Environmental *Change* Institute

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Finding the fuel poor and framing better policy

August 2023

Executive summary

The UK Government needs to make urgent decisions about whether and how to support more vulnerable energy users in the winter of 2023-24. The additional support provided in 2022-23 has been withdrawn, but prices continue to be very high, and in the absence of help, millions of households will struggle without adequate energy for heating, hot water, cooking and other vital services. This report uses data from smart-enabled prepayment meter customers to explore how the Government can best target support to those in greatest need, i.e. those in fuel poverty, and to describe the minimum level of support needed to prevent serious suffering this coming winter.

This report is based on household energy consumption and other data for 11,519 households with dual-fuel gas and electricity supplies, provided by the energy company Utilita. Using data from four years, 2019-20 to 2022-23, analysis has looked at how energy use, rates and duration of self-disconnection have varied with external temperature, price, dwelling and household characteristics, and how policies and targeted payments affected energy use and self-disconnection.

Households under pressure

The households in our sample differ from the UK population. They are younger than average, use considerably less energy (even before the era of high prices), live in smaller homes, and are more likely to be on the energy company's Priority Services Register, which can be an indicator of vulnerability. However, their homes are similarly efficient to the English average. We cannot identify which households are in fuel poverty, though self-disconnection data is a strong indicator of inadequate energy access – the issue at the heart of fuel poverty. In total, 63% of our sample households disconnected at least once a year over these four years. For the average household, there were five disconnection events a year, totalling 28 hours of disconnection.

Impact of increased prices on energy use and disconnections

The years 2019-20 and 2022-23 are used for comparison here because 2019-20 was pre-wholesale energy price rises, was not in the pandemic period and had similar winter temperatures to 2022-23.

- Annual gas use fell by 20%, while electricity use fell by 3%. This is a huge decrease in the key heating fuel in households that were already likely under-heated.
- Average annual energy expenditure rose from £1,160 to £2,130 per customer. The latter figure includes the £400 Energy Bill Support Scheme (EBSS) provided by the government, so the household's own costs increased by 50% to £1,730.
- The combined effect of increased expenditure and reduced consumption demonstrates the determination of these low-income households to achieve a minimum level of energy services. They have stretched the household budget to try and maintain their original, possibly low levels of warmth, hot water, lighting and appliance use – and failed.
- We calculated the price elasticity of demand for gas across all homes at -0.265, which means that a 10% increase in price leads to a reduction in gas use of 2.65%. For electricity it was lower, at -0.2.

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- While the percentage of customers experiencing at least one self-disconnection from gas per year has not increased, for those who are disconnected, the period of disconnection has increased by more than one quarter.
- In 2022-23, gas disconnections lasted eight times longer than those for electricity. 10% of households with the highest combined (gas and electricity) disconnections were without one or both fuels for 800 hours a year – over 2 hours a day.
- The highest levels of self-disconnection were found among young households, those in energy inefficient homes, people on the Priority Services Register, and where electricity is used for heating. The likelihood of self-disconnecting was lowest amongst pensioners.

Taken together, figures on energy use and self-disconnection demonstrate the considerable level of hardship and deprivation being suffered by many, and that fuel poverty has demonstrably worsened for the households in this sample.

Impact of cold temperatures on energy use and disconnections

Analysis of three periods of cold weather in the region with the largest sample showed that more homes disconnected from the gas meter during cold periods, compared to before or afterwards, and this happens despite the greater need for heating. Homes on the Priority Services Register are more strongly affected by periods of very cold weather, with up to 20% of them disconnected during cold events.

Finding households in extreme need

Using smart meter data has enabled us to find sub-sets of households who appear to be in extreme need:

- Around 7% of households with a gas connection are using electricity instead of gas for heating. These households scarcely use any energy for heating and are very likely the households facing the greatest hardship. These households are also more likely to be on the Priority Services Register.
- Considering all households in all years, 4.1% spend at least 240 hours disconnected per year, with at least four disconnections lasting 12 hours or more. Households in this group tend to be younger and are more likely to be on the Priority Services Register.

Impact of policy design on energy use and disconnections

- Our analysis looked at the impact of two policies: the Energy Bill Support Scheme (EBSS) and Cold Weather Payment scheme. EBSS payments were credited to electricity meters. For our sample, they halved the number of electricity disconnections, but made little or no difference to gas use and self-disconnections. The £400 was helpful, but not sufficient.
- Cold Weather Payments reduced the number and duration of gas disconnections after periods of very cold weather, but made no difference to energy use or disconnections while it was very cold. Worse than this, it was households receiving the Warm Home Discount – arguably some of the most vulnerable households – who had to endure the longest gas disconnections.

Policy recommendations to provide help in winter 2023-24

Our findings led us to two immediate recommendations for policy:

A new **Energy Cost Support Scheme** to provide financial support for households in fuel poverty, worth about £1,000 per household, between October 2023 and March 2024. This support – which would halve energy costs – could be delivered in one of two ways:

1. Either spread across six months, paid directly and automatically to energy meters or as discounts on standard credit bills. £1,000 works out at £5.50 per day through the winter. This money should be divided equally for dual-fuel customers: £500 each for gas and electricity accounts (but this method is not suited to legacy prepayment meter customers). Or,

2. Each eligible household should revert to the same gas and electricity tariff that applied when the energy cap for a typical household was £1,042, in October 2020. At these lower rates – half of the present cap – the household would effectively receive a £1,000 reduction. This is our preferred method.

We cannot use the existing fuel poverty definitions or means tested benefit routes to target this help as neither of them is sufficient to identify those in most need. For speed and simplicity, eligibility should be based on criteria already available to the energy suppliers.

All the following groups should be provided with the £1,000 support for winter 2023-24:

- Households eligible for the revised Warm Home Discount scheme (expected to be 2.8 million)
- Households with one or more prepayment meters (around 4.5 million)
- Households where electricity is the main metered fuel, but annual electricity consumption is below 4,200kWh (around 1 million)
- Households who are extra-vulnerable to loss of energy supply for medical reasons and are on the Priority Services Register (assumed to be about 1 million).

Although the total could be over 9 million households, in reality, there will be overlaps between these groups. The Government has already allocated £8 billion for the Energy Price Guarantee support this financial year that is now not going to be needed; this would cover payments for 8 million households.

Extreme Weather Payments of £6.50 a day triggered by Met Office forecasts of minimum temperatures of -4°C should replace the existing Cold Weather Payments. They would be paid in advance, daily, directly onto householders' energy accounts.

Longer-term policy and practice improvements

- Led by our data, we believe the English definition of fuel poverty considerably underestimates need. A better definition is needed.
- Based on the customer benefits of smart meters, we suggest further action to encourage households on a legacy prepayment meter to switch to a smart one.
- Being on the Priority Services Register does not protect households from high levels of self-disconnection. Its design and operation needs to be reviewed.

Next steps

The University of Oxford and Cambridge Architectural Research are hoping to discuss with decision makers how to refine the proposals in this report. We also look forward to hearing from those who interface with the fuel poor about their interpretation of the evidence provided, experiences and views on the best solutions. This is our final report, August 2023.

Full version of the report

The full report can be found at: www.eci.ox.ac.uk/article/finding-fuel-poor-and-framing-better-policy

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Environmental *Change* Institute

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