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## Fuel Poverty: 2014 update

### 1 Introduction

In early 2013, ACE Research and the Energy Bill Revolution published a fact-file on families and fuel poverty<sup>1</sup>. This briefing serves to update last year's headline figures for the number of households, people, families, and children in fuel poverty. It does so for the UK, as well as for the devolved nations where appropriate.

There are now two high-level fuel poverty definitions in use in the UK. The original definition, that of a household having to spend over 10% of its disposable income to pay for adequate energy services, has (with minor variations) been retained in Northern Ireland, Scotland and Wales. Although the Department of Energy and Climate Change still report fuel poverty in England against this definition, it has now formally adopted a new definition of fuel poverty in England, based on the recommendations of the Hills Review into the measurement of fuel poverty.

This briefing provides estimates for the level of fuel poverty (under the original definition) at the start of 2014 for the UK and its nations. In addition, it provides an estimate for fuel poverty under the new definition in England. The following factors make a 2014 update on last year's estimates pertinent:

- Energy suppliers announced significant price rises at the end of 2013. Some of these price rises have been claimed by suppliers to be smaller than they otherwise would have been, as they have pre-empted Government reductions to 'green levies'. Government proposals for reducing levies were made subsequent to the price rises at the end of 2013<sup>2</sup>;
- The rate at which energy bill-reducing measures are being delivered slowed down considerably in 2013 compared to previous years;

<sup>1</sup> (Guertler and Royston 2013)

<sup>2</sup> A formal Government consultation on this is expected in February. The main proposals are to reduce the size of the Energy Company Obligation's 'Carbon Obligation' (which principally delivers insulation), and to move the Warm Homes Discount on to public expenditure.

- And average real earnings have remained largely flat

Energy prices, energy performance of housing and incomes are the three factors that together determine the level, depth, and nature of fuel poverty, whichever definition is used. The estimates on the next pages compare the state of fuel poverty now to that of 12 months ago.

## 2 Methodology note

We have produced a very detailed updated estimate of fuel poverty in England under the original and new definitions of fuel poverty (using the English Housing Survey 2011) – by adjusting for changes to incomes, energy prices and home energy efficiency improvements that have taken place during 2013. Our UK-wide estimate of how many households, people, families and children are in fuel poverty today is simply extrapolated based on:

- 1) The relationship between English and UK-wide fuel poverty in 2011 (the latest year for which official UK-wide fuel poverty statistics are available<sup>3</sup>), and
- 2) The relationship between this and Devolved Nation data at different points in time<sup>4</sup>.

Only to a limited extent can our 2014 UK estimate take account of variations in the incidence of fuel poverty *between* Northern Ireland, Scotland and Wales, and of the variation in the number of children per family between all four nations.

The factors that cause our 2014 estimates to differ from 2013 are:

- **Energy improvements:** we have, using ACE Research's Housing Stock Optimisation Tool (HSOT), modelled improvements to the housing stock that affect its energy consumption. Measures delivered in 2013 under the Energy Company Obligation (ECO), Green Deal finance, and Green Deal cash-back have been taken into account, based on DECC's Green Deal and ECO statistics. At time of writing, measures installed under the ECO have only been reported up to the end of November. We have assumed the number of measures installed in December 2013 to equal the average of the 11 preceding months<sup>5</sup>. In addition, the market churn of boiler replacements and the installation of double-glazed windows has been taken into account and 'deployed' in HSOT.
- **Energy prices:** we have used the average increase in gas and electricity prices from the large energy retailers over the last 12 months, adjusted for inflation, as the basis for energy prices at the start of 2014<sup>6</sup>. As stated in the introduction, proposed changes to 'green levies' are implicit in some of the price increases. HSOT takes account of regional variations in unit energy prices, standing charges and method of payment. We use the average real terms increase in energy prices uniformly whilst holding regional variations constant.
- **Household incomes:** we have assumed these to change in line with average real earnings over the last 12 months. HSOT models changes to after housing cost incomes by income decile, based on historic data on income change by decile from the Department of Work and Pensions.

<sup>3</sup> See (DECC 2013a) and (DECC 2013b).

<sup>4</sup> The Devolved Nation datasets used here are the Northern Ireland House Condition Survey 2011; The Scottish House Condition Survey 2010; and the Living in Wales Survey 2008.

<sup>5</sup> See also Appendix I.

<sup>6</sup> Using data compiled by Citizens Advice and reported by *The Guardian* (Sedghi 2013). See also Appendix I.

### 3 Fuel poverty in the UK and its nations – original definition

Across the **UK** at the start of 2014, we estimate that **6.59 million households are in fuel poverty** as originally defined<sup>7</sup>, almost exactly one in four UK households, and **up from 5.3 million** (one in five households) at the start of 2013. This is an increase of 1.29 million households, up 24%.

In **England**, under the original definition of fuel poverty, 4.82m households are in fuel poverty now compared to 3.9 million a year ago, an increase of 920,000 (up 24%). Table 1 also shows the corresponding totals for Northern Ireland, Scotland and Wales. In Northern Ireland fuel poverty has increased from 340,000 to 430,000 households (up 26%). In Scotland it has increased from 760,000 to 960,000 households (up 26%) and in Wales it has increased from 300,000 to 380,000 households (up 27%).

In the whole of the UK the number of children in fuel poverty has increased by 970,000 (up 61%) since the start of 2013, up from 1.6 million to 2.57 million at the start of 2014. The number of families in fuel poverty has increased by 510,000 (up 55%) from 930,000 at the start of 2013 to 1.44 million families at the start 2014.

In **England**, the number of children in fuel poverty under the original definition has increased from 1.2 million in 2013 to 1.94 million at the start of 2014. The number of families with dependent children in fuel poverty has increased from 696,000 to 1.07 million. That is an increase of 740,000 children and 374,000 families. 961,000 of these 1.07 million families have children under the age of 16, and 456,000 have children under the age of 5.

**Table 1: Number of households, families and children in fuel poverty (original definition), in UK, England and Devolved Nations**

Number in fuel poverty	UK	England	Northern Ireland	Scotland	Wales
<b>All households: 2014</b>	6,590,000	4,820,000	430,000	960,000	380,000
<b>2013</b>	5,300,000	3,900,000	340,000	760,000	300,000
<b>Families with dependent children: 2014</b>	1,440,000	1,070,000	135,000	140,000	95,000
<b>2013</b>	930,000	696,000	85,000	89,000	60,000
<b>Of which families with under-16s: 2014</b>	-	961,000	-	-	-
<b>2013</b>	-	634,000	-	-	-
<b>Of which families with under-5s: 2014</b>	-	456,000	-	-	-
<b>2013</b>	-	303,000	-	-	-
<b>Dependent children: 2014</b>	2,570,000	1,940,000	230,000	240,000	160,000
<b>2013</b>	1,600,000	1,200,000	146,000	153,000	101,000

The increase in the number of children and families in fuel poverty has been sharp, especially when compared to the increase in the total number of households in fuel poverty. The main contributory factor to this has been the increase in energy prices over the last year, which has far outstripped incomes. Families are disproportionately affected in this situation because they are modelled to need more energy than smaller households to maintain an adequate level of heating, lighting, cooking and appliance energy use. As a result, an increase in energy unit prices has a disproportionately high effect on the amount families need to spend on energy<sup>8</sup>. In addition, the rate of energy efficiency

<sup>7</sup> I.e. having to spend more than 10% of income to maintain an adequate level of energy service in the home.

<sup>8</sup> Conversely, when energy prices fall, families emerge out of fuel poverty more swiftly than other households.

improvements has slowed down significantly over the course of 2013 compared to 2012, which has meant that energy efficiency has been able to achieve less than previously in ameliorating the effects of rising energy prices. For example, the deployment of cavity wall insulation in 2013 was down by three quarters compared to 2012, and solid wall insulation was down by two thirds.

## 4 Fuel poverty in England – new definition

Last year, DECC formally adopted a new definition of fuel poverty for England, based on the recommendations made by Professor John Hills in his review of fuel poverty measurement. The main distinction between this and the original definition is that the new definition uses a relative measure of fuel poverty. A household is defined as fuel poor if its income is less than 60% of the median equivalised income (after housing costs) plus energy expenditure, and if the amount it needs to spend on fuel to maintain an adequate level of energy service is greater than the median equivalised energy bill in the population. In the simplest terms, **the household needs to be below the poverty line, and be in that half of the population facing the highest energy costs** (i.e. needs to be paying more for its energy than the median energy bill).

As there is always one half of the population paying more than the median bill (and as long as there are households that live below the poverty line), fuel poverty becomes a relative measure under this new definition. In other words, the number of households in fuel poverty does not change much over time, even when fuel prices rise or fall sharply. Table 2 shows this: while the number of households in fuel poverty under the original definition went up from 3.9 to 4.82 million in England (up 24%), it increased by 5%, from 2.35 to 2.46 million under the new definition. The change in definition for England has reduced the number of households assessed to be in fuel poverty by 2.36 million.

Table 2: Number of households, people, families and children in fuel poverty in England (new definition)

Number in fuel poverty at start of...	England 2014				England 2013			
	Original definition	New definition	Average FP gap	Aggregate FP gap [bn]	Original definition	New definition	Average FP gap	Aggregate FP gap [bn]
<b>Households</b>	4,820,000	2,460,000	£444	£1.092	3,900,000	2,350,000	£449	£1.053
<b>People</b>	9,350,000	6,990,000	-	-	7,050,000	6,150,000	-	-
<b>Families</b>	1,070,000	1,080,000	£468	£0.506	696,000	889,000	£465	£0.413
<b>Children</b>	1,940,000	2,230,000	-	-	1,200,000	1,770,000	-	-

### Number of people in fuel poverty

In England supplementary measures on fuel poverty, recommended by Professor Hills, have also been introduced – **the number of people in fuel poverty and the ‘fuel poverty gap’**. The number of people (as opposed to the number of households) in fuel poverty in England under the new definition increased by 14% from 6.15 million to 6.99 million people in fuel poverty at the start of this year.

The reason this increased by more than the number of households in fuel poverty is down to the fact that families are more likely to need to spend more than the median energy bill. Under the new definition the number of families in fuel poverty in England has increased by 190,000, from 889,000 to 1.08 million (up 21%). Under the new definition the number of children in fuel poverty in England has increased by 460,000 from 1.77 million in 2013 to 2.23 million in 2014 (up 26%).

The number of older people in England (aged 60 or over) living in fuel poverty as newly defined is 1.14 million. In 2013, 1.23 million older people were in fuel poverty under the new definition, so this number has fallen by 7%. However, under the original definition, the number of older people in fuel poverty increased by 16%, from 2.83 million in 2013 to 3.29 million today.

### Fuel poverty gap

The fuel poverty gap says how much more than the median bill households are having to pay for their energy. For all households, the average gap has fallen by £5 over the last year. For families however, the average fuel poverty gap has increased by £3. As a result of this, and the increase in the number of families defined as fuel poor, the aggregate fuel poverty gap across all fuel poor families has increased by 23%, from £413 million last year to £506 million now.

## 5 Conclusion

This analysis finds that fuel poverty has increased across the UK over the last year under both definitions.

Under the new definition of fuel poverty for England, the number of households in fuel poverty has increased by 210,000 (up 5%), from 2.35 million to 2.46 million.

The number of people in fuel poverty in England under the new definition increased by 840,000, up 14%, from 6.15 million people in 2013 to 6.99 million people in 2014. The percentage increase of people in fuel poverty is higher because under the new definition of fuel poverty for England families are more adversely affected by a rise in energy bills.

The number of families in fuel poverty in England has increased by 119,000, from 889,000 to 1.08 million (up 21%).

The number of children in fuel poverty in England has increased by 460,000 from 1.77 million in 2013 to 2.23 million in 2014 (up 26%).

Scotland, Wales and Northern Ireland still use the original definition of fuel poverty which is more sensitive to changes in energy prices which have increased over the last year. The number of households across the UK in 2014 in fuel poverty under this original definition (including England) is 6.59 million (one in four households), up from 5.3 million (one in five households) at the start of 2013. This is an increase of 1.29 million households in fuel poverty in the UK (up 24%) under the original definition.

### The Energy Bill Revolution

The Energy Bill Revolution is an alliance of 170 organisations calling for the Government to make home energy efficiency the UK's priority infrastructure investment. It wants energy efficiency measures to be provided for free for people in fuel poverty, and subsidies for energy efficiency for everyone else. It is proposed that this be paid for by recycling revenues from two carbon taxes that are paid by consumers – the European Emissions Trading Scheme and the Carbon Price Floor. Over the next 15 years the Government will raise an average of £4 billion every year in carbon taxes; this is enough revenue to insulate to a high degree an average of 600,000 homes every year. In time, every household could benefit from recycling carbon tax into energy efficiency measures. The Energy Bill Revolution proposes that fuel poor households be prioritised for assistance. Research by Cambridge Econometrics and

Verco<sup>9</sup> shows that, compared to other kinds of public investment and tax breaks, this is the most effective way to promote economic growth and create employment. This is also the only permanent solution to end fuel poverty and bring down energy bills.

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<sup>9</sup> (Cambridge Econometrics and Verco 2012)

## Appendix I – main trends affecting 2014 fuel poverty estimates

### Energy prices and incomes

Figure 1 shows how gas and electricity prices, average earnings and the consumer prices index have developed relative to January 2013, when we last published fuel poverty estimates. These data were compiled by Citizens Advice Bureau and first reported in the Guardian last November<sup>10</sup>. Energy prices increases have far outpaced earnings growth over the last year.

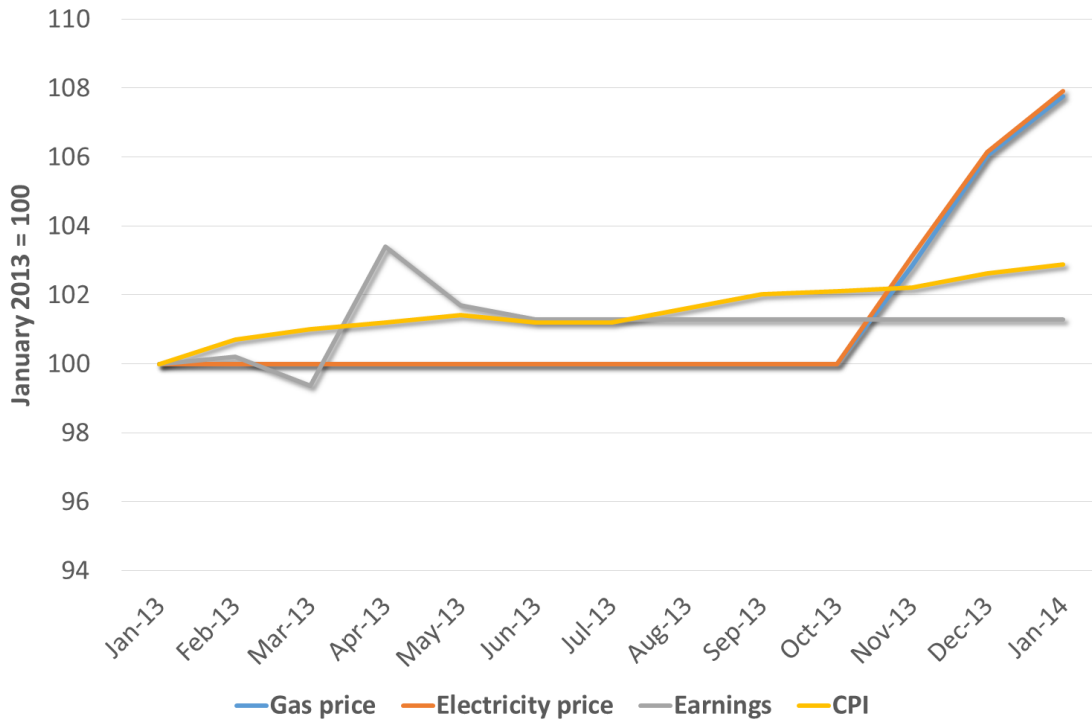


Figure 1: Development of average gas and electricity price, average weekly earnings and CPI relative to January 2013

### Energy improvements

The 2013 slowdown (compared to 2012, highlighted in Table 3) in the deployment of home energy improvements that came with the transition to the new Green Deal and Energy Company Obligation regime, has exacerbated the impact of recent energy price increases combined with income growth below the rate of inflation.

Table 3: Number of insulation measures delivered in Britain under supplier obligations and related programmes, 2012 and 2013

	Cavity wall insulation	Loft insulation	Solid wall insulation
<b>2012 (CERT and CESP)<sup>11</sup></b>	637,000	1,302,000	77,000
<b>2013 (ECO, Green Deal Finance and Green Deal cash-back)<sup>12</sup></b>	163,000	132,000	25,000
<b>Change</b>	-74%	-90%	-68%

<sup>10</sup> (Sedghi 2013)

<sup>11</sup> Data from (Ofgem 2013)

<sup>12</sup> Data from (DECC 2014); ECO data for December extrapolated, based on first 11 months of 2013 as not yet published.