Competitiveness issues in the ceramic sector: drivers and obstacles

European Economic and Social Committee
Consultative Commission on Industrial Change (CCMI)

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I - **Overview** of the European ceramic industry

II - The growing trend in **obstacles to trade**

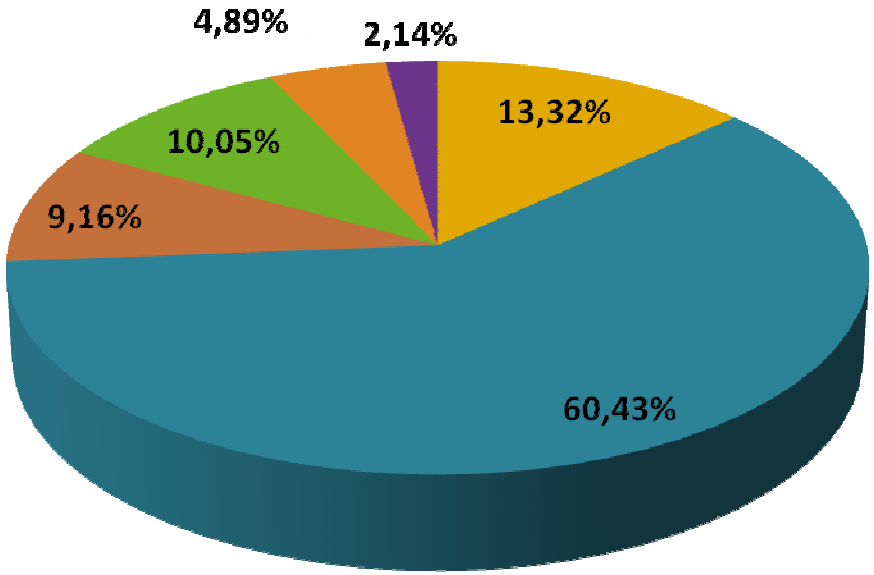
III - **Energy and Climate Change**: Currently the main challenge for the ceramic industry

IV - Access to **raw materials**

I - Overview of the European ceramic industry

- A very wide range of products:
  - Building clay materials:
    - Bricks, blocks, roof tiles
    - Wall and floor tiles
    - Clay pipes
    - Sanitary ware
  - Refractory products, a stragegic sector for most industries in Europe
  - Table and ornamental ware
  - Technical ceramics
  - Expanded clay

Product value per sector

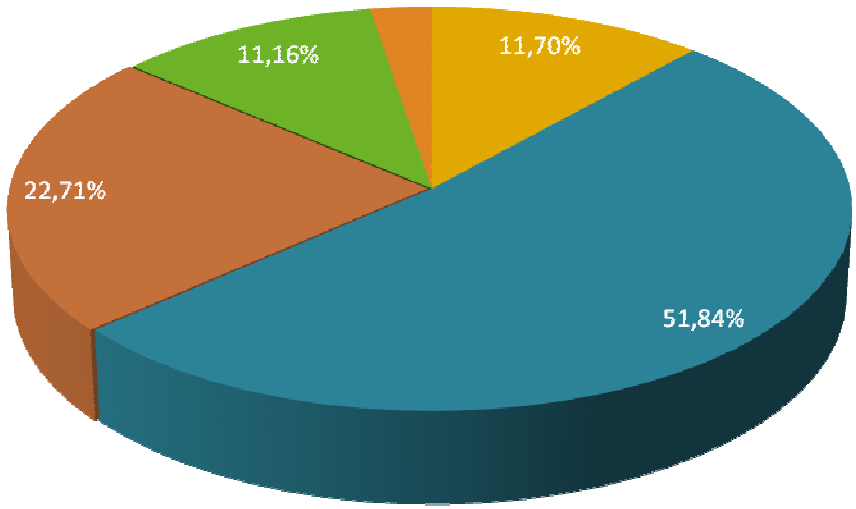


- Refractory
- Clay building materials (bricks, blocks - floor, roof & wall tiles - clay pipes)
- Ceramic household and ornamental articles
- Sanitary ware
- Technical ceramics
- Other ceramic products

Total product value in 2006: 38.9 Billion euros

Source: Eurostat 2006

Employment per sector



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- Clay building materials (bricks, blocks - floor, roof & wall tiles - clay pipes)
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- Sanitary ware
- Technical ceramics
- Other ceramic products

Total employment in 2006: 330.000 employees in the EU

Source: Eurostat 2006

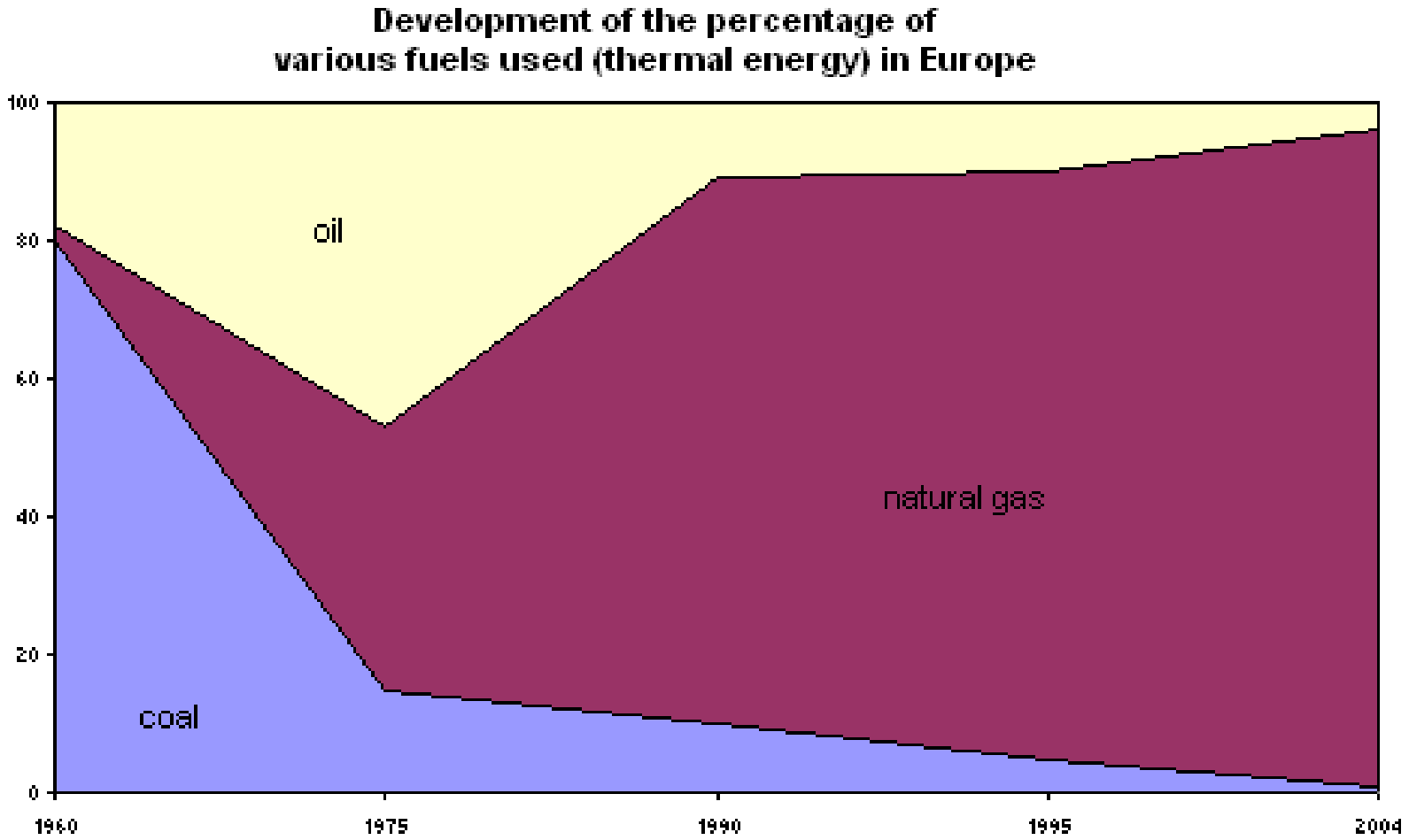
II - Growing trend in obstacles to trade

- Infringement of intellectual property rights
- Counterfeiting
- Technical barriers to trade
- Tariffs

III - Energy and Climate Change

- High energy costs and gas prices
- Past efforts to increase energy efficiency
- Contribution to reduction of energy use
- Reduction of CO2 : risk of relocation for the ceramic industry (or « carbon leakage »)
- But data collection is a huge challenge
- Overload of regulatory initiatives

Fuel substitution in the ceramic industry

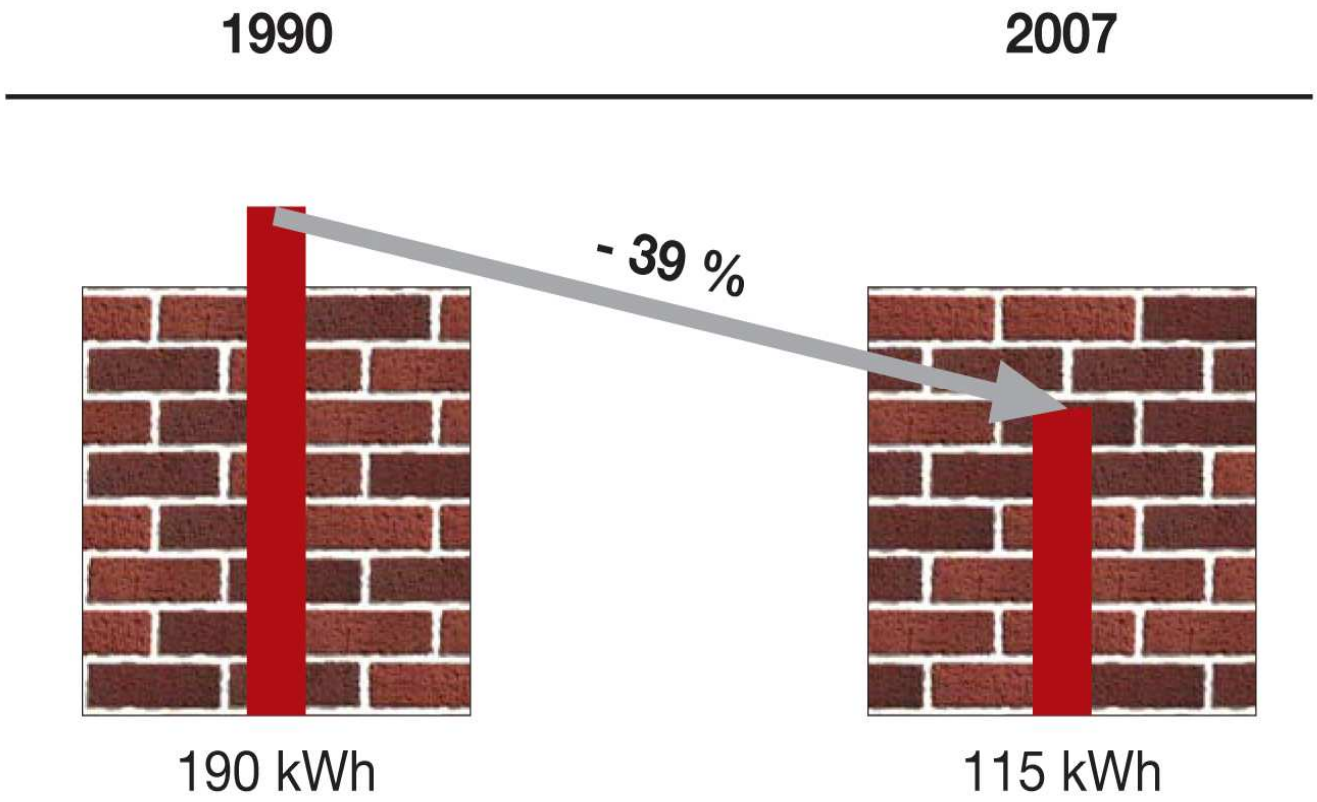


Incentives for energy efficiency:

- Energy represents on average **30% of production costs**
- The energy mix in the ceramic industry is usually **80% of natural gas** and 20% of electricity
- **Cogeneration** has only developped in a few EU Member States with clear regulatory incentives for combined heat and power generation

Early actions in the ceramic industry

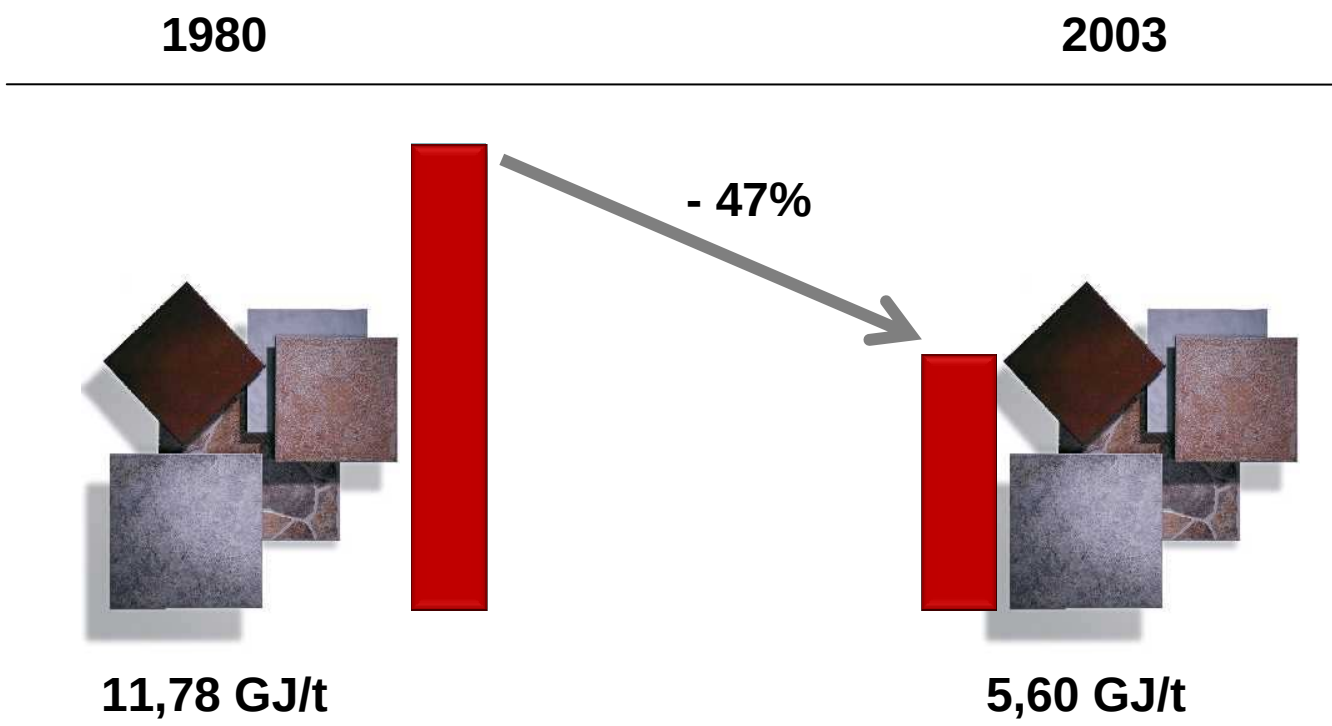
Energy consumption for the production of 1 m^2 brick wall



Specific energy consumption for brick production was reduced by 40%

Early actions in the ceramic industry

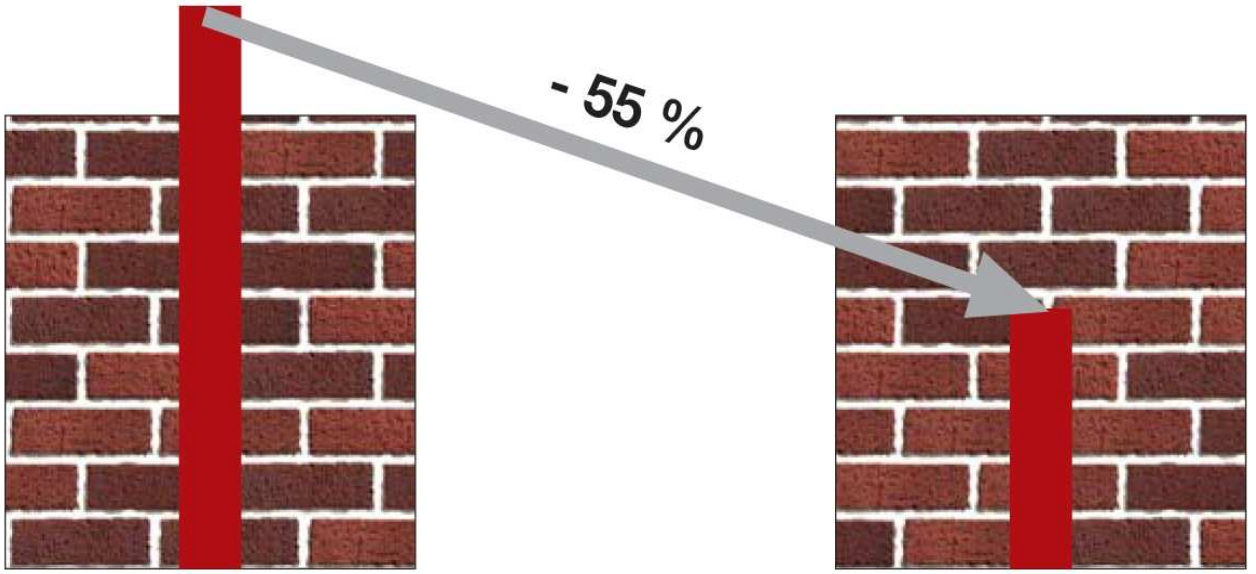
Energy consumption for the production of 1t of wall and floor tiles



Specific energy consumption for wall & floor tiles production was reduced by 47%

Early actions in the ceramic industry

U-value (unit of heat loss) of a brick wall



U-values of bricks were improved at the same time by 55%

EU Emissions Trading Scheme

- Ceramic Industry represents more than 10% of industrial installations subject to the ETS, but **only 1% of the industrial CO2 emissions!!!**

- 40% of ceramic installations emit **less than 25ktCO2/year** and can be considered as « small emitters » ; therefore, **coordinated « equivalent national measures »** will be essential for the ceramic industry

- All ceramic sectors should qualify under the definition of sectors exposed to a « **significant risk of carbon leakage** » ; however, in the case of the ceramic industry, the assessment can only be done at a level of aggregation corresponding to **NACE3 revision 2**

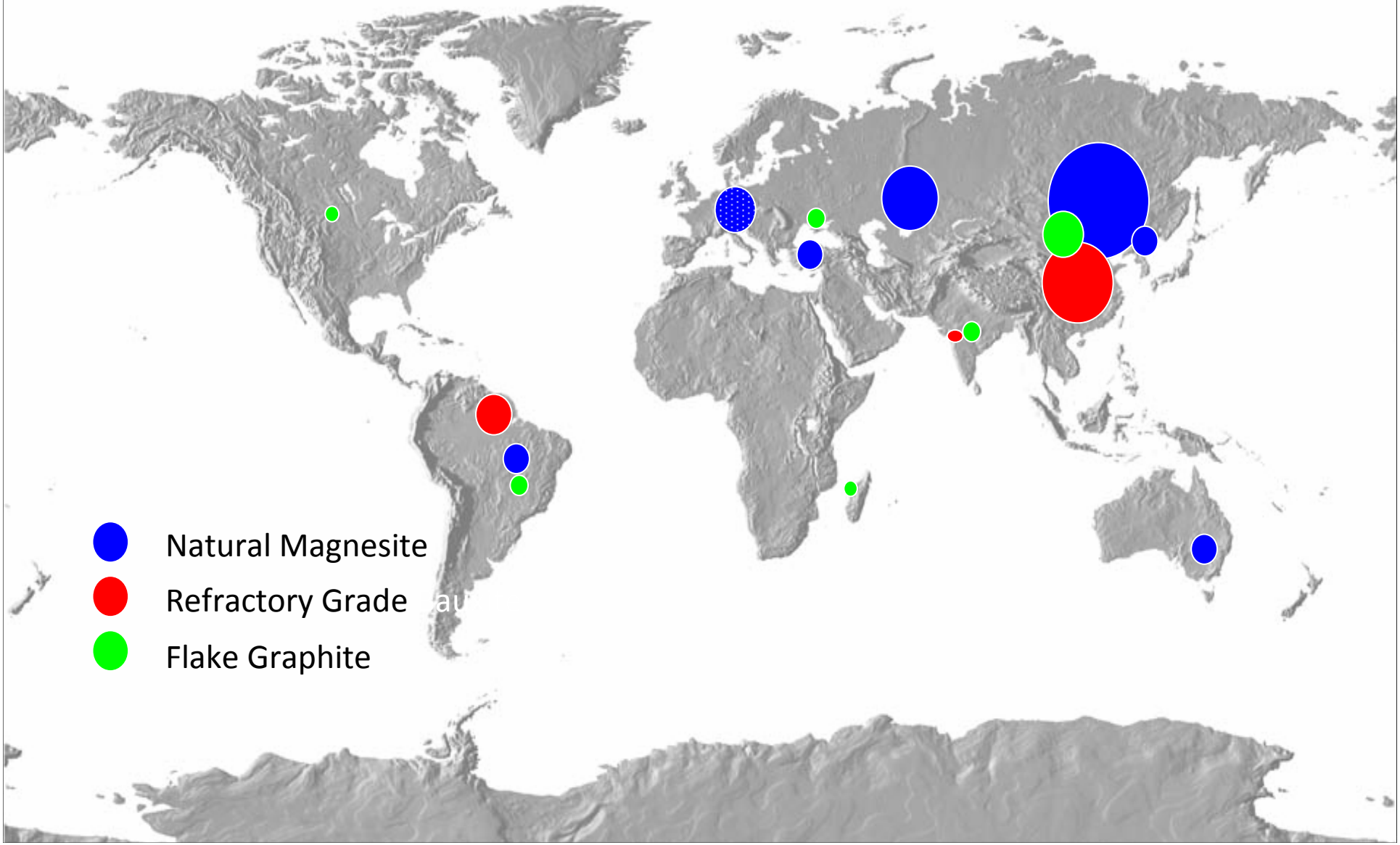
Carbon Leakage: Current estimates by the industry

PRODUCT	NACE Rev. 2 Code	NACE Rev. 1. 1 Code	YEAR	TRADE EXPOS.	GVA	CO2 COST % GVA (BREF)	CO2 COST % GVA (real emis.)
Refractory products	23,2	26,26	2005	36,89%			
			2006	35,92%			
			2007	38,55%			
Clay building materials (bricks & blocks - floor, wall and roofing tiles - other construction products)	23,3	26.3 & 26.4	2005	17,56%			
			2006	17,47%	8.972.2 M €	16,40%	10,30%
			2007	18,04%			
Other porcelain and ceramic products (household; sanitary fixtures; ceramic insulators; technical ceramics; other ceramic products)	23,4	26.21; 26.22; 26.23; 26.24; 2625	2005	43,20%			
			2006	42,74%			
			2007	45,44%			

IV – Access to raw materials

- **Red clays**
  - Increasing problems with the guarantee of supply of local clays.
- **White clays**
  - Price stability, guarantee of supply and transport costs.
  - Descending quality of some imported clays.
- Particular concern for **refractory products**, technical ceramics and high quality table and ornamental ware

Sources of Some Important Raw Materials

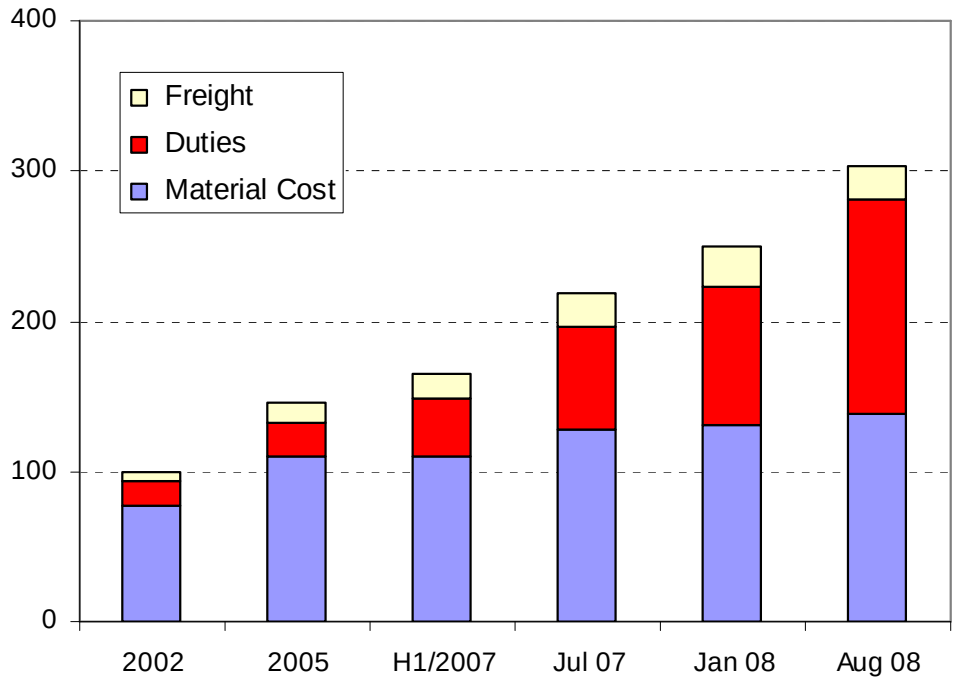


The Domination of China

- There are only a few refractory raw materials available in Europe, i.e. fireclay, silica, andalusite, dolomite, and some types of magnesite. But for many qualities China is the main source and **supplies the World**:

dead burned magnesia	45%
fused magnesia	90%
refractory bauxite	95% *
silicon carbide	40%
brown fused alumina	50%
graphite	80%

Competitive Disadvantage of EU Industry



Since 2002, magnesia prices have increased by 80% in China and by more than 200% for international buyers. Due to licensing and taxation of exported raw materials, Chinese domestic producers of magnesia bricks have a **cost advantage** in European and export markets of **approx. 30%**

Conclusions

- Three key factors for competitiveness of the ceramic industry:
  - Trade
  - Energy (production and use phase)
  - Raw materials
- The Climate-Energy package will further increase existing tensions in these areas without addressing the energy reduction potential in the use phase

Thank you

For more information
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