

# Innovations for Greenhouse Gas Reductions

A contribution of Chemistry to the G8 strategy to  
mitigate Climate Change

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**Didier HERBERT**

**Head of Unit DG Enterprise and Industry**



**European Commission**  
Enterprise and Industry

# 1.1 Competitiveness in the face of climate change: Questions

- A contradiction between competitiveness and sustainability?
- Climate change policy : a **threat** to the competitiveness of the chemicals industry ?
- Or is it carrying **opportunities**?
- **What policy-making** to enable industry to tackle these issues successfully?

# 1.1 Competitiveness in the face of climate change: the EU Chemical Industry

## Economic Crisis

- Severe impact
  - Output -21,5%\*
  - Sales -24,1%\*
- Temporary plant closures

\* 1st quarter data, 2009 vs 2008

## Competitiveness

- A key industry in EU
  - Workforce 1.2 million
  - Sales €537 billion (2007)
  - 29% of world production
- Global competition

## Climate Change & Sustainable Development

- Energy
  - 12% of total EU energy demand
  - 1/3 of total EU industrial energy use (fuel & feedstock)
- Enabling emission savings through its products

## 2.1. Competitiveness in the face of climate change: some preliminary answers

- Industry (directly and indirectly) emits only 25% of total CO2 emissions in EU
- Chemical industry is energy efficient compared to other industries and is decoupling growth and pollution.
- Abatement potential for consumers or in transport can be cheaper than in industry
- SO: The policy Approach needs to **stretch beyond Industry**

## 2.1. Competitiveness in the face of climate change: useful hints are given by :

- By the High Level Group (HLG) on the competitiveness of the European Chemicals Industry 2007-2009
- ICCA's Study
- Recommendations show the need for a **differentiated approach**

### 3. A differentiated approach-

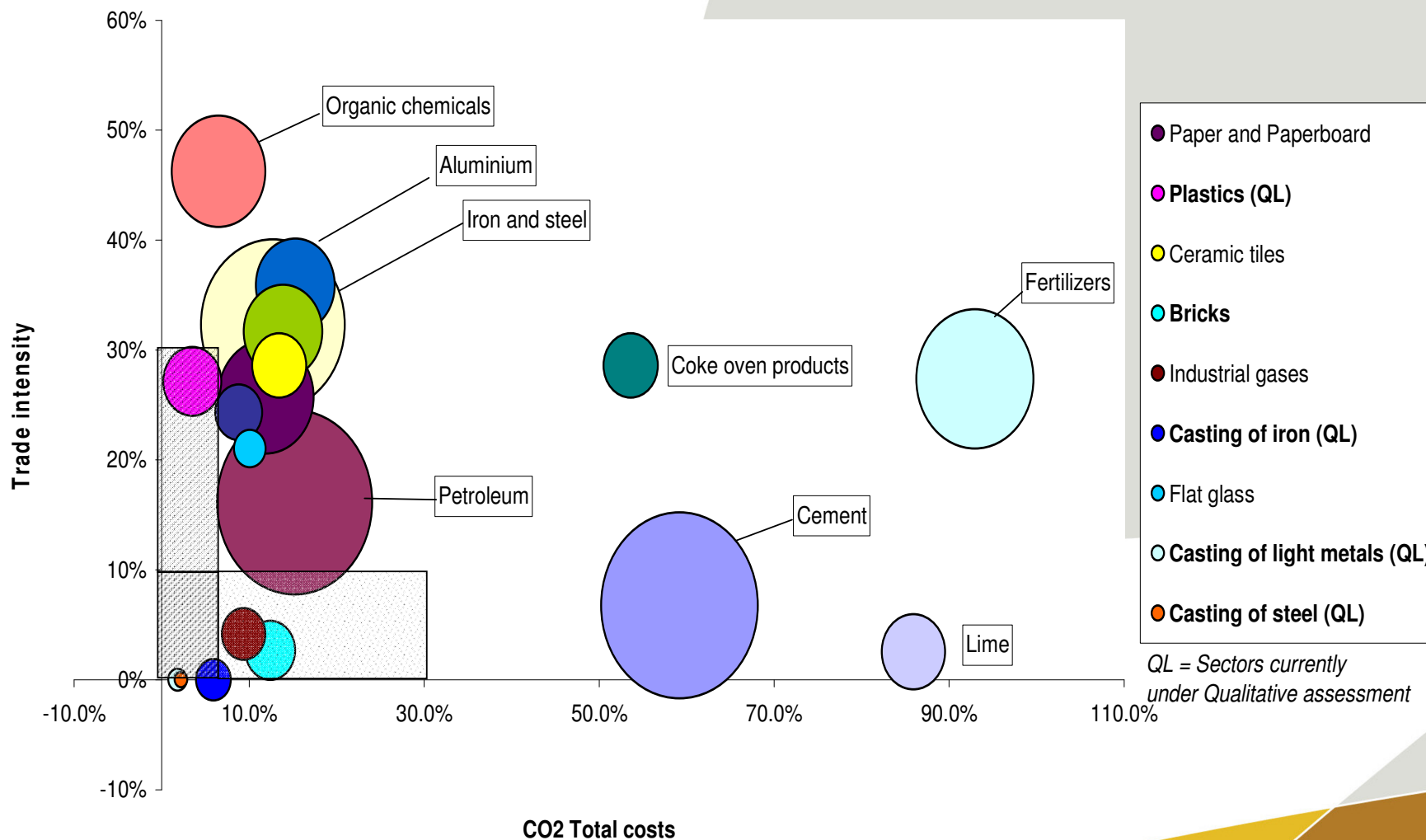
#### 1. Industrial Production & Cap and Trade

- Installations under EU Emission Trading Scheme must reduce CO2 emissions by 21% in 2020
- Default rule: auctioning of CO2 emissions
- **But:** risk of carbon leakage for energy intensive industries (80%-90% of industry CO2 emissions)
- **So:** Assessment ongoing to identify sectors at risk:
  - they will be receive free allowances (protection)...
  - ..up to a benchmark (incentive).

## CO2 emissions for relevant sectors in the carbon leakage assessment

(bubble size indicates size of sector's emissions)

- Sectors in bold do not reach the CL criteria -



## 3.2. International Climate Negotiations: the role of Sectoral Approaches

- Future climate agreement to mobilise action by all countries
- Sectoral approaches can be an instrument for developing countries
  - To **build on their own unilateral actions** and
  - To **provide incentives (with credits) for further reduction of GHG in specific key industry sectors**
- Sectoral approaches can be a flexible tool, tailored
  - to the needs and challenges of a particular sector,
  - to specific country circumstances.
- This is about a **transition to a global carbon market and reducing the level playing field gap**

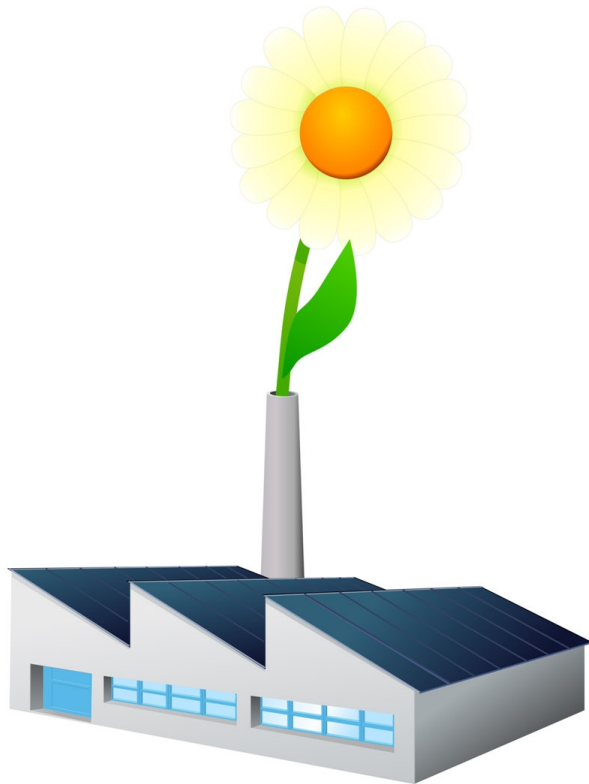
## 3.3: Products

- **Examples** : electronic appliances , insulation or detergents
- **Strong impact on GHG emissions**: household products such as light bulbs, boilers or heating are responsible for up to 40% of electricity use in the EU.
- **Opportunity**: Most of the products that use energy during their use phase can be designed such that
  - a lot of energy can be saved
  - while also making the products cheaper over the life cycle. Examples are light bulbs, industrial motor
- **Challenge**:
  - manufacturers need to adjust their product design taking into account energy and environmental concerns
  - consumers need to be made aware of environmental impact
- **Policy Tools**: ecodesign , energy efficiency labelling, public procurement

## 3.4: Environmental industries

- **Examples** of sectors are environmental technologies, renewable energy, recycling, sustainable construction and waste industry
- **Environmental impact:** the industry offers opportunities to other industries to reduce CO2 emissions while having a negligible environmental impact itself
- **Economic importance:** Environmental industries defined as all industrial sectors specialising in providing environmental solutions have a turnover of 2.2% of EU GDP and employ 3.4 mio people.
- **Challenge:** take up of environmental solutions by mainstream industry

# Combining competitiveness policy with sustainability : EU's role



- Manage transition
- Careful design of domestic measures
- Solutions should address all areas of economy
- Recognise challenges and opportunities
- Internationally we must mobilise all to act

## 1.2. Concretely: can we reconcile the climate change objective with a competitive chemicals industry?

In Europe :by 2020

- 20% renewable energy including 10% renewable energy in transport
- 20% CO<sub>2</sub> reduction including 21% reduction for industries in emissions trading scheme
- 20% energy efficiency