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The economy-wide impacts of different approaches to addressing fuel poverty: the importance of where, when and how public funds are spent

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Executive Summary

Depending on the metrics and measurement used, at least 3.6 million UK households currently live in fuel poverty.[i] This presents a public policy challenge in terms of reducing both fuel poverty and energy demand in ways that are positive for the wider economy, that support employment and income generation, and do not introduce price pressures which further affect the cost of living and doing business.

Within the **Energy Demand Research Centre (EDRC)**, the Equity theme has explored the impact of different ways of using of a £9 billion public funding pot, aimed at closing the fuel poverty gap on an annual basis between 2025 and 2030[ii]. This figure was arrived at in the following way. The fuel poverty gap is defined by ONS[iii] as the amount of money a household needs to no longer be considered as living in fuel poverty. This amount was estimated by DESNZ[iv] at £417 for 2023, the last year for which an estimate is available. If £417 is allocated to help 3.6 million households for the 6 years between 2025 and 2030, the total pot required is £9 billion.

We used an economy-wide model to simulate scenarios where this public funding pot is:

A. channelled as a direct energy bill support to 3.6 million UK households in fuel poverty under the English definition or

B. used to fund basic energy efficiency measures for as many homes as possible.

Key Findings:

1. Direct energy bill support (at a total cost of £9 billion) temporarily helps *all* households who are classed as living in fuel poverty *and* provides a transitory boost to the economy through the uplift to their non-energy spending. This boost peaks in the years 2030-31 with an additional 6,000 jobs and annual GDP gains of just over £600 million. However, all benefits quickly erode thereafter.

2. Redirecting the £9 billion pot to provide loft and cavity wall insulation for households in fuel poverty would deliver more permanent gains in terms of reduced energy bills for those receiving energy efficiency improvements. The impacts on those households' real income and spending will support modest lasting GDP and job gains (around £100 million per annum/1,100 jobs). However, the pot is only sufficient to reach 64% of the 3.6 million households helped through direct energy bill support.

3. Public spending on delivering loft and cavity wall insulation means additional demand for an already busy UK construction industry. This could trigger more pressure on the cost of living and doing business in the period to 2030 than direct bill support does.

The key point is that new public spending constitutes additional demand in a constrained UK economy, not least because of persisting worker and skills shortages. The main implication is that some increase in the consumer price index (CPI) should be expected where the economy expands in response to either approach considered here. However, where government spends on construction activity for energy efficiency, the pressure on the CPI, and the cost of doing business during the period of public spending (to 2030) is exacerbated because the construction industry services investment demand in all sectors.

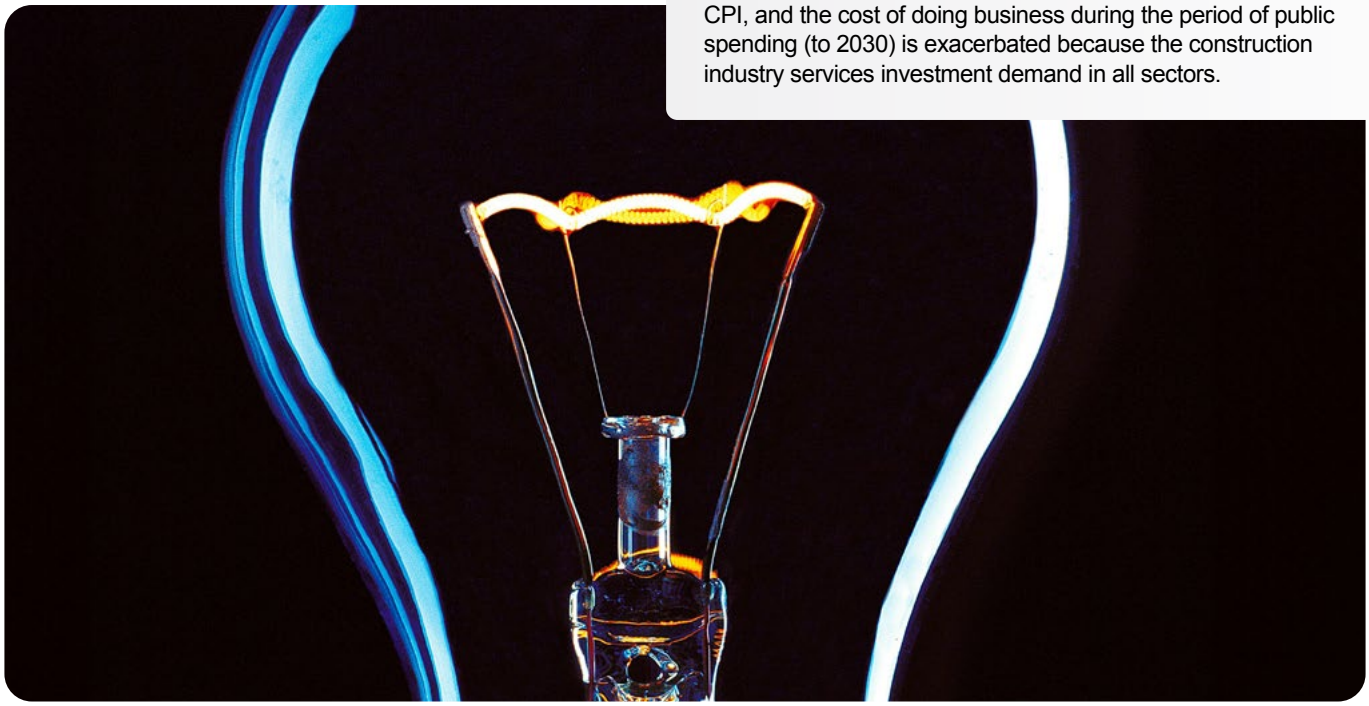

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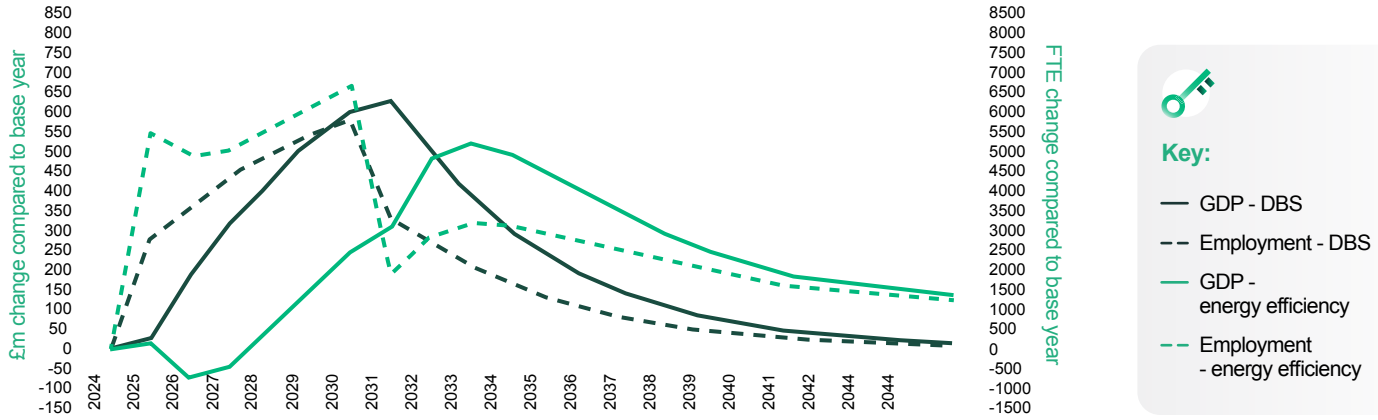
Figure 1: Comparative evolution of UK GDP and employment due to various government support measures to fuel poor households



Direct energy bill support scaled to close the fuel poverty gap

Our scenario simulation results suggest that allocating a new (additional) £9 billion public funding pot between 2025 and 2030 which is sufficient to close the fuel poverty gap through annual direct bill support (DBS) payments of £417 (the measured gap in 2023) can help all households in fuel poverty (here classified under the English definition). Crucially, if this allows households who have been living in fuel poverty to spend more on things other than their energy bills, this can also support a time-limited boost to the wider economy, peaking in 2030–31 (at the end of the period where support is provided).

The results show that net employment gains peak in 2030, with an additional 6,000 full-time equivalent (FTE) jobs, while annual GDP gains are maximised in 2031 at £628 million (see the grey trendlines in Figure 1 below). This leads to some households, who work but are in fuel poverty, being able to enjoy some additional real income and spending benefits. Research shows that spending on lower income households delivers an increased boost to the economy. However, higher income households earn more from this work and investment activity and benefit even more from the expansion to the economy. Our research does not consider how the £9 billion is raised by government but if this involved raising income tax on the expansion benefits to other households will be constrained.

All gains are slightly offset by some cost-price pressure in the constrained UK economic landscape, particularly in the UK labour market, which is persistently characterised by worker and skills shortages and relatively low unemployment. Such pressures feed through here to a 0.11% increase in the consumer price index (CPI) in 2025, but with price pressure gradually reducing over the supported period. The direct benefits to households in fuel poverty end in 2030, and the wider economic boost quickly erodes, as does any remaining cost-price pressure.

Redirecting spending to energy efficiency measures

Over time, redirecting the £9 billion pot to provide a share of households living in fuel poverty with basic energy efficiency measures such as loft and cavity wall insulation, through public spending on limited retrofitting projects delivered by the UK construction sector, could deliver more sustained (longer-term) benefits. We estimate this would result in permanent gains of at least £60 per annum in the real incomes of beneficiary households. However, given the costs of delivering loft and cavity wall insulation, we also estimate that the £9 billion pot would only reach two-thirds of the 3.6 million households considered here and, assuming spending on energy efficiency actions is spread over the 6 years to 2030, benefits will roll out more gradually than with direct bill support (DBS).

Energy efficiency can also deliver a boost to the wider economy, but this is in two quite different ways and stages, which are distinct from what happens with DBS. First, as shown in the bright green lines in Figure 1, the process of delivering loft and cavity wall insulation retrofit projects between 2025 and 2030 could boost both GDP and jobs involved in undertaking energy efficiency measures (carrying out retrofitting projects) during that timeframe. After this stage is over, the fact that beneficiary households enjoy lower energy bills and could spend more on other things dominates, and ultimately delivers a permanent but more modest boost to the economy.

The bright green trendlines in Figure 1 show the adjustment of GDP and employment trajectories for the UK economy as the impacts of delivering energy efficiency measures give way to the benefits of households realising the real income and spending gains enabled by lower energy bills. The GDP and employment gains eventually settle at around £100M per annum and 1,100 FTE jobs respectively, with minimal persisting CPI pressure (around 0.01%).

However, there are crucial trade-offs in how the cost and price pressures triggered by this additional, publicly-funded activity are felt. These would be particularly challenging for those living in fuel poverty not included in the 64% of the 3.6 million households that receive support under this scenario. Note too that we do not explore how this 64% is selected.

Where, when and how government spends is important

There are a number of issues to consider in the timing and focus of such expenditure if various risks are to be avoided. First, the £9 billion pot is only enough to deliver basic loft and cavity wall insulation to 64% of households in fuel poverty, meaning that neither full alleviation of fuel poverty, nor a comprehensive retrofitting of the properties those in fuel poverty live in are achieved under this scenario. Nonetheless, progress is made on both counts in a meaningful and long-term way.

Second, spending public funds on energy efficiency measures may be more disruptive to the wider economy if this additional government spending drives up the price of construction, so increasing investment costs across the economy. Set in the context of very tight UK labour market conditions, increased demand will drive up wage rates for all sectors. One outcome is more sustained pressure on the cost of living and doing business than in the DBS case, with a similar initial (but slightly later) spike in the CPI (0.1%) lasting throughout the period to 2030 (i.e., for as long as work on energy efficiency projects continues). This is likely to lead to some displacement, or 'crowding out' of other activity in the economy during the delivery of these measures.

Third, particularly in the context of this 'crowding out' challenge, there is a risk that the net impact on UK GDP of such an energy efficiency programme could be negative depending on how producers respond to time-limited public spending. Here, there is a need for clear policy signalling on the commitment to supporting energy efficiency programmes, involving both public and private spending, so that construction industry and other supply chain actors can have greater confidence in allocating resources to respond and deliver.

Conclusion and recommendations

Our economy-wide scenario simulations reveal that providing direct energy bill support at a level appropriate with closing the fuel poverty gap can deliver gains, with limited displacement of other activities, both to all households in fuel poverty and across the wider economy. However, gains to fuel poor households only last as long as government funding is provided and wider economic gains quickly erode thereafter. Redirecting the same pot to energy efficiency measures (loft and cavity wall insulation) provides more modest but permanent gains to beneficiary households and the wider economy.

One downside of delivering energy efficiency measures instead of energy bill support is that fewer households in fuel poverty benefit and, due to the time taken to deliver energy efficiency projects across the selected group of households, the benefits are more gradual. Another is that government spending on energy efficiency measures could displace other investment activity across the economy.

Policymakers need to pay due attention to the potential for, and the consequences of, such trade-offs. We would therefore recommend:

1. While it may be tempting to stick with DBS, and it can help all fuel poor households from the outset while delivering time-limited wider economic gains (and associated revenues to the public purse that can help offset the direct cost), it fails to deliver long-term benefits or to make progress on the net zero agenda. This learning is not new. Ideally, policy focus needs to shift from transitory DBS to delivering the more sustained benefits of energy efficiency investment, but in such a way as to not harm those currently receiving the benefit, and to allow time (and a clear signal) for the construction sector and its supply chain to respond.

2. The risk of increased congestion in the UK construction industry is clear and would exert upward pressure on the cost of living and doing business across the economy during the timeframe of public spending and energy efficiency project delivery. Urgent action is required to expand the capacity and skills of the construction sector, and to ensure policy signalling supports the necessary expansion of industry and supply chain capacity, both of which will be heavily called upon to deliver across the net zero space.

3. Consideration of how to raise funds to support such measures, so as to focus the benefits on fuel poor and lower income households, is needed. Additional funding is clearly required so that all fuel poor households can benefit as quickly as possible from whatever measures are rolled out. It should also be recognised that this is just the start of what needs to be an ambitious retrofit agenda across the UK housing stock over the next decade and more. Here, an additional benefit of limited public spending to support those less able to pay could be signalling the need for supply chain capacity to expand in servicing a much wider need for increased energy efficiency.

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References

[i] Here we follow the definition of fuel poverty defined for England by ONS (2023). In contrast to the measurement of fuel poverty in other UK nations, this focuses on prioritising households which are both considered as living in poverty (based on net disposable income after housing and energy costs are met) and require energy efficiency support (living in properties classified as EPC D-G). Therefore, low income households living in properties classified as EPC C or above are excluded. We apply this definition to the whole of the UK by extrapolating the share of English households (2023 figures) classed as being in fuel poverty under this definition to the total UK household stock. A more accurate calculation would need to take into consideration the differences in how fuel poverty is defined in other devolved nations within the UK.

[ii] Turner, K., Katris, A., Zhou, L. and Corbett, H. (2024) Addressing fuel poverty: what are the relative benefits of direct bill support or energy efficiency in a wider economy context? Research Brief, Energy Demand Research Centre (EDRC)

[iii] Office for National Statistics (ONS), released 28 March 2023, ONS website, article, How fuel poverty is measured in the UK: March 2023.

[iv] Department for Energy Security and Net Zero (DESNZ), released 15 February 2024, GOV.UK website, report, Annual Fuel Poverty Statistics in England, 2024 (2023 data).

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