



Energy Efficiency Profile: UK

May 2011

Energy Efficiency Trends

Overview

The UK has seen a gradual improvement in energy efficiency, of approximately 15%, over the period 1990-2008 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 1990–2008 UK industrial energy efficiency has improved by around 12%, 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. Non ferrous metals, non metallic metals, cement productions and other non mineral productions showed a slight increase between 2007 and 2008.

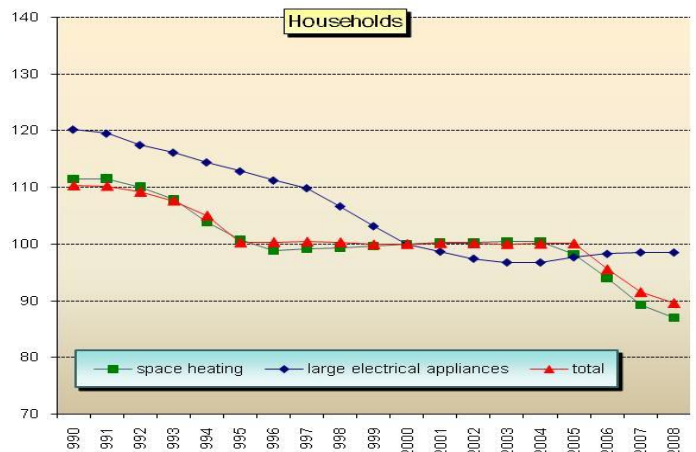
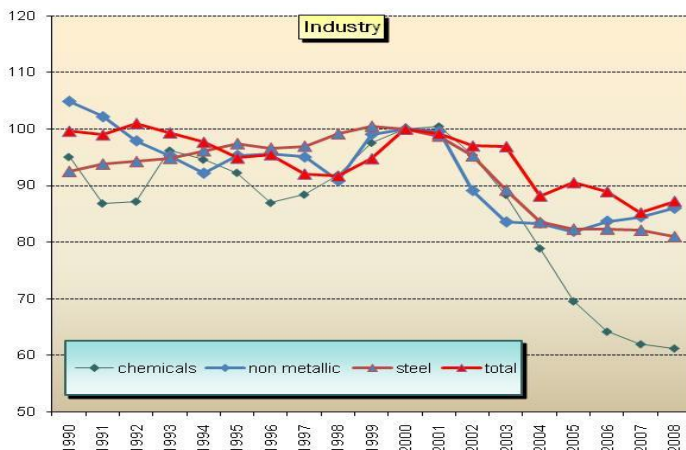
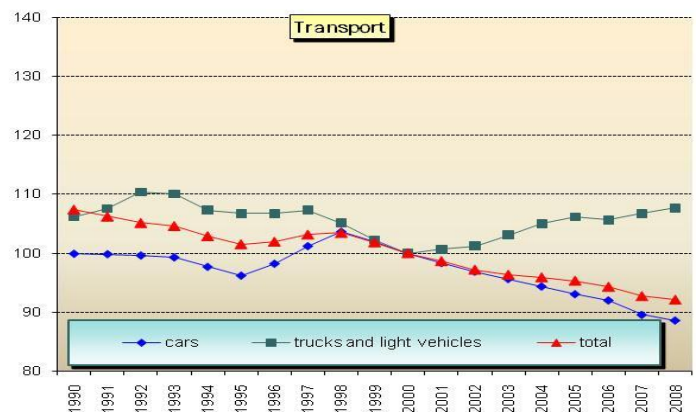
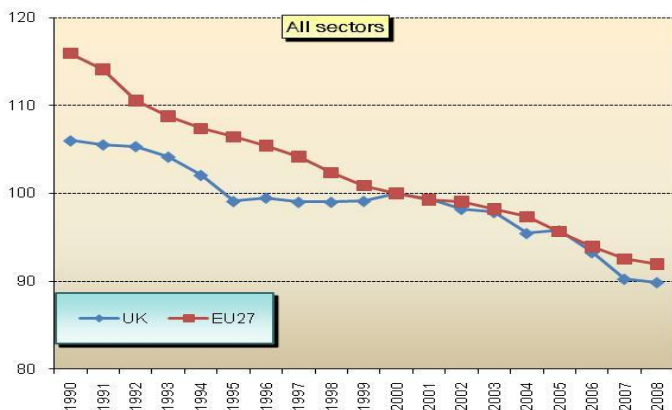
Households

Overall household energy efficiency has improved by around 19% over the period 1990-2008. However, most of the improvement was seen in the early part of the 1990s and since this point rising service demand, due to an increase in domestic electrical appliances per household, has acted to offset continued improvements in insulation and heating efficiency. However overall efficiency has again increased gradually since 2005 due to continued efficiency improvements within space heating. Climate corrected fuel consumption per dwelling has also risen by approximately 9% over the period. Consumption for large electrical appliances continued to increase since 2004 due to an increase in TV appliances per household and a saturation effect in energy efficiency improvements in other area.

Transport

Transport energy efficiency has improved steadily over the period 1990–2008 by approximately 14%. 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)*



* All indicators measured as a three-year moving average
Source ODYSSEE For more information : <http://www.odyssee-indicators.org/>

Energy Efficiency Policy measures

Institutions and programmes

The UK's **Department for Climate Change** (DECC) published the **Low Carbon Transition Plan** (LCTP) in 2009, the first white paper to set out policies and proposals to be implemented to decarbonise the UK economy. The plan lays out how the UK will meet its 34% reduction in total GHG emissions based on 1990 emission levels by 2020. The transition to a low carbon economy will be achieved by generating 40% of electricity from low carbon sources by 2020 such as renewables. The **Energy Bill 2010** is taking forward the main elements of the LCTP related to decarbonisation of the power sector (eg. Carbon Capture and Storage (CCS)) and improving the fairness of energy markets. It also includes provision for a new 'Green deal' looking at improving energy efficiency in buildings. Policies linked to the LCTP, in particular the aim to increase the use of renewable energy, are the **Renewable Obligation**, **Feed in Tariffs** and the **Renewable Heat Incentive**. In addition, two government arms length bodies, 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 implemented 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 is the **Carbon Emission Reduction Target** (CERT) which put an obligation on UK energy suppliers to make energy savings amongst their customers. It replaced the Energy Efficiency Commitment (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 Warm front), Wales and Scotland specifically aimed at improvements in energy efficiency, eg boiler scrappage scheme, insulation of homes and smart meters. Following on from the 'Building a Greener Future: a Policy Statement' which confirmed its intention for all new homes to be zero carbon from 2016, the UK government implemented the New Building regulations (2010, 2013, 2016), October 2010, setting out basic performance standards on fuel and energy conservation for all new buildings. The 'Warm Homes, Greener Homes: A Strategy for Household Energy Management', published in 2010, is setting out plans to meet a 29% reduction of non traded carbon emissions from the household sector including an extension of CERT to 2012.

Transport

The 'Low Carbon Transport: A Greener Future' published in July 2009 set out how the transport sector intends to reduce its overall GHG emissions up to 2050 in line with the 2008 Climate Change Act. 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, reaching 5% in 2013. Other transport based policies include the EU Voluntary Agreements on new car CO₂ to 2009, including supporting fiscal measures.

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 **Climate Change Agreements** (CCAs and which successfully meet the conditions of their agreement are eligible for a 65% discount on the levy as of 1st April 2011. Under the **Energy Act 2010** energy companies are required to make available at least £300 million per annum (around € 345 million) by 2013-14 on social support to support tackling fuel poverty by lowering energy bills of the most vulnerable consumers.

Selected Energy Efficiency Measures

Sectors	Title of Measure	Since	CO ₂ savings (kt) ¹
All***	Carbon Trust programmes	2001	2,073
All	Carbon Reduction Commitment**	2009	299
Industry (& commerce)	UK Emissions Trading Scheme	2002	72
All	Revised Building Regulations (2002+2005)	2010	5,677
Households	Fuel Poverty Schemes – Warm Front	2000	105
Households	Carbon Emission Reduction Target (CERT)	2008	6,968
Households	Market Transformation Programme (« Products Policy »)	1994	582
Transport	Renewable Transport Fuels Obligation	2008	2,954
Transport	Voluntary commitments on CO ₂ from Cars	1995	1,098 ²

Source MURE

For more information : <http://www.isisrome.com/mure/>

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

¹ Estimated annual energy savings by end of 2010 unless stated otherwise.

² CO₂ savings are from voluntary commitments, graduated VED and changes in company car taxation

** includes public sector Salix funding, PBR and SME loans

*** excludes households and transport sectors

