

Energy

Fuel and power consumption in the EU chemicals industry

1. Chemicals Industry Profile
2. International Trade
3. Growth and Competitiveness
4. Employment
5. Energy

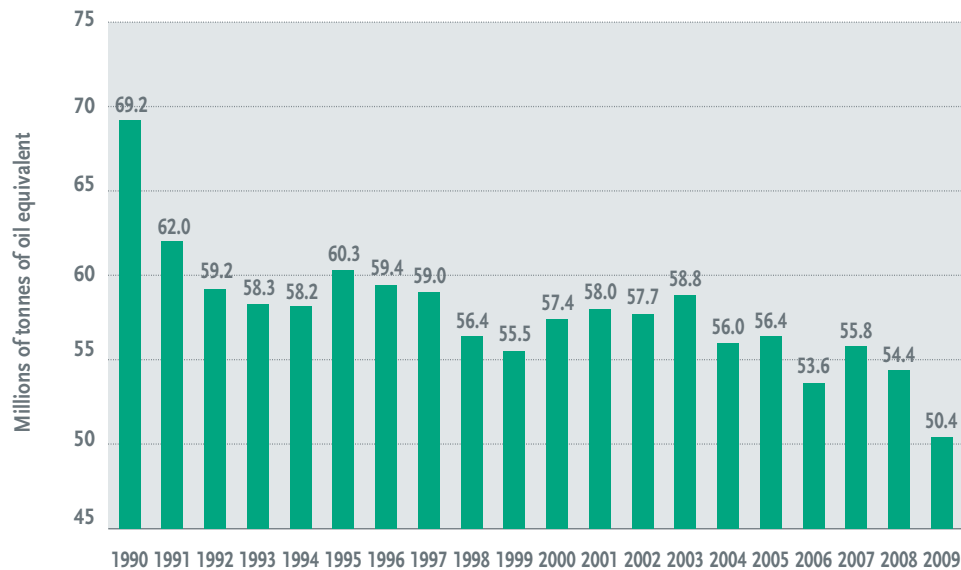
Fuel and power consumption in the EU chemicals industry

Gas and oil consumption in the EU chemicals industry during the past 20 years

Energy intensity in the EU chemicals industry

Energy intensity: European Union versus United States

6. Investment and R&D
7. Sustainable Development



Sources: Eurostat and Cefic Chemdata International

Unless specified, chemicals industry excludes pharmaceuticals
Unless specified, EU refers to EU-27

EU chemicals industry fuel and power consumption has fallen by 27 per cent since 1990

- The chemicals industry transforms energy and raw materials into products required by other industrial sectors as well as by final consumers. The cost of these two inputs is a prime factor in competitiveness on world markets.
- In 2009, the European chemicals industry, including pharmaceuticals, used a total of 69.2 million tonnes of oil equivalent (TOE) of fuel and power consumption.
- The EU chemicals industry, including pharmaceuticals, has constantly reduced its fuel and power consumption significantly during the period 1990 to 2009. The amount of energy consumed in 2009 was 27 per cent less than the level in 1990, according to the European Commission data.
- Data on feedstock are no longer available, but we know from historical data that feedstock consistently accounted for 60 per cent of total energy products, taking all sources of energy into account. This means that most of the energy used by the chemicals industry as feedstock is stored in products and can still be reused via recycling.
- Regarding other raw materials, the chemicals industry also uses a wide variety of natural and processed starting materials, including metals, minerals and agricultural raw materials such as sugar, starch and fats.

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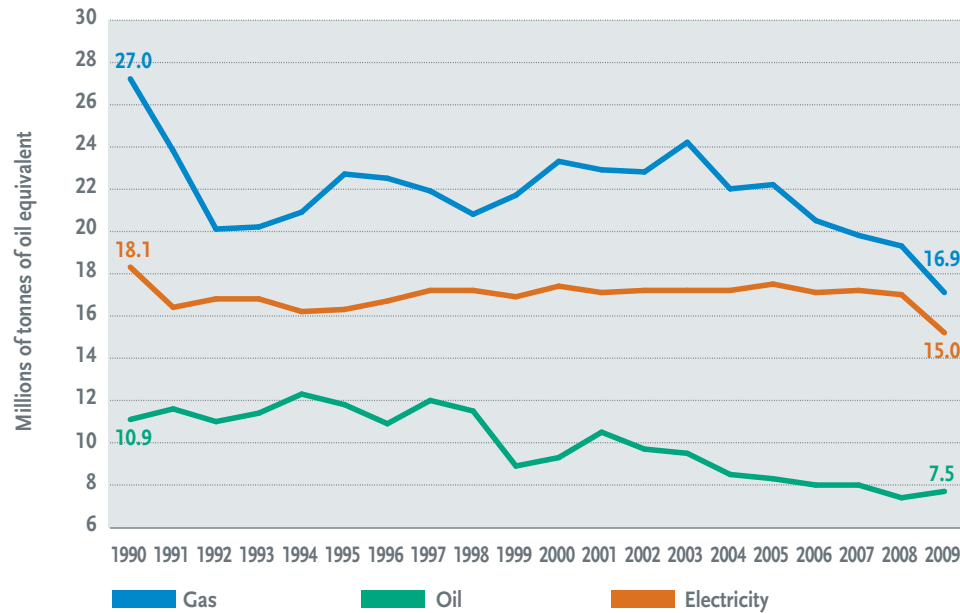
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EU chemicals industry reduced gas consumption by 37.4 per cent from 1990 to 2009

- Data on energy consumption by source confirms that the EU chemicals industry has significantly reduced its gas consumption from 1990-2009.
- In 2009, the European chemicals industry (including pharmaceuticals), used as energy a total of 16.9 million tonnes of oil equivalent (TOE) of gas consumption. This represents a sharp reduction in gas consumption of 37.4 per cent compared to 1990.
- Oil and electricity registered in 2009 a reduction of consumption of 31.4 per cent and 17.1 per cent respectively compared with 1990.

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Energy intensity* in the EU chemicals industry

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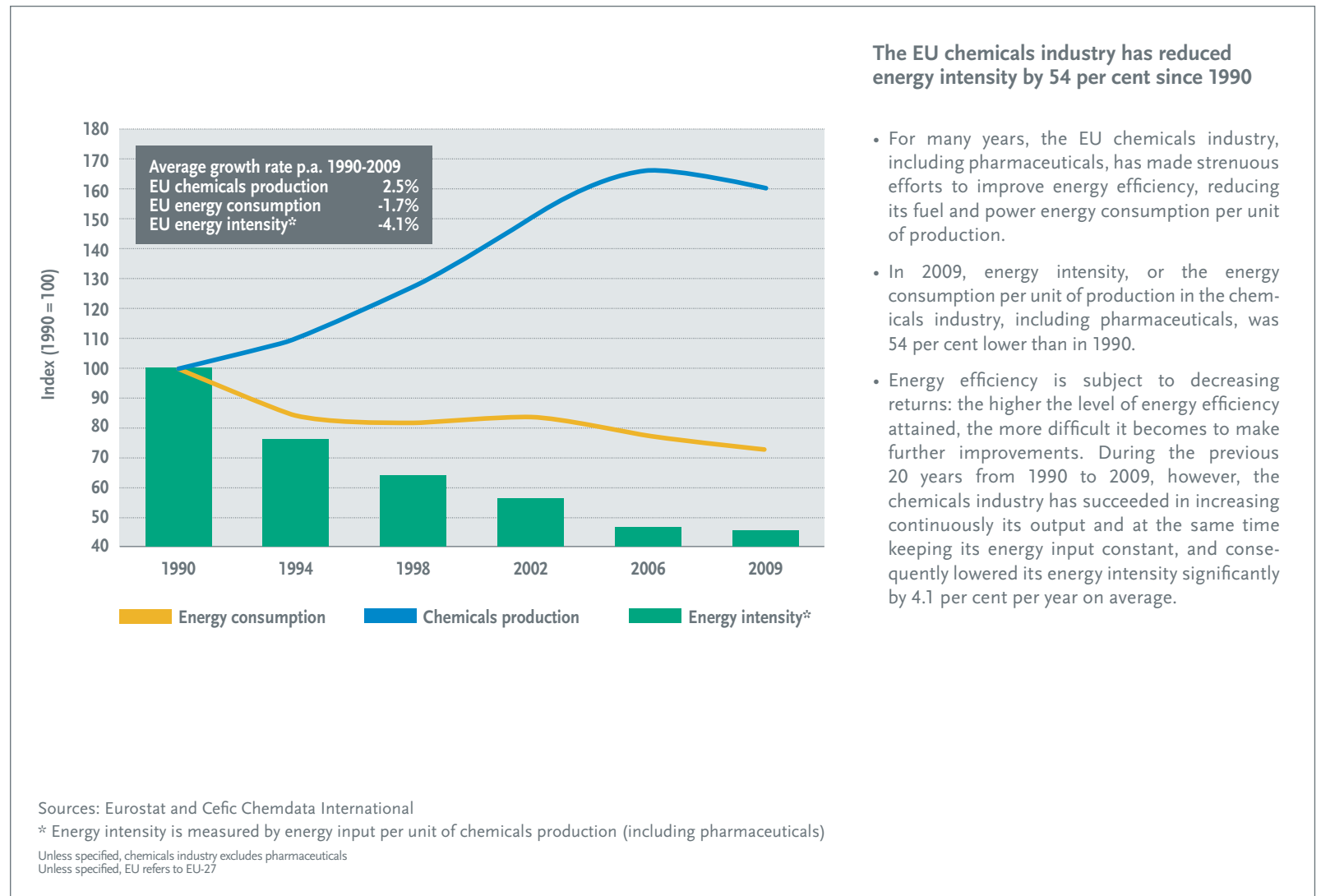
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The EU chemicals industry has reduced energy intensity by 54 per cent since 1990

- For many years, the EU chemicals industry, including pharmaceuticals, has made strenuous efforts to improve energy efficiency, reducing its fuel and power energy consumption per unit of production.
- In 2009, energy intensity, or the energy consumption per unit of production in the chemicals industry, including pharmaceuticals, was 54 per cent lower than in 1990.
- Energy efficiency is subject to decreasing returns: the higher the level of energy efficiency attained, the more difficult it becomes to make further improvements. During the previous 20 years from 1990 to 2009, however, the chemicals industry has succeeded in increasing continuously its output and at the same time keeping its energy input constant, and consequently lowered its energy intensity significantly by 4.1 per cent per year on average.

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Energy intensity: European Union versus United States

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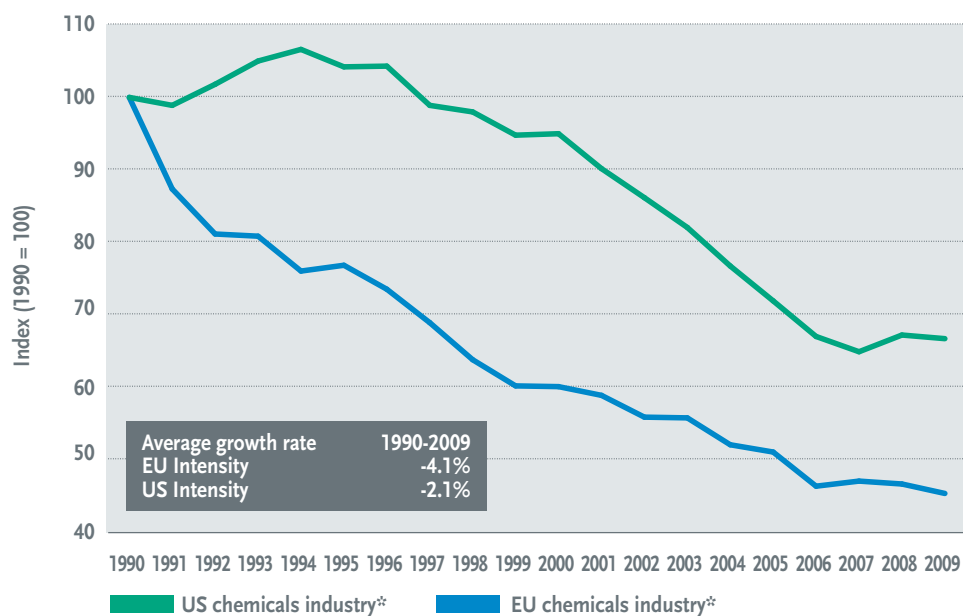
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EU energy intensity in the chemicals industry far higher than in the United States

- Energy intensity in the US chemicals industry has declined over the period 1990 to 2009, but not as much as in Europe where energy intensity slowed by 2.1 per cent per year on average.
- Energy consumption in the EU chemicals industry fell in 2009 by 27 per cent compared with 1990.

Sources: Eurostat, American Chemistry Council (ACC) and Cefic Chemdata International

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