Department for
Energy Security
& Net Zero

Interim Evaluation of Domestic Energy Affordability Support Schemes in Great Britain

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Completed by Ipsos Ltd for the Department for Energy Security and Net Zero prior to the general election in the United Kingdom in July 2024. As such, any references to government policies, commitments, or initiatives may reflect the stance of the previous administration and were accurate at the time of fieldwork.

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1. Executive summary

Introduction

This report presents findings from an interim evaluation of a series of energy affordability support schemes implemented from 2022 for households in Great Britain. This evaluation ran in parallel with one for domestic schemes in Northern Ireland which are evaluated under a separate publication [1] [2]. A final impact and economic evaluation of the domestic schemes across the UK is underway and will be published in due course.

Amid the rises in energy prices and growing concerns about their impacts on consumers in 2022, the UK government launched a package of energy affordability (EA) schemes in Great Britain (GB) to support households during this challenging period.

These schemes had to be deployed at significant speed, scope, and scale, providing near universal support to all households within GB (approximately 28 million households).

- The **Energy Bills Support Scheme (EBSS GB)** was the first energy affordability scheme to be announced. It provided a £400 payment to GB households, distributed via consumers' energy supplier through six monthly payments of £66 or £67 from October 2022 to March 2023, and officially ended on 1st July 2023 (when the final prepayment meter (PPM) vouchers expired)[3]. EBSS GB payments were accessible only to households with a domestic electricity meter point who held a household-specific account with the supplier. Landlords who retained responsibility for energy supply to tenants had a responsibility to ensure that the discount was passed down to tenants,[4] who would have the right to legal redress.
- The Government also introduced the **Energy Price Guarantee (EPG)**, which reduced the amount suppliers could charge for the unit price of electricity and gas for all households with a domestic gas and/or electricity contract. This brought a typical household energy bill, for dual fuel gas and electricity, down to around £2,500 per year in Great Britain from October 2022 until June 2023 and to around £3,000 per year from July 2023 to March 2024. However, from July 2023 onwards the Ofgem energy price cap fell below the EPG meaning the scheme was no longer active. The Government compensated suppliers for the difference between the energy price cap and the EPG. EPG was applied to bills automatically and did not require households to take any action to receive the support.

[1] The interim evaluation for Northern Ireland is available here: https://www.gov.uk/government/publications/domestic-energy-affordability-support-schemes-in-northern-ireland-interim-evaluation

[2] Note that the energy support provided to non-domestic organisations (e.g. businesses, public or voluntary sector organisations) was out of scope and this will also be published under a separate evaluation.

[3] For consumers on traditional (non-smart) prepayment meters, the support was provided via six vouchers, which then had to be credited to consumer accounts at the Post Office or PayPoint.

[4] This was required in instances where the landlord was responsible for payment of the energy bills.

- The **Energy Bills Support Scheme Alternative Funding (EBSS AF)** was designed to ensure that households without a direct relationship with an energy supplier, and hence unable to receive the EBSS GB funding, could access equivalent support. It involved a one-time payment of £400. Eligible households included some care home residents, park homes, houseboats, off grid households and other non-standard energy consumers. The scheme opened for applications in February 2023 and concluded in May 2023. The scheme was application-based, with household applications processed through local authorities. Following delivery of the EBSS AF scheme, a small additional scheme, the **EBSS AF for Continuous Cruisers (EBSS AF CC)**, was launched in September 2023 and concluded in December 2023. This scheme automatically provided a £600 voucher (equivalent value to EBSS plus AFP) for the 7,600 people who live on the waterways that are managed by the Canal & Rivers Trust (CRT) and held a long-term licence (6 or 12 months) for continuous cruising. This group were unable to apply for EBSS or AFP AF funding without a permanent address.
- A further scheme, the **Alternative Fuel Payment (AFP)**, was made available for the approximately 2 million off-gas grid households in Great Britain who rely on alternative fuels such as heating oil or liquid petroleum gas for their heating needs and therefore did not benefit as much from EPG. This sought to account for the rise in the price of alternative fuels that occurred during the energy crisis.[5] This scheme ran between February 2023 and May 2023[6]. Eligible households under the AFP received a one-time payment via their electricity supplier of £200 during the winter season. This was in addition to the £400 EBSS GB payment.
- The **Alternative Fuel Payment Alternative Funding (AFP AF)** provided the same support (a one-off £200 payment) for households who were eligible for, but did not automatically receive, the AFP payment. The scheme was introduced in March 2023 and closed to applications in July 2023. The design of the AFP AF scheme largely followed the EBSS AF, with the scheme being application-based and delivered through local authorities.

As of November 2024, the energy affordability schemes provided around £35.5 billion of support to households since their launch in Q4 2022,[7] EPG support accounted for almost two thirds (65%) of the overall support provided.

The domestic energy affordability schemes' primary objectives were to reduce or avoid underconsumption of energy and its associated negative impacts[8].

Methodology

The evaluation used a theory-based evaluation approach, with a process evaluation providing detailed analysis of the efficiency and effectiveness of processes established to deliver the

[5] DESNZ (2024). Monthly and Annual Prices of Road Fuels and Petroleum Products.
[6] In some cases households received vouchers, which expired at the end of June 2023.
[7] Pending analysis of overall DESNZ delivery costs, this is based on internal monitoring data
[8] National Audit Office (2024) Energy Bills Support: an update

energy affordability schemes. It also used contribution analysis to appraise evidence of its outcomes and early impacts. This evaluation draws on extensive quantitative and qualitative data, including bespoke nationally representative household surveys of residents across Great Britain and interviews with scheme beneficiaries and other stakeholders (such as local authorities and advocacy organisations). It also draws evidence from a range of secondary data sources, including Office of Gas and Electricity Markets (Ofgem), Office for National Statistics (ONS), DESNZ and other government (HMG) surveys and reporting products, as well as price elasticity modelling that has been developed for this evaluation to examine the relationship between financial support and energy consumption.

A final Impact and Economic Evaluation for the UK energy affordability schemes is currently underway, which builds upon the evidence collected in this and the NI evaluations. This will include estimating the costs and benefits of the schemes, an assessment of impacts on the wider economy and further modelling of impacts.

Process evaluation findings

The evaluation found:

- The schemes were set up and delivered at significant speed. This ensured that the vast majority of households received support in time during winter 2022/23, and around 28 million households were supported through the schemes overall.
- For the core schemes, delivery processes were seen as collaborative, effective and proportionate by delivery partners. Suppliers raised issues suggesting that compliance and reporting were resource intensive for EBSS GB. The voucher element for traditional PPM presented some challenges given this group were often hard to reach. Energy suppliers and local authorities had issues with initial scheme communication from HMG/DESNZ, but this generally improved throughout scheme delivery.
- For those that were aware of the schemes, satisfaction levels were high. For EPG 69% of consumers were satisfied with how the discount was applied. For EBSS GB 61% were satisfied with the amount provided and this figure was similar for the EBSS alternative schemes (63%).
- Whilst awareness of the details of the energy affordability schemes varied across households, those eligible for automatic schemes were supported regardless of their awareness and understanding of the schemes. Low rates of awareness did, however, pose a barrier to households accessing the application based, EBSS AF and AFP AF schemes (as well as voucher-based variants of EBSS). For EPG, although delivered automatically, the scheme implicitly depended upon increased awareness and reassurance of households concerned about rising energy bills. Therefore, lower awareness may have limited the extent to which EPG supported households to avoid harmful mitigation behaviours.
- Awareness of the application-based schemes was lower among vulnerable populations including those with lower digital literacy or access (such as those in care homes and

people with a disability affecting their digital access or literacy) and those in hard-to-reach groups (such as those in temporary accommodation or those in remote locations).

- Levels of awareness and understanding may have limited the effectiveness of energy affordability schemes in terms of maintaining consumption levels, delivering health and wellbeing, household finance outcomes. This low level of awareness of the nature of the support may have led some households to cut down their consumption more than was necessary.
- Levels of fraud and error were noted as comparatively low, and this was confirmed by a recent NAO Review[9].

Outcome evaluation findings

The schemes were able to ensure the vast majority of households received support in time during winter 22/23 and around 28 million households were supported through the schemes overall.

Concern

- The energy affordability schemes contributed to lowering households' level of concern about energy bills and household finances. However, over half of households were worried about paying bills in late 2022 and this remained high during the intervention period. Over a quarter of households (28%) stated they wouldn't have been able to afford their energy bills without the government support and two fifths (40%) of households reported that they would have had to reduce spending on essential items without the support.

Consumption

- There is considerable evidence that the energy affordability schemes helped support a large number of households to maintain their energy consumption to a safe and comfortable level, while limiting their use of harmful mitigation strategies (such as reducing energy use, borrowing, or reducing spending on essentials)
- Underheating did remain an issue during the intervention period. Some 29% of households reported that they avoided heating their homes most of the time and two per cent reported they were not able to heat their home at all in winter 2022/23.
- Price elasticity modelling indicates that EPG and EBSS induced a more-than 20% increase in energy usage amongst households in the four lowest income deciles- and a 28% increase for the lowest income decile.
- For prepayment meter households, 43% reported incidents of self-disconnection during winter 2022/23 (with over half of these respondents saying it was due to financial reasons). However, without the schemes, a larger share of households may have had to

[9] National Audit Office (2024) Energy Bills Support: an update. Estimates 0.7% fraud and error across energy affordability programmes

disconnect from their energy supply: 26% of PPM households said they would definitely have been unable to afford to pay their bills without the support in winter 2022/23. Almost three fifths (57%) of PPM (smart or traditional) households in GB reported they would probably or definitely not have been able to afford their energy bills in the absence of the schemes in winter 2022/23.

Household Finances

- The schemes limited the number of households that would not have been able to pay their energy bills and who would have gone into energy debt with their supplier. Overall, 59% of GB households, who reported having to reduce their spending due to higher energy costs, and 15% of GB households, who took on household debt said they would have needed to do so to a 'considerably greater extent' without the energy affordability schemes.
- DESNZ analysis of the Annual Fuel Poverty Statistics shows that 289,000 additional households in England would have experienced fuel poverty without the support provided, equivalent to an additional 1.2 per cent of all households This is consistent with the evidence from the surveys conducted for the evaluation. In the absence of the schemes, approximately nine million additional households would have needed to spend over 10% of their household income on energy in the absence of EPG and EBSS GB support during winter 2022-23.

Health and wellbeing

- Evidence confirms the strong association between underconsumption and health and wellbeing impacts. There is evidence that the reduction of underconsumption had limited these outcomes. Out of GB households, 60% would have reduced their energy use to a considerably greater extent in winter 2022/23 without the government's support. This is representative of approximately 17 million households.

Supplier stability

- Interviews with suppliers, and monitoring data, indicated that the schemes helped to reduce supplier insolvency risk. Of the three-quarters of GB households that said they did not go into debt with an energy supplier in winter 2022/23, 20% reported it was "fairly likely" and 6% reported it was "very likely" they would have gone into debt with their energy supplier without government's financial support.

Lessons Learnt

Designing future support schemes can build on the learning emerging from this work.

- Lump sum credits on bills (such as EBSS) are most easily understood by consumers and provide more immediate reassurance to households. Maximum unit prices have a different but important role to play in managing price levels, though their implications may not be understood by consumers without considerable challenges.

- The EA schemes have shown the difficulty in precise targeting given the variance in households' relationships to the energy market, and the difficulty of identifying vulnerable households directly. It is possible to target based on means tested benefits, and possibly priority service registers, but not at the pace required to meet the energy crisis experienced in 2022/23. Resolving this presents significant design and data sharing challenges. There is no evidence gathered from this evaluation which suggests that there were alternative options available at the time which would have been more effective at delivering support quickly.
- The evaluation has shown the importance of awareness in reassuring households that support is available. This requires development of sufficient communications and engagement strategies, timescales allowing.

2. Glossary

Term	Definition
Continuous Cruiser	A continuous cruiser is a boater on UK inland waterways, specifically those managed by the Canal & River Trust, who operates under a continuous cruiser licence. This licence is designed for boaters who are constantly traveling and do not have a fixed home mooring
Energy Price Cap	The energy price cap limits how much suppliers can charge for each unit of electricity or gas used.
Energy Suppliers	An energy supplier is a company that sells energy, like electricity and natural gas, to consumers. They buy this energy wholesale from generators and resell it to homes and businesses in the areas they are licensed to operate.
Heat network	Heat networks are distribution systems of insulated pipes that take heat from a central source and deliver it to a number of domestic or non-domestic properties.
Intermediary	In this context, an intermediary would be the individual who would pass on the cost of electricity or gas (or other types of energy) - and likewise the financial support received through the energy affordability schemes - to a household. For example, a landlord could be the intermediary between the renter and an energy supplier.
Ofgem	Office of Gas and Electricity Markets
Scheme Administration	The organisation(s) responsible for the day-to-day management and deployment of the energy affordability schemes.
Theory of Change (ToC)	A Theory of Change provides a simplified overview of the schemes' inputs (such as financial inputs, people or organisational inputs, infrastructure utilised), activities (activities that use inputs and result in outputs) and outputs (products of the programme activities), as well as the hypothesised outcomes (expected social, economic, environmental, etc. changes experienced by beneficiaries and other stakeholders) and impacts (systematic changes expected in the long-term).

Contribution Analysis	A contribution analysis assesses evidence against the interventions' ToC and the hypothesised outcomes derived from the ToC. Contribution analysis can also be used to help explain how and why changes did, or did not, occur, and to assess what other factors may also have contributed to outcomes.
Contribution Claim	A contribution claim is a testable statement about how an intervention's activities contribute to intended outcomes. It asserts a cause-and-effect relationship between intervention activities and observed results, explaining how and why a program works within a specific context.
LCA (Latent Class Analysis)	Latent class analysis (LCA) identifies latent groups in the population based on a set of observed variables and is typically conducted in an exploratory manner with no a priori hypotheses regarding the number or nature of the latent classes.
Underconsumption	The purchase of goods and services at a level lower than that of their supply

3. Introduction

3.1 Overview of study and work completed

In April 2023, DESNZ (the Department for Energy Security and Net Zero) commissioned Ipsos, in association with London Economics and National Energy Action, to undertake an interim evaluation of a series of support schemes for households, referred to collectively as the energy affordability (EA) schemes throughout the rest of the report[10].

The evaluation uses a process and theory-based evaluation approach, providing detailed analysis of the efficiency and effectiveness of processes established to deliver the energy affordability schemes, and it also uses contribution analysis to appraise evidence of its outcomes and impacts. This evaluation draws on extensive quantitative and qualitative data, including nationally representative household surveys of residents across Great Britain and interviews with scheme beneficiaries and other stakeholders (such as local authorities and experts in vulnerable groups). It also draws evidence from a range of secondary data sources, including data from the Office of Gas and Electricity Markets (Ofgem), the Office for National Statistics (ONS), DESNZ and other government (HMG) survey and reporting outputs. It also utilised price elasticity models that have been developed for this evaluation to examine the relationship between financial support and energy consumption.

3.2 Purpose and structure of this report

This report presents the findings of the final analysis for the process and outcome evaluation for the interim evaluation of the energy affordability support schemes.

This report is structured as follows:

- **Chapter 4** provides an overview of the context for and details of the energy affordability schemes;
- **Chapter 5** summarises this evaluation's aims and objectives, its approach and methodology, and the data and sources of evidence informing the evaluation's findings;
- **Chapter 6** presents the energy affordability schemes' Theory of Change;
- **Chapter 7** synthesises the findings from the process evaluation of the energy schemes;
- **Chapter 8** reports the results of the outcome evaluation of the energy schemes;
- **Chapter 9** concludes with a summary of findings and lessons learnt.

[10] This evaluation sits alongside two further evaluations: An interim evaluation for Northern Ireland ADD LINK WHEN AVAILABLE and UK Impact and Economic evaluations currently underway.

4. Overview of Energy Affordability Support Schemes

This chapter outlines the rationale for the schemes, their scope and a summary of the progress in delivery of each of the schemes.

4.1 Rationale for the domestic energy affordability support schemes

In 2022, households faced an unprecedented increase in prices across energy and non-energy expenditure, which placed increasing pressure on household budgets. The Government anticipated that the increase in prices could lead to households significantly reducing their heating and energy usage and an increase in household energy disconnections and energy debt. This could have had severe adverse effects on consumers health and wellbeing, increased the risk of supplier insolvency and had wider effects on economic output. The UK Government therefore launched the energy affordability support schemes to alleviate the pressure on household finances, to limit the subsequent consumption impacts on energy and non-energy sectors, and the wider effects on the energy market and economy.

Wholesale energy markets experienced several significant shocks between 2021 to 2023. This included increases in demand following the economic recovery from the COVID-19 pandemic (including changes to working patterns and remote working), as well as rising geo-political tensions and supply-side shocks stemming from the Russian invasion of Ukraine. These factors meant that wholesale gas prices increased significantly in February 2022, nearly quadrupling from early 2021 to January 2022. This had a particular impact on the UK due to its energy mix and contributed to a significant rise in the price of electricity, as gas was the energy source for around a third of electricity generation and has a leading role in setting the price of energy.

The surge in wholesale prices led to a 54% increase in the Office of Gas and Electricity Markets' (Ofgem) energy price cap in April 2022, (representing a £693 increase in the annual dual fuel energy bill for a typical household), impacting around 22 million households. There was a further estimated £830 increase predicted for October 2022, resulting in the highest ever year-on-year energy cost escalation, reaching unprecedented levels. These volatile price increases caused widespread concern about the affordability of energy bills, raising concerns about households cutting down other essential spending in anticipation of expected increases in their energy bills. This, coupled with cost-of-living pressures and high levels of inflation in the UK, put considerable pressure on households' finances[11]. Several support measures were already available to vulnerable consumers, including the Warm Home Discount, Energy Company Obligation, Winter Fuel Payments, and Cold Weather Payments. These means-

[11] Inflation in the UK surged by more than 8% during the period from May 2021 to May 2022, with the Bank of England estimating that nearly half of this hike could be attributed to elevated energy prices.

tested initiatives were, however, considered insufficient to counter the 2022 rise in costs, as they were narrowly targeted at specific household groups. Furthermore, these schemes were not linked to energy prices, so did not automatically provide extra support to eligible customers as a result of substantial energy price rises. In addition, the size of the anticipated price rise also meant that a large number of households at risk of becoming fuel poor, would not have been eligible to access existing means-tested schemes.

4.2 Overview of the energy affordability support schemes

Amid the rises in energy prices and growing concerns about their impacts on consumers, the UK government launched a package of energy affordability schemes in Great Britain (GB) to support households during this challenging period described below. These schemes had to be deployed at significant speed, scope and scale, providing near universal support to all households within GB (approximately 28 million households). Overall, DESNZ had responsibility for the design and delivery of the schemes with input from HM Treasury. Given the central role of suppliers, Ofgem was responsible for monitoring supplier compliance with the supplier obligations for the schemes in Great Britain, such as ensuring that bills are reduced to the levels specified and assessing the need for, and taking, enforcement action where required[12].

- The **Energy Bills Support Scheme (EBSS GB)** was the first energy affordability scheme to be announced. It provided a £400 payment to GB households, distributed through their energy supplier through six monthly payments of £66 or £67 from October 2022 to March 2023, and officially ended on 1st July 2023 (when the final prepayment meter (PPM) vouchers expired). EBSS GB payments were accessible only to households with a domestic electricity meter point who held a household-specific account with the supplier. Landlords who retained responsibility for energy supply to tenants had a responsibility to ensure that the discount was passed down to tenants[13], who would have the right to legal redress. For consumers on traditional (non-smart) prepayment meters, the support was provided via six vouchers, which then had to be credited to consumer accounts at the Post Office or PayPoint.
- The Government also introduced the **Energy Price Guarantee (EPG)**, which established a maximum unit price – distinct from the existing energy price cap – on the unit price of electricity and gas for all households with a domestic gas and/or electricity contract. This brought a typical household energy bill for dual fuel gas and electricity down to around £2,500 per year in Great Britain. The scheme was introduced in October 2022 and was concluded in March 2024, however from July 2023 onwards the price cap fell below the EPG meaning it was no longer active. The Government compensated suppliers for the difference between the energy price cap and the EPG. In practice, energy suppliers applied the discounts to the households' bills before receiving the weekly payments from the scheme administrators (Elexon and Xoserve). Energy

[12] Committee of Public Accounts (2023). Fifty-eighth Report of Session 2022/23: Energy bills support.
[13] This was required in instances where the landlord was responsible for payment of the energy bills.

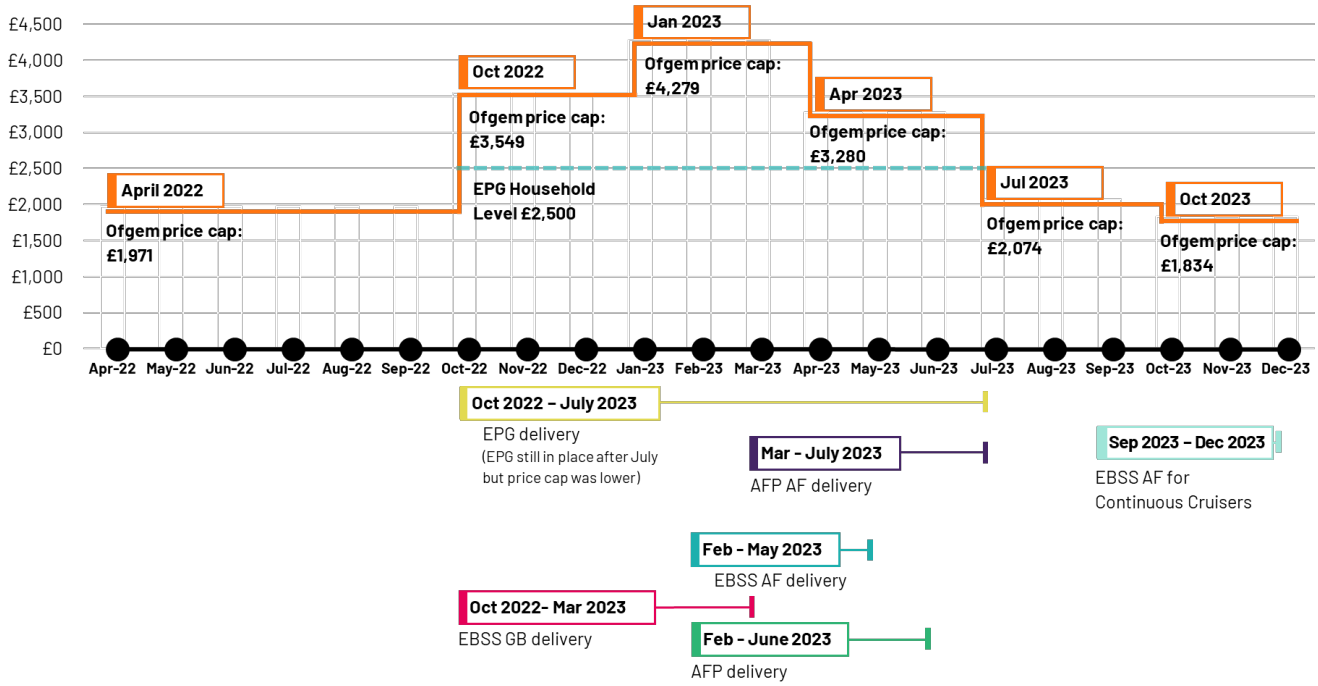
suppliers then shared meter readings and accurate energy consumption details to the scheme administrators who calculated the payment reconciliation amounts. DESNZ later checked and approved all payments made to energy suppliers.

- The **Energy Bills Support Scheme Alternative Funding (EBSS AF)** was designed to ensure that households without a direct relationship with an energy supplier, and hence unable to receive the EBSS GB funding, could access equivalent support. It involved a one-time payment of £400 and targeted an estimated population of 900,000 eligible households which included care home residents, park homes, houseboats, off grid households and other non-standard energy consumers. The scheme opened for applications in February 2023 and concluded in May 2023. The scheme was application-based, with household applications processed through local authorities. Following delivery of the EBSS AF scheme, an additional scheme, the **EBSS AF for Continuous Cruisers (EBSS AF CC)**, was launched in September 2023 and concluded in December 2023. This scheme was targeted at the 7,600 people who live on the waterways that are managed by the Canal & Rivers Trust (CRT) and hold a long-term licence (6 or 12 months) for continuous cruising, as they were unable to apply for EBSS AF funding without a permanent address. The scheme did not require an application and was provided automatically to anyone that held a continuous cruisers' licence during the EBSS AF intervention period. The scheme was delivered by DESNZ as a one-off £600 voucher (equivalent value to EBSS plus AFP), redeemable via online bank transfer, or by visiting a local store that had a PayPoint terminal.
- A further scheme, the **Alternative Fuel Payment (AFP)**, was made available for the approximate 2 million off-gas grid households in Great Britain who rely on alternative fuels such as heating oil or liquid petroleum gas for their heating needs and therefore did not benefit as much from EPG. This sought to account for the rise in the price of alternative fuels that occurred during the energy crisis[14]. This scheme ran between February 2023 and May 2023 (in some cases households received vouchers, which expired at the end of June 2023). Eligible households under the AFP received a one-time payment via their electricity supplier of £200 during the winter season, for the increasing expenses associated with alternative fuel sources. This was in addition to the £400 EBSS GB grant.
- The **Alternative Fuel Payment Alternative Funding (AFP AF)** provided the same support (a one-off £200 payment) for households who were eligible for but did not automatically receive the AFP payment. These households typically included alternative fuel users living in a postcode not identified as eligible for AFP, those without their own electricity supply, or those without a direct relationship with the electricity supplier, such as those living in caravans, houseboats (with a fixed mooring) or park homes. The scheme was introduced in March 2023 and closed in July 2023, with final payments made through local authorities in September 2023. The design of the AFP AF scheme largely followed the EBSS AF, with the scheme being application-based and delivered through local authorities.

[14] DESNZ (2024). Monthly and Annual Prices of Road Fuels and Petroleum Products.

Figure 4.1 below provides details of each scheme's delivery progress, according to monitoring data and additional secondary sources.

Figure 4.1 Timeline for the Energy Affordability Support Schemes in Great Britain



Total expenditure across the portfolio was approximately £35.5 billion, as of July 2024.

Table 4.1: Support delivered through domestic energy affordability (November 2023-July 2024)

Scheme	Expenditure to date (£ million)	Of which, percentage of estimated expenditure	Number of households reached	Scheme end date
EPG	23,711	~24%[15]	~29,300,000[16]	31st March 2024[17]
EBSS GB	11,364	99%	28,804,096	31st March 2023
AFP	369	66%	1,860,830	30th June 2023
EBSS AF	58.1	6%[18]	145,190	31st May 2023[19]
AFP AF	18	39%	89,750	31st July 2023[20]
AF CC	3.8	74.5%	6,408	31st December 2023

[15]This is based on the estimated notional average cost of £95 billion provided in the EPG business case, which was based on the 10-day forward price average energy cost at the time of writing the business case (September 2022). This value had an uncertainty range between £53 billion and £193 billion. This implies actual delivery costs were between 12% - 43% of costs estimated in the business case. Therefore, it is worth noting that the actual costs of delivering EPG are indicative of energy market changes, rather than due to the scheme failing to deliver the discount to customers.

[16] This is based on the number of domestic electricity meters in GB and will be an overstatement of the number of households given that it will include vacant properties and that dwellings can include multiple meters. Source: Smart Meter Statistics in Great Britain: Quarterly Report to end December 2022

[17] 1st July 2023 the energy price cap fell below the EPG meaning the EPG support no longer applied.

[18] Based on the estimated scheme expenditure set out in the Business Case. The process evaluation in chapter 7 discusses in more detail these low take-up rates for the EBSS AF and AFP AF schemes.

[19] Vouchers could still be redeemed until 30th June 2023.

[20] Closed to new applications 31st May 2023.

5. Evaluation approach and methodology

5.1 Evaluation aims

The scope of this evaluation is to gather evidence on, and assess, the awareness, understanding, perceptions, and experience related to the delivery of the energy affordability schemes. It also includes the gathering of evidence on the perceived outcomes of the schemes.

5.1.1 Process evaluation aims

The overarching aims of the process evaluation are:

- To explore how the interventions were implemented, including implementation effectiveness and consistency of implementation across recipient groups and by delivery mechanism;
- To explore awareness, understanding, perceptions and experience of the interventions among different recipient groups.

5.1.2 Outcome evaluation aims

The overarching aims of the outcome evaluation are:

- To provide evidence on the outcomes and the perceived impacts of the interventions;
- To provide early insights into the impacts of the interventions as reported by households and stakeholders and through modelled evidence and secondary data analysis.

Underpinning these overarching aims were a comprehensive set of evaluation questions, which are set out in Annex A. Scoping activities informing the study method and design included performing a desk review of programme documentation, wider literature on the context within which the schemes were launched, and 12 scoping interviews with DESNZ stakeholders involved in the design and delivery of the intervention.[21]

5.2 Summary of evaluation approach

Overall, as an interim and early outcome evaluation, this evaluation uses a **theory-based evaluation (TBE)** approach to examine how the energy affordability schemes have been delivered (process) and how they contributed towards their intended outputs and outcomes. This evaluation also draws upon a range of modelling and secondary data analysis to support the understanding of the process and outcomes of the schemes. A separate economic and

[21] Scoping interviews focused primarily on the following thematic areas: i) the rationale for the energy affordability scheme interventions; ii) the anticipated intervention-level outcomes and impacts, how they are expected to arise, and key risks and assumptions; and iii) key delivery processes and the criteria against which they should be measured.

impact evaluation of the schemes was commissioned in 2024 to provide final evidence on attribution of impact and overall value for money.

The unique context within which the schemes were launched, and the universal nature of the intervention informed the overall evaluation approach. The energy affordability schemes were launched at pace following a period of extreme disruption, resulting from COVID-19, structural changes in domestic energy consumption as remote working patterns settle, as well as the invasion of Ukraine, with widely acknowledged inflationary pressures exacerbating these structural changes. This means that any interpretation of change observed over time required close attention to the broader context and any external drivers of change that might offer alternative explanation for any change observed. This was particularly difficult as all energy affordability schemes were implemented prior to the evaluation work taking place.

A TBE approach was therefore considered most appropriate. A TBE involves scrutinising the assumptions underlying the causal chain from inputs to outcomes and impact. The approach seeks to understand how and why the programmes may have, or have not, influenced outcomes. As elaborated by White (2009), a rigorous TBE is based on the following four key steps:[22]

- **Mapping the causal chain (Theory of Change):** This evaluation mapped the intervention theory by developing scheme level Theories of Change (ToCs) and summarising in an overarching Theory of Change (ToC). A ToC articulates how an intervention is expected to work. It outlines the links between the inputs and activities comprising an intervention, and it shows how, under what assumptions, they are expected to lead to outputs and outcomes that produce its expected impacts.[23],[24] .[25],[26]
- **Performing an evaluation of the interventions' processes and recipients' experience (process evaluation):** To appraise the delivery of the energy affordability schemes, this study's process evaluation explored both subjective stakeholder perceptions and factual details about the delivery of the schemes from its monitoring data. A process evaluation examines how an intervention is implemented. It identifies procedures and decisions made during delivery, considers how these functions operate, and assesses the efficacy of implementation or whether it appropriately served the recipient population.[27] The focus of the process evaluation was guided by a set of process evaluation questions (see Annex A: Technical annex).
- **Conducting an evaluation on the interventions' outcomes, which is informed by different sources of quantitative and qualitative evidence (outcome evaluation):** A

[22] White (2009). Theory-based impact evaluation: principles and practice. International Initiative for Impact Evaluation. 3ie Working Paper 3.
[23] Funnell, S., & Rogers, P. (2011). Purposeful program theory: Effective use of theories of change and logic models. San Francisco, CA: Jossey-Bass.
[24] Stein & Valters (2012). Understanding Theory of Change in International Development. JSRP Paper 1. ISSN 2051-0926.
[25] Mayne, (2015). Useful theory of change models. Canadian Journal of Program Evaluation, 30(2), 119–142.
[26] For further details, please see the UK Governments' central analytical functions guidance on the Theory of Change Process
[27] Scheirer (1994). Designing and Using Process Evaluation. Handbook of Practical Program Evaluation. San Francisco: Jossey-Bass.

rigorous evaluation of the outcomes of an intervention is a key component of a TBE. A programme produces outcomes when anticipated and desired, or unanticipated and undesired change occurs that can be traced back to the intervention as a (partial) cause or influence. This study's outcome evaluation utilised contribution analysis, which assesses evidence against the intervention's ToC and the critical causal pathways (or claims) inferred from the ToC. It creates a description that, through the weight of evidence, demonstrates a plausible relationship between an intervention and its hypothesised outcomes.[28,29] A set of outcome evaluation questions set out in Annex A: Technical Annex focussed the outcome evaluation on ToC areas of particular interest.

5.2.1 Theory of Change development

To develop the ToC for each energy affordability scheme, the evaluation team initially created draft ToCs through several scoping activities including a review of programme and policy documentation, and scoping interviews with delivery teams. During the scoping phase, the evaluation team built an understanding of the scheme rationales, the expected outcomes and impacts of the schemes and allowed evaluators to explore the theory and assumptions underpinning this.

The evaluation team then organised a series of **ToC workshops** with members of the DESNZ policy team to further develop the details of the ToC for each scheme. Delivery team members closest to the details of the schemes attended different workshops, and the workshops were also attended by those responsible for the NI schemes. Workshop attendees reviewed and outlined each schemes' inputs and activities, outputs, outcomes and impacts, and the critical assumptions underlining the relationships between each of these factors.[30] As part of the ToC workshops, attendees deliberated on which outcomes were most relevant for each scheme, and how these differed by different groups of households.

ToCs were later **refined after completion of the first and second waves of fieldwork, together with a narrative to explain and contextualise them**. This involved a synthesis and review of evidence collected at each stage, to allow the evaluation team to gain insights into how each energy affordability scheme was delivered, whether the causal links and assumptions held true and what risks have materialised. At each stage the team also reviewed ToCs, the accompanying narrative, and relevant critical pathways, assumptions and risks for specific groups of the population. Given the complexity of the schemes – i.e. the fact that there are multiple objectives and targeted beneficiaries (households, suppliers and the UK economy broadly), as well as secondary benefits, and given the high level of involvement from the delivery teams, there was an intention to reflect as much as possible of the schemes' strategies and nuances in the ToCs.

[28] Mayne (2019). Revisiting Contribution Analysis
[29] Further details about contribution analysis are provided in Magenta_Book_Annex_A._Analytical_methods_for_use_within_an_evaluation.
[30] These discussions also considered the context within which the schemes were set up and how they were being communicated to suppliers and consumers, the requirement to set up schemes at speed vs alternative delivery models that might have allowed more targeted support (e.g. through the benefits system), the specific delivery mechanisms established, and the unique characteristics or challenges of schemes' target groups and the eligibility criteria for each scheme.

In Annex B of this evaluation report, a final review of the ToCs has been conducted. The purpose of the final assessment is to (1) assess the overall evaluability of the ToC diagrams ex-ante – i.e. the extent to which the ToCs were useful (sufficient, accurate, logical) as a framework for the evaluation, and (2) the extent to which the schemes' theory(s), their causal assumptions (i.e. contribution claims), were valid. The purpose of this final review is to inform / provide lessons for the underpinning design of future schemes.

5.2.2 Process evaluation

To provide a framework for the process evaluation and identify lessons for future DESNZ policy and programmes, the processes used to deliver the schemes were identified through documentation review and stakeholder interviews and set out in a 'process map'. These process maps complement and add value to the ToC by describing the flow of work to deliver the schemes. They illustrate the schemes' governance architecture, and the roles and responsibilities of various stakeholders involved in decision-making and delivery processes as well as dependencies between processes. Using qualitative interviews and quantitative monitoring data, this study's process evaluation explored both subjective perceptions and objective details of the ways the energy affordability schemes were delivered. It examined the awareness, understanding, perceptions and experience of the interventions among different recipient groups and stakeholders against how it was expected they would function. The process evaluation assessed the following key factors related to the delivery of the schemes in Table 5.1.

Table 5.1: Delivery processes / stages investigated and evaluated as part of the process evaluation analysis

Stage / process group	Types of delivery activities covered
Scheme design, set up and communications	Scoping work done by DESNZ before the interventions, drafting and finalising the business cases, launching guidance for local authorities and energy suppliers, and communications to increase awareness
Contracting and revisions	Setting up the contracts with local authorities and energy suppliers and the transfer of funds to local authorities and energy suppliers
Delivery of payments	Facilitation of the payments from local authorities and energy suppliers to beneficiaries
Compliance, assurance and audit of schemes	Checks and assurance processes to ensure local authorities and energy suppliers deliver the interventions as expected

Stage / process group	Types of delivery activities covered
Final reconciliation and scheme closure	End of scheme reporting and comparison of actual vs. estimated costs for delivering interventions[31]
Household perceptions towards and experience of schemes	Opinions and beliefs of households on the necessity of the interventions, and their experience of applying for them (where applicable) and receiving them
Stakeholder experiences of the schemes	Opinions and experiences of energy suppliers, local authorities, scheme administrators, and experts in vulnerable consumers on the necessity of the schemes and their delivery (where applicable)

5.2.3 Outcome evaluation

To examine the outcomes of the energy affordability schemes, a contribution analysis was conducted. A contribution analysis aims at understanding the contribution a policy or programme has made to the observed outcomes and impacts. It belongs to the group of theory-based evaluations, which are based on testing evaluators assumptions or theory of how change is expected to occur following an intervention (see section 6 for details). Contribution analysis can also be used to help explain how and why changes did, or did not, occur[32], the role of the intervention in this, and to assess what other factors may also have contributed to outcomes.

Contribution analysis begins with the development of a ToC (see section 5.2.1 above). In the initial stages of the evaluation, following the ToC workshops, an evaluability assessment of the ToC was conducted to assess the logic of the anticipated causal pathways. In addition, evidence from the literature was reviewed to initially validate the ToC, in particular a) whether the change expected in each outcome area would be likely to be observed, b) the assumptions that might need to be tested, and c) other factors that might influence any outcomes observed and which would also need to be investigated in the evaluation. This framework then underpinned the development of research tools for the evaluation.

An outcome evaluation framework was also developed. This was comprised of a set of contribution stories and contribution claims setting out: which links and mechanisms in the ToC are well evidenced, which lack evidence, the credibility of the contribution story overall, and any main weaknesses in the contribution story.

[31] At the time of writing, not all schemes had reached final reconciliation stage
[32] Mayne, J (2001). 'Addressing Attribution through Contribution Analysis: Using Performance Measures Sensibly', Canadian Journal of Program Evaluation 16.1: 1–24; Mayne, J (2008). Contribution Analysis: An approach to exploring cause and effect. Brief 16, Institutional Learning and Change (ILAC) Initiative

At the interim stage of the evaluation, following the first 'wave' (wave 1) of household survey and qualitative interviews with stakeholders and households, the evaluation team reviewed evidence against the framework. The team then revised the ToC, its contribution stories, and the associated hypothesised contribution claims. These iterations helped identify areas for further data collection (if the initial evidence is weak or limited) or alternative hypotheses that might explain changes over time in the hypothesised outcome that should be further investigated.

In appraising the extent to which the schemes contributed to their different intended outcomes, the evaluation team has systematically assessed (and this is reflected in the structure of the analysis presented in chapter 8):

i. Whether there was any change in targeted outcome areas – i.e. whether the positive change which the schemes intended to (help) bring about occurred or not.

ii. Evidence of scheme contribution to observed change – i.e. whether there is agreement of evidence with the hypothesised outcome/contribution.

iii. Prevalence of reported contribution to outcomes (or how widespread the impact was) – this analysis provides some indication of the scale of contribution of the scheme.

iv. Magnitude of reported contribution to outcomes (or how critical the energy affordability schemes were to the outcome materialising across the eligible population) – this analysis provides some indication of the scale of contribution of the scheme compared to other potential influences or drivers.

v. Heterogeneity of experiences or outcomes across households, which considers who are more or less likely to report positive outcomes aligned with the hypothesised contribution. This dimension also considered which groups have received sufficient/insufficient support through the schemes, and whether any groups received support they did not need. In this sense, the heterogeneity analysis aligns with the analysis of relative contribution (or additionality) of the scheme, which is a common component of contribution analysis.

vi. Risk of bias of in the findings, given the nature of the evidence and the strengths and limitations of the data collected and the analysis conducted.

For the critical appraisal (or risk of bias) of the findings, the evaluation has considered both the strengths and weaknesses of the evidence and analytical approach. This has included consideration of: **source credibility** (i.e. whether the most important / expert sources been consulted and whether evidence captured with these groups covers the most relevant themes), sample representativeness (i.e. whether the base coverage is sufficient to provide robust indications), **evidence coverage** (i.e. whether the evidence collected covers all aspects of the causal hypothesis, or whether there are some information gaps remaining), temporal coverage (i.e. whether the evidence been collected at the most relevant timepoint - when an anticipated change would have been expected to occur, or only at the prior point when inferences and assumptions only can be drawn; and also the reliability of baseline data), **evidence**

convergence[33] (i.e. whether, when triangulated, evidence from different sources indicates the same, similar, or complementary findings/conclusions, or whether there is divergence; and whether, if there is divergence, this can be explained logically in terms of the different perspectives / experiences / backgrounds of the stakeholder / the written source to build up a credible causal story), **evidence plausibility** (i.e. taking the causal argument indicated by the evidence, whether the evidence appears plausible given what is known in general or proven in the literature about the contextual landscape and behaviours), **respondent bias** (i.e. whether there is a risk that any of the groups consulted would have been more/less likely to respond in a specific way due to the design of the survey), **recall challenges** (i.e. whether the respondent would have been likely or not to recall past situations (near-) accurately), and **optimism bias** (i.e. whether the analysis sufficiently considers alternative explanations, other than the intervention, for change observed).

5.2.4 Data synthesis and triangulation approach

To triangulate evidence, the evaluation team created a mixed-methods evidence matrix, which maps different types of data from multiple sources, such as interviews, surveys, observations, or secondary data, against key elements of the ToC or the factors used to structure the process evaluation. A mixed methods evidence matrix is a useful tool used to integrate and synthesise different types of data and provides a systematic framework for organising, comparing, and analysing data. The matrix consisted of rows representing different data sources and columns representing key themes or variables of interest, mapped against contribution claims and evaluation questions.[34] For each stage of the evaluation, we used the evidence matrix to identify where findings agree (convergence), offer complementary information on the same issue (complementarity), or appear to contradict each other (discrepancy or dissonance). The evaluation team's interpretation of evidence was also tested through a validation workshop with DESNZ teams at each stage of the study.

5.3 Data and sources of evidence

5.3.1 Household surveys

This evaluation draws on evidence from two waves of data collected from two separate longitudinal surveys.

Ipsos KnowledgePanel survey: A nationally representative survey of Great Britain using Ipsos' proprietary random probability online panel survey, UK KnowledgePanel (KP), the largest online random probability panel in the UK. The survey covers households receiving all

[33] This aligns with Delahais and Toulemonde (2017)'s approach to categorising evidence. They provide some examples of evidence types by 'confidence level' – i.e. evidence derived from authoritative source - a piece of evidence which has already passed a thorough test under the responsibility of credible authorities in so far as the point at issue is not in dispute, convergent triangulated sources. or consistency in the chronology of an intervention and a sequence of change. See: Delahais, T., & Toulemonde, J. (2017). Making rigorous causal claims in a real-life context: Has research contributed to sustainable forest management? Evaluation, 23(4), 370-388.

[34] BMJ (2010). Three techniques for integrating data in mixed methods studies.

five interventions, however since most households in Great Britain were recipients of EBSS GB and EPG, this survey is primarily representative of those populations. This survey was conducted in two waves with residents from across Great Britain aged 16+.

- Wave 1 included 7,850 respondents (between 28th July – 16th August 2023)
- Wave 2 included 6,874 respondents (between 14th March – 20th March 2024)

KnowledgePanel survey panellists are recruited via a random probability unclustered address-based sampling method. This means that every household in the UK has a known chance of being selected to join the panel, including those who are digitally excluded (see Annex A: Technical Annex for further information).

Alternative schemes survey: Due to the lower incidence of the EBSS AF, AFP, and AFP AF populations in the general population (only a small proportion were captured in the KnowledgePanel survey above), a separate non-representative survey was conducted among successful applicants to EBSS AF and AFP AF, and those eligible for AFP (based on their postcode). The alternative schemes survey was conducted using a push-to-web design (i.e. applicants were contacted by post to invite them to complete the first survey online). The survey was conducted in two waves:

- Wave 1 included 10,919 respondents (between 30th October – 21st December 2023)
- Wave 2 included 3,976 respondents (between 5th April – 21st May 2024)

Participants for these surveys were selected from a sample frame of applicants (for EBSS AF and AFP AF) and eligible households (for AFP) provided by DESNZ. The samples were stratified by Local Authority to match the regional distribution of the sample frames provided. Additionally, sample boosts were applied for specific applicant groups, such as houseboats, tenants, and travellers, to allow for subgroup analysis. The recruitment approach for the alternative schemes survey involved inviting participants to take part in an online survey via a letter to their home. To capture the views of the digitally excluded, we also offered participants the option to complete by telephone (see Annex A: Technical Annex for further information).

Analysis of survey data: The analysis of the survey data comprised of a descriptive analysis of respondent's responses and the sample's characteristics, including tables and cross-tabulations showing variables distributions and the statistical significance between different groups of respondents' responses.[35] Analysis was undertaken separately for the KnowledgePanel and Alternative Schemes surveys. Survey data was analysed and reported at a total population level and, where relevant by bivariate descriptive analyses of outcome variables by relevant subgroups (for example, gender, age or property type). Statistical significance testing (at a 95% confidence level) was used to determine if differences in responses between different subgroups represented a true difference or random variation. Only differences between subgroups or different survey waves (i.e. Wave 1 and Wave 2) that are statistically significant are interpreted in this report, unless otherwise stated. It is important to remember that statistical significance alone does not tell us if a finding is important or

[35] Statistical tests reporting the significance of the differences between groups responses to survey questions using a z-test with a confidence interval of 95%.

relevant in a real-world context. For example, a statistically significant difference of 1%, might be considered too small to have real-world or practical implications relevant to the research aims and objectives, even if it's unlikely to occur by chance.

The analysis also included performing multivariate regression analysis and Latent Class Analysis examining variation in participant responses for a selection of outcome variables according to factors such as age, income, ethnicity, disability, expenditure on energy (as a proportion of income), payment type, and others (see Annex C: Supplementary research). All reported statistics and analysis have been produced using longitudinal weights between survey waves, to account for attrition between waves (see Annex A: Technical Annex for details). A Latent Class Analysis of the survey responses was undertaken to identify distinct and identifiable groups of customers according to their patterns of responses provided across the survey questions related to the mitigation strategies they would have adopted without the government's support.

Table 5.2 below further reports the achieved sample sizes.

Table 5.2: Overview of KnowledgePanel and Alternative Schemes survey samples achieved

	Wave 1 - # survey invitations	Wave 1 completes	Wave 1 response rate	Wave 2 - # survey invitations	Wave 2 completes	Wave 2 response rate
Knowledge Panel	16,131	7,850	49%	7,850	6,874	88%
Alternative schemes survey	64,000	10,919	17%	8,362	3,976	48%
EBSS AF	22,000	3,142	14%	2,294	946	41%
AFP	22,000	3,576	16%	2,691	1,192	44%
AFP AF	20,000	4,201	21%	3,377	1,838	54%

Throughout the report, the following naming conventions are used to reference the different surveys:

- 'KnowledgePanel survey' refers to the nationally representative panel survey of households in Great Britain

- 'EBSS AF Survey' refers to the alternative schemes survey of successful applicants to the EBSS AF scheme
- 'AFP AF Survey' refers to the alternative schemes survey of successful applicants to the AFP AF scheme
- 'AFP survey' refers to the alternative schemes survey of households located in areas that were eligible for the AFP scheme
- And, 'alternative schemes survey' refers to aggregated data combining the results from the EBSS AF, AFP AF and AFP surveys

Assessing Energy Burden: The measure of energy burden, which calculates the proportion of household income (after rent and mortgage expenses) spent on energy using responses to survey data, was developed to identify and estimate the proportion of households in Great Britain experiencing high energy costs[36].

A binary classification is used to categorise households into two main groups: those spending under 10% of their income (after rent and mortgage expenses) on energy and those spending more than 10% (considered to have a high energy burden). This classification aligns with some definitions of Fuel Poverty (currently used in the devolved nations) which state that "*a* household is considered to be fuel poor if it is required to spend more than 10% of its income on fuel, to maintain an adequate standard of warmth"[37]*.* In this evaluation it has not been feasible to estimate energy requirements which would have needed comprehensive data on buildings. This is therefore as an indicator of energy burden rather than the precise measure of fuel poverty, which relies on data that was not available for this evaluation. It therefore does not take account of some households who may be spending less than 10% of income but are underconsuming. It is important to note that there is no single, universally accepted definition of Fuel Poverty, and the criteria for determining fuel poverty varies across countries, including within the United Kingdom[38]. The 10% threshold remains widely used across the UK and by charities like National Energy Action to gauge fuel poverty and energy burden across different jurisdictions. Additionally, the survey also considered households that allocate 10-15% of their income to energy expenses and those spending 15% or more, marking a more extreme energy burden among households.

An income-capped option set at £36,400 (approximately the median KnowledgePanel survey household income) was explored but is not included in this report, as applying an income cap was only feasible for the KnowledgePanel survey, which included detailed panellist information such as income (before rent or mortgage costs) not collected through the alternative schemes

[36] This approach is similar to the one taken in Nock, D., Jones, A. J., Bouzarovski, S., Thomson, H., & Bednar, D. J. (2024). Reducing energy burden in the power sector: Metrics for assessing energy poverty. IEEE Power and Energy Magazine, 22(4). Both approaches calculate energy burden as the proportion of household income spent on energy. Our method further refines this by accounting for income after rent and mortgage expenses to provide a more accurate measure of disposable income.
[37] DESNZ (2024), Fuel Poverty Methodology Handbook (Low Income Low Energy Efficiency):
[38] The definitions and measurement of Fuel Poverty vary across countries, including within the United Kingdom. For more information on the differences in Fuel Poverty definitions across the UK, refer to the House of Commons Library briefing paper.

survey. Nonetheless, this income-capped reference helped validate that the measure is not overly influenced by high-income households.

5.3.2 Qualitative interviews

The qualitative strand consisted of interviews with households and key stakeholders. Qualitative interviews with households were conducted to gather insights into people's experience of Government energy support schemes and self-reported impacts of the schemes on aspects such as household finances, energy consumption, health and wellbeing. The qualitative interviews with households were conducted in two waves to gather in-depth insight into people's experiences of the schemes and self-reported impacts. The households were recruited to be broadly representative of characteristics including bills payment type, income and tenure and covered the following four groups:

- Group 1: those who received EPG, and EBSS;
- Group 2: those who received EBSS AF and EPG via pass-through;
- Group 3: those who received AFP, EPG, and EBSS;
- Group 4: those who received AFP AF, and EBSS AF.

Qualitative interviews with stakeholders from expert organisations working with vulnerable customers were conducted to gather insights into vulnerable groups within British society. Interviews with scheme delivery partners and administrators were also undertaken.

The interviews were carried out in two waves (see Annex A: Technical Annex for further details). Primary data collection with care home residents and continuous cruiser households was commissioned following the wave 1 interviews, and therefore only took place during wave 2.

Table 5.3: Sample of wave 1 and wave 2 qualitative interview respondents

	Wave 1 Start date	Wave 1 End date	Wave 1 Sample size	Wave 2 Start date	Wave 2 End date	Wave 2 Sample size*	Recontact sample
Households and other beneficiaries							
Households	26-Jun-23	05-Sep-23	153	27-Mar-24	22-May-24	59	59
Care home residents	-	-	-	31-Jan-24	14-Mar-24	15	-

	Wave 1 Start date	Wave 1 End date	Wave 1 Sample size	Wave 2 Start date	Wave 2 End date	Wave 2 Sample size*	Recontact sample
Continuous cruisers[39]	-	-	-	04-Mar-24	08-May-24	15	-
Stakeholders and experts							
Local authorities	04-Sep-23	27-Oct-23	36	-	-	-	-
Contact centre	10-Oct-23	10-Oct-23	2	-	-	-	-
Continuous cruisers - stakeholders	-	-	-	04-Mar-24	08-May-24	5	-
Experts specialising in vulnerable populations	17-Jul-23	01-Sep-23	10	08-Apr-24	16-Aug-24	8	4
GB energy suppliers +	28-Sept-23	27-Oct-23	8	-	-	-	-
Scheme administrators +	1-Nov-23	22-Nov-23	2	-	-	-	-
Ofgem +	1-Nov-23	1-Nov-23	1	-	-	-	-

* All household interviews were conducted with participants who had conducted an interview in wave 1. In the three cases where the experts in vulnerable populations had changed roles since wave 1, the most relevant contact at the organisation was interviewed instead. As the continuous cruisers strand of work was completed in between waves 1 and 2, this was freshly recruited.

+ Interviews conducted by London Economics.

[39] A continuous cruiser is a boater on UK inland waterways, specifically those managed by the Canal & River Trust, who operates under a continuous cruiser licence. This licence is designed for boaters who are constantly traveling and do not have a fixed home mooring. More information can be found here.

Analysis of qualitative interview data: Across both waves of the qualitative interviews, the evaluation team took a thematic approach to the analysis – where the data is used to identify and analyse recurring themes, patterns and concepts.

A structured, iterative approach was used to analyse the qualitative data, adhering to established methodologies for thematic analysis. This involved a systematic process of data management, coding, and interpretation. Interview data was transcribed verbatim, and an initial analytical framework was developed. This framework, grounded in both existing literature and emergent themes from the data, served as a structured guide for coding.

The coding process involved a rigorous and iterative approach, with transcripts analysed and segments of text assigned to codes from the framework. This process allowed for the refinement and modification of codes to ensure they were aligned with evolving understanding of the data. Through coding and analysis, key themes and patterns within the data were identified, which formed the basis of the report's narrative. For a more detailed illustration of the coding structure, please see Annex A: Technical Annex.

5.3.3 Price elasticity modelling

To provide an estimate of how the energy affordability schemes affected energy and non-energy consumption during the intervention period, the evaluation team also used Almost Ideal Demand System (AIDS/QUAIDS) models[40] of demand to calculate price elasticities of demand (the change of consumer demand for a product or service following a change of its price). These consumer demand models were to estimate how consumer demand for energy and non-energy goods and services would change in response to a change in energy prices. They allow estimation of counterfactual price scenarios (what would have happened to consumer demand if the energy affordability support schemes had not been in place.

To model the preferences of consumers, the analysis used a structural model which estimates a system of consumer demand functions. The functions in these models take prices and income as the inputs, and output price elasticities and expenditure, generally expressed as a budget share. Price elasticities of demand are modelled as the percentage changes in energy consumption relative to the percentage changes in prices, for each household group included in the model. These models enable comparisons of the output function at varying price and income levels, such as with/without the EBSS and EPG (see Annex C: Supplementary research for details).

5.3.4 Monitoring data and management information

Data from scheme management and monitoring was analysed to better understand how planned interventions were implemented in practice, and to compare this against the initial expectations of DESNZ. The evaluation team examined scheme business cases and analysis undertaken by DESNZ accompanying the initial business cases and delivery of the schemes, monitoring data (number of households reached, payments delivered, vouchers redeemed

[40] Eales, James S., and Laurian J. Unnevehr. "The inverse almost ideal demand system." European Economic Review 38.1 (1994): 101-115.

(PPM customers), and applications made and processed (EBBS AF and AFP AF). This data reflected the status as of July 1, 2023, and was provided by DESNZ in the form of delivery dashboards for EBSS GB, EBSS AF, AFP, and AFP AF. The team also reviewed final scheme reconciliation reports where these were available. Importantly, information from the schemes' external auditors was not available at the time of this report.

5.3.5 Desk based research and other secondary data

Secondary data was reviewed and triangulated to complement primary research findings, in particular research undertaken by the ONS, Ofgem, and the Bank of England.

Separate to the process, interim and early outcome evaluation, a review was conducted of data sources for estimating the population eligible for the EBSS AF scheme, and methodological considerations (see Annex C: Supplementary Research).

5.4 Methodology Limitations

As with any evaluation approach, there are some limitations with the methodological approach, which are summarised below:

5.4.1 Primary Research Limitations

The strength and coverage of primary evidence varied across energy affordability schemes. Ipsos survey data covered all schemes, and survey group sample sizes were substantial, but some demographic groups were too small to offer reliable disaggregated results.[41] In addition, the research was not able to produce quantitative estimates of three relevant subgroups of the GB population, either because they represent a very small proportion of the broader UK population (so very few were identified in the KnowledgePanel surveys), because they were not aware of their status/eligibility, or because of a lack of sample frames for these groups. These were:

- **Non-applicants who were eligible for EBSS AF:** There is no single sampling frame for those who have no direct relationship with a domestic energy supplier. Although some non-applicants eligible for EBSS AF were interviewed during the nationally representative household survey, there were very few identified given the low incidence of this group in the general population. In addition, qualitative research with EBSS AF non-applicants (who may have been eligible for the scheme) could not be completed due to issues identifying and reaching these households.
- **Households who had not received the pass-through of EPG or EBSS GB from intermediaries:** The KnowledgePanel survey was able to identify a small number of households who do not pay directly for their energy but due to recall issues; lack of awareness of the schemes; and lower incidence of the group in the general population, it was not possible to generate a reliable estimate of the extent to which this occurred.

[41] The report highlights all instances where survey results are drawn from limited sample sizes.

Some qualitative interviews were conducted with those without a direct relationship to an energy supplier and this evidence is included in the reporting, supplemented by research with experts in vulnerable groups and those in care homes and their families.

- **Heat Network households who were expected to receive support via pass-through of the non-domestic schemes:** Households living in properties connected to heat networks were expected to have received a discount on their energy bills via their heat network supplier through the Energy Bills Relief Scheme and the Energy Bills Discount Scheme. Although not part of the original evaluation plan, it was expected that this research would identify heat network households in sufficient numbers to estimate the level to which heat network end consumers had received a discount on their energy bills. However, there were several challenges to this, similar to the other subgroups discussed above. Not only are there no established sampling frames of heat network consumers, and this group is a low proportion of the GB population, but previous research designed specifically for these consumers shows that there is low awareness by householders that they are on a heat network.[42] In combination with potential recall issues and a lack of accurate bill reporting, it was decided by DESNZ that estimates of pass-through to this group might not be reliable.

There was also variable quality and coverage of some household survey responses, including a high number of 'n/a' responses for certain questions, and interviewees often struggled to point to contributions of individual schemes under the household consumption, health and wellbeing, and household finance themes. Findings from the qualitative interviews and quantitative surveys (conducted between summer 2023 and summer 2024) also depended on respondents' recall regarding their energy consumption patterns, health and wellbeing, wider spending behaviours before the launch of energy affordability schemes (at wave 1), and the influence of energy affordability scheme payments had on these areas.

5.4.2 Secondary Data and Modelling Limitations

Much of the analysis in the interim outcome evaluation relies on comparisons between winter 22/23 and previous years. Year-on-year comparisons are complicated by shifts in domestic consumption patterns (due, for example, to COVID-19 lockdowns and increased levels of working from home). Finally, not all secondary sources offered temperature-adjusted data, and secondary data sources consulted for this evaluation also pointed to important scientific limitations of the temperature adjustment method.[43]

The study team on this evaluation also modelled the price elasticities of demand to understand how energy affordability schemes affected energy and non-energy consumption during the intervention period. There are several limitations related to data available for this evaluation, availability these are explored further in Annex C: Supplementary Research. The forthcoming

[42] DESNZ (2023) Heat network consumer and operator survey 2022, showed that c.20% of householders misidentified themselves as not being on a heat network when the administrative dataset confirmed that their building was registered as on a heat network

[43] For further information on these limitations, please refer to: McKenna et al (2023). 'Smart Energy Research Lab: Energy use in GB gas heated domestic buildings during the 2022/2023 heating season'.

impact and economic evaluation for these schemes will use additional and more granular data to build upon the modelling presented in this report.

Finally, it should be noted that this study was not intended to deliver a counterfactual impact evaluation. The universal nature of the energy affordability schemes makes finding a control, or comparison group difficult, particularly as the intervention has already been delivered. Whilst not all schemes were launched at the same time (e.g. AFP schemes were launched c5 months after the main EPG support), this couldn't be exploited given the substantial differences in household characteristics between the two schemes. Wider empirical literature to understand the effects of energy retail prices on some outcomes of interest exploits variations in tariff types or heating fuel[44]. However, the UK energy markets lack sufficient variation in retail markets between fuel types and regions, and no longitudinal panel dataset of households including their tariff type was available for this work.

[44] See for instance relevant research in the US: Ahmed, Ahmed I., Robert S. McLeod, and Matej Gustin. "Forecasting underheating in dwellings to detect excess winter mortality risks using time series models." Applied Energy 286 (2021): 116517.

6. Theory of Change

This chapter provides a summary of scheme level ToCs in form of a schematic portfolio level ToC developed as part of this study. It also presents the agreed hypothesised contribution claims that have been appraised in the outcome evaluation[45]. Scheme level ToCs are provided in Annex B and illustrate in detail how different schemes were expected to affect outcomes, reflecting nuance in the design and delivery processes, critical causal pathways and provide a summary of assumptions and risks associated with each scheme. An ex-ante evaluability assessment, as well as the contribution story are also presented in Annex B.

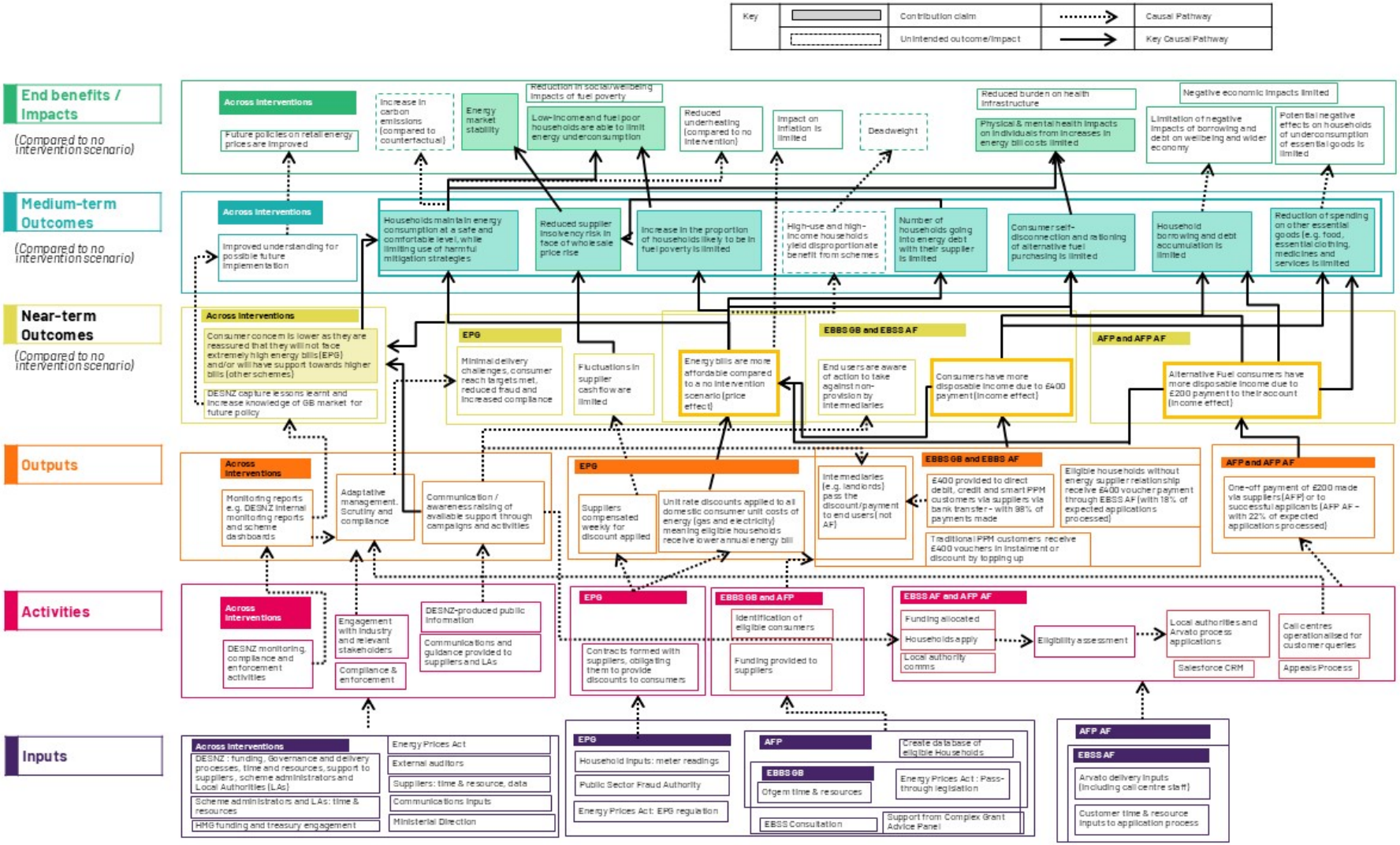
6.1 Overview of Theory of Change

Figure 6.1 summarises the key components of the portfolio-level ToC identified across the different energy affordability schemes. It provides a simplified overview of the schemes' inputs (such as financial inputs, people or organisational inputs, infrastructure utilised), activities (activities that use inputs and result in outputs) and outputs (products of the programme activities), as well as the hypothesised outcomes (expected social, economic, environmental, etc. changes experienced by beneficiaries and other stakeholders) and impacts (systematic changes expected in the long-term). In addition, household groups of particular interest have been identified to analyse how the evidence differs for these specific groups. The full discussion of household groups is provided in Annex B. These include:

- **Low-income households:** Low-income households were identified as a group who would experience greater energy consumption costs most strongly, and, as a result, be more likely to apply mitigation techniques to offset this, such as underheating their home, reducing spending on other essentials or disconnecting from their energy meter. Low-income households were expected to gain a greater benefit as share of their total household expenditure relative to those with higher incomes from the energy affordability schemes.
- **PPM customers:** PPM customers not on smart meters were identified as a group that were eligible for the schemes but may not benefit from all of it. This is because receiving the grant was not automatic and relied firstly on awareness of the scheme and how to access the vouchers; and secondly; an individual from each household would need to redeem a voucher in order to receive the payment.
- **Households using alternative fuels:** Households using alternatives to mains gas for heating (such as bottled gas, heating oil, liquified petroleum gas, etc) were eligible for variants of the main domestic energy affordability schemes (the alternative fuels programmes distributed by energy supplier or by application). These schemes faced specific challenges around identifying and reaching their intended beneficiaries, and AF households were therefore of particular interest to the evaluation.

[45] For more background on Theory of Change design and development.

Figure 6.1: Programme Theory of Change



From the assessment of the ToCs key causal pathways between the interventions and outcomes were established and distilled into the nine contribution claims set out in Table 6.1 below. For more detail see Annex B.

Table 6.1: Summary of hypothesised contributions to outcomes

Outcome Theme	Contribution	Description	Outcome Evaluation questions[46]
Household concern about energy bills	HCC1 (intermediate outcome)	The schemes contribute to lowering households' level of concern about energy bills and household finances.	OEQ10, OEQ11
Household consumption	HC1	Schemes contribute to the ability of eligible households to maintain energy consumption at a safe and comfortable level, while limiting the use of other harmful mitigation strategies[47].	OEQ1, OEQ2
	HC2	Schemes contribute to the ability of low-income households or those classified as fuel poor, to limit energy underconsumption.	OEQ3
	HC3	The schemes help limit the scale and duration of PPM household self-disconnection from energy suppliers.	OEQ4
Household finances	HF1	The schemes contribute to limiting the number of households that would not be able to pay their energy bills and who go into energy debt with their supplier.	OEQ5
	HF2	The schemes contributed towards limiting the increase in the proportion of households experiencing energy burden and therefore likely to be experiencing fuel poverty.	OEQ6
	HF3	The schemes limited increases in household borrowing and cuts in other essential spending (e.g. food, essential clothing, medicines) and savings.	OEQ7, OEQ8

[46] OEQ14,15 , and 16 were addressed across contribution claims. OEQ1 and OEQ3 regarding scheme perception were addressed in the process evaluation.
[47] For this evaluation we have defined the most harmful mitigation strategies as being reducing spending on necessities (e.g. food, essential clothing, medicines), reducing other spending (e.g. holidays, meals out, days out), struggling to pay other housing costs or bills and taking on household debt/taking on more household debt (e.g. taking out loans, borrowing more, using more credit).

Outcome Theme	Contribution	Description	Outcome Evaluation questions[46]
Health and Wellbeing	HW1	Schemes limit negative mental and physical health impacts arising from increases in energy bill costs (including limiting increases in instances of cold-related illnesses and mould in dwellings that can arise from under-heating).	OEQ11
Energy Market	ES1	Schemes limit the risks of energy supplier insolvencies through keeping customer debt levels low and delivering the schemes in a way that helps smooth cashflow fluctuations.	OEQ12, OEQ13

7. Process evaluation findings

This section presents the findings of the process evaluation. It summarises the key findings from each intervention, structured around the key steps involved in delivering them. These are drawn from the process maps developed by the evaluation team which were developed during the inception phase of the evaluation, based on an extensive review of programme monitoring data, interviews and workshops with DESNZ staff. These are presented in this chapter prior to the discussion of each scheme. These provide a detailed outline of the processes undertaken between scheme set up and scheme closure, and the stakeholders involved. They include: scheme design, set up, and communications; delivery of payments; compliance and assurance; and final reconciliation (where available). This chapter concludes by summarising the key findings and takeaways across all five interventions. Conclusions, lessons learned, and recommendation for future interventions are covered in Chapter 9.

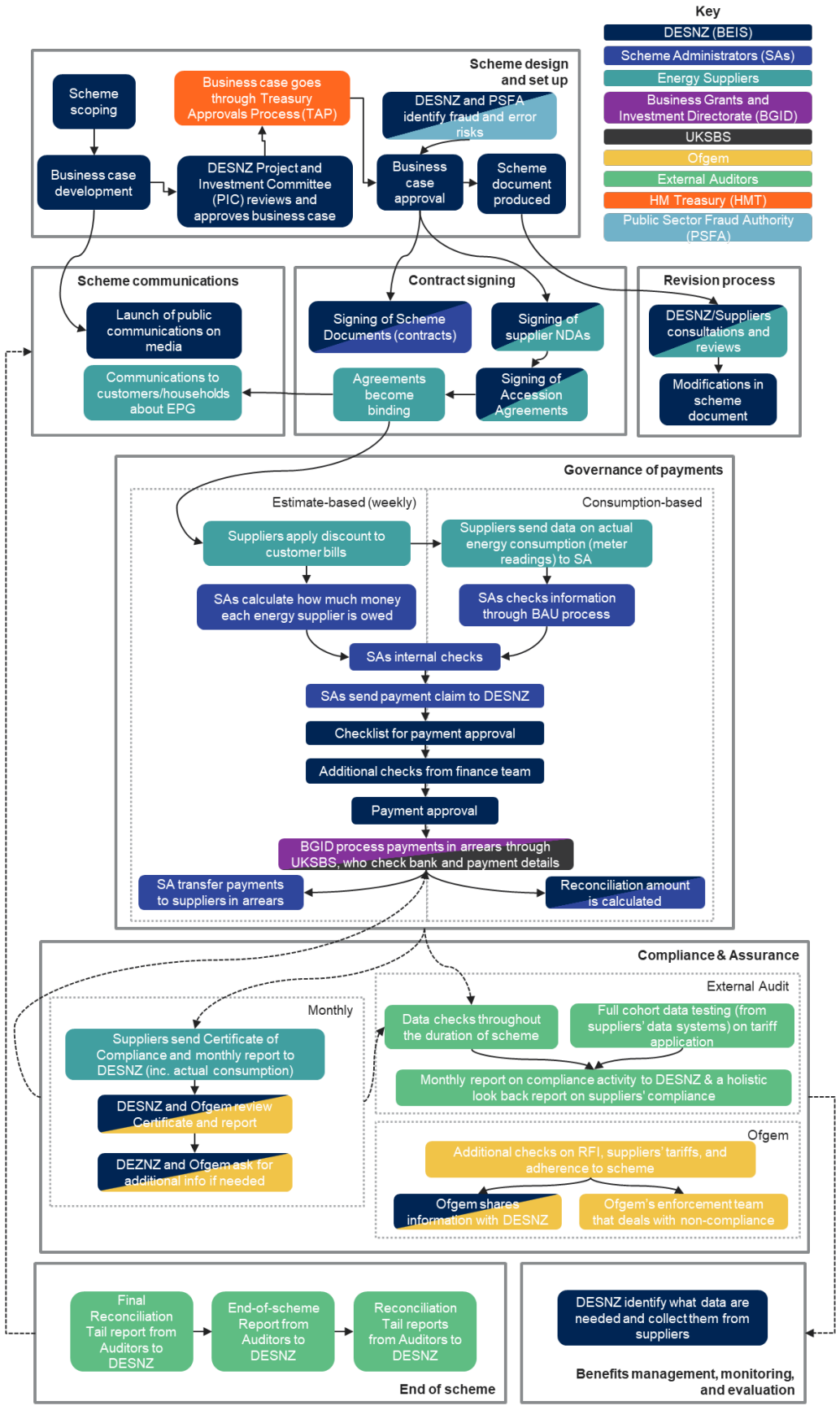
7.1 Summary of findings per scheme

7.1.1 EPG

Overall, the evidence across primary and secondary data sources indicates that the delivery processes for EPG were effective and seen by key stakeholders as appropriate for achieving scheme outcomes, despite challenges in timelines, communications, and monitoring which were overcome during the early stages of delivery. Overall, the EPG scheme administered £23.7 billion of funds to 29.3 million households[48]. Details of EPG delivery processes are set out in the process map below (Figure7.1).

[48] Source: Ofgem. Note numbers of EPG households may not match other GB household statistics due to some domestic meters located in empty or second homes

Figure 7.1: Energy Price Guarantee (EPG) Process Map



Scheme design, set up, and communications

The EPG scheme was set up at significant speed and launched in October 2022, in response to the rapidly increasing energy prices during the cost-of-living crisis. The process map indicates that key activities that facilitated the delivery of payments (suppliers applying the discount to customer bills) included engagement with suppliers around scheme documents, as well as carefully agreeing provisions for how discounts would be passed to consumers in contracts with energy suppliers. DESNZ was commended in interviews with stakeholders (i.e. scheme administrators and energy suppliers) for the speed at which the scheme was set up and launched, with strong and effective collaboration with stakeholders facilitating scheme setup and enabling data sharing. Scheme administrators were able to use robust settlement processes already in place to administer EPG which facilitated scheme delivery. Similarly, feedback from energy suppliers on scheme delivery was largely positive, finding the implementation and delivery of the EPG easier than for EBSS GB as it leveraged existing processes and mechanisms in place for the standard energy price cap.

Awareness and understanding

As evidenced in the EPG Process Map (Figure 7.1), delivery of the scheme was not reliant on scheme communications being effective at generating customer awareness, as the discount on the unit price of electricity and gas was applied to customer bills automatically. However, in order to prevent underconsumption of energy, it was still important that households were aware of the EPG and understood how it would impact their bills. If households based their consumption behaviours on their expectations of energy prices rather than the actual bills received, then there was a risk they might overly restrict their energy use in anticipation of extremely high bills. Awareness and understanding could also contribute to customer perceptions of the scheme and subsequently their satisfaction with the support provided.

The KnowledgePanel wave 1 survey of GB households found that households' awareness of the EPG and their eligibility for the scheme was somewhat limited, with half (49%) indicating they were aware of the EPG and just over a third (35%) identifying that they were eligible. This low level of scheme awareness and understanding of eligibility was more prevalent for younger respondents, those in social housing, respondents from minority ethnic backgrounds[49], those with lower annual household income, and those with a lower educational level. In earlier research, the Ofgem Consumer Impacts of Market Conditions (CIM) survey also revealed a slight decline in awareness of the EPG between November/December 2022 (Wave 3) and July 2023 (Wave 4), with 66% of respondents in Wave 3 indicating they were aware of EPG compared to 60% of respondents in Wave 4. Although EPG was larger in magnitude and reach than EBSS GB, scheme design may have limited households' awareness and therefore potential for reassurance and a change in consumption behaviour. The correlation between awareness and consumption behaviour is further examined in section 7.2.1 and in Chapter 8.2.

For the group of respondents who were aware of having received the EPG, the KnowledgePanel wave 1 survey found that the key avenues through which people were made aware were TV news (55%), Martin Lewis/Money Saving Expert (36%), Newspapers or

[49] Note: the definition of ethnic minority used in the survey does not include white minorities

magazines (26%), a letter or email or other communication from an energy supplier (24%), radio news (22%), via their energy bills (12%), and via the GOV.UK website.

Many households did not understand the details of EPG, and how it differed from the energy price cap. The Ofgem CIM survey conducted in December 2022 showed that about half (56%) of those aware of the EPG could correctly choose what the EPG does from a multiple-choice list. Similarly, only a third (32%) could select the correct description of how the EPG related to the energy price cap from a multiple-choice list. Several factors are likely to have contributed to relatively low levels of understanding of the EPG, including that the unit-rate discount was more complex than a fixed grant amount delivered to households. Additionally, the most salient parts of the awareness campaigns run by the Government were around the average annualised bills (with the frequently cited £2,500 figure), instead of the support rate discount applied to all households. This could have contributed to confusion for some customers, as they may have understood the EPG to be implemented as a cap on total energy spending at £2,500, rather than a discount on the unit rate. The level of understanding of the EPG and the energy price cap remained low in July 2023. Less than half (46%) of those who said they knew about the energy price cap and EPG, knew that the energy price cap determines prices on standard variable tariffs from 1 July 2023, while a third (32%) believed it is the energy price guarantee that does so.

> *"I think EPG awareness was probably the highest [of the schemes], given the fact that it was so well-publicised. But there was some confusion that the often-cited figure of £2,500 was what people would be paying, as opposed to it, you know, pertaining to the average household. So, we had to do a lot of work to counter that, whilst raising awareness amongst people with a learning disability. And a lot of awareness for all 3 schemes was based online. And that doesn't necessarily reach people with a learning disability, because they're digitally excluded to a disproportionate degree. So that was a kind of, issue regarding awareness."*
> *Expert organisation, ID 5, wave 1 interview*

Despite households' low level of understanding of the direct impact the EPG had on their energy bills, households had somewhat positive perceptions of the scheme. In the Knowledge Panel wave 1 survey of GB households, 69% of respondents who were aware of EPG were satisfied by how the discount was applied, 59% were satisfied by the time period the EPG was in place for and by the fact that almost all households with a domestic gas and/or electricity contract paid the same unit prices. These satisfaction levels varied however between sub-groups of the EPG recipients.

Levels of satisfaction were lower among ethnic minorities (58% of ethnic minorities were satisfied with how the EPG was applied compared to 69% for the overall population) and younger respondents (52% of 16-24 year olds were satisfied with how the EPG was applied compared to 69% for overall recipients). A small percentage of households were dissatisfied with the universality of the scheme (12%) and with the time period of the EPG (i.e. from October 2022 to June 2023) (15%). According to experts in vulnerable consumers, harder-to-reach groups and individuals with disabilities, also had relatively lower levels of satisfaction with EPG compared to EBSS GB. This could be due to a lack of understanding of the scheme,

with detailed calculations of the EPG not appearing until the second or third page of their energy bills, and some more vulnerable groups reported to be less likely to open bills at all, mostly for fear of owing money to suppliers.

Further logistic regression analysis was conducted to explore the association between how clear a respondent felt the EPG scheme was and their satisfaction with how the EPG was conducted. It was observed that when a respondent felt that the EPG was clear and thereby understood how it works, they had significantly higher levels of satisfaction with it. Furthermore, this effect was observed after controlling for payment type, income, age, and region. This supports the idea that understanding the scheme was indeed linked to an individual's general satisfaction with the scheme.

> *"Our households experienced some confusion as a lot of them thought they were paying the level of EPG at typical bill size, so it was disappointing for those with higher consumption, and we received many queries for those with lower consumption." Energy Supplier, ID 1, wave 1 interview*

> *"The EPG (…) created communication issues, as communications are automated, households were unable to individually identify how much support they were receiving through the EPG. The discount was not included as a line item, but was baked into the tariff rate, because of the system complexity of doing that. We chose not to change this system because we weren't aware the EPG scheme would be extended." Energy Supplier, ID 2, wave 1 interview*

Delivery of payments

As outlined in the Process Map (Figure 7.1), the delivery of the EPG discount to households was dependent on energy suppliers being able to effectively implement it, including implementation of the appropriate discount rates (with regional and payment type variation in discount rates). Overall, governance and payment processes for EPG proved effective in supporting delivery and appropriate in terms of burden placed on suppliers. Delivery challenges on the energy supplier side included:

- Challenges in coordinating differences in logistical and delivery processes between EPG GB and EPG NI schemes, which could have been mitigated by additional expertise covering the Northern Ireland energy market in DESNZ delivery teams.
- Limited guidance from DESNZ to suppliers at the start of the scheme.
- A "one-size-fits-all" approach to the scheme delivery, with suppliers of all sizes, types and reach required to use the same process in order to implement EPG.
- Challenges in coordinating different teams and departments in larger suppliers, who tended to treat the EPG as a financial/commercial operation rather than integrating it into regular operations.
- Complexities of the delivery of payments due to lower wholesale market rates and fluctuating household consumption, leading to initial overpayments that were later corrected through volume reconciliation.

However, these implementation challenges were seen by suppliers as surmountable given the magnitude and urgency of the intervention and were mitigated throughout scheme delivery.

The EPG scheme directly limited a typical household's annual dual-fuel energy bill to £2,500 from October 2022 until June 2023, preventing an estimated rise of 75% in bills in the final quarter of 2022. Consequently, the EPG reduced the UK annual headline CPI inflation measure by 2.8 percentage points in October 2022, according to ONS.[50]. These economic impacts are being assessed as part of the forthcoming Impact and Economic Evaluation.

Compliance and assurance

Energy suppliers were required to submit data weekly to scheme administrators, including the amount of energy supplied to customers. This was then translated by Elexon and Xoserve into the total amount owed by HMG to each energy supplier. In addition, on a monthly basis, suppliers were required to report to DESNZ a number of key figures including a summary of compliance procedures implemented, tariff rates, the monthly total volume of energy supplied to customers and the monthly total amount of reimbursement required from HMG.

These reporting requirements and the processes to ensure compliance proved effective, and instances of non-compliance were rectified, despite challenges in setting up and clarifying monitoring requirements. Monitoring compliance processes worked well with efficient stakeholder coordination to verify that suppliers applied the EPG support rate to existing tariffs and to confirm suppliers' adherence to the scheme. In-house DESNZ checks on invoices and forecasting ensured payments to suppliers were correct and fit the forecast.

These reporting requirements were, however, viewed by energy suppliers as complicated, due to, in some cases, inaccurate energy consumption estimates. This was partly the result of the lack of penetration of smart meters, with only around half of households having a smart meter at the time of the intervention, alongside challenges in identifying eligible fixed tariff households. Suppliers indicated that more clarity on the application of support for fixed tariff households versus variable tariff households could have mitigated some of the challenges. Interviews with scheme administrators have confirmed cases of inaccurate estimates, with one large supplier having initially underclaimed up to £400 million. This might have been due to billing that failed to be reflective of actual household consumption or to errors in supplier forecasting. However, these cases were rare and further monitoring corrected these. Suppliers also faced some reporting challenges as requirements were viewed as unclear initially, with one supplier indicating that there was confusion about how to claim for a fixed portfolio (of energy consumption and property/connection type), and the assumptions that had to be made for reporting against this portfolio. This required the supplier and auditor to correct mistakes made in the initial portfolio assumptions.

These factors contributed to some initial monitoring inaccuracies at supplier level and subsequently high reconciliation payment volumes in the first months of the EPG delivery. DESNZ did address these issues around reporting and monitoring requirements; communications from DESNZ to suppliers became more frequent as the scheme evolved, with

[50] ONS Consumer Price Inflation, October 2022.

clearer guidelines on reporting requirements, specifically on the volume of data required and on the timelines for reporting. All instances of incorrect payments were deemed by DESNZ as errors rather than fraud, as supplier intent could not be determined. These errors were addressed by the EPG compliance team. DESNZ worked with suppliers to rectify errors and ensure both customer refunds and appropriate payments to HMG.

> *Energy Supplier: "Communications from DESNZ was quite low at first. I then found the EPG engagement and communication was much more efficient and supportive as the scheme evolved." Energy Supplier, ID 3, wave 1 interview*

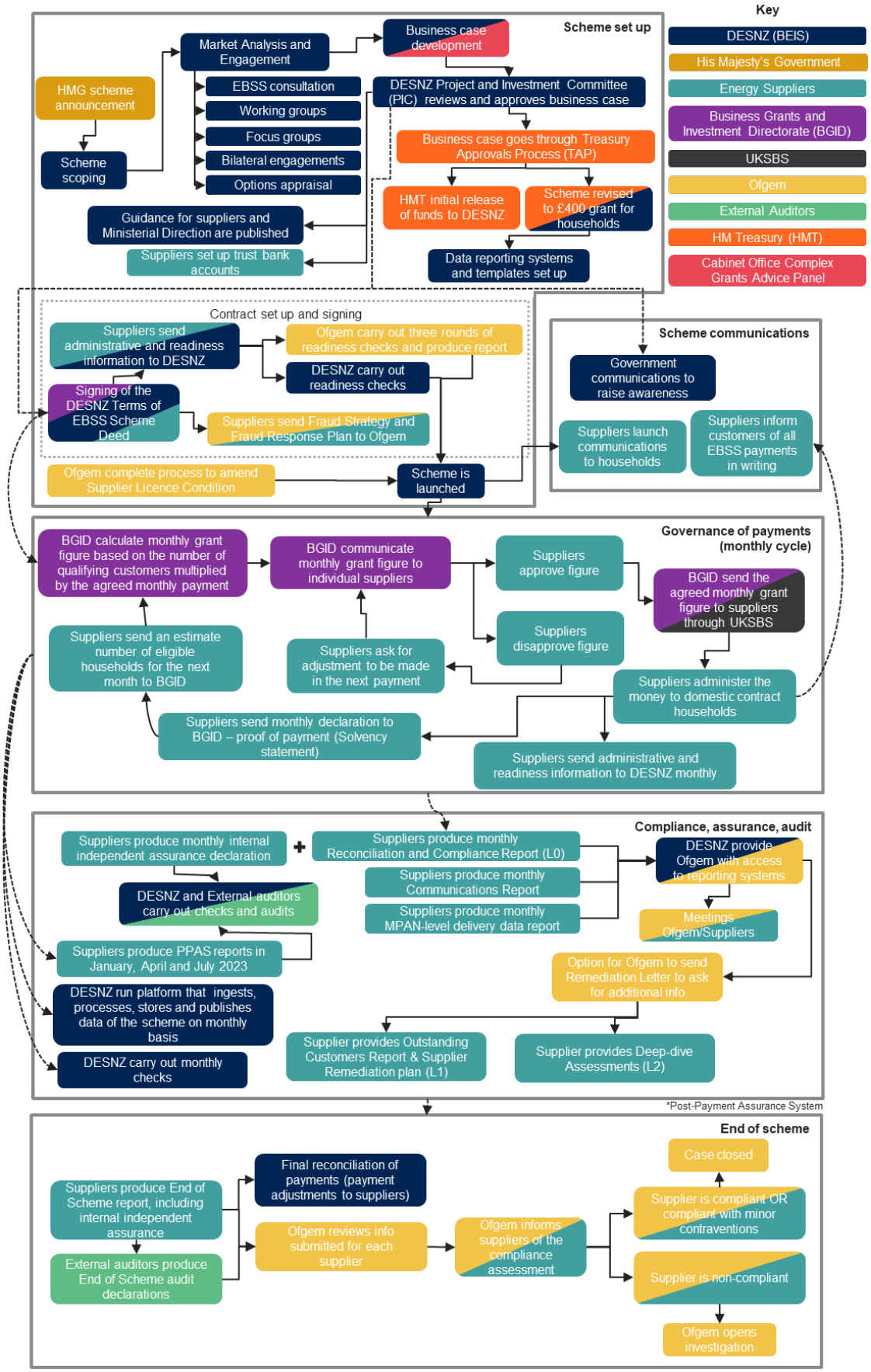
7.1.2 EBSS GB

Details of EBSS GB delivery processes are set out in the process map diagram below. Findings of the process evaluation are set out against each of the main aspects of delivery. As evidenced in the process map, delivery of payments to households was dependent on a number of key scheme set up activities including contract set up and signing activities from a range of stakeholders including DESNZ, Ofgem and suppliers. Delivery of payments was also reliant on key energy supplier activities such as providing the estimated number of eligible households to receive the support.

Overall, our evaluation found that the delivery processes were largely effective at delivering the vast majority of payments to households (98.7% of all payments, reaching 28.9 million households), with only 87.5% missing payments which largely accounted for by non-redemption of EBSS GB support vouchers for Traditional PPM customers[51]. The evaluation found, however, that the processes required from suppliers in delivery of the scheme were significantly resource intensive and challenging for energy suppliers, which included the reporting requirements and compliance activities.

[51] Energy Bills Support Scheme GB: payments made by electricity suppliers to customers

Figure 7.2: Energy Bills Support Scheme (EBSS GB) Process Map



Scheme design, set up, and communications

The EBSS GB scheme was announced in April 2022[52] and implemented in October 2022, alongside the EPG scheme, at significant pace in response to the cost-of-living crisis. EBSS GB was the first scheme to be set up, therefore it benefitted from a longer preparation period, in comparison to the other schemes. The universality of the interventions facilitated efficient distribution of payments to households. This universal approach, as opposed to a targeted one, simplified the process and expedited the overall scheme set up and payment delivery, which was one of DESNZ's main aims for the scheme.

Awareness and understanding

As with EPG, delivery of the EBSS GB was not reliant on customers having awareness of the intervention, for the majority of households (those on credit or debit accounts). However, a key exception to this was for the estimated 4.1 million households connected via a PPM (either a traditional PPM or for some smart PPMs where a remote credit to the meter was not possible). For these customers, payments were delivered as a voucher that could either be redeemed in-person at PayPoint or Post Office (traditional PPM) or via their smart meter (smart PPM where a remote credit to the meter was not possible). For this minority of EBSS GB households, awareness of the intervention in part determined whether they redeemed their voucher and therefore received the payments. In addition, as with EPG, the effectiveness of scheme communications in generating awareness may have played a role in the extent to which the schemes contributed to limiting underconsumption of energy or non-energy goods and services. Awareness and understanding may also have contributed to customer perceptions and subsequently satisfaction in the support provided.

Awareness of EBSS GB was relatively high during the first months of the EBSS GB (November-December 2022), with three out of five (58%) being aware of the scheme. Amongst these, over four fifths (83%) thought they were eligible for it[53]. Awareness grew by the end of the scheme rollout, as found in the KnowledgePanel wave 1 survey of GB households, with four out of five (80%) being aware of the intervention in summer 2023, and nine out of ten (88%) of those eligible for it self-identifying as eligible. Sub-groups who were less likely to be aware of or understand the intervention compared to the general public were younger populations and ethnic minority groups.

The KnowledgePanel wave 1 survey found that the main sources by which people heard about EBSS GB were through TV news (48%), Martin Lewis/Money Saving Expert (31%), a letter from their energy supplier (29%), through energy bills (23%) and through a newspaper or magazine (21%). A smaller proportion of respondents indicated that they had heard through government sources including through the gov.uk website (11%), through a letter or email from local council or government (10%), or through council or local government websites (3%).

In the same survey, satisfaction with the intervention was moderate to high, with three out of five households saying they were satisfied with the universality of the intervention (65%) or the value of the support (61%). When households expressed dissatisfaction, this was generally

[52] Originally conceived of as a £200 payment to be paid back in future levy.
[53] Ofgem (2022). CIM Survey.

centred on the intervention's fairness and lack of means testing. This criticism was also voiced in qualitative interviews with households and experts in vulnerable groups. Households and experts in vulnerable groups expressed the opinion that the support should have been provided based on a household's financial needs rather than being universally available and therefore target vulnerable parts of the population.

Delivery of payments

The EBSS GB payments were largely successfully made in a timely manner and close to the volume initially estimated at business case stage. According to monitoring data for the intervention, at scheme closure 98.7% of all payments were facilitated to 28.9 million[54] households and 87.5% of Traditional PPM vouchers were redeemed[55]. This exceeded the success criteria initially set by DESNZ to achieve 97% of payments and 85% of voucher redemption.

The missing payments were primarily in the cases of PPM customers, with 12.5% of vouchers issued to Traditional PPMs not redeemed. Primary research as part of the evaluation revealed two potential reasons behind this. Firstly, this was attributed to communication issues between energy suppliers and households with PPMs, particularly those in vulnerable groups. Some eligible households reported in qualitative interviews that they did not receive the correct number of vouchers or any voucher at all. Energy suppliers expressed that this might have been due to difficulties in sending physical vouchers, with some households perceiving letters related to the scheme as scams. Secondly, if financial intermediaries or landlords who were responsible for payment of the energy bills didn't communicate the process for voucher redemption to tenants, then this may have prevented some from redeeming their vouchers, as letters may have been addressed to the landlord or financial intermediary.

> *"I've been told that people could get the vouchers emailed to them. But [participant's supplier] refused to email them. They said they would only send them by post. They reckon they sent them about five times. I never received them until the last time in April. So, we got the first one, and then they reckon they sent them another 5 times, the other ones. […] The whole point of having those energy vouchers was for each month over winter while people were struggling, not to get it once you've stopped using your gas very much because it's warmed up." Household eligible for EBSS GB and EPG, ID 17, Wave 1 interview*

> *"In October last year I tried to get the £66/£67 a month […]. So at that time I asked the bursar, the landlord about this, and he got completely confused. He thought I was referring to the council related £400, which had already been paid. So I explained about that. […] He confirmed that there was no support because it was a landlord meter." Pass-through EBSS GB household, ID 88, Wave 1 interview*

[54] Ofgem EBSS Final Project Closure Report
[55] Energy Bills Support Scheme GB: payments made by electricity suppliers to customers

> *Expert in Vulnerable Groups : "I know that's where EBSS GB struggled because that was, kind of, me sending you a letter with a voucher in it going, 'Cash it,' and for some people, they won't want to open the post because it could be a bill, 'I didn't expect it,' 'I'm worried about it,' 'it never arrived,' 'I didn't know it had arrived,' 'I didn't know how to chase it up.' You know, there are so many reasons why it kind of went wrong, I think, for prepayment meter households." Expert organisation, ID 1, Wave 1 interview*

Customers on PPMs were more likely to have experienced issues with receiving the discount, with most common problems being receiving the discount later than expected and issues around receiving and redeeming vouchers, as shown in the table below.

Table 7.1: Reported problems with receiving EBSS GB (Ipsos survey)

	All EBSS recipients	EBSS recipients who pay bills by direct debit or when billed	EBSS recipients with a traditional prepayment meter	EBSS recipients with a smart prepayment meter
Did not experience any problems with the scheme	86%	88%	72%	72%
The automatic credit was added to the meter later than expected*	Not shown	Not shown	Not shown	18%
Issues redeeming the voucher(s)*	Not shown	Not shown	9%	Not shown
Received the voucher(s) much later than expected*	Not shown	Not shown	9%	Not shown
The voucher(s) expired*	N/A	Not shown	2%	Not shown
The discount was applied to the account later than expected*	Not shown	4%	Not shown	Not shown
Did not automatically receive all 6 instalments of the monthly discount*	Not shown	3%	Not shown	Not shown
The discount was less than promised (£66/67 per month)	3%	3%	1%	6%
Don't know	2%	2%	2%	1%

Source: QD1.Which, if any, of the following problems did your household experience with the Energy Bills Support Scheme discount? Base: all who say they received the EBSS discount (n=6589) *some statements were only asked to certain households on smart prepayment meters (n= 232), on a traditional prepayment meter only (n= 197), pay bills by direct debit or on receipt of a bill (n=5984).

There was also significant variance in the rate of EBSS GB voucher redemption in different areas in Great Britain. Regression analysis of voucher redemption against Index of Multiple Deprivation (IMD) at Lower Super Output Area (LSOA) level suggests recipients in more deprived areas were more likely to redeem their vouchers than those in more affluent areas. This pattern of people in less deprived areas being less likely to redeem their voucher was consistent across several domains of deprivation, for example income and employment. The exact reasons behind this are difficult to establish, with potential confounding variables such as ethnicity, education, and homeownership status probably playing a role. Nevertheless, the significant pattern of associations across all domains and nations indicates that more vulnerable households are more motivated to redeem their vouchers.

From an energy supplier point of view, the processes put in place to monitor and deliver the payments, even though effective in delivering support to most eligible households, presented some administrative challenges and associated costs. These included administering the monthly payments and responding to an increased amount of customer queries. Energy suppliers also raised questions around the delivery model chosen – i.e., why the scheme was delivered through suppliers instead of by central government. Additionally, they expressed a need for more prior notice and engagement with DESNZ to better understand any potential future interventions and their implication on business operations. Although, the scheme was implemented at pace, if time had allowed for this, it could have ensured a smoother execution and thorough understanding of the payment process.

Compliance and assurance

Energy suppliers were required to provide two monthly reports each month between October 2022 to July 2023 (following the end of the reconciliation period). This consisted of a monthly reconciliation and compliance report and the monthly MPAN-level delivery data report. For the former, this required suppliers to report on data such as headline financial figures, numbers of eligible customers, number of payments (or vouchers) delivered, and number (and reason) of exceptions to delivery of payment. For the latter, this consisted of the supplier providing the meter level data for each customer for internal DESNZ monitoring activity, which included details such as the MPAN, customer type, number of payments delivered and payment status.

These compliance processes and reporting requirements for EBSS GB generated significant additional administrative burden for suppliers. However, according to DESNZ end of scheme documentation, the compliance processes were successful in identifying fraud and error before disbursement of funds from DESNZ to energy suppliers, and in ensuring that the risk of fraud and error from supplier to consumers was minimised. By June 2023, energy suppliers reported to DESNZ seven cases of detected fraud and 1,046 cases of detected errors.

Other positive aspects reported by DESNZ and suppliers about the experience of delivering the intervention were good communication and support provided by DESNZ to suppliers. However, in interviews with suppliers it became evident that there was a need for improvement in some areas. One major challenge was the tight timelines, which put pressure on suppliers to meet deadlines for reporting. Reporting requirements were also perceived as initially unclear and open to interpretation. This led to some confusion and resulted in suppliers having to

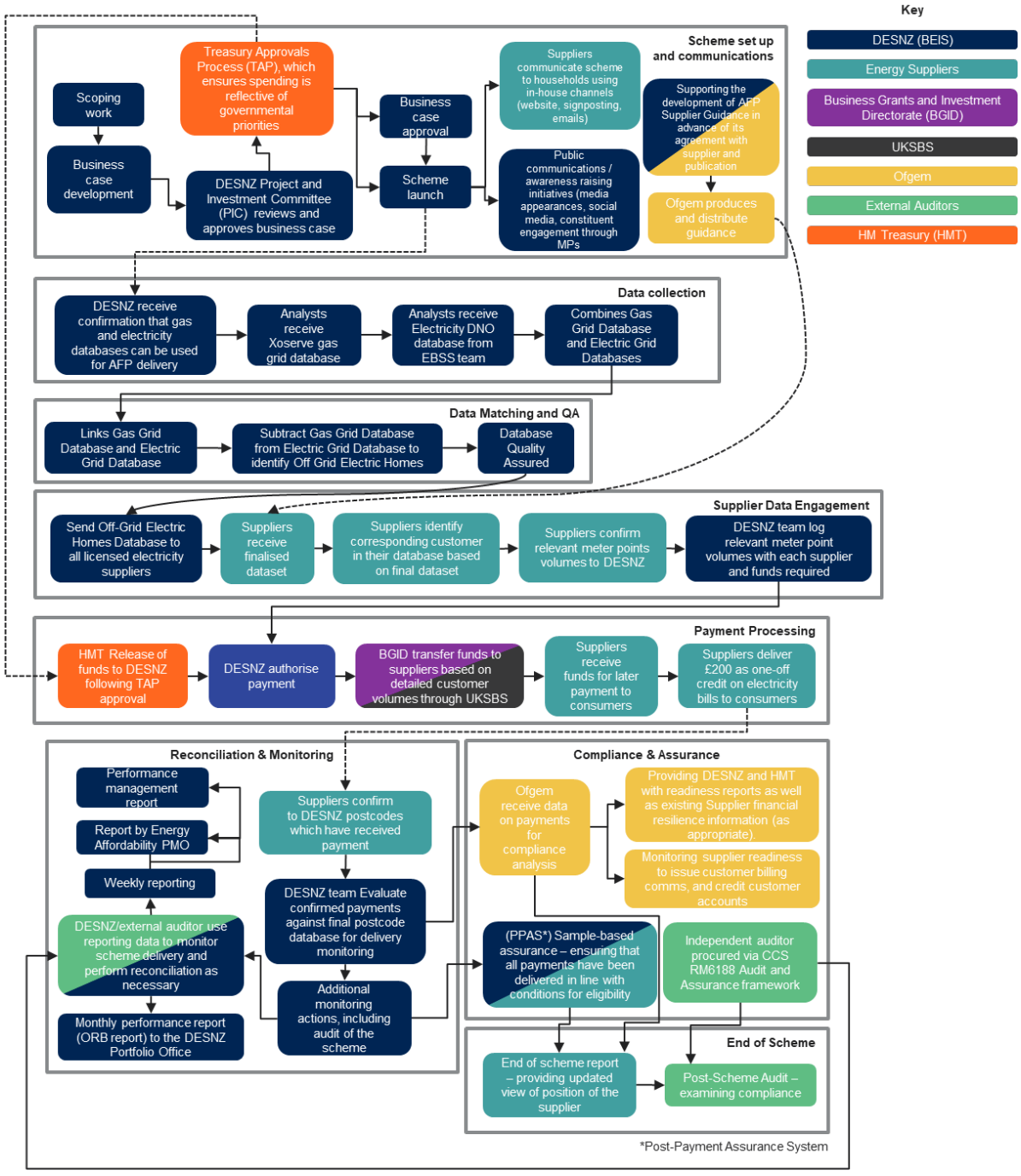
resubmit monthly reports. It was also noted that reporting requirements took a while to fully understand, leading to some notices of enforcement for suppliers, despite reporting being underway. Finally, the approach of treating all suppliers the same without considering their different sizes and organisational capacities was seen by suppliers as problematic, as the operational weight of delivering the intervention hindered ability to effectively deliver services for some, particularly smaller suppliers.

7.1.3 AFP

Details of AFP delivery processes are set out in the process map diagram below. As evidenced in the process map, delivery of the scheme was dependent on a number of key activities undertaken by DESNZ and suppliers, centred on the collection and estimation of the list of off-gas grid homes eligible for the scheme.

The evaluation found that the scheme was successful in delivering the vast majority of payments to households. Energy suppliers indicated that the burden of delivery for AFP was less than that compared with delivery of the EBSS GB scheme, due to the simplified delivery process of DESNZ being responsible for collating the list of eligible households, and the lessons learnt from delivery of the EBSS GB scheme.

Figure 7.3: AFP Process Map



Scheme design, set up, and communications

DESNZ set up the AFP scheme in January 2023 following the implementation of the EBSS GB and EPG schemes, to provide equivalent support for alternative fuel users (such as households reliant on heating oil or LPG). The list of eligible households was identified by DESNZ by collating postcodes not connected to the gas grid, and excluding areas where there was high usage of electric heating.

DESNZ was commended by energy suppliers for the speed at which the AFP scheme was set up. This was attributed to the similar design of this intervention to EBSS GB: where applicable

AFP used the same mechanisms for payment, enforcement, and regulation. Suppliers reported that changing the energy bill template was the biggest modification required for AFP implementation. This was cited as significant in helping DESNZ and energy suppliers with setting up AFP.

Suppliers said that the scheme was straightforward and easy to implement, which was attributed to three main reasons. Firstly, DESNZ collated the list of eligible households, which reduced the delivery burden experienced by suppliers. Secondly, energy suppliers were able to leverage their experience in delivering EBSS GB, as some elements within the delivery of payments, as well as monitoring and compliance, were similar. Thirdly, suppliers indicated that the mode of payment being a one-off payment simplified the administrative procedures. While suppliers found the scheme straightforward and easy to implement, they suggested that a longer engagement and consultation phase would have been helpful in ironing out details of the interventions such as the method of delivery and reporting requirements.

Awareness and understanding

As the AFP scheme was delivered through suppliers, as with EPG and EBSS, delivery of payments was not dependent on awareness for the majority of households. However, for the minority of households on PPMs, the £200 payment was delivered as a redeemable voucher, which required awareness of the intervention to achieve receipt of payments. In addition, the effect of awareness on consumption behaviours may have been greater for AFP compared to EBSS and EPG, given the nature of alternative fuel purchases, where it is common for households to bulk buy large quantities of heating oil and/or LPG prior to use. Therefore households were likely to be receiving AFP after they had already purchased fuel for winter 22/23, so if they were not aware of the AFP scheme, they may have bought a less fuel than necessary to maintain a comfortable consumption level.

Wave 1 of the survey of AFP households revealed that 60% of AFP recipients were aware of having received the payment. However, awareness and understanding of AFP varied significantly within the eligible households. The subgroup analysis of awareness of AFP based on wave 1 of the survey of AFP households reveals important disparities in levels of awareness by payment types, with 82% of direct debit households aware of the scheme, 74% of bill households and 57% of PPM households. In addition, experts in vulnerable groups indicated that there was confusion and a lack of understanding among vulnerable households (including households with disabilities and lower household income) on the eligibility criteria and how the payment would be delivered. In future deployment of similar schemes, more targeted communications specifically for vulnerable households and PPM households, clearly outlining eligibility criteria, might help improve awareness and understanding.

Wave 1 of the survey of AFP households indicated that the key ways that households became aware of the scheme was through a letter, email or other communication from your energy supplier (25%), Martin Lewis/Money Saving Expert (22%), TV news (22%), via their energy bills (12%), a letter or email from the local council or from the government (10%), Word-of-mouth (10%), and via the GOV.UK website (8%).

Delivery of payments

As of March 2023, £404 million in total AFP payments had been distributed, exceeding the estimated £380 million spend originally expected. This was due to the actual number of eligible households (2 million) exceeding the anticipated number of 1.86 million. According to monitoring data for the intervention, 97.4% of payments were delivered to households[56].

Suppliers reported that successful delivery of payments was facilitated by the timing of AFP and their previous experience in delivering the EBSS GB scheme. Suppliers were able to apply lessons learned from the EBSS GB set up and delivery, using similar processes for payment, enforcement, and reporting of AFP that had been used for the EBSS GB intervention. The burden placed on suppliers was seen as appropriate and considerably reduced by DESNZ assessing eligibility for the AFP, and by the method of delivery: a one-off payment which simplified administrative processes.

Customers were also generally satisfied with the timeliness of delivery: with 74% of those aware of the AFP or AFP AF schemes in the wave 1 KnowledgePanel survey were satisfied with the timeliness of receiving the discount. This corresponds with 83% who were satisfied with the way that the discount was paid to them, 63% who were satisfied with the amount of financial support provided and 77% that the support was provided as a lump sum, rather than monthly instalments.

> *"I was happy with [AFP being provided in a lump sum] … Because when you buy heating oil you buy it as a job lot as opposed to 2 or 3 times a year or as opposed to every single month." Household eligible for AFP, ID 32, Wave 1 interview*

Energy suppliers, however, reported some challenges in delivering payments. These were in relation to an unexpectedly high communications burden, as they were households' main point of contact for AFP. Suppliers indicated having received queries and complaints from households and some suppliers reported not being able to answer all questions due to lack of information on AFP from DESNZ. One issue cited by suppliers was that DESNZ, in some instances, would provide an additional list of eligible households to suppliers after the initial list, whilst the project delivery was ongoing. This meant that these households may have received their support later than households in the initial list, which may have been later than consumers were expecting. Whilst these instances were cited as being rare, suppliers indicated that it risked causing reputational damage.

Compliance and assurance

Overall, ensuring compliance in the delivery of payments was effective. The scheme achieved timely delivery of support while reducing administrative burden, particularly for suppliers. Stakeholders encountered some challenges, mostly related to unclear reporting guidance, however this did not impact the timeliness of payments and delivery of support.

[56] While 97.4% payments were delivered to households, 99.6% of the payments were facilitated from supplies to households. This difference is explained by a relatively small number of unredeemed vouchers among traditional PPM households. These households made up only 5% of the eligible population (91,000), so the impact on the programme's reach was not significant.

Final reconciliation was completed in summer 2023. In total, £3.3 million had been recovered (12.3% of total spend), which mainly consisted of contingency payments and grant money that had not been delivered. As of 21st December 2023, there were eight outstanding payments remaining and £668,100 outstanding cheques (2.5% of total spend) that were reported as potentially requiring recovery in January 2024.

7.1.4 EBSS Alternative Funding and AFP Alternative Funding

The delivery of the EBSS AF and AFP AF schemes shared key similarities: they were both delivered through local authorities, and both were application based. The processes involved for each scheme are outlined in the process maps below.

Evidence from the evaluation indicates that whilst the delivery processes worked well for assisting local authorities to process applications and administer payments to households, delivery of payments to households was limited due to a low number of the eligible population making applications for the schemes.

Figure 7.4: EBSS AF Process Map

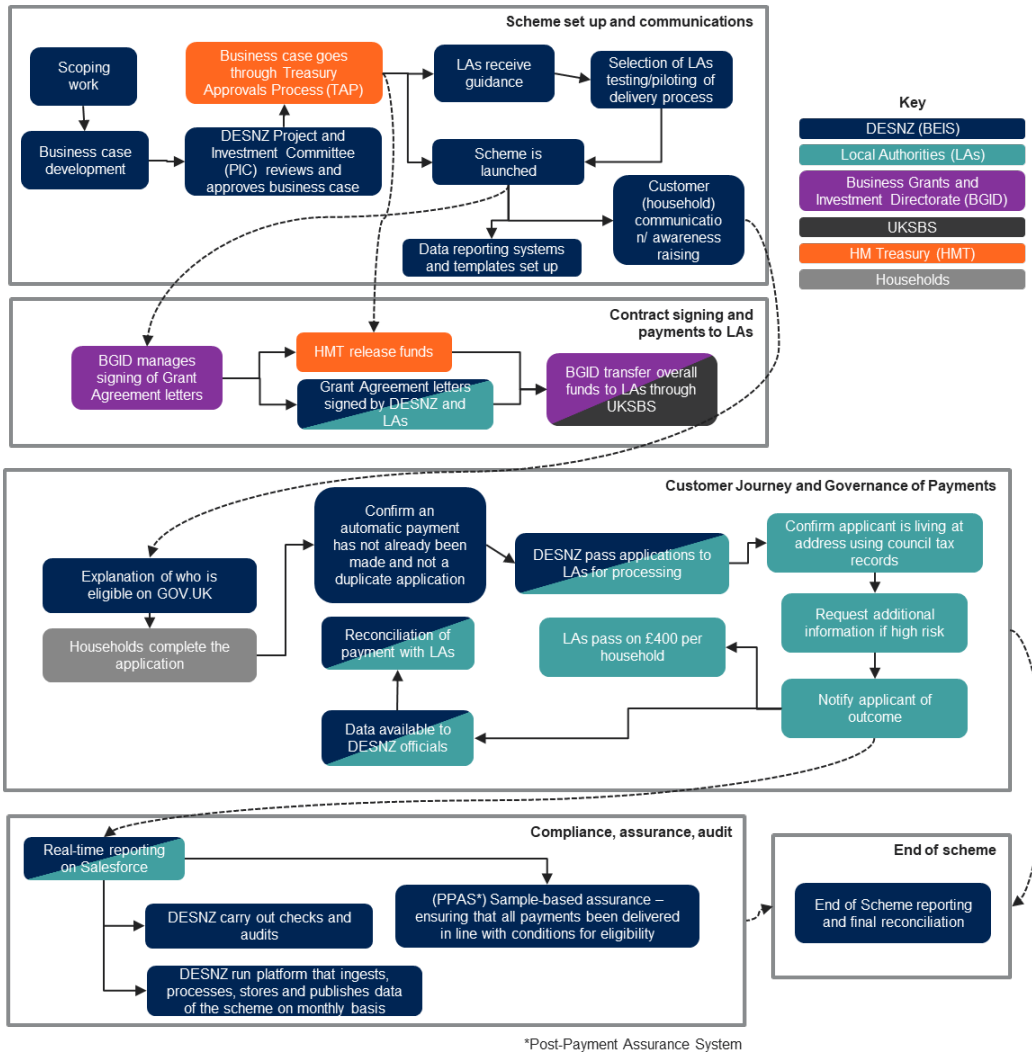
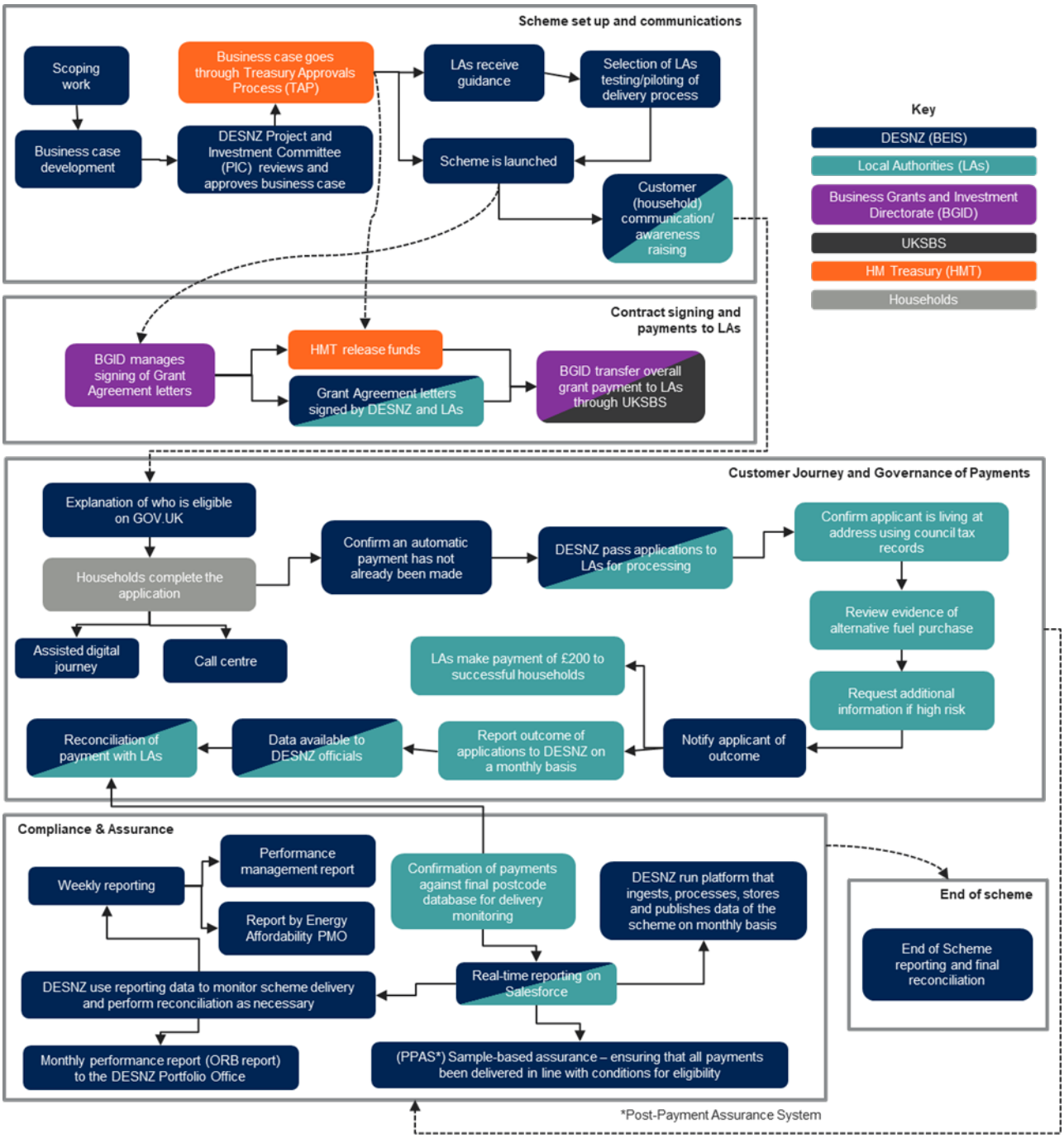


Figure 7.5: AFP AF Process Map



Scheme design, set up, and communications

As evidenced in the Process Maps (Figure 7.4, Figure 7.5), both EBSS AF and AFP AF were application-based, with households making applications via the gov.uk portal and a lump-sum payment delivered via local authorities. The eligible population for the EBSS AF and AFP AF schemes were those that did not have a direct relationship with a domestic energy supplier, which includes a wide range of households including care home residents, fixed address Gypsy, Roma and Traveller (GRT) households, houseboats with a permanent mooring, and farmers. Therefore, DESNZ chose to deliver the schemes as application-based due to the difficulties in identifying the eligible populations. The effectiveness of the schemes in delivering payments to eligible households was therefore dependent on both awareness of the

interventions and the extent to which eligible households were able to complete the application. The EBSS AF scheme was launched in February 2023 and the AFP AF scheme was launched in March 2023. Prior to launching the schemes, DESNZ and select local authorities conducted a piloting phase which aimed to test the EBSS AF delivery model, including the Salesforce system that local authorities used to process applications. Whilst participating local authorities indicated that this piloting phase was resource-intensive, they also indicated that it was a key factor in allowing the EBSS AF to run more smoothly when deployed across all Local Authorities.

DESNZ implemented awareness raising campaigns for both schemes including press notices, communicating through MPs, social media targeting, and engagement with customer groups (including care home representative groups and general consumer groups). Local authorities also indicated that they undertook a range of targeted engagement campaigns to spread awareness of the schemes, particularly to vulnerable groups. This included digital approaches (e.g. promoting the schemes on local authority websites) and physical communications, such as sending leaflets and letters to eligible household addresses.

However, evidence from a range of data sources indicates that there was limited awareness of the schemes within the eligible population. Interviews with local authorities indicated that they witnessed low awareness in eligible households during the application period and during local scheme-related outreach. This was particularly the case with care homes based in the area. Interviews with family members of care home residents indicated that awareness of EBSS AF was often dependent on the awareness by the care home provider and the extent to which this was communicated to the care home residents and those who managed residents' finances. This may indicate that awareness amongst those with limited digital access or literacy was likely facilitated or hindered by the extent to which intermediaries (such as care home managers) communicated the schemes to potential applicants.

Wave 1 of the survey of EBSS AF recipients indicated that the ways that households became aware of the scheme was through word-of-mouth (34%), via the GOV.UK website (28%), Martin Lewis/Money Saving Expert (20%), a letter or email from the local council or from the government (10%), and via TV news (10%).

Participants in qualitative interviews with households, local authorities and care home intermediaries widely reported that the application process for both the EBSS AF and AFP AF schemes was quick and easy to understand. However, interviews with households, experts in vulnerable groups and call centre administrators, indicated that some applicants, particularly members of vulnerable groups, experienced challenges. This included those in temporary accommodation, whose addresses were less likely to match those held on council records (or no records exist of their fixed address). Interviews undertaken with individuals who were responsible for care home resident's finances (rather than being a care home resident themselves), indicated that there were some issues experienced in completing the application, such as providing proof of payment to the care home to receive EBSS AF. Despite this, their experience of the application process was largely positive (discussed further in Section 7.2). Households with a Power of Attorney arrangement also found the application process difficult to complete due to issues such as bank details being rejected.

Take up and reach

Both schemes had relatively limited take up, with monitoring data indicating that the EBSS AF scheme processed 18% of expected applications (23% assuming 80% take-up) and AFP AF processed 22% of expected applications (27% assuming 80% take up). Local authorities approved a total of 145,212 applications for the EBSS AF scheme, corresponding to £59 million and approved 89,758 applications for AFP AF, corresponding to £18 million of total funding spent. Overall, EBSS AF reached 145,190 households and AFP AF 89,750 households.

Across both schemes, the largest proportion of paid applications came from park home residents (25%), followed by homeowners (24%), private tenants (11%), care home residents (10%), households on a heat network (8%), council tenants (5%), travellers with a fixed residence (4%), houseboats (2%), and residents of temporary accommodation (1%).

Interviews with representatives from local authorities and experts in vulnerable groups also indicated that the schemes had limited take up, with a lower proportion of applications than expected. For example, LAs reported that, in local outreach (such as with care homes or park homes) they experienced low awareness amongst potentially eligible populations, or intermediaries responsible for passing on communications to eligible groups. Experts in vulnerable groups also indicated that, in their work in supporting vulnerable populations there was limited awareness of their eligibility to receive EBSS AF or AFP AF funding.

Take up was limited by awareness of the schemes amongst eligible households, as discussed under scheme design, set up, and communications. In addition, low take up could be due to the confusion caused from the sequencing of the main and alternative funding schemes. For example, interviews with LAs and experts in vulnerable groups indicated that some customers were confused by the contradictory messaging between the EBSS and EBSS AF scheme, with the former having a strong focus – for anti-fraud reasons – on the payment being automatic and not requiring the customer to take any action. This conflicted with communications focused on the EBSS AF scheme which encouraged households to apply.

Beyond that, limited take up may also be explained by inaccurate estimation of the size of the expected eligible population for the EBSS AF and AFP AF schemes. The EBSS internal management information report highlights that the estimate of the size of the eligible population for the EBSS AF scheme was based on the limited data then available and associated working assumptions. Research undertaken to re-estimate the EBSS AF population found that estimates based on more recent census data were similar, but slightly lower, than the estimates derived by DESNZ at the time of the scheme's design. This was the case across all subgroups of the eligible population for EBSS AF, with the estimates for the number of social renters and caravans or other mobile structures being substantially lower than the originals. However, whilst there were underestimations of the expected eligible population, this did not fully account for the limited take up of both schemes. This analysis also found that many of the populations eligible for EBSS AF cannot be estimated directly from the census or other existing data sources, so future estimates would still need to rely on assumptions about what proportion of a wider population would be eligible. In particular, one significant challenge is the

lack of direct data on the number or proportion of households with a non-domestic energy supplier (see Annex C: Supplementary Research for a full summary of this analysis).

Delivery of payments

The alternative schemes survey found that the vast majority (86% for EBSS AF, 82% for AFP AF) of households who received the schemes were satisfied with how the payment was delivered to households. A larger proportion of EBSS AF respondents were satisfied (75%) with the amount of support provided compared to AFP AF (66%).

Local authorities had generally mixed views on their delivery experience, with some aspects of the schemes being seen as going more smoothly (such as the relatively simple delivery process) and other aspects posing more of a challenge (such as issues in liaising with DESNZ to resolve issues). Local authorities indicated that the process to assess eligibility for the AFP AF scheme was more challenging than that of EBSS AF. This may be responsible for AFP AF applications taking a longer time to process than EBSS AF applications, taking an average 39 days compared to 28 days respectively. Local Authorities indicated that the difficulties in assessing AFP AF applications was because eligible applicants (users of alternative fuels) were less likely to be captured within council systems and thus harder to verify. In addition, the receipting requirement led to issues such as applicants providing receipt evidence that wasn't clear, was not the correct quantity, or were not applicable (such as receipts that were dated outside of the eligible timeframe).

There was an option for people to apply over the phone, via a contact centre operated by Arvato, if they required more support in completing the application. Interviews with call centre representatives indicated that they received a lower number of calls from households than expected, and respondents in the household interviews indicated limited awareness of the existence of support for their application. This could be indicative of low awareness of the contact centre, which may have hindered the ability to support vulnerable households that needed it to complete their application. Interviews with households and from call centre administrators indicated that the call centres were generally considered to be positive for helping address issues that customers had with their applications. Interviews with Arvato indicated that that vulnerable groups in particular struggled to produce suitable documentation to prove their eligibility. The evidence requested was often hard to demonstrate without a direct, formalised relationship with a supplier. For example, some park home residents received informal receipts acknowledging purchase of oil – which did not meet eligibility requirements. In addition, there were some issues relating to the details required from Powers of Attorney, assisting older people with completing the digital application and assisting customers in temporary accommodation.

> *"I think the vulnerable group population were particularly hit hard, because they had to produce quite a bit of documentation, like, power of attorney. If they had a power of attorney through a council, they had to wait for them to then apply for them." Call centre representative, ID 1, Wave 1 interview*

Compliance and assurance

In total, 25% (52,733) of total applications for EBSS AF were rejected, compared to 14% (16,230) of applications for AFP AF. Across subgroups of the population for both schemes there was significant variation in the proportion of applications that were rejected, with private tenants having the largest proportion of applications rejected (25%), followed by homeowners (19%), council tenants (14%), and park homes (6%). For the remaining subgroups, less than 5% of applications from each subgroup were rejected. Applications were rejected for a number of reasons, with the highest proportion of rejections across both schemes classified as being due to the property having received funding from the main scheme (57%), identified as a duplicate (12%), insufficient proof of address (11%), ineligible property or applicant (6%) or that the applicant or household had already received the funding (3%).

From the qualitative evidence collected there was limited evidence to suggest that there was systematic fraud across either of the schemes. Local authorities indicated that the level of fraudulent applications was minimal, and in instances where applications were coming from non-eligible households (for example, multiple applications from a House of Multiple Occupancy with a shared energy meter) it was not always clear if this was purposefully fraudulent behaviour or confusion over eligibility criteria. DESNZ identified and removed only a small number of fraudulent application portals, indicating that this was not a large-scale problem for the schemes. Household interviews indicated that whilst they had heard of examples of fraudulent application portals, and phishing from companies impersonating Government departments, no respondents had direct experience of being caught by fraudulent activity.

> *"…No instances of professional fraud, if you like, where clearly, it's one party putting multiple claims in. …we dealt with the people who seemed to have put strange applications in … certainly no instances of fraud, it seemed to be confusion on their part more than anything..." Local Authority, ID 15, Wave 1 interview*

Interviews with Local Authorities and DESNZ indicated that a number of scheme characteristics contributed to a lack of systematic fraud across the schemes, including:

- DESNZ took a collaborative approach, working alongside other bodies such as the National Cybersecurity Centre, to detect the existence of fraudulent application portals. This active approach limited the spread and subsequent impact on consumers of fraudulent application portals.
- Initial verification performed by DESNZ limited the extent to which fraudulent applications could pass through to local authorities. Automated initial verification processes were designed to limit fraud by automatically rejecting applications from individuals that had already applied or previously received the discount through the main EBSS GB fund.
- The schemes were designed to reduce the burden on local authorities processing applications, which limited the extent to which fraudulent applications could pass

through assessment. Local authorities indicated that the Salesforce system assisted in determining instances where the customer was not eligible.

However, both DESNZ and local authorities noted that checks made to limit fraud may have inadvertently led to some applications from eligible households being incorrectly rejected. For example, individuals living in assisted living facilities that lived in the same address were reported to have been rejected during the initial verification phase. Whilst this may have been necessary because of ineligibility or to prevent fraud across the schemes, it is unclear whether this may have contributed to a reduction in scheme take up, given that approximately 31% of applications for EBSS AF and 23% of applications for AFP AF were either rejected or cancelled.

EBSS AF for Continuous Cruisers (EBSS AF CC) – Further detail provided in Annex C: Supplementary Research

At the start of the EBSS AF and AFP AF schemes, households living on boats without a permanent mooring (Continuous Cruisers) were not listed as an eligible category for the EBSS AF scheme. To address this, an extension of the scheme was set up to provide those with a continuous cruisers licence equivalent funding. This scheme did not require an application from households, and was delivered automatically to those who held the appropriate licence with the Canal and River Trust (CRT). The scheme was implemented in October 2023, approximately three months after the end of the EBSS AF scheme, due to the time required to develop an approach that would be effective at reaching continuous cruisers. The EBSS AF CC scheme saw a high redemption rate (84%) among registered continuous cruisers. Stakeholders participating in the Continuous Cruisers research expressed that this group is typically less trusting of government, which may be a reason behind the 16% of vouchers not having been redeemed. DESNZ chose to use those on a 6-12 month-long licence to capture a large proportion of the population of households living on a boat rather than owning a boat for leisure (such as those on a leisure licence). However, the support could not be provided to those living on a boat in another of the UK's waterways not managed by the CRT (due to there not being an equivalent licencing system) and the population that live on boats using a leisure licence. The additional research conducted on the EBSS AF CC scheme is provided in Annex C: Supplementary Research.

Interviews conducted with recipients of the EBSS AF CC scheme indicated that individuals who redeemed their voucher via electronic bank transfer were generally supportive of the delivery of the scheme and found the process for redemption of their voucher straightforward. Issues that were highlighted by interview respondents included instances such as people whose names had special characters not passing the bank transfer checks, or issues due to inconsistencies between the name provided on their CRT licence and banking details, which meant they were initially unable to pass the checks. However, interviews also indicated that there were some issues for recipients who redeemed their vouchers in-person, such as staff at PayPoint locations not believing in the legitimacy of the scheme or not having sufficient cash in the till to provide the payment.

Members of the CRT team in interviews were widely supportive of the need for the scheme, the relationship with DESNZ and overall delivery of the scheme. However, interviews indicated

that there were considerable issues with the customer journey for recipients to get assistance with accessing their payment. Interviews with members of the CRT team indicated that they were required to field a number of calls from customers but were not able to help people's issues without passing people on to DESNZ, who would sometimes then need to pass people on to PayPoint. From CRT's point of view, the scheme created a lot of correspondence, with CRT lacking the resources to handle the volume and nature of the calls received. CRT reported receiving a significant number of abusive calls but also calls of desperation. The CRT reported that this created a lot of stress for CRT call handlers, and some call centre operators either resigned or went on sick leave as a result.

7.2 Summary of overarching findings

7.2.1 Household experience

Awareness and understanding

As outlined in the Process Maps (Figure 7.1 to Figure 7.5), awareness and understanding of the EPG, EBSS and AFP interventions for households did not play a direct role in delivery of payments, other than for the minority of EBSS and AFP customers that were on a traditional or smart PPM. For the AFP AF and EBSS AF schemes, delivery of payments was dependent on households having awareness of the schemes, given that they were application based. However, across all interventions, the effectiveness of scheme communications in generating awareness may have played a role in the extent to which the schemes contributed to limiting underconsumption of energy or non-energy goods and services. This may have been the case if customers based their consumption behaviours on their expectations of energy prices rather than the actual bills received. Awareness and understanding may also have contributed to customer perceptions and subsequently satisfaction in the support provided. Awareness and understanding of the schemes was likely affected by the communications provided by central and local government, which was significantly impacted by scheme sequencing.

Overall, household awareness was highest for EBSS GB, followed by EPG and EBSS AF[57]. Out of the whole population, four in five were aware of the EBSS GB (80%), while half were aware of the EPG (49%), and one in five aware of EBSS AF (16%). Interviews with households eligible for EPG indicated limited awareness of having received the EPG intervention, with households instead generally indicating awareness of the other intervention they were eligible for (EBSS GB, AFP and AFP AF households). Households often discussed their awareness in terms of the monthly amount provided in their account, in the case of EBSS GB and AFP.

> *"I can't remember seeing much about that to be honest, I might have done. I think I went in search of it, if I got something that said, 'Oh there's going to be another £400 fuel payment', I'd go in and have a look and see whether we were eligible. I*

57 The question of awareness for AFP and AFP AF was only asked to households on alternative fuels, therefore a comparison between the rest of the schemes is not feasible.

> *can't remember it being pertinent to me." Household eligible for EBSS GB and EPG, ID 65, Wave 1 interview*

This indicates that the difference in awareness could likely be explained by the more intuitive and easier to understand way the EBSS GB and AFP payment were presented to households compared to EPG (a consistent monthly amount made directly to the households' account, compared to a discount on the unit cost of energy).

Younger individuals, social housing tenants, private renters, and those from ethnic minority backgrounds were less aware of EBSS GB, EPG, and AFP. The KnowledgePanel wave 1 survey of GB households indicated that across the EBSS GB, EPG and AFP interventions, owner-occupiers reported the highest level of awareness compared to social housing tenants and private tenants, respondents of older age groups reported higher awareness compared to respondents in younger age groups, and people from white ethnic backgrounds were more likely to report awareness of the interventions compared to respondents from ethnic minorities. Qualitative data from experts in vulnerable groups indicate that awareness of the two application-based interventions was especially low amongst vulnerable populations including those with lower digital literacy or access (such as those in care homes and people with a disability affecting their digital access or literacy) and those in hard-to-reach groups (such as those in temporary accommodation, travellers with a fixed address or those in remote locations).

> *"Quite a lot of people who are disadvantaged don't have digital access […]. It's lack of, I suppose, information to an extent, (as) they'd have to go and actively want to find out, 'Well, what do I do? Because I didn't get the money from the Government automatically because I'm on a PPM, or because I don't have an electricity meter, or because I live on a boat,' […] and a lot of them just don't have the wherewithal to actively go and pursue. And then if they do know about it, they need support to be able to claim it." Expert organisation, ID 8, Wave 1 interview*

Understanding of how schemes were applied varied across the schemes, with EPG largely not well understood. In wave 1 of the KnowledgePanel survey, two fifths (44%) of those with a domestic electricity supplier self-identified as eligible for the EPG discount, with younger groups and ethnic minorities groups being less likely to self-identify as eligible. An earlier Ofgem survey from November – December 2022[58] also indicated that households were confused about the implementation of the scheme: just over half (56%) of those aware of the EPG could choose the correct description of what it did from a multiple-choice list. In addition, household interviews provided limited evidence of awareness of EPG and their eligibility. In the limited number of cases where EPG was discussed, participants expressed confusion about how it worked and the ultimate impact that the discount would have on their bills. These findings were supported by the accounts of experts in vulnerable groups, who, in qualitative interviews, indicated that vulnerable households often thought that the EPG was a cap on their energy bills.

[58] Ofgem CIM surveys - Fieldwork dates: November - December 2022.

Further logistic regression analysis was conducted looking at whether people's awareness of the schemes might have affected the extent to which people changed their saving and consumption behaviours. The analysis found that there was a positive correlation between awareness of the schemes and the likelihood of the individual indicating that they had stopped putting money in their savings. However, these results were not significant after controlling for age, income, region and payment type. There was also a similar positive, yet-insignificant, effect of awareness of the schemes on the extent to which households under-consumed. There is likely to be a number of key unobserved contextual factors (including wider cost pressures) affecting this correlation for both the extent to which people changed their saving and consumption behaviour during the intervention period. There may also be some unobserved behavioural factors that could contribute to this correlation.

The KnowledgePanel wave 1 survey found that roughly half (45%) of those who paid through intermediaries were aware that intermediaries (such as landlords or property managers who were responsible for paying for the energy bills on behalf of their tenants) were obliged to pass on any government financial support for energy bills, compared to a slightly higher proportion of respondents (49%) who were not aware. For respondents who were heat network users, the majority (65%) indicated that they were not aware that some heat network suppliers had received government financial support, compared to 34% that were aware. The sample sizes for consumers who paid through intermediaries, or were heat network consumers were, however, low. And awareness of status of energy arrangements is often ambiguous, so these findings should be treated with caution[59].

Implications of awareness

Awareness of the schemes is not necessary – with the exception of application-based schemes – for consumers to realise the benefit of the schemes. Awareness and understanding are most relevant where the schemes were seeking to send a signal to consumers that bills would be lower therefore unnecessary underheating could be avoided. EBSS was simpler to understand and deductions from bills in the winter months were relatively clear. For EPG the extent, or exact nature, of the support may not have been clear to the majority of households and therefore the re-assurance this might have provided may not have been maximised.

Satisfaction with the interventions and experience of receiving support

The majority of households were satisfied with the level of support provided. The KnowledgePanel wave 1 survey of GB households indicated that 61% of EBSS GB and EBSS AF households and 63% of AFP and AFP AF households were satisfied with the amount of support provided (£400 in the case of EBSS GB and EBSS AF; £200 in the case of AFP and AFP AF). In regard to EPG, 69% of respondents who were aware of the scheme indicated they were satisfied with the way the discount was applied, 59% with the timings of EPG, and 59% with the fact that the vast majority of households on standard variable tariffs paid the same unit

[59] See discussion on identifying heat network households in Section 5.4 of the Technical Report for the Heat Networks Consumer Survey 2017.

prices[60]. Respondents in household interviews generally indicated that the support was welcomed. However, households who reported a higher increase in bills, such as those with a high energy usage, reported less frequently that they felt satisfied with the scale of support provided. Among respondents who have received EPG, satisfaction was higher among homeowners/those buying on mortgage (71%) compared to social tenants (54%); and those on direct debit (71%) compared to PPM customers (49%). However, households who reported a higher increase in bills, such as those with a high energy usage, reported less frequently that they felt satisfied with the scale of support provided.

Recipients' experiences of receiving the interventions were not consistent across the different sub-groups of the bill-payer population. Of EBSS GB recipients in the KnowledgePanel wave 1 survey, 86% indicated that they did not experience any issues with the payment. However, this was slightly more likely to be reported by respondents of white ethnicity (88%) than those from ethnic minorities (72%). The proportion of respondents indicating they did not have any issues with the payment was also higher in owner-occupied households compared to private tenants and council tenants, and respondents of older age groups compared to younger. However, the survey did not find a significant difference in the percentage of respondents reporting that they did not experience any issues with the payment based on working status, education or income level. Interviews with local authorities and experts in vulnerable groups indicated that vulnerable households (which includes individuals living in assisted living, temporary accommodation or those with a disability) were more likely to face issues in the application process for EBSS AF or AFP AF, or in redeeming their EBSS GB or AFP vouchers (PPM households).

Households were generally satisfied with how the interventions were applied. The majority of respondents in the KnowledgePanel wave 1 survey indicated that they were satisfied with how the discount was applied (or how the support payment was delivered for households of the application-based schemes), with 83% of AFP and AFP AF households, 80% of EBSS GB and EBSS AF, and 69% of EPG households indicating they were satisfied. Participants in household interviews also indicated that the support being delivered as monthly payments allowed for better management of costs compared to receiving as a lump sum, with this particularly reported by households with a PPM. However, the alternative schemes survey found that 86% of EBSS AF customers and 87% of AFP AF customers were satisfied with the funding being provided in a lump sum rather than in instalments.

Although satisfaction with different elements of the schemes was generally moderate to high (between 59% and 83% across the different schemes and four different aspects of scheme delivery[61]), key reasons for dissatisfaction cited by participants included an absence of means testing and a delay in receiving the payments. Among households that indicated they were dissatisfied with one or more aspects of the interventions they received; this was mostly due to

[60] Accounting for the fact that a minority of households were on fixed tariffs prior to the energy crisis, who may have paid lower unit rates. As of September 2023, Ofgem calculates the number of households on fixed tariffs rates to be approximately 3 million, compared to the approximate 29 million households on Standard Variable Tariffs (SVTs).

[61] The survey examined satisfaction across the four aspects of: how the £400/£200 was applied to you; the financial support provided (£400/£200); The timeliness of receiving the discount; and the financial support being given in monthly instalments/in a lump sum.

absence of means testing for EBSS GB (mentioned by 50% of dissatisfied recipients) and EPG (mentioned by 20% of dissatisfied recipients). In the case of AFP and AFP AF recipients, the main cause of dissatisfaction was the delay in issuing the discounts (mentioned by 39% of dissatisfied recipients). AFP and AFP AF recipients consistently did not express any dissatisfaction with the absence of means testing in delivering the interventions. In addition, whilst representatives from local authorities and experts in vulnerable groups indicated that the Government support provided was preferred compared to no intervention, a more targeted approach could have been beneficial in providing the funding to vulnerable groups who were more likely to experience the harms related to underconsumption of energy.

> *"It might be someone [whose] household has a higher income but their energy costs, because of their disability, are £1,000 more than someone else… We know that, even before cost-of-living crisis, people with a disability have to pay, on average, over £900 a month just to have… the same standard of living as a non-disabled person." Expert organisation, ID 5, Wave 1 interview*

> *"We had one group [who] organised themselves because they said that their ward is characterised by a main road where you've got affluence on one side and deprivation on the other side. What they wanted to do was collect all the £400's on the affluent side of the road and spend it on the deprived side of the road, and they used us as a vehicle to do that. So yes, it was quite common that people were feeling [this way]." Expert organisation, ID 1, Wave 1 interview*

Respondents in the household interviews also felt that the schemes could have been more targeted to vulnerable groups. In addition, a common source of dissatisfaction cited by respondents during interviews was the lack of provision of a discount for domestic gas use, and a lack of information provided on this. Given that EPG applied to both electricity and gas prices, this is likely to indicate a lack of understanding of the EPG amongst people interviewed.

> *"I think there could have been different brackets so people in bigger houses got more help, or people with less money got more help...I got the same amount as my sister and she's in a 2-bed ground floor little flat, where I'm in a 3-bed semi-detached house...So I think, yes, different circumstances could have maybe been taken into consideration." Household eligible for EBSS GB and EPG, ID 13, Wave 1 interview*

7.2.2 Delivery processes and stakeholder experience [62]

Delivery of payments

Overall, EBSS GB reached approximately 28.9 million households, EPG approximately 29.3 million households (based on electricity meters), AFP: 1.8 million households, EBSS AF: 145,190 households, and AFP AF: 89,750 households.

Energy suppliers felt that scheme delivery processes were effective overall though EBSS GB was more challenging to administer than EPG or AFP. For EPG, administering the scheme

[62] Please consult Annex B: GB Programme Theories of Change for details of scheme delivery processes

followed a similar process for suppliers to the energy price cap, which meant they could use their previously deployed systems and understanding to apply the discounts to unit prices. For AFP, suppliers indicated that the scheme being launched at a later date than EBSS GB meant that they could use their considerable learnings gained through EBSS GB delivery. In addition, administering the AFP scheme was also made easier for suppliers through the simplified process for identifying eligible households, by verifying the details provided in the list of eligible households from DESNZ. Across interventions, interviews with energy suppliers indicated that the supply forums, which were meetings held on a regular basis where energy suppliers could discuss queries and delivery progress together, were effective in facilitating knowledge sharing of best practice.

However, the tight delivery timelines, the reporting requirements and other delivery aspects presented challenges in delivery for energy suppliers. The burden on suppliers from delivering the EBSS GB, and to a lesser extent the EPG and AFP schemes, was significant. The delivery structure of EBSS GB was relatively novel to suppliers and differed to their business-as-usual operations (and previous interventions delivered). For example, energy suppliers reported having to dedicate additional resources to determining customer eligibility for EBSS GB, which was challenging due to changes in customer addresses. In addition, energy suppliers also had to dedicate resources to raising awareness of the schemes and to fulfil reporting requirements for DESNZ. Energy suppliers indicated that this created an additional administrative burden, and the resource cost of this was not reimbursed. This was exacerbated by the speed in which the schemes were brought in, which put a strain on energy suppliers' resources. For local authorities delivering the EBSS AF and AFP AF schemes, respondents also indicated challenges due to the speed in which the schemes were set up as well as the sequencing of the main and alternative funding schemes. This was particularly the case for local authorities involved in the pilot phase of the EBSS AF and AFP AF schemes, who faced challenges in refining the guidance and systems within a short timeframe. However, local authorities largely indicated that once the schemes started there wasn't a significant burden on resources, due to a relatively simple process for processing applications. In addition, local authorities, unlike energy suppliers, were provided with some funding to support delivery.

The evaluations observations on relatively low levels of fraud and error were confirmed by NAO report in late 2024[63]. They estimate 0.7 % fraud and error rate for all energy affordability schemes. This compared with Public Sector Fraud Authority estimates in March 2023 that the level of fraud and error in government spending, excluding taxation and welfare expenditure, ranged from 0.5% to 5%. And considerably lower than that experienced by some COVID 19 interventions

Monitoring and reporting arrangements

The overarching government/DESNZ monitoring arrangements were largely effective at administering and managing the schemes. DESNZ monitoring data for the EBSS GB and EPG scheme indicates that project management tools and other elements such as the delivery dashboard (for EBSS GB) were effective for tracking and monitoring scheme progress. However, collaboration across delivery teams within DESNZ could have been improved to

[63] National Audit Office (2024) Energy Bills Support: an update

encourage greater synergy in delivery. This includes knowledge sharing between the energy affordability scheme delivery teams and increased dissemination of lessons learned. DESNZ scheme management information indicates that improved internal communications across the portfolio of interventions was a key learning for delivery of the schemes. In addition, EBSS GB scheme management information indicates that the delivery teams faced resourcing challenges due to the speed at which schemes were set up, such as a lack of analytical resources and sectoral expertise.

Communication with DESNZ

Energy suppliers and local authorities had issues with initial scheme communication from HMG/DESNZ, but this generally improved throughout scheme delivery. Energy suppliers indicated that there was initial confusion on issues such as the extent to which suppliers would be compensated for additional administrative costs, and the responsibilities of different scheme stakeholders (such as Ofgem and DESNZ). Some suppliers also felt that the guidance and communication provided did not accurately reflect the variation within the energy market in terms of size of supplier and nature of business activities. For the EBSS AF and AFP AF schemes, local authorities also indicated that, in some instances, initial scheme communications from DESNZ created confusion within their organisation. However, both energy suppliers and local authorities indicated that communication and guidance from DESNZ improved significantly as scheme delivery progressed. Energy suppliers also indicated that DESNZ was able to show a willingness to engage and collaborate with suppliers to improve project management and delivery processes.

8. Outcome evaluation findings

This section presents the findings of the outcome evaluation, which assesses the schemes' hypothesised contribution claims (see chapter 6), following the approach set out in section 5.2.3.

This chapter takes a systematic approach to assessing each contribution claim: Firstly, the **contribution claim** being assessed is described – i.e. the intended outcome and associated causal chain of the ToC that is being tested. Next, the extent to which the change intended within the particular contribution claim occurred over the intervention period or not. Here, where possible, evidence of the change during winter 2022/23 (when the interventions launched) is discussed, with reference, where relevant and where data is available, to the time periods immediately before and after the interventions (i.e. winters 2021/22 and 2023/24)[64]. Next, a review and assessment of the **extent to which the evaluation evidence agrees** with the hypothesised contribution claim is presented. Then, an analysis of the extent and scale of the contribution / causal link is discussed, assessing both (a) **the magnitude** - i.e. the importance or weight that evaluators assigned to the schemes as drivers of the change observed/reported, (b) **prevalence** of the findings indicating a positive contribution of the schemes to the change observed/reported amongst those consulted / the different data strands, and (c) the **heterogeneity** of the findings by beneficiary group (i.e. the extent to which the schemes seemed to affect different types of households in the same or different ways)[65]. Finally, the strength of evidence per contribution claim is discussed in terms of the **risk of bias** in the findings for each contribution claim.

Within this chapter, 'outcomes' refers to the behaviour, experience and/or situation of households **over the intervention period,** as compared to a no intervention scenario that would have occurred over the same time period if the energy affordability schemes had not been implemented. As it is not possible to empirically define the no intervention scenario (the schemes were largely universal meaning that it was not possible to artificially construct a control group from statistical comparators), indicative evidence of a no intervention scenario has been derived from (a) **modelling the price elasticities** of demand for energy and non-energy goods and services, (b) **an analysis of trends immediately prior to the introduction of the schemes**, and/or (c) the statements **of consumers, experts and key stakeholders** about what they believe would have happened based on lived experiences and expertise. 'Key stakeholders' are consumers themselves or those with sufficient understanding of and expertise in energy and consumption behaviours to make plausible assertions about what would have happened.

[64] Where this data is presented it is to provide context of trends in other winters, but not to provide a clear comparator for data in winter 2022/23 as there are too many confounding factors that make the winters either side of winter 2022/23 non-comparable for drawing conclusions around the difference made by the intervention in that winter.
[65] Additional evidence is provided in Annex D Supporting Tables. And full cross tabs from the surveys have been made available with the publication

Table 8.1 presents a summary of the outcome evaluation findings.

8.1 Summary of findings

Table 8.1 Summary of outcome evaluation findings

Contribution Claim	Agreement of evidence	Prevalence and Magnitude
HCC1: The schemes contribute to lowering households' level of concern about energy bills and household finances. **Note this is an intermediate outcome**	The evidence available aligns with the hypothesis that the energy affordability schemes contributed to lowering households' level of concern about energy bills and household finances. Households' perceptions about the affordability of energy bills were a key factor influencing the extent to which households worry about them. 28% of GB households reported they would not have been able to afford to pay their energy bills in winter 2022/23 without the support of the government's energy affordability schemes. This represents 8 million households[66].	The evidence available suggests that the prevalence of the schemes' contribution to alleviating concern in terms of households affected was low, as the GB population remained concerned about energy bills over the intervention period despite the support. However, qualitative evidence from different stakeholders suggests that the schemes played a role at least in the case of some households in alleviating the magnitude of concern meaning that the magnitude of contribution in these cases may have been high.
HC1: Schemes contribute to the ability of eligible households to maintain energy consumption at a safe and comfortable level, while limiting the use of other harmful mitigation strategies. **HC2:** Schemes contribute to the ability of low-income households or those classified as fuel poor, to limit energy underconsumption.	Evidence shows households made substantial changes to their energy consumption and other behaviours during winter 2022/23. Evidence shows that the schemes helped support 2.3 million households maintain their energy consumption to a safe and comfortable level, while limiting their use of harmful mitigation strategies. Price elasticity modelling highlights that the EPG and EBSS GB schemes together were likely to	The evidence indicates a high prevalence of energy underconsumption over the intervention period in spite of scheme support: 40% (alternative schemes survey: 42%) heating some of the time even though it was cold and 29% (alternative schemes survey: 30%) avoided heating their homes most of the time even when it was cold. Despite some qualitative and quantitative indications that the schemes helped limit energy

[66] To extrapolate Knowledge Panel survey statistics to the number of households that the figure may represent, the KP weighted percentages were multiplied by 28.4 million which is the estimated number of UK households in 2023.

Contribution Claim	Agreement of evidence	Prevalence and Magnitude
	have induced a 28% increase in energy usage for the lowest income decile, compared a no intervention scenario. This effect decreased for higher income groups, and there was practically no effect for the highest income households.	underconsumption for certain households, the evaluation could not robustly determine the overall prevalence of positive effects from the intervention. In terms of the magnitude of the energy affordability support – i.e. the depth of effect – the schemes never aimed to, and clearly did not, eradicate underconsumption nor the use of harmful mitigation strategies.
HC3: The schemes help limit the scale and duration of PPM household self-disconnection from energy suppliers.	Evidence shows that the energy affordability schemes reportedly helped limit self-disconnections, supporting households to afford their energy usage in many cases during winter 2022/23. 57% of GB households on PPMs (Smart and Traditional) said they would have been unable to afford to pay their energy bills in winter 2022/23 without the support of the government's energy affordability schemes.	The evaluation found that although disconnections were high and potentially severe during the intervention period, the schemes had some effect on reducing the length and volume of disconnections in over half of the households. However, due to insufficient data, it remains unclear if the schemes significantly reduced the overall prevalence of disconnections at the household level.
HF1: The schemes contribute to limiting the number of households that would not be able to pay their energy bills and who go into energy debt with their supplier.	The evidence available aligns with the hypothesis that the schemes contribute to limiting the number of households that would not be able to pay their energy bills and who went into energy debt with their supplier. The evidence available aligns with the hypothesis that the schemes contribute to limiting the number of households that would not be able to pay their energy bills and who went into energy debt with their supplier.	The analysis shows that the average level of debt in repayment arrangements increased during the intervention period. Ofgem data indicates that the average debt amount was higher in the winter following the end of the schemes compared to during them, suggesting the schemes may have helped limit debt magnitude during winter 2022/23. On prevalence, the surveys suggest that the schemes helped around a quarter of GB households

Contribution Claim	Agreement of evidence	Prevalence and Magnitude
	Overall, 60% of GB households reported having to reduce their spending due to higher energy costs. This is representative of around 17 million households. Additionally, 15% of GB households who took on household debt said they would have needed to do so to a 'considerably greater extent' without the energy affordability schemes in place in winter 2022/23. This equates to approximately 4 million households.[67]	avoid energy debt, with 11% of Alternative Schemes survey respondents reporting the same.
HF2: The schemes contributed towards limiting the increase in the proportion of households experiencing energy burden and therefore likely to be experiencing fuel poverty	Evidence aligns with the hypothesis that the energy affordability schemes contributed towards limiting the proportion of households experiencing high energy burden. According to the Ipsos KnowledgePanel (Alternative Schemes) surveys, 51% (36%) of households who spend more than 10% of their income on their energy bills reported that they would have not been able to afford their energy bills in winter 2022/23 without scheme support. In line with the Ipsos survey findings, analysis of the Annual Fuel Poverty Statistics suggests that 289,000 additional households in England would have experienced fuel poverty without the support provided. In addition, price	Evidence available suggests a high prevalence of contribution of the schemes to supporting/benefitting those with the highest energy burden. Analysis of KnowledgePanel survey data shows furthermore that, assuming households would not change consumption behaviour in the absence of the schemes, approximately 9 million additional households would have needed to spend over 10% of their household income on energy in the absence of EPG and EBSS GB support during winter 2022-23. [68]

[67] To extrapolate Knowledge Panel survey statistics to the number of households that the figure may represent, the KP weighted percentages were multiplied by 28.4 million which is the approximate number of UK households in 2023. These households' statistics are intended as an estimate not precise number.
[68] Importantly, there are several caveats to this figure. Without the schemes, the KnowledgePanel survey suggests that energy behaviour would very likely change, and this analysis cannot account for the nature and scale of behavioural change in the absence of the schemes. Additionally, only data from households that have provided both their household income, and their household energy spend is used.

Contribution Claim	Agreement of evidence	Prevalence and Magnitude
	elasticity modelling undertaken further highlights that the EBSS GB and EPG schemes had an impact on reducing energy burden.	
HF3: The schemes limited increases in household borrowing and cuts in other essential spending (e.g. food, essential clothing, medicines) and savings.	The evidence available aligns with the hypothesis that the energy affordability schemes limited increases in household borrowing and cuts in other essential spending and savings.	Responses to the Ipsos KnowledgePanel survey indicate, of those who did not borrow money to pay for energy bills/costs, 14% (9% of respondents to the Alternative Survey) stated they would probably have needed to borrow money. This is representative of approximately 350,000 GB households. Survey evidence also shows that 4% (1%) of households would definitely have needed to borrow more money without the government support. This is representative of approximately 100,000 GB households[69].
HW1: The schemes limit negative mental and physical health impacts arising from increases in energy bill costs (including limiting instances of cold-related illnesses and mould in dwellings that can arise from under-heating).	The evidence available aligns with the hypothesis that the energy affordability schemes contributed to limiting the negative mental and physical health impacts (including instances of cold-related illnesses and mould) associated with rising energy bill costs. 60% of GB households, would have reduced their energy use to a considerably greater extent in winter 2022/23 without the government's support. This is representative of approximately 17 million households[70].	There is limited direct evidence of the magnitude or prevalence of the contributions of the schemes themselves to limiting either the mental and physical health impacts resulting from rising energy bills or instances of cold-related illnesses and mould. Some of the qualitative evidence does suggest the schemes were crucial or important to help limit the impacts of rising energy bills. For example, in the Knowledge Panel survey 28% (21% among alternative scheme) reported they would have not

[69] To extrapolate Knowledge Panel survey statistics to the number of households that the figure may represent, the KP weighted percentages were multiplied by 28.4 million which is the approximate number of UK households in 2023. These households' statistics are intended as an estimation rather than a definite number.
[70] To extrapolate Knowledge Panel survey statistics to the number of households that the figure may represent, the KP weighted percentages were multiplied by 28.4 million which is the approximate number of UK households in 2023. These households' statistics are intended as an estimation rather than a definite number.

Contribution Claim	Agreement of evidence	Prevalence and Magnitude
		been able to afford their energy bills in the absence of the schemes in winter 2022/23. This is representative of approximately 8 million GB households[71].
ES1: The schemes limit the risks of energy supplier insolvencies through keeping customer debt levels low and delivering the schemes in a way that helps smooth cashflow fluctuations.	The evidence available suggests the energy affordability schemes contributed to limiting the factors that impact energy suppliers' insolvency risks. Interviews with suppliers indicated that schemes helped reduce supplier insolvency risk by decreasing the number of customers reducing their energy consumption, disconnecting from the energy supply or not paying their bills. Quantitative evidence shows the schemes helped limit levels of customer debt, contributing to limiting risks of insolvencies. 76% of GB direct debit households that said they did not go into debt with an energy supplier in winter 2022/23, 20% reported it was "fairly likely" and 6% reported it was "very likely" they would have gone into debt with their energy supplier without government financial support.	There is currently limited evidence available on the importance or magnitude of the contribution of the energy affordability schemes to changes in energy supplier insolvency risks. Evidence shows that the number and composition of energy suppliers stabilised after the intervention, although other factors, such as the exit of financially weaker suppliers and lower customer switching rates, may have contributed to this outcome. While 76% of survey respondents reported avoiding debt with energy suppliers due to government support in winter 2022/23, limited evidence exists on how this impacted suppliers' insolvency risk.

[71] To extrapolate Knowledge Panel survey statistics to the number of households that the figure may represent, the KP weighted percentages were multiplied by 28.4 million which is the approximate number of UK households in 2023. These households' statistics are intended as an estimate not precise number.

8.2 Household Concern

8.2.1 Contribution Claim HCC1

HCC1: The schemes contribute to lowering households' level of concern about energy bills and household finances (intermediate outcome)

The contribution story being tested

The schemes were expected to contribute to reducing the level of concern households experienced in response to the rise in energy costs in 2022. It was expected that they would do this by (1) reassuring households that they would receive support with energy bills, and (2) by providing sufficient support to enable households to actually afford their energy. **Reduction in concern was not an intended outcome in itself but was on a pathway to reducing avoidable underconsumption.**

The achievement of this contribution claim was dependent upon households being aware of the schemes and scheme support (see chapter 7), the schemes' delivery mechanisms being effective in distributing the intended support to households, and upon the financial support being considered sufficient to alleviate concern about energy bills and household finances.

Table 8.2: Contribution Claim HCC1 Summary Appraisal Table

HCC1: The schemes contribute to lowering households' level of concern about energy bills and household finances		
Agreement	Evidence partially agrees with the claim – schemes a necessary contribution to outcome. Low/ Medium– direct and indirect evidence of substantial reduction of concern	✓
Prevalence	The majority of those expected to experience this outcome have done so	✓✓
Magnitude	The intervention was an important contribution however concern remained very high	✓✓
Heterogeneity	Groups who experienced highest anxiety about their energy bills were renting from private landlords/ council housing associations and those spending over 10% of their income on energy	✓✓
Bias	Bias was low- medium risk.	✓✓

Household concern about energy bills over the intervention period

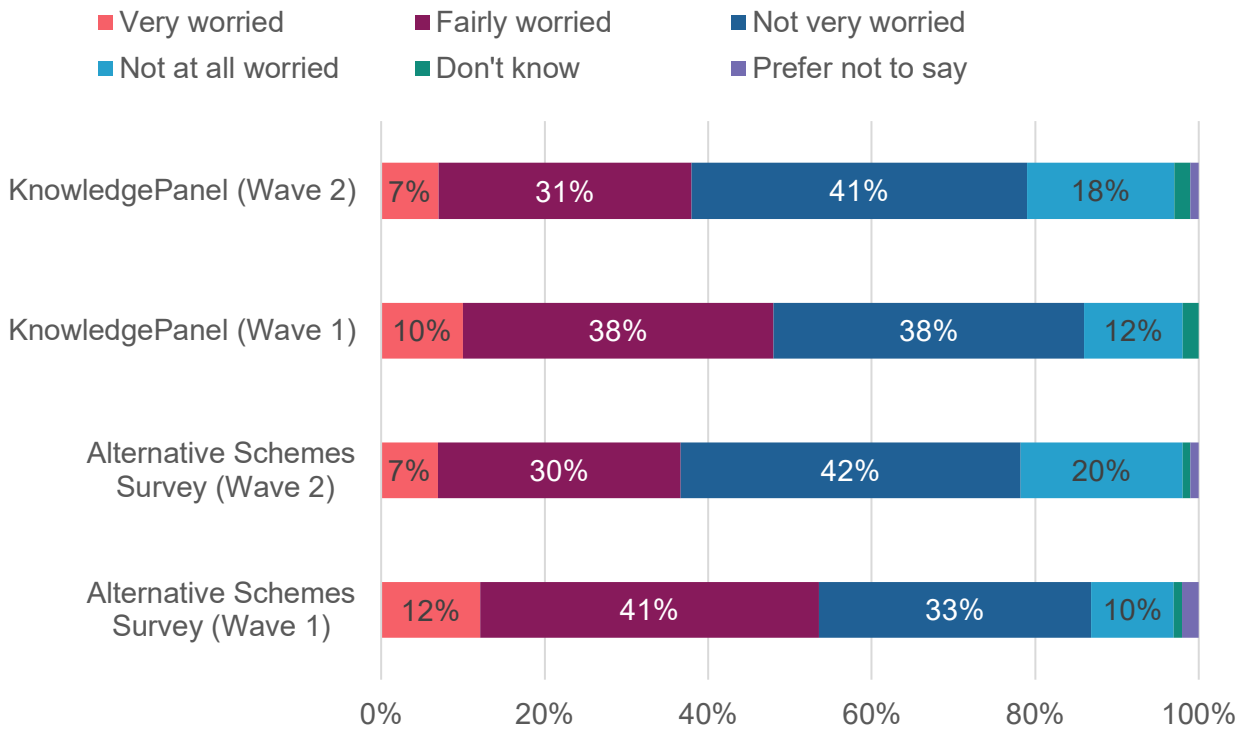
According to the alternative schemes survey, GB households eligible for the alternative schemes who reported underheating[72] their homes in winter 2022/23 reported high levels of stress about paying energy bills, with 46% of EBSS AF applicants, 37% of AFP and AFP AF households indicating they experienced stress. Specifically, 35% of EBSS AF applicants, 42% of AFP AF applicants, and 39% of AFP applicants who underheated reported that their stress got a little worse in winter 2022/23, while 56% of EBSS AF applicants, 51% of AFP AF applicants, and 54% of AFP households who underheated reported it got a lot worse.

Moreover, even during the summer months, when energy concerns were anticipated to be lower due to reduced heating costs, approximately half of all households remained worried about their energy bills.

The KnowledgePanel survey showed that 48% of households in Great Britain were worried about paying their energy bills at the time of the survey (summer 2023). Slightly higher levels of worry were reported by households in the alternative schemes survey (in October/December 2023) with 53% of households reporting being worried about paying their energy bills. (see Figure 8.1).

[72] Within the evaluation surveys, underheating was classified as those in the main wave 1 survey who said that they were able to afford to heat to a comfortable temperature most or some of the time or were not able to afford to heat their home at all (question G1).

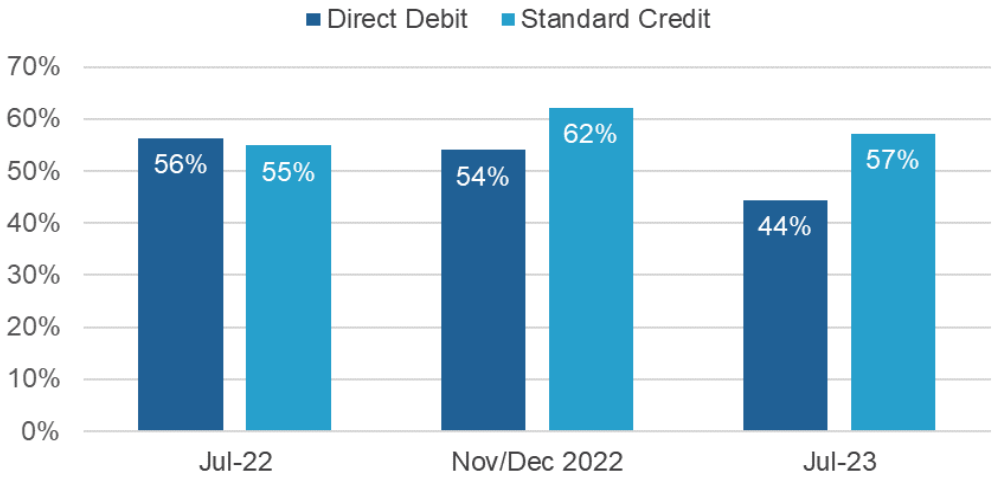
Figure 8.1: Worries regarding household energy bill payments (summer 2023/2022)



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QF3. How worried, if at all, are you about being able to pay your household energy bills now? Wave 1 Base: All (N = 7,850), All (N = 10,919), Wave 2 Base: All (N = 6,874), All (N = 3,976)

Additionally, the Ofgem CIM survey shows 54% of direct debit and 62% of standard credit customers were worried about falling behind on their energy bills in November/December 2022 because of increasing household costs (see figure 8.2).

Figure 8.2: Share of respondents who reported being fairly, or very, worried about falling behind on energy bills



Source: Ofgem CIM Survey. E4: At the moment, to what extent are you worried, if at all, about any of the following happening to you? (Falling behind on my energy bills because general household costs are going up) (Wave 2,3,4, Base: All)

After the schemes concluded, there was a decline in worry around paying energy bills - this coincided with a decrease in energy prices. The KnowledgePanel survey showed that the proportion of households in Great Britain reported they were worried about household energy bills decreased from 48% in July/August 2023, to 38% in March 2024. Alternative schemes recipients also reported decreased worry from 43% in October 23, to 32% in April/May 2024. The Ofgem CIM survey also shows a decline in levels of concern after the conclusion of the schemes, with concern about falling behind on energy bills decreasing for both direct debit and standard credit customers from 54% and 62% in winter 2022/23 to 44% and 57% in winter 2023/24.

Agreement of evidence with hypothesised contribution

The evidence available aligns with the hypothesis that the energy affordability schemes contributed to lowering households' level of concern about energy bills and household finances. The evidence of contribution is, however, limited.

Evidence from the KnowledgePanel survey shows that 28% of all respondents reported they would not have been able to afford to pay their energy bills in winter 2022/23 without the support of the government's energy affordability schemes. Similarly, 21% of alternative scheme households reported they would have been unable to afford to pay their energy bills without government support. Households' perceptions about the affordability of energy bills are a key factor influencing the extent households worry about them. For instance, in March 2024, 40% of GB households were expecting the energy prices to decrease. The KnowledgePanel survey showed a decline in the proportion of households worried about their energy bills, from 48% in July and August 2023 to 39% in March and April 2024.

Qualitative interviews with experts in vulnerable groups highlighted that levels of concern around energy bills decreased following the announcement of the schemes. For instance, one expert organisation explained:

> *"I think people were getting very, very worried about the potential of energy bills where people were predicting it getting to £3,000, £4,000, £5,000 a year, and that is very, very scary for a lot of people. When the government made the commitment to bring it down to the £2,100 a year for a typical household, I think that did take some of the edge away for people."*
>
> *Expert organisation, ID 4, wave 1 interview*

Some households also suggested that the schemes helped to alleviate concerns. For example, Participant 153 reflected:

> *"What they provided was a good help for me. It's taken a lot of worry off me for this upcoming winter [2023/24] and I'm very thankful for it."*
>
> *Household eligible to AFP AF, Participant 153, wave 1 interview*

Magnitude and prevalence of contribution to outcomes

The evidence above indicates that the GB population remained concerned about energy bills over the intervention period, despite the support. This may therefore suggest that the prevalence of the schemes' contribution to alleviating concern in terms of households affected was low. However, qualitative evidence from different stakeholders suggests that the schemes played a role at least in the case of some households in alleviating the magnitude of concern. The magnitude of contribution in these cases may therefore have been high. The schemes' effects on households' levels of concern clearly also depended on awareness of the schemes.

Overall, household awareness was highest for EBSS GB, followed by EPG and EBSS AF[73]. Out of the whole population, four in five were aware of the EBSS GB (80%), while half were aware of the EPG (49%), and one in five aware of EBSS AF (16%). The lower awareness levels for EPG and EBSS AF can be explained by the lower share of households eligible for these schemes. However, interviews with households eligible for EPG indicated limited awareness of having received the EPG intervention, with households instead generally indicating awareness of the other intervention they were eligible for (EBSS GB, AFP and AFP AF households).

Underscoring the importance of the link between awareness of the schemes and levels of concern around energy bills is the outcomes of further regression analysis, which observed significant interactions between individuals' awareness of the EPG scheme and their satisfaction with it. These findings emerged even after controlling for the following variables: region, income, payment type, age, and ethnicity. However, no clear pattern was identified in the regression results regarding varying awareness of all schemes and the mitigation of underheating behaviours, such as reducing spending due to energy bills or being able to heat their home to a greater extent. This suggests that awareness of the scheme by itself may not be sufficient for households to significantly alter their behaviour. However, awareness does appear to lead to greater satisfaction with the schemes, which may, in turn, reduce overall anxiety. The relatively low awareness levels of EPG (49%) and EBSS AF (16%) might have consequently limited the schemes' effectiveness in alleviating concerns related to energy bills.

Heterogeneity

Those experiencing higher anxiety about paying energy bills

Across alternative scheme recipients (according to the alternative schemes survey) worry was higher among EBSS AF (64%) households compared to AFP AF households (53%) and AFP eligible households (47%).

Additionally, as will be discussed further in section 8.3.1, the KnowledgePanel survey shows variations in households' ability to heat their homes to a comfortable temperature all or most of the time and households' ability to afford their energy bills in the absence of government's

[73] The question of awareness for AFP and AFP AF was only asked to households on alternative fuels, therefore a comparison between the rest of the schemes is not feasible.

financial support in winter 2022/23. These variations were driven by characteristics such as **age, tenure type, connection type and income level**.

Amongst respondents to the KnowledgePanel survey, 48% of households were worried about being able to pay their household energy bills in July/August 2023. Households on a **fixed term tariff and renting from private landlord / council housing association, those spending over 10% of their income after rent/mortgage on energy, households on PPM meters, households using electric storage as their main energy source and ethnic minorities** were more likely to report being worried about paying their energy bills in winter 2022/23.

This is further reinforced by additional logistic regression analysis looking at which subgroups experienced more anxiety about paying their energy bills in winter 2022/23. This showed that there were significant groups that had higher levels of anxiety about paying their energy bills, specifically, people who were renting from private landlord / council housing association and those spending over 10% of their income after rent/mortgage on energy. This effect was observed even after controlling for age, household income, ethnicity region and payment type. This suggests that due to their heightened worry about energy bills, these sub-groups were in greater need of financial support to alleviate high levels of concern, but it may also suggest that the schemes had a lesser effect for them on this target area.

Those who were less likely to report worry about energy bills

Survey evidence shows that some groups were less likely to report being worried about paying their energy bills. These groups include those not on a fixed term tariff for gas/electricity (54%), those not on benefits or tax credits (54%), homeowners (56%), older respondents (59% of those aged between 65-74) and white respondents (52%) as well as those on direct debit (54%) compared to 52% for the overall GB households. This suggests that these groups were less in need of financial support as their levels of worry were overall lower than the average GB population.

Risk of bias

Overall, there is a medium risk of bias in the evidence informing the evaluation's conclusions on contribution claim HCC1 (see assessment in Annex A: Technical Annex).

8.3. Household energy consumption

8.3.1 Contribution Claim HC1 & HC2

Hypothesised contribution:

HC1: Schemes contribute to the ability of eligible households to maintain energy consumption at a safe and comfortable level, while limiting the use of other harmful mitigation strategies.

HC2: Schemes contribute to the ability of low-income households or those classified as fuel poor, to limit energy underconsumption.

The contribution story being tested

During 2022 wholesale energy prices increased rapidly, leading to a 54% increase in Ofgem's energy price cap in April 2022 with a further rise predicted for October 2022. Met Office evidence also shows that winter 2022/3 was colder than preceding or subsequent winters. In this context the GB energy affordability schemes intended to contribute to limiting energy underconsumption from winter 2022/23 (see scheme-level ToCs presented in Annex B and summarised in Chapter 6). In addition to underconsumption, it was expected that the schemes would limit the use of other potentially harmful strategies to reduce energy costs (e.g. stopping saving or spending less money on other essentials).

Overall the schemes were expected to limit underconsumption by: (1) reducing the average annual energy bill compared to a no intervention scenario (EPG), (2) providing financial support that could be used towards increased energy costs (all except EPG), and (3) by reassuring households (through scheme communications) that energy bill support would be provided, thus limiting anticipatory underconsumption before any financial support or the EPG discount was applied or in cases where households would not have otherwise realised they were receiving the support.

The achievement of these outcomes was dependent upon the schemes being effective in reaching their targeted recipients through the chosen delivery mechanisms, and scheme communications being effective, and those receiving the support adjusting their behaviours in response to the scheme (or stopping themselves from adjusting to any negative behaviours in response to energy price rises, on receiving scheme support). The survey results indicate that some households were not able to heat their homes to a comfortable level and – as a result – had to resort to actions, some of which (e.g. using the heating less, turning down the temperature and limiting use of some rooms) might have indicated underconsumption or underheating depending upon the baseline situation of those homes (e.g. the extent to which vulnerable people lived in them and the extent to which baseline energy and heating use was already minimal for comfort, safety and well-being).

Table 8.3: Contribution Claims HC1 & HC2 Summary Appraisal Table

HC1: Schemes contribute to the ability of eligible households to maintain energy consumption at a safe and comfortable level, while limiting the use of other harmful mitigation strategies. HC2: Schemes contribute to the ability of low-income households or those classified as fuel poor, to limit energy underconsumption.		
Agreement	Evidence agrees with the claim – schemes a necessary contribution to outcome. Medium – direct and indirect evidence of substantial reduction of underheating	✓✓✓

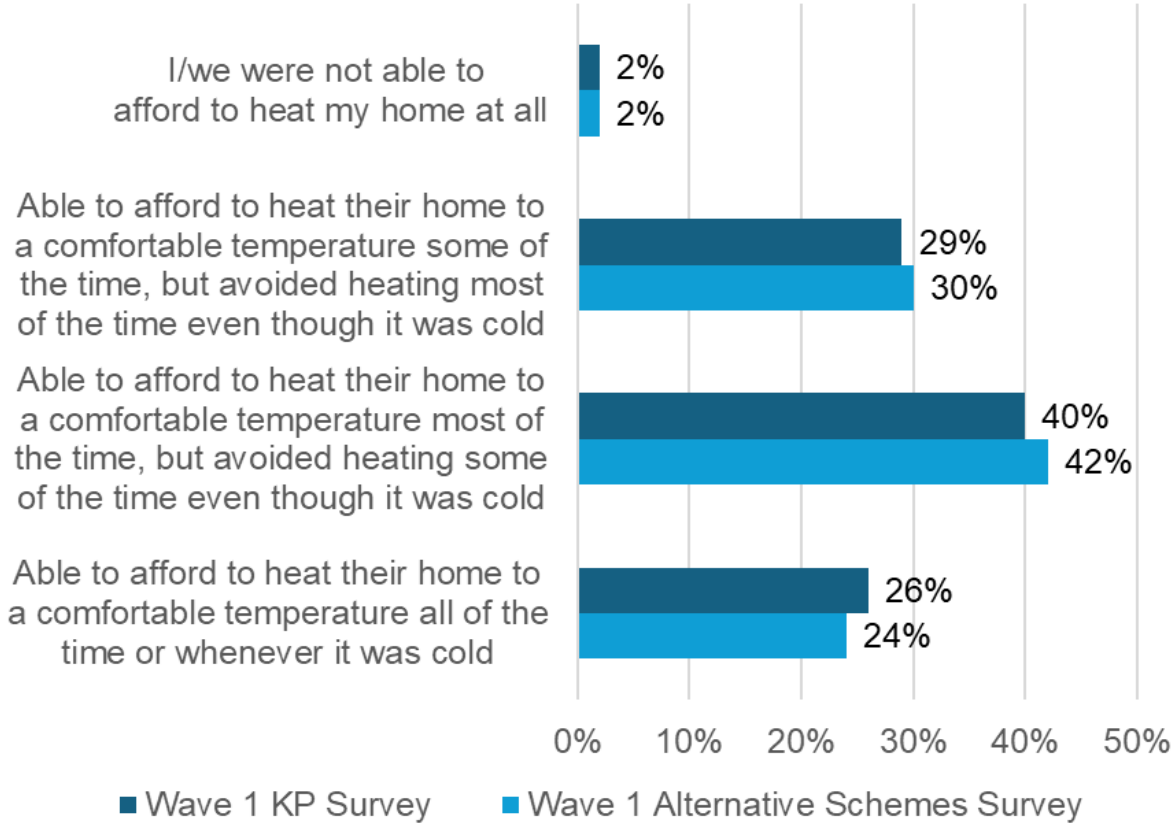
Prevalence	The majority of those expected to experience this outcome have done so	✓✓
Magnitude	The intervention was an important contribution	✓✓
Heterogeneity	Groups who experienced most underheating were younger, low income and tenants	✓✓
Bias	Bias was low- medium risk.	✓✓

Household energy consumption to a safe and comfortable level over the intervention period

Winter 2022/23

Around one third (33%) of households in GB reported challenges in maintaining a comfortable home temperature during the winter of 2022/23 (29% avoiding heating it most of the time and two per cent reporting they were not able to afford to heat their home at all). A further 40% of households reported that over winter 2022/23 they were able to afford to heat their home to a comfortable temperature most of the time but avoided heating some of the time even though it was cold. For the alternative schemes survey respondents, similar trends were observed with 39% of EBSS AF, 45% of AFP AF and 42% of AFP being able to heat their home comfortably most of the time but avoiding heating some of the time despite the cold (see Figure 8.3).

Figure 8.3: Households' ability to afford to heat their home in winter 2022/23



QG1. Thinking about when you were at home during winter 2022–23, which of the following options best describes the situation in your household? "I/we were able to afford to heat my home to a comfortable temperature…" Figures do not add to 100%, this is due to rounding of percentages, exclusion of other response options such as 'don't know' Wave 1 KnowledgePanel Base: All (N = 7,850), Wave 1 P2W (N = 10,919)

Use of mitigation strategies

Households took actions to mitigate the effects of higher energy bills over winter 2022/23. These included reducing spending on necessities (22%) and taking on more household debt (7%). A similar trend was observed amongst those responding to the alternative schemes survey (see Figure 8.4). Also in the KnowledgePanel Survey, 64% of households reduced the amount of energy they used over winter 2022-23[74] (though this behaviour change may not necessarily have been harmful). This aligns with a separate study of households with smart meters, that showed in winter 2022/23, temperature-adjusted gas usage was 15% lower and temperature-adjusted electricity usage was 9% lower than the previous winter[75].

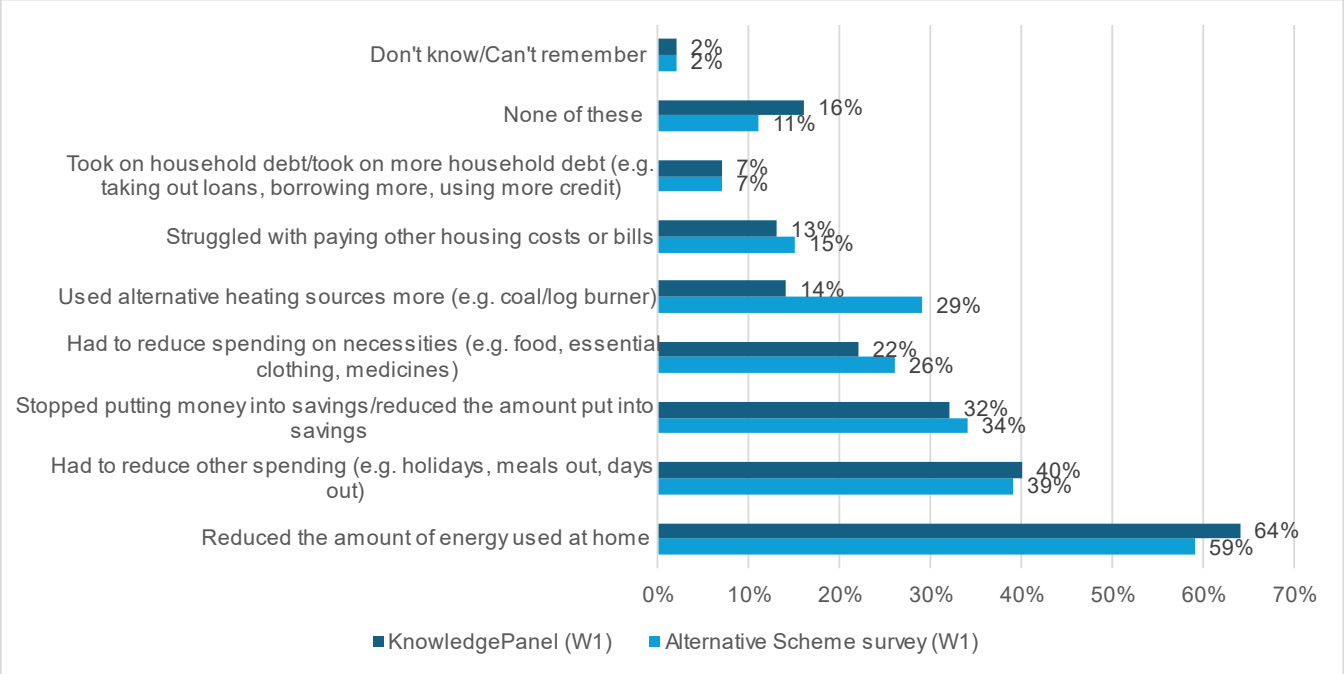
Additionally, during winter 2022/23, households reported that to reduce their energy costs:

- they used their heating less regularly (KnowledgePanel: 65%. alternative schemes survey: 62%),
- wore extra clothes (KnowledgePanel: 65%. alternative schemes survey: 67%), and
- turned the temperature on their heating down (KnowledgePanel: 60%. alternative schemes survey: 56%)[76].

These findings indicate that most households in GB had to take at least some measures to reduce their energy consumption over the intervention period. Data from other surveys conducted during winter 2022/23 show similar patterns in domestic customers' behaviour and responses to the increases in energy bills [77].

[74] QE1. During winter 2022-23, energy bills for most households were higher than they had been in previous years. Which of these impacts, if any, did the increased costs of home energy have on your household? Multiple responses allowed. Base: All (n=7,850).
[75] McKenna et al (2023). 'Smart Energy Research Lab: Energy use in GB gas heated domestic buildings during the 2022/2023 heating season'. This report describes domestic gas and electricity energy use in Great Britain in 2021 based on smart meter and contextual data from approximately 13,000 homes that are broadly representative of the GB population. It found that within 8,723 households with smart meters installed for which data was available, temperature-adjusted gas usage was 15% lower and temperature-adjusted electricity usage was 9% lower than the previous winter in winter 2022/23.
[76] QE3. During the winter of 2022-23, which of the following actions, if any, did your household take to reduce your energy use due to energy costs? Multiple responses allowed Base: All (n=7,850). *some statements were only asked to homeowners (n=6,001)
[77] E.g. the Ofgem CIM survey and the Opinions and Lifestyle survey (December 2022). shows 43% of consumers reported that they had reduced the amount of energy used at home; .39% reduced their spending on non-necessities, 31% reduced spending on necessities (such as food, clothing or medicine), 29% reduced the proportion of their income dedicated to savings, and 19% struggled with paying other household costs. The Opinions and Lifestyle survey (December 2022) also shows that the most common ways in which adults living in GB responded to the increase in energy prices was spending less on non-essentials (67% of respondents), with 56% also indicating that they were reducing the amount of fuel such as electricity or gas in the home, and 45% spending less on food or essentials.

Figure 8.4: Impacts of increased costs of home energy on households in winter 2022/23



QE1(Multi-Coded). During winter 2022-2023, energy bills for most households were higher than they had been in previous years. Which of these impacts, if any, did the increased costs of home energy have on your household? Wave 1 KnowledgePanel Base: All (N = 7,850), Wave 1 P2W (N = 10,919).

Winter 2023/24

Almost a quarter (24%) of households in GB reported challenges in maintaining a comfortable home temperature during the winter of 2023/24 (avoiding heating it most of the time) - a reduction compared to winter 2022/23 (29%). The share of households (2%) reporting not being able to afford to heat their home at all was consistent across both winters 2022/23 and 2023/24. Some 36% of households reported that over winter 2023/24 they were able to afford to heat their home to a comfortable temperature most of the time - a 10% increase compared to winter 2022/23 (26%).

Alongside this reported reduction in underheating, there was also a decrease in the number of households who resorted to harmful mitigation strategies over winter 2023/24 compared to winter 2022/23 (according to the Ipsos survey results).

Table 8.4 Impacts of increased costs of home energy on households in winter 2023/24 compared to winter 2022/23

	Knowledge Panel Wave 1 (winter 2022/23)	Knowledge Panel Wave 2 (winter 2023/24)
Had to reduce the amount of energy used at home	56%	64%
Had to reduce other spending (e.g. holidays, meals out, days out)	40%	33%
Stopped putting money into savings/reduced the amount put into savings	32%	27%
Had to reduce spending on necessities (e.g. food, essential, clothing, medicines)	22%	17%

QE. During winter 2022-2023 [2023-2024], energy bills for most households were higher than they had been in previous years. Which of these impacts, if any, did the increased costs of home energy have on your household?

Overall this indicates that households were less likely to heat their homes to a safe and comfortable level and more likely to resort to harmful mitigation strategies in winter 2022/23 (when the schemes were in place) than in winter 2023/24.

However, the two winters were not comparable in terms of key factors that were highly likely to contribute to households' perceived ability to consume energy over winter: winter 2023/24 was milder than the previous winter[78], lower wholesale energy prices led to a reduction in the energy price cap by Ofgem[79], and real weekly earnings increased by approximately 1.9%[80]. All of these factors in winter 2023/24 were likely to have contributed to households' reportedly greater ability to heat their homes. It is also possible that the support received in the previous winter helped households to feel and/or be better prepared for winter 2023/24. The wave 2 qualitative interviews with households reflect the fact that households had mixed experiences of winter 2023/24, but that – in at least some cases – the support received in 2022/23 through the schemes helped them feel better prepared for winter 2023/24.

> *"I don't know how I would've managed if it wasn't for that money [from the scheme], we'd be in debt and we'd be trying to spend the summer paying off the debt ready for the wintertime again." Group 1, EBSS and EPG, household, ID 78, wave 2 interview*

[78] Met Office Seasonal Assessment (Winter 2024) and Met Office Seasonal Assessment (Winter 2023)
[79] Ofgem," Energy prices to fall again this winter" (2023)
[80] Average weekly earnings in Great Britain: February 2024, Office for National Statistics

> *"So, we didn't notice the difference much, because although there was help, 2022, it was still a bit too much. Really, I think for me, 2022 was really steep, so at least the 2023 one, even though we didn't receive any support scheme, it was doable, because we were ready for it, budgeted for it, and we tried to consume as we were planning to consume it. It was really better in 2023, I've got to say, in that instance." Group 1, EBSS and EPG, household ID XX, wave 2 interview ID 1*

> *"I think this year [2023/24] was probably the worst one, actually, because that's the highest the bills have ever been. So, when I saw the bill in December, I thought, 'Oh, okay, I need to be a bit more careful in January', but then that bill was even higher, and I couldn't quite work out why, but, you know. So, this year they were definitely a lot higher than what they would be usually", Group 4, AFP AF and EBSS AF, household ID 58, wave 2 interview*

Agreement of evidence with hypothesised contribution

The evidence presented above suggests that the energy underconsumption, which the UK government anticipated in response to energy price rises in 2022, did take place over winter 2022/23, and was fairly prevalent. There is some evidence collected through this evaluation which indicates that underconsumption was limited compared to a no intervention scenario.

First, the qualitative evidence presented above indicates that in some households there was a perceived causal relationship between receiving the scheme support and being able to (afford to) heat the home. Other qualitative evidence collected through the evaluation also validates the behavioural assumptions underpinning the contribution story: (1) that the schemes would provide reassurance to households, which would allow households to feel able to consume to a safer and more comfortable level, and (2) that households would use the financial support to pay for any excess in energy costs to be able to pay to heat the home to a more safe and comfortable level.

> *"...We were never feeling like we couldn't turn the heating on or that we were limiting the number of hours, so that £200 buffer was quite nice to have to say if it was particularly cold or you were under the weather...it's just that kind of little safety net that's there just for those extra cold days, I think it was well received." - Household eligible to AFP, Participant 164, wave 1 interview*

Experts specialising in vulnerable groups gave the view that there had been a positive impact of energy affordability schemes on households' ability to afford their energy bills, particularly in the case of lower-income households.

In addition, economic price elasticity modelling of the relationships between prices and consumption patterns highlights that the support provided through the EPG and EBSS induced a more-than 20% estimated increase in energy usage amongst households in the four lowest income deciles. The positive effect on energy consumption decreased for higher income groups, and there was practically no estimated effect for the highest income households (see table below and Annex C: Supplementary Research for detailed results).

Changes in income and price under two scenarios were compared against a no intervention scenario[81], all else equal. These scenarios were the receipt of EBSS and EPG, and receipt of a £600 lump sum payment (equivalent to payments under EBSS and AFP). Estimates were modelled based on the Almost Ideal Demand System (AIDS).[82] The model was fitted to aggregate quarterly data from ONS Consumer Trends, which provides data on expenditure and volume for each commodity type (energy and other spending). Data from the ONS Family Spending Workbook were used to estimate how expenditure changes over time for different income deciles. Additional data on factors such as EPC rating was also made available from the National Energy Efficiency Data Framework (NEED).[83]

Table 8.5: Electricity, gas and other fuel usage over 2022/Q4 and 2023/Q1 (kWh) with counterfactual scenarios (Almost Ideal Demand System model)

Income Decile Group[84]	£400+ EPG	No Policy	% diff to no policy	£600 only	% diff to no policy	% diff to £400 + EPG policy
1st	6,827	5,178	28%	5,422	5%	23%
2nd	8,008	6,259	25%	6,473	3%	21%
3rd	8,337	6,586	24%	6,758	3%	21%
4th	8,665	7,011	21%	7,136	2%	19%
5th	8,960	7,329	20%	7,428	1%	19%
6th	9,600	8,140	16%	8,200	1%	16%
7th	9,485	8,114	16%	8,159	1%	15%
8th	9,715	8,543	13%	8,555	0%	13%
9th	9,807	8,949	9%	8,927	0%	9%
10th	11,934	12,090	-1%	11,975	-1%[85]	0%

[81] Assuming unit prices as set by the existing energy price cap managed by Ofgem.
[82] Deaton, Angus, and John Muellbauer. "An almost ideal demand system." The American economic review 70.3 (1980): 312-326.
[83] Microdata on the level of individual household meters (Meter Point Administration Number, MPAN), was not available for this study.
[84] To note, there are 10 income deciles, which divide the income distribution into 10 equal sized groups. Decile 1 here being the lowest income. The decile groups are estimated from disposable household income from ONS data.
[85] The very small negative impact for the highest income group should probably not be interpreted as significant. Nonetheless. Because energy is an inferior good, the income effect starts to dominate the price effect. In theory, as income increases the price impacts are of less and less consequence, and the desired level of heating and energy use is achieved. In addition, these households could have invested in energy saving equipment with money saved.

Source: AIDS/QUAIDS analysis based on data from ONS Consumer Trends, Family Spending Workbook and NEED (see Annex C: Supplementary research). Deciles divide the income distribution from NEED into 10 equal sized groups (with 1st decile having the lowest income).

Third, survey evidence also indicates a link between the schemes and perceived ability to heat the home (though this is subject to some limitations as set out in the discussion of bias in Annex A: Technical Annex, appendix 1):

- For the 26% of GB households who reported that they had been able to heat their home all of the time or whenever it was cold in winter 2022/23, 28% stated they would not have been able to heat their home to a comfortable level all of the time without the government's support. Of the 24% of alternative scheme households who heated their home all of the time or whenever it was cold in winter 2022/23, 28% stated they would have not been able to heat their home to a comfortable level all of the time without the government’s support.
- Of the 19% of GB households who heated their home all the time and still would have heated their homes all the time without support, 32% said they would have adopted another harmful mitigation strategy without the government support. Of the 10% of EBSS AF, 17% of AFP AF and 11% of AFP AF respondents who heated their home all the time and still would have heated their homes all the time without support, 32% of EBSS AF households, 23% of AFP AF and 19% of AFP households said they would have adopted another harmful mitigation strategy without the government support.

Table 8.6: Of respondents that heated their home all of the time and still would have heated their homes all the time without support, % stating they would adopt another harmful mitigation strategy without government support

	KnowledgePanel	Alternative Schemes survey
Number of harmful strategies respondents would have adopted without government support		
1 strategy	26%	(26% EBSS AF, 18% AFP AF, 15% AFP)
2 strategies	4%	(3% EBSS AF, 3% AFP AF, 2% AFP)
3 strategies	1%	(2% EBSS AF, 1% AFP AF, 1% AFP)
4 strategies	1%	(0% EBSS AF, 0% AFP AF, 0% AFP)
Harmful strategies that would have been adopted without government support		
Struggle with other bills	4%	(4% EBSS AF, 2% AFP AF, 2% AFP)
Reduce spending on necessities	6%	(8% EBSS AF, 4% AFP AF, 3% AFP)
Reduce other spending	28%	(27% EBSS AF, 20% AFP AF, 16% AFP)
Take on household debt/took on more household debt	2%	(2% EBSS AF, 2% AFP AF, 2% AFP)

Source: Ipsos KnowledgePanel survey and alternative schemes surveys presented respondent with expected bills without the support of the schemes, calculated differently depending on household size: QE2. Without the financial support from the government, energy bills for a typical household of (xx adults) were predicted to be around (£xx) a month higher during winter 2022-2023 (based on average direct debit rates in Great Britain) according to estimates based on government figures. Now imagine you had to pay an extra (££165/ £225 / £290) a month for your energy bills during winter 2022 - 2023. Which of these impacts, if any, would this have had on your household? Wave 1 Base: All (N = 7,850), All who received EBSS or AFP/AFP AF (N = 8,040).

Prevalence and Magnitude of contribution to outcomes

Prevalence

The evidence presented above suggests that energy underconsumption was prevalent over the intervention period in spite of scheme support: 40% (alternative schemes survey: 42%)

avoided heating some of the time even though it was cold,29% (alternative schemes survey: 30%) avoided heating their homes most of the time even when it was cold, and two per cent were not able to afford their homes at all (alternative schemes survey: 2%)

The evaluation has not been able to robustly assess the prevalence of households who felt better able to heat their home compared to a no intervention scenario (i.e. the prevalence of scheme effects). The evaluation modelling does not provide strong evidence of prevalence, and whilst the mix of qualitative and quantitative evidence validates the contribution story that the schemes contributed to limiting underconsumption in at least some households; it does not indicate the prevalence of this positive contribution. This is particularly the case because the survey did not ask the counterfactual question (about predicted behaviours in a no intervention scenario) to all respondents (only to those who reportedly could heat their homes all the time).

However, that the schemes reached a large number of households (see chapter 7.1), and given the findings of the price elasticity modelling that energy consumption would have been much less in all income deciles (except for the highest income decile) without scheme support, it is likely that the schemes' influence on limiting underconsumption was prevalent (i.e. without the scheme support, more households might have reported not being able to heat their home some or most of the time).

Magnitude

In terms of the magnitude of the energy affordability support – i.e. the depth of effect – the schemes did not eradicate underconsumption nor the use of harmful mitigation strategies. The issue is how much was underconsumption limited by the interventions,

> *"Yes, it made a difference but it still wouldn't buy 500 litres of oil… They were grateful to have the £200 but the people that didn't have any money, £200 wasn't enough because they still couldn't buy any oil, so it's useful because they could buy food or they could buy something else with it, but they couldn't buy oil."*
>
> *Expert organisation, ID 9, wave 1 interview*

The survey findings described in the sub-sections above indicate clearly that a majority of households responded to the rise in energy prices in 2022 with some behaviours in winter 2022/23 which were potentially harmful to their health. A majority of households reduced the amount of energy used at home. Other mitigation strategies include reducing other spending and spending on necessities, and stopping putting money into savings/reducing the amount put into savings over the winter 2022/23. However, evidence shows a decrease in the number of households who resorted to harmful mitigation strategies in response to increases in energy bills over the winter 2023/24 compared to winter 2022/23.

Whilst it is not possible to assess the magnitude of these behaviours, the survey evidence indicates high proportions of respondents with reported anxiety, respiratory illness, difficulty sleeping, and mould, damp and rot that they attributed to underheating in their home. This would suggest that the energy price rise generated high magnitude effects even with the scheme support. The extent to which the schemes limited the severity (magnitude) of these

effects – or prevented more households from experiencing them to a severe extent is challenging to ascertain from the data.

Evidence from both of the wave 1 surveys shows that these issues were most prevalent among **individuals on benefits, tenants** renting from private landlord and council housing/association, **younger households** between 25-54 years old, ethnic minorities (excluding white minorities), **PPM households** and **households spending over 10% of their income on energy**. For instance, 65% of respondents renting from council/housing association reported stress or anxiety compared to 44% across the GB population and 33% of respondents from ethnic minorities reported difficulty sleeping and anxiety about the health of household members compared to 23% for across the GB population. As set out below, survey evidence shows that most of these groups (renters, PPM customers, recipients of social benefits and households spending over 10% of income on energy) were especially reliant on the schemes as they were statistically more likely to respond that they would not have been able to heat their home without the scheme support. This suggests that the scheme support limited the magnitude of the negative effects of the energy crisis on the groups that would have been most severely impacted by the crisis.

Heterogeneity

Groups for whom the schemes were more or less effective

As set out above, while some groups were able to benefit from the schemes to avoid harmful energy consumption outcomes, others still struggled. Some households struggled to heat their homes despite the support, as illustrated by a participant who limited heating use despite receiving assistance.

> *"...I wasn't able to put [the heating] on as I had been in the past years... I bought some thermal leggings and bits and pieces like that. And a blanket in the front room, and I'd sort of wrap up a bit until my heating came on. Because I had my heating on from 4-9, and prior to that before the electric went up, if it was really cold I would switch it on for a couple of hours. But I wasn't able to do that."*
>
> *Household eligible for AFP AF, Participant 148, wave 1 interview*

Evidence from the KnowledgePanel survey shows that some sub-groups still showed higher levels of underconsumption than others, even with the support. Compared to just under a third (31%) of all GB households, the following groups were more likely to report they were only able to heat their home to a comfortable temperature some of the time (and avoided heating most of the time even though it was cold) or were unable to afford to heat their home at all in winter 2022/23:

- Younger respondents (40% of 25 to 34 years-old);
- ethnic minorities (42%);
- tenants (49% renting from private landlord and 54% renting from council/housing association),

- recipients of social benefits (60% on universal credit and 52% on tax credits), and
- households spending over 10% of income on energy (50%) .

For these groups the schemes were less effective and future schemes should consider whether better targeting or a different delivery approach is needed to better reach these groups.

The following case study illustrates some of the points made above.

Case Study 1 – Energy debt/Underconsumption

Key characteristics:

Personal details	Scheme	How they paid	Underconsumption	Employment status
Female, 45-54, SEG E, urban area	EBSS and EPG	Prepayment meter customer (smart)	Yes, experienced underconsumption	Not in paid employment during either wave of interviews

Sandra[86] is a single mother who lives with her two children, aged 20 and 12. She had long-term health issues, had been out of employment for some time and was on Universal Credit of around £400 per month for living costs. She thought her energy usage, both gas and electricity, was quite high due to her children's lifestyles – for example, playing a lot of computer games or taking long, hot showers.

Experience paying energy bills across winter 22/23 and winter 23/24

Sandra struggled to pay her energy bills in winter 2022/23 due to the increased prices. She said she found it difficult to afford anything else after her bills had been paid and the household started to get into debt. Sandra felt this started to affect her mental and physical health:

> *"I'm in debt up to my eyeballs with it. Again, maybe once a month we used to go out for a family meal, to days out. I can't do any of that any more... It's a struggle. I don't have money left over…We used to do fun, so it's obviously affecting me."*
>
> *"We just seemed to get more colds and flus. I've got major health problems… And I struggled really to have to live like that. So yes, it had an effect on us. And our mental health, because we're having to watch what we use. In 2022 we're in dressing gowns and have blankets on to keep warm, it's not right. My [children] find it hard."*
>
> *Participant 143, Wave 1 interview*

Coming into winter 2023/24, Sandra continued to struggle with high energy prices. She noticed not having scheme support because energy felt more expensive and the household went into further, worsening debt. This was despite having access to the Warm Home Discount in 2023/24. Sandra called up her energy company to ask for credit on more than one occasion:

> *"I've really struggled. I've had no gas and no electricity so I [phoned] the company up and [went] through all my means with them. Where they've had to put credit onto my meter, say, £60. I've got to pay it back but that's how desperate [I am]. Like, I've never done that before… I have had no money left [on] electricity and gas because it just eats it."*
>
> *Participant 143, Wave 2 interview*

Views on the schemes

Sandra thought the amount of support from the 2022/23 schemes did not make up for the total energy price increases. However, she liked the support in monthly instalments because she felt people would be more likely to spend it on energy rather than general costs. Sandra would have appreciated the schemes running again in 2023/24 because even a small amount of support would have reduced stress and made bills more affordable.

> *"It was sufficient because it helped. But it wasn't a lot really, considering the price they put it up to. So really, we're not benefiting from it because they're just taking it anyway. But something's better than nothing."*
>
> *Participant 143, Wave 1 interview*
>
> *"It would help a little bit more. And take the stress of not having to worry as much. Just to know that's coming at the end of the month you just think, 'That's like a week's worth.' Do you know what I mean? So, it takes a bit of the burden off you, that you've only got 3 weeks to pay."*
>
> *Participant 143, Wave 2 interview*

Those more likely to report benefitting from / reliance on the schemes

Using data from the KnowledgePanel Wave 1 Survey, further analysis indicates that the following groups were more likely to have benefited (relied) on the schemes. These were households occupied by those who are **younger, renting**, and **poorer** than the average population, were more likely to report that they had applied potentially harmful behaviours in response to the energy price increase (i.e. reduce their energy use, reduce spending and saving behaviours, or borrow without government support) in winter 2022/23. Further, households that are **younger** and **poorer** (with a higher proportion earning less than £26,000 relative to segment 1), who **have an illness or are disabled**, and are more likely to **rent from a council/housing association** than the average, would similarly have been more likely to reduce energy use, cut back on spending on necessities, and borrow without government support. These groups were more likely to report that they would have relied on the schemes to a greater extent to avoid resorting to harmful mitigation strategies[87].

Amongst respondents to the KnowledgePanel survey, whilst 24% would have been able to heat their homes to a comfortable level all or most of the time without government support, **households spending over 10% of income on energy and tenants renting from a private landlord and renting from a council/housing association** were especially reliant on the schemes (i.e. they were statistically more likely to respond that they would not have been able

[86] All names have been changed to anonymise interviewees.
[87] This is based on a Latent Class Analysis (LCA), conducted in 2024, to identify distinct and identifiable groups of customers according to their patterns of responses to survey questions related to the mitigation strategies they would have adopted without government support. See Annex C for more detail.

to heat their home without the scheme support): 10% of tenants renting from a private landlord and 11% renting from council/housing association reported they would not have been able to heat their home without the scheme support compared to 4% across the GB population.

A logistic regression analysis that was conducted to examine the relationship between households' ability to heating their homes without the scheme, reinforced these findings. This analysis found that a robust determinant of whether households could have afforded their energy bills without the scheme was the proportion of their income spent on energy bills (after accounting for rent/mortgage). Those spending a higher proportion were significantly less likely to afford their energy bills. This association was established after controlling for factors such as region, payment type, age, household income, and whether they rented or owned a house. This suggests that a key subgroup that the scheme helped to alleviate underconsumption in the winter of 2022/23, were groups who had been spending a higher proportion of their income on their energy bills.

The alternative schemes survey provided further insights on variations among alternative scheme recipient households. It showed that among these, households able to heat their homes to a comfortable temperature all of the time in winter 2022/23, 79% of AFP households, 74% of AFP AF households, and 62% of EBSS AF households would have been able to do so without the scheme. Additionally, lower-income households and younger households in the AFP AF and EBSS AF schemes, and ethnic minorities in the AFP scheme, were less likely to report being able to afford energy bills without government support.

In addition, experts consulted for this evaluation highlighted that many vulnerable groups also faced significant difficulties in accessing the schemes and the extent they benefited from them also varied. These are summarised below.

Table 8.7: Summary of the challenges faced by some customer subgroups and reasons for variation in outcomes

Challenge	Description
Higher Energy Needs	People with disabilities often had significantly higher energy usage compared to non-disabled people due to additional needs such as high energy use supportive equipment and heating requirements. Subsequently, the financial support they received through the schemes did not massively contribute towards covering the costs of higher energy needs.
Personal circumstances e.g., household with children	Similarly to participants with disabilities, those with children at home reported having higher energy usage. For those who had to prioritise heating their home, the schemes did not provide an amount to make a significant difference on their ability to do so.
Digital exclusion	Those who were digitally excluded often missed communications about the schemes, which then had consequences on their ability to access the schemes, where an application was required. It also impacted their awareness of the schemes.
Lack of awareness of the schemes	Some participants did not receive communications about the schemes. For example, some individuals in the gypsy/traveller community reported not receiving sufficient information about the schemes, which affected their ability to benefit from them. Awareness and understanding of the schemes were important in reassuring customers that they would not face high energy bills, thereby limiting the likelihood of them potentially harmful measures, such as underheating, and going into debt.

Source: qualitative research Wave 1

Those who may not have needed the schemes' support

Conversely, some groups were more likely to report being able to afford to heat their homes without government support, suggesting that they needed government financial support less.

These groups included **households on fixed energy term tariffs, homeowners, direct debit customers, individuals not receiving benefits**, and **those spending between 0-10% of their income on energy**. Notably, households on fixed energy term tariffs and those spending between 0-10% of their income on energy were also more likely to maintain comfortable heating levels without resorting to harmful mitigation strategies such as cutting spending on essentials or increasing borrowing. Households that were older and own their home were less likely to reduce energy use, cut back on spending on necessities and other goods, or borrow more without the government's support[88]. The KnowledgePanel survey also found that 67% of households could afford energy bills without support, with **older** respondents, **higher-income** households (earning between £52,000 and £99,999), and **households using alternative fuels** being more likely to afford their energy bills without government support. This suggests these groups needed less support compared to younger households, lower-income households, and those relying on gas/central heating.

The above sections could indicate that some groups could have been able to have maintained energy consumption even without the schemes. However, a fuller exploration and estimation of deadweight is being conducted under the forthcoming Impact and Economic Evaluation.

Risk of bias

Overall, there is a medium risk of bias in the evidence informing the evaluation's conclusions around contribution claims HC1 and HC2 (see Annex A: Technical Annex for full assessment of bias).

8.3.2 Contribution Claim HC3

Hypothesised contribution:

HC3: The schemes help limit the scale and duration of PPM household self-disconnection from energy suppliers.

The contribution story being tested

Around 4 million households in GB use PPMs to pay for and access energy. Such households have to pay for their energy using a gas card or electricity key at a local Payzone, PayPoint or Post Office or, if they have a smart meter, they may pay via the smart meter. All suppliers in GB provide 'emergency' or temporary credit in cases where households run out (sometimes only if eligibility criteria are met). However, once the temporary credit runs out the gas and/or electricity will no longer be accessible, and households run the risk of going into energy debt for daily standing charges and missing debt repayments.

The pathways through which the schemes were expected to limit the scale and duration of PPM self-disconnection are the same as for HC1 and HC2 – it was expected that by: (1) reducing the cost of energy per unit compared to a no intervention scenario (EPG), (2)

[88] According to the Latent Class Analysis (see Annex C)

providing financial support that could be used towards increased energy costs (all except EPG), and (3) by reassuring households (through scheme communications) that energy bill support would be provided, households on PPMs would be less likely to disconnect for long periods or when energy is needed due to not being able to afford to connect/reconnect.

The schemes intended to limit disconnection where (a) the disconnection was due to either not being able to afford to connect/reconnect or due to anxiety over costs, and (b) where it would lead to underconsumption of energy (with potential harm to mental or physical health).

The achievement of these outcomes was dependent upon the schemes being effective in reaching their targeted recipients through the chosen delivery mechanisms, and upon scheme communications being effective, and upon those receiving the support adjusting their behaviours in response to the scheme (or stopping themselves from adjusting to any negative behaviours in response to energy price rises, on receiving scheme support).

Table 8.8: Contribution Claim HC3 Summary Appraisal Table

HC3: The schemes help limit the scale and duration of PPM household self-disconnection from energy suppliers.		
Agreement	Evidence agrees with the claim – schemes a necessary contribution to outcome	✓✓✓
Prevalence	The majority of those expected to experience this outcome have done so	✓✓✓
Magnitude	The intervention was an important contribution	✓✓
Heterogeneity	PPM groups more likely to self-disconnect were households renting from a housing association and those spending more than 10% of their income on energy.	✓
Bias	Bias was medium risk.	✓✓

Scale and nature of disconnection over the intervention period

Scale of disconnection

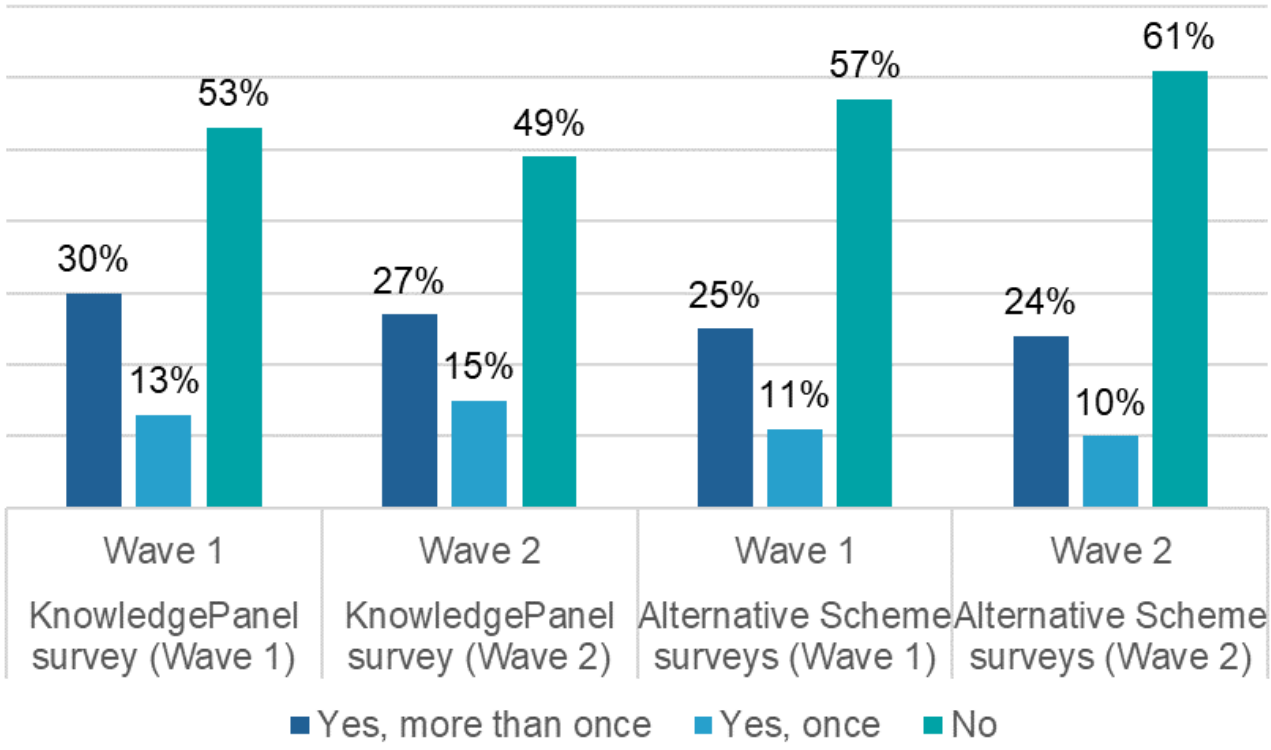
Over winter 2022/23, the KnowledgePanel survey showed that 43% of PPM households reportedly ran out of credit on their meter and disconnected from their energy supply at least once during, and 30% of all PPM households ran out of credit and disconnected more than once. In the alternative schemes survey the equivalent proportions for PPM disconnections was 35% (at least once) and 25% (more than once) (Figure 8.5)[89].

[89] In wave 1, six per cent of the KnowledgePanel survey and four per cent of the alternative schemes surveys used PPMs.

In winter (2023/24) the scale of disconnections remained similar to the previous winter: 42% of PPM households ran out of credit at least once in winter 2023/24, a minimal change compared to 43% in winter 2022/23.

Rates of self-disconnection among alternative scheme PPM households (AFP, AFP AF and EBSS AF), remained consistent across the two winters with 34% of PPM households saying they had to disconnect from their energy supply in winter 2022/23 and 35% in winter 2023/24.

Figure 8.5: Households with prepayment meters who ran out of credit during winter 2022/23 and winter 2023/24



Source: Ipsos KnowledgePanel survey and alternative schemes survey: QE4a. During the winter of 2022-2023 / December 2023 - February 2024, did your household run out of credit on your meter and disconnect from your energy supply at any time? Wave 1 Base: All on PPMs (N = 504 for the Ipsos KnowledgePanel survey), All on PPMs (N = 526 for the alternative schemes survey), Wave 2 Base: All on PPMs except care home residents (N = 412 for the Ipsos KnowledgePanel survey), All on PPMs (N = 163 for the alternative schemes survey)

Nature (severity) of disconnection

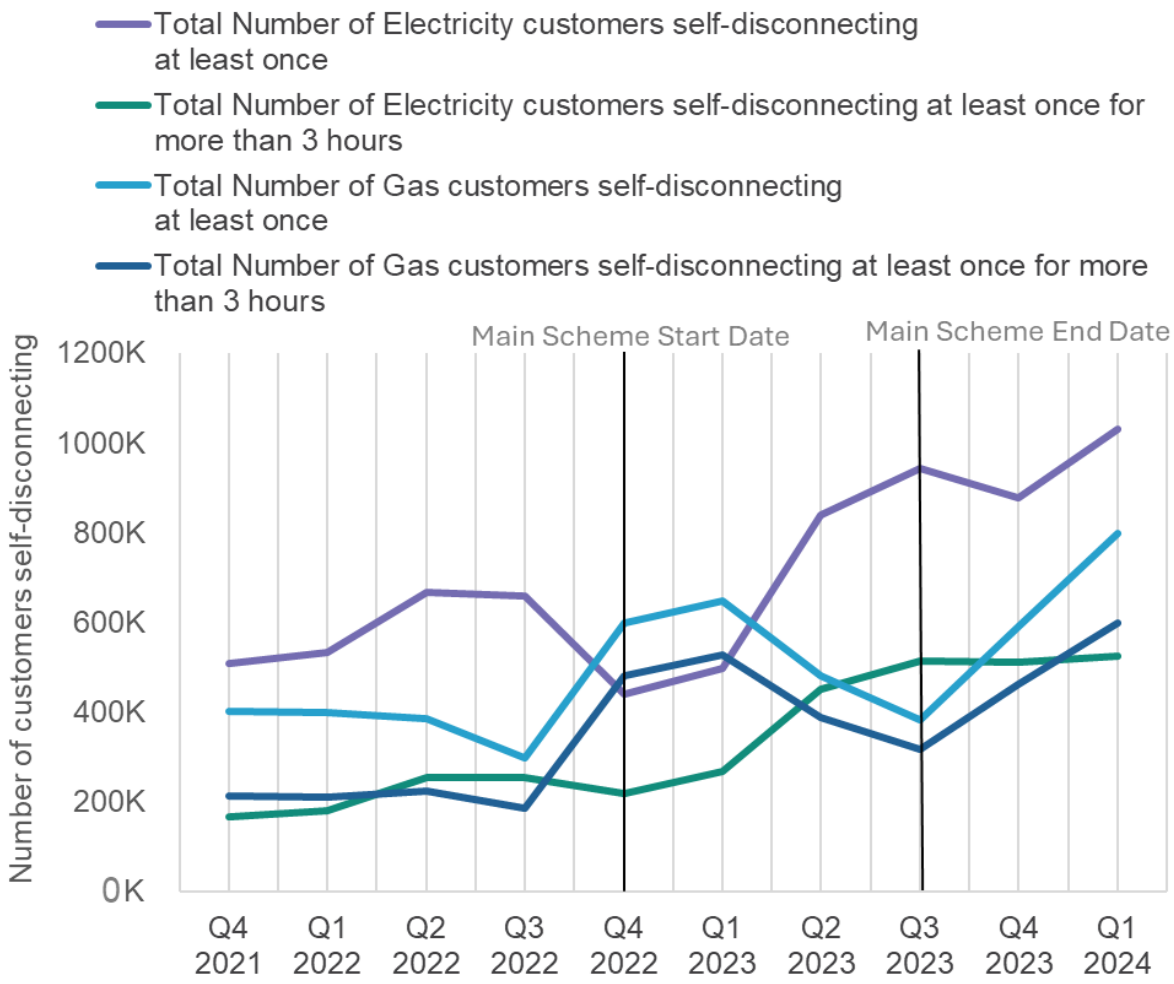
Among the PPM households who self-disconnected from their energy supply in winter 2022/23, 54% (62%) stated that the reason for disconnecting was that they did not have enough money to top up the meter. This suggests that in most cases the disconnection was driven by affordability reasons and indicates a risk that where households on PPMs were not able or perceived they were not able to afford energy from their meter were at risk of potentially harmful mitigation strategies (underconsumption, reducing spending elsewhere, increased borrowing). Other reasons for self-disconnection include a lack of awareness about the credit status on their meter (48% from the KnowledgePanel survey and 43% from the Alternative Schemes survey) and simply forgetting to top-up their meter (22% from the KnowledgePanel

survey and 16% from the Alternative Schemes survey). This indicates that beyond financial constraints, there were also informational and behavioural factors which contributed to self-disconnection.

For most of the PPM households who disconnected (83% from the KnowledgePanel survey and 84% from the Alternative Schemes survey), the length of time disconnected from the energy supply was less than 24 hours during winter 2022/23. However, 12% reported disconnecting for multiple days in both surveys. Depending upon the energy use needs at that time, and other factors such as the outside temperature or pre-existing health needs, this may have created risk of harm to health.

Data from Ofgem shows that there has been a gradual upward trend in gas and electricity self-disconnections since late 2021 among domestic smart PPM customers. Despite the energy affordability schemes' support, there was a strong increase of gas self-disconnections for domestic smart PPM customers during winter 2022/23, whilst the increase of households self-disconnecting from electricity slowed during the intervention period (see Figure 8.6).

Figure 8.6: Trend in gas and electricity self-disconnections for domestic smart prepayment meters customers (Q4 2021 – Q1 2024)



Ofgem Customer Service Data, 2024

Agreement of evidence with hypothesised contribution

Whilst the evidence presented above suggests that disconnections continued over the intervention period (despite scheme support) and that these were potentially harmful, there is evidence collected through this evaluation which indicates that it was limited compared to a no intervention scenario.

First, the surveys asked respondents about their perceived ability to afford to pay their energy bills in winter 2022/23 without the support of the government's energy affordability schemes[90]. They found that 57% of customers using PPM meters (Smart and Traditional) responding to Wave 1 of the KnowledgePanel survey reported they would have been unable to afford to pay their energy bills in winter 2022/23 without the support of the government's energy affordability schemes. Similarly, 49% of PPM households[91] responding to the alternative schemes survey considered they would have been unable to meet their energy bill payments without government support. Since 59% of PPM households (and 62% for PPM households on the alternative schemes survey) who experienced self-disconnection during the winter of 2022/23 cited financial constraints as the primary reason for disconnecting from their energy supply, this underscores the importance of financial support. This suggests that in the absence of government financial support, a larger share of households would have had to disconnect from their energy supply. As set out in Figure 8.7 below, there was a significantly higher number of respondents stating that they would not have been able to afford their energy without the schemes amongst PPM metered households than households in general.

Second, there is some qualitative evidence (albeit limited given the small sample of PPM households included in the qualitative research) that suggested the scheme support helped households to avoid disconnection or severe disconnection.

> *"…If it wasn't for the money from the government, we would have probably had no gas and electric for a bit because the emergency only goes on so much."*
>
> *Household eligible to EPG and EBSS, Participant 78, wave 2 interview*

Third, there is also some evidence from the surveys and qualitative interviews that validate the causal steps and assumptions implicit in the contribution story – specifically the assumption that PPM users would be aware of the scheme support (but not that such awareness necessarily influenced behaviour).

Evidence from the KnowledgePanel survey shows high awareness levels among PPM customers, particularly for the EBSS scheme, where 85% of PPM customers reported awareness compared to 80% on average for the GB households. Awareness of other schemes

[90] Exact survey question in the KP survey and Alternative Schemes Survey was: "Without the financial support from the government, energy bills for a typical household of [1-2 / 3-4 / 5 or more] people were predicted to be around [£165 / £225 / £290] a month higher during winter 2022-23 (based on average direct debit rates in Great Britain) according to estimates based on government figures. Now imagine you had to pay an extra [£165 / £225 / £290] a month for your energy bills during winter 2022-23. Would your household have been able to afford to pay your energy bills during winter 2022-23?"

[91] The coverage of PPM households in the KP survey is 574 households and 352 households in the Alternative Schemes survey.

was slightly lower than the average GB population (excluding EBSS AF in which PPM matched average GB households at 14% awareness) with 30% aware of EPG (compared to 40% for the GB households) and 2% for AFP (compared to 3%) and 2% for AFP AF (compared to 1%). Only 9% of PPM customers were not aware of any schemes, compared to 12% for the GB population.

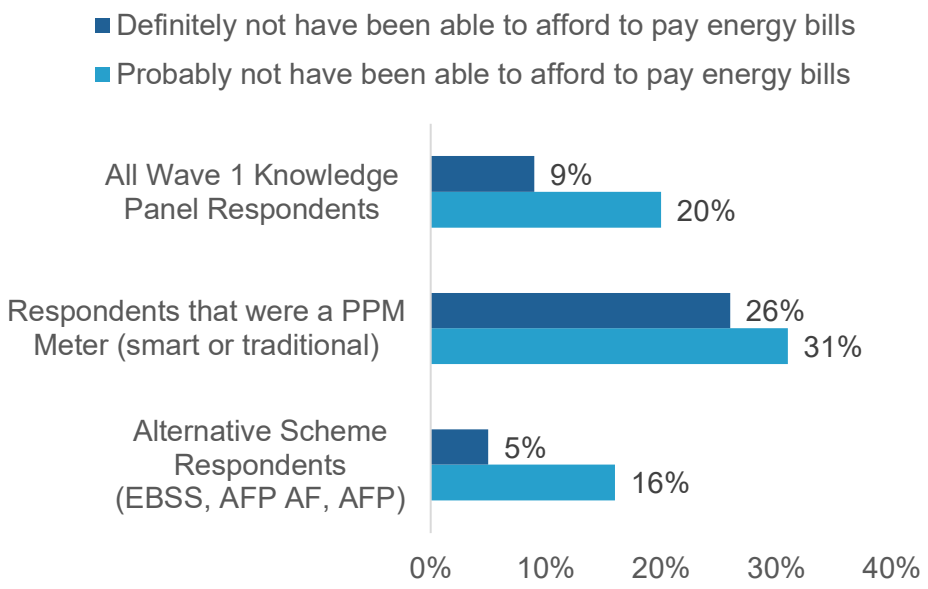
Some evidence from qualitative interviews also indicates awareness:

> *“It was all over the news, and it was quite nice to hear as well. But yes, you get told about it but you don't know if you're actually going to get it because you don't know if it's just hearsay or whatever. But yes, it was really good.”*
>
> *"Prepayment meter, Group 1, EBSS and EPG, household, ID 50, wave 1 interview*
>
> *"We knew there was different stages of when we'd receive money. Because of my disability I was eligible to get two lump sums over the year which did help a little bit. In fact, it came at just the right time each time, when we were really starting to worry. Getting the £67 and £66, I don't know how they worked the payments, but it did really help a lot. You know, we found out that it's coming down a little bit, but it's still a lot higher than what we were paying two years ago. "Prepayment meter, Group 1, EBSS and EPG, household, ID 17, wave 1 interview*

Magnitude and prevalence of contribution to outcomes

The scale and potential severity of disconnections from the grid over the intervention period were set out above. The evaluation found the scale of disconnections over the intervention period were high and there is some evidence they may also have been severe. The evidence of contribution presented directly above indicates that the schemes had some effect on disconnection behaviours in more than half of all households. Putting these two factors together, it is plausible to draw the conclusion that the schemes limited the potential magnitude in terms of length of disconnection and volume of disconnections within GB over the intervention period. In addition to the evidence above, the KnowledgePanel and Alternative Schemes survey show that without the government financial support, some households would have not been able to afford to pay their bills (see Figure 8.7). The extent this would have precisely impacted self-disconnections is unclear, albeit the two factors are closely related. Given that disconnections still continued in a large number of households it appears on the surface that the schemes did not reduce prevalence of disconnections at the household level; however, the data is insufficient for drawing robust conclusions on this.

Figure 8.7: Respondents who would have probably or definitely been unable to afford to pay their bills in absence of the schemes' support during the winter of 2022/23



Source: KnowledgePanel survey and alternative schemes surveys: QF2. Affordability of household energy bills in 2022-23 without financial support (counterfactual scenario) Wave 1 KnowledgePanel Base: All (N= 7850) alternative schemes survey Wave 1 Base: All respondents who received EBSS or AFP/AFP AF (N= 8040)

Heterogeneity

Those in greatest need of the schemes

Amongst households on PPMs reporting one or more disconnections over the intervention period, there was variation in the number and duration of disconnection by different subgroups.

Overall 43% of PPM households reported that they self-disconnected at least once in winter 2022/23. The groups more likely to report this outcome (according to The KnowledgePanel survey), were:

- Recipients of the Warm Home Discount Scheme (58%),
- Households that typically spent more than 10% of income (after rent and mortgage) on energy (57% compared to 38% who do not spend less than 10%) and those spending over 15% of income (after rent and mortgage) on energy (66%),
- Households residing in the Midlands (56% compared to 40% in the North and 37% in the South)
- Households renting from a council or housing association (48%, compared to 42% of private renters and 29% of homeowners).

This suggests that these subgroups were particularly vulnerable to self-disconnection and had a greater need for government support.

The extent of the variation observed among the PPM population can be explained by higher proportions of household profiles likely to be vulnerable to energy burden, disconnection and/or

energy debt (i.e. households on lower incomes, households paying more than 10% of their income towards energy) among PPM customers compared to the overall GB population.

Those more likely to report benefitting from / reliance on the schemes

On the one hand, the fact that the above-mentioned subgroups report higher levels of disconnection over the intervention period may mean that the schemes helped them less. However, the same subgroups were also more likely to report they would not have been able to afford their household energy bills without the financial support from the government. Recipients of the Warm Home Discount Scheme (63%), households renting from council/housing association (58%), respondents residing in Scotland (31%) and the Midlands (30%) and those spending over 10% of their income on energy bills (51%) reported they would have been unable to afford their energy bills in winter 2022/23 without financial support compared to 28% across GB households.

This suggests that these subgroups were more reliant on the schemes to afford their energy bills, as financial affordability was the main reason for self-disconnection.

Experts consulted for this evaluation highlighted that many vulnerable groups faced significant difficulties in accessing the schemes and the extent they benefited from them also varied. These are summarised in Table 8.7 under section 8.3.1.

Those who may not have needed the schemes' support

The sample of PPM households was not large enough to draw robust conclusions on whether the scheme provided support that was used to pay for PPM credit where this was not needed (i.e. the household would have always been able to pay for the credit / would not have worried about being able to put credit on the meter). However, since the PPM population in GB has higher proportions of households likely to be vulnerable to energy burden, disconnection and/or energy debt (i.e. households on lower incomes, households paying more than 10% of their income towards energy) or at greater risk of harm should a disconnection occur (e.g. unemployed, larger families, people with existing illnesses or disabilities), then it is much less likely that this population will have benefitted when they didn't need to.

Small sample sizes for alternative schemes survey PPM respondents make reliable subgroup analysis difficult. Therefore, it cannot be confidently stated which Alternative Scheme households were less likely to disconnect from their energy supply and therefore needed the scheme less.

Risk of bias

Overall, there is a medium risk of bias in the evidence informing the evaluation's assessment of contribution claim HC3 (see Annex A: Technical Annex, appendix 1 for full assessment of bias).

8.4 Household finances

8.4.1 Contribution Claim HF1

Hypothesised contribution:

HF1: The schemes contribute to limiting the number of households that would not be able to pay their energy bills and who go into energy debt with their supplier.

The contribution story being tested

A key objective of the schemes was to assist households in paying their energy bills and to limit energy debt. It was anticipated that the schemes would do this by achieving the near-term outcome of reducing households' energy bills compared to a no intervention scenario by: (1) reducing the cost of energy bills (EPG), (2) providing a discount on bills (EBSS, for direct debit customers), (3) providing a voucher that could go towards the cost of energy credit for PPMs (EBSS, for PPM customers), (4) providing financial support to pay for energy bills (for those paying for bills with cash, cheque or on credit), and (5) providing financial support that could go towards the cost of alternative fuels or energy costs where there is no direct relationship with the supplier (EBSS AF, AFP, AFP AF).

It was expected by achieving this near-term outcome, the medium-term outcomes of less energy debt, fewer disconnections from PPMs and fewer people going without alternative fuels would take place, and that subsequently there would be less underconsumption of energy within homes and fewer energy companies in GB going into insolvency due to high levels of energy debt within households.

The achievement of these outcomes was dependent upon the schemes' delivery mechanisms being effective in distributing the intended support to households; upon households using the support in the way envisaged (towards energy and limiting energy debt disconnections, and underconsumption of alternative fuels); and upon the financial support being sufficient to limit these negative responses to energy price rises.

Table 8.9: Contribution Claim HF1 Summary Appraisal Table

HF1: The schemes contribute to limiting the number of households that would not be able to pay their energy bills and who go into energy debt with their supplier		
Agreement	Evidence agrees with the claim/contribution story – schemes necessary contribution to outcome	✓✓✓
Prevalence	The majority of those expected to experience this outcome have done so	✓✓
Magnitude	The intervention was an important contribution	✓✓

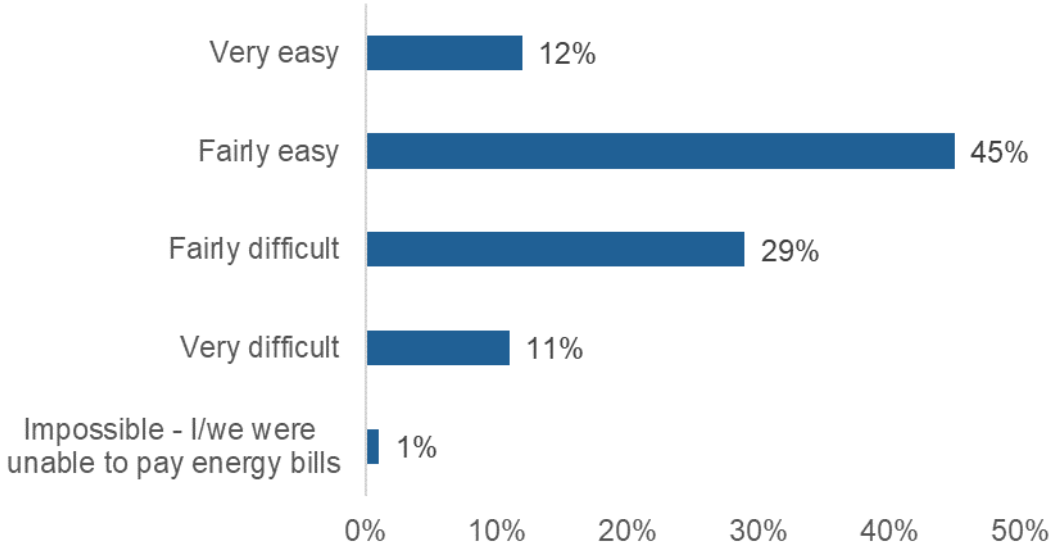
Heterogeneity	Groups who benefitted least were older, higher income, and from a non-ethnic minority background	✓
Bias	Bias was low risk.	✓✓✓

Household ability to pay bills and energy debt over the intervention period

Winter 2022/23

In winter 2022/23, 41% of households responding to the KnowledgePanel survey found it difficult or impossible to afford their energy bills (see Figure 8.8). Amongst respondents to the alternative schemes survey, 45% found it difficult or impossible to afford to pay their bills

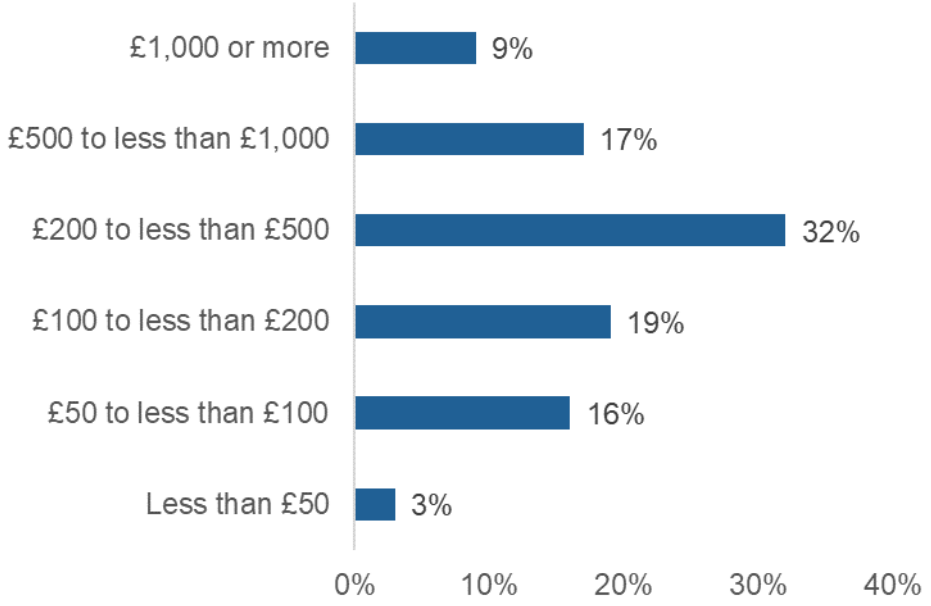
Figure 8.8: Ease or difficulty in affording to pay their energy bills during winter 2022-23



Source: Ipsos KnowledgePanel survey: QF1b. During winter 2022-23, how easy or difficult was it for your household to afford to pay your energy bills? Wave 1 KnowledgePanel Base: All (N= 7850)

Findings from the KnowledgePanel survey (alternative schemes survey) also showed that 15% (12%) of households (who pay an energy supplier by direct debt or in receipt of a bill) had been in energy debt since October 2022, with 32% (29%) owing between £200 – £500 to their energy supplier (see Figure 8.9).

Figure 8.9: Those experiencing energy debt: highest amount owed



Source: Ipsos KnowledgePanel survey: QF5. Roughly what is the highest amount that was owed to your energy supplier(s) when you were in debt? Wave 1 KnowledgePanel Base: All (N= 939)

Winter 2023/24

In winter 2023/24, the proportion of households who reported that it was difficult (or impossible) to pay their energy bills during the winter slightly decreased, according to the KnowledgePanel survey, falling from 41% (winter 2022/23) to 37% (winter 2023/24). This pattern was also observed among alternative scheme households, falling from 45% in winter 2022/23 to 38% in winter 2023/24[92]. Longitudinal data showed that 26% of households (29% of alternative scheme households) who previously struggled with energy bills in winter 2022/23 found it easier to manage them in winter 2023/24. Conversely, 13% (10%) of those who reported no prior issue of the affordability of energy bills in winter 2022/23 reported that it had become difficult in the following winter 2023/24. This shows that trends were not consistent across all households.

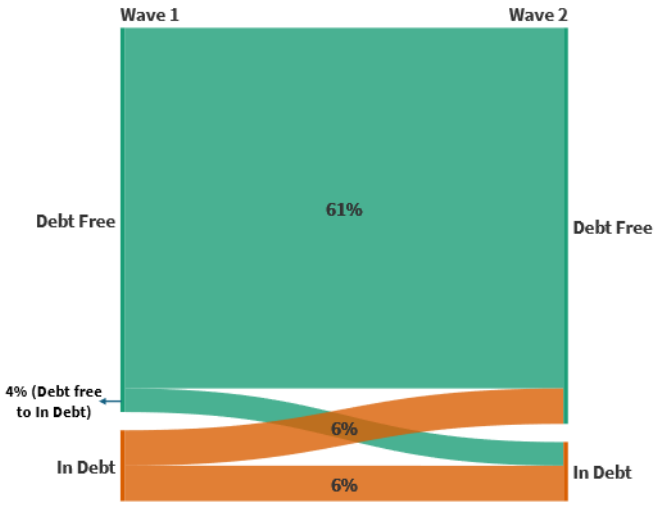
Other surveys showed a similar improvement in reported energy bill affordability between the two winters. Data from the ONS Opinions and Lifestyle Survey (November – December 2023) indicated that 41% of adults found it very or somewhat difficult to afford their energy bill payments, compared to 48% over the same period in the previous year (November – December 2022)[93].

Energy debt also slightly decreased in winter 2023/24 for the KnowledgePanel survey respondents (see table 8.10, overleaf); the proportion of households carrying debt to their

[92] EBSS AF applicants saw a drop from 57% in winter 2022/23 to 50% in winter 2023/24. AFP AF applicants reported a decrease from 49% to 38%, and AFP households from 45% to 34% over the same period
[93] Office for National Statistics (2023). Public opinions and social trends, Great Britain: household finances - Office for National Statistics. Available at: Public opinions and social trends, Great Britain: household finances - Office for National Statistics

energy supplier fell to 13% between October 2023 and March 2024 in wave 2, from 15% between October 2022 and August 2023 in wave 1. For alternative scheme respondents, debt had slightly increased from 12% in wave 1, to 14% in wave 2. Longitudinal analysis shows that energy debt remained largely consistent between waves for 67% of households (56% of alternative scheme households). From wave 1 to wave 2 the majority of GB households (61%) remained debt-free. However, there was some movement in and out of debt, with 6% of households entering debt and 4% exiting debt. A small portion of households (6%) experienced persistent debt across both waves.

Figure 8.10 Longitudinal Analysis: Prevalence of Energy Supplier Debt Among GB Households



Source: Ipsos KnowledgePanel wave 1 and wave 2 surveys: QF4. Since [October 2022 / October 2023], has your household been unable to pay an energy bill, leaving you in debt to your energy supplier(s)? / Since [October 2022 / October 2023], has your household been in debt to your energy supplier(s) (e.g. your account had a negative balance for more than 1 month)? Base: All GB households who pay their energy supplier by direct debit or on receipt of a bill (6,094).

Evidence from wave 2 qualitative interviews with households showed that households' focus had shifted from concern over energy bills to concern for the wider cost of living crisis. While energy costs contributed to the overall cost of living concerns, the participants were primarily focused on the broader cost of living issue as a whole. More households reported budgeting ahead of winter 2023/24, to ensure they would be able to afford their bills.

Agreement of evidence with hypothesised contribution

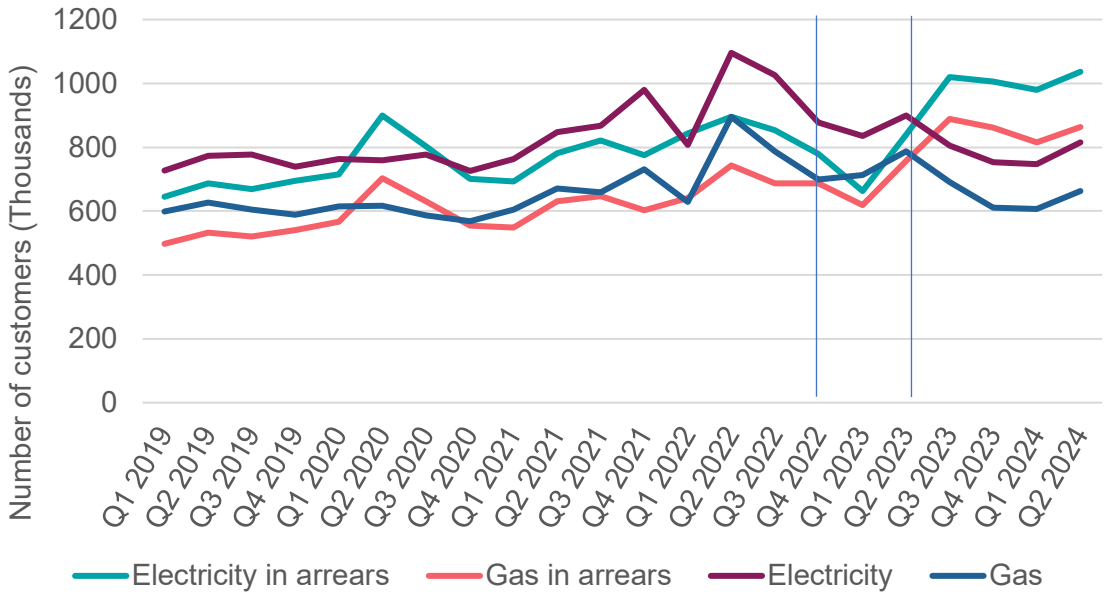
The evidence available aligns with the hypothesis that the schemes contributed to limiting the number of households that would not be able to pay their energy bills and who would go into energy debt with their supplier.

First, several responses to wave 1 of the KnowledgePanel (alternative scheme) surveys indicate a causal relationship between the scheme support and perceived ability to pay for energy bills / avoid energy debt:

- 28% (21%)[94] which based on KnowledgePanel percentages is representative of 8 million GB households responded in the surveys that, without the government energy bill support, they would have been unable to afford to pay their energy bills in winter 2022/23.
- Similarly, 26% (11%)[95] of all households who reported in the surveys that they had not gone into debt considered they would have likely gone into debt with their supplier in the absence of the government's financial support.
- Overall, 59% (31%) of households who reported in the surveys that they had had to reduce their spending due to higher energy costs, and 15% (11%)[96] of households who took on household debt, reported they would have needed to do so to a 'considerably greater extent' without the energy affordability schemes in place in winter 2022/23.

Second, Ofgem data showed that during October 2022 to March 2023, the number of customers in debt fell significantly. This decline is exhibited for both customers of gas and electricity and for both those with an arrangement to repay and those in arrears (see Figure 8.11). Whilst it is not possible to establish a direct causal link between the scheme and the lower debt figures from this Ofgem data (the data only shows correlation), the Ofgem data does indicate a decrease in customers with energy debt during the schemes period which corroborates this evaluation's findings around energy debt being lower in winter 2022/23.

Figure 8.11: Accounts with a consumer repaying an energy debt, with or without an arrangement to repay



Source: Ofgem Data Portal

[94] QF2. Affordability of household energy bills in winter 2022-23 without financial support. Base: All (KnowledgePanel: N = 7850, Alternative Schemes: N = 8040).
[95] QF6. Likelihood of energy debt during winter 2022-23 without financial support for energy bills. Base: All who did not experience energy debt (KnowledgePanel: N = 5951, Alternative Schemes: N = 4350).
[96] QE2. Impact of winter 2022-23 on household energy bills without financial support (counterfactual scenario). Base: All (KnowledgePanel: N = 7850, Alternative Schemes: N = 8040).

Third, in qualitative interviews for this evaluation, experts specialising in vulnerable groups gave the view that there had been a positive impact of energy affordability schemes on households' ability to afford their energy bills, particularly in the case of lower-income households. Similarly, in wave 1 qualitative interviews, some households directly attributed their ability to avoid debt to the schemes, and a few others reported that the schemes were very useful in helping them afford their energy bills without going into debt.

> *"Yes, I think it's probably what kept us from going into debt with it or using our emergency credit during the peak winter methods. So it was a bit of a cushion .... we were paying way more than the support scheme but it was kind of just bit of a buffer which was really useful."*
>
> *Household eligible for EPG and EBSS, Participant 64, wave 1 interview*

In the KnowledgePanel survey wave 2, many households reported continued struggles to pay their bills, with some still struggling with debt from the previous winter, suggesting a carryover of financial strain into winter 2023/2024. (Though the KnowledgePanel survey wave 2 findings suggests that energy debt remained consistent between waves for 67% of households, whether this was being debt free over the time period or continuing to be in debt.).

> *"The one thing that is continuing to rise and is higher than it was the preceding year is the level of energy debt that we're seeing people dealing with…January 2024 was the highest number of people that we'd given advice on energy debt."*
>
> *Expert organisation, ID 5, wave 2 interview*

Continuous cruisers (i.e. houseboats)[97], who received support from the EBSS AF CC scheme in autumn 2023, also often reported that they used the money received to repay debts and loans taken out during the previous winter (2022/23).

> *"Well, it [the scheme] was good, it was nice to get, you know, some recompense for some of the additional funds we'd spent that winter, so it meant that we were back on an even keel, rather than in the red."*
>
> *Continuous cruiser, Participant 4, wave 2 interview*

On the other hand, having experienced the challenges of winter 2022/2023, other households in wave 2 qualitative interviews reported adopting measures to better manage their energy bills, such as working on their budgeting and bulk-ordering heating oil and/or wood and/or setting up automatic refills with fuel suppliers to avoid running out during the winter (for those who used alternative fuels for heating).

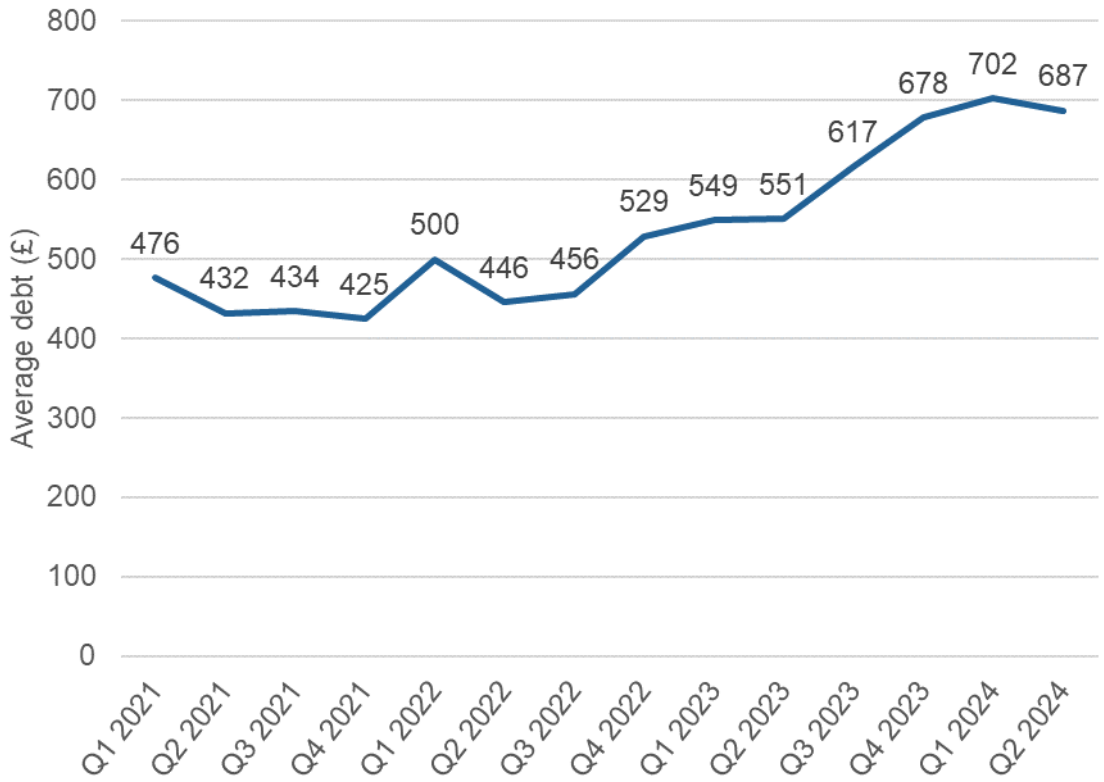
[97] Continuous cruisers were one of the groups we conducted interviews with. A continuous cruiser is a boater on UK inland waterways, specifically those managed by the Canal & River Trust, who operates under a continuous cruiser license. This license is designed for boaters who are constantly traveling and do not have a fixed home mooring. More information can be found here.

Magnitude and prevalence of contribution to outcomes

Magnitude

According to secondary data analysis conducted for the evaluation, the average level of debt remaining where there is an arrangement to repay grew over the intervention period. According to Ofgem data, the average level of debt for customers with a debt repayment in place was £476 in Q1 2021, £549 in Q1 2023 and £703 in Q1 2024. This suggests that the average amount of debt was higher in the winter after the close of the schemes compared to the time period over the schemes. Additionally of all the outstanding debt balances in the UK 72% was made up of arrears (debt with no plan to repay) in Q4 2023 (see Figure 8.11).

Figure 8.12: Average level of debt remaining where there is an arrangement to repay the debt for electricity customers



Source: Ofgem Data Portal

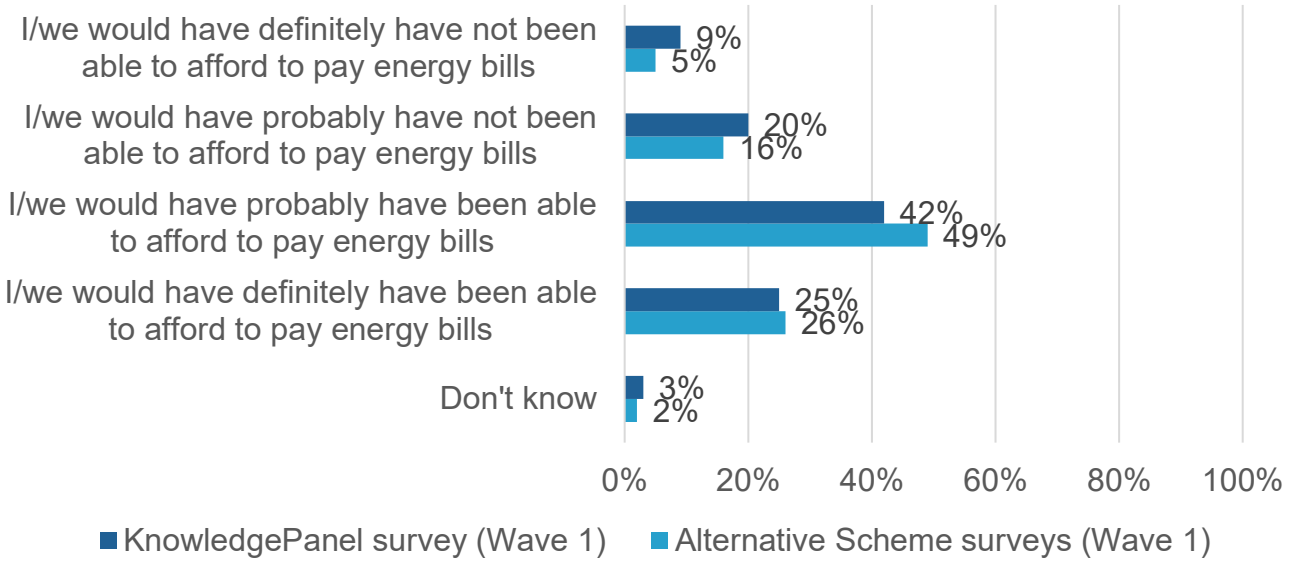
The fact that the average size (magnitude) of debt by household was higher after the schemes may support the proposition that the schemes limited the magnitude (size) of debt during winter 2022/23.

Prevalence

The surveys conducted for this evaluation asked respondents for their perceptions of how much the scheme support enabled them to afford their energy. This data from the KnowledgePanel survey (and alternative schemes survey), suggests that the prevalence of benefit from the schemes was around 29% (21%). Some 20% (16%) stated they would

probably have not been able to afford to pay their energy bills without the support and 9% (5%) would definitely have not been able to afford their bills (see Figure 8.13).

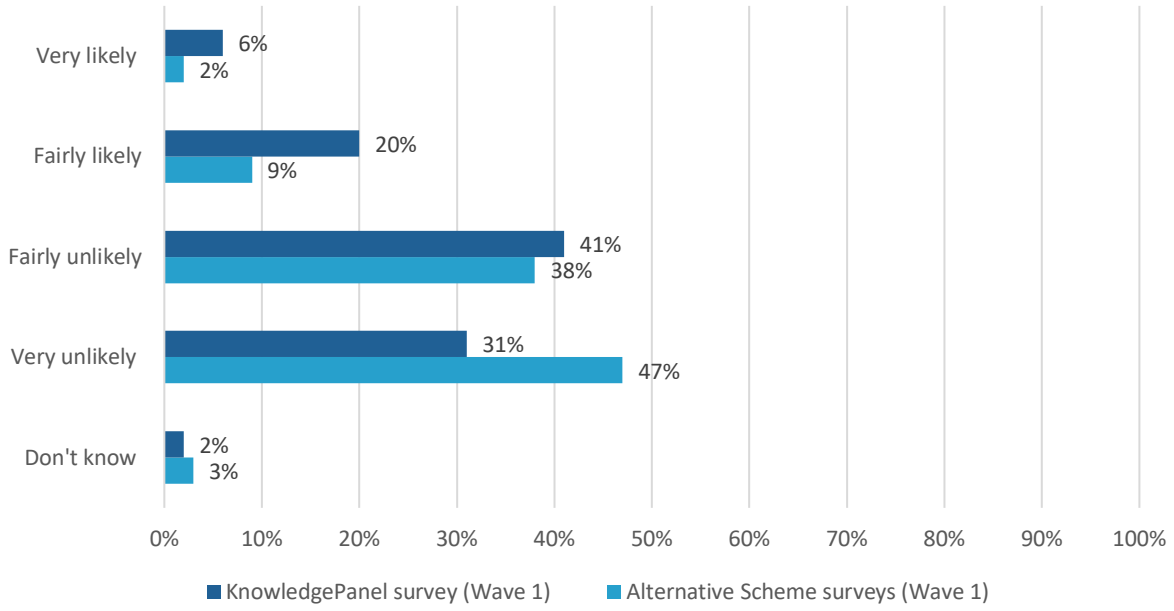
Figure 8.13: Likelihood of households not being able to afford their energy bills without government support (in winter 2022/23)



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QF2. Affordability of household energy bills in winter 2022-23 without financial support. Wave 1 Base: All (N = 7,850), All who received EBSS or AFP/AFP AF (N = 8,040)

In terms of energy debt, the KnowledgePanel survey suggests that the schemes enabled around a quarter (26%) of households to avoid debt (those saying they were very or fairly likely to have without the support); with 11% of alternative schemes survey respondents saying the same (see Figure 8.14). These data suggest that those on alternative schemes may have either been less in need of the support (see heterogeneity analysis below) or reflecting that these households often pay upfront for their energy and therefore are less at risk of going into energy debt.

Figure 8.14: Likelihood of having gone into debt without government support (in winter 2022/23)



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QF6. Likelihood of energy debt during winter 2022-23 without financial support for energy bills. Wave 1 Base: All who did not experience energy debt (N = 5,951), All who received EBSS AF, AFP AF or AFP, who did not experience energy debt (N = 4,350)

Heterogeneity

Those most in need of the scheme

Some households struggled to afford their bills despite the support, as illustrated by Participant 43 who reported difficulties in paying their energy bills during winter 2022/23, despite receiving assistance.

> *"It was very difficult [compared to the previous winter]. It was really month by month just a case of prioritising what you do, bills you pay, and trying to time when your pay comes in, my wife's pay come in, when do we have enough money to put aside to make an order for the oil knowing it's going to be £500 that we need to find? And it's not money you just put aside easily with everything else going up in price?"*
>
> *Household eligible for AFP, ID 43, Wave 1 interview*

Experts consulted for this evaluation highlighted that many vulnerable groups faced significant difficulties in accessing the schemes and the extent they benefited from them also varied. Qualitative interviews for this evaluation indicated that factors such as permanency of employment and salary, and number of dependents affected ability to pay for energy.

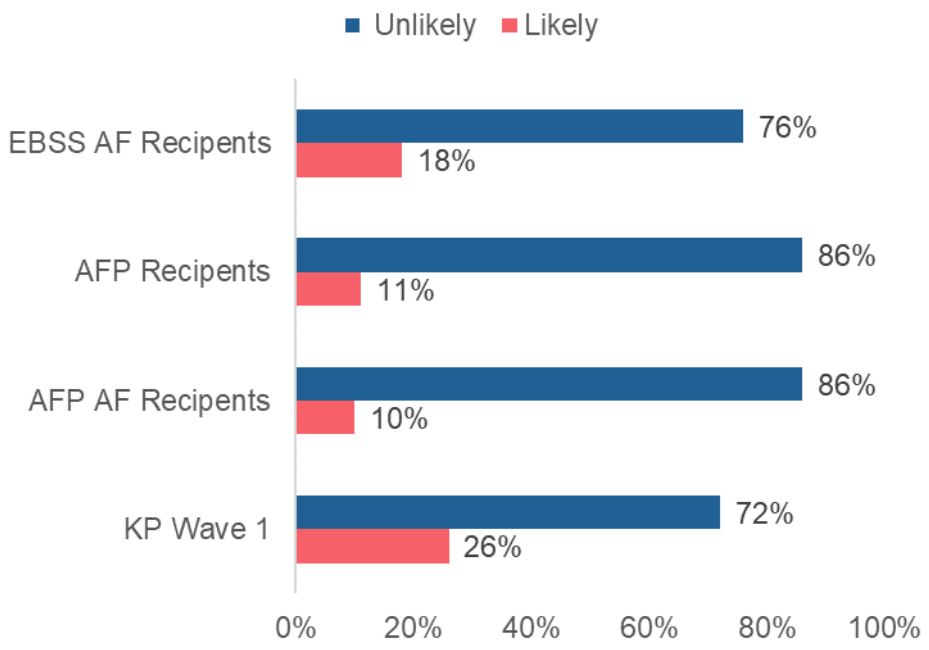
Those more likely to report benefitting from / reliant on the schemes

Households who stated they were able to afford their energy bills winter (2022/23), **tenants**, **households on benefits**, **households on PPMs**, and **those spending over 10% of their income on energy** were less likely to report being able to afford their energy bills without government support. Similarly, households in receipt of benefits, those who are of an ethnic minority background, and those who spend more than 10% of their income on bills, were more likely to respond that they would have gone into debt in the absence of the schemes.

The Latent Class Analysis found that respondents who were **younger**, **more likely to rent**, and **on lower salaries** than the average population (segment 1), would have reported struggling more with paying other housing costs and bills, and would have also been more likely to reduce spending on necessities without government support in winter 2022/23. Those who were younger and poorer (with a higher proportion earning less than £26,000 relative to segment 1), more **likely to have an illness or be disabled**, and **more likely to rent from a council/housing association** than the average, would similarly have been more likely to struggle with paying other household expenses and bills, and to have to reduce spending on necessities. Households in both these segments were also more likely to say they would have taken on household debt without government support, hence they likely benefited more from the schemes.

Responses to the Alternative Schemes Survey showed that among households able to afford their energy bills in winter 2022/23, 84% of AFP households, 76% of AFP AF households, and 63% of EBSS AF households said they would have been able to do so without the schemes. Likewise, 86% of AFP recipients, 86% of AFP AF recipients, and 76% of EBSS AF recipients reported they would have been less likely to have gone into debt in the absence of the schemes (This is potentially not a surprising finding if these households use alternative fuels to heat their homes and therefore often pay upfront for energy and are less likely/able to go into energy debt). (see Figure 8.15). However, **lower-income households** and **younger households** in the AFP AF and AFP schemes, and **tenants** in the EBSS AF scheme, were less likely to report being able to afford energy bills without government support; again indicating that such households were in much greater need of (and likely to benefit from) the schemes in terms of energy bill affordability.

Figure 8.15: Likelihood of energy debt without government support during winter 2022-23 - respondents who did not experience energy debt



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QF6. Likelihood of energy debt during winter 2022-23 without financial support for energy bills (counterfactual scenario) Alternative Scheme Base : All respondents who received EBSS AF, AFP AF or AFP (who pay their bills upon receipt or by DD) who did not experience energy debt (EBSS AF N = 483 , AFP N= 1572, AFP AF N= 2765), KnowledgePanel Base: All (who pay their bills upon receipt or by DD) who did not experience energy debt (N = 5951)

Those who may not have needed the schemes' support

Some households were more likely to report being able to afford their energy bills without government support, suggesting that they needed government financial support less.

These groups included **older respondents, higher-income households (earning between £52,000 and £99,999)**, **households using alternative fuels** (see discussion above), **those not on benefits, and those spending between 0-10% of their income** on energy. Likewise, some groups were less likely to have gone into debt without government support. These groups included households who were **not on benefits, as well as older households, and those with a non-ethnic minority background**.

The results are supported by further logistic regression analysis, indicating that respondents from higher-income households or those who are older were significantly less likely to report that the scheme affected their likelihood of falling into energy debt. This association was observed irrespective of the respondent's region, ethnicity, the proportion of their income spent on energy, and their energy bill payment type.

Data from the FCA Financial Lives Survey shows that whilst the number of employed respondents who report that keeping up with their bills and credit commitments is 'not a burden at all' has been decreasing since 2017 (45% in 2017, 40% in 2020, 34% in 2022, and 32% in 2024), **those in the relatively younger age category of aged 35-44** were the most likely to

report that keeping up with bills is a 'heavy burden' (15% - 2017, 17% - 2020, 19% - 2021, 21% - 2024).

Risk of bias

Overall, there is a medium to low risk of bias in the evidence informing the evaluation's conclusions around contribution claim HF1. (see Annex A: Technical Annex, appendix 1 for full assessment of bias).

8.4.2 Contribution Claim HF2

Hypothesised contribution:

HF2: The schemes contributed towards limiting the increase in the proportion of households experiencing fuel poverty.

The contribution story being tested

The energy affordability schemes were intended to limit the prevalence and magnitude of fuel poverty experienced in GB in response to the rise in energy bills. As per the overarching ToC, the EPG was a primary tool for achieving this given that it targeted the 'energy price' driver of fuel poverty[98]. Key determinants of fuel poverty are energy costs and income. All the schemes lowered energy bills compared to the no intervention scenario so would have limited fuel poverty through this mechanism (EPG and EBSS direct debit). Where the support was not directly reducing bills, payments would have increased household income (EBSS AF and AFP AF). Therefore, these schemes should also have been able to limit fuel poverty depth and breadth for those households experiencing energy burden: (a) to the extent that they increased income over the intervention period, and (b) where households put the support directly towards energy costs. The other determinant of fuel poverty is building standards – the energy affordability schemes did not influence this directly.

This evaluation addressed the impacts on fuel poverty by using national fuel poverty statistics, where available, alongside an indicator of energy burden, to allow a comparison across GB. As discussed in section 5.3, there is no single, universally accepted definition of Fuel Poverty, and the criteria for determining fuel poverty varies across countries, including within the United Kingdom[99]. Therefore, the energy burden indicator was included which uses a 10% of income (after housing costs) threshold of energy bills as a measure of the relationship between expenditure and household income

[98] The three primary drivers of fuel poverty are: high energy costs driven by the energy demand within the home (e.g. homes being harder-to-heat), the households' spending power (i.e. levels of income), and energy prices.
[99] The definitions and measurement of Fuel Poverty vary across countries, including within the United Kingdom. For more information on the differences in Fuel Poverty definitions across the UK, refer to the House of Commons Library briefing paper.

Table 8.10: Contribution Claim HF2 Summary Appraisal Table

HF2 The schemes contributed towards limiting the increase in the proportion of households experiencing fuel poverty.		
Agreement	Evidence agrees with the claim – schemes contributed to outcome	✓✓✓
Prevalence	The majority of those expected to experience this outcome have done so	✓✓
Magnitude	The intervention was an important contribution	✓✓
Heterogeneity	Groups likely to have experienced fuel poverty most were households/ tenants renting from the council/ housing associations, households on benefits and those with an ethnic minority background.	✓
Bias	Bias was medium risk.	✓

The scale of energy burden over the intervention period

Winter 2022/23

The Annual Fuel Poverty Statistics Reports for England (2022&2023 data)[100] [101] show that the proportion of households in England experiencing higher energy burden increased from 2021 to 2023. The report indicates that in 2023, 36% (8.9 million) of households in England were spending more than 10% of their income (after housing costs) on domestic energy, compared to 30% (7.4 million) in 2022 and 21% in 2021 (4.9 million).

The KnowledgePanel survey (and alternative schemes survey) evidence shows that, in winter 2022/23, of the respondents who provided the necessary information to calculate the average monthly proportion of income (after rent/mortgage) on energy bills (73% of all respondents), 19% (26% for the alternative schemes survey) were spending over 10% of their remaining income on energy bills. Energy burden is defined as households spending over 10% of their income after rent/mortgage payments on energy bills. This suggests that the scale / prevalence of energy burden was slightly higher amongst those on alternative schemes.

Evidence from the Ofgem Wave 3 CIM survey[102] (December 2022) also found that many households facing energy affordability issues were doing so for the first time. Approximately a fifth (21%) of consumers surveyed fell into the category of 'newly financially vulnerable' (defined as experiencing affordability issues - beyond reducing energy - after August 2021). The demographic profile of this group differed from those who were facing issues prior to the

[100] Annual Fuel Poverty Statistic Report: 2023
[101] Annual Fuel Poverty Statistics Report: 2024
[102] Ofgem Consumer impacts of market conditions survey: wave 3 (Nov/Dec 2022)

energy crisis: the 'newly financially vulnerable' had a more even age distribution, and were less likely to be homeowners, as well as less likely to be on means-tested benefits. The figures reported above cover only a portion of the period under evaluation (November to December 2022), and do not account for the introduction of the EBSS AF and AFP AF schemes (introduced in February and March 2023, respectively).

Table 8.11: Proportion of income (after rent/mortgage expenses) spent on energy among nationally representative sample of GB households – KnowledgePanel wave 1 survey

Household group		Over 10%	0-10%	Unweighted base
All (total)		19%	81%	5,709
Energy Tariff	Those on fixed term tariff for gas/electricity	20%	80%	2,255
	Those not a fixed term tariff for gas/electricity	17%	83%	3,228
Benefits	Universal Credit	46%	54%	338
	Personal Independence Payment	36%	64%	254
	Tax credits	41%	59%	153
	Not on benefits/ tax credits	15%	85%	4,756
Tenants or homeowners	Owned outright/buying on mortgage	16%	84%	4,398
	Rent from private landlord	21%	79%	601
	Rent from council/housing association	38%	62%	589
Annual household income	Below £26,000	37%	63%	1,696
	£26,000 up to and including £51,999	14%	86%	1,984
	£52,000 up to and including £99,999	5%	95%	1,061
	£100,000 and above	8%	92%	458

Some demographic subgroups were more likely to say they spent more than 10% of their income on energy bills. Of the 19% (26%) of households that spent more than 10% of their income on their energy bills, respondents from an ethnic minority background and lower-income households were more likely to fall into this category.

Winter 2023/24

From the Ipsos surveys there was evidence that in winter 2023/24, the proportion of households spending more than 10% of their income on their energy bills was at a similar level compared to the previous winter, at 18% (22%) in winter 2023/24 compared to 19% (26%) in winter 2022/23 even though temperatures were lower in winter 2023/24.

As, in theory, households overall might have been expected to pay more in winter 2022/23 for their energy costs given the winter was colder and energy costs were rising, the fact that responses are similar between each winter may indicate an effect of the scheme in winter 2022/23. Energy burden was not higher in the intervention period, when it may have been expected to spike, than in the subsequent winter when energy bills had reduced.

Agreement of evidence with hypothesised contribution

Several sources of analysis for this evaluation indicate a causal relationship between the scheme and a reduced risk of fuel poverty, in at least some households.

First, DESNZ analysis of the Annual Fuel Poverty Statistics shows that 289,000 additional households in England would have experienced fuel poverty (LILEE definition) without the support provided, equivalent to an additional 1.2 per cent of all households This is consistent with the evidence provided by Ipsos surveys.

Second, logistic regression analysis of the Wave 1 Knowledge Panel data reported a significant association between individuals spending more than 10% of their income (after rent/mortgage) on energy and a variety of energy mitigation behaviours. These results observed that, without the scheme, those experiencing a higher energy burden would have been significantly more at risk of underheating and engaging in more harmful energy mitigation strategies, such as taking on more household debt or reducing spending on necessities.

Additionally, based on Wave 1 Knowledge Panel statistics, 51% of respondents who spent more than 10% of their income (after rent/mortgage) responded in the Ipsos surveys for this evaluation that they would have probably or definitely been unable to afford to heat their homes without the scheme. This can be approximated to around 2.8 million households who spent more than 10% of their income on energy (after rent/mortgage), finding it difficult to afford their energy bills without the scheme. However, the extent to which this would have led them to experience fuel poverty is difficult to determine.

Price elasticity modelling undertaken further highlights that the EBSS GB + EPG schemes did have an impact on reducing energy burden[103]. The table below shows the positive effect of EBBS GB + EPG on energy burden; however the impact is small. Higher income households with an A-D rating were using less energy per square metre of their home. This may be reflective of these households having larger homes and there is a per unit 'scale economies' factor in larger units. Alternatively, larger energy efficiency gains could have been more affordable to higher income households. An impact and economic evaluation is underway, which will investigate these results in further detail, using more granular energy consumption data. These results however suggest that EPC rating and the type of property were more important in determining the effect of schemes on energy burden than household income decile.

Table 8.12: Reduction of energy costs as % of income (after housing costs) - No policy vs EPG and EBSS GB support

EPC/ Income Decile	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
A	-2.4%	-2.3%	-1.8%	-1.9%	-2.0%	-2.2%	-2.0%	-2.1%	-2.2%	-2.8%
B	-2.4%	-2.1%	-1.7%	-1.5%	-1.7%	-1.7%	-1.7%	-1.9%	-2.0%	-2.7%
C	-2.6%	-2.5%	-2.0%	-2.0%	-2.1%	-2.2%	-2.3%	-2.5%	-2.7%	-3.6%
D	-3.1%	-3.0%	-2.4%	-2.3%	-2.5%	-2.7%	-2.7%	-2.9%	-3.1%	-4.0%
E	-3.4%	-3.2%	-2.5%	-2.5%	-2.8%	-3.0%	-3.1%	-3.3%	-3.5%	-4.6%
F	-3.3%	-3.1%	-2.5%	-2.6%	-2.8%	-3.0%	-3.2%	-3.7%	-4.0%	-5.4%
G	-3.1%	-3.0%	-2.3%	-2.3%	-2.6%	-2.8%	-2.9%	-3.3%	-3.7%	-4.8%

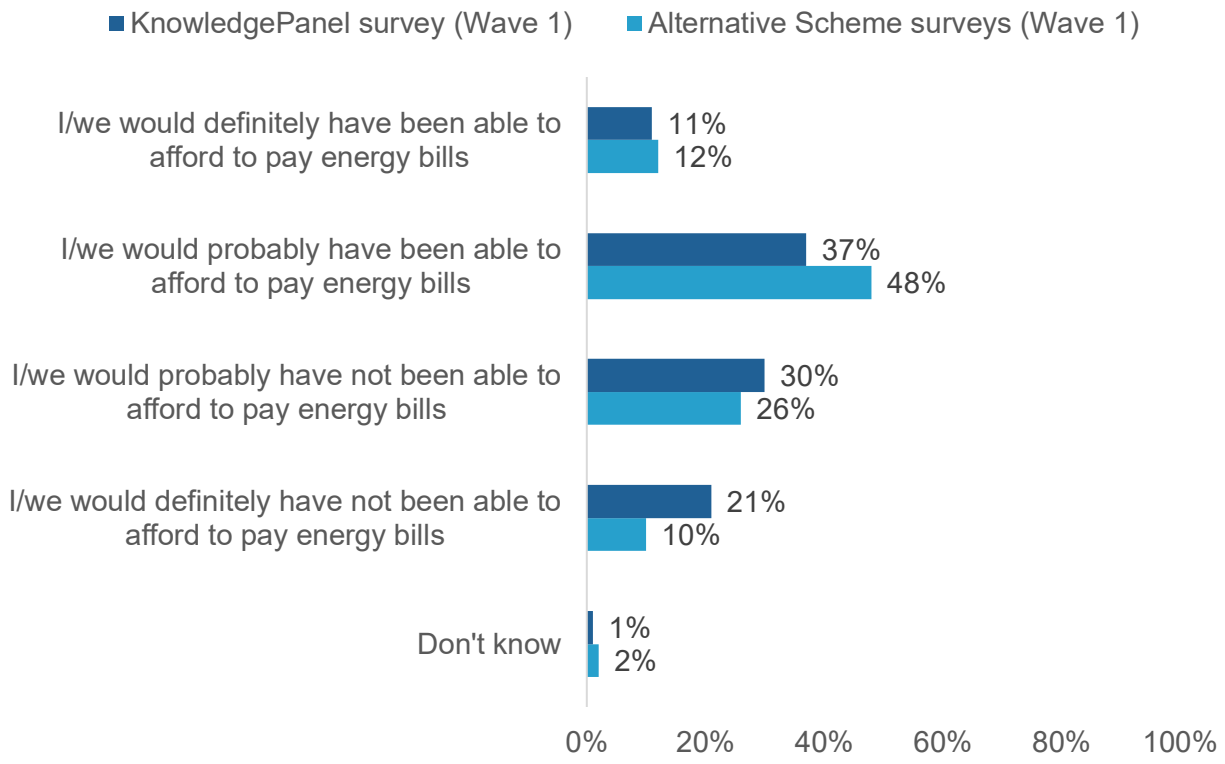
Source: AIDS analysis (see Annex C: Supplementary Research). Deciles divide the income distribution from NEED into 10 equal sized groups (with 1st decile having the lowest income)

Magnitude and prevalence of contribution to outcomes

According to the KnowledgePanel (alternative scheme) surveys, 51% (36%) of households who spent more than 10% of their income on their energy bills reported that they would have not been able to afford their energy bills in winter 2022/23 without scheme support (see Figure 8.16). This suggests a high prevalence of contribution of the schemes to supporting/benefiting those with the highest energy burden.

[103] In order to obtain estimates of energy burden, NEED data was used to produce estimates of household energy usage per metre squared were estimated by EPC rating and income decile, by dividing the average usage by the midpoint of the corresponding area [m2] band. See Annex C for discussion of this method.

Figure 8.16: Likelihood of households' ability to afford their energy bills without the government's support – households who spent more than 10% of their income on energy bills



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QF2. Affordability of household energy bills in winter 2022-23 without financial support. Wave 1 Base: All who spent more than 10% of their income on energy bills (N = 985), All who received EBSS or AFP/AFP AF who spend more than 10% of their income on energy bills (N = 2,054)

In terms of the magnitude of the GB schemes' contributions to claim HF2, answers to the KnowledgePanel survey provide an initial picture. Analysis of KnowledgePanel survey data shows that, assuming households would not change consumption behaviour in the absence of the schemes, approximately 10.5 million additional households would have needed to spend over 10% of their household income on energy in the absence of EPG and EBSS GB support during winter 2022-23.[104]. Some 87% of households would have needed to spend over 10% of their income to maintain their energy consumption.

[104] Importantly, there are several caveats to this figure. Without the schemes, the KnowledgePanel survey suggests that energy behaviour would very likely change, and this analysis cannot account for the nature and scale of behavioural change in the absence of the schemes. Additionally, only data from households that have provided both their household income, and their household energy spend is used.

Table 8.13: Estimated Energy Burden Rates if the EPG, EBSS GB did not exist

	Total	Up to £25,999	£26,000 to £51,999	£52,000 to £99,999	£100,000 and above
0-10%	44%	9%	37%	80%	79%
Over 10%	56% (+37%)	91% (+54%)	63% (+49%)	20% (+15%)	21% (+13%)

Source: Ipsos KnowledgePanel survey QJ6 Total amount of household income per month (after various outgoings) , Average Monthly spend on energy bills costs. Wave 1 Base: All respondents who provided income (after rent/mortgage) and energy burden data (N = 5,669)

Heterogeneity

Differences between subgroups in terms of energy burden

While some groups were able to benefit from the schemes, others still struggled. Experts consulted for this evaluation highlighted that many vulnerable groups faced significant difficulties in accessing the schemes and the extent they benefited from them also varied. These are summarised in Table 8.7, in section 8.3.1.

The Ipsos KnowledgePanel survey shows variations in households experiencing energy burden in winter 2022/23. Overall, 19% of households in GB reported they spent more than 10% of their income on bills. **Those renting from the council or a housing association, households on benefits, and those with an ethnic minority background were more likely to report this.**

Responses to the alternative schemes survey showed that 22% of AFP recipients, 27% of AFP AF recipients, and 30% of EBSS AF recipients spent more than 10% of their income on energy. This indicates that alternative scheme households had rates of energy burden higher than the 19% rate for the GB the population in the KnowledgePanel survey.

Households renting from the council or a housing association and households **receiving benefits** across all schemes, were most likely to report spending more than 10% of their income on energy bills during the intervention period. This is confirmed by additional logistic regression analysis that explored the association between households' reported ability to heat the home in the absence of the schemes and a range of characteristics. It found that respondents who were above the 10% energy burden metric were more likely to report struggling to heat their home in the absence of the support schemes irrespective of their region, income, age and their payment type. This was also the case for AFP AF and EBSS AF recipients **on PPMs**.

It is plausible to conclude that where high levels of energy burden are reported, the scheme support met a greater need and therefore had a greater impact. This is drawn from the finding that, according to the KnowledgePanel (alternative scheme) surveys, 51% (36%) of

households who spent more than 10% of their income on their energy bills reported that they would have not been able to afford their energy bills in winter 2022/23 without scheme support.

Those who may not have needed the schemes' support

Conversely, 81% of households reported spending between 0-10% of their income on energy bills, suggesting that they needed government financial support less and thus benefited less from the schemes. These groups included **homeowners, individuals not receiving benefits, and those from a non-ethnic minority background.**

Risk of bias

Overall, there is a medium risk of bias in the evidence informing the evaluation's conclusions around contribution claim HF2. (see Annex A: Technical Annex, appendix 1 for full assessment of bias).

8.4.3 Contribution Claim HF3

Hypothesised contribution:

HF3: The schemes limited increases in household borrowing and cuts in other essential spending (e.g. food, essential clothing, medicines) and savings.

The contribution story being tested

Similarly to contribution claims HC1, HC2, and HC3, the schemes were expected to limit harmful mitigation strategies by households concerned with the cost of energy. Here, HF3 sets out how the schemes were expected to limit households increasing their borrowing, cutting savings, and cutting essential spending on items other than energy. As with the HC contribution claims, the schemes were expected to do this by: (1) reducing the cost of energy bills and therefore reducing expenditure for households thus freeing up spending for other household items, (2) providing financial support that could be used on energy, but also – possibly – on other household spending.

The achievement of these outcomes was dependent upon the schemes being effective in reaching their targeted recipients through the chosen delivery mechanisms, and upon scheme communications being effective, and upon those receiving the support adjusting their behaviours in response to the scheme (or stopping themselves from adjusting to any negative behaviours in response to energy price rises on receiving scheme support).

Table 8.14: Contribution Claim HF3 Summary Appraisal Table

HF3 The schemes limited increases in household borrowing and cuts in other essential spending (e.g. food, essential clothing, medicines) and savings		
Agreement	Evidence agrees with the claim – schemes contributed to outcome	✓✓
Prevalence	The majority of those expected to experience this outcome have done so	✓✓
Magnitude	The intervention was an important contribution	✓✓
Heterogeneity	Groups who benefitted least were older, homeowners and those not on a fixed-term tariff	✓
Bias	Bias was low risk.’	✓✓✓

Household borrowing

Rising energy prices caused households to adopt a range of strategies to mitigate the financial impacts of higher bills. The ONS Opinions and Lifestyle Survey (21 December 2022 – 8 January 2023)[105] indicated that 22% of respondents reported having to borrow money. Furthermore, the Ofgem CIM Survey Wave 3 report (November – December 2022)[106] highlighted a third of consumers had contacted someone for help regarding paying their bills within the previous three months. According to the KnowledgePanel survey, the reported proportion of households taking on debt due to higher energy costs decreased from 7% to 6% between winter2022/23 and winter 2023/24.

Household savings

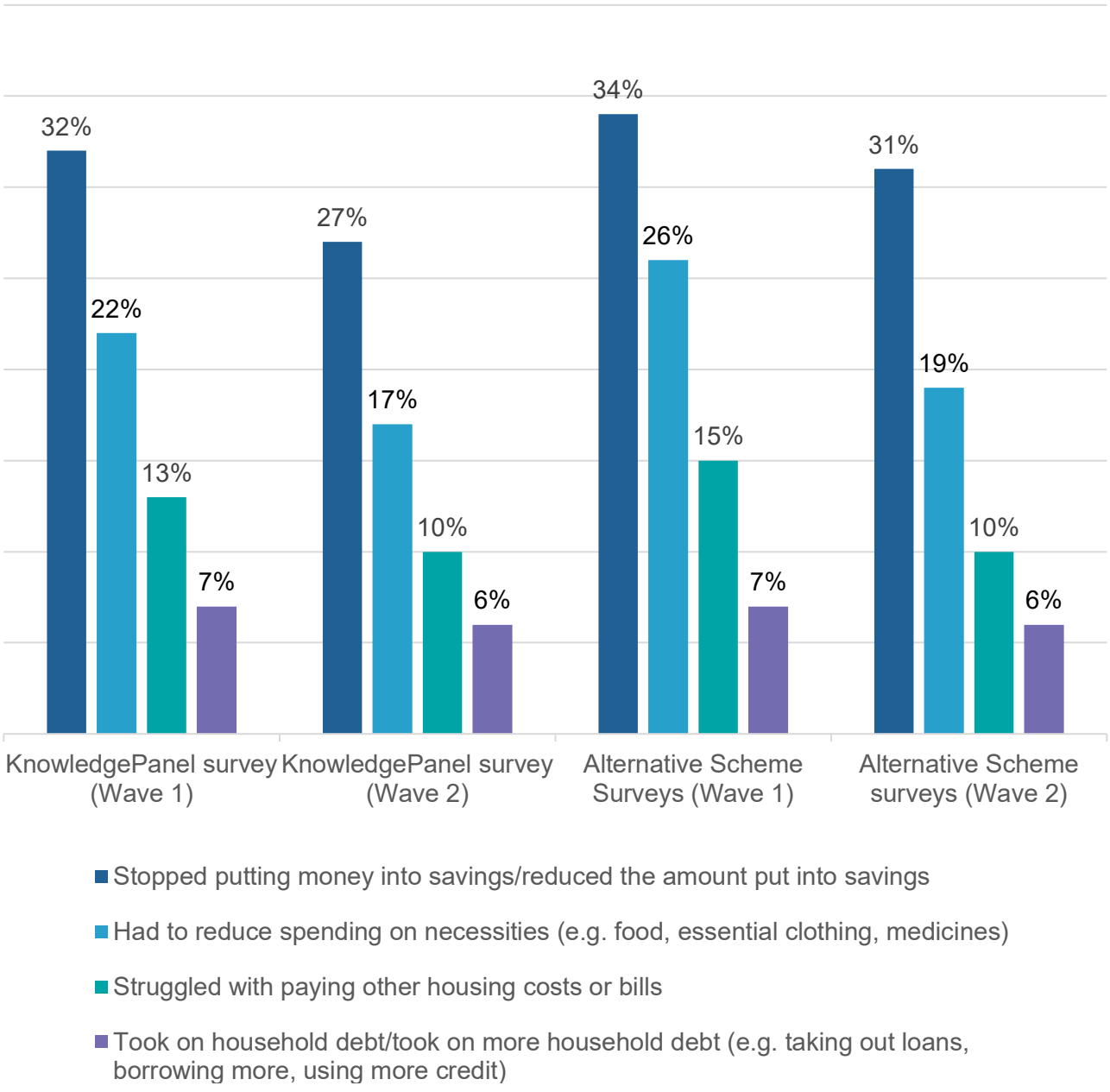
Data from the House of Commons Household Debt Briefing (August 2023)[107] highlights that 56% of households reduced (or completely stopped) saving to be able to meet their daily expenses during this period. According to the KnowledgePanel survey, the proportion stopping or reducing the amount they put into savings decreased from 32% to 27% between winter2022/23 and winter 2023/24.

Household spending on necessities

The KnowledgePanel (alternative schemes) surveys highlight that 22% (26%) reported reducing spending on necessities (such as food, essential clothing, medicines) (see Figure 8.17). Furthermore, the proportion reporting they reduced spending on necessities fell from 22% to 18% between winter2022/23 and winter 2023/24.

[105] Office for National Statistics (2023). Public opinions and social trends, Great Britain: household finances - Office for National Statistics.
[106] Ofgem (2022). CIM Survey.
[107] Brigid Francis-Devine (2023). Household debt: statistics and impact on economy.

Figure 8.17: Adoption of mitigation strategies due to higher costs of home energy in winter 2022/23 (wave 1) and winter 2023/24 (wave 2)



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QE1. During winter 2022-2023, energy bills for most households were higher than they had been in previous years. Which of these impacts, if any, did the increased costs of home energy have on your household? Wave 1 Base: All (N = 7,850), All (N = 10,919), Wave 2 Base: All (N = 6,874), All (N = 3,976)

Agreement of evidence with hypothesised contribution

The evidence available aligns with the hypothesis that the energy affordability schemes limited increases in household borrowing and cuts in other essential spending and savings.

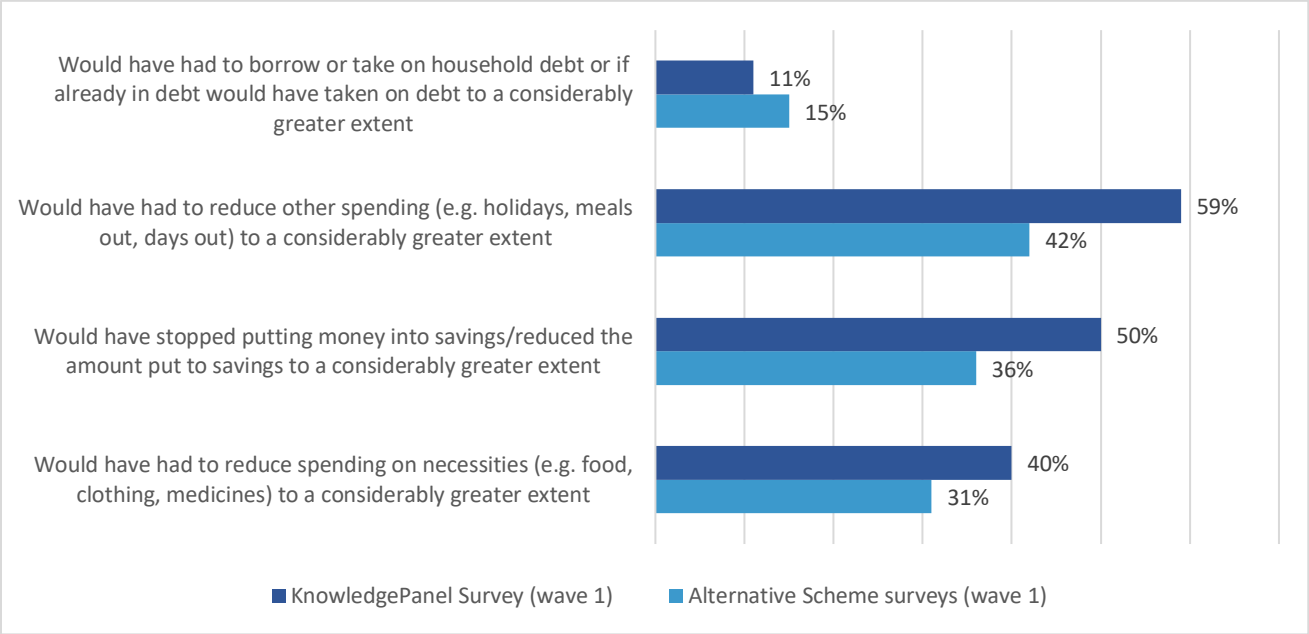
First, according to the KnowledgePanel survey (and the Alternative Schemes survey), 15% (11%) of households indicated that they would have had to borrow or take on some household debt or if already in debt would have taken on debt to a considerably greater extent without the government's support in winter 2022/23. Forty per cent (31%) stated they would have had to

reduce spending on other necessities and 50% (36%) would have stopped putting money into savings or reduced the amount (see Figure 8.18).

The process evaluation reported in Chapter 7 highlights that scheme payments were effectively processed, either by energy suppliers or local authorities, with the vast majority of households receiving support. Overall, these payments reduced energy bills, thus limiting the extent to which households would have required other mitigation strategies to meet the costs of their energy consumption.

In many cases the adoption of mitigation strategies (such as reduced spending on necessities) would have been a decision made prior to a household receiving an energy bill or the payments being processed and issued. Many households reacted proactively to changes in energy prices and their impacts on bills, as was evidence in the stage one qualitative research. Households would have needed to be more reassured earlier to prevent individuals from making pre-emptive decisions on whether to adopt mitigation strategies. Qualitative evidence provided in section 8.2 highlighted the reassuring (psychological) effects of the government's support.

Figure 8.18: Adoption of mitigation strategies without government support in winter 2022/23 (including household borrowing and cuts in other essential spending and savings)



Source: Ipsos KnowledgePanel survey and alternative schemes surveys presented respondent with expected bills without the support of the schemes calculated differently depending on household size: QE2. Without the financial support from the government, energy bills for a typical household of (xx adults) were predicted to be around (£xx) a month higher during winter 2022-2023 (based on average direct debit rates in Great Britain) according to estimates based on government figures. Now imagine you had to pay an extra (£165/ £225 / £290) a month for your energy bills during winter 2022 - 2023. Which of these impacts, if any, would this have had on your household? Wave 1 Base: All (N = 7,850), All who received EBSS or AFP/AFP AF (N 8,040).

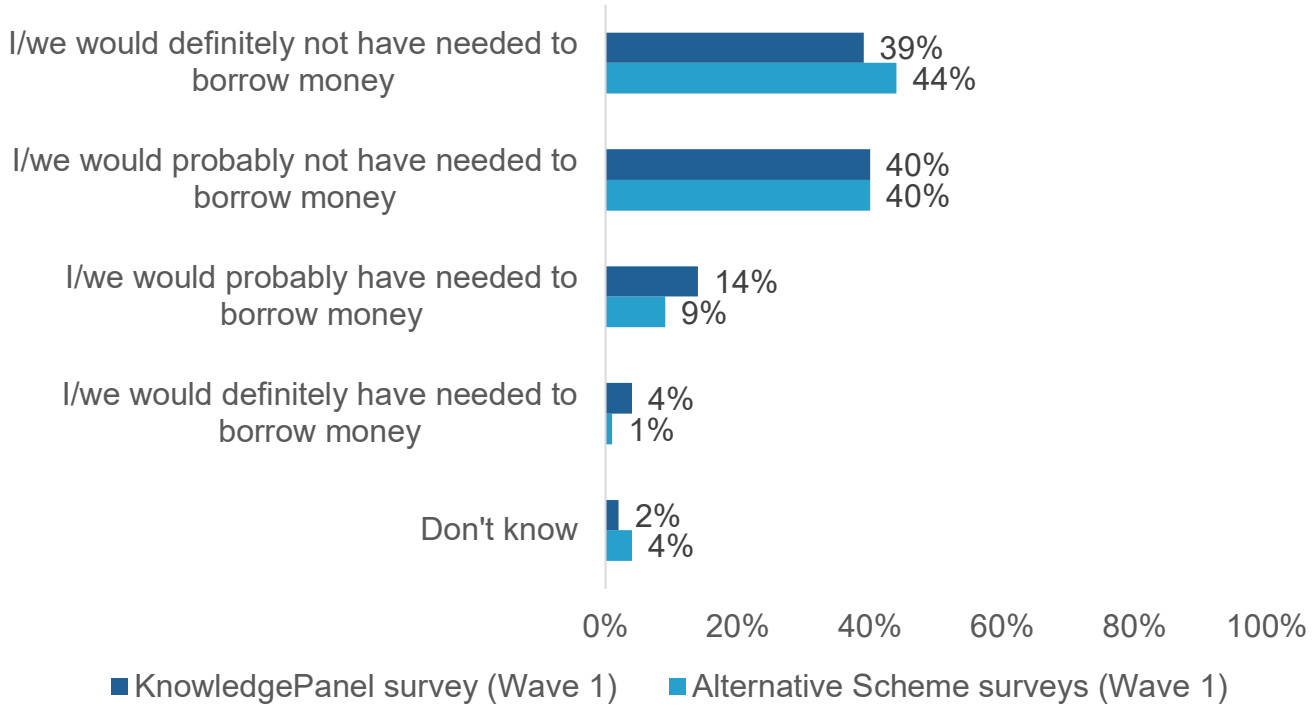
Magnitude and prevalence of contribution to outcomes

According to the KnowledgePanel (alternative scheme) surveys, of those who did not borrow money to pay for energy bills/costs over the intervention period, 14% (9%), which is

approximately 350,000 GB households, stated they would probably have needed to borrow money and 4% (1%) which is an estimated 100,000 GB households would definitely have needed to borrow more money without the government support. This does not account for the schemes' contribution to outcomes where the household did borrow in winter 2022/23 but would have likely borrowed even more without the government's support.

This indicates that the impact of the schemes on reducing borrowing was relatively low (see Figure 8.19).

Figure 8.19: Likelihood of needing to borrow money, from any source, to pay energy bills without government support (in winter 2022/23)



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QF8. Again, imagine there was no government support for energy bills, and your household had to pay an extra (£165 / £225 / £290) a month for your energy bills during winter 2022 - 2023 Do you think your household would have needed to borrow money, from any source, to pay your energy bills? Wave 1 Base: All who did not borrow money to pay for energy bills/costs since October 2022 (N = 7,090), All who received EBSS AF, AFP AF or AFP who did not borrow money to pay for energy bills/costs since October 2022 (N = 6,942)

Heterogeneity

Those for whom the schemes were less effective

The profile of households more likely to report having to reduce spending on necessities in winter 22/23 due to increased energy costs was similar to those reporting more debt, with **ethnic minorities**, **renters** (private and council), **low-income households**, households on **PPMs**, **larger households** and **households with a member that has a long-standing illness or disability** all more likely to say they had to reduce their spending on necessities. Among households eligible for alternative schemes, the same groups were more likely to

report this, and additionally **those livings in flats, maisonettes, houseboats or alternative housing** were more likely to be affected.

The profile of households more likely to report stopping or reducing the amount of money put into savings due to higher energy costs in winter 22/23 differed slightly from the households more likely to report debt or reduced spending on necessities. This might be explained by some groups, such as low-income households, being less likely to have built up savings prior to the energy price increases. Households more likely to report stopping or reducing spending included middle-income households (£26,000 – £99,000 annually), private renters, those who pay for energy by bills, households with a member that has a long-standing illness or disability, ethnic minorities, larger households and those on a fixed energy tariff.

The case study below illustrates some of the points discussed above.

Case Study 3 – Living in social housing with a disability

Key characteristics:

Personal details	Scheme	How they paid	Underconsumption	Employment status
Male, 45-54, SEG C2	EBSS AF	Monthly payment to housing association for meter shared with other tenants	Has not experienced underconsumption	Self-employed, also on needs-tested benefits

Krish[108] is a single man living alone in a one bedroom flat in a house owned by a housing association. He has limited mobility and other physical disabilities which prevented him obtaining consistent employment. He struggled to leave his flat and was on needs-tested benefits. The energy usage in his household was low and he made monthly payments towards an electricity meter, shared by all tenants of the house.

Experience paying energy bills across winter 2022/23 and winter 2023/24

Krish really struggled to pay for his energy bills in winter 2022/23 as his household income was very low. He had used food banks for over a year in 2022 and 2023. The housing association increased his rent and additional surcharge every year and he was in arrears.

> *"The cost of living is just a burden to most people… I'm using food banks and have been using food banks for about a year and a half. I've only stopped using food banks in the last month."*
>
> *Participant 93, Wave 1 interview*
>
> *"The surcharges go out on standing orders with my bank. It was difficult, you know, basically having an amount which I was used to over the year and then it increasing in April, that was quite difficult. I mean, I was in arrears with my rent over the last autumn…"*
>
> *Participant 93, Wave 1 interview*

He used a buy-back service to sell some of his possessions for cash, and then lost the possessions because he could not afford the buy-back payment.

> *"It was quite difficult because I was in arrears for the last year and over the winter it didn't seem to change, you know, in terms of the amount going out. So, it was quite a difficult time because… I lost a Breitling watch, it was worth £3000, a year and a half ago… so pawning it and I nearly sold quite an expensive bike at Christmas."*
>
> *Participant 93, Wave 2 interview*

In winter 2023/24, Krish continued to find paying his energy bills challenging and was put on a payment plan by the housing association. He did not report any underconsumption because the

housing association did not switch off his energy supply despite his payment difficulties. Krish felt the separate cost of living payments and his additional disability support payments were very helpful over this period, as the energy supports schemes did not run again in 2023/24.

> *"Cost of living, yes. For disability and visibility where I had double vision and severe impairment vision, I have received £150 over three months from the government… that again has helped me to provide my life with the things that I needed, food and the bills."*
>
> *Participant 93, Wave 2 interview*

Views on the schemes

Krish received a call from the local authority who helped him fill out the form to receive the £400 EBSS AF payment, for which he was very grateful. He received the payment about three weeks later and said the process was very straightforward and reassuring.

> *"[The phone call] was basically to tell me, you know, that £400 was being provided by the government to people who are renting their accommodation and then he made another appointment… So a week or two later he helped me fill out the form when he phoned again."*
>
> *Participant 93, Wave 2 interview*

Krish was very happy with the government providing support in 2022/23 as it helped reduce his rent arrears. He thought support would have been beneficial in 2023/24 for the housing association to reduce energy costs for tenants and felt that any support at all would have been helpful for him.

> *"I think it would help [the housing association] a lot because they have a lot of properties in [my area] and they… deal directly with the bills and with the authorities and [the water company] and, the electricity companies..."*
>
> *Participant 93, Wave 2 interview*
>
> *"Any help would be beneficial… money, just to survive the winters, and the year."*
>
> *Participant 93, Wave 2 interview*

Those more likely to report benefitting from the schemes

Overall, 79% of households in Great Britain reported they would not have needed to borrow without government support.

[108] All names have been changed to anonymise interviewees

However, tenants, households on benefits, younger households, and those spending over 10% of their income on energy were more likely to report they would have needed to borrow without government support. This indicates that these groups benefited more from the government schemes, as they relied on financial support to afford their energy bills.

Similarly, 40% of households reported that they would have to reduce spending on necessities to a considerably greater extent, without the energy schemes, and groups more likely to report this included those **receiving benefits, renters, and younger households**.

This is confirmed by the Latent Class Analysis (LCA)[109]. Using data from wave 1 of the KnowledgePanel survey, the analysis shows that the first segment (20% of the sample), which tends to be younger, more likely to rent, and poorer than the average population, would have been more likely to resort to reducing their spending on necessities and to cut back on the amount put into savings without government support in winter 2022/23. The second segment (4% of the sample), which also tends to be younger and poorer (with a higher proportion earning below £26,000 relative to segment 1), more likely to have an illness or be disabled, and more likely to rent from a council/housing association than the average, would similarly have been more likely to cut back on spending on necessities. Both segments 1 and 2 would have been more likely to borrow without the government support in place. The LCA shows that both segments would have relied on the schemes to a greater extent to avoid resorting to harmful mitigation strategies such as underheating their homes.

Those who may not have needed the schemes' support

Groups less likely to report needing to borrow without government support, suggesting that they needed government financial support less and thus benefited less from the schemes, included households who were **not on a fixed-term tariff, those who were not receiving benefits, home owners, and older households**. Notably, households **spending between 0-10% of their income** on energy were also less likely to need to borrow, without resorting to harmful mitigation strategies such as cutting spending on essentials or underheating, to afford their energy bills.

According to the alternative schemes survey, among households who did not borrow in winter 2022/23, 91% of AFP households, 86% of AFP AF households, and 76% of EBSS AF households would not have needed to borrow in the absence of the scheme.

Looking more specifically into the potential effects of the scheme, 22% of AFP recipients, 30% of AFP AF recipients, and 43% of EBSS AF recipients reported they would have had to reduce their spending on necessities to a considerably greater extent in the absence of the schemes.

[109] Latent class analysis (LCA) identifies latent groups in the population based on a set of observed variables and is typically conducted in an exploratory manner with no a priori hypotheses regarding the number or nature of the latent classes. This analysis involved two steps: 1) conducting a Latent Class Analysis on statements relating to the impact of the government's support and then selecting the optimal number of segments for the analysis; 2) creating a demographic profile for each segment and assessing the relative importance of key demographic variables that discriminate between the different segments.

Risk of bias

Overall, there is a low risk of bias in the evidence informing the evaluation's conclusions around contribution claim HF3. (see Annex A: Technical Annex, appendix 1 for full assessment of bias).

8.5. Health and Wellbeing

8.5.1 Contribution Claim HW1

Hypothesised contribution:

HW1: The schemes limit negative mental and physical health impacts arising from increases in energy bill costs (including limiting instances of cold-related illnesses and mould in dwellings that can arise from under-heating).

The contribution claim being tested

Similar to other expected outcomes of the schemes, the schemes were expected to limit the adverse effects of rising energy bill costs on household mental and physical health. This objective is underpinned by the well-evidenced assumption that cold / underheated homes can exacerbate pre-existing physical conditions such as respiratory illnesses and disabilities and can also negatively affect mental health.

Table 8.15: Contribution Claim HW1 Summary Appraisal Table

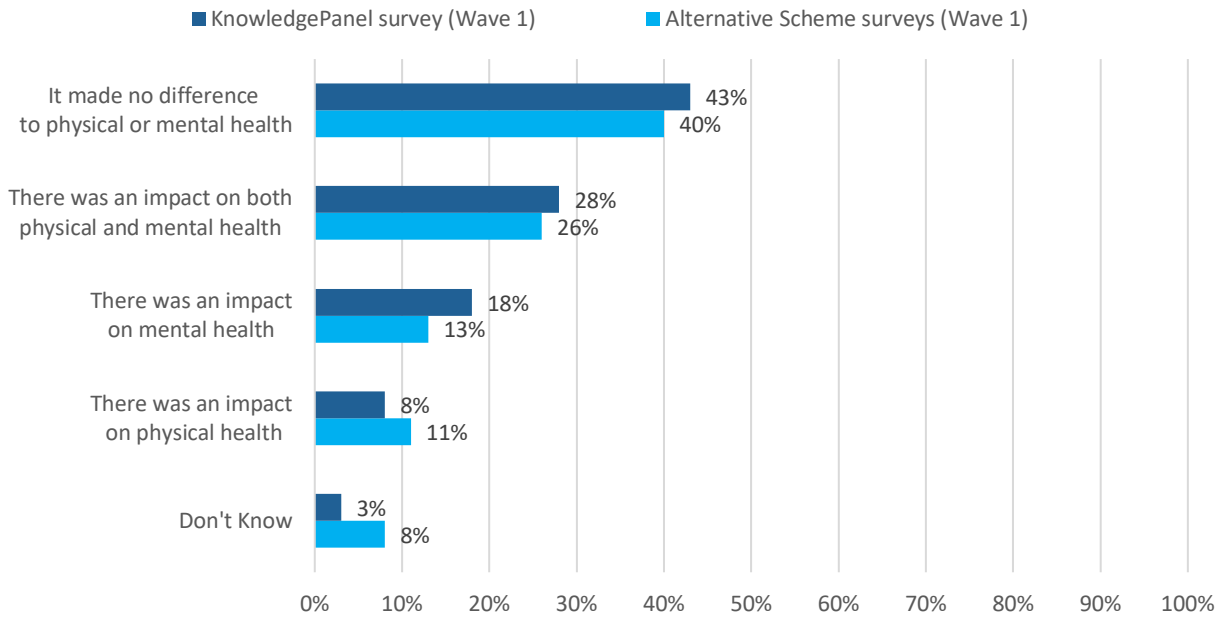
HW1 The schemes limit negative mental and physical health impacts arising from increases in energy bill costs (including limiting instances of cold-related illnesses and mould in dwellings that can arise from under-heating).		
Agreement	Evidence partially agrees with the claim – schemes contributed to outcome	✓✓
Prevalence	The minority of those expected to experience this outcome have done so	✓
Magnitude	The intervention was an important contributor however the level of mental and physical health impacts arising from energy bill costs remained high with the scheme.	✓✓
Heterogeneity	Groups who experienced most mental and physical health impacts due to underheating were those receiving universal credit, tax credits or personal independence credits as well as those renting from private landlords/ council housing.	✓
Bias	Bias was medium to high.	✓

Negative mental and physical health impacts from energy bill costs over the intervention period

Winter 2022/23

In January 2023, the ONS Winter Survey tracking the impact of winter pressures conducted on adults in Great Britain showed 34% of respondents reported that increases in the cost of living had negatively impacted their health. The most commonly cited cause of this was 'not being able to afford to heat my home or having to cut back on energy use', with 27% of respondents reporting this issue impacted their mental health and 20% that it impacted their physical health[110].

Figure 8.20: Impacts of underheating on households' physical and mental health among households who reported underheating in winter 2022/23



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QG2. Which of the following is closest to your view about the impact of this on you and other people in your household? Wave 1 Base: All who underheated (N = 5,516), All who underheated (N = 8,007)

Overall, the findings of the Ipsos KnowledgePanel survey and alternative schemes survey indicate that 71% of GB households eligible households did not heat their homes to a comfortable temperature all of the time in winter 2022/23. Similar proportions also reported this in the Alternative Schemes surveys[111]. Amongst those reporting underheating in the KnowledgePanel survey, 54% stated that underheating their home impacted either their physical or mental health or both. This includes 28% of respondents that indicated underheating impacted **both their mental and physical health**, while 18% reported it impacted their mental health alone, and 8% reported it impacted their **physical health alone** (Figure 8.20). Similar levels were reported among alternative schemes households in the

110 Office for National Statistics (2023). Tracking the impact of winter pressures in Great Britain (November 2022 to February 2023).

111 75% of EBSS AF, 76% of AFP AF and 71% of AFP households.

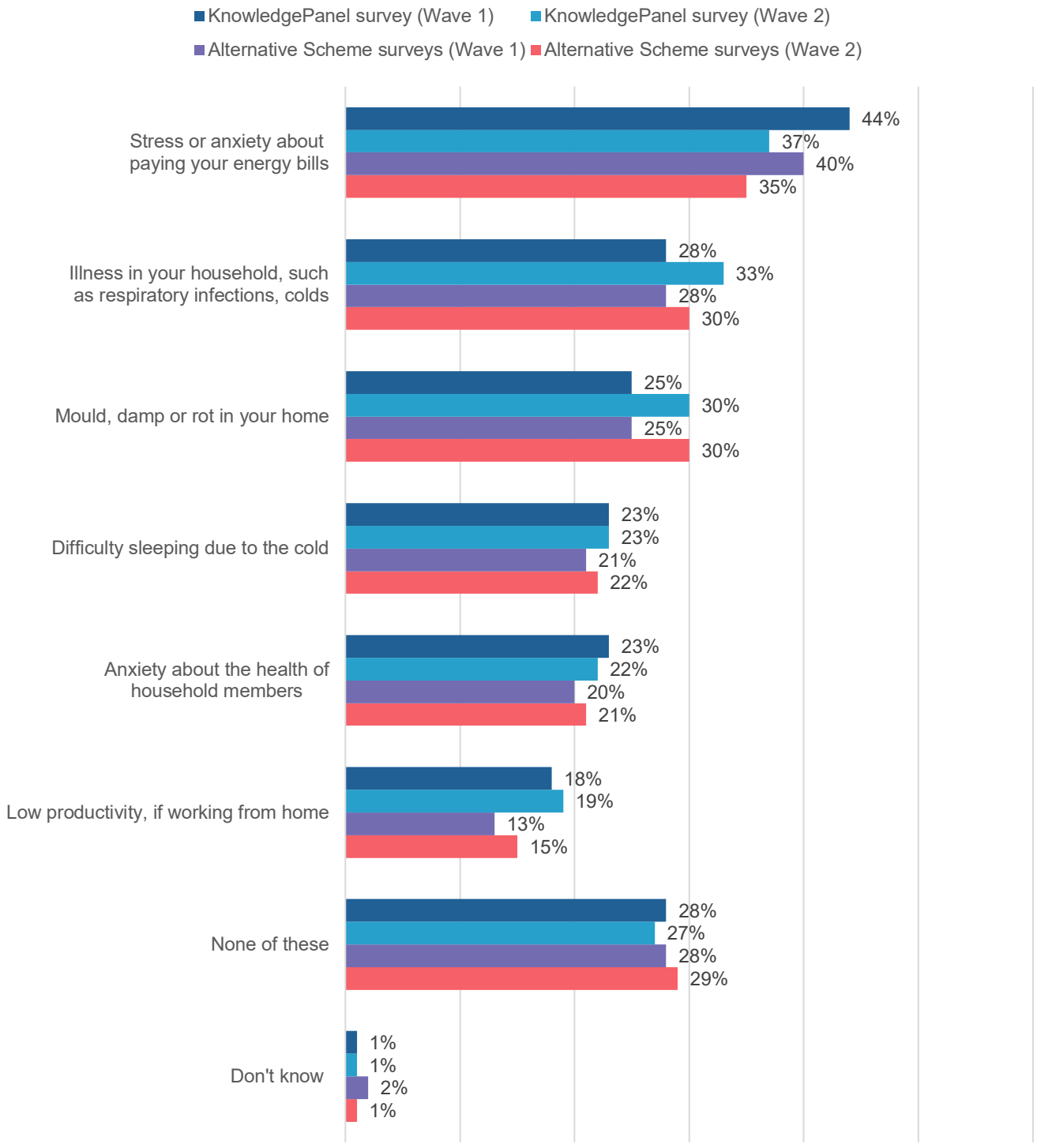
alternative schemes survey, with 49% of households stating underheating their home impacted **both their mental and physical health**. Among these respondents, 26% indicated underheating impacted both their mental and physical health, while 13% reported it impacted their **mental health alone**, and 11% reported it impacted their **physical health alone**.

The KnowledgePanel survey also shows, of the 71% (73% of alternative scheme households) of respondents who reported they were not able to afford to heat to a comfortable level all of the time during winter 2022/23, 28% (28%) reported issues related to **household illnesses** (such as respiratory infections and colds) and 25% (25%) reported issues related to **mould, damp or rot**. This included 44% (40% for the alternative schemes survey) of those who claimed to underheat their home some of the time or always reported stress or anxiety about paying their energy bills, 23% (21%) reporting difficulty sleeping due to the cold, and 25% (25%f) reporting mould, damp or rot in the home[112]. Households consistently reported that these issues were worse in winter 2022/23 than in previous winters (more than 85% of relevant respondents stated that the respective issue had worsened either a little or a lot in winter 2022/23)[113].

[112] QG4. Which of the following issues, is any, did you or members of your household experience in the winter of 2022-23? Base: All who underheated their homes (n=5,516) Base Alternative Schemes Survey: All who underheated their homes (n=8,007)

[113] QG5. You mentioned that you or members of your household experienced the following issues in the winter of 2022–23. For each, please say how this compares to previous winters. Please say if they have got better, got worse, or there has been no change. Base: All who experienced: Mould, damp or rot (n=1,152), Illness such as respiratory infections, colds (n=1,408), Difficulty sleeping due to the cold (n=1,118), Low productivity, if working from home (n=784), Stress or anxiety about paying energy bill (n=2,265), Anxiety about the health of household members (n=1,107)

Figure 8.21: Issues experienced during the winter of 2022/23 and 2023/24 among households who did not heat their homes to a comfortable level all of the time or whenever it was cold



Source: Ipsos KnowledgePanel survey and alternative schemes surveys: QG4. Which of the following issues, if any, did you or members of your household experience in the winter of 2022-23? Wave 1 Base: All who underheated (N = 5,516), All who underheated (N = 8,007), Wave 2 Base: All who underheated (N = 4,130), All who underheated (N = 2,398)

Qualitative interviews with households further highlighted the negative physical and mental health impacts of households' underheating in winter 2022/23. Participant 143 described:

> *"We just seemed to get more colds and flus. I've got major health problems… I struggled really to have to live like that. So yes, it had an effect on us. And our mental health, because we're having to watch what we use. In 2022 we're in dressing gowns and have blankets on to keep warm, it's not right. My teenagers find it hard. You know what they're like. They don't understand it, so they're like, 'Why can't we have the heating on?"*
>
> *Household eligible to EPG and EBSS, Participant 143, wave 1 interview*

Some participants also explained that reducing heating in their homes due to increasing energy bills across winter 2022/23 and 2023/24 meant that their homes were more susceptible to mould. For example, Participant 31 stated:

> *"I did get a bit of mould in one of the bedrooms, and I do believe that was because I wasn't using the heating."*
>
> *Household eligible to EPG and EBSS, Participant 31, wave 2 interview*

Stress and anxiety caused by rising energy bills was regularly reported in the qualitative interviews with households. Respondents reflected during wave 2 interviews on the mental and emotional struggle of constantly worrying about affording their energy bills during winter 2022/23. For example, Participant 3 explained:

> *"Mentally, it's put me in a really horrible state, over the last couple of years, because you're always thinking of the financial side of these things and it's something that you always worry about."*
>
> *Household eligible to EPG and EBSS, Participant 3, wave 2 interview*

The KnowledgePanel survey showed that 48% of households in Great Britain were worried about paying their energy bills at the time of the survey (summer 2023). Slightly higher levels of worry were reported by households in the alternative schemes survey (in October/December 2023) with 53% of households reporting being worried about paying their energy bills (see 8.21).

Winter 2023/24

According to the KnowledgePanel survey findings for waves 1 and 2, reports of illness and damp increased slightly in winter 2023/24 among households who reported underheating, compared to winter 2022/23. In 2023/24, 33% of GB households who underheated reported experiencing **cold-related illnesses** in their household (compared to 28% in 2022/23), and 30% of households who underheated reported experiencing mould (compared to 25% in

2022/23). The alternative schemes survey showed a similar increase from winter 2022/23 to winter 2023/24 among responding households who underheated[114].

Agreement of evidence with hypothesised contribution:

The evidence available aligns with the hypothesis that the energy affordability schemes contributed to limiting the negative mental and physical health impacts (including instances of cold-related illnesses and mould) associated with rising energy bill costs.

Positive contributions of the scheme to reduced illness were reported by several households participating in qualitative interviews for the evaluation. For example, in wave 1 one household said:

> *"I don't think I would have managed without that payment. It would have been very difficult. I would have been in debt considerably and I really do thank the government. It would have been detrimental to my health, my mental health and my physical health as well."*
>
> *Household eligible to EBSS AF and EPG, Participant 93, wave 1 interview*

Related to this, some people stated that the schemes helped them manage concerns with dealing with existing financial commitments that would have been difficult to otherwise manage in this period. A Continuous Cruiser explained that their boat loan accounted for a significant portion of their income and the scheme reduced some of the financial pressure in the short term:

> *"It just made me less stressed about finances. My position is that, you know, I spend half of my money on the loan I used to buy the boat. I do have to watch my finances quite carefully. So, it helped for that month."*
>
> *Continuous cruiser, Participant 2, wave 2 interview*

Magnitude and prevalence of contribution to outcomes

There is limited direct evidence of the magnitude or prevalence of the contributions of the schemes themselves to limiting either the mental and physical health impacts resulting from rising energy bills or instances of cold-related illnesses and mould. However, the qualitative evidence highlighted above does suggest the schemes were crucial or important to help limit the impacts of rising energy bills. Section 8.2 discusses further the indirect evidence on the extent to which the energy affordability schemes contributed to improvements in perceptions about the affordability of energy bills and limited underheating.

[114] : 34% of EBSS AF, 28% of AFP and 27% of AFP AF households reported experiencing cold-related illnesses in their household in winter 2023/24, compared to 33% for EBSS AF, 26% for AFP and 25% for AFP AF households in winter 2022/23, and 30% of EBSS AF, 32% of AFP and 27% of AFP AF reported experiencing mould in winter 2023/24 compared to 24% of EBSS AF, 28% of AFP and 23% of EBSS AF households in winter 2022/23

Heterogeneity

Those most at risk of health issues associated with high energy costs

There is limited direct evidence of the contributions of the schemes to alleviating concerns and worries about energy bills. However, data is available on (1) individuals who are more likely to report mental and physical health impacts, cold-related illnesses, and mould, and (2) individuals that are more likely to indicate they would underheat their home without the government's support.

Amongst respondents to the Ipsos KnowledgePanel survey, 54% of households who underheated reported negative mental and physical health impacts in winter 2022/23. Among those who underheated, households on **universal credit, tax credits and personal independence payments, those renting from private landlord / council housing association, those spending over 10% of their income after rent/mortgage on energy, households on PPM meters and those using electric storage** as their main energy source, were more likely to report negative mental and physical health impacts. These negative impacts include illness in their household, such as respiratory infections, colds; stress or anxiety about paying energy bills; mould, damp or rot in their home; difficulty sleeping due to the cold; anxiety about the health of household members. Among those who underheated, **younger respondents** were also more likely to report illness in their household, mould damp or rot in their home and difficulty sleeping due to the cold and anxiety about the health of household members in winter 2022/23; while **ethnic minorities** were more likely to report stress or anxiety about paying their energy bills in winter 2022/23.

The LCA showed that tenants, younger households and those poorer than the average population, those more likely to have an illness or be disabled, and those more likely to rent from a council/housing association would have relied on the schemes to a greater extent than the general population to avoid resorting to harmful mitigation strategies (e.g. reducing energy use and spending on necessities, borrowing to pay energy bills).

The alternative schemes survey showed that EBSS AF recipients were more likely than those in other alternative schemes to report an impact on physical health, mental health or both in winter 2022/23 (57% of EBSS AF recipients compared to AFP AF applicants (47%) and AFP eligible households (44%) – bases are all who underheated their home in winter 2022-23).

Risk of bias

Overall, there is a medium to high risk of bias in the evidence informing the evaluation's conclusions around contribution claim HW1 (see Annex A: Technical Annex, appendix 1 for full assessment of bias).

8.6 Energy suppliers

8.6.1 Contribution Claim ES1

Hypothesised contribution:

ES1: The schemes limit the risks of energy supplier insolvencies through keeping customer debt levels low and delivering the schemes in a way that helps smooth cashflow fluctuations.

The contribution story being tested

The energy affordability schemes were expected to help limit the risk of supplier insolvency to the energy market in the intervention period principally by limiting energy debt and improving cashflow. Therefore the contribution story set out under HF1 also applies here.

Table 8.16: Contribution Claim ES1 Summary Appraisal Table

ES1 The schemes limit the risks of energy supplier insolvencies through keeping customer debt levels low and delivering the schemes in a way that helps smooth cashflow fluctuations.		
Agreement	Evidence partially agrees with the claim – schemes contributed to outcome	✓✓
Prevalence	The majority of those expected to experience this outcome have done so	✓✓
Magnitude	The intervention was an important contribution however there is limited direct evidence on the precise direct effects of the schemes.	✓
Heterogeneity	Heterogeneity cannot be directly established due to limited evidence however groups most vulnerable to energy debt were households on universal credit. Tax credits and personal independence payments as well as ethnic minorities.	✓
Bias	Bias was low risk.	✓✓✓

Energy supplier solvency over the intervention period

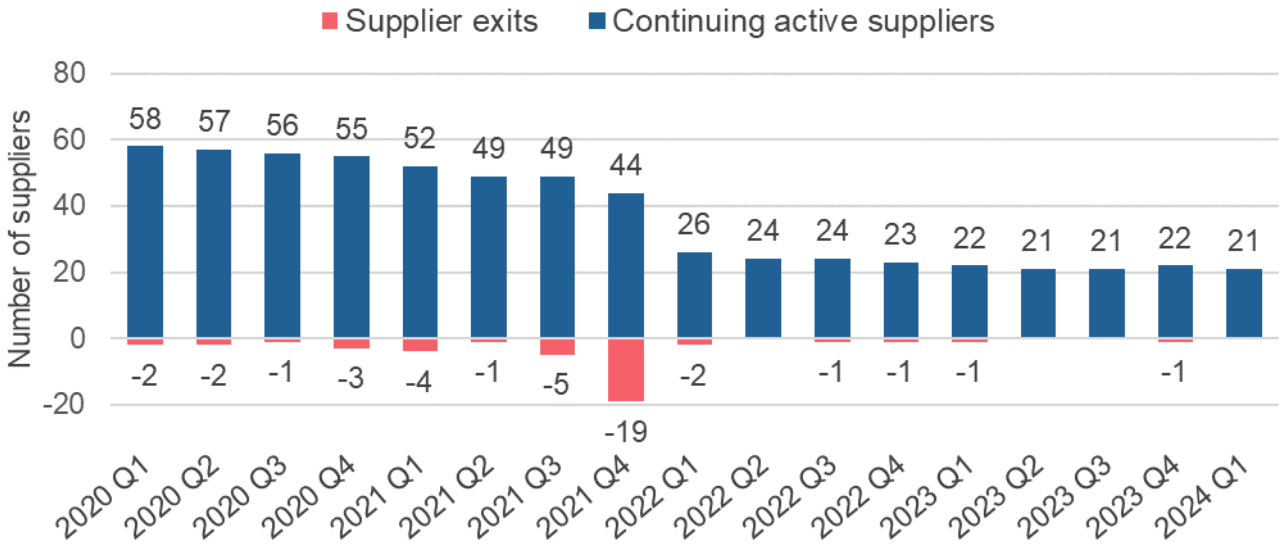
Data from Ofgem shows that in 2021, as energy prices started rising rapidly, there was a significant reduction in the number of domestic energy suppliers in the UK; with three domestic energy suppliers entering and 29 exiting[115] the UK market (19 in the final quarter). Overall, this represented a considerable increase in the number of suppliers exiting the market relative to

[115] Supplier exits are licensed suppliers that have stopped actively supplying customers in the GB domestic gas and electricity market.

previous years. For example, in 2019 eight suppliers entered and 12 suppliers exited the UK energy market. Alternatively, during 2020, two suppliers entered and eight exited the market.

Following 2021 supplier exits, a report by the National Audit Office[116] found that many suppliers who were allowed to operate in the market as result of permissive competition laws[117] lacked financial resilience. The business models they adopted, for instance being more reliant on customer credit and operating with lower liquidity levels, exposed them to volatility in the energy market.

Figure 8.22: Number of continuing and exiting UK domestic suppliers



Source: Ofgem data portal

In 2022, the year the energy affordability schemes were first introduced, the market observed a period of relative stability in the number of suppliers entering and exiting market exits. No suppliers entered and four exited the market in 2022. This period of relative stability among the composition of energy suppliers in the UK markets continued through winter 2023/24, with no suppliers entering or exiting the market in the first quarter of 2024.

Presently it is too early to establish the effect of the scheme on improving market stability and reducing suppliers' insolvency risk. However recent internal Ofgem documentation on the financial health of suppliers were positive, with some suppliers earning profits for the first time in four years in 2023. This trend is notable considering the wider context of energy suppliers' financial health, for example internal Ofgem documentation reported that weighted average

[116] National Audit Office (2022) The energy supplier market. Available online: The energy supplier market (nao.org.uk)
[117] Capita (2021) 2021's unprecedented exit of UK energy supplier and the supplier of last resort. Available online at: 2021's unprecedented exit of UK energy suppliers and the supplier of last resort | Capita
[117] Pending our analysis of overall DESNZ delivery costs, this is based on the OBR Forecast evaluation report – October 2023.

earnings margin (before tax and interest) more than halved for large and medium suppliers between 2020-2021.

Agreement of evidence with hypothesised contribution

The evidence available suggests the energy affordability schemes contributed to factors that limited the impact energy suppliers' insolvency risks. Interviews with suppliers indicated that schemes helped reduce supplier insolvency risk by reducing the number of customers reducing their energy consumption, disconnecting from the energy supply, or not paying their energy bills.

Evidence provided in Section 8.4 affirms that the energy affordability schemes supported many households, helping them afford their energy bills, limit the extent they would take on debt (or delay payments to energy suppliers) and preventing self-disconnections. For example, as highlighted above, of the 76% of respondents in the KnowledgePanel survey that reported they did not go into debt with an energy supplier in winter 2022/23, 20% reported it was "fairly likely" and 6% reported it was "very likely" they would have gone into debt with their energy supplier without government's financial support.

Evidence from interviews with energy suppliers supported the proposition that the schemes had contributed to reducing market risks. One energy supplier felt that due to the schemes their profitability was 'probably' more assured as they could plan for profit margins more effectively with the EPG. There was also some feeling that "there was more consistency to retain customers into fixed deals". Another energy supplier also reported having benefitted financially from the schemes and said their exposure to debt risk was reduced and highlighted that they were at lower risk of insolvency compared to other companies in the sector.

> *"Due to the makeup of our customers, [our company] is not as exposed to insolvency. Schemes reduced our bad debt expense and exposure to debt risk. [Our company] would not have been as at risk as other suppliers."*
>
> *Energy supplier 2, wave 1 interview*

Two other energy suppliers also reported that the schemes mitigated the risk of customer non-payment. However, they reported that there were no materials changes to insolvency risk, but it helped to extend support further to customers.

> *"The supplier side was supportive as it mitigated risk of customer non-payment. We don't have any data on disconnections, but the debt picture has got worse over that winter... We were seeing a steady increase in non-payment or part payment through that summer and into the winter and the EPG scheme softened that blow."*
>
> *Energy supplier 3, wave 1 interview*
>
> *"Building up capital reserves is very difficult, for a small supplier to be able to provide the support to customers is risky… and the schemes allowed to be more supportive to customers. Part of payment from the customer is guaranteed from*

the government and it probably supported suppliers through a 30-year energy cost high."

Energy supplier 4, wave 1 interview

Magnitude and prevalence of contribution to outcomes

There is limited evidence available on the importance or magnitude of the contribution of the energy affordability schemes to changes in energy supplier insolvency risks.

There is some contextual evidence presented above that highlights the number and composition of energy suppliers stabilised in the period following the intervention being introduced. However, there are several alternative potentially confounding factors that may explain this outcome. For example, according to Ofgem's data, a significant number of suppliers exited the market between 2019 and 2021 (n = 49), effectively removing some of the 'financially weaker' suppliers from the market. As a result of this survivorship bias, the suppliers remaining by the start of winter 2022/23 would have been skewed towards a more resilient group of suppliers that also faced fewer competitors compared to previous years. In the same vein, lower customer switching rates and higher margins allowed under the energy price cap would have helped to reduce supplier costs and increase revenues, both of which also will have contributed to strengthening suppliers' financial position.

Indirect evidence on the extent the energy affordability schemes contributed to limiting domestic customers going into debt with their energy supplier is discussed in Section 8.4. For example, of the 76% of respondents in the KnowledgePanel survey that reportedly did not go into debt with an energy supplier, 20% said it was "fairly likely" and 6% that it was "very likely" they would have gone into debt during winter 2022/23 with their energy supplier the scheme. However, limited evidence is available on the extent this may have further impacted energy suppliers' risk of insolvency.

Heterogeneity

There was limited evidence on the variation between suppliers because of the number of suppliers interviewed. Energy suppliers that were of relatively small size and market share highlighted their particular exposure to cashflow constraints. This was because of the difficulties for small suppliers to build up capital reserves in the face of decreased revenue. The extent to which individual energy suppliers were exposed to customer debt and insolvency risks following energy price increases was also a factor which was dependent on the make-up of the supplier's customer base. Energy suppliers with a higher percentage of low-income households or PPM customers were more exposed to insolvency risk due to customer non-repayment or disconnection.

Risk of bias

Overall, there is a low risk of bias in the evidence informing the evaluation's conclusions around contribution claim ES1. (see Annex A: Technical Annex, appendix 1 for full assessment of bias).

9. Conclusions and lessons learnt

9.1 Conclusions

The energy affordability schemes were designed and delivered in the context of surging inflation (which increased to 8% during the period leading up to summer 2022). From 2021, there was a worldwide recovery in energy demand following the end of the COVID-19 pandemic and then, in 2022, Russia's invasion of Ukraine. This resulted in higher household energy tariffs in Great Britain, and increased costs for home heating oil, LPG and other alternative fuels.

As of July 2024, the energy affordability schemes have provided around £35.5 billion of support to households since their launch in Q4 2022,[118] significantly lower than the anticipated cost of £139 billion as per the initial business cases – due to wholesale energy prices falling faster than expected. EPG support accounted for almost two thirds (65%) of the overall support provided, making it by far the most expensive of the schemes.

The Theory of Change set out in chapter 6 informed the design of the evaluation and acted as the foundation against which the contribution hypotheses and evaluation framework were designed.

The evaluation found that overall, the programme assumptions were correct, and outcomes have materialised as expected, there was however variation in experience and outcomes between different household groups. The domestic energy affordability ToC was therefore valid, and the causal mechanisms worked as anticipated, which led to outcomes materialising.

9.1.1 Process and awareness conclusions

This evaluation collected a considerable amount of evidence. The process evaluation examined evidence and stakeholder perceptions on the implementation of the schemes. Conclusions include:

- The schemes were set up and delivered at significant speed. This ensured that the vast majority of households received support in time during winter 2022/23, and around 28 million households were supported through the schemes overall.
- For the core schemes, delivery processes were seen as collaborative, effective and proportionate by delivery partners. Suppliers raised issues suggesting that compliance and reporting were resource intensive for EBSS. The voucher element for traditional PPM presented some challenges.
- Governance of the schemes and reassurance of suppliers required some iteration, with suppliers reflecting that they needed more prior notice and engagement with DESNZ.

[118] Pending our analysis of overall DESNZ delivery costs, this is based on the OBR Forecast evaluation report – October 2023.

This would enable them to better understand implications of the schemes on business operations, payment processes and on reporting/auditing requirements.

- Whilst awareness of the energy affordability scheme details generally varied across households, those eligible for automatic schemes were supported regardless of their awareness and understanding. Low rates of awareness did pose a barrier to households accessing the alternative funding energy affordability schemes and receiving support via these application-based mechanisms (as well as voucher-based variants of EBSS). For EPG, low awareness and understanding of the scheme may have limited the extent to which it prevented harmful mitigation behaviour.
- Awareness of the application-based schemes was especially low amongst vulnerable populations including those with lower digital/English literacy or access (such as those in care homes and people with a disability affecting their digital access or literacy) and those in hard-to-reach groups (such as those in temporary accommodation or those in remote locations).
- The delivery of application-based schemes was less effective than those delivered automatically, largely due to them being hard to access for some groups and low awareness. Whilst the use of national systems to support local authorities (such as a national salesforce system and customer contact helpline) generally reduced burdens on local authorities and drove more consistent delivery, there were also issues with the application processes, which likely led to lower application rates among eligible households. There were also issues with some applications from eligible households being rejected[119] – denying or delaying support to these households. There was also correlation between those who application-based schemes did not always reach and those most in need of energy bill support, including vulnerable groups.
- Levels of awareness and understanding may have limited the effectiveness of energy affordability schemes in terms of maintaining consumption levels, delivering health and wellbeing, household finance outcomes. This low level of awareness of the nature of the support may have led some households to cut down their consumption more than was necessary or led some households to consume more energy than if they had correctly understood the scheme.
- For those that were aware of the schemes, satisfaction levels were high. For EPG 69% of consumers were satisfied with how the discount was applied. For EBSS 61% were satisfied with the amount provided and this figure was similar for the EBSS alternative schemes (63%).
- Levels of fraud and error were noted as comparatively low, and this was confirmed by a recent NAO Review[120].

[119] For instance, eligible applicants using a power of attorney were often rejected.
[120] National Audit Office (2024) Energy Bills Support: an update.

9.1.2 Outcome Evaluation Findings

The outcome evaluation element of the research examined the evidence drawn from a range of sources which tested the logic behind contribution claims which linked the interventions with expected outcomes. These will be revisited in the impact and economic evaluation which completes later in 2025. This adopts a modelling approach to estimating impact and also includes assessment of impacts on the wider economy.

Household concern

Part of the logic of the schemes was that providing reassurance to consumers would result in reduction of underconsumption. The evidence aligns with the proposition that the energy affordability schemes contributed to lowering households' level of concern about energy bills and household finances. Households' perceptions about the affordability of energy bills are a key factor influencing the extent households worry about them. Over half of households were worried about paying bills in late 2022 and this remained high during the intervention period. Of GB households, 28%, reported they would not have been able to afford to pay their energy bills in winter 2022/23 without the support of the government's energy affordability schemes.

Household energy consumption

While evidence shows households made substantial changes to their energy consumption and other behaviours during winter 2022/23, there is considerable evidence that the energy affordability schemes helped support a large number of households to maintain their energy consumption to a safe and comfortable level.

Some households that were able to heat their homes would have not been able to without the schemes. Of the 26% of GB households who heated their home all of the time or whenever it was cold in winter 2022/23, 28% stated they would not have been able to heat their home to a comfortable level all of the time without the government's support. This suggests that the schemes prevented around 2 million GB households from underheating in winter 2022/3. Of the 24% of alternative scheme households who heated their home all of the time or whenever it was cold in winter 2022/23, 28% also stated they would have underheated in the absence of the alternative schemes.

In addition, the schemes supported households to limit their use of harmful mitigation strategies (e.g. reducing spending on other essentials, increasing borrowing, etc). Of the 15% of GB households who heated their home all of the time and did not use any harmful mitigation strategies[121], 14% said they would have undertaken harmful mitigation strategies in the absence of the support. This suggests that the schemes kept around 600,000 GB households from undertaking harmful mitigation strategies. Similar levels were reported amongst alternative schemes households. Some 17% of EBSS AF, 16% of AFP AF and 6% of AFP

[121] Harmful mitigation strategies include reducing spending on necessities (e.g. food, essential clothing, medicines), reducing other spending (e.g. holidays, meals out, days out), struggling to pay other housing costs or bills and taking on household debt/taking on more household debt (e.g. taking out loans, borrowing more, using more credit).

households who heated their home all of the time, and did not adopt any harmful mitigation strategies, stated they would not have been able to do so without the support.

Price elasticity modelling undertaken further highlights that the EPG and EBSS GB schemes, given patterns of demand for different categories of expenditure, together induced a 28% increase (representative of 1,649 kWh) in energy usage for the lowest income decile. This modelled consumption effect decreased for higher income groups, and there was practically no effect for the highest income households.

Younger respondents between 25 and 34 years-old (36%), ethnic minorities (37%), tenants (44% renting from private landlord and 46% renting from council/housing association), recipients of social benefits (50% on universal credit and 27% on tax credits), and households spending over 10% of income on energy (45%) were more likely to report they were only able to heat their home to a comfortable temperature some of the time (and avoided heating most of the time even though it was cold) in winter 2022/23. Conversely, some other groups were more likely to report being able to afford to heat their homes without government support, suggesting that they needed government financial support less. These groups included households on fixed energy term tariffs, homeowners, direct debit customers, individuals not receiving benefits, and those spending between 0-10% of their income on energy.

Evidence also showed that the energy affordability schemes helped limit PPM customer self-disconnections, supporting many households to afford their energy usage during winter 2022/23. Although there is limited *direct* evidence of the contributions of the schemes to limiting households' self-disconnection from energy suppliers, 57% of PPM (smart or traditional) households in GB reported they would probably or definitely not have been able to afford their energy bills in the absence of the schemes in winter 2022/23.

Household finances

The schemes supported many households to be able to afford to pay their energy bills, and for some this may have also prevented them taking on debt or cutting back on saving or other spending.

The schemes limited the number of households that would not have been able to pay their energy bills and who would have gone into energy debt with their supplier. Overall, 59% of GB households, who reported having to reduce their spending due to higher energy costs, and 15% of GB households, who took on household debt, said they would have needed to do so to a 'considerably greater extent' without the energy affordability schemes in place in winter 2022/23. This suggests the schemes prevented around 4 million GB households from taking on debt to a considerably greater extent, in the absence of support in winter 2022/23.

The schemes limited the proportion of households experiencing high energy burden or fuel poverty. The DESNZ Annual Fuel Poverty Statistics Report, in line with Ipsos survey evidence, suggests that 289,000 additional households in England would have experienced fuel poverty without the support provided.

Analysis of KnowledgePanel survey data shows furthermore that, assuming households would not change consumption behaviour in the absence of the schemes, approximately 10.5 million additional households would have needed to spend over 10% of their household income on energy in the absence of EPG and EBSS GB support during winter 2022-23. [122]

Rising energy prices caused households to adopt a range of strategies to mitigate the financial impacts of higher bills. The surveys highlight that 22% of GB households reported reducing spending on necessities (such as food, essential clothing, medicines) in winter 2022/23. Without the schemes, 15% of households indicated that they would have had to borrow or take on new or more household debt to a considerably greater extent in winter 2022/23. Forty per cent stated they would have had to reduce spending on other necessities and half (50%) would have stopped or reduced savings.

Across the outcomes relating to household finances, those with a lower income and those of ethnic minority background were key amongst those more likely to report that they would not have been able to pay their energy bills in the absence of financial support. Findings were very similar for energy debt, with the same two subgroups being more likely to report that they would have likely gone into debt without the government support. Key groups of respondents who were significantly less likely to go into debt without the schemes, included higher-income households and older individuals[123].

Health and wellbeing

The evidence available suggests that the energy affordability schemes contributed to limiting the negative mental and physical health impacts (including instances of cold-related illnesses and mould) associated with rising energy bill costs. Of GB households, 60%, representative of approximately 17 million households, would have reduced their energy use to a considerably greater extent in winter 2022/23 without the government's support. This impact may have been dampened by low levels awareness and understanding of EPG.

Overall, the contribution of the schemes on limiting adverse health and wellbeing impacts of energy prices was less well evidenced than other outcome areas.

Energy suppliers

The evaluation evidence suggests the energy affordability schemes contributed to limiting the factors that impact energy suppliers' insolvency risks. Interviews with suppliers indicated that the schemes helped reduce supplier insolvency risk by limiting the number of customers reducing their energy consumption, disconnecting from the energy supply or non-payment of their bills.

[122] Importantly, there are several caveats to this figure. Without the schemes, the KnowledgePanel survey suggests that energy behaviour would very likely change, and this analysis cannot account for the nature and scale of behavioural change in the absence of the schemes. Additionally, only data from households that have provided both their household income, and their household energy spend is used.
[123] This association was observed irrespective of a respondent's region, ethnicity, the proportion of their income spent on energy, and their payment type.

Quantitative evidence shows the schemes helped limit levels of customer debt, contributing to limiting risks of insolvencies. Of the 76% of GB households that said they did not go into debt with an energy supplier in winter 2022/23, 20% reported it was "fairly likely" and 6% reported it was "very likely" they would have gone into debt with their energy supplier without government's financial support. Smaller energy suppliers with a higher percentage of low-income households or PPM customers were more exposed to insolvency risk due to customer non-repayment or disconnection. Although data on which type of supplier benefitted more/less from the scheme was limited for this contribution claim

Variation of outcomes for groups of particular interest

The energy affordability schemes were less likely to achieve their desired outcomes for certain demographic groups. The demographic groups who less frequently reported experiencing positive outcomes (around energy consumption, affordability of energy bills, health and wellbeing and household finances) were: PPM households; ethnic minorities; council/housing association tenants; long-term unemployed; benefit claimants and younger consumers (those under 55).

For households without a direct relationship with a domestic energy supplier, evidence indicates that there was lower awareness of the schemes by eligible households during the application process period and during local scheme related outreach.

For PPM households, evidence indicates:

- There were regional variations in voucher redemptions. Internal DESNZ monitoring information indicates that London and the south east, and Scotland showed comparatively lower voucher redemption rates than the rest of the UK.
- There was some miscommunication between households with PPMs and energy suppliers: household interviews indicated that in some cases, eligible households did not receive the correct number of vouchers or any voucher at all. This was caused by difficulties in sending physical vouchers or energy suppliers being un-responsive to customer requests for assistance.
- Traditional PPM households were more likely to report that they would have been unable to afford household energy bills in winter 2022-23 without financial support

For low- income households, evidence indicates:

- PPM households with an annual income below £26,000 were more likely to report, than others on PPMs, [124] running out of credit on their meter and disconnecting from their energy supply during winter 2022/23.
- Lower income households (those with an annual income below £26,000) were more likely to report[125] being unable to afford household energy bills or needing to borrow money during winter 2022/23; without financial support for energy bills.

[124] Across both KnowledgePanel and Alternative Schemes Survey
[125] Across both KnowledgePanel and Alternative Schemes Survey

- Households with an income below £26,000 were also more likely to report negative mental and physical health impacts arising from increases in energy bill costs (including limiting increases in instances of cold-related illnesses and mould in dwellings that can arise from underheating.

9.2 Lessons learnt

Designing future support schemes can build on the learning emerging from this work:

- Lump sum credits on bills (such as EBSS) are most easily understood by consumers and provide more immediate reassurance to households. Maximum unit prices have a different but important role to play in managing price levels, though their implications may not be understood by consumers without considerable challenges.
- The EA schemes have shown the difficulty in precise targeting given the variance in households' relationships to the energy market, and the difficulty of identifying vulnerable households directly. It is possible to target based on means tested benefits, and possibly priority service registers, but not at the pace required to meet the energy crisis experienced in 2022/23. Resolving this presents significant design and data sharing challenges. There is no evidence gathered from this evaluation which suggests that there were alternative options available at the time which would have been more effective at delivering support quickly.
- The evaluation has shown the importance of awareness in reassuring households that support is available. This requires development of sufficient communications and engagement strategies, timescales allowing.

This publication is available from: www.gov.uk/government/publications/domestic-energy-affordability-support-schemes-in-great-britain-evaluation

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