CSE's Fuel Poverty Calculator

A summary of fuel poverty and
how to access and use the FP calculator tool
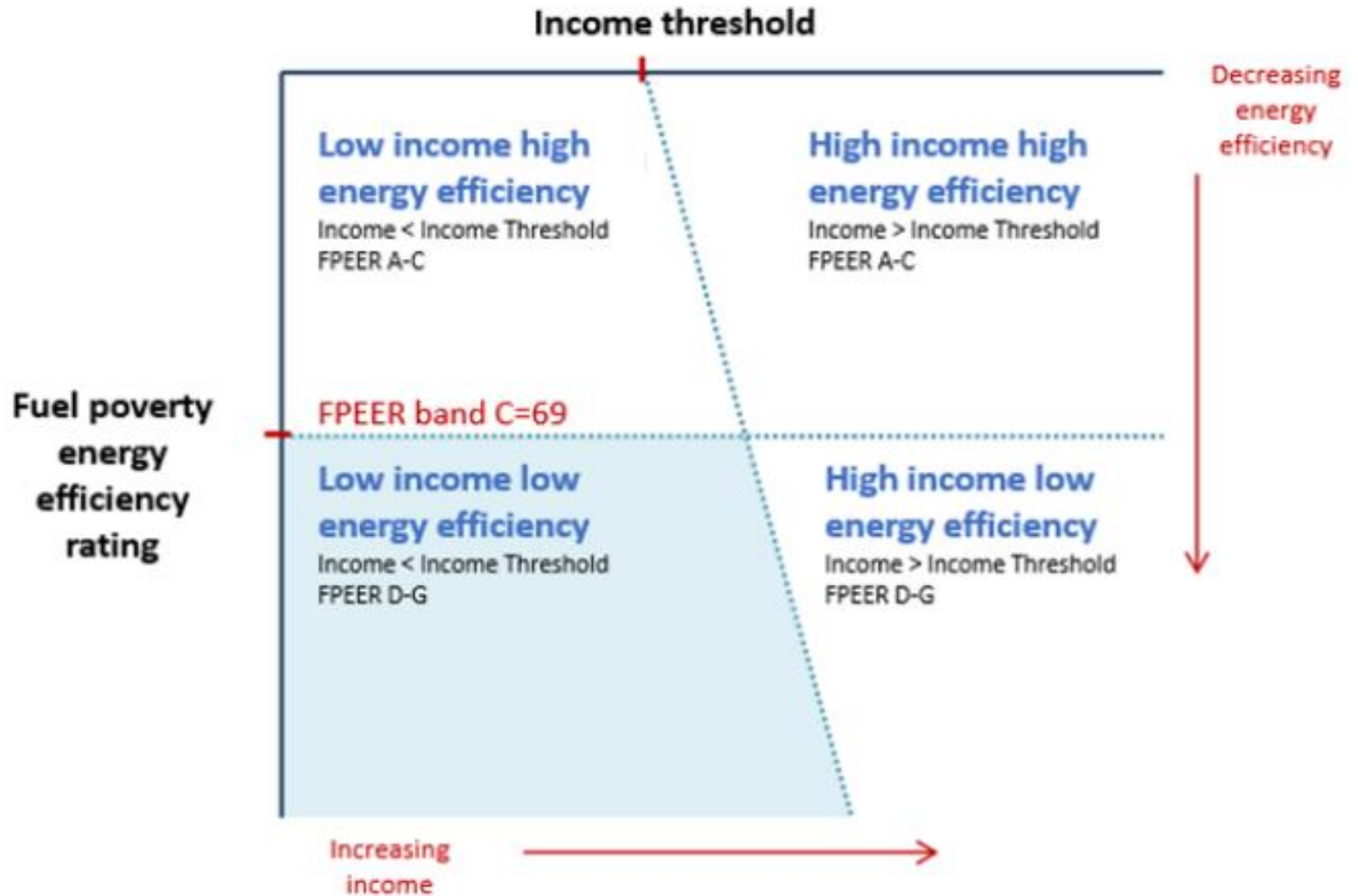
What is LILEE fuel poverty?

==This is now the official definition of fuel poverty in England. It replaced the LIHC definition in 2021.==

Under the Low Income Low Energy Efficiency (LILEE) definition, households are considered fuel poor if:

- They have a Fuel Poverty Energy Efficiency Rating (FPEER) of band D or below (**Low Energy Efficiency**); *and*

- Were they to spend the required amount on fuel to heat their home adequately* they would be left with a residual income below the official poverty line (**Low Income**).

(* required fuel costs are those calculated by an domestic energy assessment and based on the amount of fuel required to maintain an 'adequate level of warmth')

Classifications under the Low Income Low Energy Efficiency matrix (source: BEIS 2021)
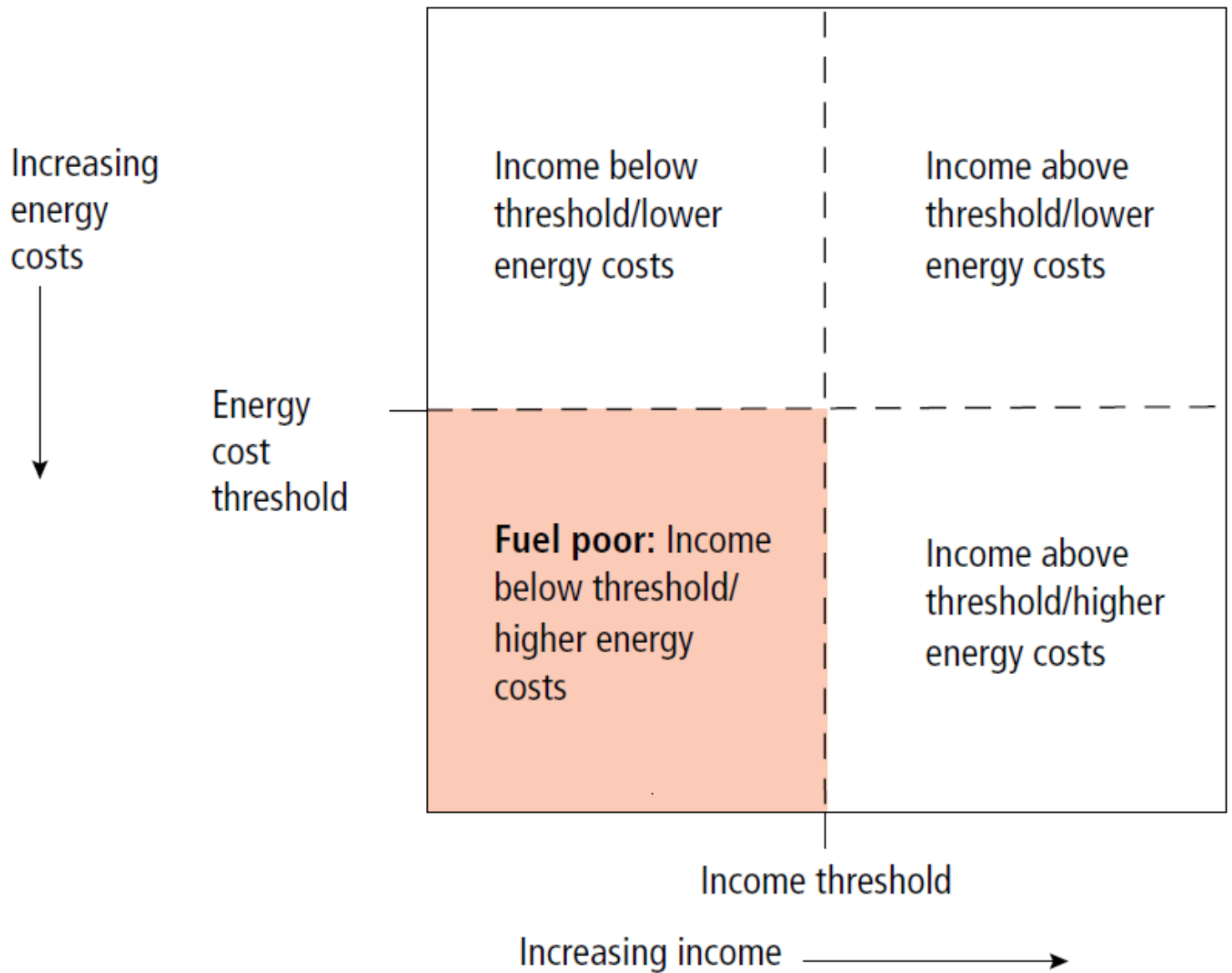
What is LIHC fuel poverty?

Under the Low Income High Costs (LIHC) definition, households are considered fuel poor if:

- They have required* fuel costs that are above the median level (**High Cost**); *and*

- Were they to spend that amount they would be left with a residual income below the official poverty line (**Low Income**).

(* required fuel costs are those calculated by an domestic energy assessment and based on the amount of fuel required to maintain an 'adequate level of warmth')

Increasing
energy
costs

Energy
cost
threshold

Income below
threshold/lower
energy costs

Income above
threshold/lower
energy costs

Fuel poor: Income
below threshold/
higher energy
costs

Income above
threshold/higher
energy costs

Income threshold

Increasing income

The Low Income High Costs trapezium (Source: DECC 2013)
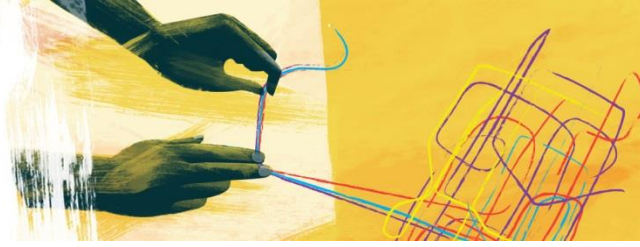
What is 10% fuel poverty?

Under the 10% definition of fuel poverty, households are considered fuel poor if:

- They have to spend more than 10% of their income* on maintaining an adequate level of warmth.

Or

- If $\frac{Fuel\ cost}{Income} > 0.1 \rightarrow$ household is fuel poor
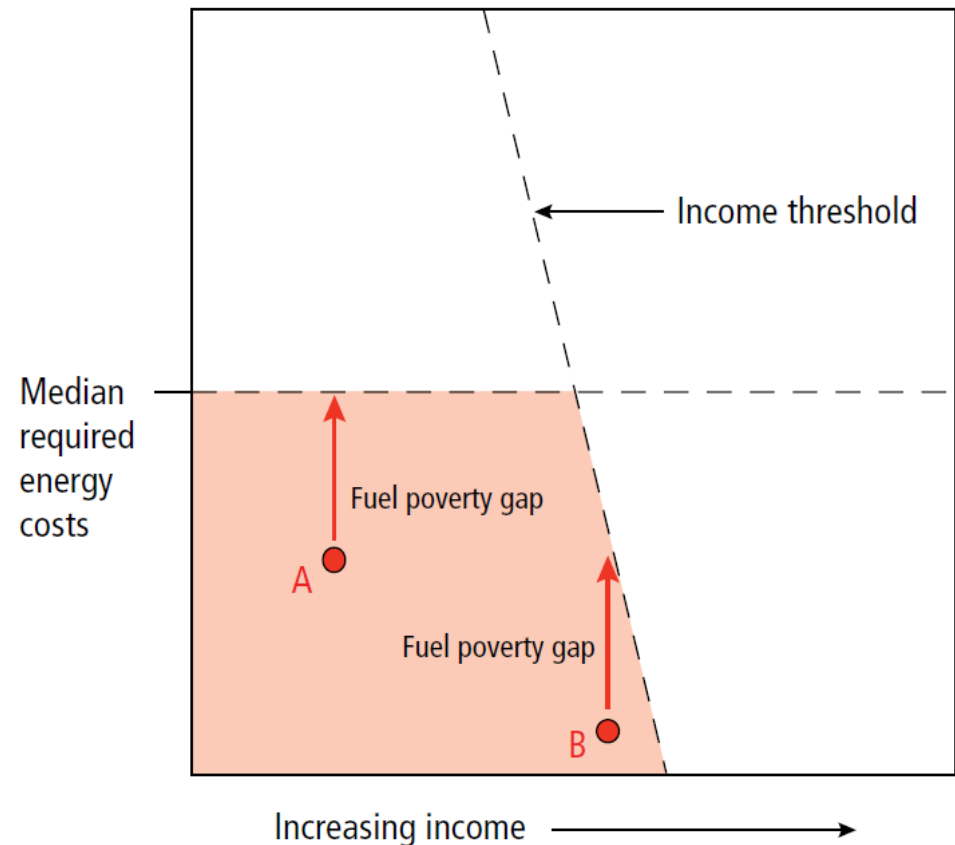
* income is net income after tax and NI deductions, includes income from benefits and takes account of council tax payments.
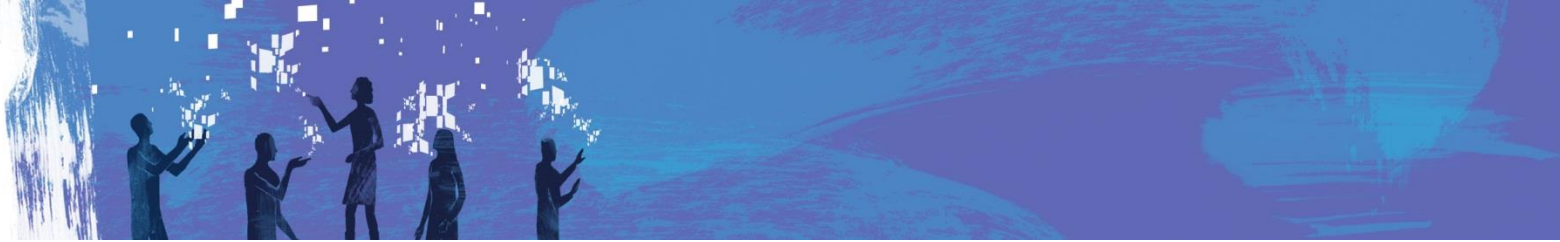
The fuel poverty gap

As part of the LIHC definition, fuel poverty gaps are also assessed. These are:

"*the amounts by which the assessed energy needs of fuel poor households exceed the threshold for reasonable costs.*"

What is the fuel poverty calculator?

- A free Excel tool that allows users to input occupancy information, income, housing costs and energy bill details to derive fuel poverty status.

It includes:

- A main calculation tab 'FPCalculationForm' for directly calculating fuel poverty status for individual households

- A database tab 'CommunityFuelPovertyDatabase' which can be easily populated from data entered in the 'FPCalculationForm' tab

- A printable questionnaire form for collecting data through face to face interviews, during home visits, etc.

Also

- Full instructions on the data required to calculate fuel poverty

How does it work?

- Calculations are based on the official method of calculating fuel poverty by the government.

    – The 'Fuel Poverty Methodology Handbook' can be downloaded from the gov.uk website: https://www.gov.uk/government/publications/fuel-poverty-statistics-methodology-handbook

Data and information required

- Total household net income:

    – Income after tax and NI contributions and after council tax

    – Income from benefits

- Housing costs (rent and mortgage payments)

- Number of adults and children under 14 who live permanently in the household

- Annual energy costs (ideally calculated from an energy assessment)

- EPC rating of property

Database

- Macros and buttons in the tool allow records to be saved and stored in the database tab and cleared for new details to be added

How many people regularly living in you household?
How many of these are 14 or over?
How many of these are under 14?

	1
	2
	0

Annual equivalised fuel bill £1,463

Annual equivalised income (after housing costs) £9,000

A household is defined as living in fuel poor if its annual equivalised fuel bill is greater than the national median equivalised fuel bill AND the total household income (disposable) after housing costs and equivalised fuel bills have been removed, is less than 60% of the national median disposable income.

OR, MORE SIMPLY:

Fuel poor households are low income households with high fuel costs

Your household is officially living in fuel poverty

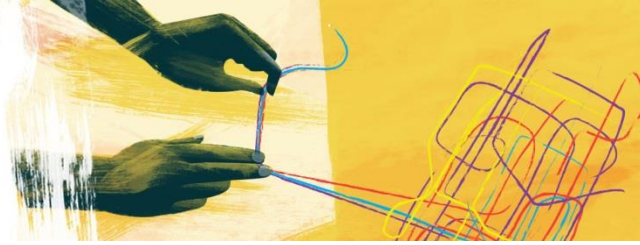Your 'fuel poverty gap' is:

£162.27

Your household is officially not fuel poor

Transfer record to database

Low Income High Cost (LIHC) Definition:
Official definition in England (since 2013)

10% Definition[#]:
Official definition in Wales, Scotland and Northern Ireland

...nition specifies that a household is in fuel poverty if 10% or more of their income ...nt on energy costs to provide adequate warmth and power. This was also ... ...land before 2013.

Fuel poverty questionnaire (printable)

FUEL POVERTY DATA COLLECTION QUESTIONNAIRE

Title:	
First name:	
Surname:	
Flat Number:	
Building Name:	
Building Number:	
Street:	
District:	
Town:	
County:	
PostCode:	

INCOME
What is your total annual disposable household income?
This should include private income *after* tax and NI, any payments from benefits and tax credits, net interest from savings and investments, plus the Winter Fuel Payment if received. You should also subtract your annual council tax bill from your income (see overleaf for space to make notes)

HOUSING COSTS
Mortgage payments

If you have a mortgage, how much do you pay in mortgage payments?

How often do you pay these (e.g. Weekly, monthly, other)

Rent costs

If you pay rent, how much do you pay?

How often do you pay these (e.g. Weekly, monthly, other)

FUEL COSTS
What do you pay for electricity each month?

What do you pay for gas each month?

Do you spend money on other fuels each month?

House coal	
Wood (logs, pellets, chips)	
LPG	
Oil	
Other	

HOUSEHOLD SIZE
How many people regularly living in you household?

How many of these are 14 or over?

How many of these are under 14?

INCOME CALCULATION NOTES

The income for all persons over 16 should be included in the calculation wHere applicable. If benefits or tax credits are recived as a couple or household as a whole then only include these for one person below.

PERSON 1	
ANNUAL GROSS PRIVATE INCOME (from earnings and/or pension)	£
ANNUAL NET PRIVATE INCOME (Deduct tax and & NI from GROSS PRIVATE INCOME)	£
Running total	£
To the NET PRIVATE EARNINGS then add:	
ANNUAL NET INCOME FROM SAVINGS/INVESTMENTS	£
ANNUAL INCOME FROM ALL BENEFITS	
(Including Housing benefit, council tax benefit, MPPI, SMI)	£
ANNUAL INCOME FROM TAX CREDITS	£
Running total	£
PERSON 1 ANNUAL NET INCOME	£ (1)

PERSON 2	
ANNUAL GROSS PRIVATE INCOME (from earnings and/or pension)	£
ANNUAL NET PRIVATE INCOME (Deduct tax and & NI from GROSS PRIVATE INCOME)	£
Running total	£
To the NET PRIVATE EARNINGS then add:	
ANNUAL NET INCOME FROM SAVINGS/INVESTMENTS	£
ANNUAL INCOME FROM ALL BENEFITS	
(Including Housing benefit, council tax benefit, MPPI, SMI)	£
ANNUAL INCOME FROM TAX CREDITS	£
Running total	£
PERSON 2 ANNUAL NET INCOME	£ (2)

OTHER PERSONS	
ANNUAL GROSS PRIVATE INCOME (from earnings and/or pension)	£
ANNUAL NET PRIVATE INCOME (Deduct tax and & NI from GROSS PRIVATE INCOME)	£
Running total	£
To the NET PRIVATE EARNINGS then add:	
ANNUAL NET INCOME FROM SAVINGS/INVESTMENTS	£
ANNUAL INCOME FROM ALL BENEFITS	
(Including Housing benefit, council tax benefit, MPPI, SMI)	£
ANNUAL INCOME FROM TAX CREDITS	£
Running total	£
OTHER PERSONS ANNUAL NET INCOME	£ (3)

Preliminary total

TOTAL OF ALL PERSONS ANNUAL NET INCOME (1) + (2) + (3)	£ (4)

From the preliminary total then add:	
WINTER FUEL PAYMENTS	£ (5)
And then subtract:	
ANNUAL COUNCIL TAX BILL	£ (6)

FINAL TOTAL NET HOUSEHOLD INCOME (4) + (5) - (6)	£

Caveats and limitations

- For an official definition of fuel poverty, the annual fuel costs used must be calculated by a energy assessment using BREDEM based calculations.

- Actual fuel costs will only provide an indication of fuel poverty status.

- But, many low income households typically under-heat their homes:

  – If found to be fuel poor using actually fuel costs, then likely to also be ***officially*** in fuel poverty.

- National average fuel cost and income thresholds are calculated using the latest available data. Updates will be made to the tool when more recent data is available.

How can you access it?

- The tool was developed by the Centre for Sustainable Energy. It is free and can be obtained by sending an email to:

  communities@cse.org.uk