

EU energy policy, implications for the EU chemical industry

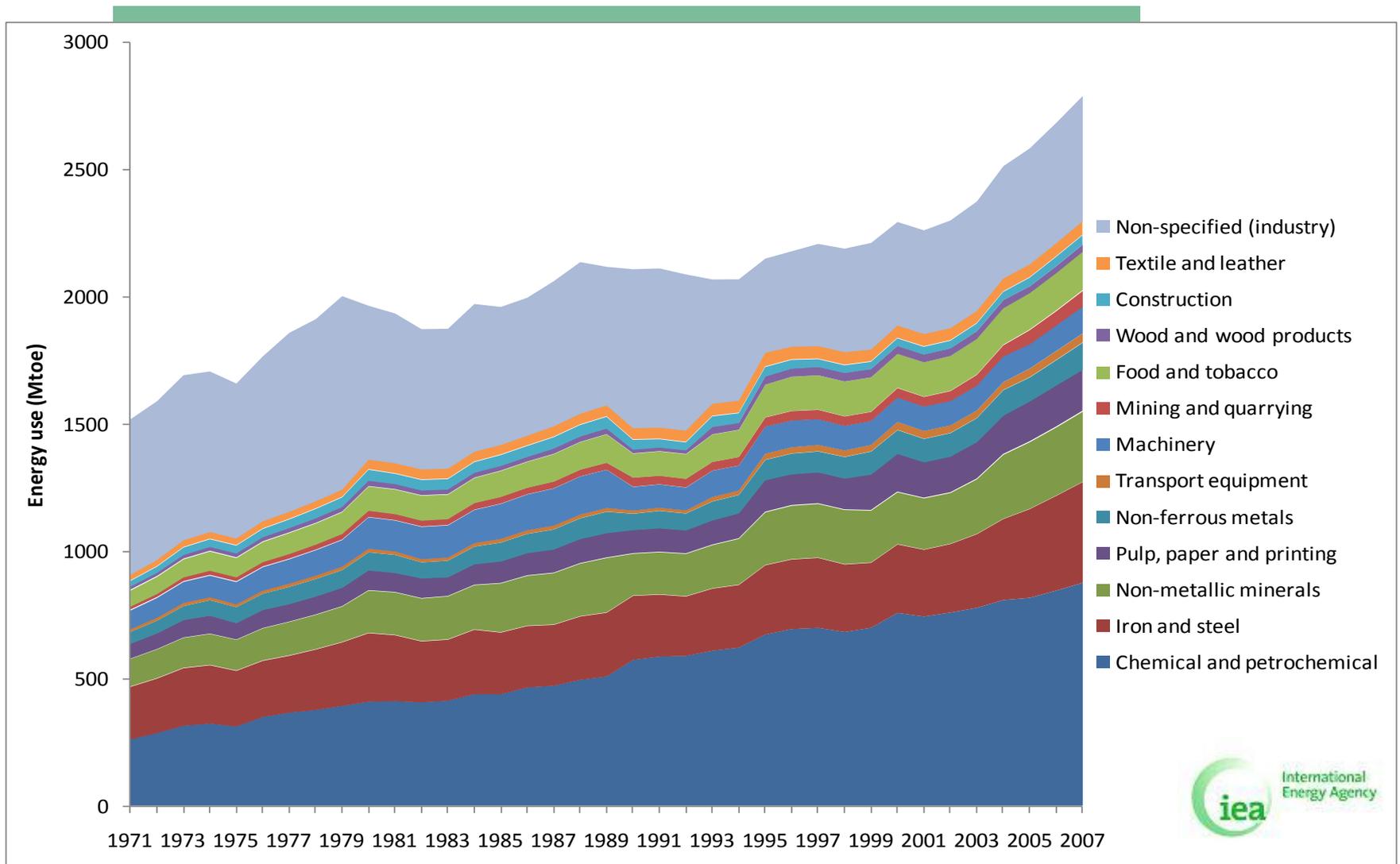


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Brussels Roundtable 6 October 2011

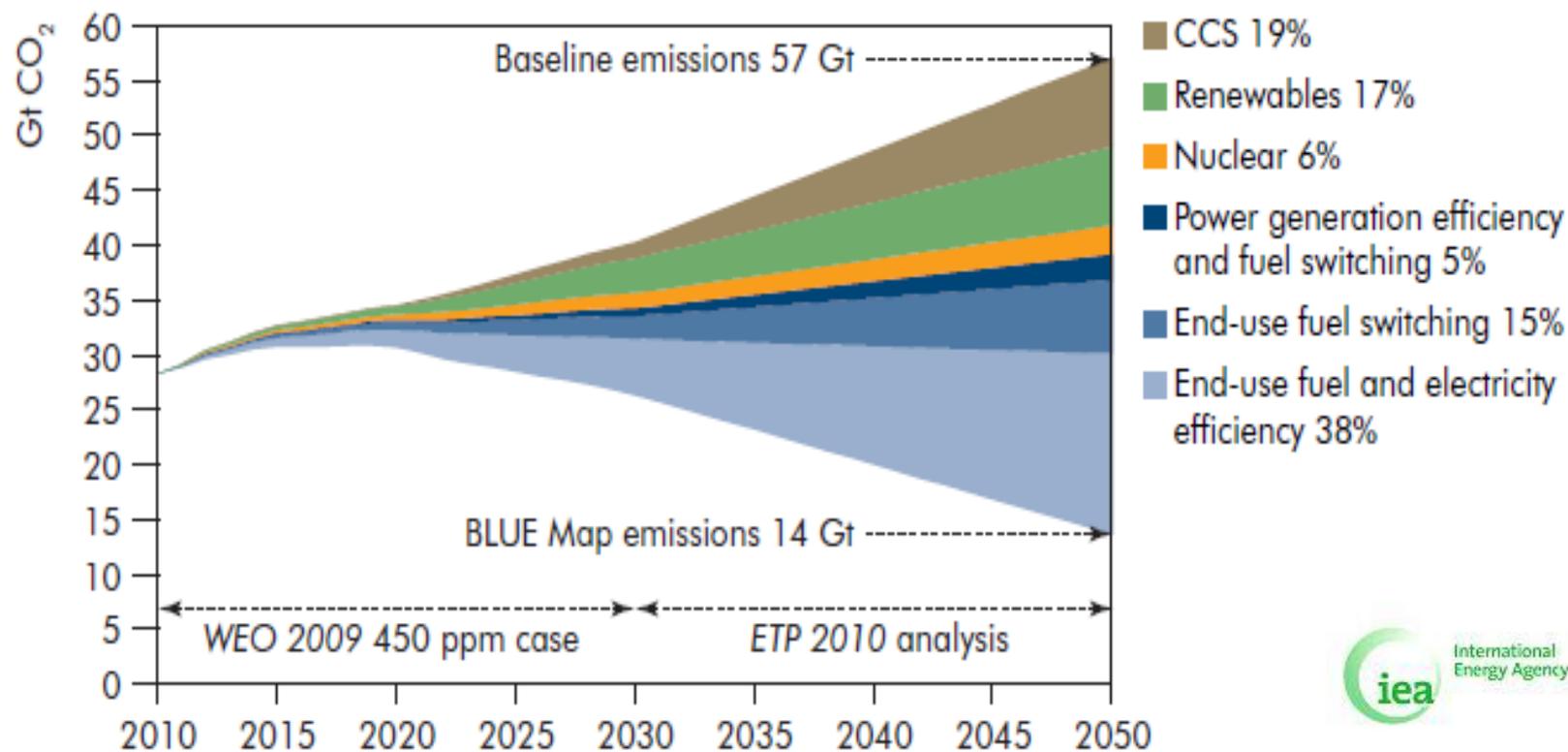
Industrial energy use: Chemicals stick out



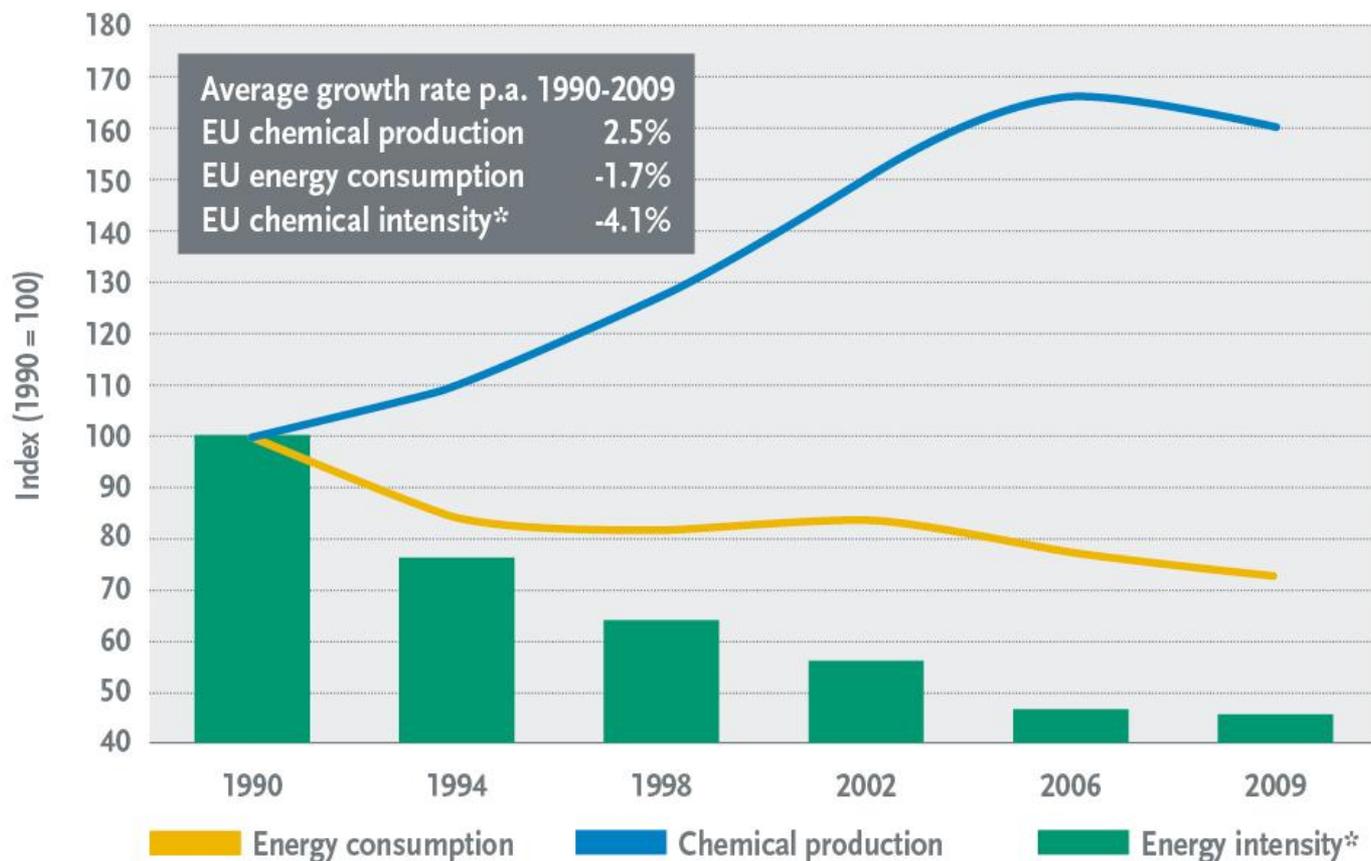
CO2 emissions



Figure ES.1 ► Key technologies for reducing CO₂ emissions under the BLUE Map scenario



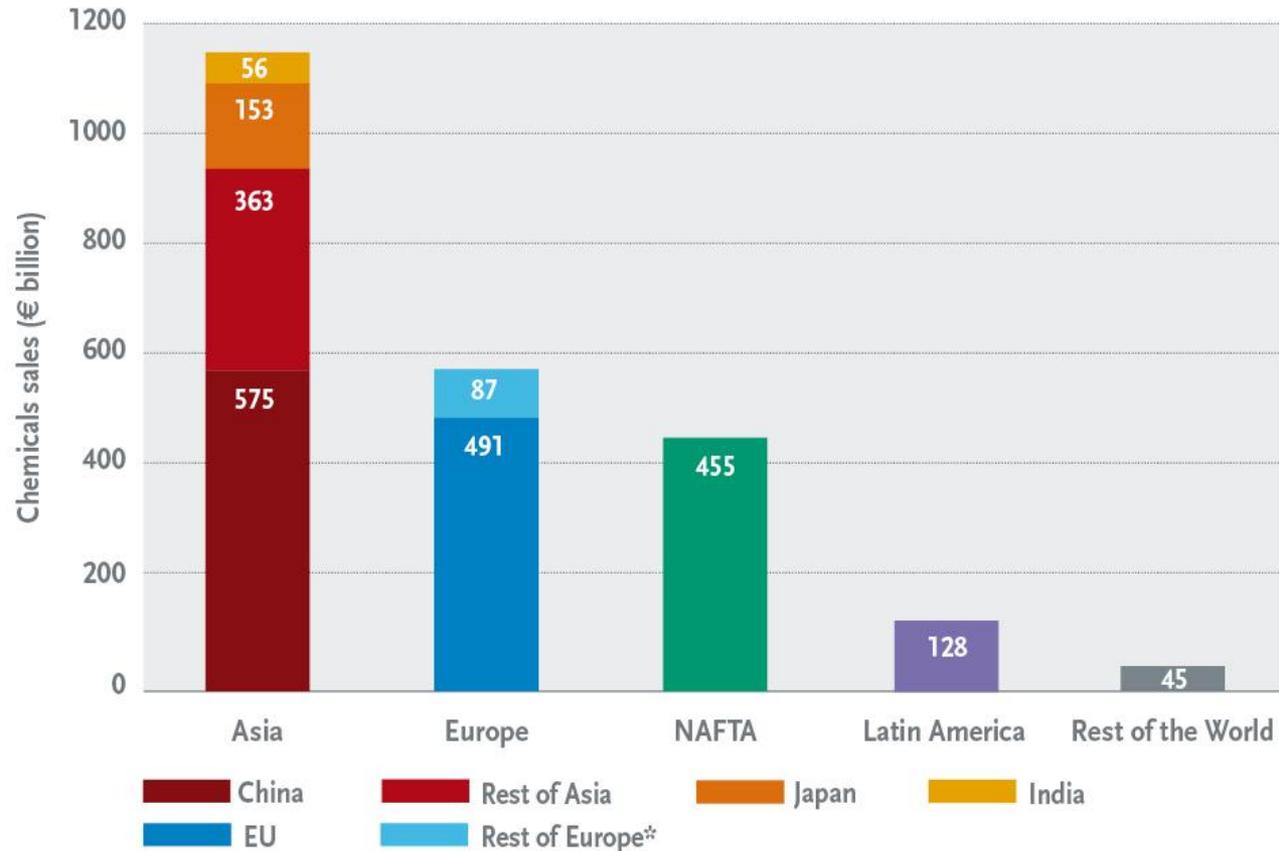
The EU chemical industry has reduced energy intensity by 54 per cent since 1990



Sources: Eurostat and Cefic Chemdata International

* Energy intensity is measured by energy input per unit of chemical production (including pharmaceuticals)

Asian chemical production equals that of Europe plus America



World chemical sales in 2010 are valued at € 2353 billion.

The EU accounts for 21% of the total.

Source: Cefic Chemdata International

* Rest of Europe = Switzerland, Norway and other Central & Eastern Europe (excluding the new EU 12 countries)

EU 20-20-20 strategy



- **reduce greenhouse gas emissions** at least 20% by 2020 (compared with 1990 levels),

« On track » ✓

- raise **renewable energy's share** of the market to 20% and

« On track » ✓

- **cut overall energy consumption** by 20% (compared with projected trends)

« Not on track » !

EU energy strategy: 20% energy savings by 2020

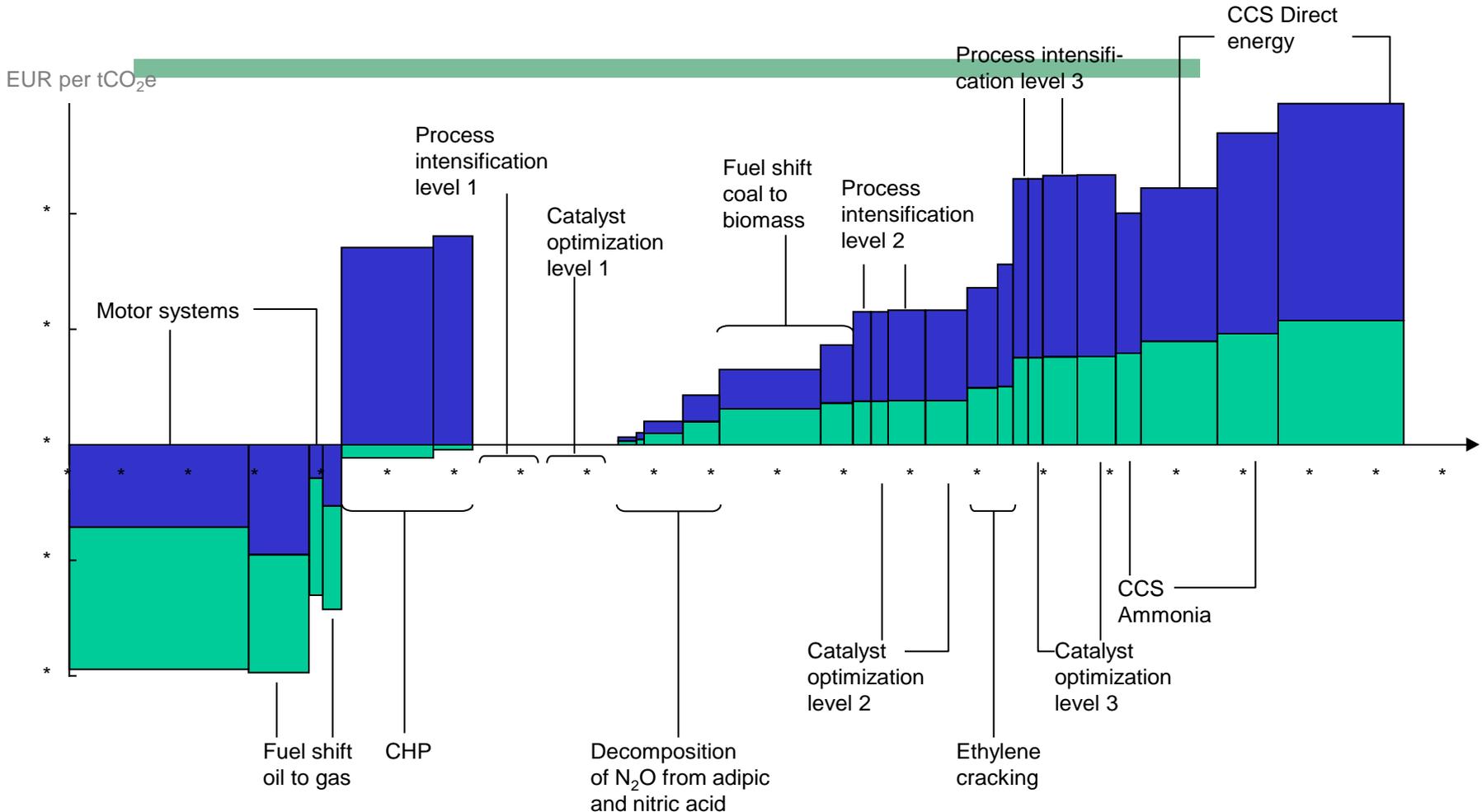


EU “**Efficiency**”:

The European Commission published in June 2011 a proposal for an Energy Efficiency Directive (EED) translating the target literally by aiming to cut energy consumption in absolute terms by 368 Mtoe in 2020.

Cefic: **Energy efficiency improvements** instead of absolute saving targets **are the appropriate goal - avoid limiting growth !**

McKinsey models confirmed technology options but at higher business costs than prior estimates

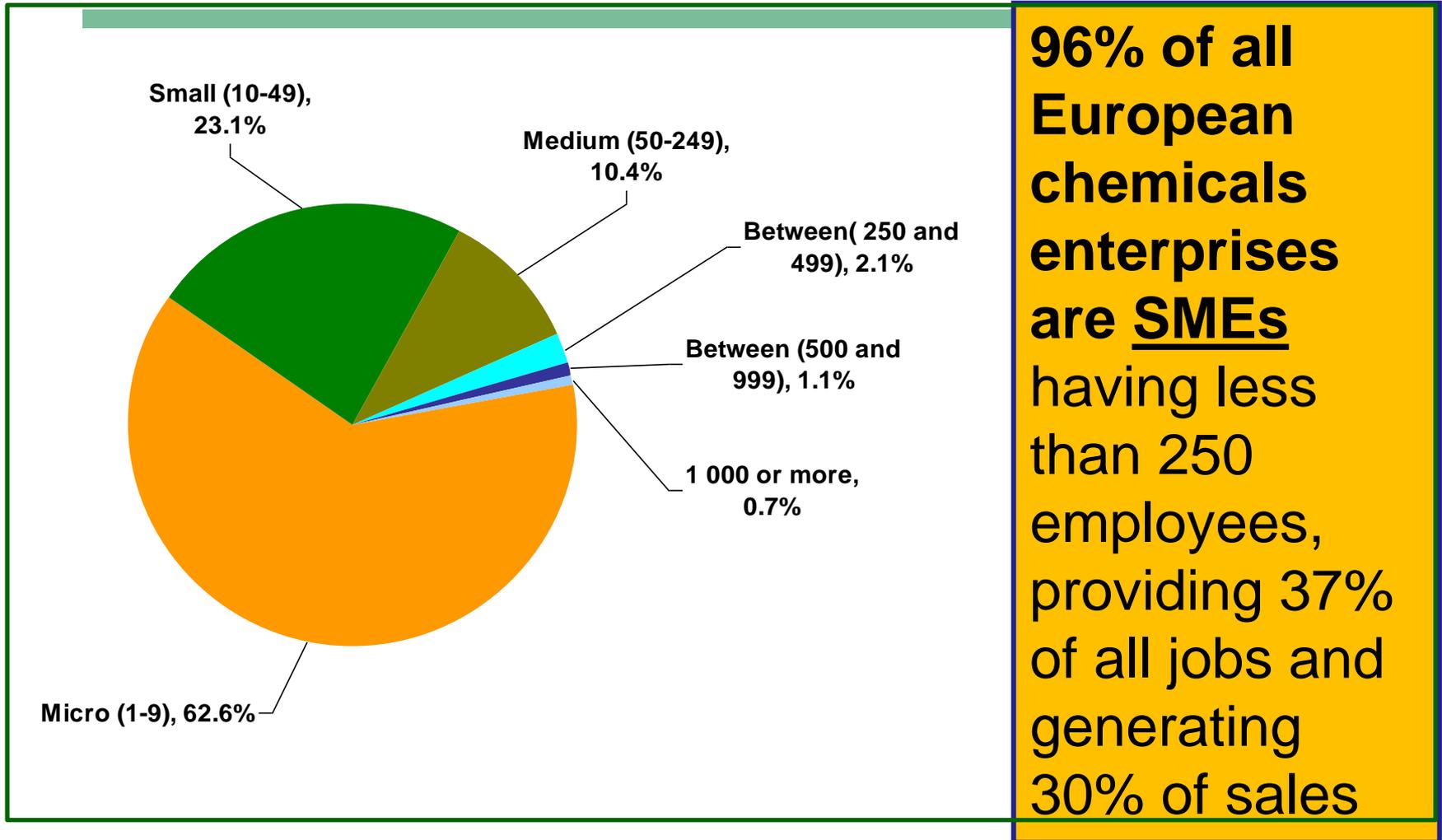


New investments offer **Fastest, Largest and Cheapest** reductions

■ Society view*
■ Business view**

EU initiative for SMEs

The majority of chemical enterprises in Europe have less than 50 employees



96% of all European chemical enterprises are SMEs having less than 250 employees, providing 37% of all jobs and generating 30% of sales



Project Summary

CARE+ Training Chemical SMEs in Responsible Use of Energy

- Care+ is funded and supported by the European Commission under the framework of “**Intelligent Energy Europe**”
- **CARE+ aims to promote energy efficiency in chemical SMEs**
- An Energy Management **Best Practice Manual** and a **Self Audit Guide** are the main instruments of the project for energy savings available on www.cefic.org/careplus
- First target countries are **Bulgaria, Italy and Poland**; the project aims at promoting energy best practice throughout Europe and beyond



The Energy Efficiency Guidance Documents



Self Audit Guide

- Leads through the analysis of company's energy performance
- Helps determine strengths and weak points while managing energy sources
- Aims at improving Energy Efficiency supporting the identification of measures, their expected energy savings, Costs & Return on Investment calculation (suggested evaluation model provided through developed **excel tables**)

Best Practice Cases

- Focus on the energy issues that are of greatest interest to chemical SMEs, e.g.:
 - ✓ Energy management programmes
 - ✓ Steam generation performance,
 - ✓ Motors and drives,
 - ✓ Compressed air systems
- Give guidance on financial implications of the possible energy improvement measures and technologies

Both documents were translated into the 3 national languages and will soon be available also in Finnish and German

The Energy Efficiency Guidance Documents



Good Housekeeping Measures

- 1 Switch off motors when they are not in use, prevent pumps operating for longer time over their minimum by-pass control
- 2 Apply regular maintenance on all components of your drive systems
- 3 Check coupling alignment, lubrication, and pump seal maintenance
- 4 Replace excessively leaking seals and packing
- 5 Regularly check electric motor condition, amongst others the condition of motor winding insulation
- 6 Conduct a survey of belt-driven equipment. Gather data on application and operating hours. Determine the cost effectiveness of replacing V-belts with cogged belts or synchronous belts
- 7 Conduct a survey about the quality of your in-plant power distribution
- 8 Check the distribution system for unevenly distributed single-phase loads
- 9 Eliminate voltage unbalances, because they can seriously degrade the performance and shorten the lifetime of three-phase motors
- 10 Eliminate excessive voltage drops in your in-plant distribution system
- 11 Check the power factor in your in-plant distribution system and evaluate measures to improve the power factor

The Energy Efficiency Guidance Documents



BP 7 8.2. Pumps

The most common flow control in pump systems is with a flow control valve in the discharge of the pump. This often results in a waste of energy as the pump is not running at its optimum point.

Using a **variable speed drive** instead of a throttling control valve can result in substantial energy efficiency improvement and therefore cost savings.

Summary



Chemical industry is committed to further reduce its energy and emission intensity and to increase the substantial net savings enabled by its products

New investments provide best reduction opportunities – for chemicals much of this occurs in developing countries

Motors, pumps and drives play an important role in further increasing efficiencies

Chemical industry initiatives e.g. explore best practice and future potentials for energy efficiency gains



Many thanks for your attention

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