



Solutions for an improved ETS

Peter Botschek

ETS Review Group meeting on 21/22 May 2007



ETS Review objectives

ETS design should be

- **enabling industry to meet, in a more cost-effective manner, emission reduction goals**
- **consistent with efficient growth and competitiveness**
- **globally compatible**
- **minimizing competitive distortions between sectors or installations inside and also outside the EU**

ETS design and competitiveness



Competitive impacts

- indirect costs through electricity prices ('windfall profit' issue)
- administrative costs e.g. from monitoring, reporting and verification requirements
- compliance costs for direct emissions

ETS design and competitiveness



- **The chemical sector is vulnerable**
- **We act in global markets and are unable to pass on ETS costs, i.e. impact on electricity price**
 - **The chlor alkali industry output the electricity cost of the full manufactured cost is about 50%. Some 60% of the EU chemical industry as a whole is itself dependent on some form of chlorine product supply.**



ETS design: Solutions

Targeted introduction of performance-based allocation (e.g. through benchmarks) to large emitting, homogenous processes

- **Other activities may remain allocated with reference to historical emissions where this is the most workable methodology**



ETS design: Solutions

Linking allocation to production

- **Helps meeting better allocation needs**
- **Addresses issues of**
 - **relocation of production (“carbon leakage”)**
 - **binding of market share**
 - **‘windfall profits’**



ETS design: Solutions

Small emitters must be excluded from EU ETS since their participation is not cost effective

- **The European chemical industry consists of some 27.000 SMEs (small and medium size enterprises)**
- **UK Environment Agency: Operators below 25KtCO₂/a have total costs of participation of €3/tCO₂ to > €8/tCO₂**



Auctioning aggravates ETS impacts

- **Theoretically, auctioning of allowance would be an ideal way of allowance allocation - if applied world-wide**
- **Auctioning limited to the EU will result in a**
 - large up-front payment which will harm global competitiveness of EU business and
 - remove funding for research and development, innovative solutions for climate change



Recycling of auctioning revenues

Challenges:

- **ETS impacts on competitiveness are bigger than auctioning revenues – even if 100% redistributed**
- **Recycling**
 - leads to additional administrative procedures and costs
- **Diversity of practice in member states may not lead to leveling the playing field**

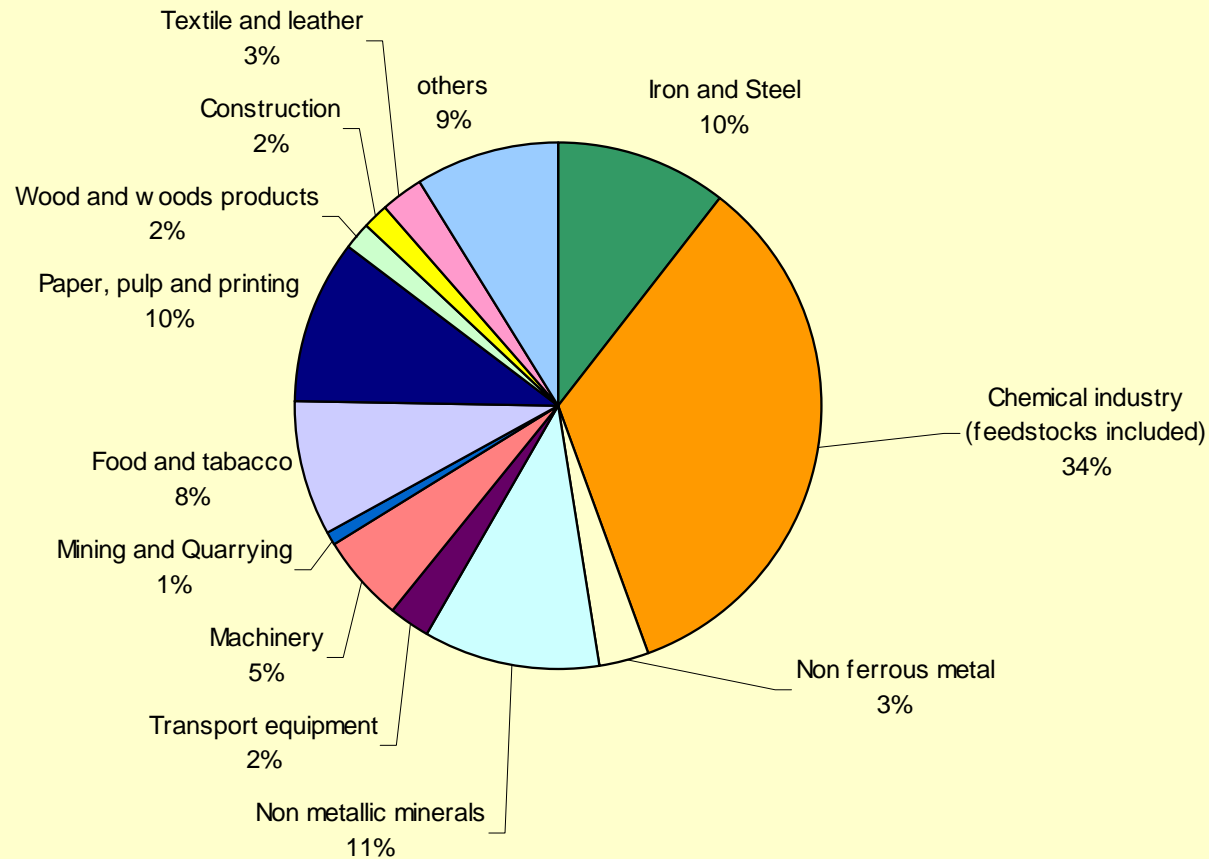
Backup slides



Chemical industry energy profile



Industry Energy consumption per sector 2002

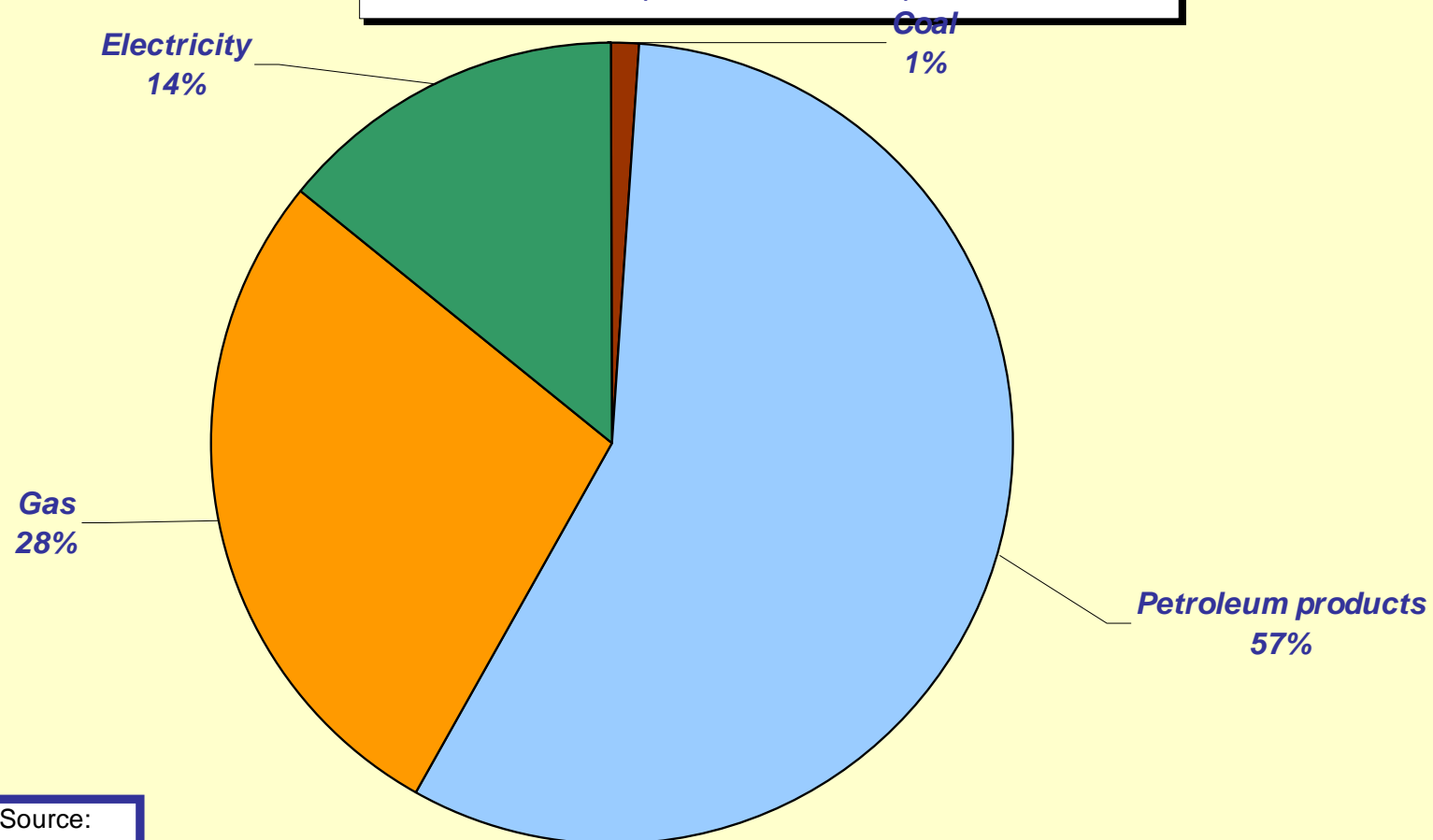


Source: IEA

Chemical industry Energy sources

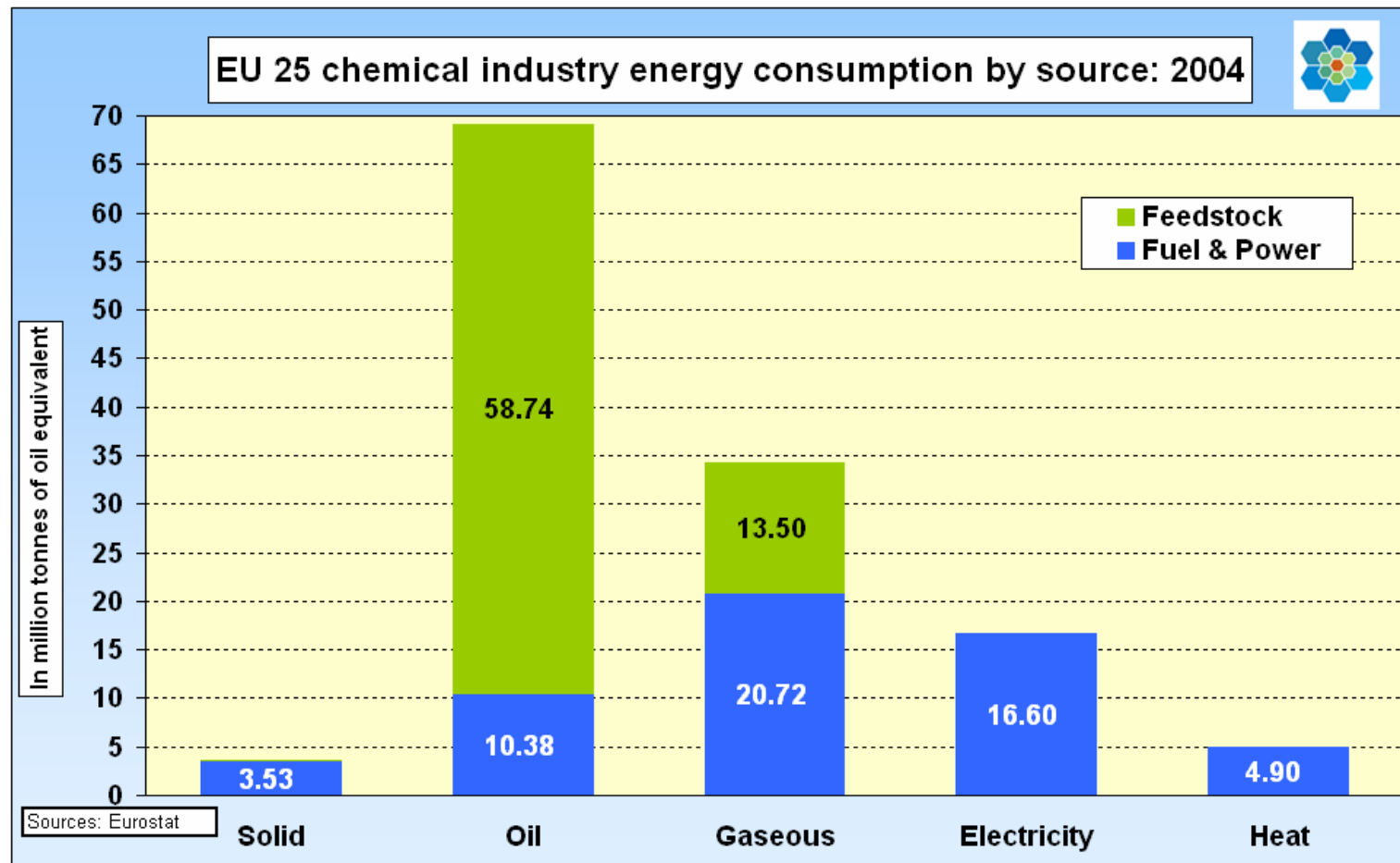


Sources of Energy of the chemical industry 2002
(Feedstocks included)



Source:
IEA

Energy Consumption by source





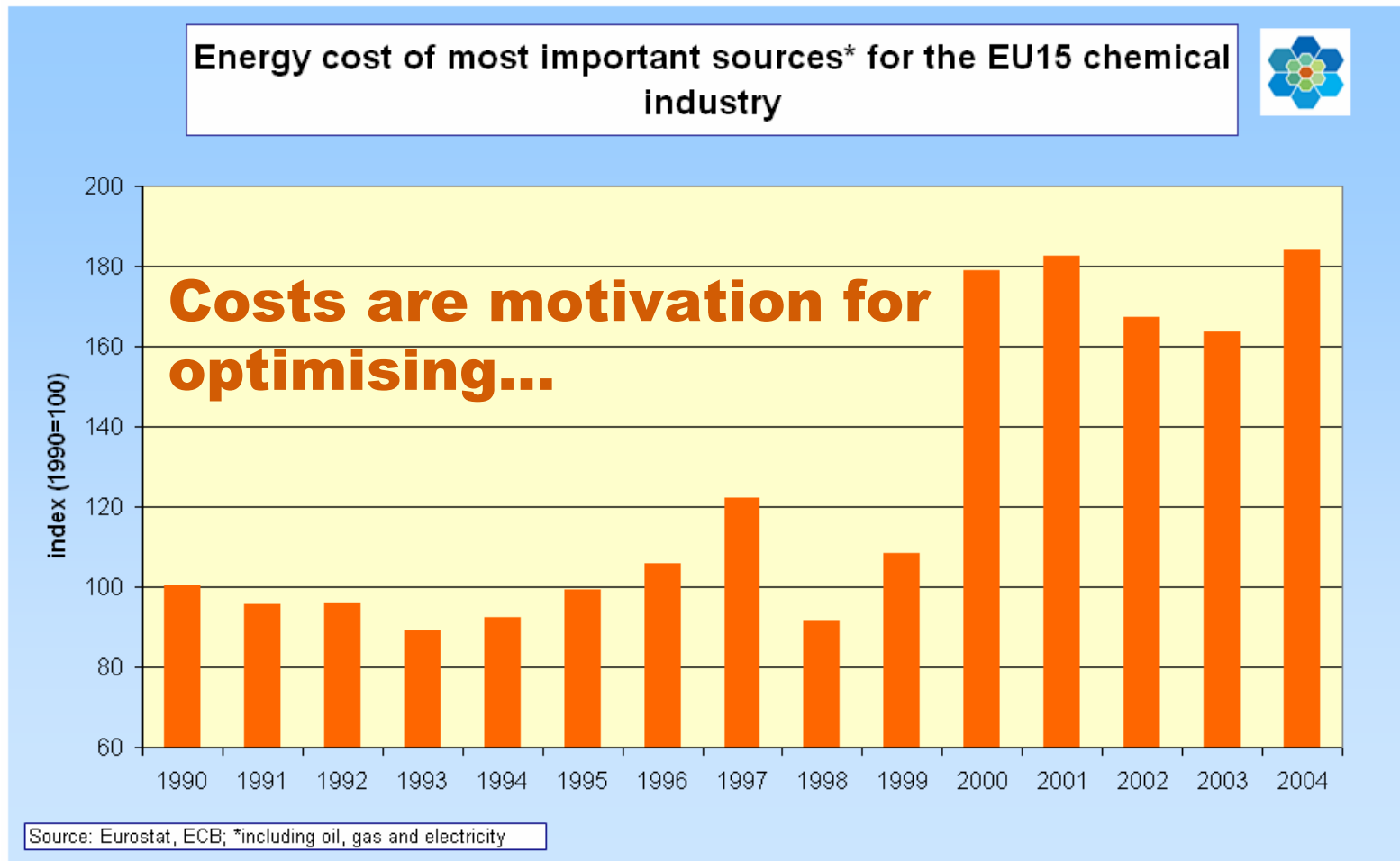
Energy is a huge cost factor:

Consumption accounts for roughly 160Mtoe
(3% of global and about 12% of EU energy demand*₁)

Costs account for 10 – 60% of production costs of most products

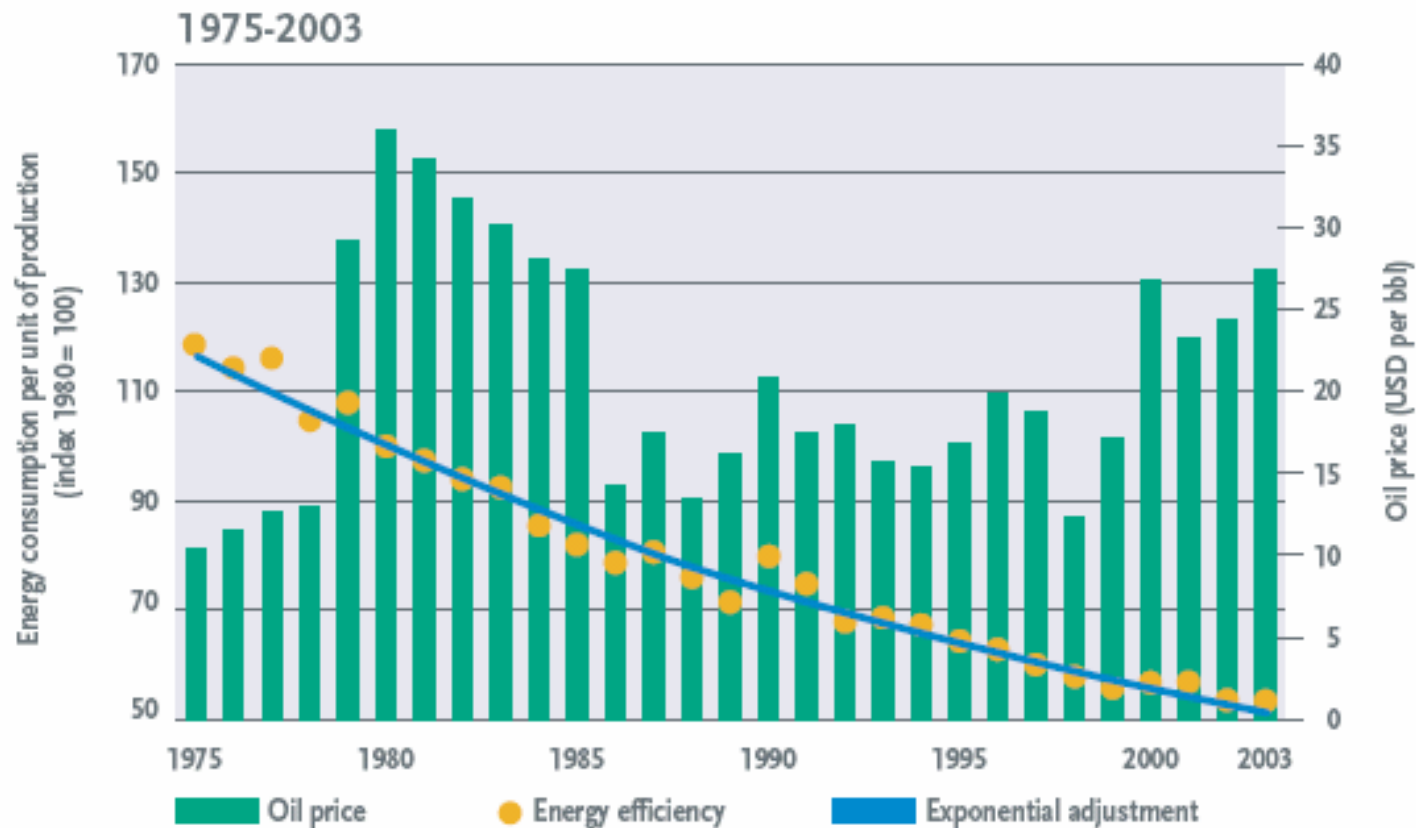
*₁ Source: EC European Energy Outlook and Cefic

Energy cost of most important sources for EU15 chemical industry





Energy Efficiency trend and oil price

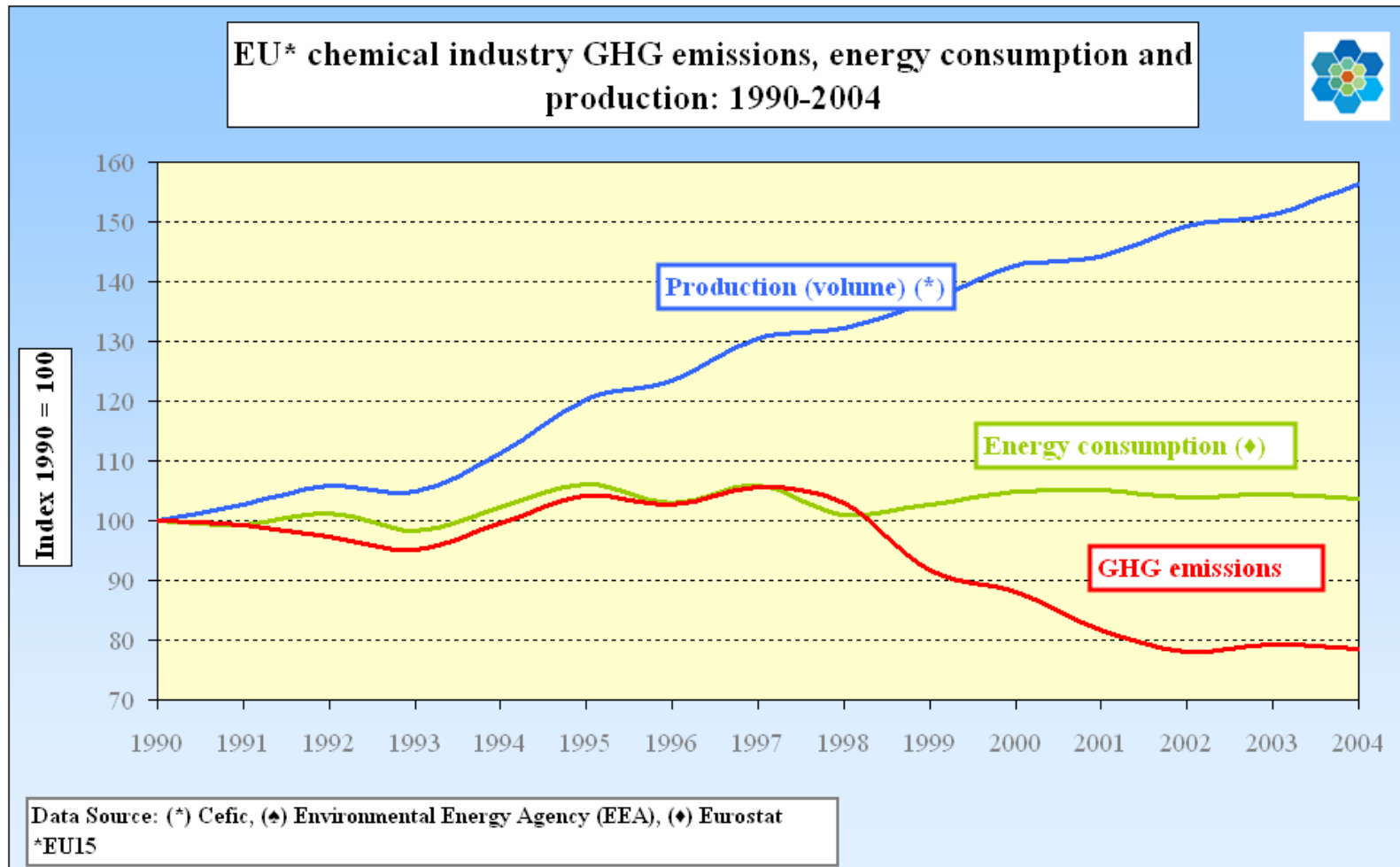


Sources: Cefic, IEA and UN

Notes: Energy efficiency is measured by energy input per unit of chemicals production

* EU 15

GHG emissions, energy consumption, production trends





GHG emission trends

