



Sub-regional Fuel Poverty in England, 2020 (2018 data)

30 April 2020

Experimental Statistics

Summary findings:

- Local Authorities in the South East of England generally have below average fuel poverty levels, while households in the North West, London and the West Midlands generally have the highest levels of fuel poverty.
- This is consistent with the data shown in the Annual Fuel Poverty Report which showed the South East had the lowest fuel poverty levels at 7.9 per cent; and the North West, London and the West Midlands had higher than average fuel poverty levels, between 12.1 per cent and 11.4 per cent.
- The Annual Fuel Poverty Statistics report, which provides a comprehensive view of the latest statistical trends and analysis of fuel poverty in England can be found at the following link:

<https://www.gov.uk/government/statistics/annual-fuel-poverty-statistics-report-2020>

What you need to know about these statistics:

Estimates of fuel poverty at the sub-regional level 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.



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Experimental Statistics¹: Sub-regional fuel poverty, 2020 (2018 data)

1.1 Introduction

Fuel poverty in England is measured using the Low Income High Costs (LIHC) indicator², which considers a household to be fuel poor if:

- they have required fuel costs³ that are above average (the national median level); and
- were they to spend that amount, they would be left with a residual income⁴ below the poverty line⁵.

In 2014, the Government put in place a new statutory fuel poverty target for England: to ensure that as many fuel poor households as reasonably practicable achieve a minimum energy efficiency rating of Band C^{6,7} by 2030, with interim targets of Band E by 2020, and Band D by 2025.

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.

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

² Further information on the LIHC indicator works can be found in Annex B of the Annual Fuel poverty Statistics Report: <https://www.gov.uk/government/statistics/annual-fuel-poverty-statistics-report-2020>

³ Fuel costs required to have a warm, well-lit home, with hot water and the running of appliances. An equivalisation factor is applied to reflect that households require different levels of energy depending on who lives in the property. Further information on how fuel costs are calculated can be found in Section 5 of the Methodology Handbook: <https://www.gov.uk/government/publications/fuel-poverty-statisticsmethodology-handbook>

⁴ Residual income is defined as equivalised income after housing costs, tax and National Insurance. Equivalisation reflects that households have different spending requirements depending on who lives in the property. Further information on how income is modelled can be found in Section 3 of the Methodology Handbook (above).

⁵ The poverty line (relative income poverty) is defined as an equivalised disposable income of less than 60% of the national median (Section 2):

<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/articles/persistentlypovertyintheukandeu/2017>

⁶ Energy efficiency rating is measured using Fuel Poverty Energy Efficiency Rating (FPEER), see Section 2 in the Annual Fuel Poverty Statistics Report.

⁷ Household energy efficiency ratings are banded from G (lowest) to A (highest).

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 household 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 2011⁸ 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)⁹
- County
- Local Authority
- Parliamentary Constituency
- Lower Super Output Area (LSOA)

⁸ For the Low Income High Cost measure.

⁹ 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 LSOAs with similar fuel poverty levels due to very small sample sizes and consequent instability in estimates at this level.

1.3 Methodology

Fuel poverty statistics are based on data from the English Housing Survey (EHS). Given the sample size of the EHS (12,203 households in the combined 2017 and 2018 dataset¹⁰), 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)¹¹, 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 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>

¹⁰ More information on the EHS combined dataset can be found in Annex B of the Annual Fuel Poverty Statistics report: <https://www.gov.uk/government/collections/fuel-poverty-statistics>

¹¹ More information on ONS census geography: <http://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeography>

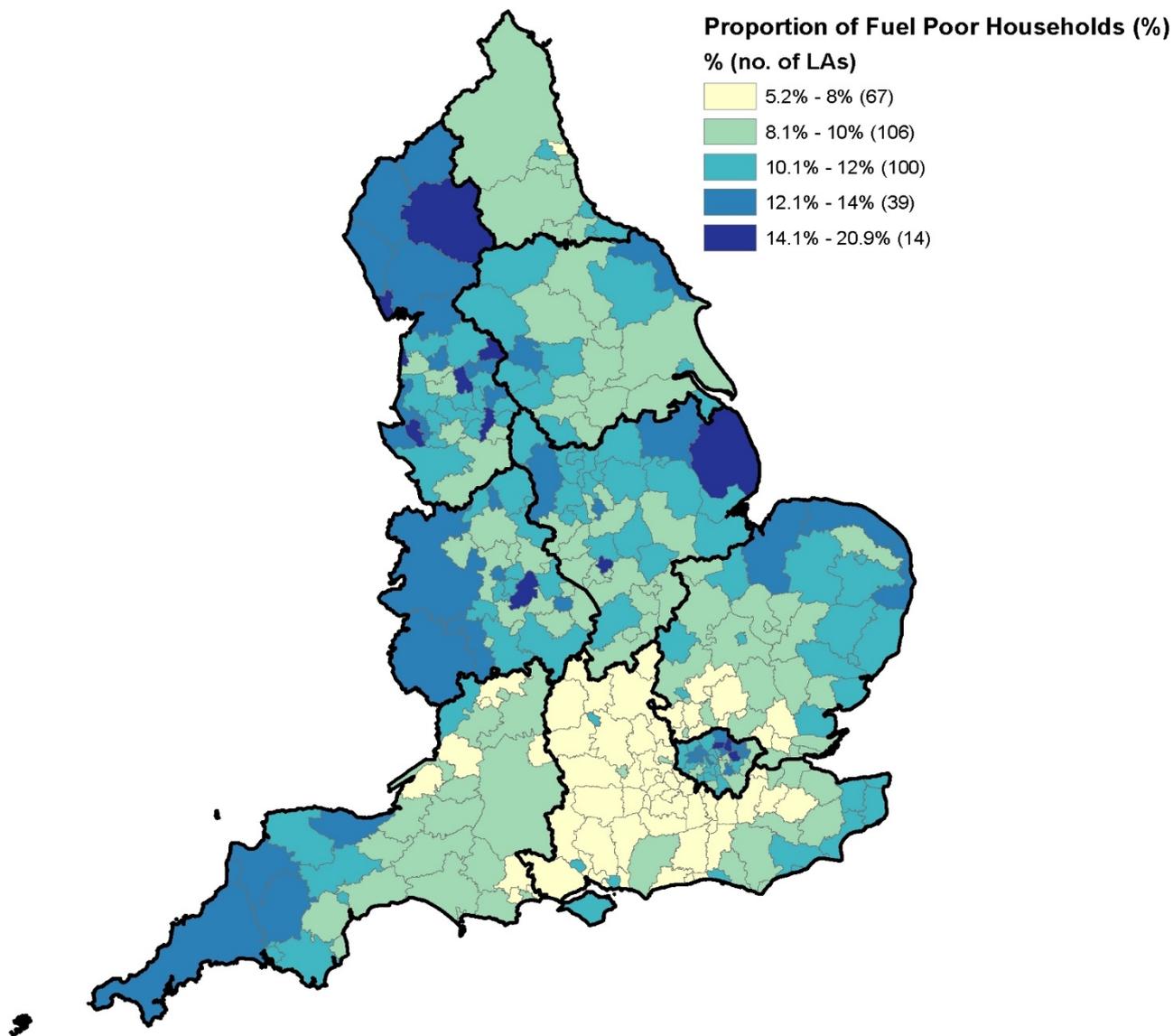
1.4 Mapping fuel poverty

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.

The majority of Local Authorities in the South East had below average fuel poverty levels, whilst some of the Local Authorities in the North West, London and the West Midlands had the highest levels of Fuel Poverty in the country. This is consistent with the data shown in the Annual Fuel Poverty Report which showed the South East had the lowest fuel poverty levels at 7.9 per cent; and the North West, London and the West Midlands had higher than average fuel poverty levels, between 12.1 per cent and 11.4 per cent.

In 2018, the Local Authorities with the lowest proportion of households in fuel poverty were Bracknell Forest, Wokingham, City of London and Hart; all of which were estimated to have 5.5 per cent or fewer fuel poor households. As found in 2017, the London borough of Newham, Liverpool and Manchester were amongst those with the highest proportion of fuel poor households. All were estimated to have greater than 15.5 per cent fuel poor households.

Figure 1.1: Proportion of households in fuel poverty, by Local Authority, 2018



1.5 Summary

BEIS has 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



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