



Department for  
Business, Energy  
& Industrial Strategy

# SUB-REGIONAL FUEL POVERTY, 2017 (2015 DATA)

England

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Experimental Statistics

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This publication is available for download at <https://www.gov.uk/government/collections/fuel-poverty-sub-regional-statistics>.

# Contents

Experimental Statistics: Sub-regional fuel poverty, 2017	3
1.1 Introduction	3
1.2 Sub-regional fuel poverty	5
1.3 Methodology	5
1.4 Mapping fuel poverty	6
1.5 Comparisons over time	9
1.6 Summary	9

# Experimental Statistics<sup>1</sup>: Sub-regional fuel poverty, 2017 (2015 data)

## 1.1 Introduction

In December 2014, the Government introduced a new statutory fuel poverty target for England<sup>2</sup>. The target is to ensure that as many fuel poor homes as reasonably practicable achieve a minimum energy efficiency rating of a Band C<sup>3</sup>, by 2030. To support the implementation of this target, the Government published 'Cutting the cost of keeping warm: a fuel poverty strategy for England'<sup>4</sup>, in March 2015. The strategy also set out interim milestones to lift as many fuel poor homes in England as is reasonably practicable to Band E by 2020; and Band D by 2025, alongside a strategic approach to developing policy to make progress towards these targets.

A household is considered to be fuel poor if it has higher than typical energy costs *and* would be left with a disposable income below the poverty line<sup>5</sup> if it spent the required money to meet those costs. It captures the fact that fuel poverty is distinct from general poverty: not all poor households are *fuel* poor, and some households would not normally be considered *poor* but could be pushed into fuel poverty if they have high energy costs. Fuel poverty is therefore an overlapping problem of households having a low income *and* facing high energy costs.

The Government is interested in the amount of energy people need to consume to have a warm, well-lit home, with hot water for everyday use, and the running of appliances. We therefore measure fuel poverty based on *required* energy bills rather than *actual* spending. This ensures that we do not overlook those households who have low energy bills simply because they actively limit their use of energy at home, for example, by keeping their home cold.

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<sup>1</sup> They are Official Statistics which will be undergoing an evaluation process prior to being assessed as National Statistics.

<sup>2</sup> Fuel poverty is a devolved matter, with each nation in the UK having its own policy target, measurement and outputs. See Annex B for further information.

<sup>3</sup> Household energy efficiency ratings are banded from G (lowest) to A (highest).

<sup>4</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/408644/cutting\\_the\\_cost\\_of\\_keeping\\_warm.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408644/cutting_the_cost_of_keeping_warm.pdf)

<sup>5</sup> The poverty line (income poverty) is defined as an equivalised disposable income of less than 60% of the national median:

<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/articles/persistentpovertyintheukandeu/2014>

The Annual Fuel Poverty Statistics Report is a National Statistics report which provides a comprehensive view of the latest statistical trends and analysis of fuel poverty in England. These statistics report on the proportion of all households in fuel poverty in England and the depth of their fuel poverty. The report also looks at the key drivers of fuel poverty and how fuel poverty in England varies by a number of dwelling and households characteristics.

The sub-regional Experimental Statistics aim to complement the National Statistics on fuel poverty, by estimating the number and proportion of fuel poor households at smaller geographical levels, for example, Local Authority (LA) level. The sub-regional statistics do not report on the average fuel poverty gap.

This year's report, and a detailed methodology on how fuel poverty is calculated, can be found on the BEIS website at the following link(s):

<https://www.gov.uk/government/collections/fuel-poverty-statistics>

Sub-regional breakdowns are available back to 2011<sup>6</sup> data at the following link:

<https://www.gov.uk/government/collections/fuel-poverty-sub-regional-statistics>

### Data available

For each of the following geographical levels, estimates are available for the total number of households, the number of fuel poor households, and the proportion of households in fuel poverty:

- English Region (former Government Office Region)<sup>7</sup>
- County
- Local Authority
- Parliamentary Constituency
- Lower Super Output Area (LSOA)

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<sup>6</sup> For the Low Income High Cost measure.

<sup>7</sup> These are National Statistics and are presented in the Annual Fuel Poverty Statistics Report.

<https://www.gov.uk/government/collections/fuel-poverty-statistics>

### 1.2 Sub-regional fuel poverty

In 2013, BEIS undertook an internal review of the methodology used to produce sub-regional estimates of fuel poverty, in conjunction with Office for National Statistics (ONS) Methodology Advisory Service. This review found that estimates of fuel poverty were robust at Local Authority level, but not robust at lower levels of geography. In particular, estimates of fuel poverty at Lower Super Output Area (LSOA) should be treated with caution. The estimates should only be used to look at general trends and identify areas of particularly high or low fuel poverty. They should not be used to identify trends over time within an LSOA, or to compare LSOA's with similar fuel poverty levels due to very small sample sizes and consequent instability in estimates at this level.

For the 2018 publication, we will be developing our sub-regional fuel poverty models to make better use of available administrative data, and where possible, provide measures of uncertainty around these estimates. More information will be available later this year via our website and stakeholder mailing lists.

Please contact us at [fuelpoverty@beis.gov.uk](mailto:fuelpoverty@beis.gov.uk) if you wish to join the stakeholder mailing list.

### 1.3 Methodology

Fuel poverty statistics are based on data from the English Housing Survey (EHS). Given the sample size of the EHS (11,955 households in the combined 2014 and 2015 combined dataset<sup>8</sup>), it is not possible to robustly estimate fuel poverty levels in small geographical areas, such as Local Authorities, without the use of modelling.

A logistic regression model is created, matching data from the EHS on whether a household is fuel poor or not (as the binary dependent variable) with data from other sources available for all Census Output Areas (OA)<sup>9</sup>, e.g. Census 2011 data (as the independent variables).

The model is used to estimate the levels of fuel poverty for all OAs across England; these are then aggregated to higher level geographies, which are constrained to the regional totals. This modelling approach introduces the possibility that small atypical areas are not

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<sup>8</sup> More information on the EHS combined dataset can be found in Annex A of the Annual Fuel Poverty Statistics report: <https://www.gov.uk/government/collections/fuel-poverty-statistics>

<sup>9</sup> More information on ONS census geography: <http://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeography>

accurately picked up by the model. It is therefore essential to compare, where possible, the modelled sub-regional level results to the national and regional statistics.

More information on the sub-regional statistics methodology can be found at the following link:

<https://www.gov.uk/government/publications/fuel-poverty-sub-regional-methodology-and-documentation>

### 1.4 Mapping fuel poverty

Maps provide a useful way of comparing fuel poverty across different geographical areas. Figure 1.1 shows the proportion of households in fuel poverty in England at Local Authority level.

Many of the Local Authorities in the East and South East of England generally have below average fuel poverty levels, while households in the West Midlands and the South West generally have the highest levels of fuel poverty. This is consistent with the data shown in Figure 4.15 of the Annual Fuel Poverty Report, which showed the East and South East of England have the lowest fuel poverty levels at 7.8 per cent and 9.4 per cent, respectively; and the West Midlands and South West to have higher than average fuel poverty levels at 13.5 per cent and 11.4 per cent.

In 2015, at the Local Authority level, the proportion of households in fuel poverty was lowest in the City of London, where 4.8 per cent of households were estimated to be fuel poor. The Isles of Scilly was estimated to have the highest fuel poverty levels of the Local Authorities with 19.4 per cent of households estimated to be in fuel poverty.

Figure 1.1: Proportion of households in fuel poverty, by Local Authority, 2015

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**Proportion of Households in Fuel Poverty  
Local Authority, 2015**

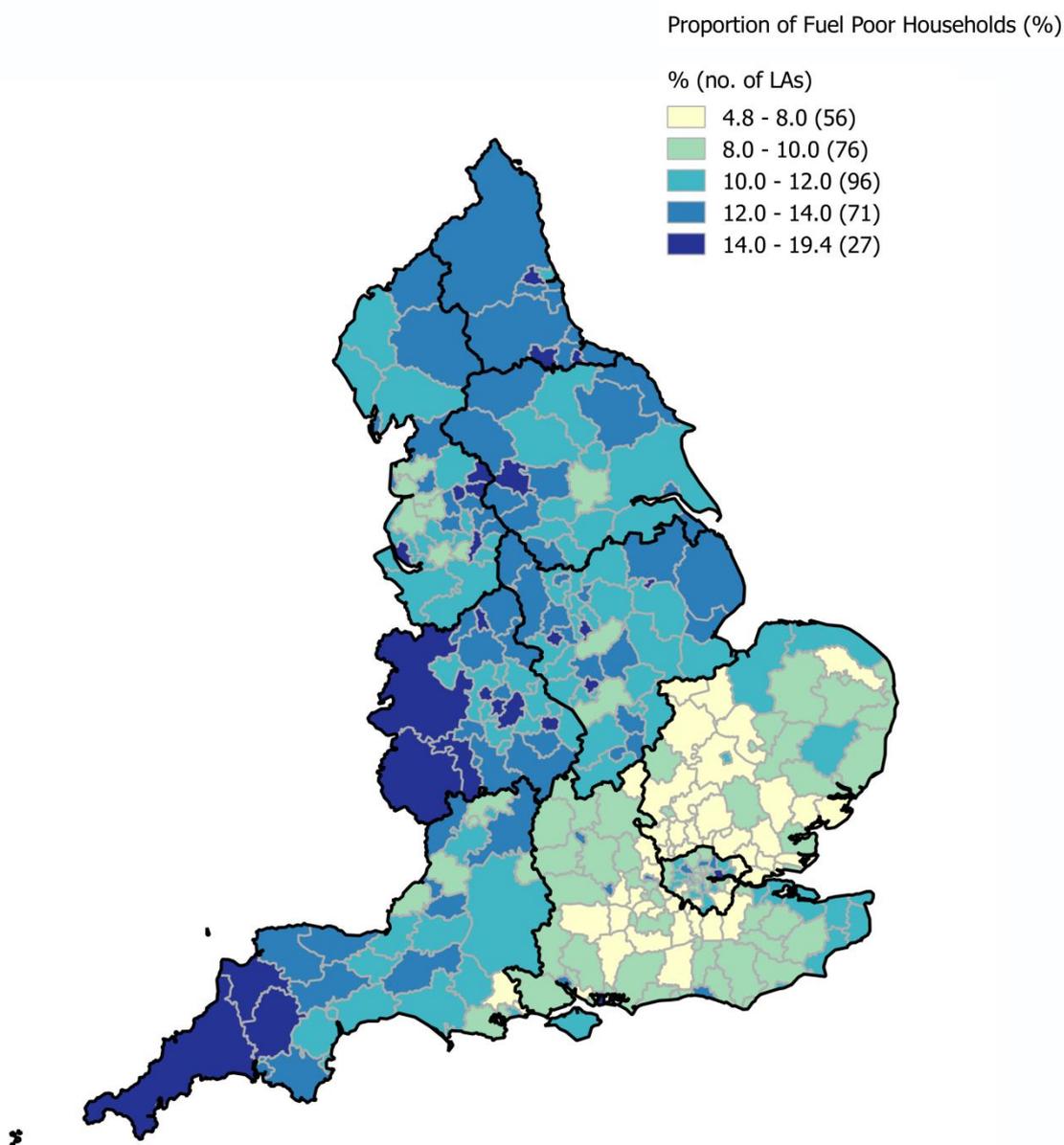
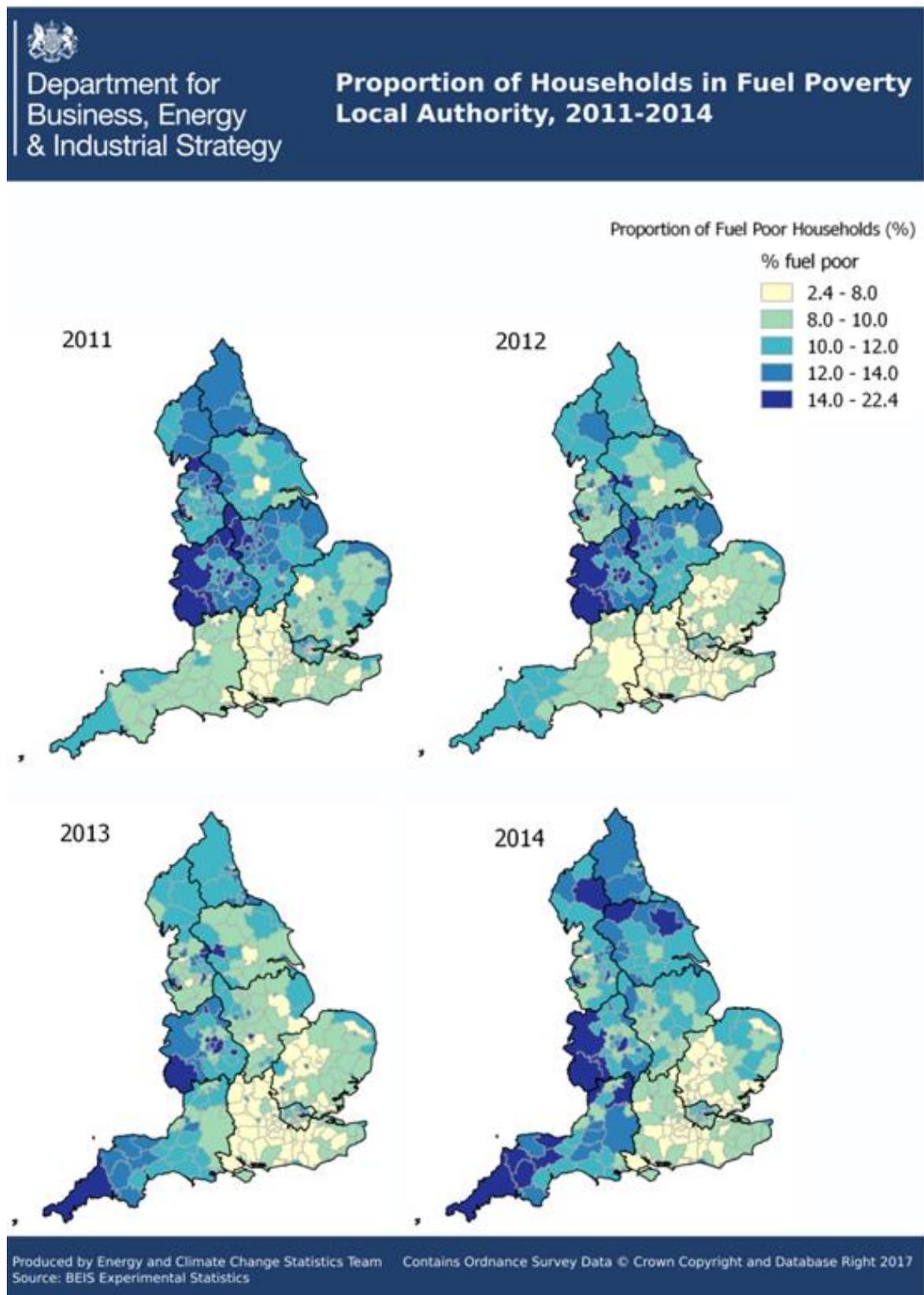


Figure 1.2: Proportion of households in fuel poverty, by Local Authority, 2011-2014



### 1.5 Comparisons over time

Figure 1.2 shows the proportion of households in fuel poverty by Local Authority between 2011 and 2014. In 2011, 128 Local Authorities had below average fuel poverty levels, which has risen to 132 in 2015; whereas the number of LAs with above average fuel poverty levels has decreased slightly to 98 (from 99 in 2011).

The overall pattern is similar for the majority of regions. In 2011, the South East had below average fuel poverty levels and the East and West Midlands had higher than average fuel poverty levels. This is consistent with the regional data for 2011, which showed the South East (8 per cent) to have the lowest fuel poverty levels and the West Midlands (14 per cent) and East Midlands (13 per cent) to have some of the highest fuel poverty levels. Fuel poverty levels in the South West have increased from 10 per cent to 11 per cent at the regional level; this increase can be seen at the Local Authority level between 2011 and 2015.

Caution should be exercised when looking at year on year changes for individual Local Authorities, as changes observed may be due to uncertainty in the data and/or small sample sizes.

### 1.6 Summary

BEIS have published sub-regional Experimental Statistics alongside the National Statistics on fuel poverty, providing estimates of the number and proportion of fuel poor households at smaller geographies, including Local Authority. This is accompanied by a fuel poverty map across Local Authorities in England.

The datasets which underpin this report can be found at the following link on the BEIS website:

<https://www.gov.uk/government/collections/fuel-poverty-sub-regional-statistics>

If you have any comment or feedback in relation to the development of these statistics, please contact us at:

[fuelpoverty@beis.gov.uk](mailto:fuelpoverty@beis.gov.uk)

