CASE
CENTRE FOR ANALYSIS OF SOCIAL EXCLUSION

Hills Fuel Poverty Review

Getting the measure of fuel poverty

Final Report of the
Fuel Poverty Review

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27 March 2012

Approaching the Terms of Reference

Interim report

(1) Whether fuel poverty is a distinct problem

(2) If so, how fuel poverty is best measured and does the current approach to measurement capture problems effectively?

Final report

Final conclusions on (1) and (2) above AND

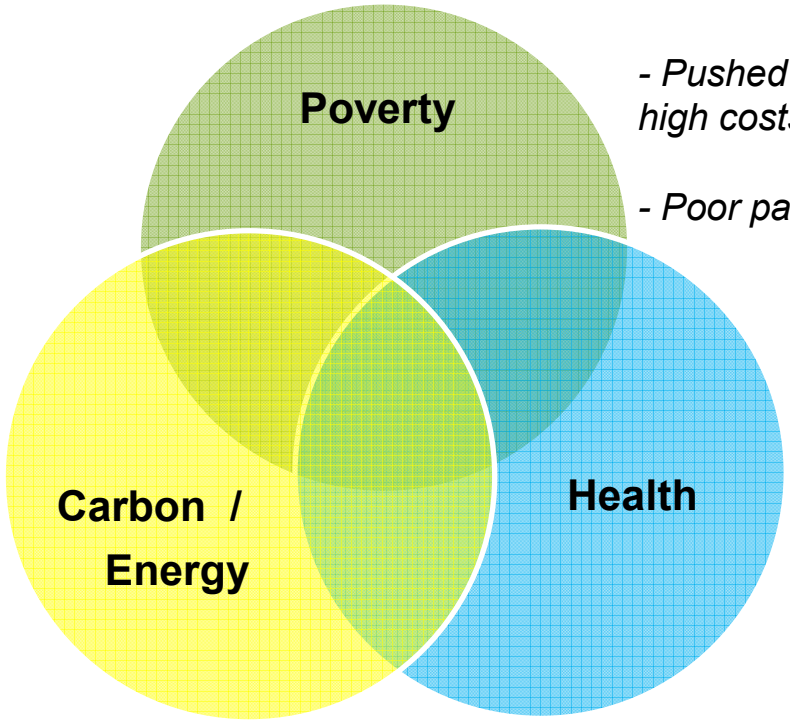
(3) Implications of measurement for the way we understand the effectiveness of the range of policy approaches to reducing it

The Review so far

Warm Homes and Energy Conservation Act 2000: *"A person is to be regarded as living "in fuel poverty" if he is a member of a household living on a **lower income** in a home which cannot be kept warm at **reasonable cost**."*

Fuel poverty as a distinct problem

We found that fuel poverty is a distinct issue and of concern from at least three different perspectives. Fuel poverty is an *additional* problem for some low-income households.



- Unequal ability to convert cash to warmth

- Pushed into poverty by high costs

- Poor pay more

-Capital investments out of reach for some

- Potential obstacle to carbon mitigation policy delivery, especially where costs go on bills

-High rate of EWDs and morbidity issues in general

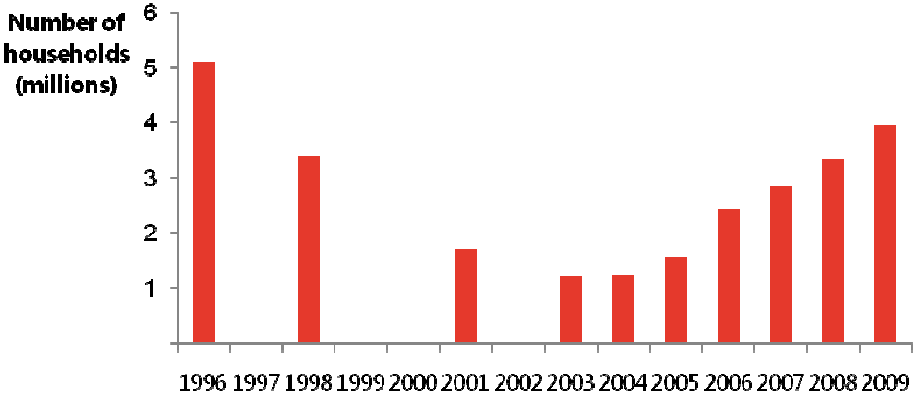
- Mental health and social well-being

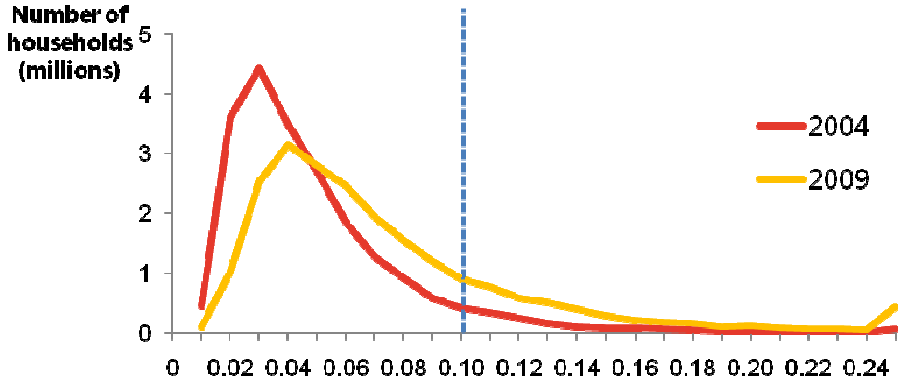
- Social isolation

What we currently measure

A fuel poor household is one that would need to spend more than 10% of its income on adequate warmth.

$$\text{Fuel poverty ratio} = \frac{\text{Required fuel costs (i.e. required usage x price)}}{\text{Income}}$$



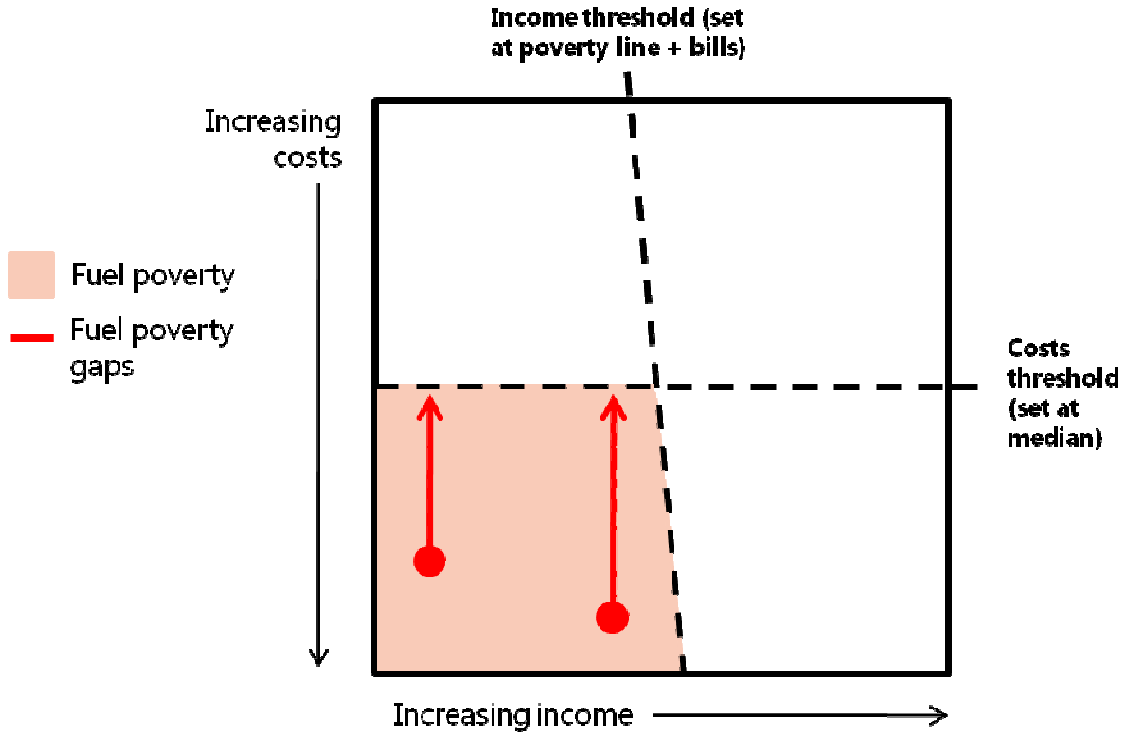


The indicator is rightly based on modelled needs. But it is fundamentally flawed because it misrepresents trends, includes some households that are not low income, does not show policy impacts very clearly and is sensitive to technical issues.

Our alternative: Low Income and High Costs indicator and the fuel poverty gap

A fuel poor household is one that has both high modelled costs and low income.

The fuel poverty gap is the required reduction in modelled costs to take a household out of fuel poverty.



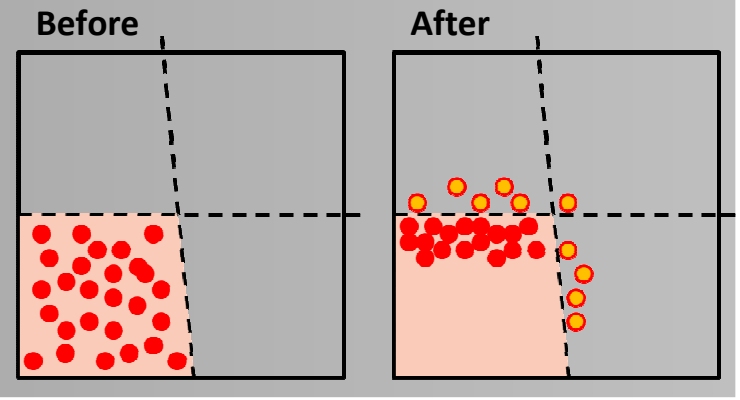
Together, the indicators show both the extent and depth of fuel poverty (rather than conflating them)

Setting the costs threshold

Concerns	Response
Threshold is too low This level is driven by the high levels of energy inefficiency in the housing stock	We consider a range of different ways of setting the threshold, including absolute and relative approaches.
Threshold is too high It is very difficult to ensure that zero low-income households have higher-than-typical costs	Although after careful reflection we retain our initial approach, the analysis is set out for those who would prefer an alternative.

Target setting

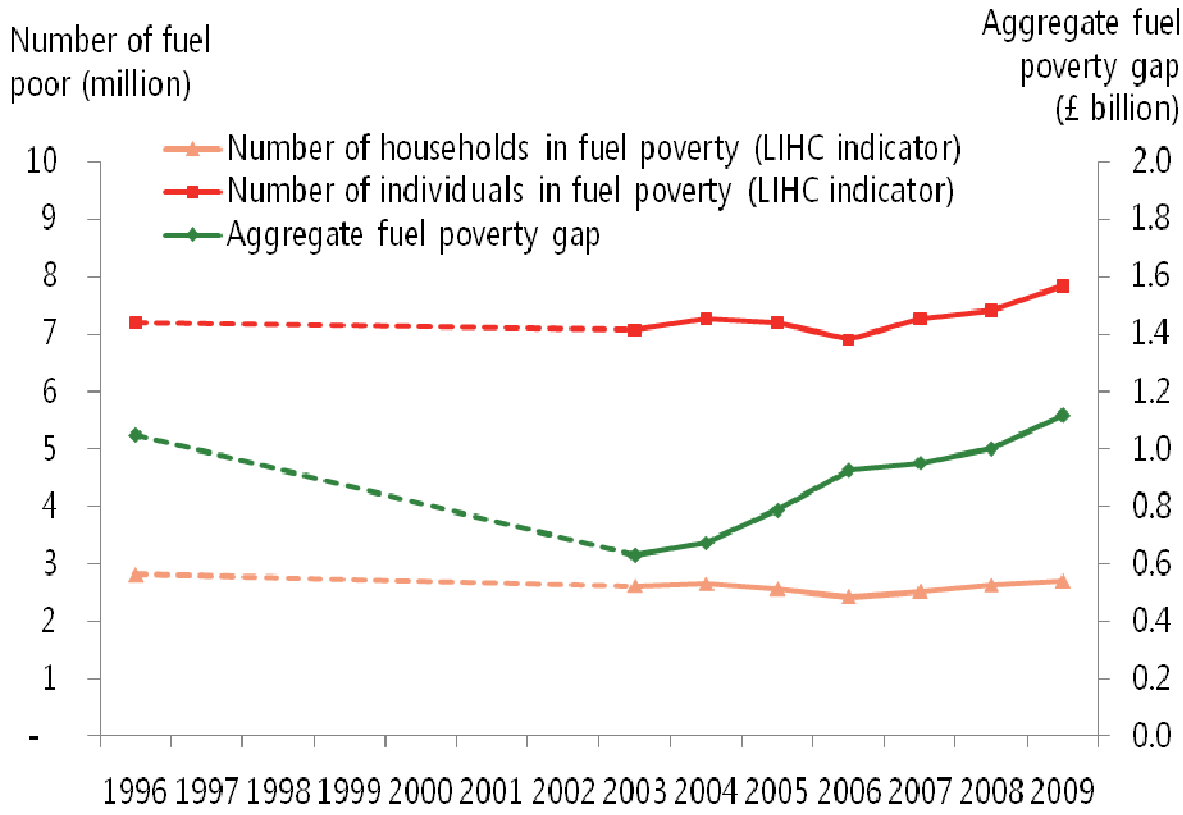
The key indicator should be the scale of the fuel poverty gap. If this is reduced to a low level then no household can be left *very far* above the threshold. This is preferable to using a fixed standard that is easier to beat, but becomes out of date.



Fuel poverty under twin indicators, 1996-2009

Under the LIHC indicator, the number of fuel poor households has remained broadly stable over this period.

The fuel poverty gap increased by three-quarters between 2003 and 2009.

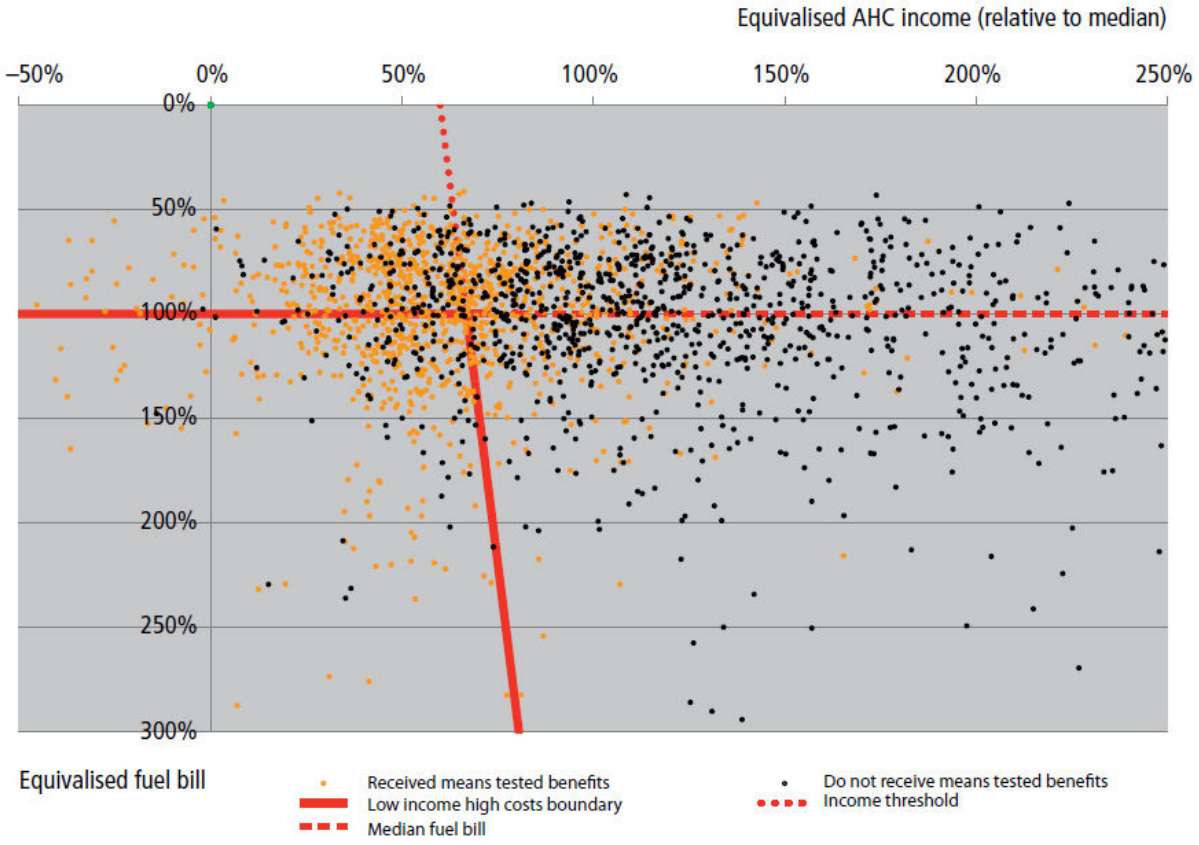


Proxies

Understanding household characteristics is only part of the picture.

In practical terms, proxies are needed to identify specific households for assistance. Proxies will hit some of the right people and some of the wrong ones.

The chart shows the hit rate of means-tested benefits as an eligibility criterion. 62% of LIHC households are on such benefits representing 62% of the fuel poverty gap.

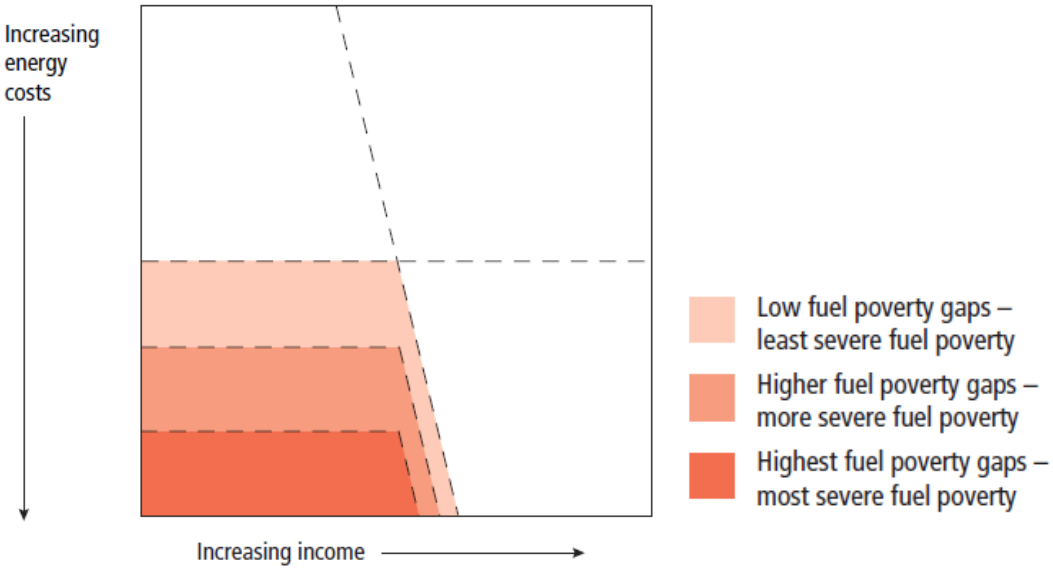


Using the fuel poverty gap

The fuel poverty gap can provide a bridge between targeting and the measurement of fuel poverty.

Importantly, the fuel poverty gap also helps identify those who are deepest in fuel poverty who are priorities for assistance.

Just over 50 per cent of the 2009 fuel poverty gap was accounted for by recipients of means-tested benefits living in houses with solid fuel heating or off the gas grid or solid walls or built pre-1945. Of course, some houses showing these characteristics are not fuel poor.



Applications: Understanding policy

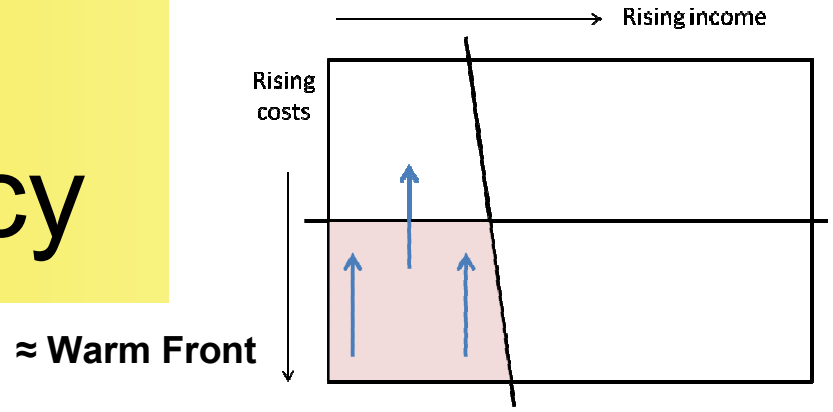
Principles

The impact of a given policy on fuel poverty will depend on three factors:

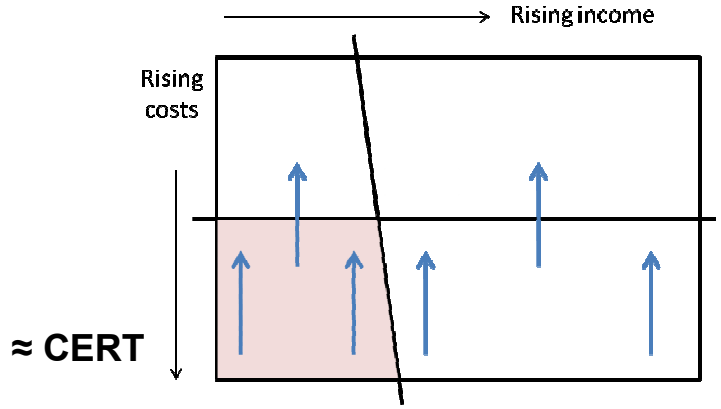
1.The type of policy (i.e. whether it addresses energy efficiency, income or prices)

2.Who pays for the policy (i.e. customers or taxpayers)

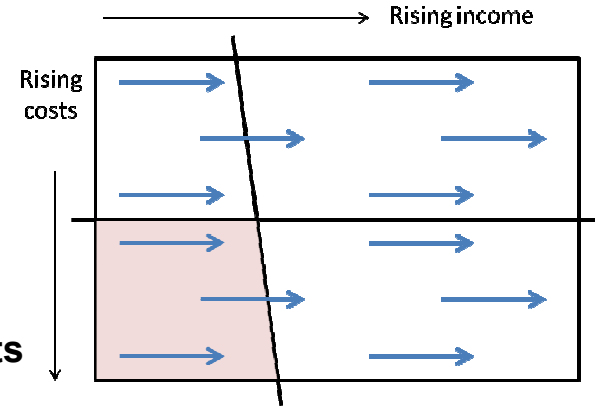
3.Who benefits (i.e. fuel poor households or all households)



≈ Warm Front



≈ CERT

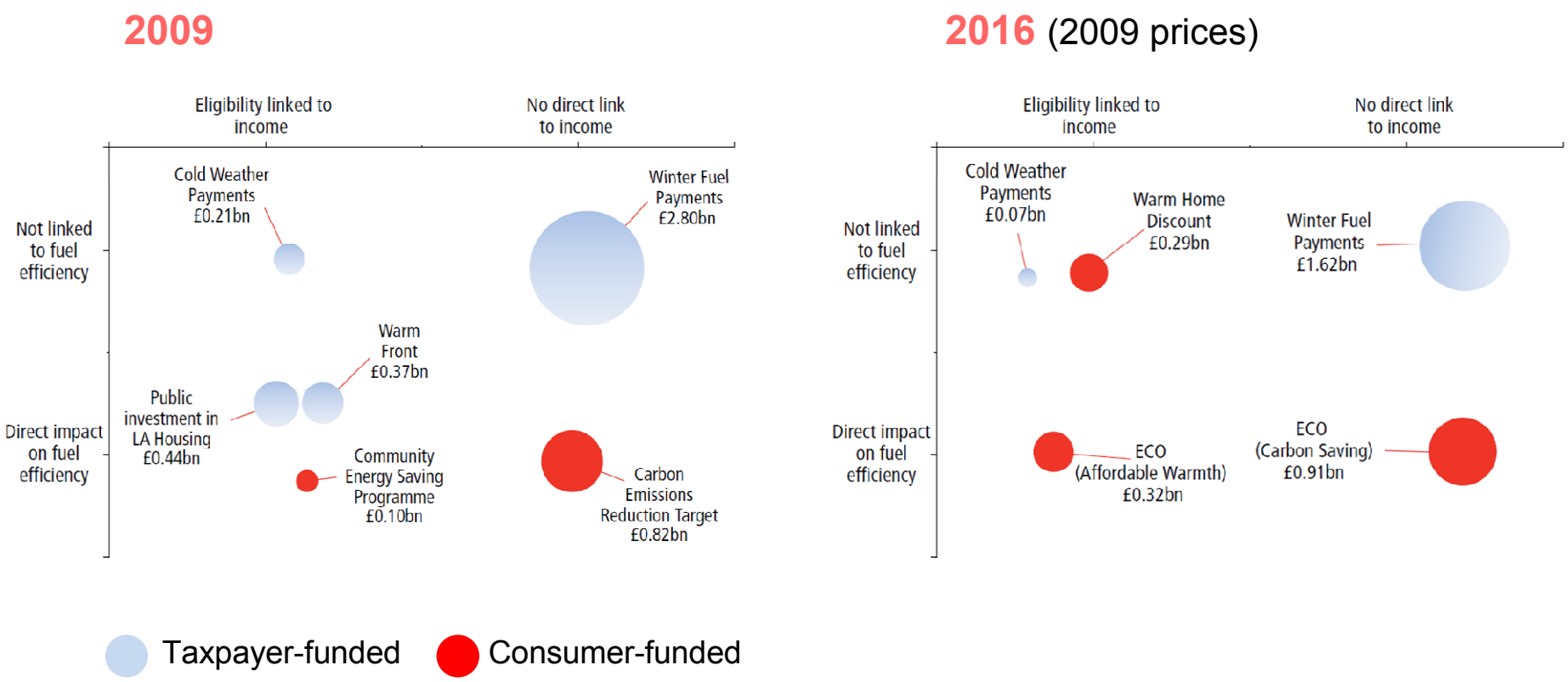


≈ Winter Fuel Payments

Existing climate and energy package

Current policy spans the three key drivers of fuel poverty.

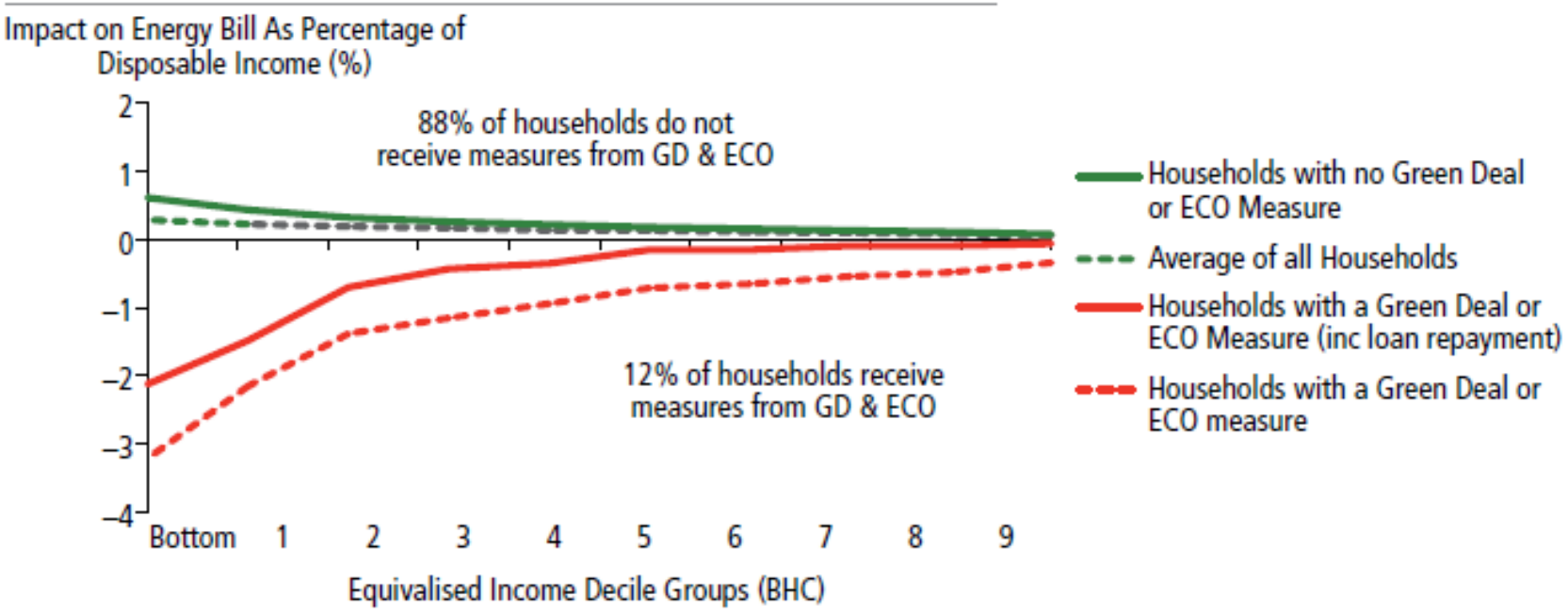
The picture is changing between 2009 and 2016 as shown.



Winners and losers

The net effect of a policy and group of policies on fuel poverty will depend on precisely who benefits and who pays. There is also a distributional impact.

This kind of trade-off is a live issue with ECO (see Figure) which is currently expected to have a regressive impact. To remove this, one would have to spend more than half (rather than one quarter) of ECO on Affordable Warmth.



Applications: Projecting fuel poverty

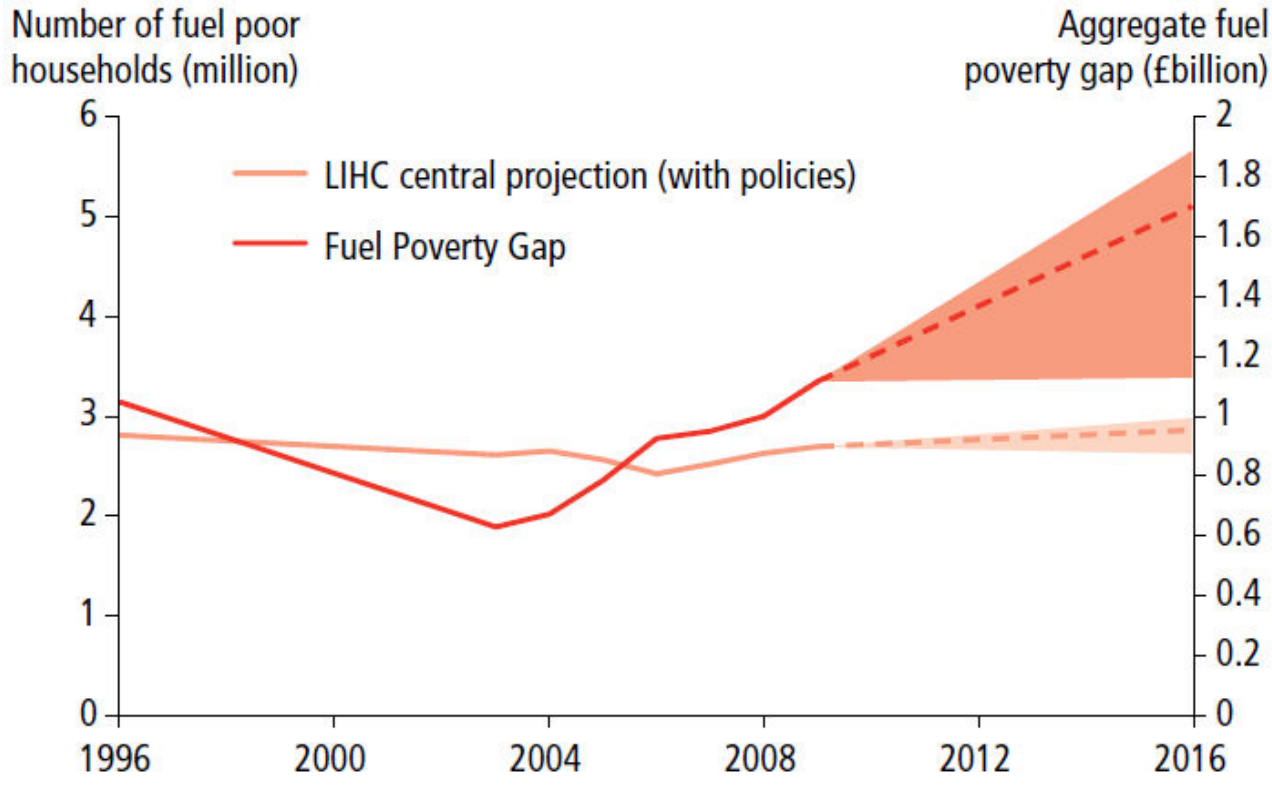
Prices and incomes projections are uncertain, so we show a range. We cannot allow for higher unemployment or tax/benefit reforms since 2009 – so may be over-optimistic.

LIHC indicator and fuel poverty gap

Our projections show an increase under both indicators by 2016 – but one that is lower than it would be in the absence of policies.

On our central projection, the fuel poverty gap is more than 50% higher in 2016 than in 2009 and nearly three times what it was in 2003.

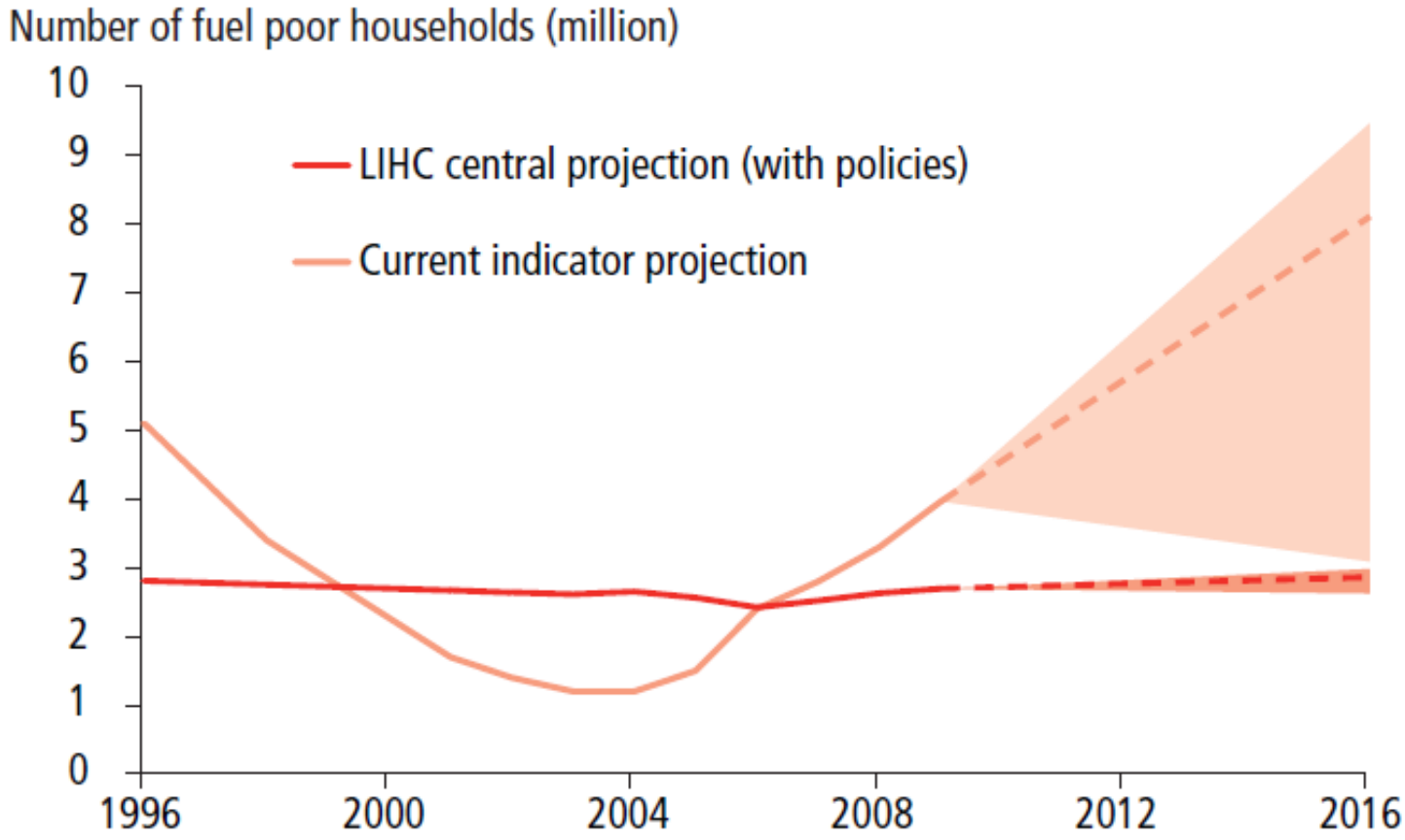
This is 10% lower (but *only* 10% lower) than it would be in the absence of policies.



Comparing indicators

Compared to the official indicator, the LIHC indicator is much more stable in the number of households affected and less unduly sensitive to fuel price assumptions.

The fuel poverty gap (as shown previously) *is* sensitive to price changes, like the current indicator. This seems appropriate. The main impact of sharp price rises is to deepen fuel poverty rather than make the core problem much more widespread.



Applications: Making further progress

Policy archetypes

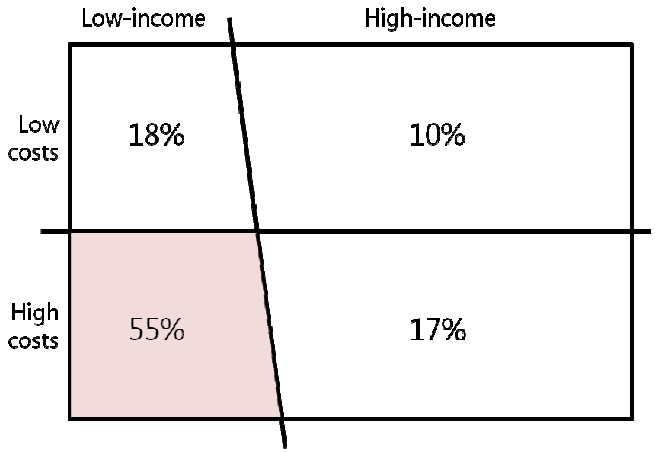
- Bill rebate*
- Narrowly-targeted energy efficiency policy*
- Broadly-targeted energy efficiency policy*
- Increase in means-tested benefits
- Increase in Winter Fuel Payment

** For these policies we have modelled both Exchequer- and supplier-funded variants*

Modelling

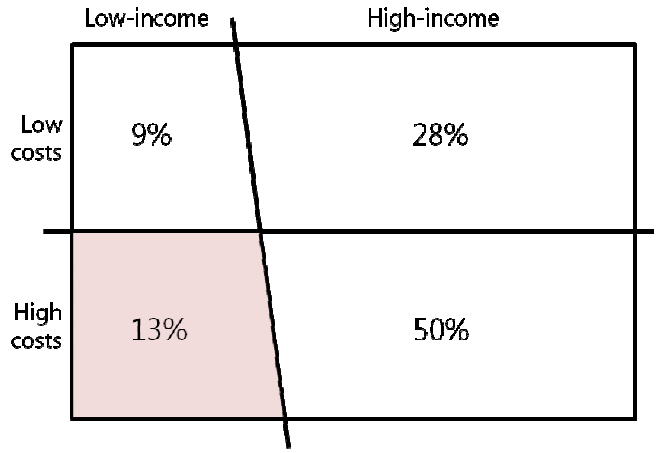
We spend £500 million on each intervention in 2016.
These are stylised scenarios with standardised inputs to allow comparison of effects against key indicators.

Results - eligibility by household status



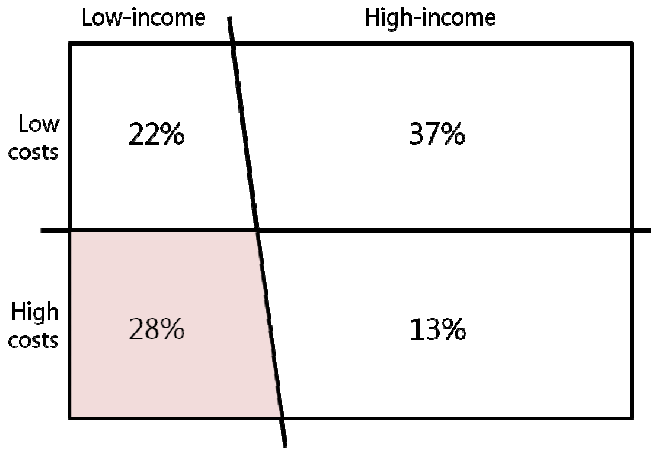
Narrowly targeted supplier-funded energy efficiency archetype

This is analogous in some ways to ECO affordable warmth.

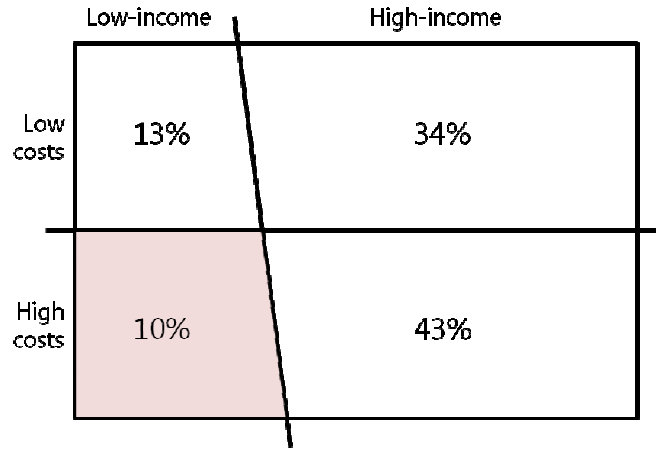


Broadly targeted supplier-funded energy efficiency archetype

This is analogous in some ways to ECO carbon.



Energy bill rebate



Winter Fuel Payments

Results of analysis of interventions

Best in column

Second best in column

Archetype	Proportion of recipients that are LIHC (%)	Short term change in fuel poverty gap (£ million)	Life-time change in fuel poverty gap (£ million)	Total change in carbon emissions ($MtCO^2$)	Non equity-weighted NPV (£ million)	Equity weighted NPV (£ million)
Supplier-funded, narrowly targeted energy efficiency	55	-50	-2,930	-4.92	590	1,900
Exchequer-funded, narrowly targeted energy efficiency	55	-70	-2,630	-3.40	310	1,730
Exchequer-funded, broadly targeted energy efficiency	18	-20	-680	-3.76	360	860
Supplier-funded broadly targeted energy efficiency	13	+20	-390	-6.76	990	1,360
Exchequer-funded rebate policy	28	-70	-70	+0.58	50	600
Supplier-funded rebate policy	28	-40	-40	+0.35	100	490
Increase in Means-Tested Benefits	28	-3	-3	<+0.01	<10	550
Increase in Winter Fuel Payment	10	<-1	<-1	+0.58	60	420

Conclusion

Fulfilling our ToR

1. Is fuel poverty distinct from general poverty?	2. What does this imply for measurement?	3. How can measurement help effective policy-making?
Yes – it is a serious problem and appears set to rise	**The current indicator is flawed**. It would be better to focus directly on the overlap of having both low income and high costs and to separate the measurement of extent and depth.	**The LIHC indicator provides a framework for analysis.** It flags priorities for action, opens up tools for targeting and highlights risks and trade-offs.