

What are households’ perceptions of fuel poverty?

Introduction

Fuel poverty in England is measured using the Low Income High Costs (LIHC) indicator. Under the LIHC indicator, a household is fuel poor if:

1. they have required fuel costs¹ that are above average (the national median level);
2. and, were they to spend that amount, they would be left with a residual income² below the poverty line³

In 2018⁴, 10.3 per cent of households were in fuel poverty, approximately 2.40 million households.

These statistics are modelled based on technical data collected in the English Housing Survey (EHS), which is a continuous national survey commissioned by the Ministry of Housing, Communities and Local Government (MHCLG). It collects information about people’s housing circumstances and the condition and energy efficiency of housing in England. The survey also asks whether households perceive that they are able to keep comfortably warm in their living room during cold winter weather, if they are not able to do so why that is and how easy or difficult they find it to meet their fuel costs.

This article considers these questions on household’s perceptions of their ability to heat their living room and meet their fuel costs. It compares the perception question responses with the National Statistics measures, and looks at the reasons why some households are struggling to heat their living rooms and meet their fuel costs.

Are households able to comfortably keep their living room warm in cold weather?

In 2018, 90.1 per cent of households in England said that they were able to keep comfortably warm in their living room and 8.5 per cent of households said they were not able to do so.

Of those households who are fuel poor under the LIHC measure, 82.2 per cent said that they could keep comfortably warm in their living room and only 15.9 per cent said that they could not. This compares to a larger proportion of non-fuel poor homes, 91.1 per cent, saying they can keep comfortably warm in their living room and a smaller proportion, 7.6 per cent saying they cannot. An additional 1.4 per cent of all households answered that they did not know to this question. Households giving “don’t know” responses have been removed from all further analysis on this question. Where later it is said that 7.7 per cent of households cannot heat their living room, assume that 92.3 per cent can.

¹ 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-statistics-methodology-handbook>

² 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).

³ The poverty line (relative income poverty) is defined as an equivalised disposable income of less than 60% of the national median, more information on the methodology can be found in the following infographic:

<https://www.gov.uk/government/publications/how-low-income-is-measured>

⁴ 2018 Annual Fuel Poverty Statistics

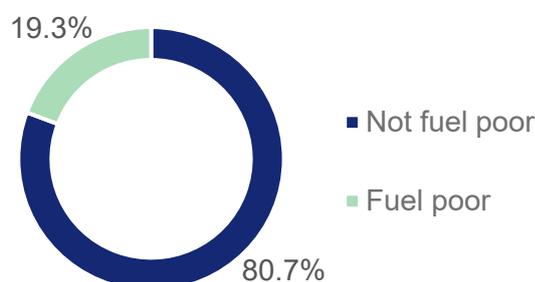
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882404/annual-fuel-poverty-statistics-report-2020-2018-data.pdf

Table 1: Number and proportion of households who can or cannot comfortably keep their living room warm

	Proportion of all households (%)	Proportion of non-fuel poor households (%)	Proportion of fuel poor households (%)
Households who can comfortably keep their living room warm	90.1	91.1	82.2
Households who cannot comfortably keep their living room warm	8.5	7.6	15.9
Households who do not know if they can comfortably keep their living room warm	1.4	1.3	1.9

Of those answering that they could not heat their living rooms comfortably, only 19.3 per cent are fuel poor households. This means that 80.7 per cent of those struggling are not fuel poor. This equates to 1.60 million households who are saying they are struggling to heat their living rooms but are not being classed as fuel poor.

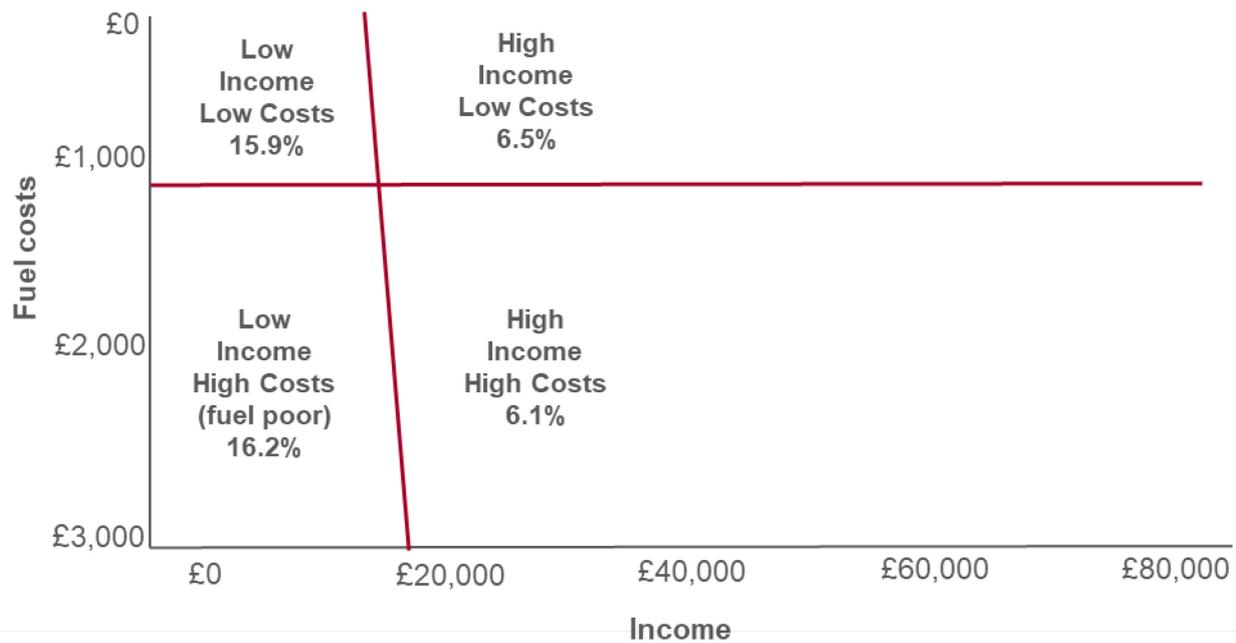
Figure 1: Fuel poor split of households who cannot comfortably keep their living room warm



Fuel poverty in England is measured using the LIHC indicator, which is defined in the introduction. Based on a combination of a household’s income, energy requirements and energy prices, the indicator allows households to be grouped into one of the following four quadrants illustrated below in Figure 2.

Of households in the LIHC quadrant, 16.2 per cent of households said they cannot comfortably keep their living room warm. This was the highest figure across all quadrants. In the Low Income Low Costs (LILC) quadrant 15.9 per cent answered that they cannot comfortably keep their living room warm. Households fitting into the two low income quadrants appear to struggle more than those in the two high income quadrants. In the High Income Low Costs (HILC) quadrant 6.5 per cent of households cannot comfortably keep their living room warm and 6.1 per cent of households in the High Income High Costs (HIHC) quadrant also cannot. The survey responses would suggest that household income is the reason households cannot comfortably keep their living room warm and not fuel costs.

Figure 2: Proportion of households in each quadrant of the Low Income High Costs Matrix that find it difficult to comfortably heat their living room



Households who report that they are able to heat their living rooms to a comfortable standard have a median household income (after housing costs)⁵ of £23,910 compared to the £16,192 for households who cannot. This is considerably lower than the median income of £23,212⁶ for all households. In addition, households who cannot heat their living rooms comfortably have fractionally lower median fuel costs than those who can (£1,167 and £1,184 respectively).

Table 2: Median fuel costs and income split for households who can and cannot comfortably heat their living room

	Median equivalised fuel costs (£)	Median after housing costs (AHC), equivalised income (£)
Households who can comfortably keep their living room warm	1,184	23,910
Households who cannot comfortably keep their living room warm	1,167	16,192

By looking at how households across the different income deciles answered the question, it is clear that those with lower household incomes are more likely to report to struggle to keep their living rooms comfortably warm. In the 1st (lowest) income decile, 19.2 per cent of households said they could not comfortably keep their living room warm. This contrasts to 3.8 per cent of households from

⁵ Mortgage and rent payments (and council tax) are deducted from the full income of each household to give an after housing cost (AHC) measure of income. Once housing costs are deducted, incomes are then equivalised to reflect the fact that different household types will have different spending requirements.

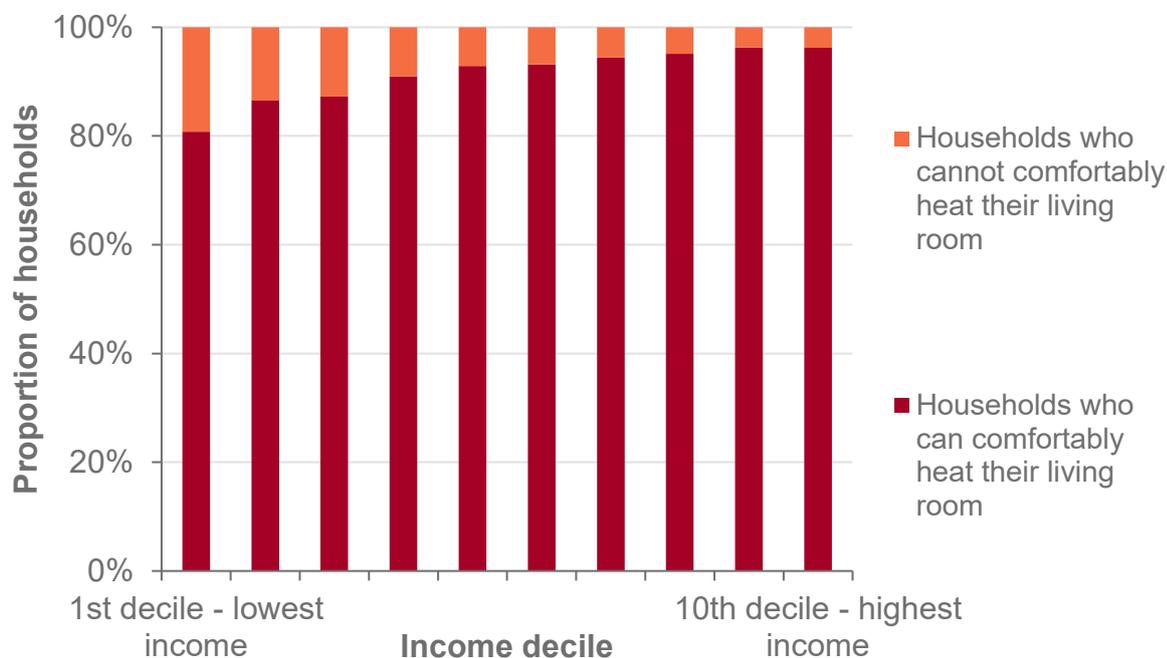
⁶ 2018 Fuel Poverty Supplementary tables

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882127/fuel-poverty-supplementary-tables-2020-2018-data.xlsx

Special feature article – What are households’ perceptions of fuel poverty?

the 10th (highest) income decile who also cannot comfortably heat their living room. The proportion of households from the 1st income decile struggling is lower in comparison to 40.3 per cent of households in the decile are fuel poor⁷.

Figure 3: Proportion of households who can and cannot comfortably heat their living room across all income deciles



The Standard Assessment Procedure (SAP) is used⁸ to measure the technical energy efficiency of the housing stock in England and hence derive the costs of heating the property to standard heating pattern. For fuel poverty statistics, and to measure progress against the fuel poverty target (Section 2.2), BEIS is legally bound to use a fuel poverty specific energy efficiency rating.

The fuel poverty energy efficiency rating (FPEER)⁹ (from hereafter referred to as energy efficiency rating), is based on SAP, but accounts for the impact of policies which discount households’ energy bills (e.g. the Warm Home Discount¹⁰). For example, if a household has a Band E Energy Performance Certificate (EPC) and they get £140 deducted from their energy bill due to receipt of the Warm Home Discount, this could move them into an FPEER Band D.

Households with lower energy efficiency ratings were slightly more likely to say they could not heat their living rooms. For example, 11.6 per cent of Band F and G properties said they could not comfortably heat their living rooms compared to 7.7 per cent of Bands A, B and C. The proportion of Band F and G households who cannot comfortably heat their living rooms is noticeably lower than expected, when taking into account 20.8 per cent of the group are fuel poor¹¹.

⁷ Fuel poverty (2018) Detailed Tables – Table 30

⁸ Every household in England can be assessed using SAP, and a score 1-100 awarded, with 1 indicating the least energy efficient and 100 being the highest. For the purposes of Energy Performance Certificates (EPC), SAP scores are banded to give a rating A-G, A being the highest.

⁹ Fuel Poverty Energy Efficiency Rating methodology

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/332236/fpeer_methodology.pdf

¹⁰ Warm home discount www.gov.uk/the-warm-home-discount-scheme

¹¹ Fuel poverty Detailed Tables 2018 – Table 3

Table 3: FPEER split of households who can and cannot comfortably heat their living room and fuel poverty

FPEER Band	Proportion of households in group who cannot comfortably heat their living room (%)	Proportion of households in group who are fuel poor (%)
A/B/C	7.7	3.5
D	8.5	11.9
E	11.1	21.5
F/G	11.6	20.8

Furthermore, there is a difference in how households from different tenures responded to this question. A total of 95.9 per cent of owner-occupied homes said they were able to comfortably heat their living room and only 4.1 per cent said they could not. This contrasts to 83.4 per cent of households in the private rented sector saying they can comfortably heat their living room and 16.6 per cent saying they cannot. Within the private rented sector, 17.7 per cent of households are fuel poor. In the social housing sector 16.5 per cent of households said they cannot heat their living rooms compared to 9.1 per cent of that group who are fuel poor.

Figure 4: Tenure comparison of households who can and cannot comfortably heat their living room

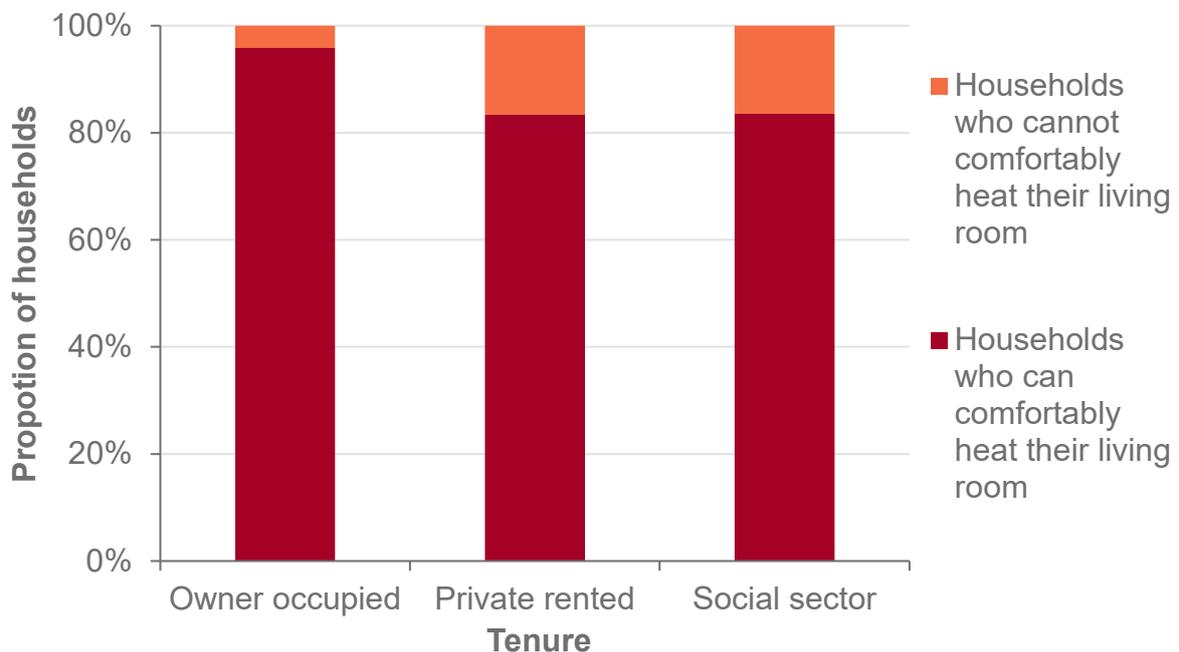


Table 4: Tenure split of households who cannot comfortably heat their living room and fuel poverty

Tenure	Proportion of households in group who cannot heat their living room (%)	Proportion of households in group who are fuel poor (%)
Owner-occupied	4.1	8.3
Private rented	16.6	17.1
Social sector	16.5	9.1

Why can some households not comfortably heat their living room in cold weather?

Households who said that they could not comfortably heat their living room were asked to give a reason as to why they were unable to do so. Most, 47.0 per cent, gave the reason of it not being possible to heat their living room to a comfortable standard and 26.6 per cent said it was because it costs too much to keep their heating on. An additional 20.1 per cent said that it was a combination of both of those reasons.

However, when we split this into fuel poor and non-fuel poor, a slightly smaller proportion of fuel poor homes have said it is because it is not being possible to heat their living room to a comfortable standard than non-fuel poor homes have (38.3 per cent compared to 49.1 per cent). This suggests that there are 1.6 million households who are not classed as fuel poor but struggle to comfortably heat their living room and feel they cannot do so for energy performance reasons. More fuel poor households, 30.5 per cent compared to 25.7 per cent, said it was because it costs too much to keep their heating on. A further 24.1 per cent of fuel poor households said it was both reasons compared to 19.1 per cent of non-fuel poor homes.

Table 5: The reasons households cannot heat their living room with a fuel poor split

	Proportion of all households (%)	Proportion of households within group who are non-fuel poor (%)	Proportion of households within group who are fuel poor (%)
Costs too much to keep heating on	26.6	25.7	30.5
Not possible to heat to a comfortable standard	47.0	49.1	38.3
Both of the above	20.1	19.1	24.1
Neither	6.3	6.1	7.0

Those who said that it costs too much to keep their heating on, have the lowest median income of £14,115 and low median fuel costs of £1,148. Households who said that it was because it is not possible to heat their living room to a comfortable standard had a higher median income of £18,447 and only fractionally higher median fuel costs of £1,156. Those who said it was both also had a low median household income of £15,200 and the most expensive fuel costs of £1,197.

Table 6: Median fuel costs and income for each reason given as to why households could not heat their living room to a comfortable standard

	Median equivalised fuel costs (£)	Median after housing costs (AHC), equivalised income (£)
Costs too much to keep heating on	1,148	14,115
Not possible to heat to a comfortable standard	1,156	18,447
Both of the above	1,197	15,200
Neither	1,209	16,944

Are households able to meet their fuel costs?

A further question was asked on how easy or difficult households find it to meet their fuel costs. A total of 72.7 per cent of all households said that they find it easy, 11.6 per cent said they find it difficult and 14.6 per cent said they find it neither easy nor difficult. An additional 1.0 per cent of all households answered that they didn't know to this question. These households have been removed from all further analysis on this question.

There is also a clear difference in how fuel poor and non-fuel poor homes answered. Whilst the majority of fuel poor homes, 55.2 per cent, said they find it easy to meet their fuel costs this is noticeably lower than the 74.7 per cent of non-fuel poor homes who answered the same. Additionally, a quarter of fuel poor households said they find it difficult to meet their fuel costs compared to only 10.1 per cent of non-fuel poor homes. Although this does highlight that the fuel poor group are struggling to meet their fuel costs compared to the non-fuel poor group, it is still notable that the majority of fuel poor households have said they find it easy to meet their fuel costs.

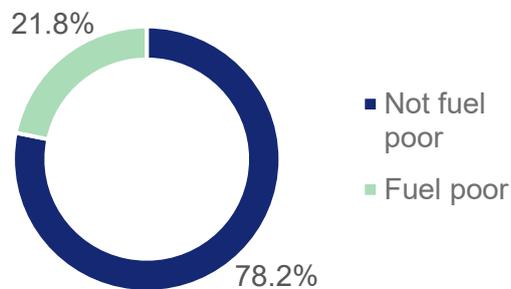
Table 7: Number and proportion of households who find it easy or difficult to meet their fuel costs

	Proportion of all households (%)	Proportion of non-fuel poor households (%)	Proportion of fuel poor households (%)
Easy	72.7	74.7	55.2
Difficult	11.6	10.1	24.8
Neither easy nor difficult	14.6	14.2	18.6
Don't know	1.0	1.0	1.5

Special feature article – What are households' perceptions of fuel poverty?

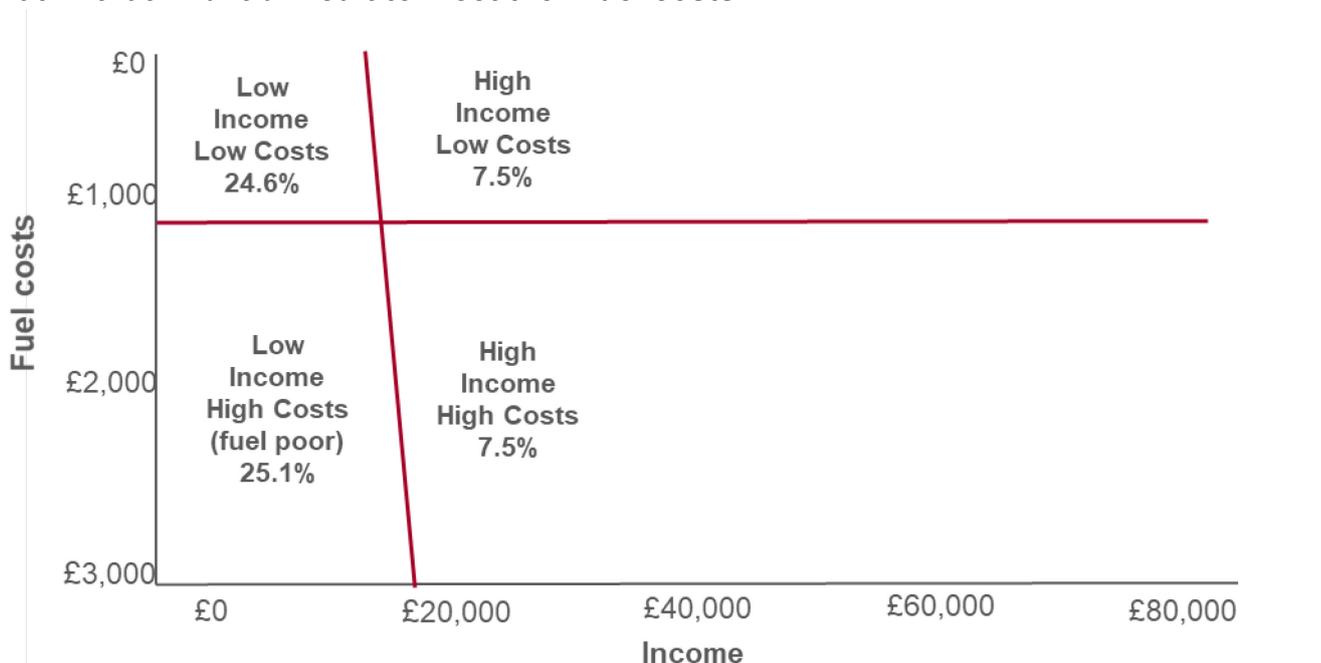
Of those answering that they find it difficult to meet their fuel costs, 21.8 per cent are fuel poor households. Therefore, 78.2 per cent of those struggling are not fuel poor. This equates to 2.13 million households who are saying they find it difficult to meet their fuel costs but are not classed as fuel poor.

Figure 5: Households who find it difficult to meet their fuel costs split by fuel poverty



Of those households in the LIHC quadrant, 25.1 per cent said they find it difficult to meet their fuel costs. Similarly, 24.6 per cent of households in the LILC quadrant said they also find it difficult. This compares to 7.5 per cent of households in both the HILC and HIHC quadrants saying they find it difficult. This provides further evidence that household income is the reason households struggle to meet their fuel costs.

Figure 6: Proportion of households in each quadrant of the Low Income High Costs Matrix that find it difficult to meet their fuel costs



Those households finding it easy to heat their living room have a considerably higher median income than those finding it difficult (£25,922 compared to £14,698). They also have slightly more expensive median fuel costs of £1,190 compared to £1,160 for households finding it difficult, although in comparison to the differences in household income this is not as significant. As the median fuel costs

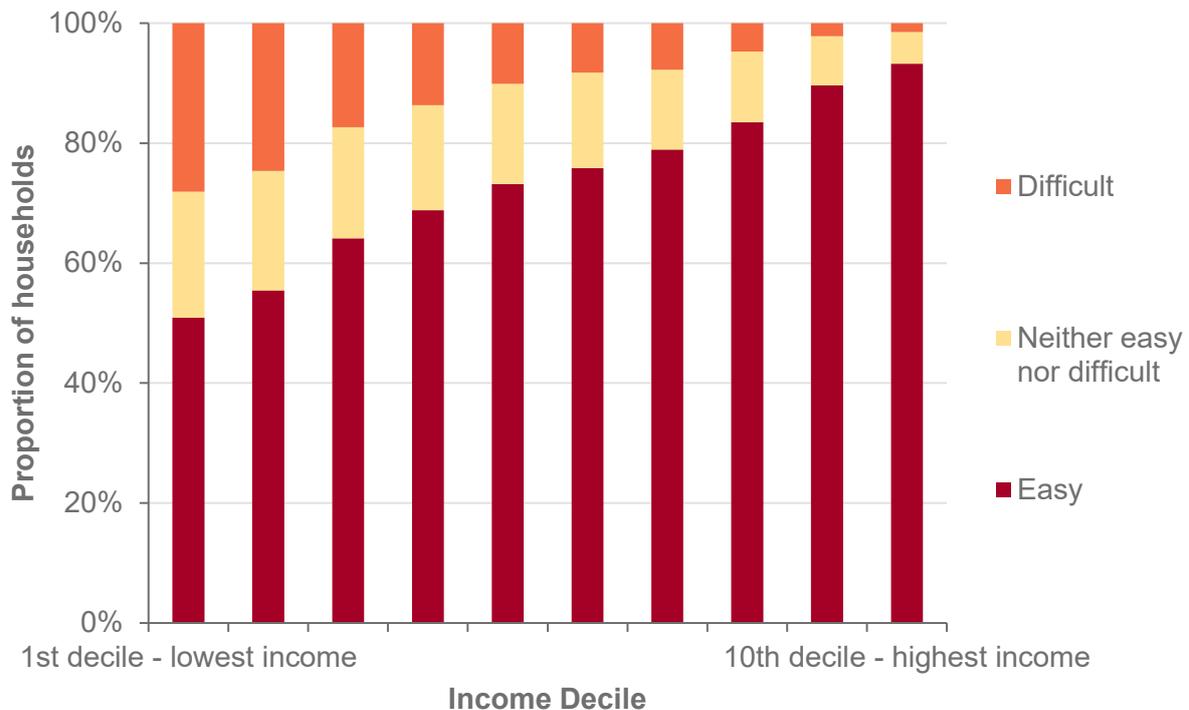
for households finding it difficult to meet their fuel costs are below the median of £1,181¹² for all households but their median income is below the average of £23,212³ for all households, it suggests that it is not necessarily high fuel costs that are the reason households are struggling but household income.

Table 8: Median fuel costs and income for each reason given as to how easy or difficult households find it to meet their fuel costs

	Median equivalised fuel costs (£)	Median after housing costs (AHC), equivalised income (£)
Easy	1,190	25,922
Difficult	1,160	14,698
Neither easy nor difficult or don't know	1,165	19,320

There is also a marked difference between how those from the 1st (lowest) income deciles answered compared to those from the 10th (highest) decile. Although 50.9 per cent from the 1st decile said they find it easy to meet their fuel costs, this is considerably lower than the 93.3 per cent from the 10th income decile that also find it easy. Additionally, 28.1 per cent of households in the first income decile find it difficult compared to 1.5 per cent of those from the 10th decile. This is further evidence of the impact of a household's income on their perceptions of fuel poverty.

Figure 7: Different income deciles and how easy or difficult they find it to meet their fuel costs



¹² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882127/fuel-poverty-supplementary-tables-2020-2018-data.xlsx

Special feature article – What are households’ perceptions of fuel poverty?

There is some difference between dwellings with lower energy efficiency in how easy or difficult they find it to meet their fuel costs, although this has a lesser effect than income. For Bands A-C homes 86.5 per cent said they find it easy and 13.5 per cent said they find it difficult. For Bands F and G households, 80.3 per cent find it easy and 19.7 per cent said they find it difficult. Whilst this is a smaller proportion of less energy efficient households finding it easy to meet their fuel costs than the most energy efficient, it is only a difference of 6.2 percentage points.

Similarly, there are more F and G homes finding it difficult to meet their fuel costs, but this is not significantly higher than Band A-C homes finding it difficult. This would suggest that it is not the energy efficiency of a dwelling that is influencing how easy or difficult households find it to meet their fuel costs. This is also a similar proportion of F and G homes finding it difficult to meet their fuel costs as there are in fuel poverty, but there are more households in Bands A, B and C finding it difficult compared to only 3.5 per cent of that group in fuel poverty.

Table 9: FPEER split of how easy or difficult households find it to meet their fuel costs

FPEER Band	Proportion of households in group who find it difficult (%)	Proportion of households in group who are fuel poor (%)
A/B/C	13.5	3.5
D	13.1	11.9
E	15.8	21.5
F/G	19.7	20.8

A large proportion of owner-occupied homes, 81.2 per cent, find it easy to meet their fuel costs compared to only 57.6 per cent of households from the social sector. In the private rented sector, 61.7 per cent find it easy to meet their fuel costs and 19.2 per cent find it difficult. In addition, 24.6 per cent of households from the social sector find it difficult to meet their fuel costs compared to 6.1 per cent of owner-occupied households. This is also a high proportion of households from the social sector considering only 9.1 per cent of the group are fuel poor.

Figure 8: Tenure of households who find it easy and those who find it difficult to meet their fuel costs

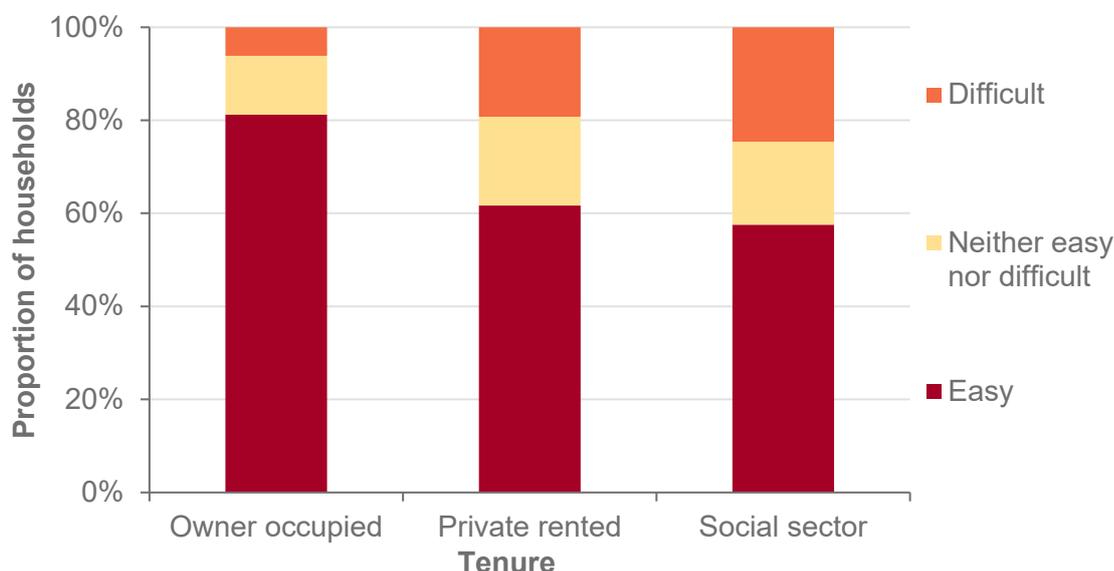


Table 10: Proportions of households finding it easy and difficult from each tenure compared to proportion who are non-fuel poor and fuel poor

Tenure	Proportion of households who find it difficult (%)	Proportion of households in group who are fuel poor (%)
Owner occupied	7.0	8.3
Private rented	23.8	17.1
Social sector	30.0	9.1

Summary:

It is interesting to note that using a qualitative indicator has identified a greater number of households who struggle to comfortably heat their living rooms compared to the official measurement of fuel poor households. These households who have reported that they struggle are across the income and energy efficiency spectrum but in particular those on low incomes. There is little difference seen between households with modelled high or low energy costs. Additionally, most (82%) fuel poor homes say that they can comfortably heat their living rooms and over half (55%) can easily meet their fuel costs. This could be due to some households not being comfortable in admitting they are struggling in a face to face interview process like EHS. This analysis has shown that in addition to those households identified as fuel poor, there are 1.60 million households who are not fuel poor saying they cannot comfortably heat their living rooms and 2.13 million households finding it difficult to meet their fuel costs.

As for the reasons why households are struggling to heat their living rooms and meet their fuel costs, there is some evidence to suggest that it is due to the energy performance of dwellings. For example, 46.8 per cent of households said the reason they could not heat their living room was due to it not being possible to heat it to a comfortable standard. However, when looking at the difference between how households across different energy efficiency ratings answered the questions there were no notable difference between the higher and lower energy efficient homes. However, there is more evidence to show that household income is the key driver in why these households have said they are struggling. This is picked up on through the notable differences in lower median incomes in households struggling and in more lower income decile households struggling. There is less evidence that high fuel costs are causing households to struggle due. This is seen in those saying they cannot heat their living room and find it difficult to meet their fuel costs despite having below average fuel costs.

Katie Shortland

Fuel poverty statistics

Tel: 020 7215 8533

E-mail: Fuelpoverty@beis.gov.uk

Stephen Oxley

Fuel poverty statistics

Tel: 0300 068 5025

E-mail: Fuelpoverty@beis.gov.uk