



Department  
of Energy &  
Climate Change

# PROGRESS AGAINST INPUT AND IMPACT INDICATORS 2013-14

26 June 2014

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## Progress against input and impact indicators 2013-14

This section provides a progress report for the input and impact indicators for each of our priorities. Additional indicators have been included to demonstrate in more detail what we have delivered in 2013-14.

### Priority 1 impact indicator 1

#### The total number of energy efficiency installations (cavity wall and loft insulation) in GB households

This indicator tracks progress on the number of homes with adequate loft (at least 125mm) and cavity wall insulation in Great Britain.

The total number of energy efficiency installations (cavity wall and loft insulation) in UK households					
	2010-11	2011-12	2012-13	2013-14	
<b>Cavity wall insulation</b>					
Number of cavity wall installations at start of period	11,490,000	12,090,000	12,750,000	13,360,000	
Additional cavity wall installations during period	600,000	660,000	610,000		
<b>Loft insulation</b>					
Number of lofts insulated at start of period	12,450,000	13,540,000	14,770,000	16,160,000	
Additional lofts insulated during period	1,090,000	1,230,000	1,390,000		

Source: DECC home insulation statistics (next update June 2014)

<https://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics>

ECO is a statutory obligation placed on the main energy suppliers to meet a series of targets relating to carbon savings and reducing home heating costs up to 2015. In December 2013 the Government announced proposals to extend ECO to 2017; these proposals went out for public consultation in early 2014.

Cavity wall and loft insulation are two of the most cost-effective carbon saving measures and over the course of the year have been delivered particularly under those sub-targets of ECO which focus on households most at risk of fuel poverty, and on lower income areas. However, the Government now proposes that loft and standard cavity wall insulation should become eligible measures under all aspects of ECO, which is likely to drive increased delivery of these measures going forward.

Most of the easy-to-treat cavities in Great Britain have now been insulated. Figures for December 2013 show:

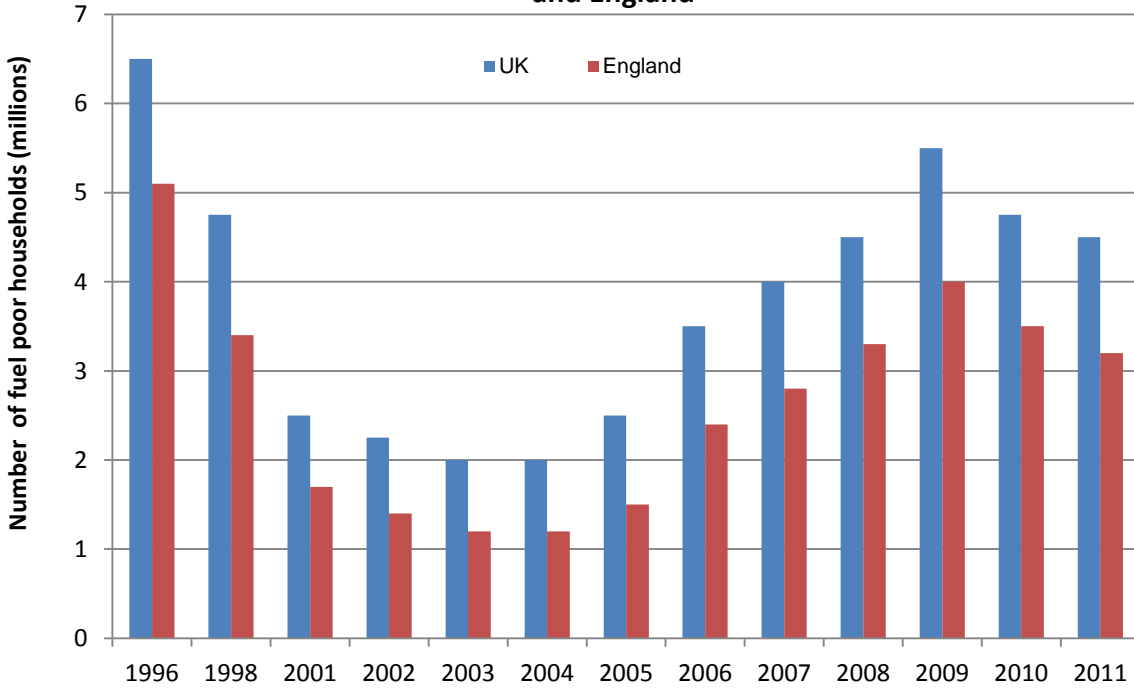
- **16.3 million homes had loft insulation of at least 125mm** (69 of homes with lofts). Of the 7.3 million homes with lofts without at least 125mm of insulation, only around 1% are estimated to have no loft insulation.
- **13.6 million homes had cavity wall insulation** (71% of homes with cavity walls). Of the 5.1 million homes without cavity wall insulation, most are hard to treat, with only 0.7 million of them being easy to treat standard cavities without insulation.
- **232,000 homes had solid wall insulation** (3% of homes with solid walls).

**Priority 1 impact indicator 2**

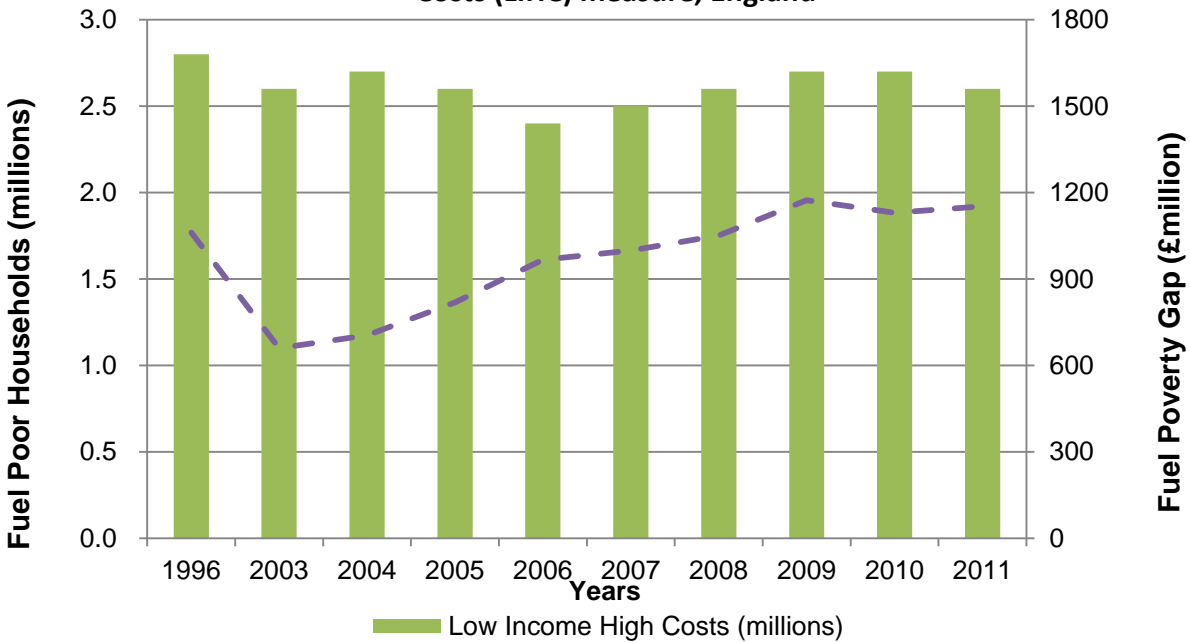
**The number of households in fuel poverty**

This indicator records the number of households considered to be in fuel poverty and the fuel poverty gap. The latest official statistics for fuel poverty were published on 16 May 2013 and show that in 2011, 3.2 million households were in fuel poverty in England.

**The number of households in fuel poverty under the 10% measure, UK and England**



**The number of households in fuel poverty under the Low Income High Costs (LIHC) measure, England**



DECC annual report on fuel poverty statistics (next update June 2014)  
<https://www.gov.uk/government/collections/fuel-poverty-statistics>

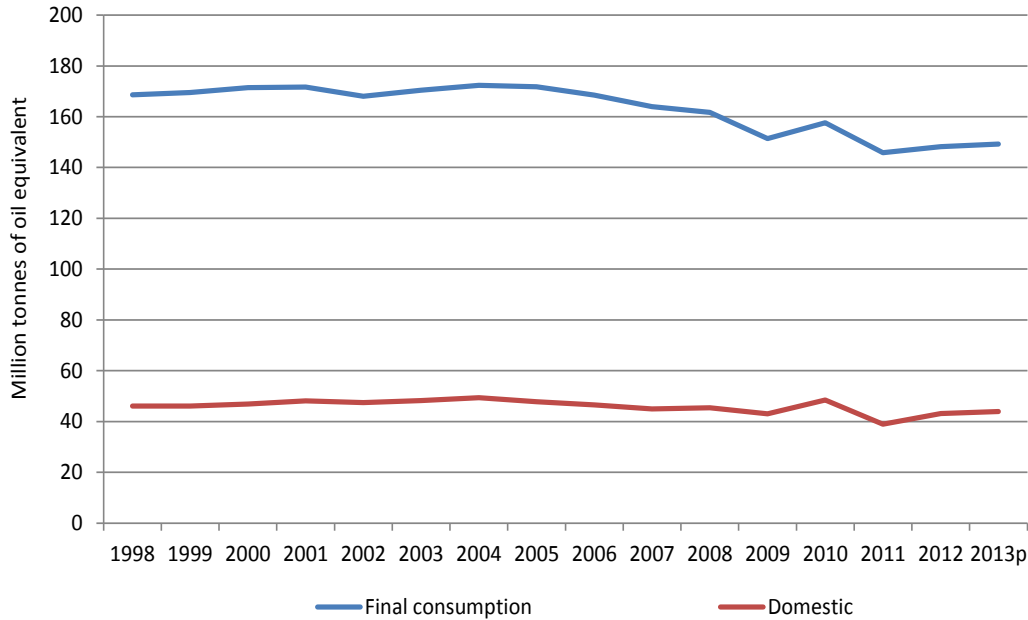
The Government has recently set out the new definition of fuel poverty which it intends to adopt under the LIHC Framework. The August 2013 statistics reflect this new definition. Under the new definition, a household is said to be in fuel poverty if they have required fuel costs that are above the average (the national median level). Were they to spend that amount they would be left with a residual income below the poverty line.

Fuel poverty is driven by three key elements: energy efficiency, incomes and energy prices. Helping a household to improve the thermal comfort and efficiency of the dwelling through the installation of heating and energy efficiency measures is usually the most cost-effective way of reducing the cost of maintaining an adequate level of warmth and tackling fuel poverty.

### Priority 1 additional indicator 1

#### Final energy consumption (domestic/household energy consumption)

This indicator shows the total final energy consumption and consumption by the domestic (residential) sector.



Source: DECC Energy Trends table 1.3a

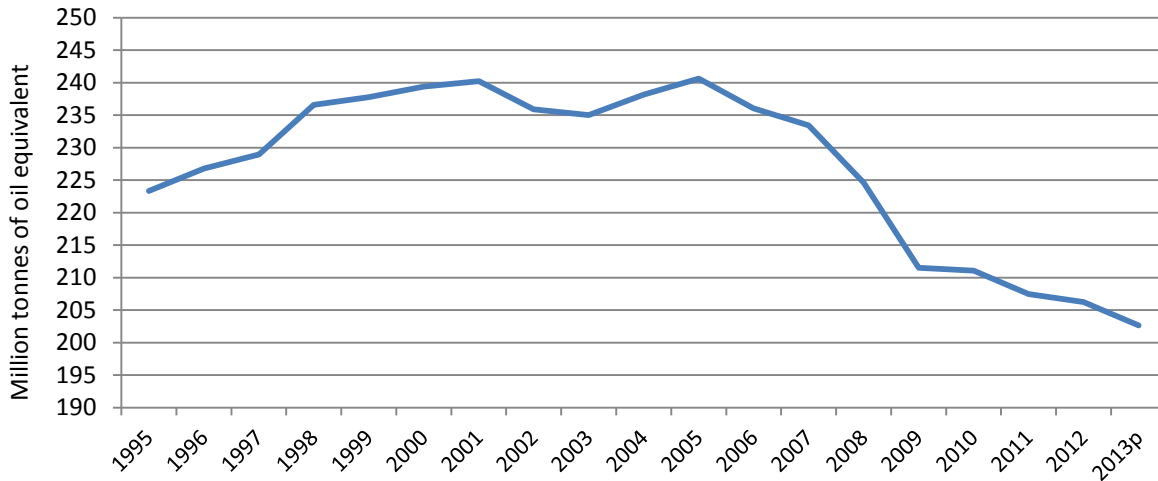
<https://www.gov.uk/government/publications/total-energy-section-1-energy-trends>

The long term trend demonstrates the impact on consumption of the take up of home energy efficiencies measured by the other indicators of Priority 1 together with energy efficiency in the other sectors. Final energy consumption is strongly influenced by external temperatures particularly in the domestic sector where consumption rose by 1.8%.

## Priority 1 additional indicator 2

### Temperature-adjusted primary energy use

The measurement of temperature-adjusted primary energy use indicates what annual consumption might have been if the average temperature during the year had been the same as the average for the years 1971 to 2000. This complements additional indicator 1 by showing the impact of seasonal and temperature effects on energy consumption.



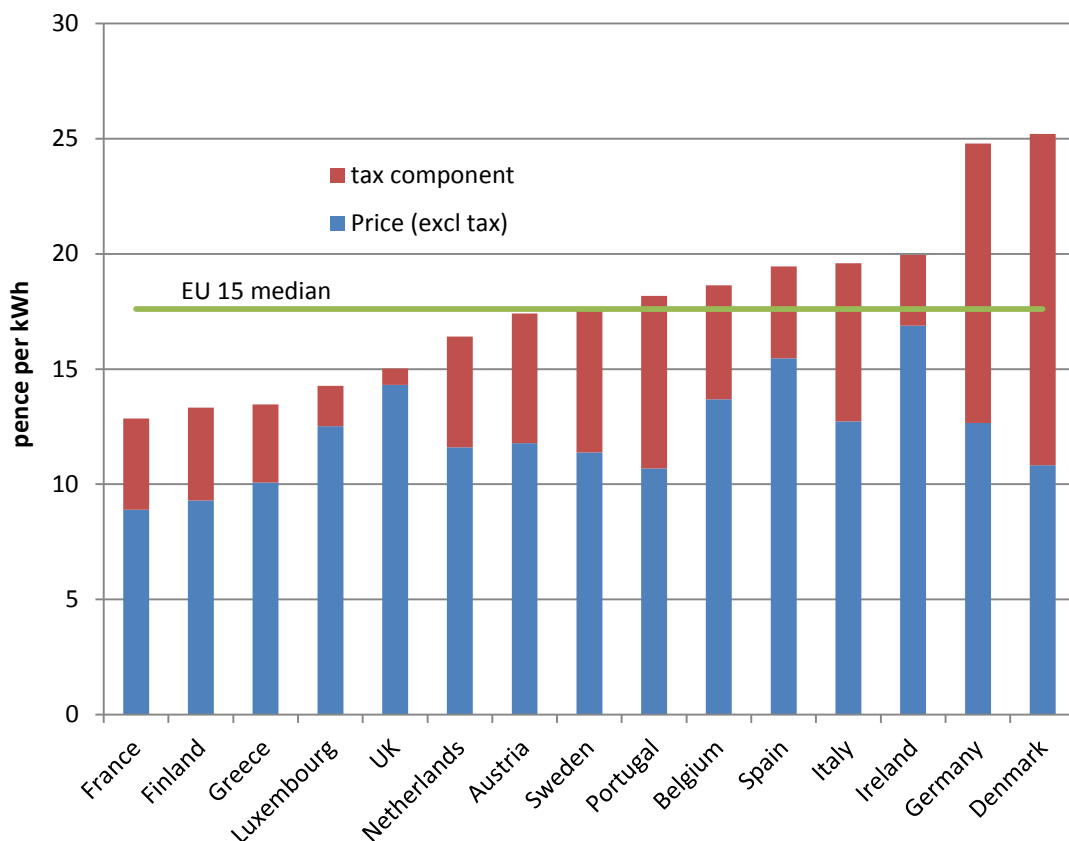
Source: DECC Energy Trends table 1.2

<https://www.gov.uk/government/publications/total-energy-section-1-energy-trends>

In 2013 total consumption was 203.7 million tonnes of oil equivalent, 1.3% lower than in 2012. A temperature-corrected domestic series is also published within Energy Trends, table ET1.3c.

### Priority 1 additional indicator 3

#### Average domestic electricity prices (including taxes) within the EU15 in 2013



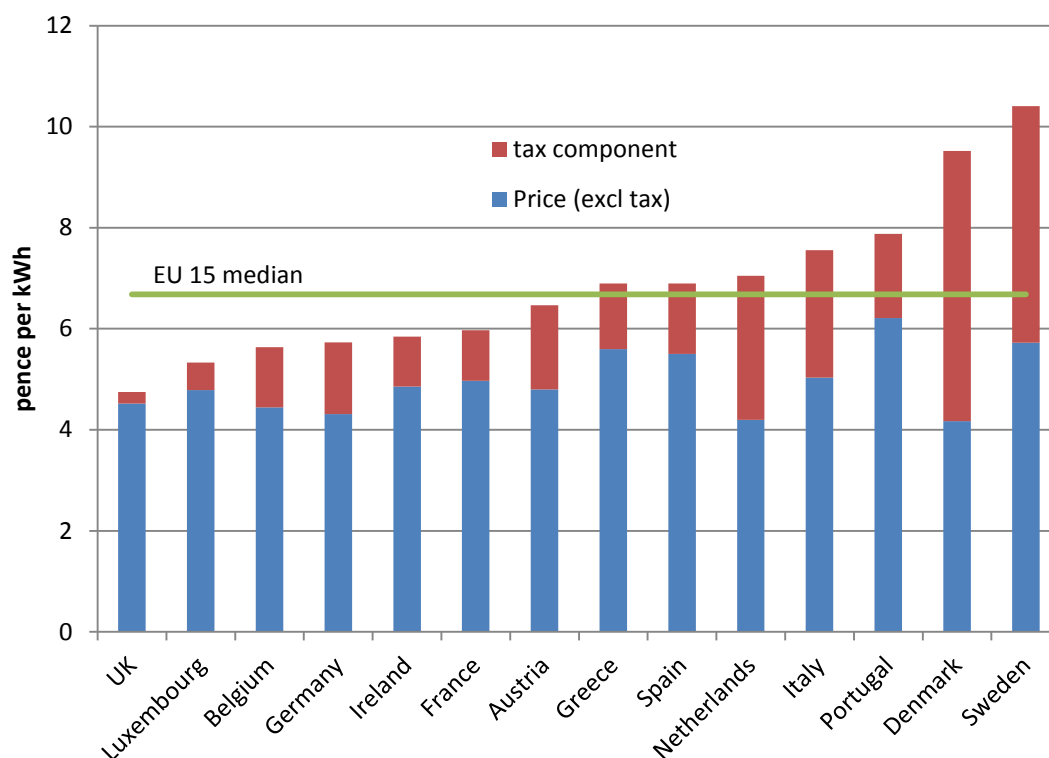
**Source: DECC Quarterly Energy Prices 5.6.2**

<http://www.gov.uk/government/statistical-data-sets/international-domestic-energy-prices>

Medium consumers are defined as having an annual consumption of 2,500 - 4,999 kWh per annum. The average UK domestic electricity price including taxes for medium consumers for January to June 2013 was the fifth lowest in the EU15 and was 16.4% below the median price. The UK price excluding taxes was the third highest in the EU15, and was 17.3% above the median level.



## Average domestic gas prices (including taxes) within the EU15 in 2013



Source: DECC Quarterly Energy Prices 5.10.2

<https://www.gov.uk/government/statistical-data-sets/international-domestic-energy-prices>

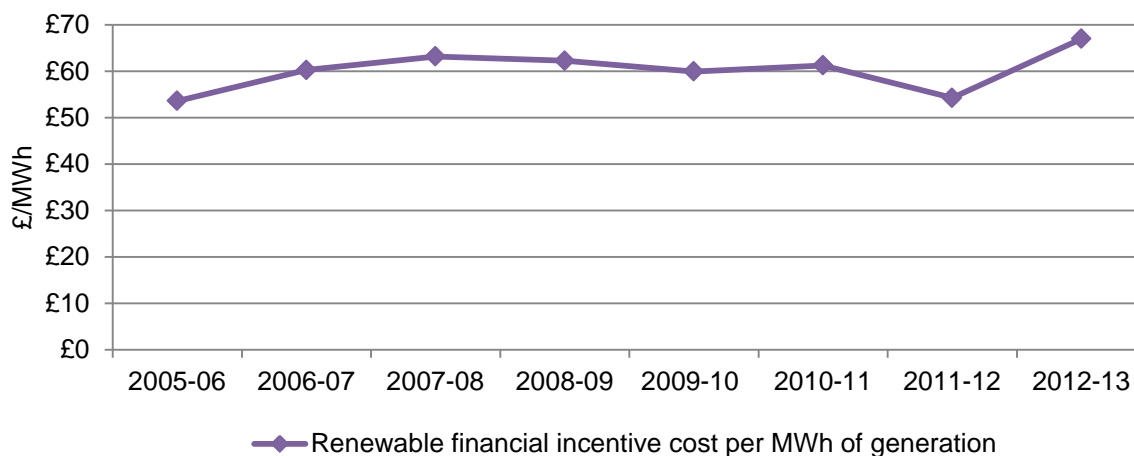
Medium consumers are defined as having an annual consumption of 5,557– 55,556 kWh per annum. Finland does not provide data to Eurostat for this series. In 2012, average UK domestic gas prices, including taxes where not refunded, were the ninth lowest in the IEA, third lowest in the G7, and were 18.9% lower than the IEA median.

Prices in the UK excluding taxes were the eleventh lowest in the IEA, third lowest in the G7, and were 0.4% lower than the IEA median. Prices relative to the median for some countries have been estimated.

## Priority 2 input indicator 1

### Renewable financial incentive cost per unit of renewable energy generated (excluding transport levies)

**2.49** This indicator shows the costs of support for renewables as part of progress towards the UK's requirement to meet the EU target for 15% of energy consumed to come from renewable sources by 2020.



Source:

Ofgem: Renewables Obligation Annual Report: <https://www.ofgem.gov.uk/publications-and-updates/renewables-obligation-ro-annual-report-2012-2013>

Ofgem: Feed in Tariffs Annual Report:

<https://www.ofgem.gov.uk/publications-and-updates/feed-tariff-fit-annual-report-2012-2013>

This data incorporates the Renewables Obligation (RO), the Feed-in Tariffs (FITs) and the non-domestic Renewable Heat Incentive (RHI). Data for the domestic RHI will be incorporated when launched.

For the RO, the indicator is the RO subsidy cost/MWh of RO generation. For FITs, the indicator is Gross FITs cost/MWh FITs generation. For the non-domestic RHI, the indicator is RHI expenditure /MWh RHI heat generation.

The Feed-In Tariff Scheme was launched in April 2010 and includes incentives for small-scale (less than 5 MW) low carbon electricity generation.

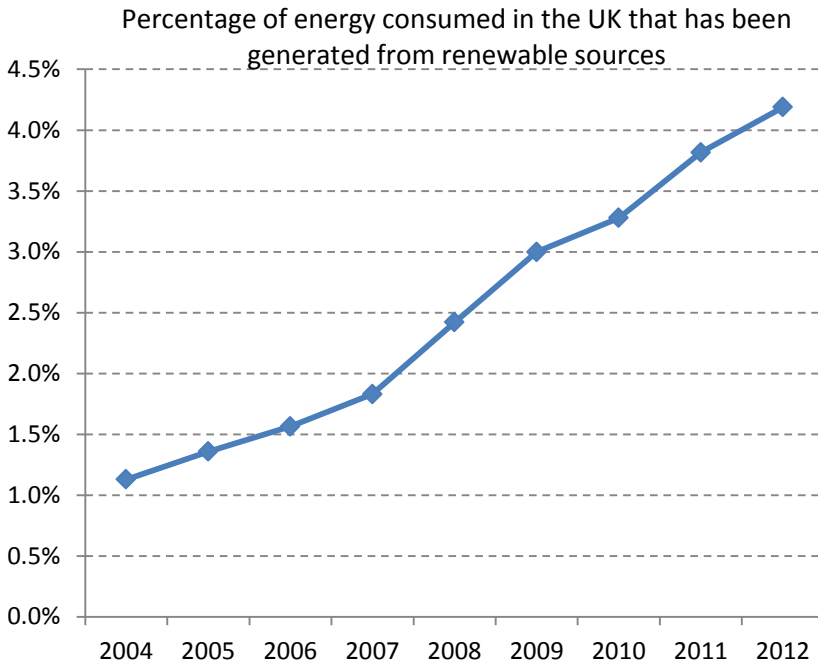
In 2012-13, the period for which the latest data is available, the average cost per unit of renewable energy was £66.97 per MWh. The nature of renewables means that the average cost will vary from year to year. Data for 2013-14 will be available in March 2015, when the Renewables Obligation Annual Report is published.

In 2013, 14.8% of the UK's electricity came from renewables.

## Priority 2 impact indicator 1

### Percentage of energy consumed in the UK that has been generated from renewable sources

This indicator uses the data that report the UK's progress against the Renewable Energy Directive and records the energy consumed from renewable technologies, such as wind (onshore and offshore), hydro, solar, bio-energy and transport bio-fuels.

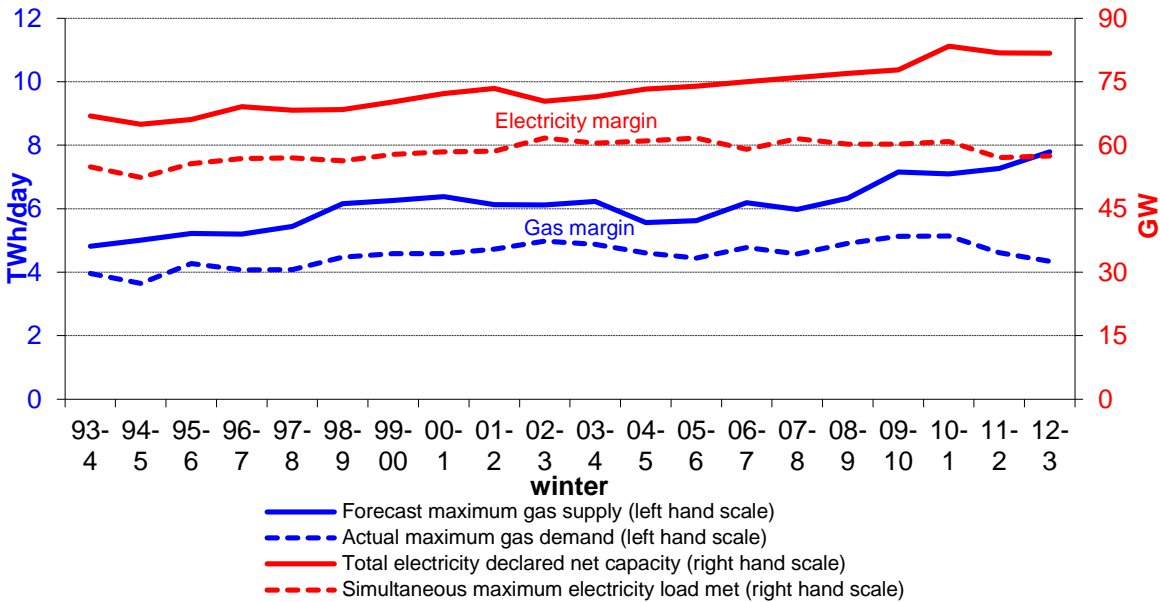


Source: DECC Energy Trends (next update due June 2014)  
<https://www.gov.uk/government/collections/energy-trends>

## Priority 2 impact indicator 2

### The spare capacity of the UK's gas and electricity networks (difference between maximum possible supply and actual peak demand)

This indicator illustrates one element of energy security, showing the difference between maximum supply and demand for gas and electricity.



Source: DECC UK Energy in Brief  
<https://www.gov.uk/government/collections/uk-energy-in-brief>

For electricity, the data shows the difference between the transmission entry capacity of UK power stations owned by major power producers and the simultaneous maximum load met in the UK. For gas, the data shows the difference between the peak forecast of supply and the actual maximum daily demand. This data is measured in winter, when demand for both electricity and gas is greatest.

Data for 2012-13 shows that:

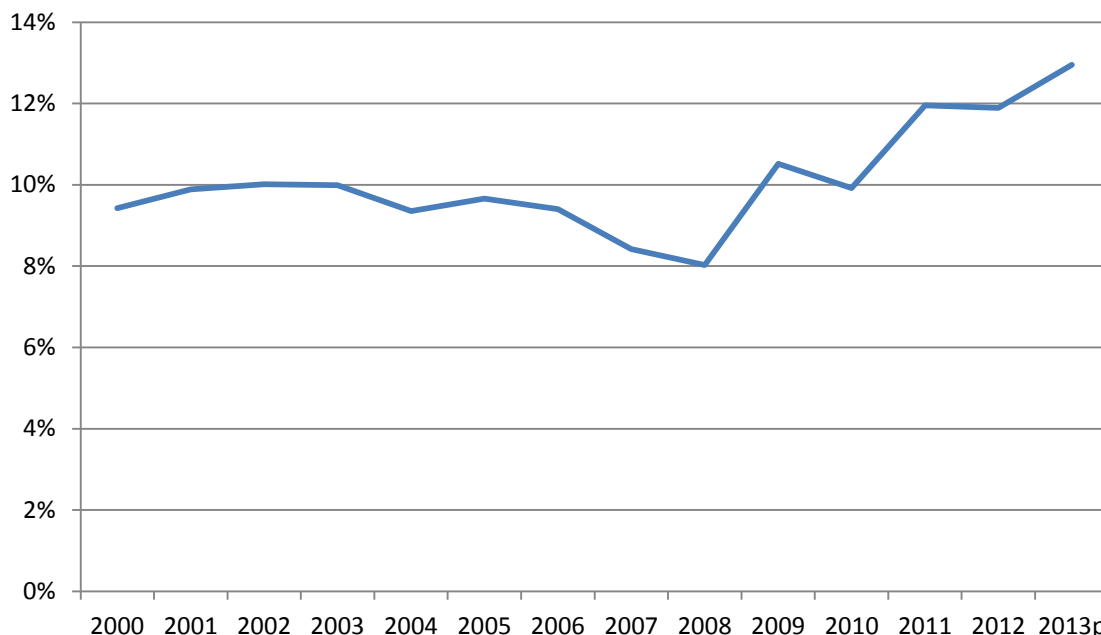
- Maximum gas supply was 7.8 TWh/d (Terawatt hours per day) and peak winter demand was 4.3 TWh/d
  - Maximum electricity supply was 81.7 GW (Gigawatts) and peak winter demand was 57.5 GW
- Data for 2013-14 will be available July 2014.

Electricity margins are currently at historic highs. However, 19 GW of capacity (roughly 25% of Britain's current generation) is scheduled to close by 2018. More than 20 GW (of which 12.5 GW is gas-fired and 6.5 GW wind powered) of new build is under construction or has planning consents. The Energy Security Strategy, published in November 2012, sets out for the first time a clear overarching analysis and policy framework for ensuring our energy security.

### Priority 2 impact indicator 3

#### The proportion of all UK energy supply from low carbon sources

This indicator measures the share of supply of the UK's energy sourced from low-carbon technologies.



Source: DECC Energy Trends table 1.3a

<https://www.gov.uk/government/publications/total-energy-section-1-energy-trends>

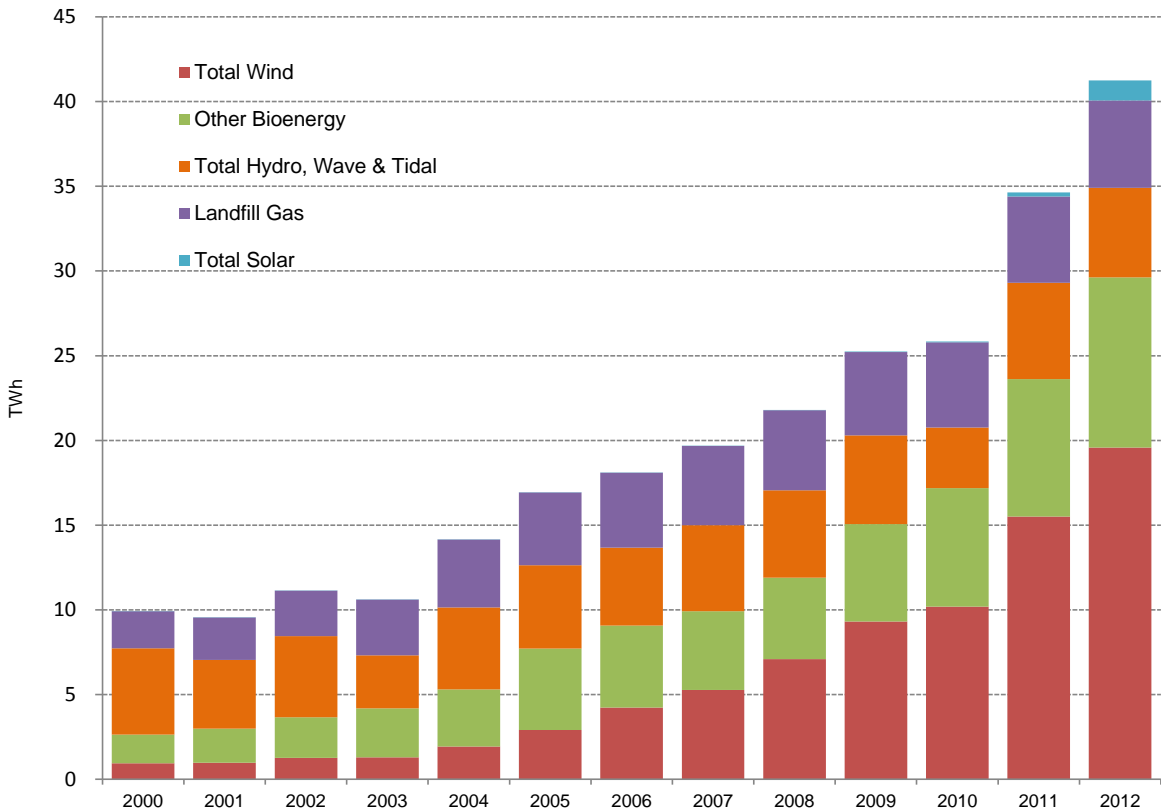
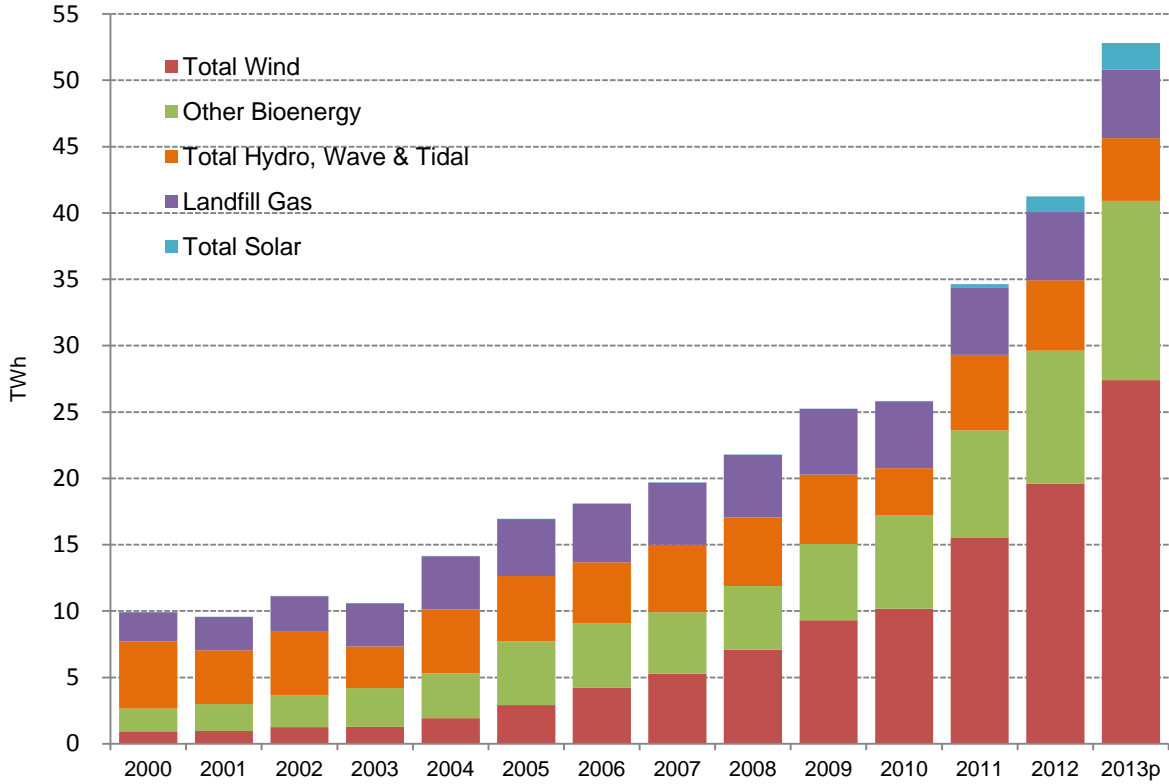
The data shows the sum of primary energy consumption of non-fossil fuels (nuclear, wind, hydro, biomass and other renewables) divided by the sum of the primary energy consumption for all fuels. Primary energy consumption is defined as the sum of energy final consumption, transformation, transfers, energy industry use and losses, less non-energy use.

Provisionally, in 2013, the period for which the latest data is available, 13.0% of all UK energy supply came from low carbon sources. Final data for 2013 will be available in the DECC publication Energy Trends, to be published on 26 June 2014.

## Priority 2 additional indicator 1

### Electricity generation from renewable sources

This indicator records the electricity generated from renewables, split by: hydro, landfill gas, other bioenergy, wind (onshore and offshore) and solar photovoltaic.



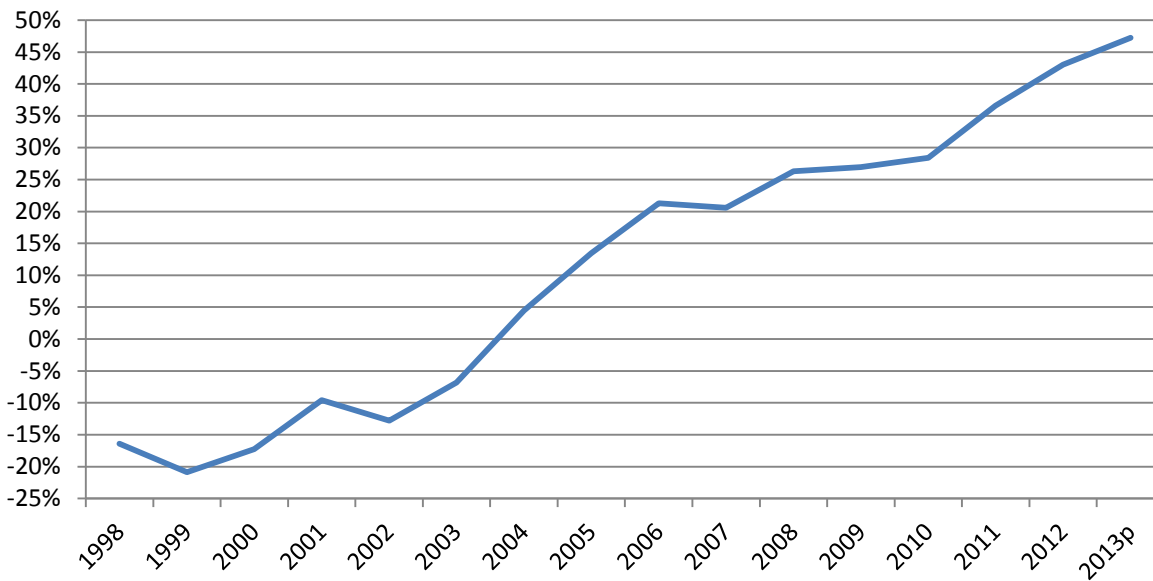
Source: DECC Energy Trends

<https://www.gov.uk/government/publications/renewable-sources-of-energy>

The amount of electricity generated from renewable sources in 2013 was 52.8 TWh, a 20% increase on 2012. Offshore wind generation increased by 3.4 TWh (45%), and onshore wind by 4.4 TWh (36%). Generation from bioenergy (excluding landfill gas) increased by 2.0 TWh (35%), while generation from solar photovoltaic increased by 75% (

## Priority 2 additional indicator 2

### Net import dependency



Source: DECC Energy Trends table 1.3a (next update June 2014)

<https://www.gov.uk/government/publications/total-energy-section-1-energy-trends>

The decline of indigenous production has meant an increased dependency on imported supplies. The UK strategy for managing its import dependency is centred on making greater use of its own supplies. Government is currently promoting more energy generation from onshore and offshore wind, marine and waste.

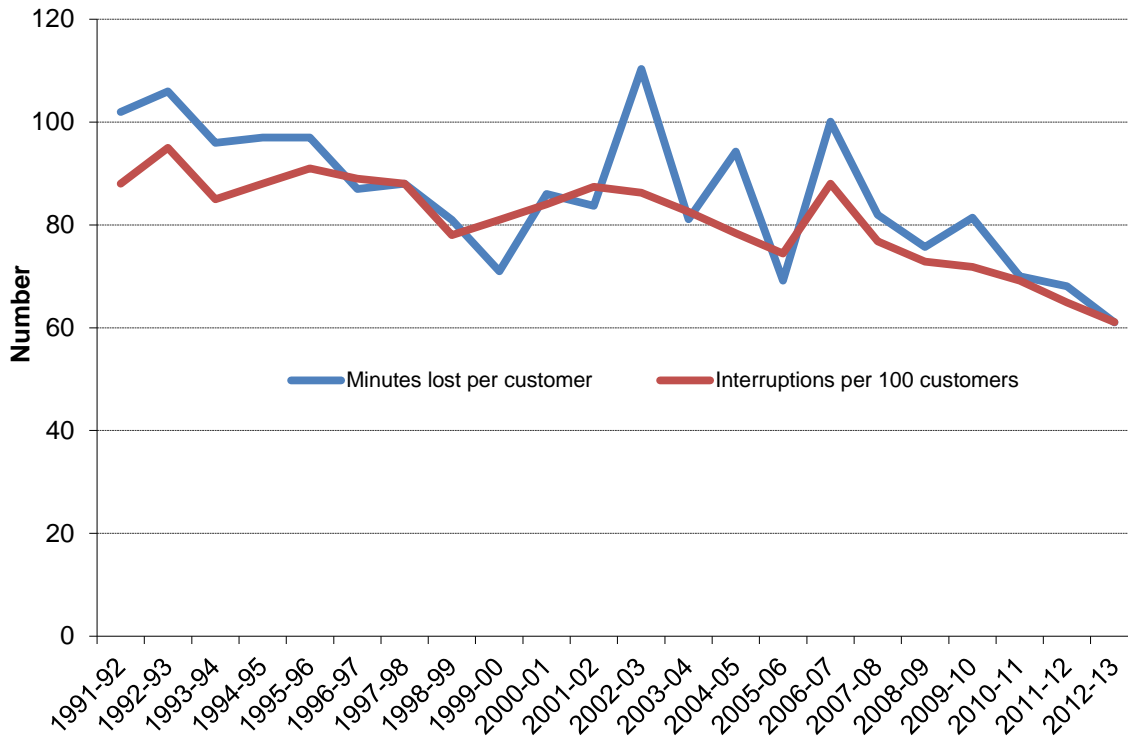
In the third quarter of 2013 net import dependency was 47.9%, up 4.9 percentage points from the third quarter of 2012.



### Priority 2 additional indicator 3

#### Security and availability of electricity supply for the average customer

Ofgem reports on the number of minutes of electricity supply lost per customer. This indicator is a measure of the reliance of the distribution network in the UK and demonstrates individuals' ability to access secure and reliable energy supplies.



Source: Ofgem Electricity Distribution Annual Report (UKESI 8.4)

<https://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=702&refer=Networks/ElecDist/PriceCtrls/DPCR5>

Since the 1990s both interruptions and minutes lost per customer have been falling, suggesting an improvement in electricity supply security and availability over this period. However, there have been large fluctuations in the number of minutes lost per customer since 2000.

In 2011-12, the latest period for which data is available (the next update is due in July 2014) 68 minutes per customer were lost through 65 interruptions per 100 connected customers. Extreme weather conditions such as storms and floods can impact upon performance.

### Priority 3 input indicator 1

Leverage of UK international climate change finance (\$US of international climate finance leveraged per \$US of funding)



Source: DECC based on data from Climate Investment Funds (next update autumn 2014)

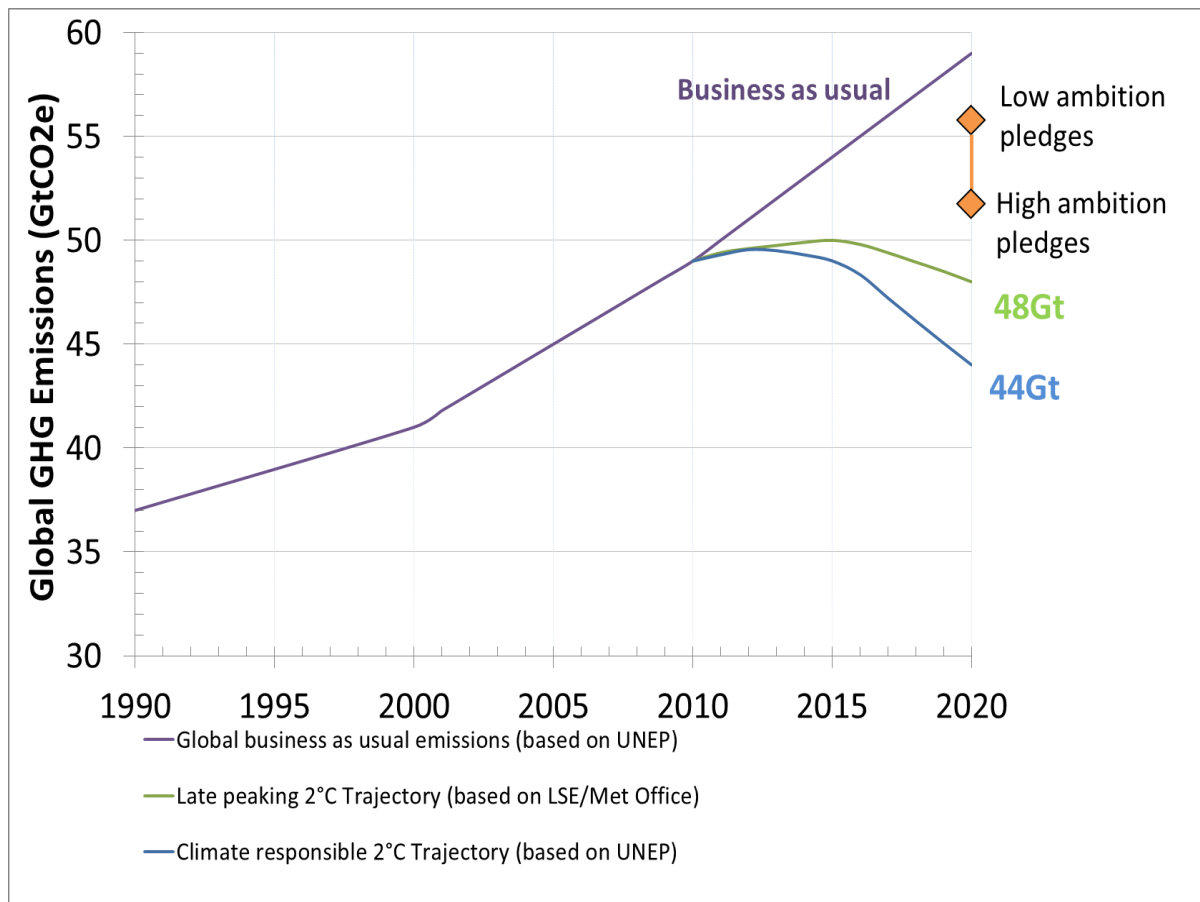
<http://www.climateinvestmentfunds.org>

This indicator monitors the impact of UK climate finance on funding from other sources, including the private sector, multilateral development banks, recipient governments and non-governmental organisations. Leverage is an important indicator as it measures the potential of public funds to unlock markets and provide scaled-up, sustainable, private sector finance.

### Priority 3 impact indicator 1

#### The impact of other countries' pledges to decrease their greenhouse gas emissions on predicted global emissions

This indicator captures the extent to which countries' current national policies and the international negotiations have put the world on course to deliver on the goal of limiting average global temperature increase to below 2°C.



Source: UNEP Emissions Gap Report 2013 (next update November 2014)

<http://www.unep.org/publications/ebooks/emissionsgapreport/2013>

The latest data is from the 2013 Emission Gap Report, a detailed report by the United Nations Environment Programme UNEP that updates their assessment of how international researchers' estimates of current national emission pledges compare with possible 2°C trajectories (scientific research suggests that to achieve the 2°C goal, global emissions need to peak before 2020 and get down to around half of 1990 levels by 2050).

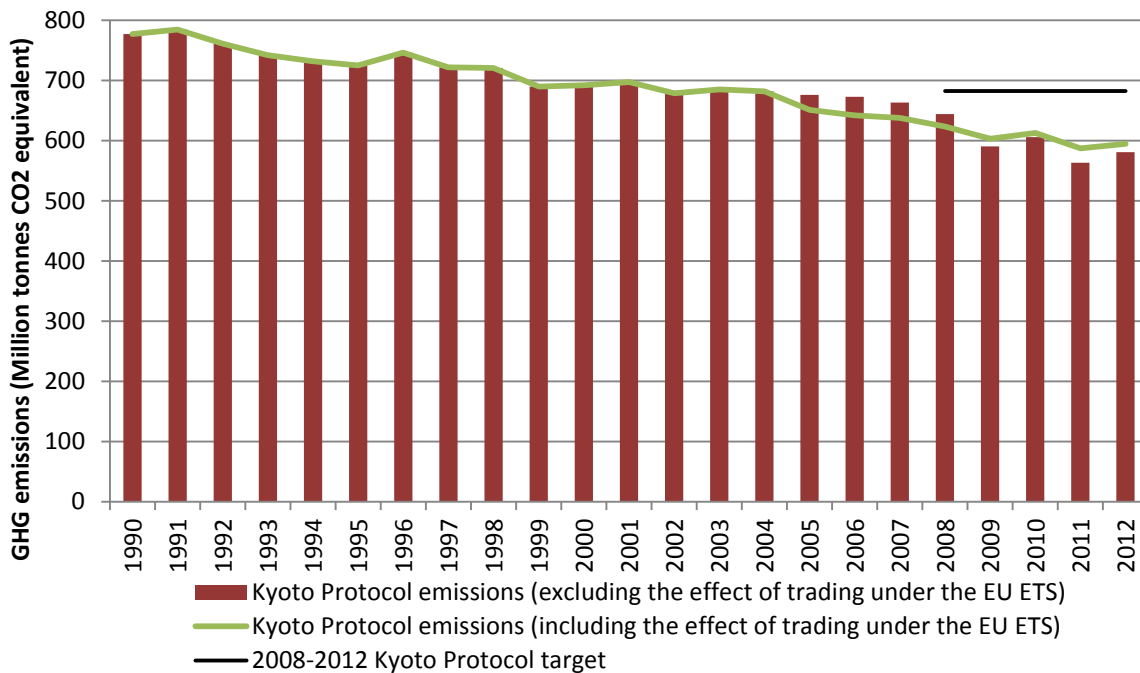
UNEP's Bridging the Emissions Gap Report (2011a) estimated the total emission reduction potential in 2020 to be in the range of  $17 \pm 3$  GtCO<sub>2</sub>e. The mid-range of 17 GtCO<sub>2</sub>e is slightly greater than the estimated difference between business-as-usual emissions in 2020 and the 2020 emissions level consistent with a likely chance of staying within the 2° C target of 15 GtCO<sub>2</sub>e. This indicates that there is still a chance to close the gap by 2020, but it also means

that even relatively small changes in the total emission reduction potential could have important implications on the ability of society to bridge the gap.

We will continue to work through the United Nations Framework Convention on Climate Change UNFCCC and through complementary initiatives such as the Climate and Clean Air Coalition to seek to bring forward ambitious action from all parties and take action to help fill the emissions gap; as well as negotiating a new global agreement on climate change by 2015, which will come into force by 2020.

### Priority 3 impact indicator 2

#### Total emissions of greenhouse gases from the UK, showing progress against legal limits on emissions (carbon budgets)



Source: DECC UK Emissions Statistics

<http://www.gov.uk/government/collections/uk-greenhouse-gas-emissions>

#### Kyoto Protocol

The UK target emissions of the basket of six greenhouse gases covered by the Kyoto Protocol is 682.4 MtCO<sub>2</sub>e for 2012. When taking into account the net EU Emissions Trading System position, 12.8% lower than target. The UK remains on track to over-achieve on its Kyoto Protocol target.

## Priority 4 input indicator 1

### Proportion of the Nuclear Decommissioning Authority's (NDA) budget that is spent on decommissioning and cleaning up nuclear plants

Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Proportion of budget spent on decommissioning and cleaning up nuclear plants	20%	24%	24%	24%	25%	29%	34%	35%

Source: NDA annual report and accounts (next update June 2014)

<https://www.nda.gov.uk/aboutus/>

The NDA's core mission is to ensure that the historic civil public sector nuclear legacy sites are decommissioned safely, securely, cost effectively and in ways that protect the environment. The NDA is also required to: operate existing commercial activities to meet current contracts, using revenues to offset spend on decommissioning; scrutinise the site decommissioning plans of British Energy; and implement Government policy on the long-term management of nuclear waste.

Decommissioning expenditure includes capital expenditure for new plant to undertake clean-up operations, for example building a machine to extract waste safely. It excludes waste and nuclear materials, support and operational costs. Subject to continuing to maintain its infrastructure to ensure it remains safe and secure, an objective for the NDA is to reduce overheads and support costs across its estate and to use savings to increase the proportion of its budget spent on decommissioning. Early decommissioning delivers value for money by avoiding future overhead costs (such as building maintenance and security). The data is collected by the NDA and reported in its Annual Report and Accounts, which are audited by the National Audit Office.

## Priority 4 impact indicator 1

### Reduction in the Nuclear Liabilities Estimate through decommissioning and clean up (in line with published Nuclear Decommissioning Authority business plans)

Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Opening estimate (£bn)	-24.1	-30.6	-37.0	-44.1	-44.5	-45.0	-49.2	-52.9
Provision worked off (£bn)	1.3	1.5	1.8	1.4	1.8	2.2	1.9	2.4
Financial adjustments and changes in scope (£bn)	-7.8	-7.9	-8.9	-1.8	-2.3	-6.4	-5.6	-8.5
Closing estimate (£bn)	-30.6	-37.0	-44.1	-44.5	-45.0	-49.2	-52.9	-59.0

Source: NDA annual report and accounts

<https://www.nda.gov.uk/aboutus/>

The NDA accounts for the future cost of the decommissioning and clean-up of its estate by way of the Nuclear Provision (previously called the Nuclear Liability Estimate). The Nuclear Provision represents the total estimated cost of the rolled up plans for carrying out the NDA's core mission of decommissioning and cleaning up its 19 sites. It includes waste management, maintaining safety and security at the sites and the NDA's share of the costs of the Geological Disposal Facility. It does not include the costs of commercial operations and the associated income. The indicator shows the total value of work completed in the year, offset by any increase in the Nuclear Provision as a result of financing costs (unwind of discount and effect of inflation) and any change in scope. Because the mission is long term and because the challenge inherited by the NDA was poorly understood, the Nuclear Provision has risen significantly in recent years as the NDA has increased its understanding of the task and related costs. Over time, efficiency and innovation should see the Nuclear Provision fall as the work-off rate increases and starts to exceed increases in scope or financing costs. The data is collected by the NDA and reported in its Annual Report and Accounts, which are audited by the National Audit Office.

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