Committee on
Fuel Poverty

Exploring options for improving energy bill equity for fuel poor households

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Contents

Foreword

The Committee on Fuel Poverty (the Committee) is an advisory Non-Departmental Public Body sponsored by the Department for Energy Security and NET Zero (DESNZ). The Committee advises on the effectiveness of policies aimed at reducing fuel poverty and encourages greater co-ordination across the organisations working to reduce fuel poverty.

In 2024, there were an estimated 2.73 million households in fuel poverty and debt and arrears have now reached a record high of nearly £4bn in the domestic sector. Our hypothesis for this year's research was that there is insufficient support in existing electricity and gas tariff structures for those in fuel poverty, leading to cost inequity during the transition to net zero. The CFP would like to thank all workshop participants who contributed their perspectives on this question.

The research found that both the fixed and variable elements of energy bills have risen significantly since 2021, exacerbating financial pressure on fuel poor and vulnerable households. Fixed elements of bills, namely standing charges, are not only regressive but are also being driven to increase through policies supporting net zero. Therefore, those least able to pay are being disproportionately charged for net zero.

The findings also point to increasing divergence between fuel poor households and those more able to access and take advantage of smart time of use tariffs. Incentivising energy use during off peak hours can generate much greater savings in households where smart appliances and significant electrification in the home exists, such as electric vehicles, heat pumps, solar generation and battery storage. This is vastly different in usage and savings potential to a fuel poor household without these goods, who may be self-rationing, and unable to load-shift due to household requirements or working patterns.

Currently, the lowest-income 5% of households typically allocate 1.1% of their income to low-carbon policy costs, compared to 0.18% for the highest-income group. The Committee sees it as essential to protect the most vulnerable against overpaying for the net zero transition. If a more equitable split of costs for net zero are to be borne by the fuel poor, structural pricing reform would be appropriate. The research outlines high level options for policy-makers to consider further in supporting the fuel poor, contributing to the evidence base. However, there remains significant gaps on both an appropriate cost for the fuel poor or on how to target and deliver it. The Committee also recognise the limitations of the outlined options in isolation of considerations to wider energy market reform. The research has highlighted the critical importance of ensuring the fuel poor are not lost in the debate on energy market form and function. It is imperative that the fuel poor are explicitly considered in an equitable transition to net zero.

The Committee on Fuel Poverty

Glossary

Term	Definition
Economy 7 tariff	A type of electricity tariff that offers a cheaper electricity rate during a 7-hour period in the night, and a higher rate during the rest of the day.
Energy Performance Certificate (EPC)	A rating that indicates the energy efficiency of a property, ranging from A (most efficient) to G (least efficient).
Innovative tariff	Novel pricing structures in the energy market designed to better meet consumer needs and promote efficient energy use, in particular when households are using smart meters and/or clean heat technologies.
LILEE fuel poverty indicator	The LILEE metric defines households as 'fuel poor' if their home has an energy efficiency rating of Band D or below and if, after subtracting their modelled energy costs and housing costs, their residual income is below the poverty line.
Policy costs	Charges that make up a portion of consumer energy bills to fund government funded schemes such as renewable energy initiatives, energy efficiency schemes, and affordability support.
Prepayment meter (PPM)	A type of energy meter where consumers pay for energy in advance.
Review of Electricity Market Arrangements (REMA)	A UK government initiative to reform the electricity market to support decarbonisation and affordability.
Rising block tariff	Tariffs providing a basic amount of energy at low or no cost, then imposing higher tariffs on additional usage.
Self-disconnection	When customers experience interruption to their gas or electricity due to a lack of credit on their PPMs.

Term	Definition
Standing charge	A fixed daily cost applied to energy bills regardless of usage, covering the cost of network infrastructure, other supplier costs and policy costs.
Time-of-Use (TOU) tariff	Energy tariffs that vary depending on the time of day, encouraging consumers to use energy during off-peak periods when it is cheaper.
Unit rate	The variable portion of an energy bill, charged per kilowatt-hour of energy used.
Warm Home Discount	A government-funded scheme providing a one-off £150 discount to the electricity bills of eligible customers during winter.

Executive summary

London Economics, Basis Social, and University College London (UCL) were commissioned to examine energy affordability for fuel poor and vulnerable households in England. Since 2021, energy bills have risen considerably in line with a series of shocks to the energy sector, most notably after Russia's invasion of Ukraine in 2022. While energy prices have since fallen, they remain above the pre-2021 levels. Safeguarding consumers from the effects of fuel poverty requires long-term improvements to household energy efficiency and broader investment in the energy sector. However, the identification and mitigation of the causes of fuel poverty within energy bill structures can be used to reduce the near-term impacts of fuel poverty.

This study aims to identify the structural elements of energy bills that contribute to inequity, assess the impact of innovative tariffs on fuel poor households, and explore potential policy options to improve bill equity. Recognising that energy affordability challenges extend beyond households officially classified as fuel poor, the research also considers low-income and vulnerable groups, including those with disabilities, long-term health conditions, elderly residents, and families with young children.

The study employed a multi-method approach, beginning with a Rapid Evidence Assessment (REA) to synthesise existing literature related to the research questions. This was complemented by UCL's analysis of Smart Energy Research Lab (SERL) data, which provided household-level insights into energy costs and affordability. Finally, two rounds of stakeholder workshops were conducted, bringing together experts to discuss the implications of bill inequity and evaluate potential policy solutions.

Findings

The structural elements of energy bills and impact on different vulnerable groups

The fixed (standing charge) and variable (unit rate) elements of energy bills have risen significantly since 2021, exacerbating financial pressure on fuel poor and vulnerable households. Standing charges are regressive, placing a disproportionate burden on low-income, low-energy usage households, who pay a higher average price per unit of energy consumed. Regional variations in standing charges mean that some lower-income areas face higher fixed costs, deepening energy affordability issues for some low-usage households. However, vulnerable high-usage households benefit from standing charges in reducing their average price per unit and would otherwise be significantly exposed to high unit rates. These households include those with medical conditions, elderly residents, rural dwellers, renters, those in energy-inefficient homes, and households with children.

Households with disabilities or long-term health conditions often face higher energy costs due to reliance on medical equipment and the need for stable heating. However, financial support remains inconsistent, leading some to ration their energy use. Elderly fuel poor households are particularly vulnerable, with winter gas consumption patterns revealing that non-fuel poor

elderly households tend to use more gas than fuel poor elderly households. Families, especially single-parent households, are also at high risk, with fuel poor households with children spending more on energy than fuel poor households on average.

Rural households face additional challenges due to larger, less energy-efficient homes. Private sector renters are often disadvantaged by poor insulation and locked into prepayment meters (PPMs), which historically had higher standing charges before Ofgem mandated their equalisation with direct debit tariffs in 2024.

Some workshop participants argue that a redistribution between the standing charge and unit rate would create a fairer system that better reflects actual energy consumption. However, redistributing costs from standing charges to unit rates would disadvantage vulnerable high-energy users. According to Ofgem, around five million low-usage households would benefit, while one million high-usage vulnerable households could face higher costs. Although previous research for the Committee on Fuel Poverty highlighted that underheating during Winter 2022/23 suggests that Ofgem's figure may underrepresent the number of vulnerable high-usage households, and the Committee has recommended that further analysis be undertaken in this area.

Findings from the workshops and literature indicate that energy debt has become a significant issue. Analysis by Ofgem found a 20% increase in the number of households in arrears between 2022 and 2023. Citizens Advice have identified that energy debt repayments have become an additional cost within household bills for a growing number of households, compounding affordability challenges, particularly for low-income and vulnerable customers. Debt repayment support, such as debt repayment matching schemes and adjustments for prepayment meter (PPM) customers, could alleviate financial burdens for indebted households.

Potential policy options to create greater energy bill equity

The study identifies several policy options to improve energy bill equity based on the literature review and workshops, and while there is rich discussion of the benefits, challenges and trade-offs of different policy options, there is very little detail in the existing literature on the specific design of support options. There is also no clear consensus on the appropriate level of cost for fuel poor bill payers, and the level of support that is consequently required.

Potential policy options include direct bill support, standing charge redistribution, and pricing reforms. It should be noted that each approach presents trade-offs in terms of fairness, efficiency, and administrative feasibility. Workshop participants slightly preferred lump sum options for near-term support, with additional targeted support at vulnerable subgroups such as households with debt or significant medical needs.

Designing effective policies to improve energy bill equity is challenging due to eligibility issues, complex billing systems, and cliff edges (the sudden removal of support to households that no longer meet strict eligibility criteria). Strengthening data sharing, implementing tapered support, and enhancing automatic enrolment were some suggestions identified by workshop participants to improve policy targeting and accessibility.

Fixed lump sum payments were widely supported by workshop participants due to their simplicity, ease of administration, and consumer familiarity. However, they do not account for variations in household energy needs. A tiered lump sum approach would provide more targeted support but introduces complexity. Floating lump sum payments, which vary with energy prices, were viewed less favourably overall by workshop participants due to their unpredictability and implementation challenges.

Unit rate discounts, which lower the cost per unit of energy consumed, can better target households with high energy needs but are more complex to administer. There was generally more support for flat unit rate discounts by workshop participants as these are simpler to implement, while tiered unit rate discounts allow for greater targeting but increase administrative burdens.

Both the existing literature and the workshop participants identified benefits of Rising Block Tariffs. These tariffs charge lower rates for baseline energy use and higher rates for additional consumption. However, concerns were raised, both in the literature and workshops, that high-usage vulnerable households would face higher costs under this model. The combination of rising block tariffs with other support mechanisms (such as social tariffs) were identified as a potential solution to mitigate adverse effects on high-usage households.

Workshop participants emphasised that addressing energy bill inequities requires fundamental reforms to the energy market in order to improve affordability for fuel poor households, particularly through initiatives like the Review of Electricity Market Arrangements (REMA).

Current and future expected benefits and challenges of innovative tariffs

Innovative tariffs refer to novel pricing structures in the energy market designed to better meet consumer needs and promote efficient energy use, in particular when households are using smart meters and/or clean heat technologies. These tariffs are different to traditional pricing models. Time-of-Use (TOU) tariffs are the most common type of innovative tariff. They include static TOU tariffs (e.g., Economy 7), which provide fixed off-peak pricing periods, and dynamic TOU tariffs, which adjust prices in real-time based on grid demand. By incentivising energy use during off-peak hours, these tariffs can help reduce household energy costs. However, the ability to benefit from TOU pricing is often tied to households' ability to shift energy use and access, enabling technologies such as battery storage, and digital confidence. These technologies are less affordable, or potentially accessible, for many fuel poor and vulnerable households.

As a result, while TOU tariffs have potential long-term benefits, a priority should be ensuring that vulnerable households are not disadvantaged and supporting them in preparing for a future where such tariffs may become more widespread.

Evidence gaps

One of the key evidence gaps is a lack of evidence on what an appropriate level of cost for energy consumption might be for fuel poor bill payers, and hence the level of support required. Furthermore, while insights on energy usage suggest self-rationing among fuel poor and

vulnerable households, there is no clear metric to assess their energy needs. Research on innovative tariffs has largely focused on TOU tariffs, with limited evidence on alternative models. Additionally, the literature lacks detailed analysis of targeting methods, implementation mechanisms, and the level of financial support required for policy interventions. Given the strong emphasis on energy market reform in workshop discussions, future research could explore strategies to enhance energy bill equity within broader market reforms, particularly in the context of REMA.

Introduction

In November 2024, the Department for Energy Security & Net Zero (DESNZ), on behalf of the Committee on Fuel Poverty (CFP), commissioned London Economics, Basis Social and University College London (UCL) to conduct a study on energy bill equity for fuel poor households in England. The study follows the 2021-2023 energy crisis, which has increased energy costs and subsequently worsened energy bill affordability in England. The rapid increase in energy prices has led to household energy rationing, self-disconnection, and debt accrual. While investment in energy efficiency can lead to substantial decreases in energy costs for households, near-term support is needed to complement this longer-term governmental support. In 2025, the main existing energy bill support options are the Warm Home Discount, the Winter Fuel Payment and Cold Weather Payments. The main objective of the study is to understand the key factors that lead to energy bill inequity for fuel poor households; explore whether and how future innovative tariffs would impact fuel poor households; and explore potential policy options to support greater bill equity for those in fuel poverty.

This research considers a broad cohort of low-income and vulnerable households that struggle to afford their energy and meet their energy needs, despite not necessarily being classified as fuel poor, as defined by the Low Income Low Energy Efficiency (LILEE) metric unless otherwise stated.[1] These include households with members who have a disability or long-term health condition, the elderly, or households with young children. Energy bill inequity refers to the high relative costs that fuel poor and other vulnerable households may incur compared to other households.

Addressing fuel poverty in England involves multiple factors, including household income, the cost of living, energy prices, and home energy efficiency. While improving the energy efficiency of UK housing stock is an important long-term solution that the government is addressing, the inequitable cost of energy bills remains a significant contributor to fuel poverty. The purpose of this research is to build evidence on which aspects of energy bills disproportionately impact fuel poor households and explore solutions to reduce the inequity of energy bills, while acknowledging that the answer to fuel poverty in England requires interventions across all areas.

The literature has highlighted the inconsistent definition of ‘social tariffs’ within the energy sector. The term ‘social tariff’ has been used to describe a wide range of support options, including lump-sum payments, unit rate discounts, and pricing reforms. For the avoidance of ambiguity, this report will avoid the phrase ‘social tariff’ in the analysis of policy options.

The study addresses the following research questions:

[1] The LILEE metric defines households as ‘fuel poor’ if their home has an energy efficiency rating of Band D or below and if, after subtracting their modelled energy costs and housing costs, their residual income is below the poverty line.

1. What are the structural elements of energy bills that are inequitably borne across bill payers now and into the future?
    a. How do different elements of energy bills (unit rates, fixed costs) disproportionately impact fuel poor households?
    b. How do different elements of energy bills impact different types of fuel poor households?
    c. What are the current and future expected benefits of innovative tariffs? What are advantages or disadvantages of these tariffs for fuel poor households?
2. What options are there to create greater bill equity for those in fuel poverty?
    a. Is there an appropriate level of cost for fuel poor bill payers?
    b. What might be the challenges associated with implementing these options?
    c. What are the trade-offs associated with each option?
    d. Will there be any differential impacts of the options identified on fuel poor households? Who should receive the support? Where should the support be delivered (direct to consumers or via suppliers) How should the support be funded?
    e. How should the support take account of the wider Net Zero ambitions?
    f. What considerations would policy-makers need to take into account when considering a social tariff?

Methodology

The first stage of the study involved a rapid evidence assessment (REA), which was conducted to collect evidence on the key research questions. A REA is a systematic and rigorous approach to quickly provide an overview and synthesis of existing evidence, while not being as exhaustive or comprehensive as a full systematic literature review. The REA was conducted in November to December 2024. Initial searches identified 358 papers (grey literature and academic papers combined). Through several rounds of abstract screening, more in-depth review and prioritisation, 33 papers were included in the analysis.

In parallel to the REA, University College London (UCL) conducted an analysis of the Smart Energy Research Lab (SERL) data to supplement findings related to research question 1. The analysis used household-level smart meter gas and electricity consumption and tariff data, combined with linked survey data, Energy Performance Certificate (EPC) data, and local weather data sourced from European Centre for Medium-Range Weather Forecasts (ECMWF). Survey data, including data on household occupants (e.g. gross household income and whether occupants had long-term health conditions), was collected via self-completed questionnaires designed and distributed by UCL. UCL estimated household-level energy costs over a variety of fuel poverty metrics, household classifications, and years. Limitations with the SERL dataset meant that the LILEE indicator was estimated by using a proxy. Overall, the SERL dataset is considered a credible and reasonably accurate source, with highly reliable

energy consumption data, generally robust tariff and EPC data (despite some quality and completeness issues), and survey responses that, while self-reported, show good alignment with verified data sources where available.

The final stage of the study involved two rounds of reconvened workshops:

- Workshop 1 discussed the impact of energy bill inequity on fuel poor and other vulnerable households.
- Workshop 2 explored options to support greater bill equity for fuel poor and other vulnerable households.

Participants of the workshops included academics, representatives from the energy retail market, energy suppliers, regulators and trade associations. Five online sessions were conducted for Workshop 1 in January 2025, followed by five more for Workshop 2 in February 2025.

Methodological details are provided in the Technical Annex.

Structural elements of energy bills that are inequitably borne across bill payers

Key findings

- The fixed element of energy bills (the 'standing charge') and the variable element ('unit rate') have both increased substantially since 2021.
- Standing charges are regressive and disproportionately borne by low-income, low-energy usage households, as they pay a higher average price per unit of energy consumed.

Structural elements of energy bills

Energy bills are made up of a fixed daily charge, or the 'standing charge', and a variable element, or the 'unit rate'. Standing charges are applied to household energy bills regardless of energy usage and are designed to cover fixed costs incurred by energy suppliers. These include network costs for electricity, the expenses associated with the transmission and distribution of energy, and operating costs. The standing charge also includes policy costs, which are charges to recover the cost of Government-provided schemes related to renewable energy initiatives, energy efficiency schemes, affordability support, such as the Warm Home Discount, and rollout of smart meters.[2] There are no network costs covered by the standing charge for gas; all are currently covered by unit rate charges.[3]

Both standing charges and unit rates have increased substantially since 2021, with standing charges increasing from an annual average of £86 per household to £186 in 2024.[4] This sharp increase is primarily due to a rise in operational and network costs, and a shift of some network costs from unit rates to standing charges in 2022.[5] Policy costs and other costs recovered through the standing charge have also increased.[6] A notable contributor to the increased standing charge has been the cost of the Supplier of Last Resort scheme. The collapse of 31 energy suppliers between 2021 and early 2022 has imposed financial burdens on consumers through the decision to pass costs onto the standing charge. In total, Citizens Advice estimated that the cost of supplier failures had reached £2.6 billion by 2022.[7]

[2] Future Energy Associates (2024) Standing Charge Reduction Analysis
[3] Future Energy Associates (2024) Standing Charge Reduction Analysis
[4] Ofgem (2023) Standing Charges: Call for Input
[5] Future Energy Associates (2024) Standing Charge Reduction Analysis
[6] Future Energy Associates (2024) Standing Charge Reduction Analysis
[7] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022

Regressive impact on low-income households

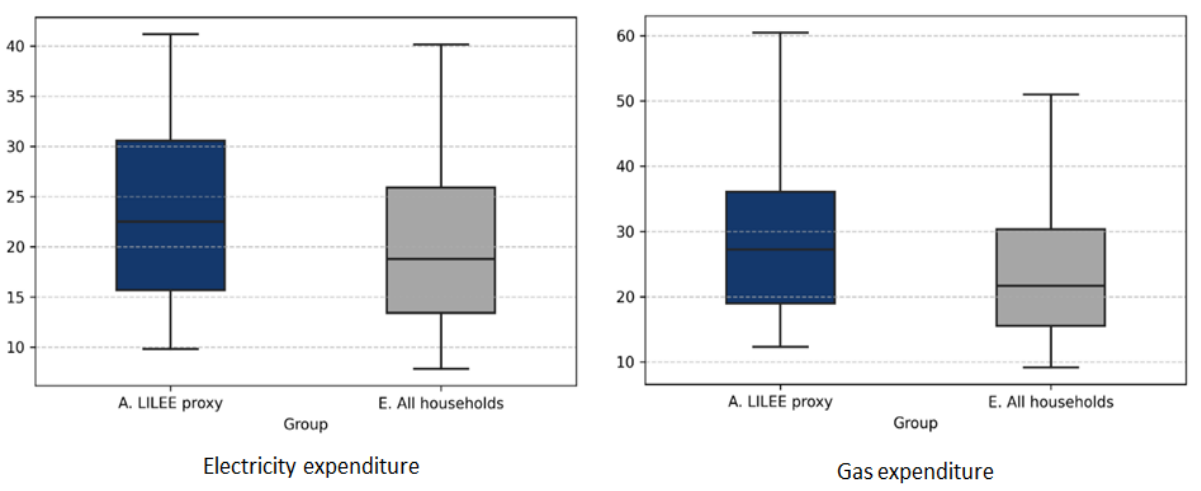
There is an ongoing debate in the literature (and media) over the fairness and distributional impact of allocating substantial fixed charges irrespective of energy usage. This debate was also discussed in the workshops. One argument is that this does not align with the principle that costs should reflect energy usage.

> *"In the current price capped market, if you removed the standing charge and increase the unit rate to try and compensate for that loss of revenue so that suppliers can cover their fixed costs, more fuel poor people will benefit from that. But the people that don't benefit from it are the people that have low incomes but high energy needs." - Workshop participant, energy supplier*

The structure of energy bills disproportionately affects most lower-income households, making standing charges regressive.[8] [9] Low-income households tend to use less energy than higher-income households, meaning the standing charge represents a higher proportion of their total bill. As a result, **they pay a higher average price per unit of energy consumed**, and it is considered that the shift of costs towards standing charges has exacerbated financial pressure on lower-income groups.[10] [11]

Analysis of SERL data highlights the regressivity of the standing charge. The analysis revealed that **LILEE-proxy households pay higher fixed costs as a proportion of total energy expenditure, compared to households in general**, for both gas and electricity (Figure 1). The same is found for fuel poor households defined as those who spend 10% or more of their disposable income on energy.

Figure 1 Fixed energy expenditure as a proportion of total energy expenditure by household (%) in 2023



[8] Ofgem (2023) Standing Charges: Call for Input
[9] Future Energy Associates (2024) Standing Charge Reduction Analysis
[10] Osman, D. (2023) Reforming energy standing charges for prepayment customers
[11] Osman, D. (2023) Reforming energy standing charges for prepayment customers

Data tables for Figure 1:

Statistic	LILEE proxy households (electricity)	All households (electricity)	LILEE proxy households (gas)	All households (gas)
5th percentile	9.8%	7.8%	12.3%	9.1%
Q1 (25th percentile)	15.7%	13.4%	19.0%	15.5%
Median	22.5%	18.8%	27.2%	21.7%
Q3 (75th percentile)	30.6%	25.9%	36.0%	30.3%
95th percentile	41.2%	40.1%	60.5%	50.0%

One study finds that the standing charge was the price variable most correlated to three different measures of fuel poverty after controlling for other relevant variables.[12] The paper exploits differences in energy prices by region to examine the relationship between fuel poverty metrics and price variables. The findings support the argument that fixed charges lead to higher average costs for low-energy-consuming households, as these households are more likely to be in fuel poverty. Policy costs levied through standing charges disproportionately impact low-income households, who spend a higher share of their income on these costs. The lowest-income 5% of households typically allocate 1.1% of their income to low-carbon policy costs, compared to 0.18% for the highest-income group, according to modelling of UK survey data.[13] Workshop participants and the literature raised that this disproportionate allocation could encourage behaviours including self-disconnection, defined by Ofgem as "when customers experience interruption to their gas or electricity due to lack of credit on their PPMs", and underheating of households already not meeting their energy needs.[14]

[12] Burlinson, A., Giulietti, M., Law, C., and Liu, H. (2021) Fuel poverty and financial distress
[13] Owen and Barrett (2020) Reducing inequality results from UK low-carbon policy
[14] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor

How different elements of energy bills impact different types of fuel poor households

Key findings

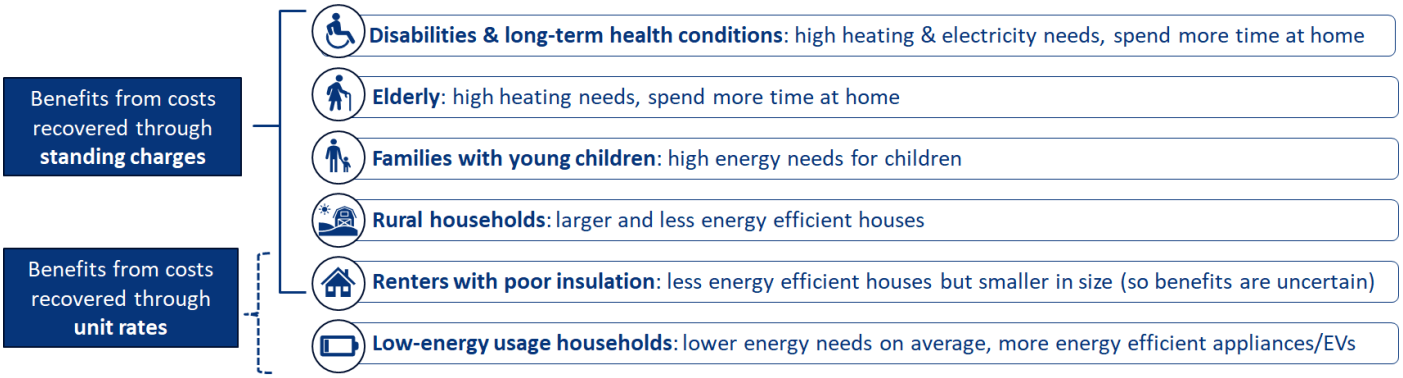
- Certain types of fuel poor households are impacted in particular ways by different elements of energy bills due to their particular energy needs, which affect their energy usage. Figure 2 below summarises these impacts.
- Households with disabilities and/or a long-term health condition benefit from higher standing charges and lower unit rates as they have higher energy needs due to medical equipment and the need for stable heating.
- Fuel poor elderly households, who are particularly vulnerable, have below-average gas usage in winter and hence benefit from low gas standing charges.
- High unit rates and elements of bills to recoup energy debt disproportionally affect fuel poor households with children, who spend more on energy than fuel poor households in general and have accumulated higher levels of energy debt, which complicates future bill repayment.
- Regional differences in standing charges mean that some low-income areas face higher fixed costs.
- Many renters are locked into prepayment meters (PPMs), which can limit their ability to register for the most competitive tariffs.[15]
- Shifting costs recouped through the standing charge to unit rates would reduce bills for low-income, low-usage households, making bills more equitable, overall. However, this step would need to be taken in tandem with measures to mitigate the impact on vulnerable households with higher energy demands, who would be negatively affected.

This section examines how different elements of energy bills impact different types of fuel poor households. Categories of households covered by available research include those with disabilities and/or long-term health conditions, elderly households, households with children, rural households, and households in the private rental or social housing sector. This section mainly focuses on the impact of standing charges and unit rates, but where evidence is

[15] This point is referring to the finding that for non-default tariffs (i.e. below the price cap), PPM users cannot access competitive tariffs provided on direct debit, which in some cases are cheaper and therefore are locked into more expensive tariffs. Ofgem's regulation to levelise standing charges for PPM and direct debit tariffs is a separate point where suppliers can no longer charge higher standing charges for PPM users.

available the impacts of other elements of bills are considered, such as regional pricing differences, the role of energy debt and the impact of varied payment methods.

Figure 2 The impact of energy bill elements on different types of household



Note: The research states fuel poor households on average may have lower energy needs. These comments were partially informed by Ofgem's analysis of standing charge reform. The Committee on Fuel Poverty has previously criticised Ofgem's analysis for failing to consider the degree of underheating.

Variation across different types of vulnerabilities

Households' energy needs vary considerably. Hence, the impact of energy bill elements is not uniform, including between different types of vulnerable households. The evidence from the literature and workshops is focused on the impact of standing charges due to different levels of energy consumption. **Households with low energy usage have a higher average price per unit of energy due to the fixed standing charge, while high-usage households have lower average per unit prices**. Since different types of vulnerable households have different levels of energy use – some above average and others below average – they are they affected in different ways by the standing charge and unit rate components of bills, as discussed below.

For instance, shifting more costs to unit rates would negatively impact vulnerable groups with fixed high energy usage such as those with medical conditions requiring electricity for life-sustaining equipment.[16] This is reflected in Ofgem's decision, highlighted by workshop participants, to reallocate only £10 of operator costs from the standing charge to the unit rate, instead of the £20-£100 it had initially proposed, due to the risk of severe impacts on low-income, high usage households.[17]

Low usage households pay the same standing charge as high users, so they bear a disproportionate share of the costs (while high users pay lower average per-unit costs). This disparity could increase if future network costs paid via standing charges rise to support electric vehicles and other electricity-intensive technologies.[18]

[16] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[17] Ofgem (2024) Standing charges: update on our review
[18] New Economics Foundation (2023) Delivering a National Energy Guarantee

Low-income, high-energy households are exposed to volatility and a lack of control as energy spending is a larger proportion of their income.[19] Workshop participants raised that low-income households may not be aware of the 'premiums' they pay and questioned the fairness of penalising people for "not being active customers in essential services".

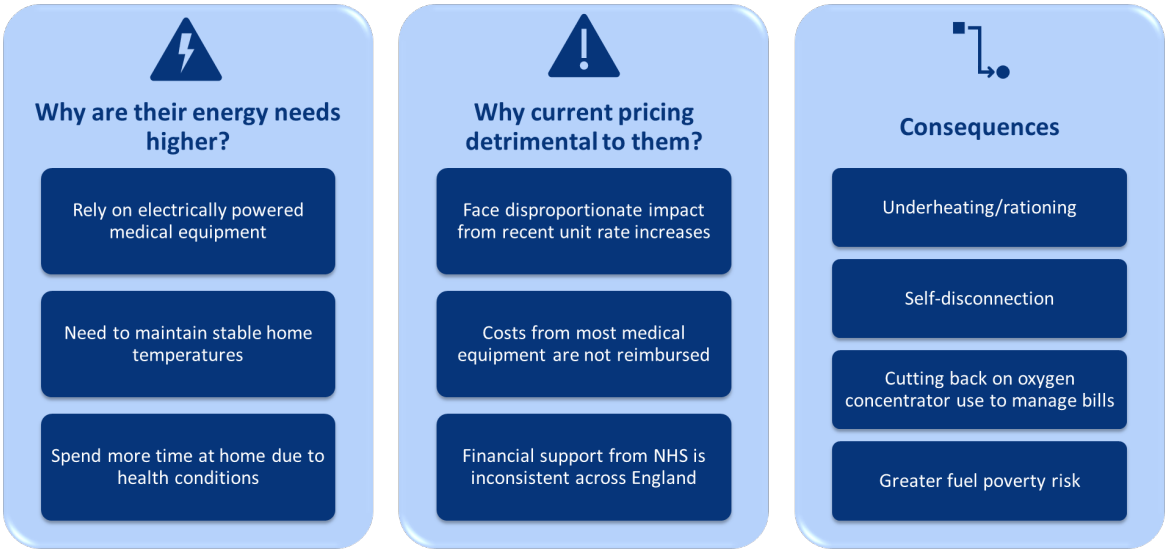
Households with disabilities and/or long-term health conditions

Fuel poverty disproportionately affects disabled households.[20] For example, one study found that 60% of households with a disabled member are fuel poor.[21] **Households with disabilities and/or long-term health conditions have higher energy needs because of their conditions and medical equipment**[22] and **benefit from allocating costs towards standing charges** and away from unit rates.

> *"[Customers with a long-term illness are] likely to start needing to use more energy at home because [they will] be less able to leave the house as [their] illness progresses." – Workshop participant*

These energy needs are not uncorrelated to other contextual factors, such as income. Ofgem modelling found that households receiving disability benefits and below the poverty line benefit more from electricity standing charges than households with disabilities not below the poverty line.[23] Workshop participants raised that households with medical equipment or high healthcare needs without adequate support faced significant impacts due to the increase in unit rates in recent years.

Figure 3 The impact of energy bill elements on households with disabilities and/or long-term health conditions



[19] New Economics Foundation (2023) Delivering a National Energy Guarantee
[20] Resolution Foundation (2024) Cold comfort: Mitigating the Winter Fuel Payment cut
[21] AgeUK (2023) Keeping the lights on: The case for an energy social tariff Discounted bills so older people can keep warm and well at home
[22] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022
[23] Ofgem (2023) Standing Charges: Call for Input

Households with long-term health conditions often rely on electrical devices (e.g. ventilators, oxygen concentrators and dialysis machines) leading to increased electricity demand, have additional heating needs if they need to keep their homes at stable temperatures, and may have higher usage due to spending more time at home because of their health condition.[24]

For example, estimates show that home dialysis can cost up to £1,918 per year.[25] The NHS provide support with energy bills to pay for energy costs from oxygen concentrators and dialysis machines, but the evidence review found this support is not uniform across England and (as noted in the workshops) other costs such as for increased heating fall to the individual. Academics specialising in consumer vulnerability noted in the workshops that they are seeing, through their research, that households are cutting back on their usage of electronic support aids.

> *"We found a depressingly high percentage of households declaring that they were [using their oxygen concentrator] less or not at all to make ends meet with their energy bills". – Workshop participant, academic researcher of consumer vulnerability, discussing their research*

Due to their higher energy usage, households with a health condition are disproportionately impacted by high energy prices; for instance, those in Scotland face an additional annual expenditure of £124 on energy bills on average compared to households without a person with health conditions (comparable research was not available for England).[26]

The high level of vulnerability of these households has led to rationing behaviours, with households with disabilities or long-term health conditions being found to be more likely to self-disconnect and for longer periods of time.[27] Analysis of SERL data indicates that households with a member who is not working due to a long-term health condition use less energy than the average household, which may suggest underheating. The analysis also found that fuel poor households with health conditions use less energy than fuel poor households on average, suggesting that these householders may be energy rationing, which may be attributable to their low average income.

Workshop participants identified that some households with disabilities or long-term health conditions are at risk of energy debt, due to their high energy needs and a limited capacity to handle complex administrative tasks.

> *"[According to research by the Joseph Rowntree Foundation,] nearly 70% of low-income households with a person who has a learning disability were behind on at least one of their kind of household bills by the middle of last year." – Workshop participant, frontline support*

[24] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs
[25] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs
[26] Citizens Advice Scotland (2024) Ofgem Discussion Paper – Future of Domestic Price Protection Citizens Advice Scotland response
[27] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises

Individuals receiving end-of-life care are more at risk of fuel poverty, partially due to their higher energy needs. For adults aged over 20, fuel poverty prevalence rose from 18.8% to 20.5% for those in their last year of life based on the 10% net income definition.[28] The risk of fuel poverty for single people aged 20-64 increases by 39.5% for those with terminal cancer diagnoses.[29] Receiving end-of-life care is linked with heightened fuel poverty prevalence among some demographic groups in particular, namely non-white ethnicities, those with a non-cancer terminal diagnosis, female pensioners and male working-age adults.[30]

Elderly households

The elderly often live on fixed incomes while facing higher energy needs. For example, in a workshop, it was raised that the elderly often feel uncomfortable under 21 degrees due to the effects of medication (e.g. blood thinners) and sedentary lifestyles, so need to keep their homes warmer. **Consequently, due to their higher energy needs, these households would benefit from increasing the standing charge and reducing the unit rate on energy bills.**

The SERL data shows that, indeed, elderly households generally consume more gas than average, likely due to higher heating needs, **but elderly households that are fuel poor on the LILEE measure use less gas on average** (Figure 4). This suggests that financial hardship may be limiting their ability to adequately heat their homes. That said, the data also shows that **fuel poor elderly households increase their gas consumption in winter months** (more than other households), which may be a result of these households prioritising heating over other needs, or may reflect the impact of the Winter Fuel Payment in mitigating energy rationing by elderly households.

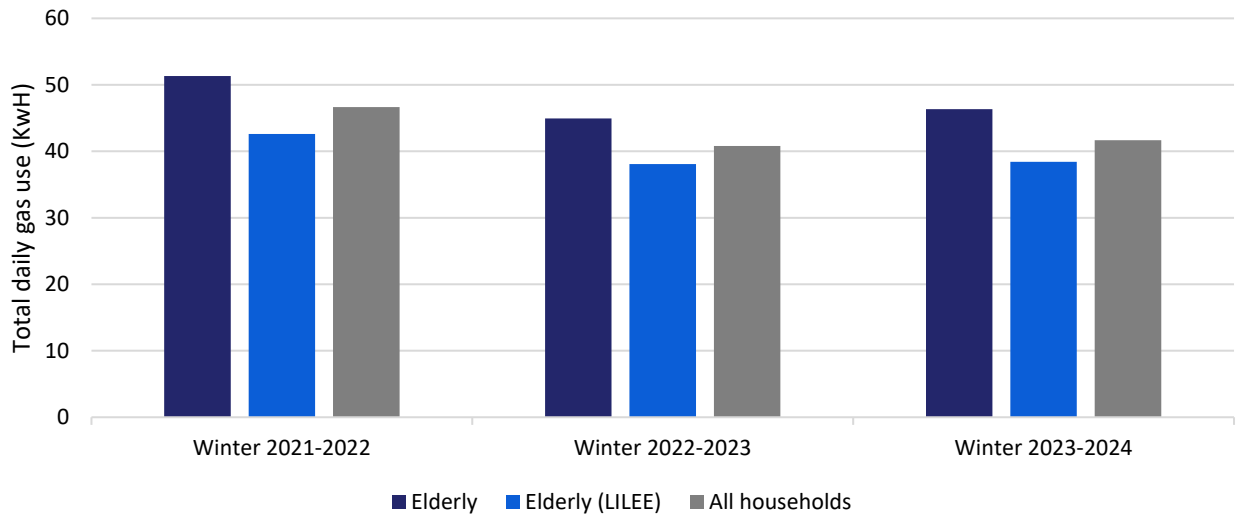
In terms of electricity use, the SERL data shows that both elderly and fuel poor elderly households tend to use less electricity than the average household, even when compared to the average small households (i.e. 1 to 2 residents), which may suggest energy rationing. Research shows that elderly households are more likely to ration energy use, potentially leading to serious health risks. One study found that more than half of those aged over 60 said they had to cut back on heating, eating or powering their home to make ends meet.[31]

> *"Older people tend not to go into debt because they tend to just turn down the heating […] or turn it off, and huddle under an electric blanket." – Workshop participant, advocacy group*

[28] Loughborough University Centre for Research in Social Policy for Marie Curie (2024) Fuel poverty at the end of life in the UK
[29] Loughborough University Centre for Research in Social Policy for Marie Curie (2024) Fuel poverty at the end of life in the UK
[30] Loughborough University Centre for Research in Social Policy for Marie Curie (2024) Fuel poverty at the end of life in the UK
[31] AgeUK (2023) Keeping the lights on: The case for an energy social tariff Discounted bills so older people can keep warm and well at home

Elderly households are also more likely to use oil, coal, bottled gas or other fuels for heating. For example, a study found nearly a million elderly households rely on these fuels for heating. These fuels are costly so, while these households are unaffected by the components of standard tariffs, the type of fuel used for heating is the crucial contributor towards their energy bill. Households relying on these fuels typically have higher rates of fuel poverty (28% higher than gas users) and energy costs (with an average fuel poverty gap 150% larger than gas users).[32] [33]

Figure 4 Total daily gas use by elderly households, fuel poor elderly households and the average household



Data table for Figure 4:

Time period	Elderly households (KwH)	Elderly, LILEE-proxy households (KwH)	All households (KwH)
Winter 2021-2022	51.3	42.6	46.7
Winter 2022-2023	44.9	38.1	40.8
Winter 2023-2024	46.3	38.4	41.7

[32] AgeUK (2023) Keeping the lights on: The case for an energy social tariff Discounted bills so older people can keep warm and well at home
[33] Department for Energy Security and Net Zero (2024) Fuel poverty detailed tables 2024 (2023 data)

Workshop participants raised that fear of high energy costs and lack of understanding has resulted in elderly households not having their heating on when they could afford to. Other workshop participants noted that elderly households who are asset-rich but income-poor lack support in easing cash flow issues, which can contribute to fuel poverty.

Households with children

Households with children are found to have higher energy needs and are at greater risk of fuel poverty, with single-parent households being particularly vulnerable. As a consequence of their energy needs, **these households benefit from costs being recovered via the standing charge and would lose out from reallocating costs towards an increased unit rate**.

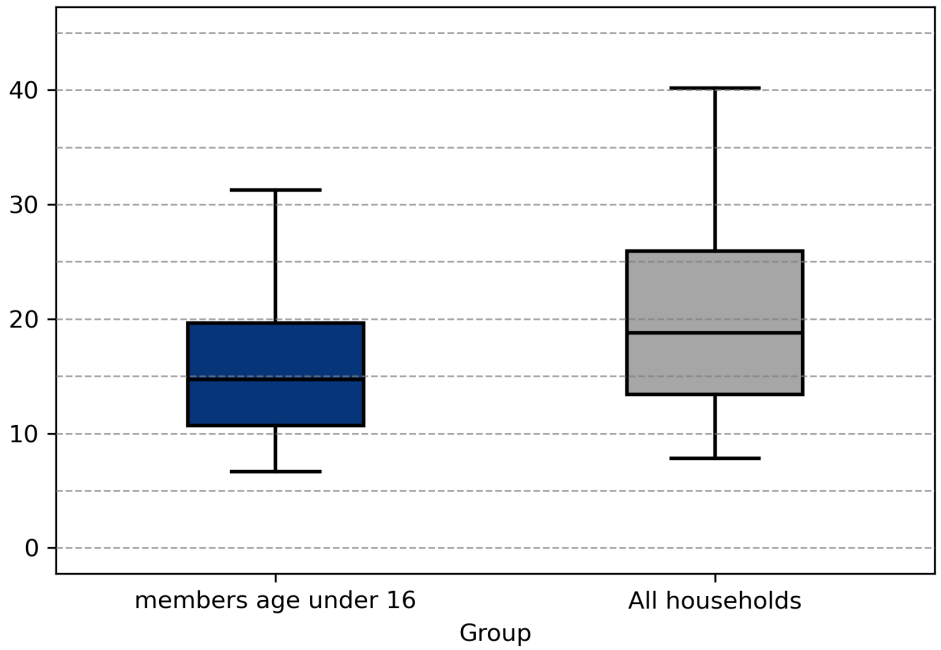
One study found that families experience fuel poverty at rates significantly higher than childfree households, with 56% of families reporting difficulties in managing energy costs.[34] One study estimated 'poverty premiums' by comparing average unit energy costs across households. In terms of the total amount spent per unit of gas or electricity (including standing charges, unit costs, debt repayments and support schemes) it was found that households with children experience poverty premiums[35] that are larger than other fuel poor households.[36] Single-parent households are especially affected, with 77% experiencing fuel poverty. Frontline-support workshop participants highlighted that in 2023 single-parent households faced higher fuel poverty rates than two-parent households, and the workshops also indicated that there is a **high level of energy debt** among single-parent households.

> *"When you look at [our] single clients with children, over a third [have] energy arrears [compared to] a quarter of clients overall." – Workshop participant, frontline support, referring to their organisation's client data*

Analysis of SERL data supports these findings by revealing that **households with children (aged under 16) have higher variable expenditure** (their variable expenditure makes up a larger proportion of their total expenditure) compared to the average household and other vulnerable households (Figure 5). However, LILEE-proxy households with children consume less energy than the average household with children, suggesting some rationing due to financial constraints. Despite this, they still use more energy than the average LILEE-proxy household, highlighting the additional energy needs that come with children in the home.

[34] Resolution Foundation (2024) Cold comfort: Mitigating the Winter Fuel Payment cut
[35] Poverty premiums in this study refer to the double burden faced by poor households i.e. those on low incomes paying more for their energy than those on higher incomes.
[36] Rasanga, F., Harrison, T. & Calabrese, R. (2024) Measuring the energy poverty premium in Great Britain and identifying its main drivers based on longitudinal household survey data, Energy Economics, Volume 136

Figure 5 Fixed electricity expenditure as a proportion of total electricity expenditure in households with children (aged under 16) compared to all households (%) in 2023



Data table for Figure 5:

Statistic	Households with members age under 16	All households
5th percentile	6.7%	7.8%
Q1 (25th percentile)	10.7%	13.4%
Median	14.7%	18.8%
Q3 (75th percentile)	19.6%	25.9%
95th percentile	31.3%	40.2%

Rural households and regional differences

Workshop participants noted that rural homes are generally larger and often less energy-efficient, making them particularly vulnerable to fuel poverty. These factors increase energy needs for these households and mean that a higher standing charge and lower unit rate would

likely benefit these households. However, there are also more cases of **using energy sources** such as oil, coal or bottled gas in rural homes, **which are typically more expensive**.

The structure of energy bills also varies by region, with standing charges and unit rates differing due to differences in energy distribution costs and other factors, which can disproportionately impact vulnerable households in these regions.[37] For example, London typically has lower standing charges (and higher average incomes), while **some lower-income regions**, including Mersey, the North East and Yorkshire, **face higher standing charges**, with a greater degree of rurality being linked with higher standing charges.[38] This can amplify the impact of standing charges in these regions.

Rented sector and social housing

Many low-income households living in **rented accommodation have poor insulation and inefficient heating systems**, meaning they can face significant disadvantages with energy costs.[39] [40] These consumers will need to consume more energy to heat these properties. Consequently, lower standing charges and higher unit rates would have negative impacts on these households (due to their higher energy use), although smaller rental properties may still benefit from low standing charge bill structures. Household modelling of energy efficiency, energy usage, and the degree of energy affordability of these households is required to understand the individual household effect of reducing standing charges.

Furthermore, in the past, **low-income renters were further disadvantaged by landlords opting for prepayment meters** (PPMs) to limit debt accumulation, which raised issues for households on this method of payment (see section *Variation by payment method*).

Workshop participants noted that social housing is generally more energy-efficient than private rented or owner-occupied housing. It was suggested that this may partially explain lower energy consumption in low-income households, beyond behavioural factors like underheating. Consequently, more of these households would benefit from higher unit rates and reduced standing charges compared to private rented housing.

However, for households living in energy inefficient homes (i.e. EPC rating is D or below), households in social housing are more likely to be in fuel poverty than those in other housing types.[41] They are also more likely to be on a heat network, which are currently unregulated and often leaves tenants locked into fixed heating suppliers.[42] Frontline support workshop participants highlighted that heat networks can complicate support and are a growing problem. Without the ability to switch providers or negotiate better deals, some social housing tenants may face high heating costs with no way to reduce them. Workshop participants raised concerns about the fact that heat networks are currently unregulated and that they can leave

[37] Ofgem (2023) Standing Charges: Call for Input
[38] Osman, D. (2023) Reforming energy standing charges for prepayment customers
[39] Rasanga, F., Harrison, T. & Calabrese, R. (2024) Measuring the energy poverty premium in Great Britain and identifying its main drivers based on longitudinal household survey data, Energy Economics, Volume 136
[40] Rasanga, F., Harrison, T. & Calabrese, R. (2024) Measuring the energy poverty premium in Great Britain and identifying its main drivers based on longitudinal household survey data, Energy Economics, Volume 136
[41] Peabody (2022) Energy, economy, environment: Protecting social housing residents from compounding crises
[42] Peabody (2022) Energy, economy, environment: Protecting social housing residents from compounding crises

customers without any energy supply if they fail to pay. However, they also noted their awareness of the upcoming regulation of heat networks in 2026.

The SERL data shows that among non-fuel poor households, owner-occupiers have higher energy consumption than renters. However, among fuel poor households, owner-occupiers and renters have similar energy consumption, meaning that, for these households, shifting costs from the standing charge to the unit rate would have a similar impact regardless of housing tenure. The fact that fuel poor owner-occupiers and renters have similar energy consumption even though rented properties are typically smaller, suggests that these renters have lower energy efficiency.

Households in debt

Findings from the workshops and the literature indicate that debt is a significant issue in terms of energy bills in 2025. For many households, energy debt repayments now make up a component of their energy bills. National Energy Action estimates that 2.3 million households now pay higher energy bills due to debt repayments, despite the fall in the price cap.[43] The rise in total energy debt has been particularly driven by an increase in arrears, where customers have no arrangement to repay. Analysis of Ofgem data shows that between 2022 and 2023, energy debt with a repayment plan increased by 16%, while arrears grew by 72%.[44] Total energy debt rose by around 50%, from £2 billion to £3 billion, and the number of households in energy debt grew by 20%, rising from 1.9 million to 2.3 million.[45] Certain groups are especially affected by energy debt, particularly households with children. Families with young children are more than twice as likely to be in energy debt compared to those without children.[46]

Once in debt, many customers find themselves trapped in a cycle that limits their ability to regain control over their energy costs. Debt repayments can effectively act as an additional standing charge that is paid regardless of energy consumption. One workshop participant noted that some households with PPMs may misunderstand standing charges, leading them to self-disconnect, resulting in accumulating debt even when they are not using energy. A report estimated that over 2 million people on prepayment meters will have self-disconnected over the winter 2023-2024.[47] This issue is exacerbated by any meter top-ups paid by the customer going mainly towards paying off debt unless a repayment plan has been arranged. Customers in debt face challenges participating in the energy market and being able to switch suppliers.

Many families struggling with energy debt are forced to make difficult trade-offs, cutting back on essentials such as heating and food. One study found that nearly half of those in debt have

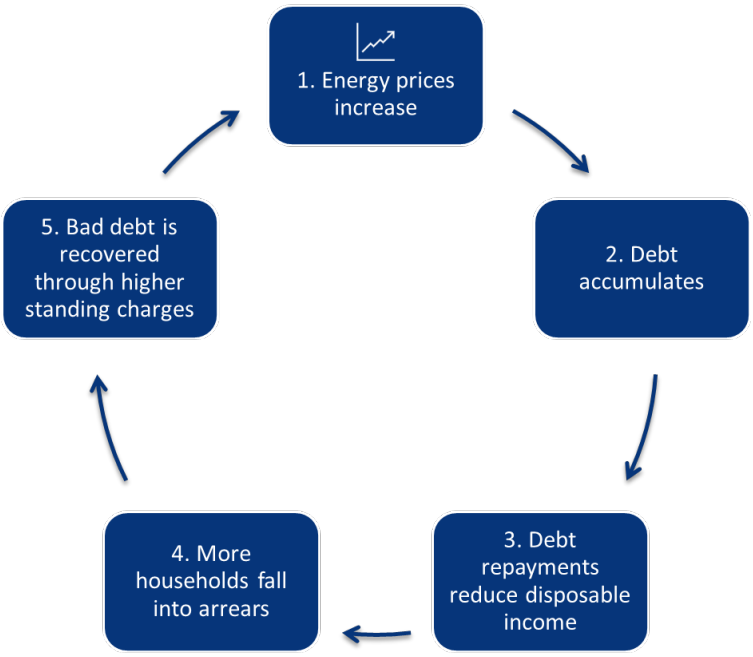
[43] Citizens Advice Scotland (2024) Ofgem Discussion Paper – Future of Domestic Price Protection Citizens Advice Scotland response
[44] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input
[45] Ofgem (2024) Affordability and debt in the domestic retail market - call for input
[46] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[47] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises

turned off their heating to save money.[48] For some, energy costs have become so unmanageable that 10% of those in debt have resorted to food banks and 25% have skipped meals or significantly reduced food spending.[49]

> *"Increasing numbers of people are going into debt, but the real issue is in those who are already in a position where they're unable to pay and they are getting significantly worse." – Workshop participant, energy supplier*

When customers are unable to repay their debt, suppliers are allowed, within Ofgem's price cap calculations, to recover this loss by increasing bills across their customers, typically from higher standing charges, which disproportionately impact those most prone to debt.[50] This creates a cycle of energy debt.

Figure 6 The cycle of energy debt



Variation by payment method

The structure and level of energy bills can vary significantly depending on the payment method customers use, which can have a disproportionate impact on vulnerable households. The three main methods of payment are prepayment meters (PPM), direct debit, and standard credit.

[48] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[49] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[50] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input

An estimated 15% of customers use a prepayment meter (PPM), and they are more likely to be on low incomes and/or vulnerable.[51] Previously, these customers paid more for their energy relative to direct debit customers. According to Ofgem, this was owing to the higher operating costs for PPMs.[52] In 2023, standing charges were estimated to be £50 per year higher for PPM customers.[53]

In 2024, Ofgem implemented a policy to equalise standing charges for PPM and direct debit customers. While this lowered costs for PPM users, it resulted in slight increases for some direct debit customers, with Ofgem's analysis showing the lowest-income direct debit users experiencing the largest relative increases (around 0.07% of their income, compared to 0.02% for higher income groups). However, lower-income PPM customers benefited from greater savings than higher-income PPM customers.[54] PPM customers still face higher costs as supplier eligibility restrictions create a barrier to their access to competitive tariffs, such as fixed contracts below the energy price cap.

PPM customers can face challenges, particularly with self-disconnection.[55] In 2023, Citizens Advice reported that 33% of PPM users (over three million people) self-disconnected at some point during the year.[56] Using smart meter data from PPMs Fawcett et al (2024) highlight that this was as high as 63% of PPM users.[57] The study also finds that more homes self-disconnected from gas during cold periods than at other times, despite the greater need for heating.[58] Not only is this concerning due to the consequences for health and wellbeing, but when a customer self-disconnects, standing charges continue to accumulate. This can create difficulties when trying to reconnect, as the accumulated debt must be paid off before energy can be used.[59] One study found that those on PPMs are nine times more likely to take out expensive short-term loans to pay for energy bills.[60]

Workshop participants highlighted that, despite these challenges, PPMs offer some benefits, particularly for those who prefer to actively manage their energy consumption. The growing adoption of smart PPMs (now used in approximately half of PPM households) has also improved user experience by allowing online top-ups, remote switching between credit and prepayment modes, and better monitoring of energy consumption.[61] However, challenges remain, including digital literacy barriers among vulnerable consumers.

[51] Fawcett, T., Palmer, J., Terry, N., Boardman, B. & Narayan, U. (2024) Using smart energy meter data to design better policy: Prepayment meter customers, fuel poverty and policy targeting in Great Britain
[52] Peabody (2022) Energy, economy, environment: Protecting social housing residents from compounding crises
[53] Osman, D. (2023) Reforming energy standing charges for prepayment customers
[54] Ofgem (2023) Levelling the cost of standing charges on prepayment meters
[55] Fawcett, T., Palmer, J., Terry, N., Boardman, B. & Narayan, U. (2024) Using smart energy meter data to design better policy: Prepayment meter customers, fuel poverty and policy targeting in Great Britain
[56] Osman, D. (2023) Reforming energy standing charges for prepayment customers
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[59] Peabody (2022) Energy, economy, environment: Protecting social housing residents from compounding crises
[60] Peabody (2022) Energy, economy, environment: Protecting social housing residents from compounding crises
[61] Osman, D. (2023) Reforming energy standing charges for prepayment customers

> *"Not all prepayment meters are the same, and that by and large I think smart prepay meters can offer a lot more than your traditional prepayment meters." – Workshop participant, energy supplier*

Workshop participants noted that standard credit, where customers pay after receiving their bill, is typically the most expensive payment method and disproportionately affects elderly and vulnerable consumers.[62] This is due to the lack of direct debit discounts and the perceived credit risk associated with this payment method. Energy retail market workshop participants noted that some vulnerable consumers, particularly elderly customers, still choose standard credit despite its higher costs due to distrust in direct debit systems and concerns over billing inaccuracies.

[62] Rasanga, F., Harrison, T. & Calabrese, R. (2024) Measuring the energy poverty premium in Great Britain and identifying its main drivers based on longitudinal household survey data, Energy Economics, Volume 136

Current and future expected benefits and challenges of innovative tariffs

Key findings

- The most common example of innovative tariffs is Time-of-Use (TOU) tariffs. The two main types are static TOU (e.g. Economy 7) which offer fixed periods of cheaper off-peak electricity, and dynamic TOU which offer real-time pricing.
- TOU tariffs aim to incentivise energy use during off-peak hours, which can result in cost savings for households. Those that can benefit the most are those with smart meters, EVs, heat pumps and battery storage capabilities, which are substantially less affordable for fuel poor and/or vulnerable households.
- Challenges for fuel poor and vulnerable households include: limited flexibility to shift energy use (e.g. for households with medical conditions); less ability to invest in enabling technologies and digital exclusion.

Innovative tariffs refer to novel pricing structures in the energy market designed to better meet consumer needs and promote efficient energy use. These tariffs aim to incentivise energy use during off-peak hours, reducing demand during peak periods and ultimately lowering system-wide costs.[63] Ofgem highlight that these dynamic pricing systems will be necessary to transition to a flexible net-zero energy system, but ensuring fair price protections will be essential to prevent negative consumer impacts.[64].

Time-of-Use (TOU) tariffs

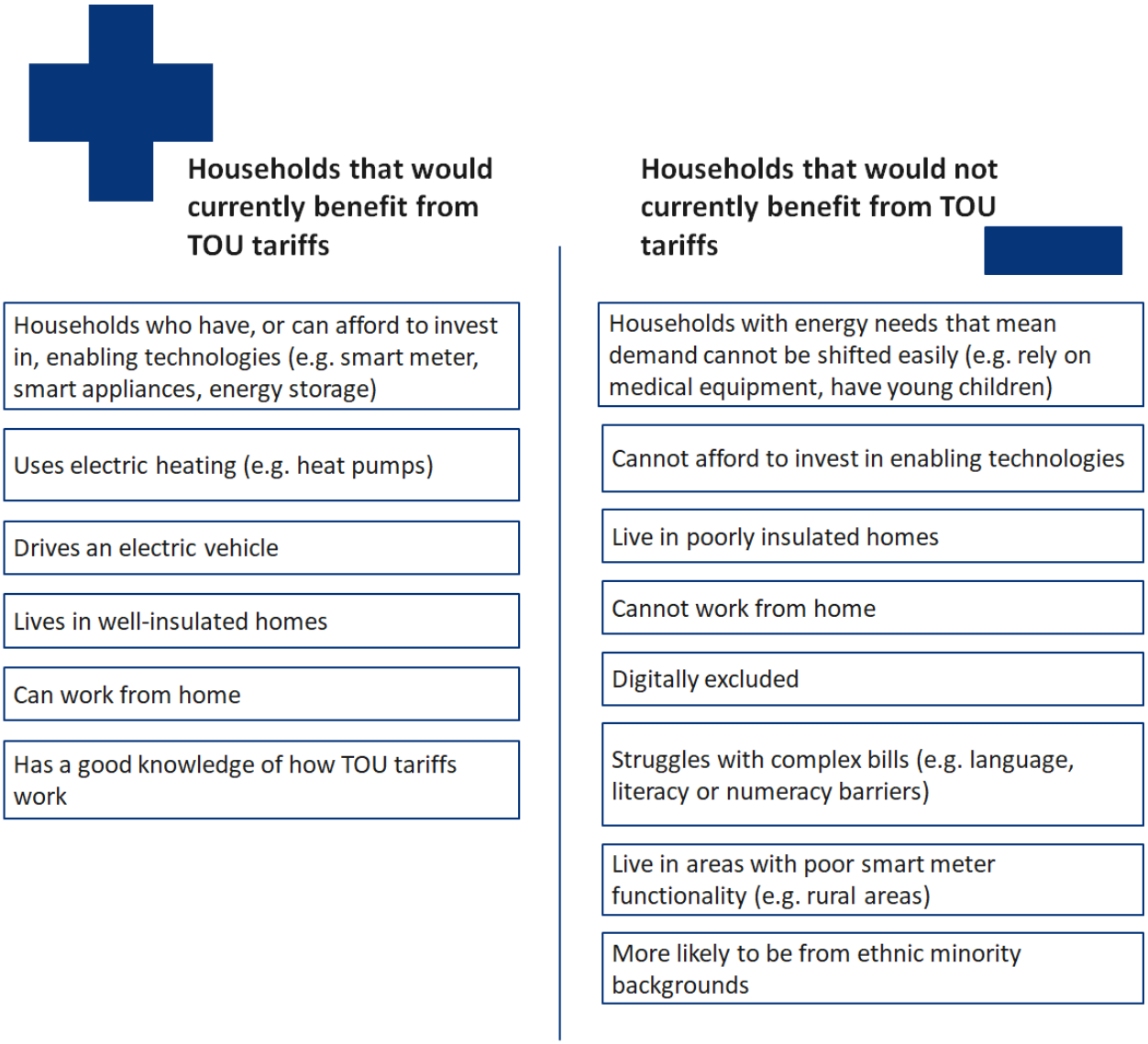
The most commonly discussed innovative tariffs in the literature are time-of-use (TOU) tariffs, which encourage households to adjust their energy consumption based on price fluctuations throughout the day. There are two categories: static TOU tariffs and dynamic TOU tariffs.

Static TOUs **offer predetermined, fixed rates for** energy during set times of the day, such as Economy 7 tariffs, which provide cheaper electricity for seven hours overnight while charging a

[63] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[64] Ofgem (2024) Future of domestic price protection

premium during the day.[65] [66] Dynamic TOU tariffs expose customers to **real-time pricing**, allowing them, or smart systems in their homes, to shift demand based on fluctuating prices.[67]

Figure 7 Households that benefit from time-of-use tariffs



[65] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[66] A Hardy, D. Glew, & C. Gorse (2019) Assessing the equity and effectiveness of the GB energy price caps using smart meter data
[67] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor

Advantages of TOU tariffs

Workshops and the literature highlighted similar advantages of TOU tariffs. They can support grid stability by reducing peak-time strain, integrating more renewable energy sources, and limiting the need for excess energy capacity. **In a competitive market, or under the current price cap, the efficiency savings from reduced investment needs and the usage of cheaper, renewable energy during the off-peak period would translate to cheaper prices for consumers on aggregate**. At an individual level, households with smart meters, electric heating such as heat pumps, electric vehicles, and energy storage technologies can achieve significant cost savings by shifting their energy use to lower-priced periods.[68] From a policy perspective, TOUs align with long-term goals of electrification and decarbonisation by encouraging smart technologies to support household energy flexibility and market efficiency.

Challenges of TOU tariffs for fuel poor and vulnerable households

Low-income households **lack the financial resources to invest in the technology** that would result in the largest benefits from these tariffs, including smart appliances, EVs, and battery storage. These technologies typically come with a **high upfront cost that would not be feasible for fuel poor and vulnerable households to fund**.[69] One study using household half-hourly consumption (from smart meters) to estimate benefits from TOU tariffs found that those with smart appliances or batteries saw the most benefit from the TOUs. Nearly all households with battery storage saw bill reductions, most by more than 10%.[70] Workshop participants noted that some tariffs offer cheaper rates only for EV owners or those with heat pumps.

TOU tariffs present challenges to vulnerable households related to **limited flexibility in energy use**, **financial barriers**, **technology and digital exclusion**, and unintended **inequities in pricing**. In terms of limited flexibility, vulnerable and high-usage groups (e.g. those reliant on medical equipment, households with children, energy inefficient homes) may **struggle to shift their energy consumption to off-peak hours**.[71] Those who work outside the home, particularly in low-paid sectors, may be unable to shift their energy use to off-peak hours.[72] Academics specialising in energy innovation highlighted within workshop discussions that this may disproportionately impact ethnic minorities who are more likely not to work from home. Workshop participants noted that those who work from home have already internalised necessary behavioural changes, for example, running appliances during off-peak hours. In the workshops, it was generally considered that, despite dynamic TOU tariffs leading to the greatest reduction in energy supply costs, consumers would mostly prefer the static TOU tariffs because of their simplicity, and these could still be very beneficial for system-wide cost reductions.

[68] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[69] Changeworks (2022) Supporting Vulnerable Consumers to Access Dynamic Time of Use Tariffs
[70] Cambridge Economic Policy Associates (2017) Distributional Impact of Time of Use Tariffs
[71] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[72] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises

> *"Dynamic tariffs may be particularly less suitable for vulnerable households since they require more active monitoring of their tariff and energy use and more uncertainty in terms of prices and total energy bills." – Workshop participant*

Digital and rural exclusion further compounds these challenges, as smart meter functionality is often poorer in rural areas, and the end of Radio Teleswitching, a historic system to control electricity meters, may exacerbate these issues.[73] [74] Digital exclusion and complexity of TOU billing structure may prevent some consumers from effectively managing TOU tariffs (e.g. consumers with disabilities, consumers with English as a second language, or broad literacy and numeracy difficulties).

> *"[My thoughts turn to] digitally excluded consumers missing out on this […] they can't have a smart meter installed." – Workshop participant, frontline support*

For those with these tariffs but who are unable, or fail to, shift their usage from higher-priced periods, it may result in increased energy bills. A study estimating the impact of Economy 7 tariffs found that Economy 7 users on average spent more on their bills than they would have on a standard tariff. This was due to high gas use, despite owning Economy 7 compatible heating products, and low use of electricity during off-peak hours.[75] This finding was also corroborated in workshops, with the general consensus that Economy 7 tariffs fell short of creating intended benefits and were inequitable. They also raised concerns that optimism bias would induce many to switch to these tariffs in the hope of making energy savings while not understanding the challenges and whether it is suitable for their needs, resulting in higher energy bills.

Supporting vulnerable households with TOU tariffs

Workshops and the literature suggest that the main focus should not be transitioning all households onto these tariffs at the moment, but rather laying the foundations for the future of TOU tariffs, including completing the rollout of smart meters, improving awareness of TOU benefits and risks, and strengthening regulatory frameworks to enhance consumer protection.[76] Workshop participants noted that support schemes where households are provided with battery storage (similar to solar panels) could benefit from the transition to TOU tariffs. Another consideration was tariffs that could be customised so that if the user does not change behaviour, they are not worse off, but changing behaviour could result in energy savings.

[73] Cambridge Economic Policy Associates (2017) Distributional Impact of Time of Use Tariffs
[74] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[75] Hardy, A., Glew, D., & Gorse, C. (2019) Assessing the equity and effectiveness of the GB energy price caps using smart meter data
[76] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor

Other emerging innovative tariffs

Beyond TOU pricing, other innovative tariff structures were mentioned briefly in workshops without substantial analysis:

- Local energy storage networks: Allow households to share stored energy to borrow from each other and collectively benefit from lower rates.
- Fixed contribution heat tariffs: Energy companies are trialling fixed heat payments, most in energy-efficient homes the energy company has retrofitted, to stabilise costs.
- Automation-driven tariff placement: Smart systems that automatically switch consumers to the most beneficial tariffs based on their usage patterns.
- Weekly payment tariff options: Addressing consumer demand for more flexible billing cycles.

Options to create greater bill equity for those in fuel poverty

This section of the report sets out the findings related to research question 2 on the options to create greater energy bill equity for fuel poor households. The literature review identified potential policy measures to tackle fuel poverty through the mechanisms of lump-sum payments, unit rate discounts, targeted bill support, standing charge redistribution (including policy cost reform), and pricing reforms. The role of lump-sum payments, unit rate discounts, and standing charge redistribution was further examined during stakeholder workshops. These findings are outlined below and then considered in-depth in subsequent sections of the report through analysis of the policy options' advantages, disadvantages, implementation challenges, differential impacts across households, and impact on the government's Net Zero objectives, where possible.

The determination of an appropriate level of cost for fuel poor households was an objective for this research. However, limited evidence exists to calculate a quantitative figure within the literature. Workshop participants also did not agree on an appropriate figure, but did provide principles for what such a figure should be based on. Broad themes identified within the literature and workshop discussions include: cost reflexivity, tailoring support to energy needs, ensuring the level of support increases with energy bills, and the overall cost of the support.

Overview of support options

Proposals for direct energy bill support typically consist of lump-sum payments, unit rate discounts, or a combination of these mechanisms. The impact of direct support varies significantly by eligibility criteria, funding mechanisms, and the level of support provided. As a result, policymakers have access to a broad range of direct support options. However, the literature review and stakeholder discussions reveal no consensus about the optimal structure for a direct support scheme. Separately, targeted bill support is considered for defined subgroups: those with life-supporting medical equipment and those with debt due to energy bills.

Standing charge redistribution and pricing reforms are considered separately as potential policy measures. Both options can be *revenue-neutral* through the redistribution of energy supply costs across different consumers, unlike direct bill support, which requires additional levies or government funding. Alternatively, standing charges could also be redistributed to general taxation. These measures would typically complement other support options by shifting the recovery of costs away from fuel poor households or by reducing the cost of delivery for other support options.

Appropriate level of cost for fuel poor households

The research also aimed to explore an appropriate level of cost for fuel poor households. However, there was limited consideration for a cost metric in the literature, and workshop participants expressed doubt about being able to pinpoint an ideal level of support without further information. Individual cost considerations of workshop participants were often anchored by references to individual reports that modelled the impact of support on which the participant had worked, existing levels of support (Warm Home Discount), and energy market metrics such as the increase in the price cap since October 2020.

The literature does not provide a clear benchmark for an appropriate cost for fuel poor billpayers. The average fuel poverty gap, the support needed for a household to leave fuel poverty, in 2023 (£417) was presented to workshop attendees as a starting point for discussion. Workshop participants had significant criticism of this metric because of the inability of averages to capture information on the variability of fuel poverty between households. The LILEE measure of fuel poverty was criticised for being slow to update, failing to reflect the increase in fuel costs, ignoring the degree of underheating, and ignoring certain households (high EPC ratings or smaller homes with low incomes). It was, however, noted that every definition of fuel poverty has flaws.

> *"Looking at the poverty gap can sometimes lead policymakers just to think about bigger houses that will have a bigger number associated with them. The result of that has been a lot of policies [that end] up ignoring people in smaller homes who often have very low income." – Workshop participant, advocacy group*

From the research, principles for policymakers to determine an appropriate level of cost included cost reflectivity, equity, greater support for the most vulnerable households, and the government's cost of support.

The principle of cost reflectivity represents concerns that energy bills could increase and hurt vulnerable households due to inefficiencies created when energy prices do not reflect the underlying costs of energy consumption. Meanwhile, discussion of the diverse nature of energy needs and the lack of support for vulnerable, high-consumption households led to calls for support tailored to energy needs. However, there were concerns about the perceived fairness of support given to different population groups, for example, the high-standing charges paid by low-usage consumers or the fairness of more support given to high-consumption households. Workshop participants also highlighted a need to address the small increases in support levels over time in the context of energy bills increasing significantly, including relative to income levels. Finally, additional concerns of the literature surrounded the cost-effectiveness of support and the feasibility of high levels of government support.

Lump sum payments

Key findings

- Fixed lump sum payments and floating lump sum payments were explored as potential policy options to improve energy bill equity.
- There was generally more support for fixed lump sum payments due to its simplicity, ease-to-administer and the fact that consumers are familiar with the type of support mechanism.
- The main criticisms around floating lump sum payments were its unpredictability in terms of level of support and complexity of delivery.
- A trade-off of the lump sum payment support is that it does not adjust for high energy needs in its delivery of the support.
- A tiered fixed lump sum approach would allow differential targeting by energy needs but adds complexity.

Lump sum payments are fixed amounts provided to households that are invariant to household energy consumption. Consequently, lump sum payments are often simpler to administer than other support options, as concluded by workshop participants. Existing energy sector support schemes are primarily lump sum in nature, and stakeholder workshops highlighted that consumers are likely to be familiar with this type of support. For instance, the Warm Home Discount, a one-off £150 discount for households in receipt of specific means-tested benefits, is an example of a lump sum support scheme.

Considerations for lump sum support implementation

However, lump sum support schemes do not reduce the unit rate of energy consumed. Consequently, **there is no proportional adjustment for fuel poor households with high energy needs.** Without effective targeting, there is a risk of inefficient allocations of funds through lump-sum support, as they do not automatically account for varying energy needs.

Workshop participants also identified broader issues with the lump sum payment method. In particular, the issue of timing payments to support periods of need was highlighted, such as winter. Participants noted that self-disconnections drastically fall around periods when lump sum payments were directly delivered to meters. However, lump sum payments direct to meters would only offset existing debt and provide no short-term support for indebted households, which raised concerns from some participants. Furthermore, there were participants who raised concerns that lump sum payments may not support the digitally excluded who rely on their family for support with bill payments.

Options for a lump sum support mechanism

Two categories of lump-sum discounts were presented to workshop participants: **fixed lump sum payments** and **floating lump sum payments**.

Fixed lump-sum payments are fixed in value upon policy introduction unless they are increased or decreased through intentional policy change.

Floating lump-sum payments fluctuate according to some predefined variable(s), such as the price cap or the inflation rate.

The workshop participants identified the **simplicity** of **fixed lump sum payments** as a potential strength through its impact on **consumer engagement** and **provider delivery**. In particular, the fixed nature of the scheme would facilitate vulnerable customers' ability to budget in advance, unlike floating payments. Concerns existed about consumers' ability to comprehend floating lump sum discounts due to the lack of consumer understanding of the energy market, such as price caps. The ability of energy providers to deliver floating lump sum discounts was also raised. However, one workshop participant from a major UK energy provider highlighted that providers already handle frequently updating price caps and should be able to support floating lump sum payments.

Floating lump sum support fluctuates automatically; however, the level of support and the total cost would inevitably be less predictable. The unpredictability of the cost of floating lump sum payments was raised as a concern due to the feasibility of government financing. However, floating lump-sum payments would address concerns of workshop participants and the argument within the literature that the Warm Home Discount has fallen behind increases in energy bills since its introduction.[77] Overall, workshop participants preferred fixed over floating lump sum payments, however, there were participants who preferred the floating variant.

> *"I think [floating lump sums have] a lot of advantages in terms of actually tying it to energy costs at the time and making sure it's not […] arbitrary." – Workshop participant, frontline support*

Tiered fixed lump-sum payments are non-uniform fixed lump-sum payments that vary depending on the degree of consumer eligibility.

A tiered fixed lump sum payment was proposed by workshop participants as a compromise between fixed lump sums and more targeted support, following participants' concerns that neither fixed nor floating lump sums take into consideration the size of the household or additional needs. This approach would help high-usage households without a unit rate discount. One study found that **a formula-based lump-sum payment** would be the most progressive and fiscally efficient policy, **where payments depended on income and energy use, with the most support given to low-income, high-usage households and reduced**

[77] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises

linearly as income increased and energy expenditure decreased.[78] However, greater matching of energy providers' and inter-departmental government data would be required to identify fuel poor households than is currently available. There were also concerns by workshop participants that **a tiered fixed lump sum would increase the complexity of delivery** due to higher costs, the need for data sharing and the need for supplier billing system improvements. A standard fixed lump sum payment was raised as a potential interim solution until a more targeted scheme could be introduced. An expansion of the Warm Home Discount in the short term was recommended by some workshop participants, which was supported by findings from the literature review.[79]

> *"The fixed lump sums [are best] in the short term, and then [once] you get the data on additional needs […] [you can] provide something that is more tailored." – Workshop participant, academic researcher of consumer vulnerability*

Workshop participants suggested a revision to the Cold Weather Payment, which currently provides £25 payments to households in receipt of specific means-tested benefits after seven consecutive days of realised or forecasted sub-zero average temperatures. This proposed revision is discussed in Fawcett et al. (2024) to an 'Extreme Weather Payments' policy, whereby Met Office data is used to make payments in advance of cold weather, so households know prior to the event that they have secured funding for the cold weather ahead.[80] The paper proposed an initial payment of at least £6.50 for each day the temperature is 0 ◦C or below for households with either gas or electricity. For those with smart PPMs, payments could be made to their meter, and for other households, payments can be made directly to bank accounts.

> *"There should be a much better cold weather payment […] at the moment it's retrospective and we wanted it paid in advance." – Workshop participant, academic researcher of consumer vulnerability*

[78] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[79] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[80] Fawcett, T., Palmer, J., Terry, N., Boardman, B. & Narayan, U. (2024) Using smart energy meter data to design better policy: Prepayment meter customers, fuel poverty and policy targeting in Great Britain

Unit rate discounts

Key findings

- Unit rate discounts reduce the price per unit of energy, and hence total support increases with energy consumption. They can be effective in targeting energy needs.
- Unit rates can be harder to administer and more complex for consumers to understand compared to lump sum payments.
- There was generally more support for flat unit rate discounts as these are simpler to implement, while tiered unit rate discounts allow for greater targeting at the expense of administrative difficulties.

Unit rate discounts are reductions in the price of the unit rate for energy, and hence total support increases proportionally with energy consumption. As a result, **unit rate discounts may benefit households with high energy needs**, assuming their consumption aligns with these needs. This proportionality has led to arguments that unit rate discounts are a more effective mechanism for targeting support to households with greater energy needs compared to lump-sum payments.

Considerations for unit rate discount implementation

The impact of unit rate discounts on indebted consumers differs from that of lump sum support. Unit rate discounts are applied at the point of consumption, while lump-sum payments may (automatically) be used to pay off existing debt when added to the meter, which limits their use for current consumption needs. Some workshop participants saw the ability to target current consumption as a benefit of unit rate discounts, while others stressed the importance of debt relief support in eliminating financial insecurity in the aftermath of the energy crisis.

However, concerns have been raised that unit rate discounts would be more difficult for consumers to conceptualise. In particular, workshop participants highlighted that many vulnerable households struggle to understand concepts like kilowatt-hours, which are important to understand for financial budgeting with unit rate discounts.

> *"The advantage of [lump sum payments] is people can see the money and [as] people understand what money means […] they can manage that resource appropriately." – Workshop participant, energy supplier*

There were also concerns that these households would be limited in the support they receive, despite their energy needs, because of underheating. When energy consumption is detached from energy needs, unit rate discounts are not well targeted as support options. **Unit rate discounts were also seen as potentially more difficult and costly to administer than lump sum support**. Furthermore, support was seen as less consistent as it depends on the consumer's tariff.

> *"[A unit rate discount] implies that depending on what tariff you are on, you would get a different level of discount." – Workshop participant, energy supplier*

Both lump-sum support and unit rate discounts can alleviate financial constraints that lead to underheating and energy debt through financial support. However, literature and some workshop participants raised that unit rate discounts could create perverse incentives as lower unit rates – relative to other goods – theoretically encourage more energy demand than simply by alleviating underheating due to the substitution of demand from other goods.[81] The change in price incentives could increase the total cost of the scheme, reduce incentives for energy efficiency, and increase system-wide energy costs by increasing aggregate energy demand.[82] [83] Consequently, concerns were raised that unit rate discounts would undermine net-zero objectives and drive up transmission costs. Some workshop participants believed that these concerns are overblown, especially if eligibility criteria are strict enough to exclude less financially constrained households.

> *"[A unit rate discount] helps people with very high energy usage, but therefore reduces energy efficiency incentives. Obviously, energy waste is now being subsidised, and the issue is that energy waste is being subsidised by people in energy starvation." – Workshop participant, advocacy group*

Eligibility is a broader issue discussed later in the report, however, workshop participants noted that unit rate discounts were particularly vulnerable to inaccurate eligibility criteria, as the cost of support is less predictable. Concerns were raised that ineligible high-consuming vulnerable households were particularly exposed to cliff edges under unit rate support.

Options for a unit rate discount mechanism

From the considerations of the literature, two proposed unit rate discounts were presented to workshop participants: a **flat unit rate discount** and a **tiered unit rate discount**.[84] [85]

Flat unit rate discounts apply the same percentage discount on unit rates for all eligible consumers.

Tiered unit rate discounts apply differential discounts depending on the degree of consumer eligibility.

Tiered unit discounts were praised by some workshop participants for their ability to target support towards households with the greatest energy needs. Other workshop participants were more sceptical that a real-world implementation would be practical or lead to

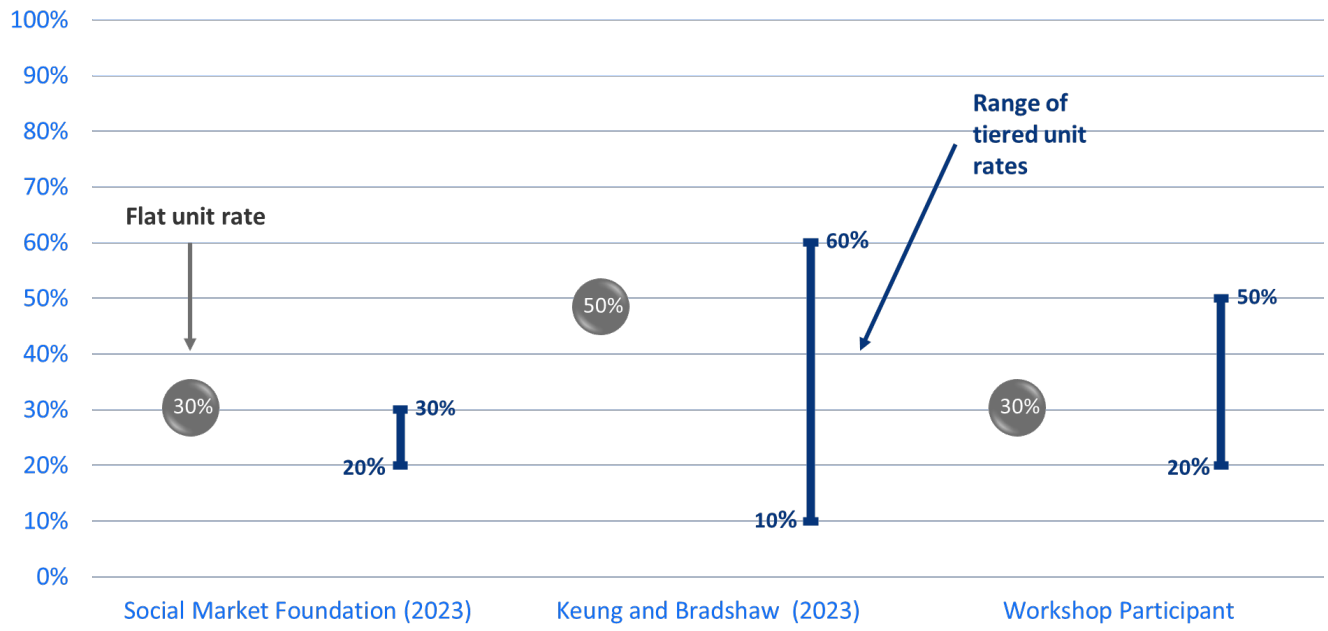
[81] New Economics Foundations (2023) Delivering a National Energy Guarantee
[82] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[83] New Economics Foundation (2023) The National Energy Guarantee: A long-term policy to protect essential energy needs, reduce bills and cut carbon
[84] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[85] Keung and Bradshaw (2023) Exploring social tariffs for energy

a more equitable distribution. In particular, tiering support by income was questioned by workshop participants because of the potential fluctuations in support for households with volatile incomes. **Flat unit rate discounts were praised for their relative simplicity**, although concerns exist that these would still be impractical to administer compared to lump sums.

> *"My main reservation here would not be the logic or the equity, it would be the feasibility." – Workshop participant, trade association*

Workshop participants were particularly interested in understanding the modelled impact of unit rate discounts on fuel poor households. Models normally use the ONS Living Costs and Food Survey to model impacts, which depend significantly on the specific assumptions made to support delivery. However, the literature does not offer detailed proposals for these unit rate discounts, and there is no consensus on the specific structure of these discounts. Figure 9 visualises the range of proposed discounts within the literature and workshops.

Figure 8 Scale of unit rate discounts proposed by the literature and a workshop participant



Note: Dots represent a flat unit rate discount proposal, while the bars represent the range of discussed tiered unit rate discounts.

Other targeted support

Key findings

- Households should receive tailored support based on their circumstances, such as disabilities and medical conditions, where financially and administratively possible.
- Discussions of targeted support in the workshops tended to focus on debt repayment support and a reformed medical expense scheme.
- Repayment matching schemes (where the government matches debt repayments) and shifting debt to the back of PPM payments would benefit those in debt.
- Expanding eligibility, standardising support schemes and introducing auto-enrolment could improve the effectiveness of the support.

Households have diverse energy needs due to variations in their composition and demographic features. As a result, **the literature and workshop participants repeatedly underlined the importance of differentiated support**, where financially and administratively sensible. This support can be delivered through targeted direct support or by refining eligibility criteria of broader support schemes, such as Cold Weather Payment eligibility for those with disabilities (who meet additional criteria). While the benefits and feasibility of expanding eligibility criteria for vulnerable groups of wider support schemes will be considered later in the report, this section considers the potential role of targeted support.

In particular, the literature has considered targeted direct support through debt repayment support for indebted households[86] [87] [88] and a reformed medical expense scheme.[89] [90]

Debt repayment support

Since the energy crisis, calls for debt repayment support have increased. There are fears within the literature that debt built up during the energy crisis has prolonged energy rationing and added to existing debt despite energy prices falling, particularly originating from consumer-support and debt-support charities.[91] [92] Analysis by National Energy Action calculated that in early 2024, 2.3 million households would pay more than at the peak of the energy crisis due to

[86] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input
[87] National Energy Action (2022) Supporting vulnerable energy customers
[88] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022
[89] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs
[90] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022
[91] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input

[92] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises

debt repayments.[93] As previously mentioned, PPM users are also prone to higher levels of expensive, short-term debt external to Ofgem's regulatory sphere.[94] The literature highlights that debt repayment support should extend to these consumers.

Repayment matching schemes, where the government matches energy debt repayment, receive strong public support and have been previously recommended by the former BEIS Select Committee and considered in a recently closed Ofgem consultation.[95] [96] **Debt support charities have highlighted the potential for higher returns from investment through debt repayment support by directly reducing debt, reducing future debt accrual, and improving debt recovery**.[97] [98] [99] Improved debt recovery could in turn reduce the price cap by reducing the level of the 'bad debt' allowance.[100] A reduction in the price cap could lead to a subsequent reduction in consumer bills.

A particular concern of one workshop participant working with a debt support charity was that half of their clients with debt arrears have a negative budget after paying for basic costs, so even limited debt repayment is difficult. Although equally, small amounts of support can have a significant impact on these households. Workshop participants suggested moving debt towards the back of 'energy meters' to allow for energy to be purchased alongside debt repayments. Participants also highlighted Ofgem's consultation on debt standards as a positive change to ensure consistent treatment of indebted consumers between energy providers.

Reformed medical equipment energy rebate scheme

Households with energy-intensive medical equipment have high energy needs as a result. Workshop participants were concerned that the range of medical devices eligible for support needs to be expanded beyond home dialysis and oxygen support machines. The literature raised further concerns about the lack of consistency in the application of support both between the types of machines and by the NHS trust.[101]

Oxygen machine energy rebates are provided through the oxygen concentrator providers and are paid directly to consumers following bi-annual technician readings of the machine's meters.[102] In contrast, home dialysis machine support varies by individual NHS trust – some

[93] Citizens Advice Scotland (2024) Ofgem Discussion Paper – Future of Domestic Price Protection Citizens Advice Scotland response
[94] Peabody (2022) Energy, economy, environment: Protecting social housing residents from compounding crises
[95] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022
[96] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input
[97] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[98] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input
[99] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022
[100] Money Advice Trust (2024) Consultation Response: Affordability and debt in the domestic retail market - call for input
[101] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs
[102] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs

trusts offer full reimbursements, while others have no reimbursement scheme in place by 2023.[103] A survey by Contact suggests that as low as 3% of households with life-supporting medical equipment received any electricity rebates.[104]

While targeted help for households with medical equipment was not discussed in detail during the workshops, when mentioned, workshop participants advocated for **a joined-up approach to improve the consistency** of medical equipment energy rebates. **The introduction of auto-enrolment** was also discussed as a method **to increase the uptake of support** for these households.

[103] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs
[104] Retail Energy Code Company (2023) Support for medical equipment users: A new approach to meeting electricity costs

Standing charge redistribution

Key findings

- Due to their regressive nature, a potential policy option to improve energy bill equity is to reform the standing charge, with a specific focus on the policy costs collected through the standing charge.
- Redistributing the costs on the standing charge to be accrued through the unit rate would benefit many low-income, low-usage households (around 5 million), but disadvantage many vulnerable households with high energy needs (around 1 million).
- On average, households in the UK pay 11% of their energy bills towards policy costs, which are collected mostly through the standing charge for electricity.
- Policy cost reforms included recouping policy costs through general taxation or redistributing policy costs onto gas bills.
- Redistributing to general taxation was the favoured approach as it was seen to be more progressive. While redistributing costs to gas bills was seen as simply shifting costs to disadvantage a different group of households, and not improving equity.

Findings from the literature and workshops suggested that, due to their regressive nature and disproportionate impact on many low-income households, a reform to the standing charge could increase bill equity. It is worth noting that, over the course of this research, Ofgem announced that, by next winter (2025/26), energy suppliers will be required to offer energy tariffs with low or no standing charges.

Redistribution between the standing charge and unit rate

There is general debate over the distribution of costs across standing charges and unit rates. **Some argue that shifting more of the costs from standing charges onto unit rates would create a fairer system that better reflects actual energy consumption** and reduces the regressive nature of standing charges. This will particularly benefit low-income, low-usage households. This is considered more equitable as households that consume more energy would contribute more to system costs. However, others highlight the potential risks, particularly for high-energy-need households and the financial stability of energy suppliers.

According to Ofgem analysis published in 2023, **while five million low-income households would benefit** from a full shift of standing charges onto unit rates, around **one million households**, many of whom are in vulnerable circumstances, would experience financial losses with higher bills. On average, these households would see a bill increase of £45 per year, compared to an average gain of £22 per year for those benefiting from the shift.[105] These figures are disputed by the Committee on Fuel Poverty due to underheating, highlighting the

[105] Ofgem (2023) Standing Charges: Call for Input

complexity of assessing differentiated energy needs, which are widely recognised to vary across households. Ofgem estimates that those in receipt of disability benefits would suffer the most, especially those households who are also below the poverty line.[106] Workshop participants were similarly concerned with the impact on households with residents who are disabled or have a long-term health condition.

Another concern is the financial stability of energy suppliers. Standing charges provide a stable and predictable revenue stream, ensuring suppliers recover fixed costs regardless of demand fluctuations. If these costs are instead included in unit rates, suppliers could face financial risk if overall energy consumption is lower than expected. To manage this uncertainty, Ofgem is concerned that suppliers may apply a risk premium as insurance, which could further increase unit costs and exacerbate the impact of high-usage households.[107] Concerns were also raised in the literature and workshops that higher unit rates could create unintended barriers to electrification and the transition to net-zero by increasing the running cost of heat pumps and EVs.[108]

Policy cost reform

On average**, households in the UK pay 11% of their energy bills (£187) towards policy costs**, which are collected mostly through the standing charge.[109] [110] These fund renewable energy initiatives, energy efficiency schemes and affordability programs (e.g. Energy Company Obligation (ECO)), Warm Home Discount, feed-in tariffs and smart meter rollout.[111]

Policy costs have increased due to significant stimulus being put into decarbonising the power system, but as the technology matures, the level of subsidy required has dropped.[112] However, there is the additional concern that any reductions in energy bills as a result of the policies to increase energy efficiency will be less than the levies applied to household bills for these policies. There are also concerns that fuel poor households are covering the costs of home efficiency improvements and capital investments in wealthier households through support for feed-in tariffs.[113]

Most policy costs are applied to electricity bills rather than gas bills, which is partially because almost every household uses electricity while only 85% of households are connected to the gas grid, and partially because some of the levies are used to pay for low-carbon electricity generation.[114]

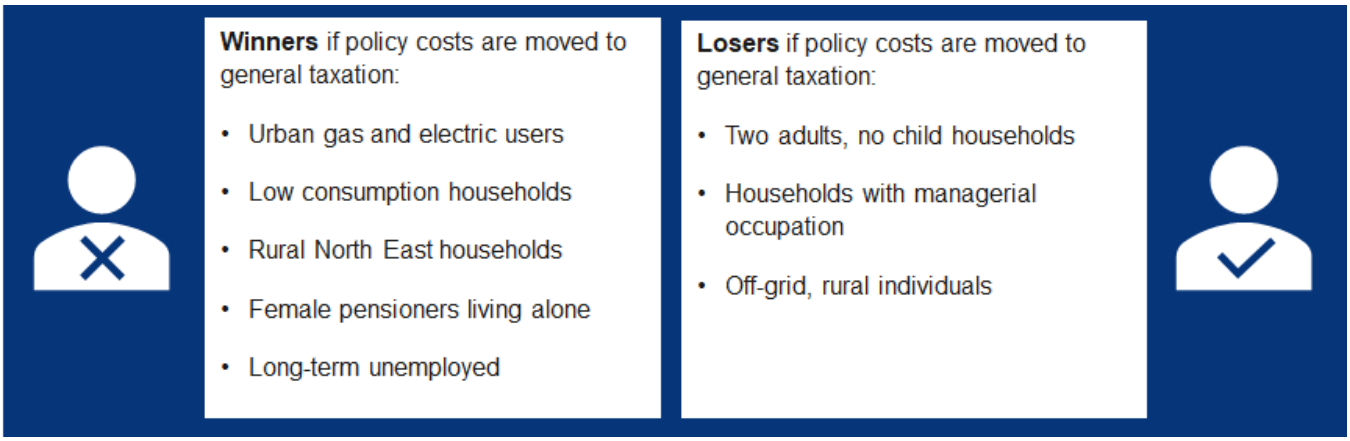
[106] Ofgem (2023) Standing Charges: Call for Input
[107] Ofgem (2023) Standing Charges: Call for Input
[108] Ofgem (2023) Standing Charges: Call for Input
[109] Owen and Barrett (2020) Reducing inequality results from UK low-carbon policy
[110] Ofgem (2024) Energy price cap (default tariff) update from 1 January 2025
[111] Owen and Barrett (2020) Reducing inequality results from UK low-carbon policy
[112] Citizens Advice (2022) Balancing act: The implications of transferring policy levies from electricity to gas bills
[113] Owen and Barrett (2020) Reducing inequality results from UK low-carbon policy
[114] Citizens Advice (2022) Balancing act: The implications of transferring policy levies from electricity to gas bills

Recovery of policy costs through general taxation

The argument for moving policy costs to general taxation is that it would ensure households with electric heating are not disadvantaged, reduce the financial burden on low-income households, and make the system less regressive.[115]

The main advantage of this policy is its progressive nature, whereby higher incomes contribute more, reducing the financial strain on vulnerable households and does not penalise low-income high-usage households.[116] A report estimates the impact of funding policy costs through general taxation using household level energy expenditure data and finds that it would reduce costs for 65% of households and varies by household type. Figure 10 provides examples of household types that are estimated to either benefit or lose out, however these are not exhaustive.[117]

Figure 9 An estimation of household types that would be winners and losers following a shift to policy costs being recovered through general taxation



Workshop participants raised concerns about the feasibility of shifting costs to taxation given the current fiscal climate, and whether the government would be willing or able to absorb these costs given existing budgetary constraints and competing fiscal priorities. Evidence from the literature and workshop participants indicates that shifting policy costs to general taxation would cost the Treasury around £5 billion a year.[118] Some workshop participants suggested that a windfall tax on energy companies could provide a temporary revenue source to facilitate the transition. Others pointed out that relying on public funding could introduce financial instability. Without dedicated, ring-fenced funding, there is a risk that policy costs could be deprioritised in future budgets, making energy funding more uncertain than if it remained on bills.

Workshop discussions emphasised the need to distinguish between different types of policy costs when considering a shift to taxation. The average household pays £183.18 a year towards policy costs, with £65.79 (35%) of current policy costs supporting fuel poor households (e.g., the Warm Home Discount), while £16.72 (9%) funds ongoing green energy schemes,

[115] Future Energy Associates (2024) Standing Charge Reduction Analysis
[116] Future Energy Associates (2024) Standing Charge Reduction Analysis
[117] Owen and Barratt (2020) Reducing inequality results from UK low-carbon policy
[118] Future Energy Associates (2024) Standing Charge Reduction Analysis

with the remainder covering legacy green schemes.[119] Findings from the literature indicate that many policy costs (around 55%) are tied to legacy schemes that are no longer active, so these can be considered a 'public good' to be funded through general taxation.[120]The Aldersgate Group and UCL (2023) proposed that only ongoing renewable energy contracts and low-carbon gas subsidies should remain on bills, while all other policy costs should be removed.

Overall, the workshop discussions highlighted strong advocacy for shifting policy costs to general taxation as a fairer and more progressive solution, however, concerns about implementation and long-term stability remain key barriers to reform.

> *"If you put the entire cost of HS2 onto everyone's train tickets, you would have a massive public outcry. Yet this is what is essentially going to happen if we get the entire cost of renewing the grid put onto our energy bills, which is what is probably going to happen at the moment." – Workshop participant, advocacy group*

Recovery of policy costs through gas bills

While the recovery of policy costs through gas bills is not a proposed solution to fuel poverty itself, it is considered for its impact on the fuel poor because of its frequent support by the broader energy literature and its potential subsequent realisation.

Redistributing policy costs onto gas bills would involve rebalancing the current 80:20 split so that a higher share (or all) of policy costs is paid through gas bills.[121] The aim of this would be to make electricity more affordable and encourage households to transition to electric heating solutions, such as heat pumps, which aligns with UK decarbonisation goals. This would particularly benefit the 15% of UK homes not connected to the gas grid, which is as high as a quarter in the South West and are, on average, in a greater degree of fuel poverty.[122]

Citizens Advice estimates that shifting policy costs onto gas bills would reduce annual bills for households not connected to the gas grid by an average of £123 per year.[123] Electricity-only households are more likely to be in fuel poverty, so this could have financial benefits for vulnerable households.

However, **this policy comes with significant concerns as it shifts costs to households connected to the gas grid** (85% of households). The impact would vary substantially between different households; however, Citizens Advice estimates annual bills would increase by £22 on average.[124] Although this is a relatively small increase, it is likely to grow over time as the

[119] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[120] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[121] Cornwall Insights (2024) Policy costs in domestic energy bills
[122] Cornwall Insights (2024) Policy costs in domestic energy bills
[123] Citizens Advice (2023) Balancing act: The implications of transferring policy levies from electricity to gas bills
[124] Citizens Advice (2023) Balancing act: The implications of transferring policy levies from electricity to gas bills

number of households connected to the gas grid diminishes due to the electrification transition.[125]

> *"Once you start transferring policy costs away from electricity bills onto gas, you are inevitably going to hit those people that rely on gas for heating…so you are just passing the cost from potentially one group of consumers in vulnerable situations and fuel poverty onto another group [of vulnerable consumers]." – Workshop participant, energy retail market*

A key argument against this policy is fairness. Exempting some households from contributing to levies for policies that are trying to deliver public goods (tackling fuel poverty, decarbonisation, warmer homes) because they are not connected to the gas grid may be viewed as unfair.[126] Another concern is the stability of gas as a long-term revenue base. As electrification efforts continue, the number of gas consumers will decrease, making it an increasingly unstable source from which to recover policy costs. Those who remain reliant on gas, particularly low-income households unable to afford a switch to electric heating, would face a disproportionate financial burden.[127] Overall, workshop participants largely opposed this approach, citing concerns about fairness, affordability, and the disproportionate burden on low-income and gas-dependent households.

Other considerations for policy cost reform

Workshop participants suggested shifting the financial burden onto oil and energy companies, aligning with the "polluter pays principle" to reduce corporate profits in support of the net-zero transition. A workshop participant, who works with energy advice charities, advocated for a tiered approach to policy cost allocation, where those who choose greener tariffs or renewable energy options would contribute a greater share of the policy costs associated with decarbonisation and renewable investments.

[125] Cornwall Insights (2024) Policy costs in domestic energy bills
[126] Citizens Advice (2023) Balancing act: The implications of transferring policy levies from electricity to gas bills
[127] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor

Rising block tariffs and pricing reforms

Key findings

- High-usage households can be disadvantaged due to paying premiums on the most expensive 'block' of energy.
- Rising block tariffs, when combined with other support measures, could reduce energy bills while mitigating the impact on vulnerable, high-usage households.
- Workshop participants emphasised that addressing inequities in energy bills requires fundamental reforms to the energy market, such as those being considered under the Review of Electricity Market Arrangements (REMA).

Pricing reforms refer to changes to the price structure with which suppliers charge their customers for energy. As a result of existing regulations and business incentives to maintain cost reflexivity, pricing reforms would mostly require regulatory prescription and are more administratively expensive methods to address fuel poverty. Only rising block tariffs were directly presented to workshop participants, due to limited analysis of other pricing reforms in the literature. Rising block tariffs form the primary focus of this analysis as a result. Other proposals by workshop participants are outlined, but limited discussion prevents any substantial analysis.

Rising block tariffs

Rising block tariffs (RBTs) involve providing a basic amount of energy at low or no cost, then imposing higher tariffs on additional usage. This structure is intended to ensure affordability for essential energy needs while charging more for excessive consumption.

Findings from the evidence review and workshops cite several benefits, including that RBTs provide a basic block of affordable energy, helping to reduce costs for low-usage households. RBTs may also contribute to decarbonisation efforts by encouraging energy conservation, investment in energy efficiency, and investment in solar panels.[128] [129] Another potential benefit raised in workshops was the progressive nature of RBTs, where those who consume more energy pay more.

> *"I like the sound of [rising block tariffs]. I think it is a good idea in principle for various reasons. [Rising block tariffs] would be great for the majority of low-income consumers: low-income, low-consumption people. They would win from that system." – Workshop participant, academic research of consumer vulnerability*

[128] New Economics Foundation (2023) The National Energy Guarantee: A long-term policy to protect essential energy needs, reduce bills and cut carbon.
[129] New Economics Foundation (2023) Delivering a National Energy Guarantee

However, **while RBTs would be beneficial to low-income, low-usage households, they pose significant risks for those with higher energy needs**.[130] Some low-income or vulnerable households, such as those living in energy-inefficient homes, households with a resident who has a medical condition or households with children, have higher energy demands and less flexibility to reduce consumption. These households can end up subsidising low-usage consumers, who may not necessarily be financially vulnerable. Ensuring RBTs do not inequitably impact vulnerable, high-usage households is crucial to the design.

> *"The risk […] is around again the low-income, high [-usage] consumers that could actually be quite badly hit around that." – Workshop participant, academic research of consumer vulnerability*

One prominent design in the literature is the 'National Energy Guarantee' developed by the New Economics Foundation (NEF).[131] [132] This model features a first-tier minimum energy allocation priced at 50% below the average pre-crisis level gas and electricity prices. The highest tier is priced at 20-30% above the 2021 market prices. To mitigate the impact on high-usage, low-income households, the design includes a 'social tariff'. The 'social tariffs' they test include **an exception for households receiving means-tested benefits from the highest tariff tier**, and **an expanded free energy allowance for households with children and for those with a disabled resident**. NEF estimates that under pre-crisis conditions, 80% of households will be winners, with the largest gains (a £250 bill reduction) seen amongst the poorest 30% of the population.[133]

The main weakness of this design is the small minority of lower-income households who experience a bill increase, which is those with very high energy usage. To support this group, NEF suggest a phased rollout to prevent sudden financial shocks, where modest tariff reductions are first made for the minimum energy allocation (e.g. 5%) and then increasing this to 50% over several years. The authors note that this would need to be combined with targeting homes for retrofitting through the use of postcode-level energy use data and the energy efficiency of housing stock data.[134]

Public First and the Social Market Foundation (2023) also analyse the impacts of a rising block tariff policy and find it creates a significant portion of losers in the lowest three income deciles. Implementing a fixed lump sum to those with higher energy needs improves the outlook, with a 15% reduction in "losers" in lower income bands, but still leaves many vulnerable households worse off.[135]

[130] Citizens Advice (2015) Energy tariff options for consumers in vulnerable situations
[131] New Economics Foundation (2023) The National Energy Guarantee: A long-term policy to protect essential energy needs, reduce bills and cut carbon.
[132] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[133] New Economics Foundation (2023) The National Energy Guarantee: A long-term policy to protect essential energy needs, reduce bills and cut carbon.
[134] New Economics Foundation (2023) Delivering a National Energy Guarantee
[135] Public First and Social Market Foundation (2022) Energy bill support – designing policies to support British households in an age of high prices

Workshop participants raised several broader considerations around RBTs. One suggestion was that RBTs should be scaled according to the household size and energy needs but noted that this would introduce more administrative complexity. Another suggestion was to base RBTs on kilowatt demand rather than kilowatt-hour consumption, as seen in Italy. Some participants also expressed concerns about the financial stability of energy suppliers under an RBT system, noting that cold winters could lead to excessive profits due to higher heating demand, whereas warm winters could result in business failures. A further policy consideration was the possibility of applying RBT structures to standing charges, making them more progressive.

The overall sentiment in workshops was mixed, with acknowledgment of the potential benefits for some consumers and significant challenges for others. Workshop participants felt that the success of rising block tariffs hinges on the design and supportive measures, like 'social tariffs' or other financial support, to ensure equity and avoid exacerbating fuel poverty.

Energy market reform

Workshop participants emphasised that addressing energy bill inequities requires fundamental reforms to the energy market. A key concern raised was the design of the market, which drives high electricity prices. This is partly due to marginal pricing and electricity prices being linked to gas prices, despite some of the electricity being generated from renewables at very low marginal costs. As part of the Review of Electricity Market Arrangements (REMA), workshop participants mentioned the need to decouple electricity and gas prices, although this has been ruled out.[136] There was also uncertainty around the fairness and benefits of locational pricing, which could reduce bills in some regions while significantly increasing them in others.

One reform that was mentioned in workshops and in the literature was the Green Power Pool, as a potential near-term solution to providing customers with cheaper renewable energy. This would allow consumers to directly access increasingly cheap renewable energy based on the average cost of generation, rather than the short-term marginal cost model, which results in gas setting the price for all technologies.[137] Access can be targeted to fuel poor and vulnerable households directly, rather than through the wholesale market.

[136] Public First and Social Market Foundation (2022) Energy bill support – designing policies to support British households in an age of high prices
[137] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor

Challenges and considerations to implementing options to improve energy bill equity

Key findings

- Eligibility issues with implementing policy options were strongly highlighted in the literature and workshops. Improving eligibility criteria and data matching between energy providers and the government could help to identify fuel poor households more accurately.
- Cliff edges in support were also a significant concern. Tapering support, gradually decreasing benefits as households move out of eligibility, could offer a fairer solution.
- Vulnerable households often struggle with complex billing systems and a lack of trust in energy providers. A simplified support system with options like automatic enrolment and enhancements to the Priority Services Register could help improve access to support.
- The importance of connection to a functional smart meter was highlighted in order to benefit from direct support and innovative tariffs (e.g. TOU).
- Inequity in access to certain tariffs, or being fixed into more expensive tariffs, were also raised as broad challenges.

The identification and provision of support to fuel poor households presents several significant challenges. Key issues include determining accurate eligibility criteria, addressing the impact of cliff edges, the ability for consumers to navigate complex markets, promoting smart meter adoption, and addressing tariff inequities. These factors are crucial in determining the effectiveness of support provided to fuel poor households.

Eligibility

The issue of **eligibility** has been consistently highlighted by both the literature and workshop discussions as critical to ensuring support is efficiently targeted to reduce fuel poverty.[138] [139] [140] However, an ideal eligibility criterion is difficult to pinpoint despite calls for improvements in eligibility being unanimous from all sources. There is, however, a widespread understanding that the data matching of energy provider and government departmental data

[138] New Economics Foundation (2023) Delivering a National Energy Guarantee
[139] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[140] Keung and Bradshaw (2023) Exploring social tariffs for energy

needs to be improved to support the identification of fuel poor households.[141] [142] [143] [144] **Improved datasets would increase the knowledge of the government about the degrees of fuel poverty by household demography to allow for differentiated support by household**. However, the literature underlines that the time and resources required to complete this data matching could be significant and would prevent any immediate implementation of targeting improvements.[145] [146] There also exist concerns around GDPR compatibility for energy providers and that data matching could be politically contentious due to the potential for a 'big brother' narrative, even if the data already exists individually.[147]

> *"There [are] so many other factors you have got […] like someone's income, the size of someone's house, the insulation level of their house, their medical state, their age." – Workshop participant, advocacy group, discussing the range of data required for adequate targeting*

Cliff edges

The issue of **cliff edges** (the sudden removal of support to households that no longer meet strict eligibility criteria) in support is another important consideration for policymakers. The literature emphasises that it is not a binary issue, and households near the boundary of support criteria may still suffer from the impact of fuel poverty.[148] Furthermore, households are at risk of moving in and out of eligibility, which creates uncertainty for these households. This uncertainty can also dissuade households from making improvements such as energy efficiency upgrades. The proposed solution of workshop participants and the literature is to **implement a taper to the level of support, which slowly reduces as households move out of eligibility**.[149] [150] However, it has been acknowledged that these schemes could have higher administrative costs. Most existing support is based upon the receipt of means-tested benefits, of which there is no clear way to taper support. This reliance on means-tested benefits has also been criticised.[151] [152]

[141] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[142] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[143] National Energy Action (2022) Supporting vulnerable energy customers
[144] Citizens Advice (2015) Energy tariff options for consumers in vulnerable situations
[145] Citizens Advice (2015) Energy tariff options for consumers in vulnerable situations
[146] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[147] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[148] National Energy Action and Energy Action Scotland (2023) The hardest hit: Impact of the energy crisis. UK FUEL POVERTY MONITOR 2021-2022
[149] Citizens Advice (2024) Shock proof: Breaking the cycle of winter energy crises
[150] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[151] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor
[152] New Economics Foundation (2023) Delivering a National Energy Guarantee

Complexity

For consumer bills and support payments, the issue of **complexity** is an issue emphasised by participants in the workshop discussions. The literature acknowledges that vulnerable consumers are particularly prone to disengaging with the energy market and are sensitive to complex payment structures.[153] [154] [155] Workshop participants pointed out that disadvantaged consumers are more likely to have low trust in energy providers, low literacy and numeracy skills, mental health conditions, and anxiety.

> *"IT application-based systems are really hard for certain groups: people with disabilities and so on." – Workshop participant, frontline support*

These factors can impact the ability of vulnerable households to manage bills and financial tasks. A simplified support system for consumers could be more effective at reducing fuel poverty by facilitating improvements to the accessibility and uptake of support. A **simplified support system could also reduce barriers to practical implementation; however, it would restrict the use of complex eligibility criteria to accurately target support to energy needs**.

> *"[Tiering] is obviously very laudable, but those issues of complexity and [cost] feel like it is going to be on a hiding to nothing." – Workshop participant, academic research of consumer behaviour*

Automatic identification and enrolment, under an enhanced Priority Services Register framework, were highlighted as potential options to reduce complexity.[156] [157] However, these methods alone do not directly address the difficulties of forward-looking budgeting under complex systems.

> *"I think that [automatic application of support] is the only real feasible way of running it." – Workshop participant, energy supplier*

Smart meter uptake

The issue of smart meter uptake has also been highlighted as relevant to the implementation of support and eligibility improvements. Smart meters report more detailed and up-to-date information than traditional energy meters, which may be necessary for adequate data matching to identify fuel poor households. **Smart meters can also enable direct and innovative support, which traditional PPMs have not been able to provide**. Workshop

[153] Cambridge Economic Policy Associates (2017) Distributional Impact of Time of Use Tariffs
[154] Rasanga, F., Harrison, T. & Calabrese, R. (2024) Measuring the energy poverty premium in Great Britain and identifying its main drivers based on longitudinal household survey data, Energy Economics, Volume 136
[155] Ofgem (2024) Future of domestic price protection
[156] Social Market Foundation and Public First (2023) Fairer, warmer, cheaper: New energy bill support policies to support British households in an age of high prices
[157] Aldersgate Group and UCL (2023) The Case for a Social Tariff: Reducing Bills and Emissions, and Delivering for the Fuel Poor

participants raised examples of offering short-term, interest-free loans and direct support credit to smart meters while highlighting the difficulties with fuel voucher uptake on traditional prepayment meters.

The upcoming introduction of the Market-Wide Half-Hourly Settlement should incentivise energy providers to encourage consumers to choose innovative and dynamic tariffs,[158] which are not available to customers with traditional meters.[159] Consumers with traditional meters may subsequently lose out on cost savings. However, workshop participants noted that a minority of smart meters are currently not functioning properly. This represents approximately 1 in 10 smart meters, according to the latest statistics for the final quarter of 2024, but the proportion of ill-functioning smart meters has been decreasing.[160]

Tariff inequity

Tariff inequity was an issue raised by workshop participants and the literature. Currently, some smaller providers do not offer the Warm Home Discount, leaving vulnerable households without support.[161] In addition, workshop participants outlined that households with prepayment meter debt over £500 may be unable to switch providers, preventing these households from accessing providers that offer more support. A workshop participant who works with a major energy provider highlighted that historic companies retain a high proportion of customers who are 'less desirable' to energy providers, leading to an inequitable distribution of customer bases. The participant argued that this has led to customer lock-in and potentially uneven access to additional support. Both workshop participants and the literature highlighted that future support should be mandatory for all providers. **Participants highlighted that smart electric vehicle (EV) tariffs often offer better rates than Economy 7 tariffs**. This price difference was seen as a form of 'price discrimination' aimed at attracting more desirable customers, as EV tariffs often require proof of EV ownership, which is correlated to financial status. While there is some discussion that the growing availability of innovative tariff options could help address inequities in existing time-of-use tariffs, there are also calls for Ofgem to monitor and potentially intervene.

[158] Public First and Social Market Foundation (2022) Energy bill support – designing policies to support British households in an age of high prices
[159] Citizens Advice Scotland (2024) Ofgem Discussion Paper – Future of Domestic Price Protection Citizens Advice Scotland response
[160] Department for Energy Security and Net Zero (2024) Smart Meter Statistics in Great Britain: Quarterly Report to end December 2024
[161] National Energy Action (2022) Supporting vulnerable energy customers

Comparison of potential policy options

Key findings

- Lump sum payments received more support in workshops than unit rate discounts due to their simplicity, familiarity, and faster rollout. However, unit rate discounts were seen as more proportional to energy use, targeting high-usage households.
- Concerns around unit rates focused on the administrative challenges and uncertainty that they would be delivered effectively.
- Targeted support based on precise eligibility criteria was felt to be essential but would increase complexity, administrative costs and customer confusion.
- The movement of policy costs to general taxation was preferred over embedding them in gas bills due to public perception risks and the potential to hurt fuel poor gas users.

Workshop participants were encouraged to discuss the trade-offs of the different policy options. These insights are important to understand how the workshop participants perceive the overall relative net impact of the advantages and disadvantages of each of the policy options. While the workshop participants did not always reach a consensus in opinion, these findings highlight areas for future policy consideration.

Table 1: Summary of workshop participants' views on potential policy options

Policy option	Advantages	Disadvantages	Level of support
Flat lump sum payment	Simple, familiar and easy to administer	Fails to target energy needs	Majority support (more so for the short term)
Floating lump-sum payment	Automatically adjusts with costs	Complicates budgeting for households	Minor support
Tiered lump-sum payment	Targets energy needs	Difficult to deliver, requires data matching to identify energy needs	Majority support (more so for the long term)

Policy option	Advantages	Disadvantages	Level of support
Flat unit rate discount	Support proportionate to energy consumption	Energy use may not model energy needs; disincentivises cutting energy waste; delivery concerns	Minor support
Tiered unit rate discount	Allows for highly targeted support	Same concerns as with flat unit rate discounts, but with further concerns about the administrative difficulty of delivery	Minimal support
Targeted support through lump-sums	Allows for specific targeting by need and is simple	Requires data matching to identify energy needs	Universal support
Redistribution of policy costs to general taxation	Efficient to move the infrastructure and welfare costs away from prices; benefits low-income households	Insufficient without further support and politically infeasible	Majority support

Unit rate discounts and lump-sum payments

Discussions with workshop participants revealed a wide range of opinions on the optimal support structure. **Lump-sum payments were favoured for their simplicity and familiarity** to households. Workshop participants believed that a new lump sum support scheme could be rolled out more quickly than more complex measures due to the similarity to existing schemes.

Workshop participants and literature recognised **the benefit of unit rate discounts in increasing support proportional to energy consumption**. The proportionality would ensure that eligible high-consuming households receive more support, potentially making it more effective at targeting energy needs. As a result, some workshop participants argued that unit rate discounts might deliver better value.

> *"If you give one fixed lump sum payment for a large household that uses a lot of energy or for somebody with a disability who's charging a wheelchair […] that is*

> *not enough […], whereas for other people it might be quite a good contribution. So, I think that is the main disadvantage of a fixed lump sum." – Workshop participant, trust or think tank*

However, concerns were raised that households with high energy needs that underheat would not benefit from unit rate discounts as their total rebate would be small if they remain financially constrained and would only be applied at the point of consumption, unlike with lump sums. There were also concerns regarding the **administrative challenges of implementing unit rate discounts**, particularly in the short term. Echoing the findings of the literature review, workshop participants highlighted that the unit rate discount could reduce the incentives for less-constrained, eligible households to ensure energy efficiency and not over-consume. If realised, this could lead to additional costs and risks for billpayers and the government, in addition to conflicting with the government's net-zero goals. Concerns were also raised that support would not be passed on to vulnerable households with communal heating or rentals with bills included in the rent. Delivering lump sum support directly to the vulnerable individual in these circumstances was considered more feasible by workshop participants.

For households with high medical energy needs, unit rate discounts were seen as a crude method of targeting support. Workshop participants preferred separate lump-sum payments to address these needs more effectively.

> *"Lump sums are perfect for things like a medical condition where we already measure […] the additional energy needs." – Workshop participant, advocacy group*

While there were concerns that indebted households would not receive any lump-sum support for current usage due to immediate debt repayment at the meter, there was also a recognised need for lump-sum debt repayment support. Workshop participants acknowledged that further modelling will be required to fully understand the quantitative effects of the different support options needed to determine the most effective approach.

Precise targeting of support

There was widespread workshop participant acceptance that **precise targeting of households would require refined eligibility criteria dependent on various factors with differentiated support depending on the degree of eligibility**. This need for differentiation and precise targeting reflects the highly heterogeneous nature of fuel poverty. However, workshop participants recognised that this precision would introduce complexity and inefficiencies to the delivery of support, including higher administrative costs, consumer confusion, and delays in implementation. Complex support systems would also require better data integration of individual government and energy provider databases. **Workshop participants were generally in favour of simpler systems**, especially in the **short term**, due to concerns about fluctuating support affecting vulnerable consumers.

Standing charge redistribution

The movement of policy costs to general taxation was generally preferred over embedding them in gas bills due to public perception risks and the potential to hurt fuel poor gas users. Some workshop participants argued that the movement to gas bills over general taxation would support fuel poor households without gas heating, who tend to face higher rates of fuel poverty. However, there was a consensus that short-term reallocations of costs would not help effectively address fuel poverty, and the focus should be on long-term affordability. It was instead preferred that standing charge redistribution and pricing reforms only be implemented alongside other targeted support options, where feasible, to enhance these outcomes.

Evidence gaps and recommendations for further research

Evidence gaps

- There is no clear consensus (in the literature or amongst workshop participants) on the appropriate level of cost for fuel poor bill payers, or the level of support that is required. However, there was broad agreement in workshops that using the average fuel poverty gap for England in 2023 (£417 per household) was not useful as the average fails to reflect the disparities between different household types. There is no single objective measure of an appropriate level of cost.
- The evidence reviewed in this study provides insights into energy usage but not necessarily energy needs, leading to deductions about self-rationing. It can be hypothesised that fuel poor or vulnerable households using less energy than the average or non-fuel poor household indicates fuel poor/vulnerable households are not meeting their needs, but there is no direct measure of this.
- While there is rich discussion of the benefits, challenges and trade-offs of potential policy options to increase energy bill equity, there was a lack of more detailed discussion in the literature regarding the specific design of support options. For example, there is limited exploration or proposal of sufficient targeting methods, delivery mechanisms, or the distribution of discounts across groups.

Recommendations for further research

Workshop participants emphasised that addressing inequities in energy bills requires fundamental reforms to the energy market (see section ‘Rising block tariffs and pricing reforms’) to increase affordability for energy for all households, ultimately helping to reduce fuel poverty. Further research could explore policy options to enhance energy bill equity in the context of energy market reform, particularly following the conclusions of REMA. Some other policy options suggested by workshop participants, such as the Green Power Pool, that were identified but were not (or rarely) mentioned in the literature included in this research, could benefit from further exploration.

Conclusion

This research integrated findings from an evidence review, workshops with stakeholders, and analysis of smart-meter data to examine the factors driving energy bill inequity and assess potential policy options to improve bill equity for fuel poor and/or vulnerable households.

The structural elements of energy bills that are inequitably borne across bill payers now and in the future

The findings of this study highlight that the main structural elements of energy bills (standing charges and unit rates) present significant challenges for households depending on their circumstances. For example, standing charges are regressive as they are disproportionately borne by many low-income households. However, there are many low-income, vulnerable households that benefit from costs being collected through standing charges due to higher energy needs. These include those with medical needs, elderly residents, rural households, and renters in energy-inefficient homes.

Specific groups face unique energy burdens. Households with disabilities or long-term health conditions often struggle with high energy costs for medical equipment and heating, leading to self-rationing. Elderly fuel poor households, particularly in winter, use less energy than their non-fuel poor counterparts, putting them at risk of cold-related health issues. Families, especially single-parent households, tend to spend more on energy and experience more energy debt, increasing their vulnerability. Rural households face additional costs due to inefficient homes, reliance on expensive heating fuels. Renters, particularly in the private sector, often experience poor insulation and higher costs due to prepayment meters.

Energy debt has become a growing issue since the energy crisis, with a 20% rise in households in debt, making repayments an increasing component of energy bills. Prepayment meter (PPM) users, who are more likely to be low-income, have historically faced higher standing charges, further exacerbating fuel poverty.

Current and future expected benefits of innovative tariffs

Innovative tariffs, particularly Time-of-Use (TOU) tariffs, have the potential to reduce energy costs by encouraging off-peak consumption. However, their benefits are not equally accessible to all households. Many fuel poor and vulnerable households face barriers such as limited flexibility to shift energy use, financial constraints, and digital exclusion. Given these challenges, the priority should be on preparing for a future transition to TOU tariffs rather than a rapid rollout, with a focus on ensuring that vulnerable households receive the necessary support to participate equitably.

Options to create greater bill equity for fuel poor households

The literature review discovered a variety of potential support options to help fuel poor households. For near-term support, less complex options like fixed lump-sum payments were preferred as they were considered simple to implement and familiar to households. However, longer-term improvements to the government's data matching could enable more advanced support options, including tiered payments with automatic enrolment, which could improve the effectiveness of support by aligning support with energy needs. The implementation of these improvements would need greater consumer engagement to ensure households can properly react to the changes, and further modelling to ensure vulnerable groups are not left unsupported. Workshop participants supported the use of additional lump sum targeted support measures to support groups with high-energy needs and some participants supported the idea of price reforms or policy cost reallocation when used in addition to other support. There was also support for policy costs to be removed from energy bills and instead collected through general taxation.

However, workshop participants did highlight that the size of support and eligibility criteria are major factors in support outcomes. Further quantitative modelling would be needed to fully evaluate the impact of the different, precise support options.

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