



# Energy Efficiency Profile : UK

October 2008

## Energy Efficiency Trends

### Overview

The UK has seen a gradual improvement in energy efficiency, of approximately 12%, over the period 1990-2005 as illustrated by the overall ODEX index. This is due to improvements in all three of the sectors under consideration; industry, households and transport.

### Industry

During the period 1990-2005 UK industrial energy efficiency has improved by around 16%, with steady overall year-on-year progress being made after an initial period of stagnation in the early 1990s. Within energy-intensive sub-sectors, the energy intensity of primary metals (iron/steel and non-ferrous metals) increased towards the end of the 1990s before starting to decline in recent years. Analysis of non energy-intensive sub-sectors suggests recent increases in energy intensity for the manufacture of textiles may have reached a peak, whilst food, equipment manufacture, chemicals and paper continue to fluctuate. Chemicals has exhibited a general downward trend, however since 2001 there has been a slight increase in the manufacture of paper.

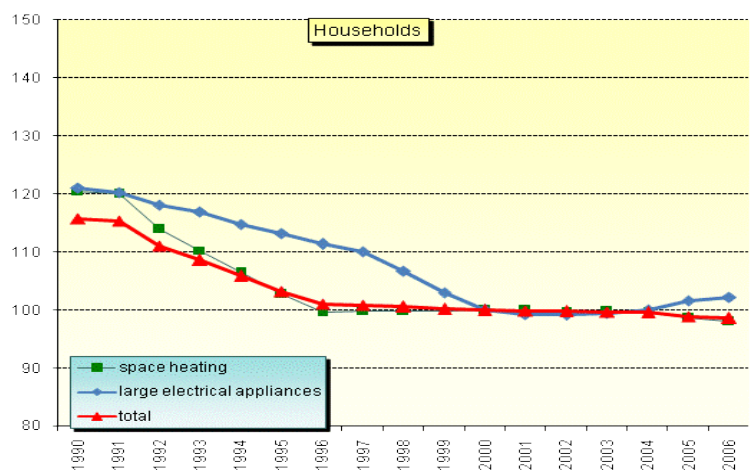
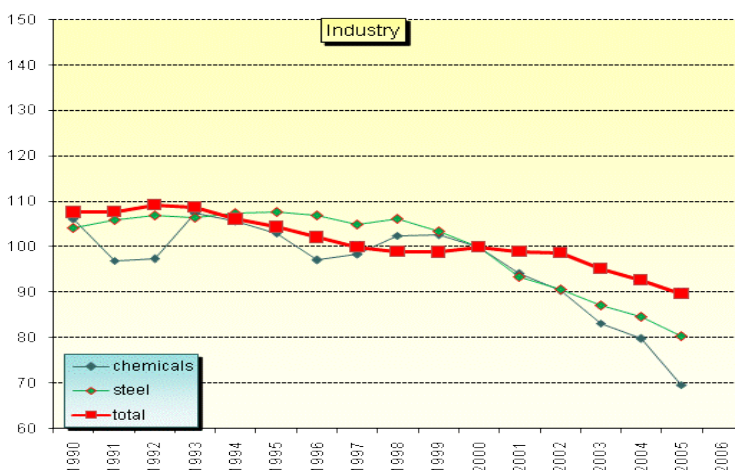
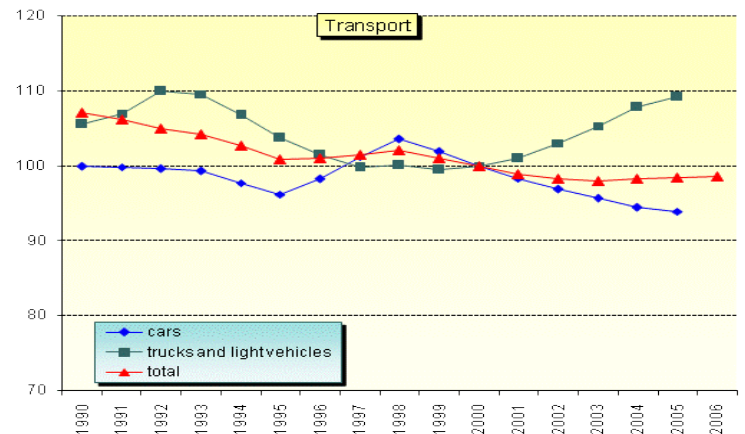
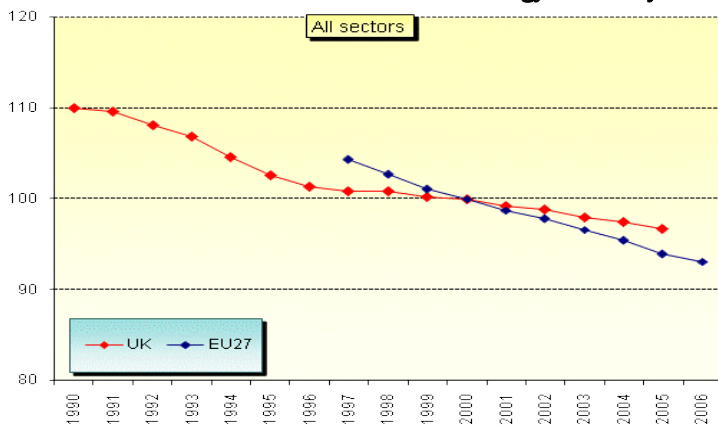
### Households

Overall household energy efficiency has improved by around 14% over the period 1990-2005. However, most of the improvement was seen in the early part of the 1990s and since this point rising service demand has acted to offset continued improvements in insulation and heating efficiency. Climate corrected fuel consumption per dwelling has also risen by approximately 10% over the period, although there are hopes that consumption will begin to plateau due to a gradual saturation of ownership for some appliances, coupled with continued efficiency improvements. In 2005 there was a slight improvement compared to 2004.

### Transport

Transport energy efficiency has improved steadily over the period 1990-2005 by approximately 8%. This is due to a gradual improvement in car efficiencies, which are the dominant consumer of UK transport energy. However, some of these improvements in road and air transport have been counterbalanced by decreases in the efficiency of road freight transport.

Energy efficiency index, base 100=2000



# Energy Efficiency Policy Measures

## Institutions and programmes

The UK's Department for Environment, Food and Rural Affairs (Defra) published the new UK Climate Change Programme in 2006. A key part of the strategy is to put in place the legislative framework to deliver a low carbon economy. In November 2007 the Climate Change Bill was introduced into Parliament, which should create the clear and credible long-term legal framework required. Defra is also the lead department for energy efficiency and for policy on combined heat and power (CHP). In June 2007 they published the UK Energy Efficiency Action Plan which sets out in detail the policy framework that has been put in place for improving efficiency across all sectors of the economy, in order to meet the UK energy saving target under the EU Energy End-Use Efficiency and Energy Services Directive of 9%. In addition, two government agencies, the Carbon Trust (CT) and Energy Saving Trust (EST) are responsible for improving energy efficiency and stimulating reductions in carbon emissions in the industrial/commercial and household/transport sectors respectively.

## Industry

The government introduced in 2001 the Climate Change Levy, which is a tax on the energy use of the UK business and public sector. As part of the Levy package UK government signed Climate Change Agreements (CCAs) giving industries an 80% discount provided they meet agreed carbon reduction targets. The Government will also implement the Carbon Reduction Commitment (CRC) in 2009; this is a mandatory cap-and-trade scheme for large commercial and public sector organisations. Separately from these schemes, the Carbon Trust provides advice, as well as technical and financial assistance, for businesses wishing to improve energy efficiency.

## Households, Services

The EST is primarily responsible for promoting energy efficiency in the household sector. A key policy has been the Energy Efficiency Commitment (EEC), which put an obligation on UK

energy suppliers to make energy savings amongst their customers. The first phase of EEC ran from 2002-2005, and a second phase ran until 2008. The Carbon Emission Reduction Target (CERT) replaced the EEC in April 2008, and extends the scope of the obligation to include microgeneration and behavioural measures. There are also centrally funded government schemes in England (known as Warmfront) and Wales, Scotland and Northern Ireland specifically aimed at alleviating fuel poverty via improvements in energy efficiency. In July 2007, the UK government published its 'Building a Greener Future: a Policy Statement' which confirmed its intention for all new homes to be zero carbon from 2016, with a progressive tightening of the energy efficiency components in building regulations by 25% in 2010, and by 44% in 2013, up to the zero carbon standard in 2016.

## Transport

In April 2008 the Renewable Transport Fuel Obligations (RTFO) Order 2007 came into force, this requires that 2.5% of transport fuel must come from renewable sources in 2008-2009. The Government will consult later in 2008 on slowing down the proposed rate of increase in the RTFO in light of the concerns about biofuels. Other transport based policies include the introduction of variable vehicle excise duty (VED) and variable company car taxation; these are graduated to reflect the CO<sub>2</sub> emissions from cars, with lower rates for fuel efficient vehicles, and increases in rates for the least efficient.

## Energy prices and taxes

The UK introduced the Climate Change Levy, (a tax on the business use of fossil fuel energy) in 2001. Companies that are part of CCAs and which successfully meet the conditions of their agreement are eligible for an 80% discount on the levy. UK businesses are also able to reduce their tax liability through the use of enhanced capital allowances on energy efficient goods and services; this provides businesses with a first year 100% tax allowance on designated energy efficient equipment investment. Value Added Tax on energy is currently at 17.5% with the exception of the domestic sector, which has a reduced rate of 5%.

## Selected Energy Efficiency Measures

Sectors	Title of Measure	Since	CO <sub>2</sub> (1) (Mt)
Industry	Climate Change Agreements	2001	1.1
Industry	Carbon Trust programmes	2001	4.0
Industry	Carbon Reduction Commitment	2009	0.3
Industry	UK Emissions Trading Scheme	2002	1.1
All	Revised Building Regulations 2005/06	2006	0.7
Households	Fuel Poverty Schemes - Warm Front	2000	1.5
Households	Carbon Emission Reduction Target (CERT)	2008	3.6
Transport	Renewable Transport Fuels Obligation	2008	9.5
Transport	Voluntary commitments on CO <sub>2</sub> from Cars (2)	1995	8.4

**Note:** the above estimates are taken from the UK Energy Efficiency Action Plan, published July 2007.

<sup>1</sup> Estimated annual energy savings by end of 2010 unless stated otherwise.

Source: MURE data base  
[www.mure2.com](http://www.mure2.com)

