CEEP
Central Europe Energy Partners

Gas and coal: friends or enemies

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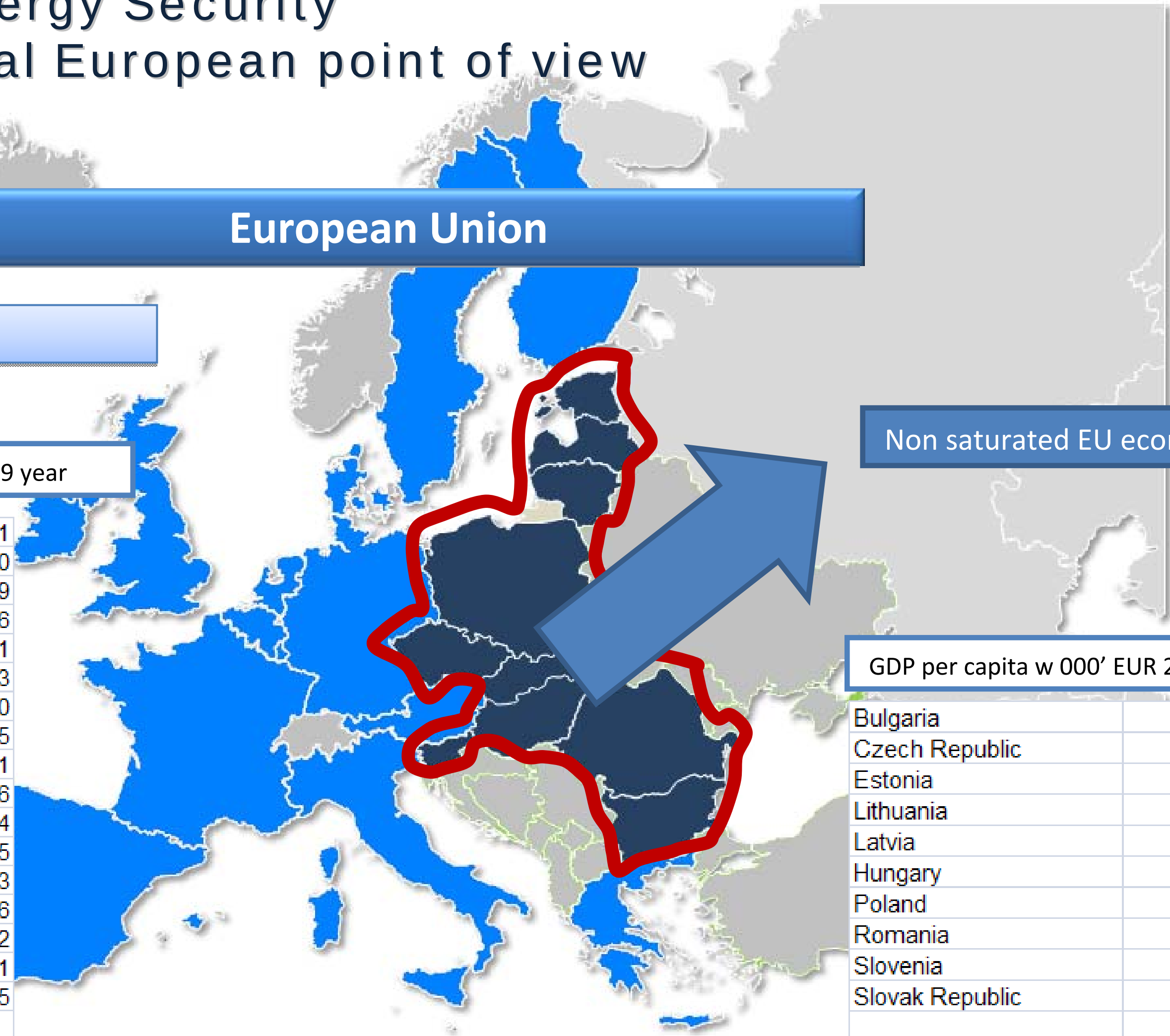
Working Brekfast in the European Parliament
II European Coal Days
1st of December 2011

European Energy Security
from a Central European point of view



GDP per capita w 000' EUR ,2009 year

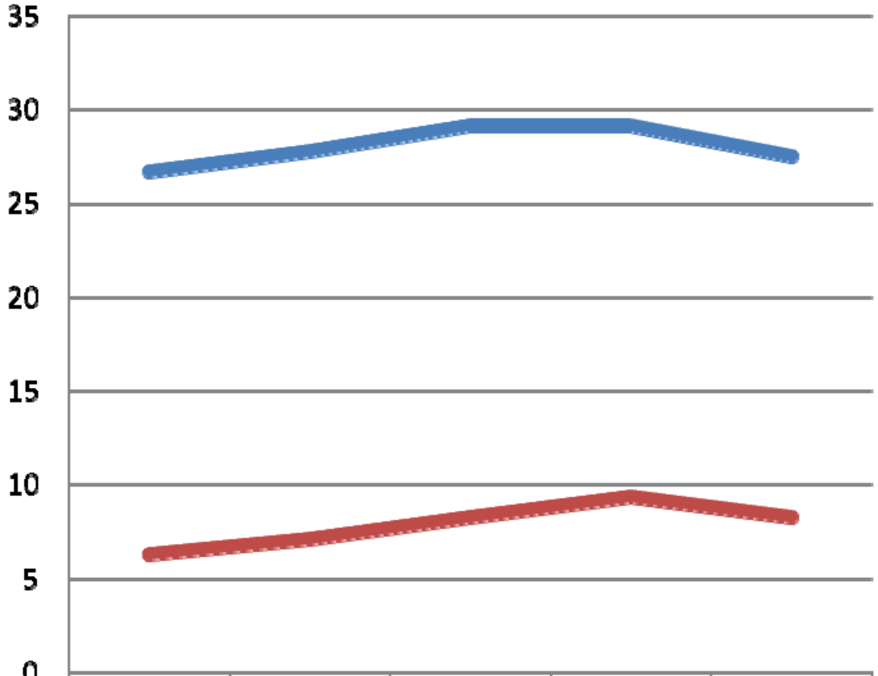
Belgium	31
Denmark	40
Germany	29
Ireland	36
Greece	21
Spain	23
France	30
Italy	25
Cyprus	21
Luxembourg	76
Malta	14
Netherlands	35
Austria	33
Portugal	16
Finland	32
Sweden	31
United Kingdom	25
Average GDP per capita	28

Source:Eurostat

GDP per capita w 000' EUR 2009 year

Bulgaria	5
Czech Republic	13
Estonia	10
Lithuania	8
Latvia	8
Hungary	9
Poland	8
Romania	5
Slovenia	17
Slovak Republic	12
Average GDP per capita	8

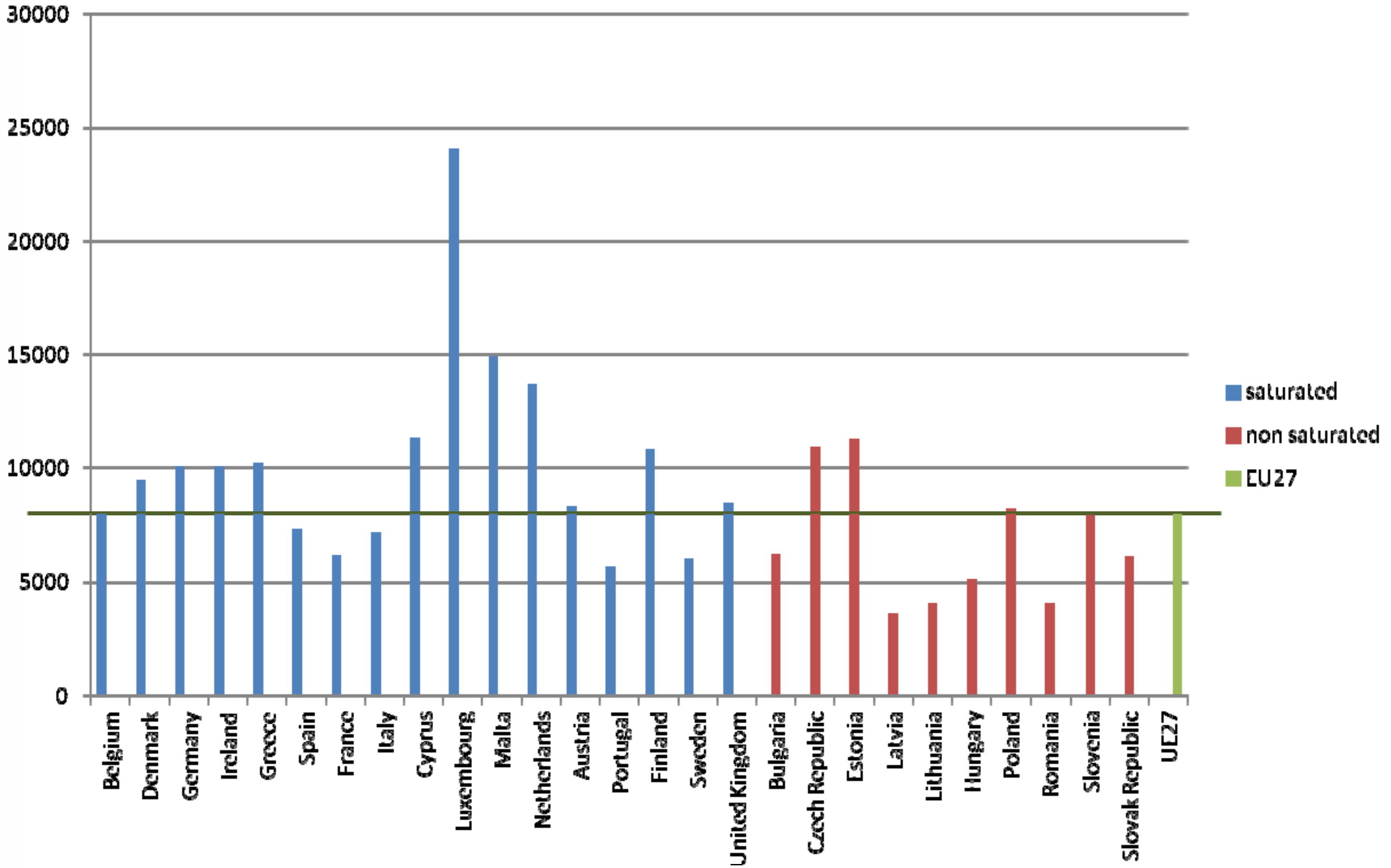
GDP per capita (000'EUR) UE27



	2005	2006	2007	2008	2009
saturated economies	26,7	27,8	29,2	29,2	27,5
non saturated economies	6,3	7,1	8,3	9,4	8,3

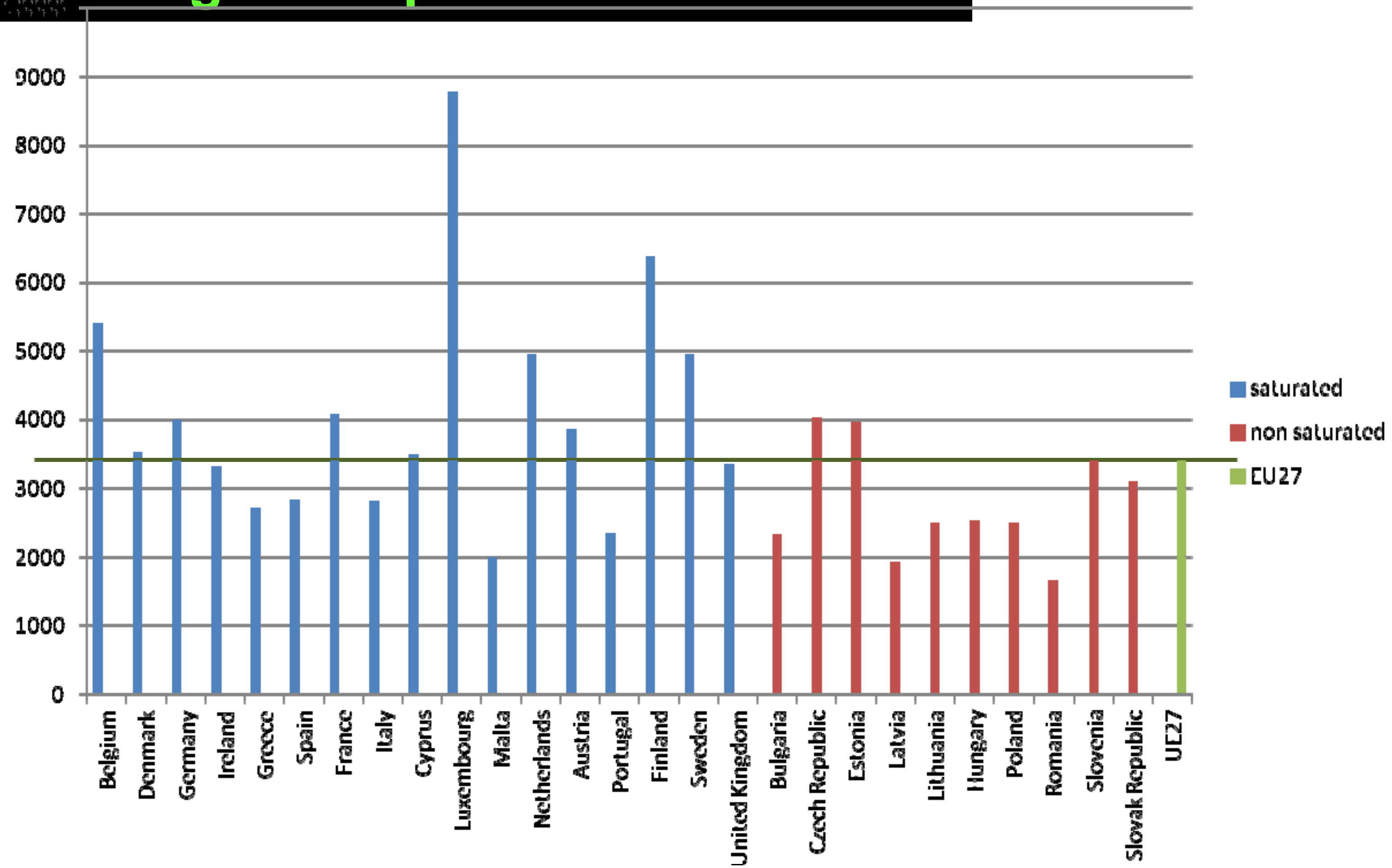
Source:Eurostat

CO2 emissions per capita (kg/cap) 2009



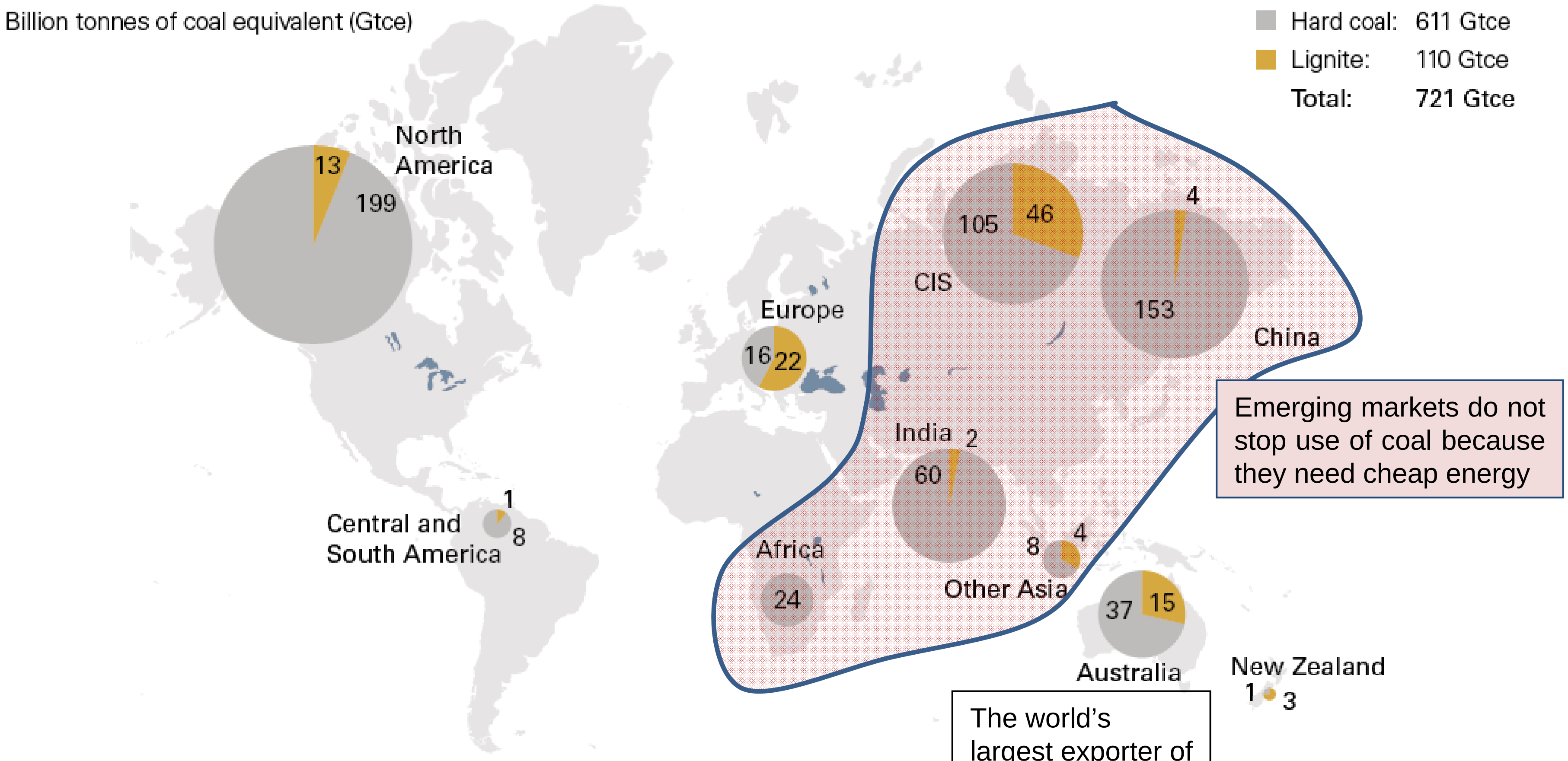
Source: European Commission, Countries factsheets

Energy consumption per capita 2009 - kgoe / cap



Source: European Commission, Countries factsheets

Global hard coal and lignite reserves



Emerging markets do not stop use of coal because they need cheap energy

The world's largest exporter of coal

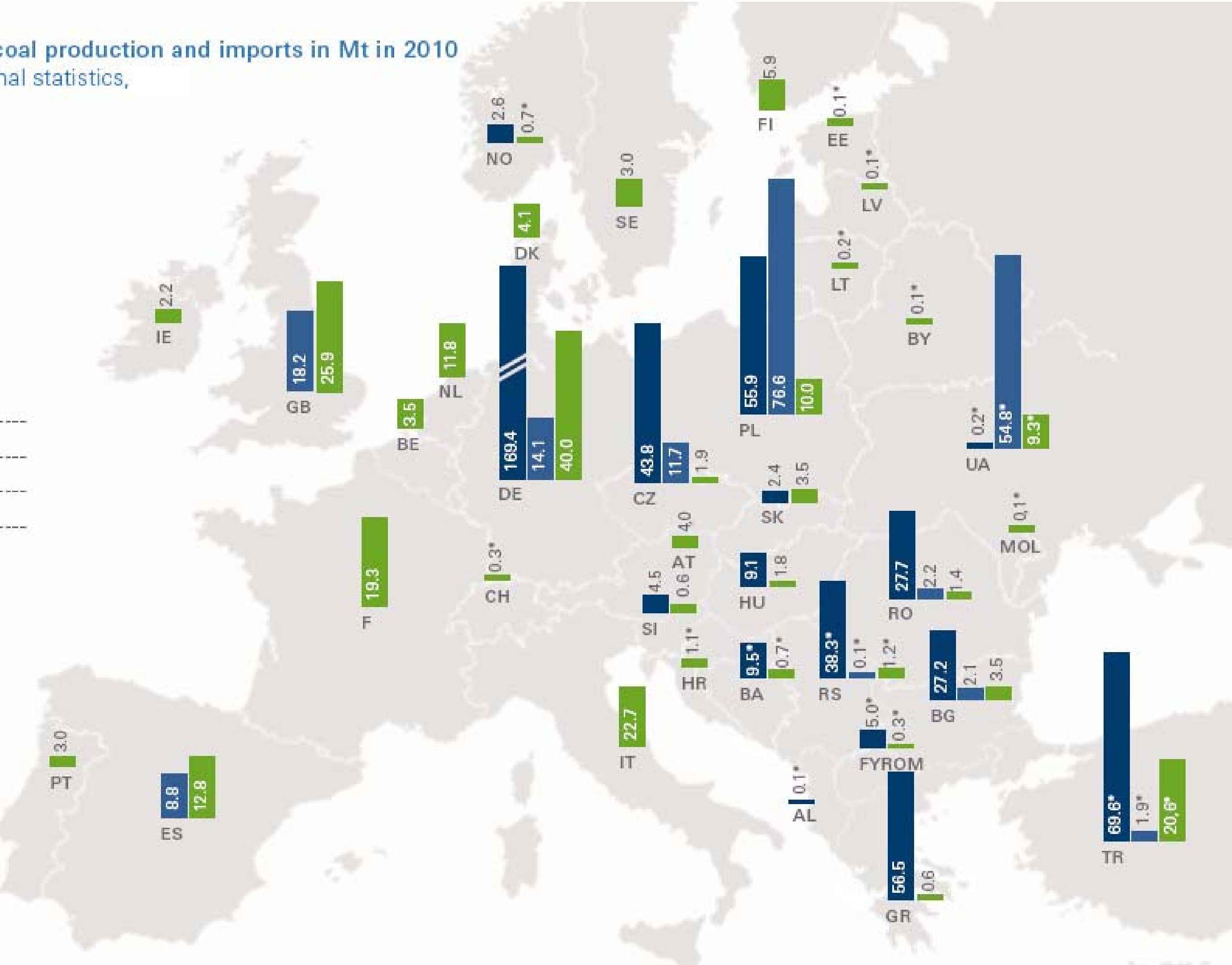
Source: BGR, EURACOAL

CEEP

Coal in Europe

Lignite production, hard coal production and imports in Mt in 2010

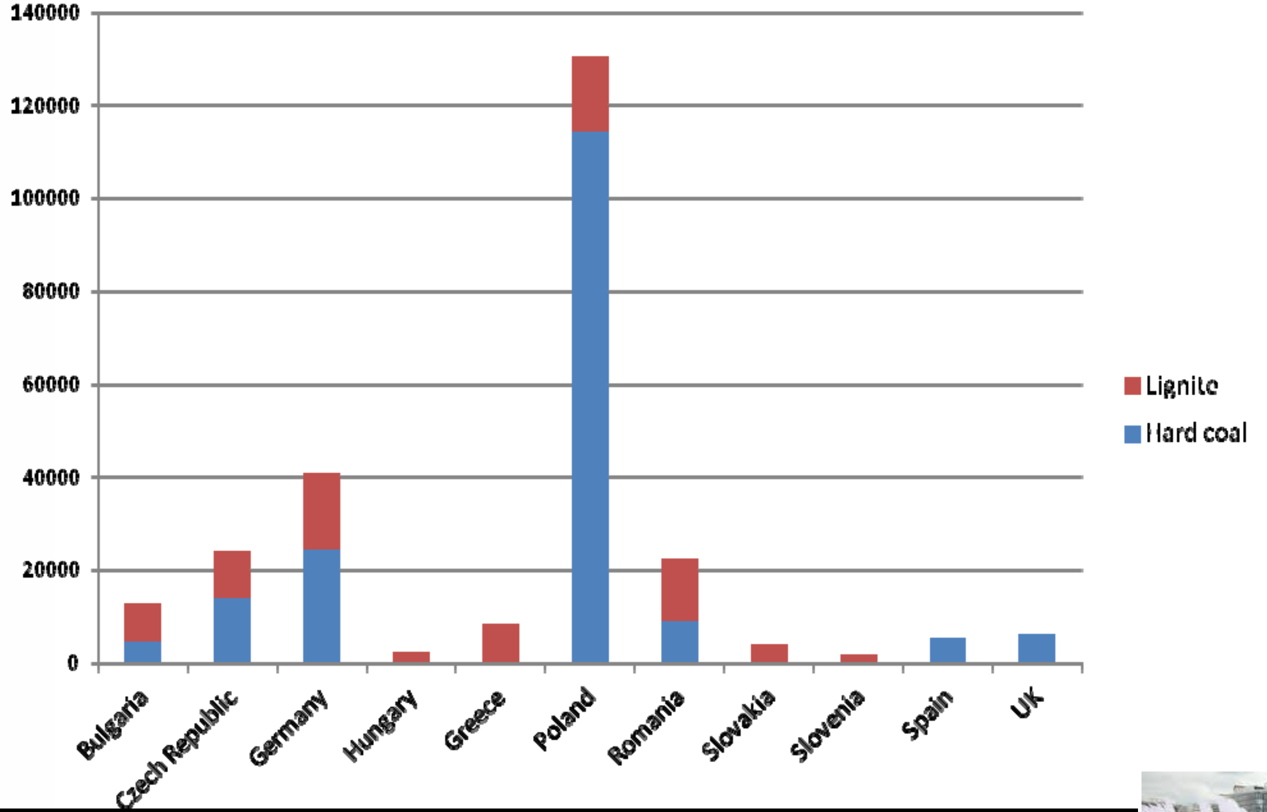
Sources: EURACOAL, national statistics,
partly preliminary figures
*2009



Information

- Lignite production
- Hard coal production
- Hard coal imports

Employment in the European coal industry 2010

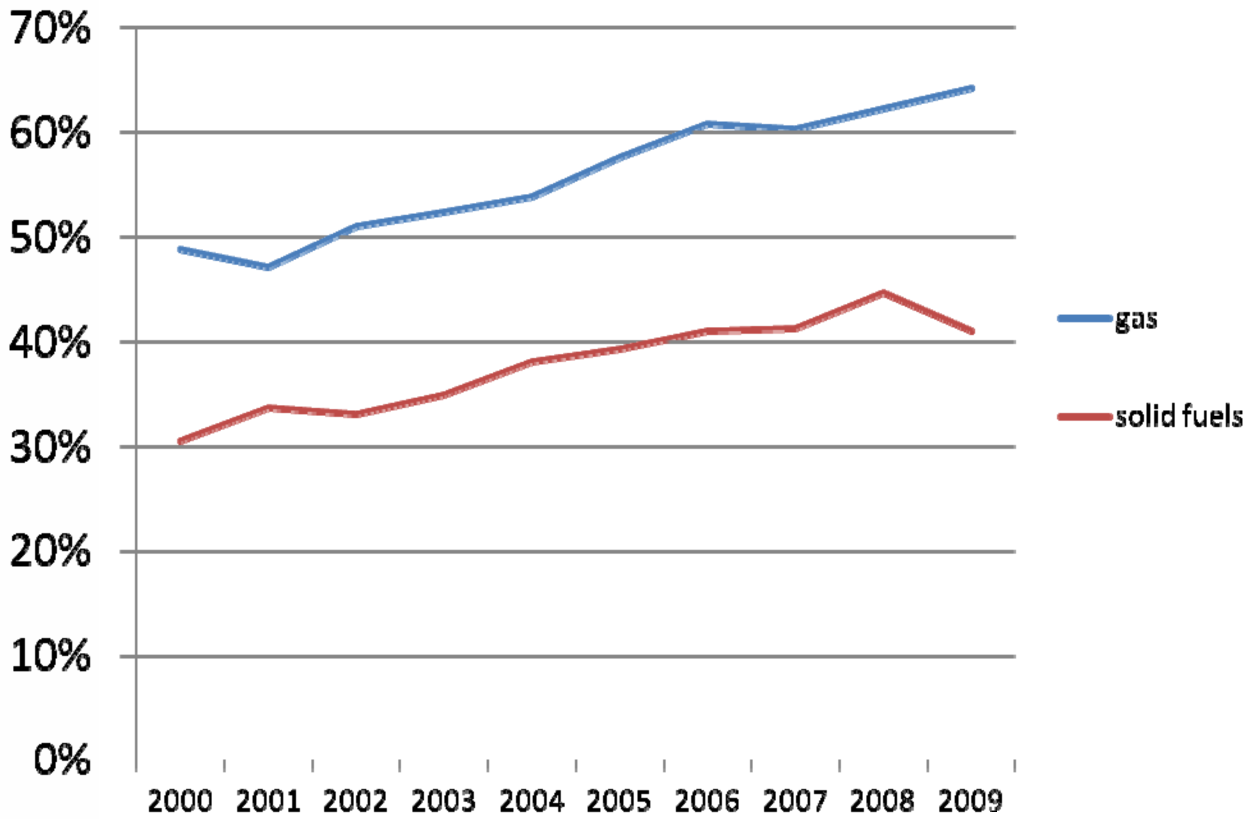


2010 EU 27 app. 300**.000** direct & **800.000 - 1.000.000** indirect jobs in coal mining

For each direct jobs in the lignite industry, another 2.5 jobs are created at companies who supply equipment and services.
Each jobs in the hard coal mining industry generates another 1.3 jobs

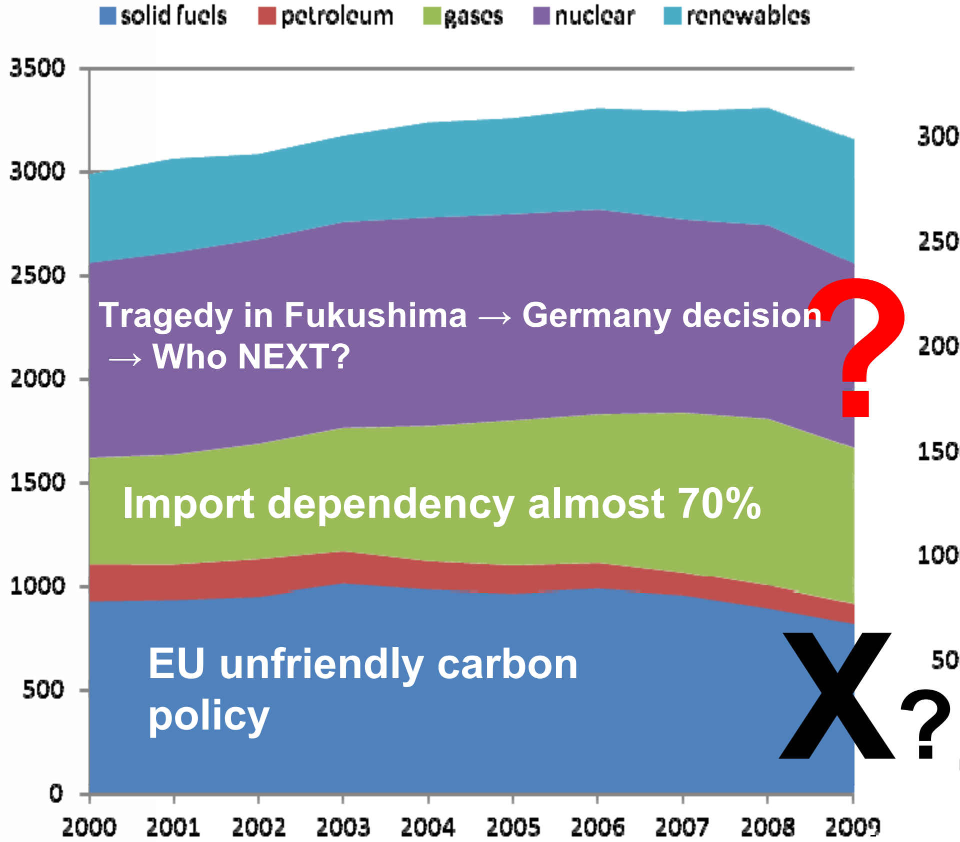
Source: EURACOAL, others

UE 27 import dependency



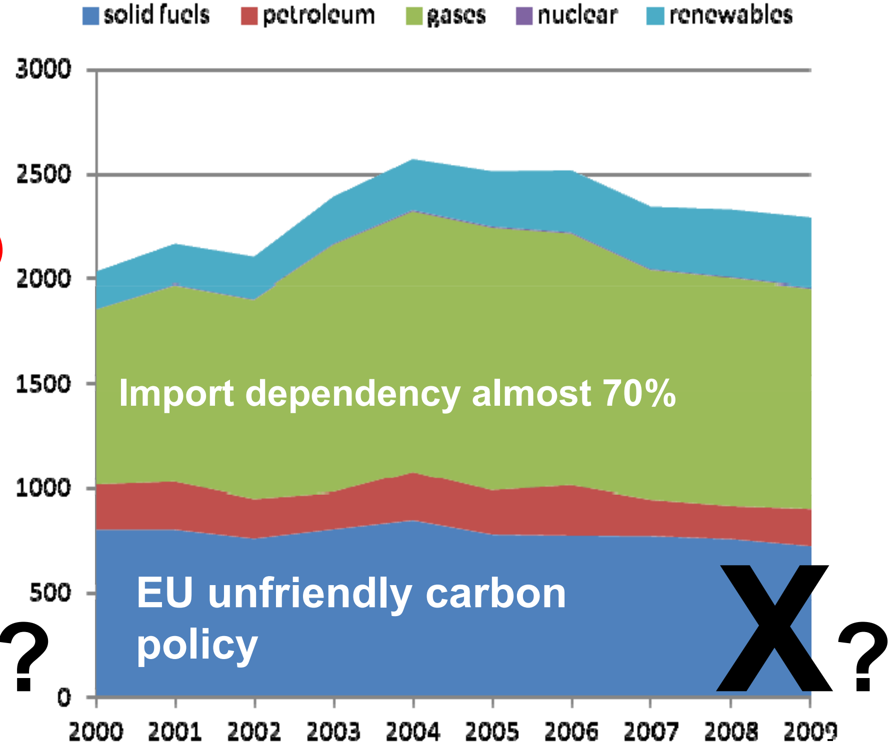
Source: Eurostat

EU 27 Gross Electricity Generation TWH



Source: European Commission, Countries factsheets

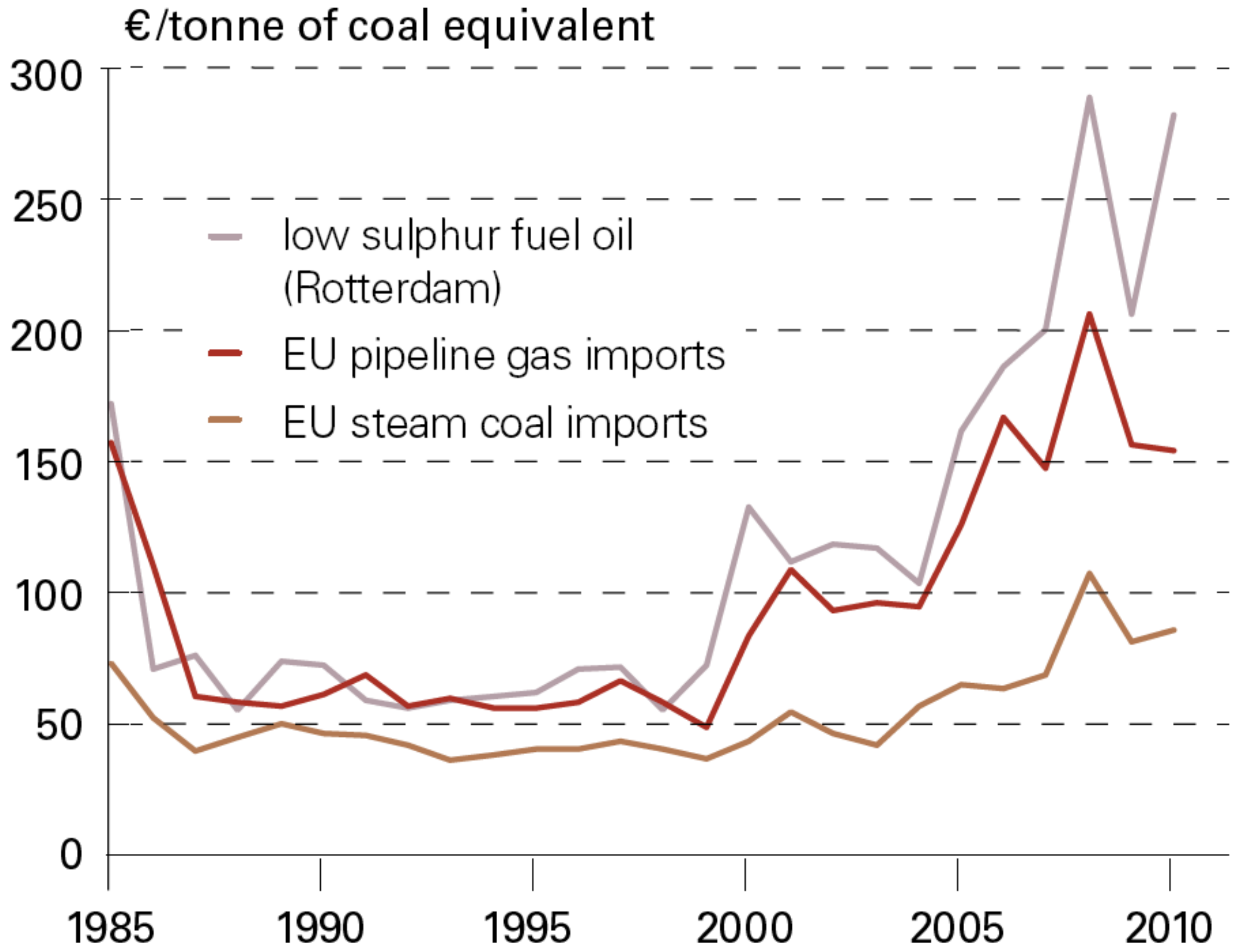
EU 27 Gross Heat Generation PJ



Elimination of solid fuels is impossible, but it is unfortunatelly possible that: countries who use coal will pay more for energy due to EU climate regulations.
They are mostly countries with non saturated economies

Prices of energy

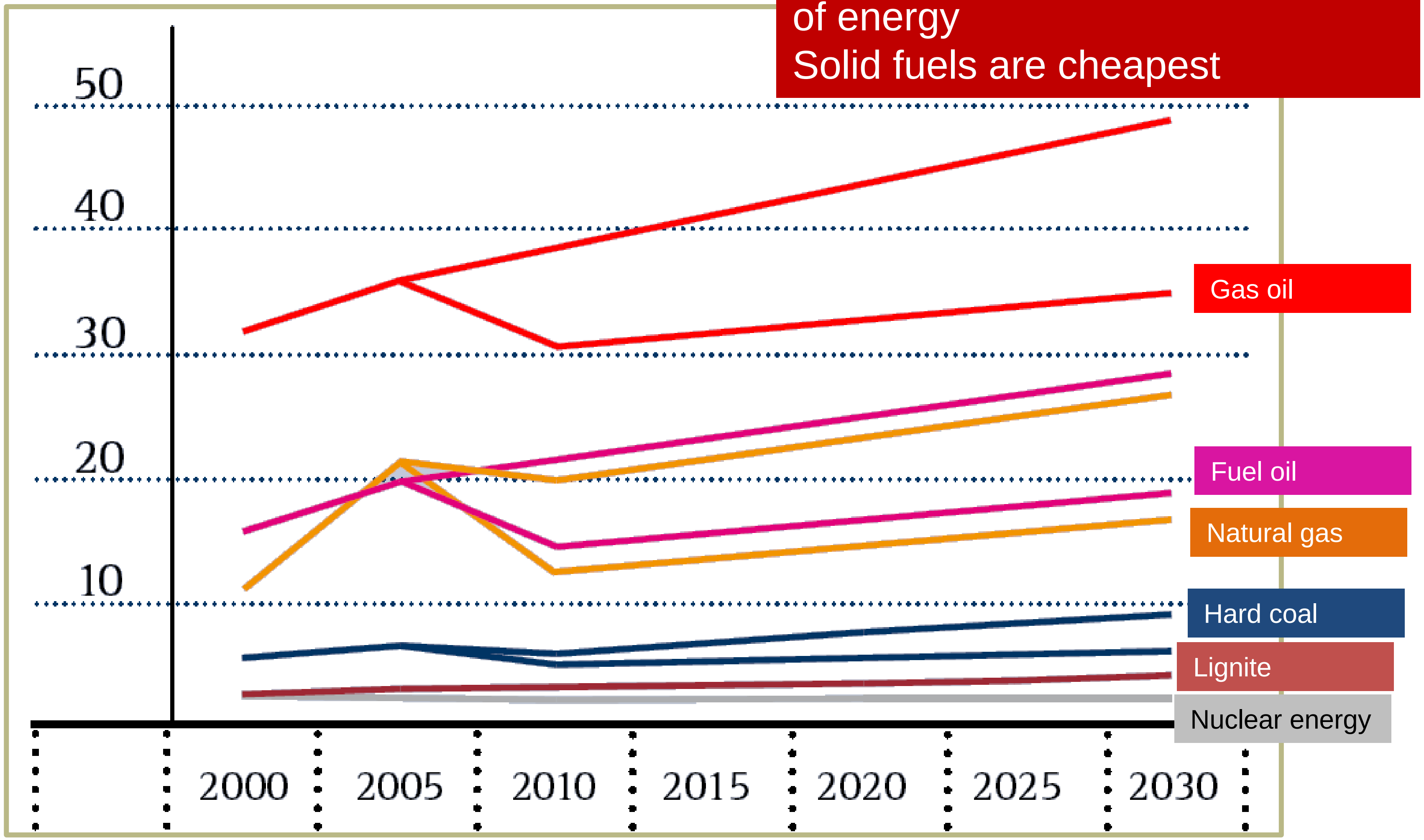
EU import prices for coal, oil and natural gas, 1985 to 2010



Source: IEA, EURACOAL

Energy Prices (EUR/MWH)

In times of crisis,
EU countries need cheap sources of energy
Solid fuels are cheapest

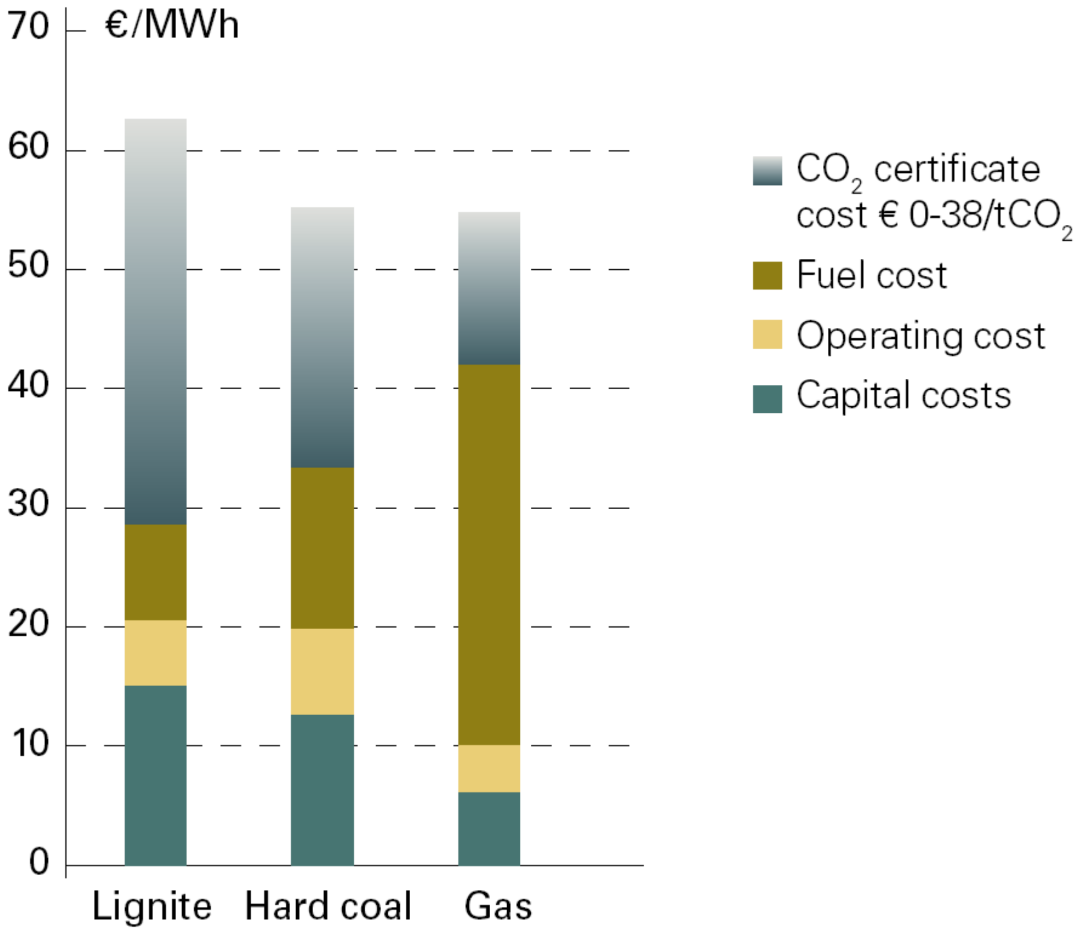


Source:Central Mining Institute

Full costs of new lignite-, coal- and gas - fired power plants

According to analysis by the university of Stuttgart, production costs are approximately:

- EUR 29/MWh for lignite,
- EUR 33/MWh for hard coal
- EUR 42/MWh for natural gas

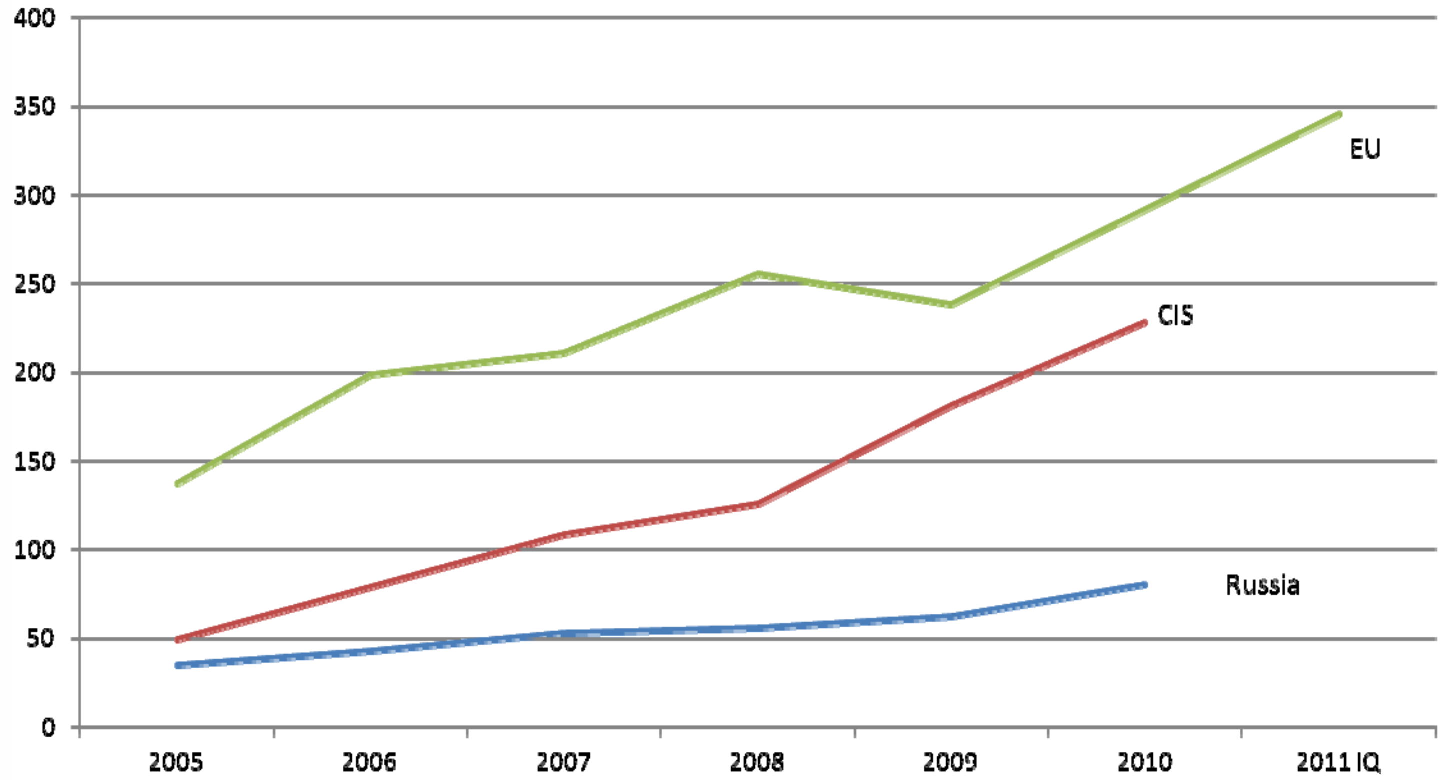


Source: EURACOAL, University of Stuttgart

Action taken by the European Commission aimed at increasing the share of natural gas in the EU energy mix

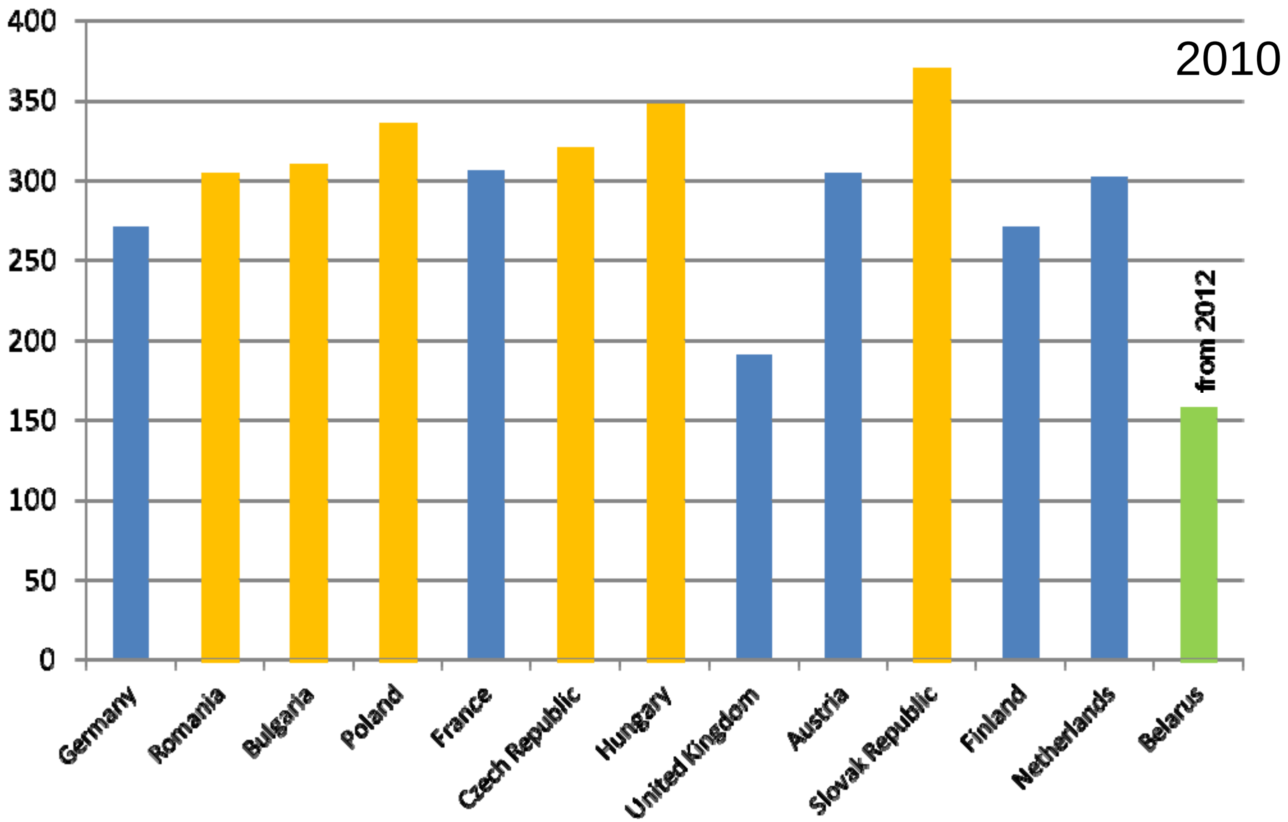
Gas prices, however, are not the same for all!

The average price of Russian gas in Europe (USD/1000m3)



Source:Rzeczpospolita

The average price of Russian gas in Europe (USD/1000m3)

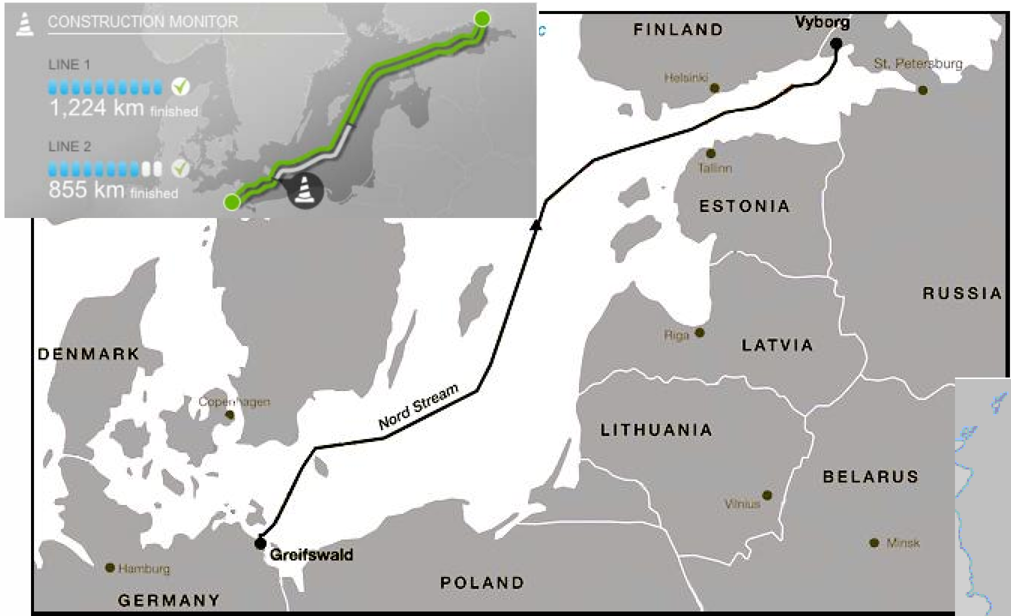


Source: Interfax

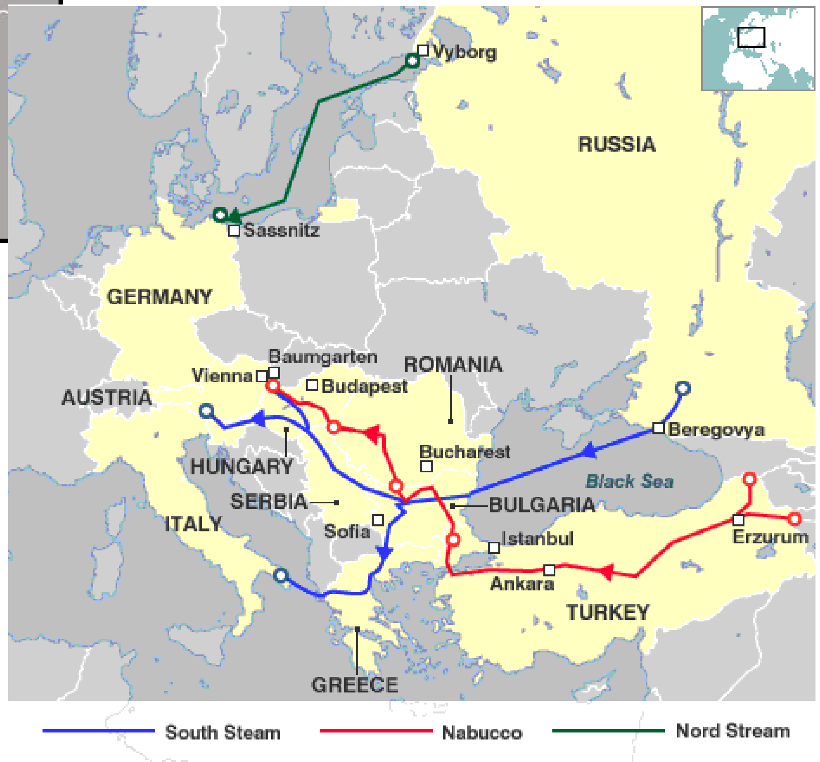
Saturated economies
Not saturated economies

Central European states are dependent on mainly one gas supplier

The new natural gas pipelines in Europe
NORDSTREAM



Nabucco will diversify the natural gas supply and is a chance for Central Europe countries, as concerns price levels.



Nordstream gas pipeline will deepen differences between Central Europe countries and UE 15.

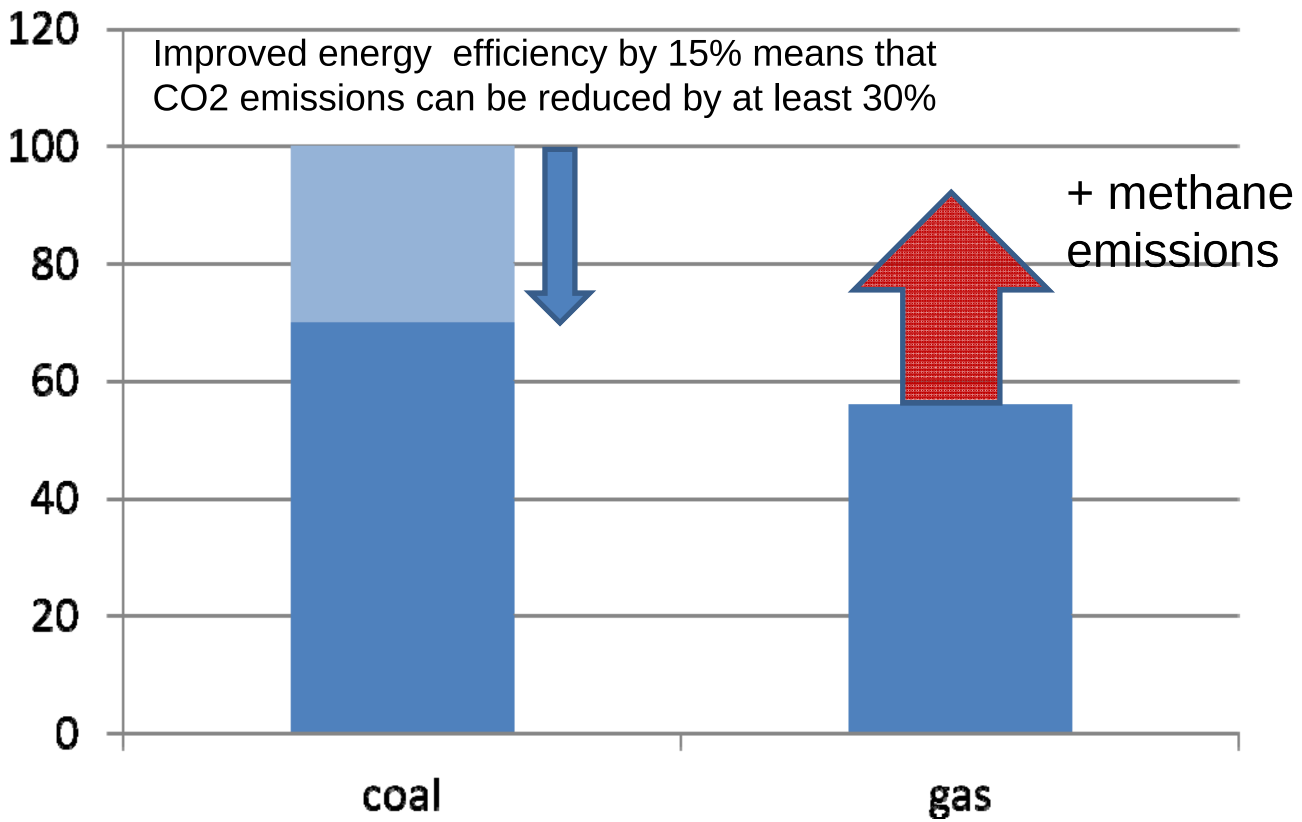
This will negatively affect the competitiveness of the CE economies

Source: Nordstream, BBC

Many coal power plants in Central Europe have an energy efficiency of 30%,

New power units can have an efficiency of 45%-46%

CO2 emissions (kgCO2/1GJ)



Source:Central Mining Institute, EURACOAL, others

What will the impact be of shale gas on the gas market in the EU? (bcm)

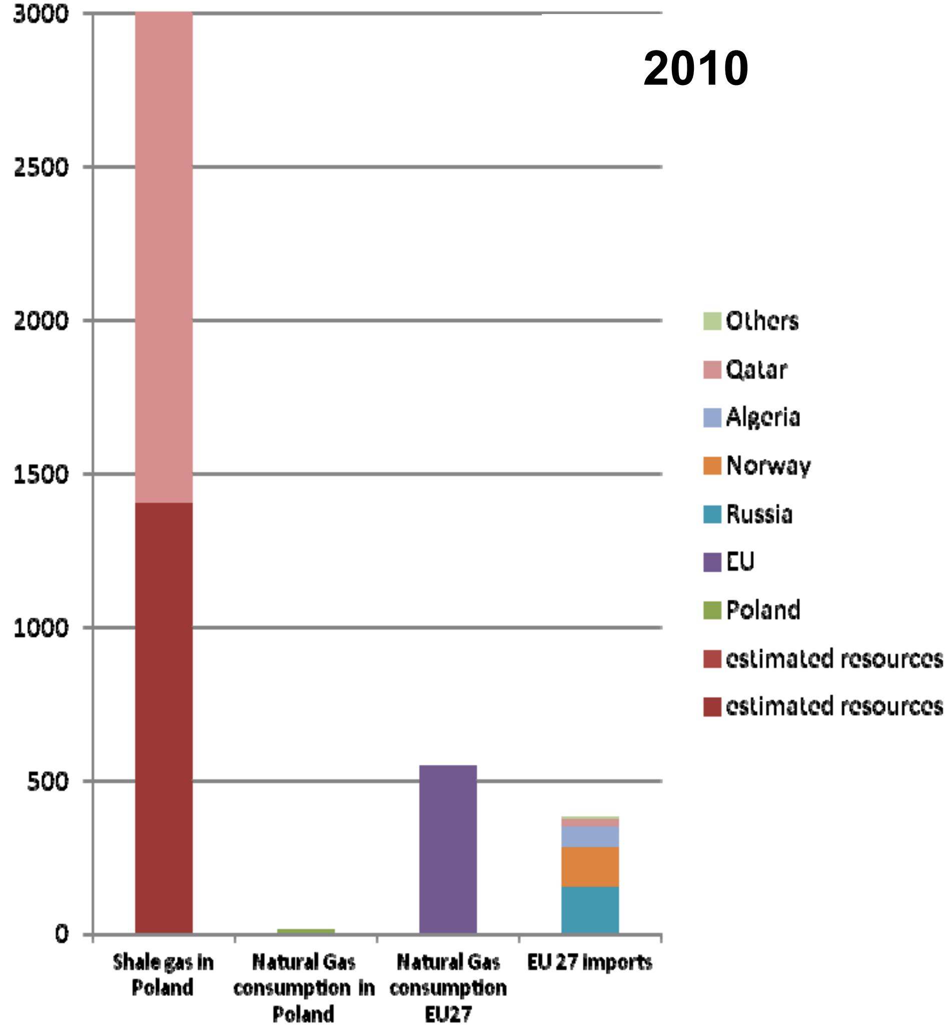
Estimated resources of Polish shale gas (1,400 – 3,000 bcm) is equivalent to:

3 - 6 years of EU gas consumption

10 - 20 years of EU gas imports from Russia

100-200 years of gas consumption in Poland

Recently presented U.S.Geological Survey estimate - 5,300 bcm



Source: Eurostat, Geologica Review 2010

•European Union cannot function without coal

and

•European Union cannot function without gas (including shale gas)

<u>We need all energy sources and particularly indigenous UE-27 European sources</u>

Europe has to be competitive and must use as much energy as possible from its own sources.

<u>Coal and shale gas meet these conditions</u>

The impact assessment - CEEP Proposal

„Most moves made by the [European] Commission, one way or the other, tend to almost, either directly or indirectly, reduce the competitiveness of European industry."

Simon Henry, SHELL, Chief Financial Officer

Each Directive, or any other legal solution stated by the EU, should be justified by economic calculations (The impact assessment) concerning their influence on:

- The EU's competitiveness against the USA, China, India, Brazil, and Russia, with a special chapter concerning the competitiveness of Central European countries;
- The economies of EU countries: taking into consideration their level of development and GDP, and natural resources of energy.

The impact assessment - CEEP Proposal

- **To allow immediate investment in coal power plants we ask the DG Energy to both consider all aspects of coal usage and extend the derogation period for new power plants based on coal with the efficiency of a minimum 45%, whilst a minimum 20 years from their operational date be granted. This derogation period should be shortened when the complete CCS technological chain is available, economically and commercially.**

- **If such solutions are adopted immediately, it will allow investors to start their investments and to contribute towards solving efficiently in-coming energy problems in the EU countries, fulfilling EU energy objectives.**

Source: www.telegraph.co.uk 26 October 2011

Thank-you for your attention