

Sustainable Development Indicators



The UK Government and Devolved Administrations set out a strategy for sustainable development, *Securing The Future*, in 2005. Drawing on this framework and stakeholder feedback, we focus on the five themes which we think capture how the Gas and Electricity Markets Authority should contribute to the sustainability challenges of the 21st century.

The third of the five themes is promoting energy saving. Energy conservation and improved energy efficiency are critical elements in any sustainable development strategy. Saving energy can deliver a huge range of environmental, social and economic benefits. We are committed to playing our part to encourage all energy consumers to be more energy efficient and to facilitating the provision of energy services by market participants.

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Source: DECC Energy Consumption in the UK

The past 9 years, gas consumption has fallen. Major trends in the UK economy include moving away from heavy industry, outsourcing of production and buying products from abroad. The recession heavily affected industries, who are large users of gas and electricity; this explains the reduction in consumption in 2009 compared to the levels in 2006. Another factor that would have contributed to the downward trend of consumption is the increase of home insulation and more energy efficient appliances.



Figure 15 - Energy intensity by sector.

Source: DECC Energy Consumption in the UK

All sectors of the economy are now less energy intensive than they were in 1990. However, it is the service sector that has progressed the most in recent years. In the past year, domestic energy intensity has also fallen sharply. This could be due to a number of factors, including improved standards for household appliances and energy efficiency, as well as households curtailing their energy consumption in challenging economic times.



Figure 16 – Energy intensity and carbon dioxide emissions of power generation Source: DECC UK Energy Sector Indicators

There has been a sharp decline in CO_2 emissions from electricity generation in the last year but emissions are still higher than they were a decade ago. The recent fall could be attributed to the start of the EU Emissions Trading Scheme (ETS) in 2005 that has put a price on carbon emissions. The overall trend of Energy Intensity is downwards, meaning that we are using electricity more efficiently.

Indicator 10: CO₂ savings from the CERT



Figure 17 - Carbon dioxide emissions savings from the CERT, including carry-over Source: Ofgem

Suppliers have nearly met the original target set by the Government's Carbon Emissions Reduction Target (CERT) scheme. However, as the chart above shows, recent reviews have nearly doubled the amount of savings required by the CERT, which will now end in December 2012 rather than March 2011. The latest amendments require at least two thirds of the target is delivered through professionally installed insulation. In addition, 40% of measures must be delivered to a Priority Group of vulnerable and low-income households and 15% to a Super Priority Group at high risk of fuel poverty. CERT has a positive Net Present Value to society of about £17 billion after taking into account the costs to suppliers.

Historically the largest lifetime savings have come from insulation and lighting. Because of an overreliance on free low energy light bulb mail-outs (232 million sent out in 2 years), this is now not allowed, though promotion through retailers is still eligible. Other ways suppliers can get a carbon return include approved financial investment in trails of innovative measures as well as behavioural measures. While 'Micro & CHP' and 'Appliances' only represent a small amount of the attained target, they have increased 250% and 175% respectively.

Indicator 11: Gas and electricity losses



Figure 18 - Electricity losses

Source: Ofgem data

Transmission losses have risen again to that of near 2007/08 while distribution losses are the highest they have been in the last 9 years. There is no clear reason or specific events for the reversal of the downward trend, however, a change in methodology could have contributed to this.



Figure 19 – Methane emitted from gas distribution networks Source: Ofgem data

This chart has not been updated since last year due to data availability. We hope to provide an update on this in the near future.

This chart shows a continued decline in methane emissions from gas distribution networks as the gas mains replacement programme proceeds.