Fuel Poverty levels in England, 2010

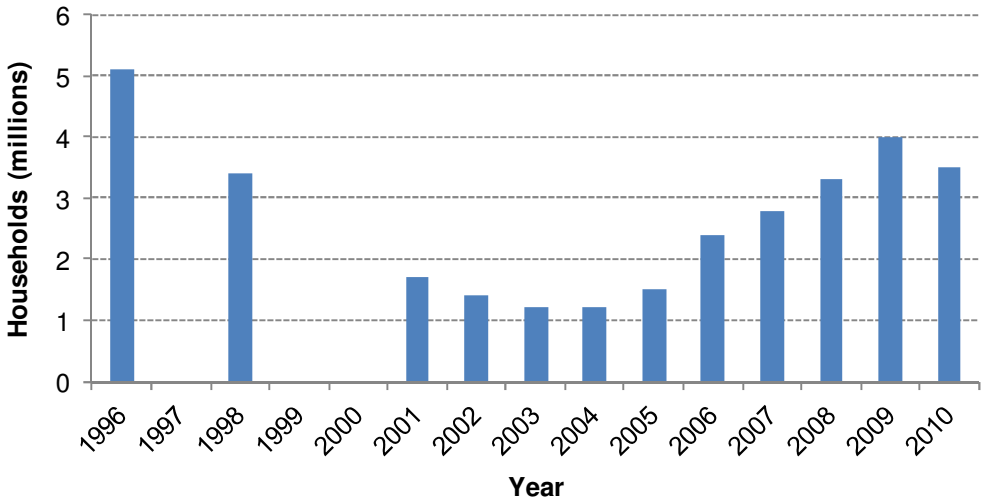
Introduction

This article summarises the 2010 Fuel Poverty Statistics, published on 17 May 2012. The full annual report and data can be found at:
www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/fuelpov_stats.aspx
The headline findings from these statistics are shown below, along with a snapshot of fuel poverty in 2010 under the measure suggested by the Hills Review of Fuel Poverty.

Headline figures

Chart 1 shows that the number of households living in fuel poverty in England fell from 4.0 million in 2009 to around 3.5 million in 2010 (around 16.4% of households).

Chart 1 – Fuel poverty in England, 1996 to 2010



Note: Figures not calculated for 1997, 1999 and 2000.

Interpreting the change in fuel poverty

This reduction in fuel poverty seen between 2009 and 2010 is due to a combination of rising incomes, improvements in the energy efficiency of the housing stock (including installation of new energy efficient boilers), and relatively little change in prices between 2009 and 2010. This can be seen in table 1 below, which shows the relative effects of these three factors on fuel poverty levels. These have been calculated by holding two of the factors constant, whilst changing a third. For example, by applying 2010 prices to 2009 data, we can hold income and energy efficiency constant at 2009 levels, and determine the effects of price changes between the two years. Whilst this method is not perfect, it gives us a useful indication of the drivers of change.

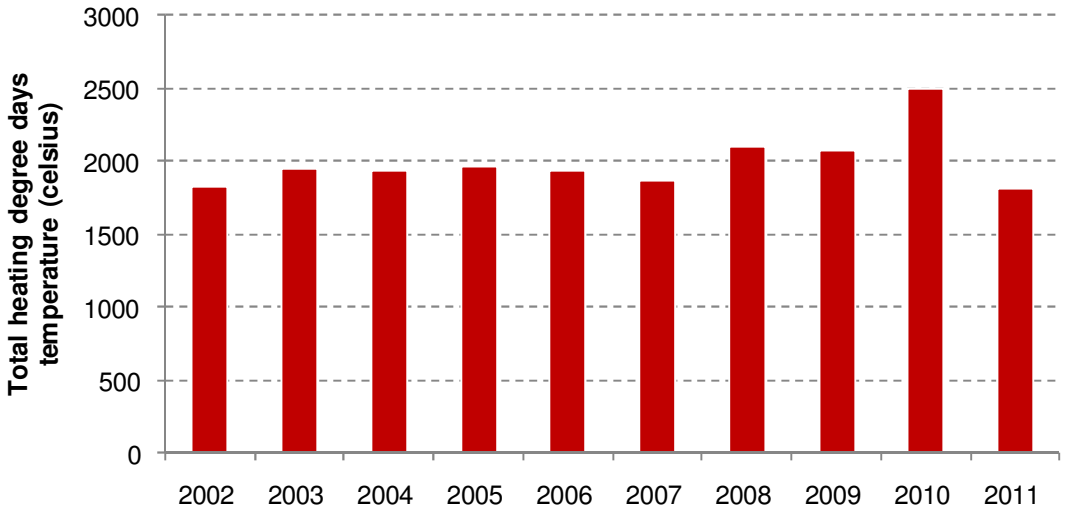
Table 1 – Fuel poverty change, 2009 to 2010

	Fuel poor	Change in % fuel poor (percentage points)	Change in fuel poverty (households)
2009	**4.0m**	**18.4**	**-**
Prices		***+ 0.7***	***+ 0.15m***
Social tariffs		***- 0.3***	***- 0.06m***
Income		***- 1.5***	***- 0.33m***
Energy consumption		***- 0.9***	***- 0.19m***
2010	**3.5m**	**16.4**	**-0.43m**

As table 1 shows, income increases had the largest effect, taking approximately 330,000 households out of fuel poverty between 2009 and 2010. Energy efficiency improvements (measured by changes in modelled energy consumption) and price increases then almost cancelled each other out, while social tariffs took approximately 60,000 people out of fuel poverty.

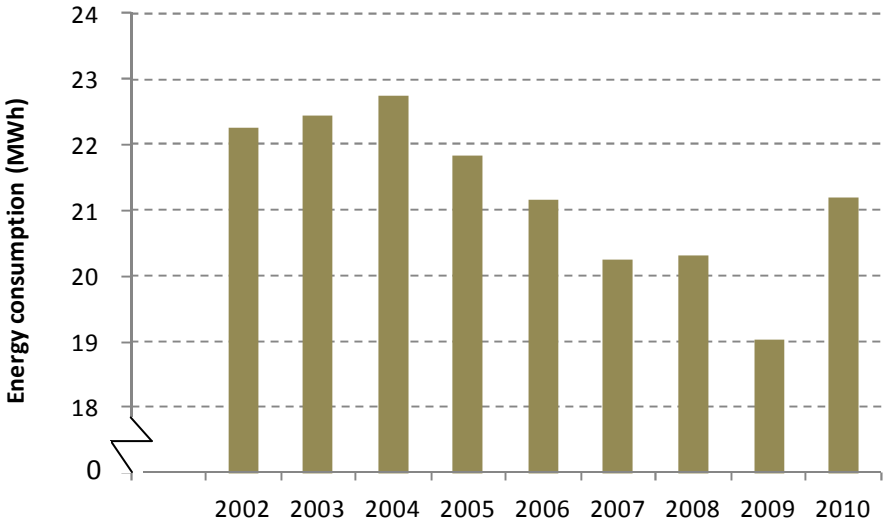
It is also important to consider the fuel poverty numbers alongside energy consumption data for the same year. 2010 was a cold year, especially during the early and late months, and this led to an increase in the number of degree days[1] (chart 2) and therefore demand for space heating grew, leading to a rise in domestic energy consumption (chart 3).

Chart 2 – Total annual degree days UK, 2002 to 2011



Source: Energy Trends, table 7.1

Chart 3 – Total annual energy consumption per household, 2002 to 2010



Source: Energy Consumption in the UK, Table 3.4

[1] Heating degree days (HDD) are defined relative to a base temperature - the outside temperature above which a building needs no heating. The chart uses 15.5° Celsius. If the average outside air temperature on a day is above this base temperature, no heat is required; if it is below, then the heating requirement that day will be equal to the temperature deficit in degrees. For example, a day with an average temperature of 10°, would score a HDD as 5.5. The HDDs are summed across the year and displayed in the chart.

However, the notional bill used in estimating fuel poverty is modelled based on achieving an adequate standard of warmth of 21 degrees Celsius in the main living area, and 18 degrees in other occupied rooms. In addition, although the fuel poverty modelling of heating requirements varies according to regional differences in climate, it does not reflect periods of annual temperature variations from long-term averages (either cold snaps during the winter that might require additional spells of heating, such as those in chart 2, or mild spells that might reduce the amount of heating required) in any one year that would cause the duration or extent of the heating season to change significantly. Therefore, it is assumed that the same amount of energy will be required to heat an identical dwelling and household in the same location in consecutive years.

So while actual domestic gas consumption rose by 17 per cent between 2009 and 2010 (largely reflecting an increased demand due to the cold weather, partially offset by improvements in the energy efficiency of homes) modelled consumption used in the fuel poverty data actually fell by around 5 per cent (mainly reflecting improvements in the energy efficiency of homes).

Measuring Fuel Poverty using the measure proposed by the Hills Review

In March 2012 the Hills Review of fuel poverty published its final report:
www.decc.gov.uk/en/content/cms/funding/Fuel_poverty/Hills_Review/Hills_Review.aspx

The review set out an alternative way of measuring fuel poverty, focusing on both the extent and depth of fuel poverty in England. It therefore consisted of two parts:

1. The **number** of households that had both low incomes and high fuel costs (both relative to contemporary levels).

2. The **depth** of 'fuel poverty' amongst these households – measured in terms of a fuel poverty gap, which represents the difference between the modelled fuel bill for each household, and the reasonable costs threshold for the household.. This is summed for all households that have both low income and high costs to give an aggregate fuel poverty gap.

Comparing Fuel Poverty in 2010 to the Hills Review Low Income-High Costs Measure

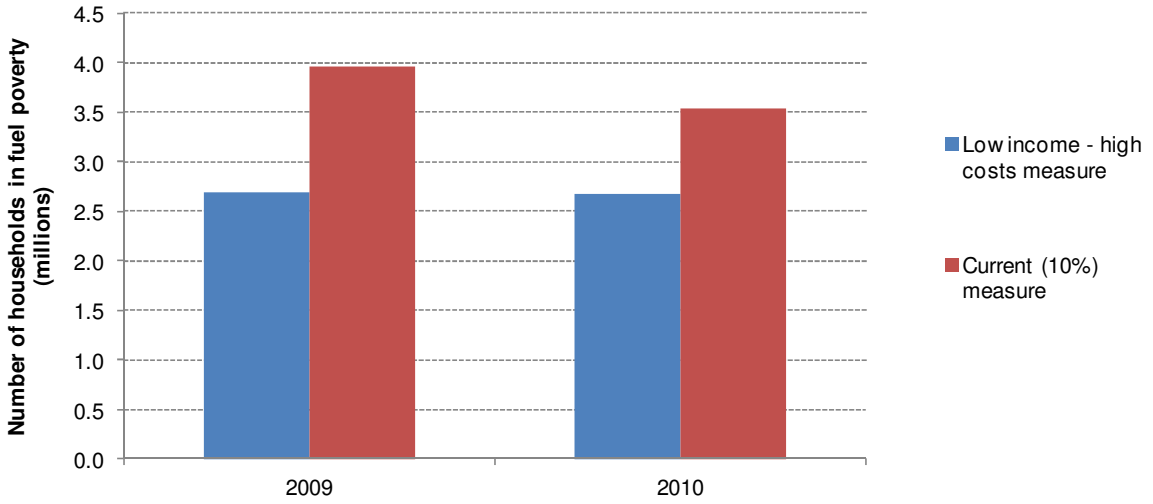
Table 2 shows that in 2010, under the low income–high costs measure 0.8 million fewer households were fuel poor compared with the current 10 per cent measure. This difference is consistent with recent years.

Table 2 – Number and percentage of households in fuel poverty under the low income-high costs measure and the current measure, 2010

	Number of households in fuel poverty (millions)	Percentage of households in fuel poverty
Low income-high costs measure	2.7	12%
Current (10%) measure	3.5	16%

It is interesting to consider how the two measures have changed since 2009. The current measure showed a marked drop in the number of fuel poor households between 2009 and 2010, from 4.0 million to 3.5 million. By contrast, under the low income-high costs measure the number of fuel poor households remained unchanged, at 2.7 million. This can be seen in chart 4.

Chart 4 – Number of households in fuel poverty under the low income-high costs measure and the current measure, 2009 and 2010



The two measures differ largely because of the different effects of income changes on them. For the current measure (which is an absolute measure), any rise in incomes is likely to reduce the extent of fuel poverty. However, under the low income high costs measure, the key factor is how the incomes of households with low incomes and high costs change, relative to other households. Table 3 shows that incomes rose for all quadrants of the matrix between 2009 and 2010. However, median incomes for households with low income and high costs rose by less than the overall median (£362 compared with £432), meaning that relative to all households, these households fared slightly less well.

Equally important is the depth of fuel poverty amongst households with both low incomes and high costs, as measured by the fuel poverty gap. In 2010, this fuel poverty gap was £1.1 billion, with an average of £415 for each fuel poor household. These figures were similar to 2009. This lack of change can be explained mainly by changes in modelled bills. Between 2009 and 2010, median bills fell slightly for households with low income and high costs. However, again the key factor is how the bills changed for households with low incomes and high costs, relative to all households. In this case, the fall was similar to that seen by all households, as seen in table 3. Therefore the average fuel poverty gap for households with low incomes and high costs did not change much between the two years.

Table 3 – Changes in incomes and fuel bills in each quadrant of the low income high costs matrix, 2009 to 2010

		Low income	High income
Low costs	**Income**	**+£535**	**+£253**
	Bill	**-£11**	**-£3**
High costs	**Income**	**+£290**	**+£1,380**
	Bill	**+£4**	**+£25**

Change in income from 2009 to 2010 (average +£432)
Change in bill from 2009 to 2010 (average -£11)

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