



CO2 from petrochemical and chemical production processes

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Refineries, Pipelines and Crackers in Europe





Production by regions

2005 World Petrochemical Production Report

Product (Kt)	Asia	Western Europe	North America	South America
Ethylene	15,824	21,600	28,688	3,853
Propylene	11,258	15,406	16,608	1,908
Benzene	8,726	8,425	7,647	1,118

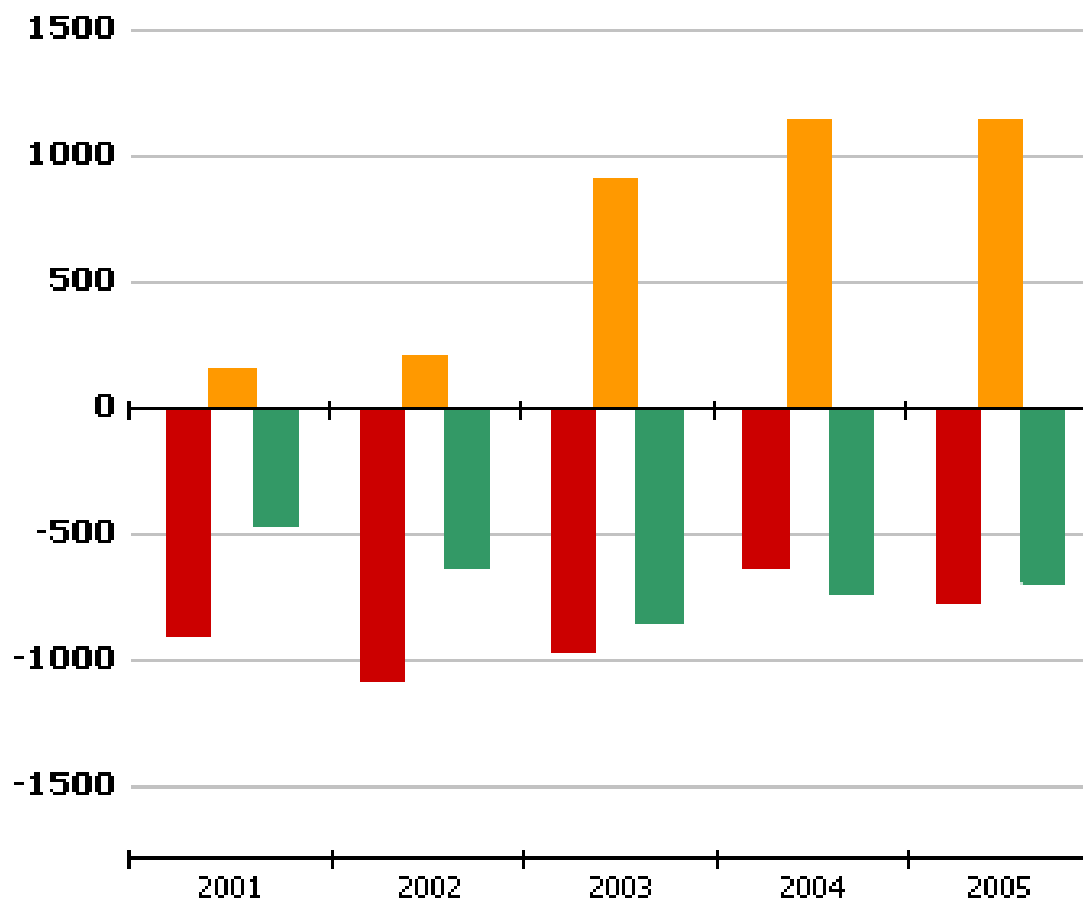
Source: International Petrochemical Information Forum



Trade balance

21. Western European trade balance of petrochemicals derivatives

Kt/yr calculated in ethylene, propylene and benzene equivalents



Ethylene Propylene Benzene

Source: Appe/PMRC



Current situation

- **Petrochemical sector not included as sector**
- **Combustion installations > 20 MW included**
- **But different interpretation by MS in 2005 –2007 and 2008 – 2012 periods**
 - **Narrow definition:** only combustion installations that produce electricity, heat or steam and supply that to third parties
 - **Medium definition:** all combustion installations that produce electricity, heat or steam, with the purpose of energy production, including those that are process-integrated , e.g. steam plant integrated in e.g. chemical industry is included, but process furnaces such as crackers in the petrochemical industry are excluded
 - **Medium definition extended (Phase II):** see above; crackers and carbon black installations included
 - **Broad definition:** all combustion installations are included

Why Should We Include or Exclude the Petrochemical Sector ?



- **The emissions must be “relevant”**
 - ↔ Small installations (< 50 kTon CO₂) to be excluded
 - ↔ A 50 kt CO₂/y threshold would exclude less than 5% of currently included emissions (EEA Tech Report 4/2007, table 5 page 19)
 - ↔ Small emission sources to be excluded
- **There must be a reduction potential**
- **They must easily be measurable and verifiable**
 - ↔ Flare emissions: the flare devices are “safety” non continuous installations (Changing quantities and qualities), so incompatible with reliable measurement/monitoring
- **Prevent intra-EU competitive distortions and impact on international competitiveness**
- **Appropriate allocation methods must be feasible**



Global competitiveness

The EU Petrochemical sector is in global competition

- ⇔ **Competing with producers with low cost feedstock supply**
- ⇔ **Dependent on feedstock imports**
- ⇔ **Subject to strict EU environmental regulation, e.g. IPPC Directive**



Before Any Discussion of Inclusion ...

First fundamentals of the current scheme must be improved, moving to a more acceptable scheme:

- **Eliminate built-in disincentive to growth**
- **Harmonise effects among MS and sectors**
- **Allocation according to performance**
- **No reward for relocation of production**
- **Resolve ETS impact on power prices**
- **Inclusion of effective JI/CDM mechanisms**

→ Cefic makes consideration of any inclusion or enlargement of scope dependent on resolution of the above issues