
  - ❖ LUBELSKI WĘGIEL BOGDANKA
- ❖ OUTPUT  
76.6 mln tonnes



# LOCATION OF THE HARD COAL MINES IN UPPER SILESIAN COAL BASIN





# POLISH HARD COAL COMPANIES



- the largest mining company in Poland and EU
- employment – 63,800
- 16 coal mines
- output – ca. 47 Mt of hard coal



## POLISH HARD COAL COMPANIES

- the largest coking coal producer in Poland and Europe
- employment – ca. 22,000
- 6 coal mines
- output – ca. 12 Mt of hard coal (83% coking coal)



# POLISH HARD COAL COMPANIES



- employment – ca. 20,000
- 5 coal mines
- output – ca. 17 Mt of hard coal





## Upper Silesian Coal Basin :

Presently **30** operating hard coalmines including:

**26** gassy coalmines

**19** use drainage systems

**14** utilise CMM



# TOTAL ANNUAL HARD COAL & CMM PRODUCTION

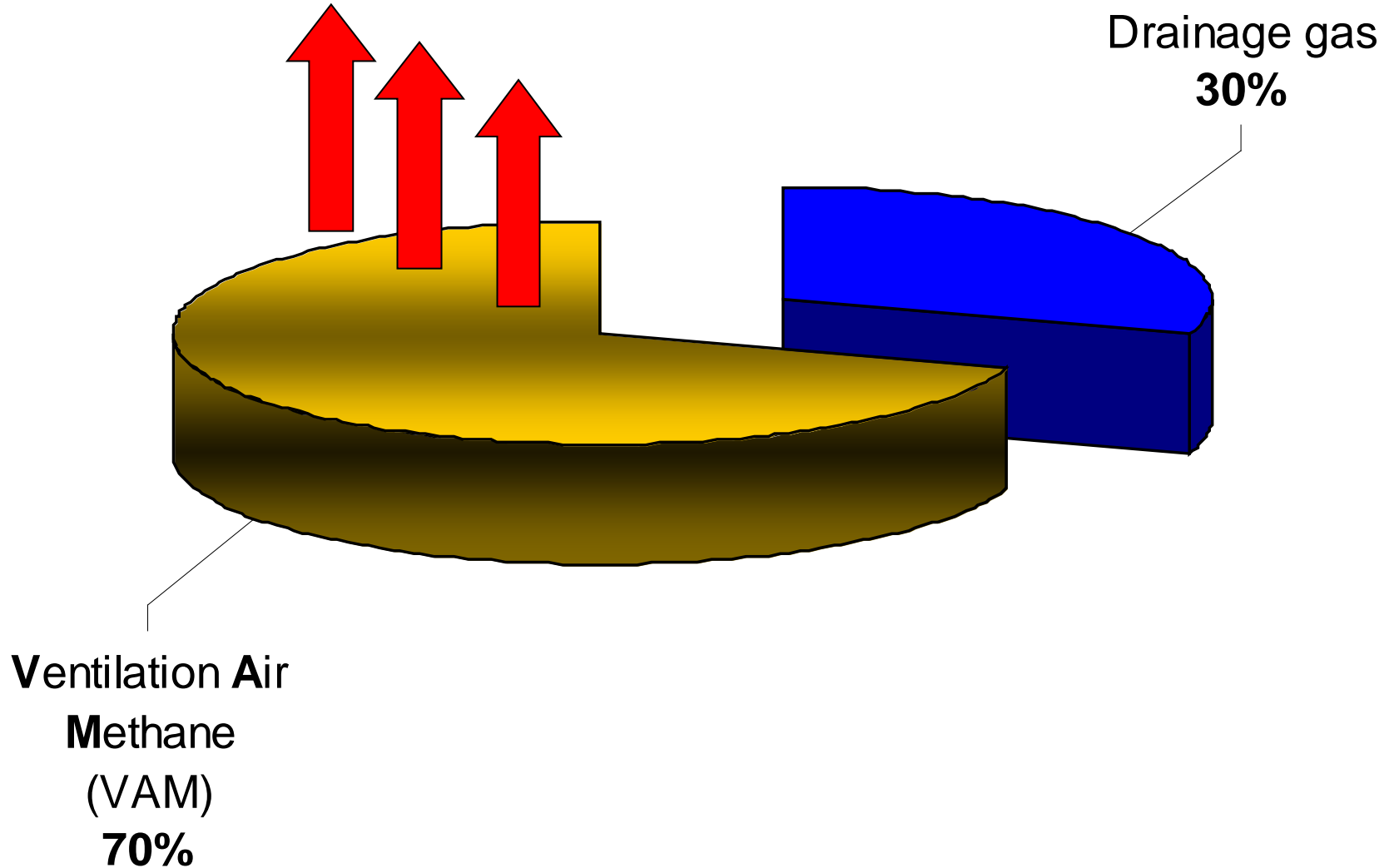


Hard coal output: **76.6 mln Tonnes**

Total absolute gasiness: **834.9 mln m<sup>3</sup>**

data for the end of 2010

# TOTAL GAS RELEASED DURING MINING OPERATIONS ( about 834.9 mln m3)





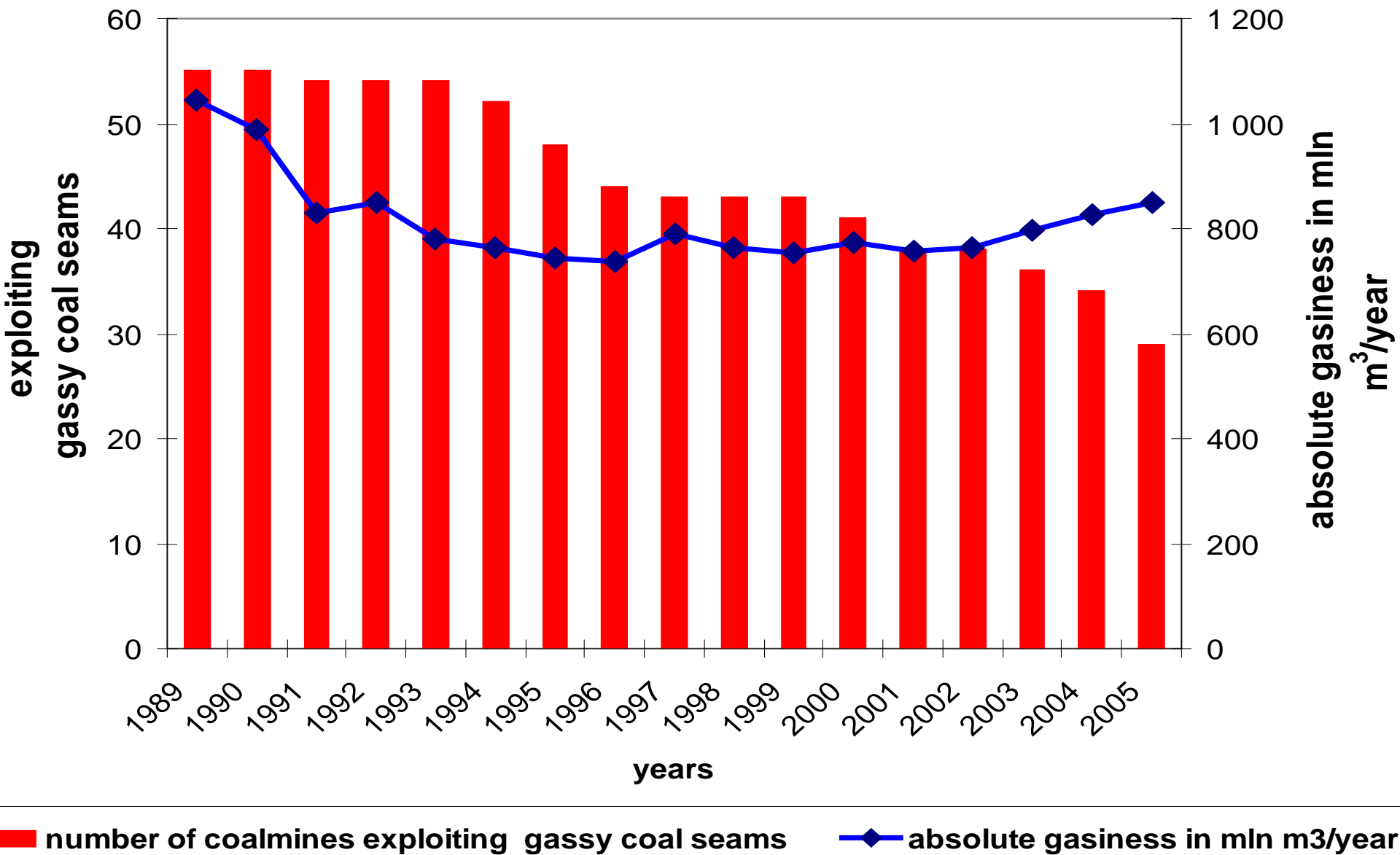
- **Drainage**

**in 19 (from 26 ) gassy coal mines**

**255.9 mln m<sup>3</sup> of methane was captured**

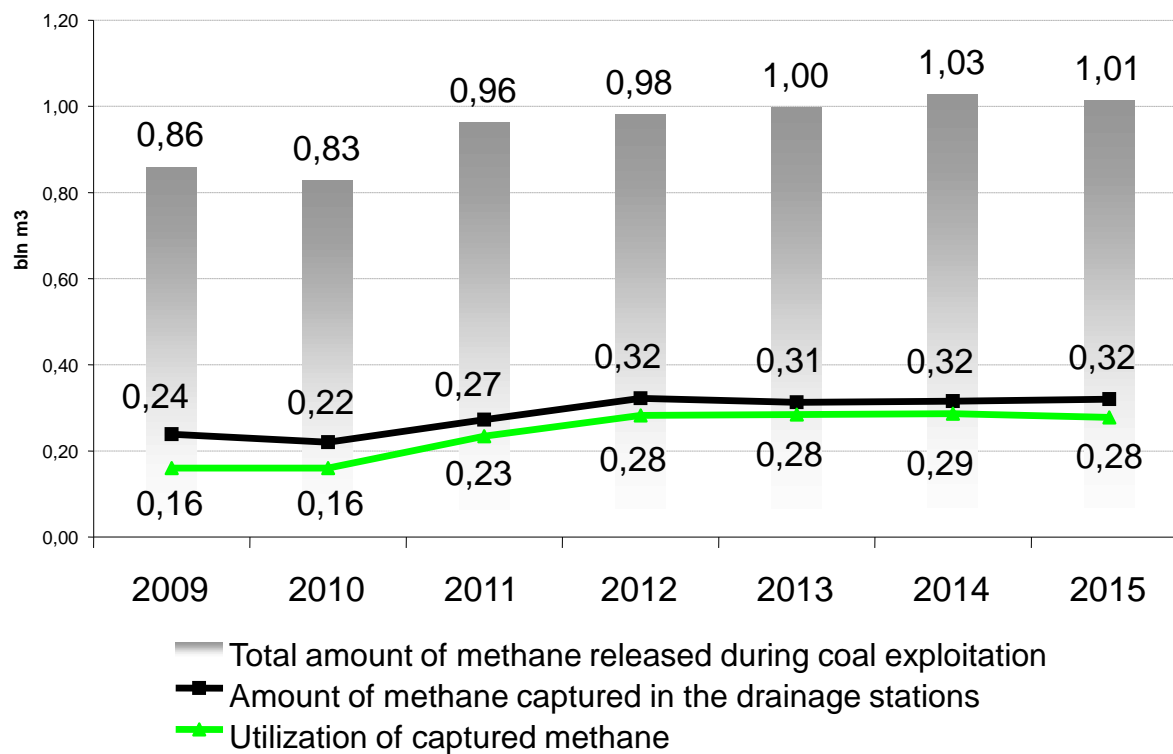
**161 mln m<sup>3</sup> (66%) was utilized**

# Changes of absolute gasiness versus decrease of active gassy coalmines' number





# UTILIZATION OF METHANE





# Support system for CBM & CMM in Poland

**Since March 11th, 2010 there is a support system for electricity produced from high efficiency cogeneration** (Primary Energy Saving > 10%) from CBM and CMM.

This system is a real financial support for the efficient utilisation of CBM and CMM.

**According to the energy law records, this system, will be valid until the year 2018**



**Taking over the energy  
produced from methane gas  
with the system of energy origin  
certificates (from cogeneration).**





- The idea of the support system was to put the **obligation on the energy companies selling the electricity to the end-users to buy** and present it to the President of Energy Regulation Office in order **to be remitted**,  
certain amount of **certificates of electrical energy origin, produced in cogeneration** **or** paying supplementary fee instead !



**It must be emphasized that above system could be effective only several months during the year, when there is sufficient demand for the heat !!!**

**In the year 2011 there will be analysis of effectiveness of above support system.**



## Conclusions / Challenges for Polish CMM and CBM

- **Only 30%** from **834.9 mln m<sup>3</sup>** of methane released during mining operations is being captured by drainage systems.
- **Only about 66%** of drainage gas is being utilized...
- **Will the supporting system for the cogeneration energy be able to stimulate more efficient utilisation of CMM ?**
- **70%** of methane released during mining operations is being vented to the atmosphere; **VAM projects are needed !**
- **Post Kyoto situation. Government assistance needed.**  
**Consideration of VAM & CMM emissions' reduction in the national plan of allocations could stimulate new projects !**



- **Extremely long procedures to obtain CARBON CREDITS ( e.g. Borynia mine – 4 years !)**
- **Shale gas operations in Poland another hope for Polish CBM when implementing new Directional Drilling Technologies ?**

Companies:

**Dart Energy**

**Poltex-Methane,**

**New Millennium Resources Poland,**

**still in Silesia region....**

Can we afford not to use this source of energy ?



**Thank you for your attention**

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