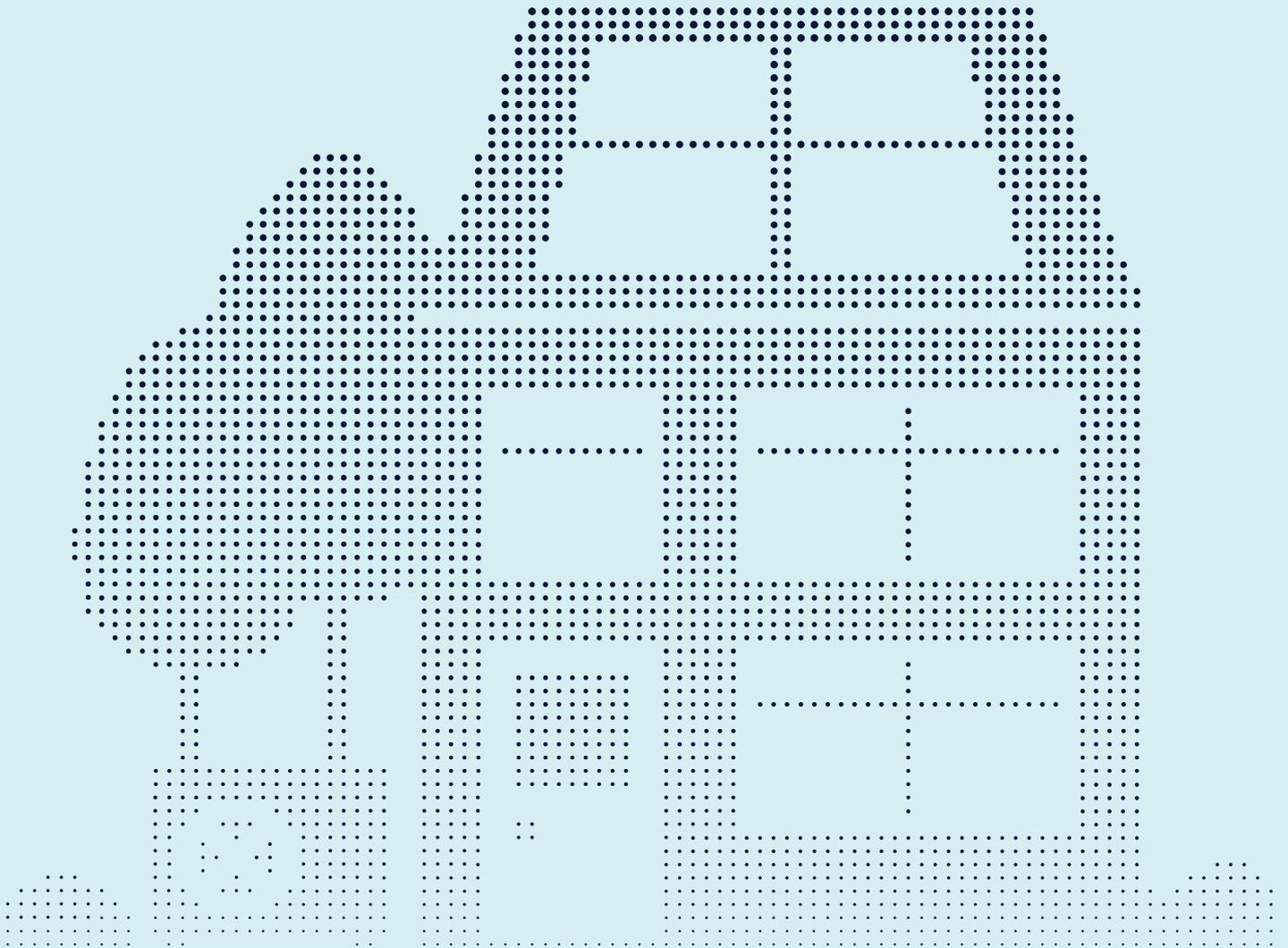


REBALANCING ELECTRICITY
LEVIES IN THE UK:
IMPACTS ON ELECTRICITY
BILLS, FUEL POVERTY, AND
THE CLEAN HEAT TRANSITION





Rebalancing Electricity Levies in the UK: Impacts on Electricity Bills, Fuel Poverty, and the Clean Heat Transition

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About The MCS Foundation

Our vision is to make every UK home carbon-free.

The MCS Foundation helps drive positive change to decarbonise homes, heat and energy through our programmes, grants, and advocacy work.

We support engagement programmes, fund research and facilitate innovative solutions to drive widespread adoption of renewables to help achieve a net zero future. In addition, the Foundation oversees the [Microgeneration Certification Scheme \(MCS\)](#) which defines, maintains and improves quality standards for renewable energy at buildings scale.

Designed by: Jimmy Davies, JimmyDavies.com

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Glossary

Boiler Upgrade Scheme (BUS)

A UK government programme in England and Wales that offers property owners an upfront grant of £7,500 to help replace fossil fuel heating systems with low-carbon alternatives, primarily heat pumps (air or ground source) or biomass boilers, aiming to reduce carbon emissions and energy bills.

Demand side response (DSR)

Actions taken by consumers to shift or reduce electricity use in response to price signals or system needs, helping balance supply and demand and reduce system costs.

Fuel poverty (official definition in England)

A household is considered fuel poor if, after energy costs are deducted, its remaining income falls below the poverty line, and the home has an EPC rating of D–G.

Fuel poverty (National Energy Action definition)

A household is considered fuel poor if it spends 10% or more of its income on energy costs in order to maintain a satisfactory heating regime.

Heat pump

A low-carbon heating technology that uses electricity to extract heat from the air, ground, or water and transfer it into a building, delivering multiple units of heat for each unit of electricity used.

Marginal pricing (electricity market)

A pricing system where the most expensive source of electricity needed to meet demand sets the wholesale price for all electricity traded at that time.

Net income

Household income after taxes and benefits, representing the amount available for spending on essentials such as energy, housing, and food.

Non-commodity costs

Components of energy bills that are not related to the wholesale cost of gas or electricity, including network charges, system operation costs, and policy-related charges.

Ofgem

The Office of Gas and Electricity Markets, the independent regulator responsible for protecting consumers and overseeing gas and electricity markets in Great Britain.

Ofgem archetypes

A set of representative household profiles developed by Ofgem to assess how different types of consumers are affected by changes in energy policy, prices, and regulation.

Price cap (Ofgem price cap)

A limit set by Ofgem on the maximum amount suppliers can charge for energy under default tariffs, based on estimated costs of supplying a typical household.

Review of Electricity Market Arrangements (REMA)

A UK Government programme examining reforms to the electricity wholesale market to better reflect a low-carbon power system and improve outcomes for consumers.

Retail energy market

The part of the energy system where households and businesses buy gas and electricity from suppliers, including tariffs, billing, and customer services.

Social and environmental levies / Policy costs

Charges added to energy bills to fund government schemes supporting decarbonisation, energy efficiency, renewable generation, and assistance for vulnerable households.

Spark gap

The ratio between electricity and gas unit prices, reflecting how much more expensive electricity is than gas per unit of energy.

Standing charge

A fixed daily cost paid by energy consumers regardless of how much gas or electricity they use, covering network and system costs.

Time-of-use (ToU) tariffs

Electricity tariffs where prices vary by time of day, encouraging consumers to use electricity when demand is lower or renewable generation is higher.

Unit rate (per MWh)

The variable cost paid for each megawatt-hour of energy consumed, excluding fixed charges such as the standing charge.

Wholesale energy market

The part of the energy system where electricity and gas are bought and sold between generators, suppliers, and traders before being supplied to end users.

Foreword



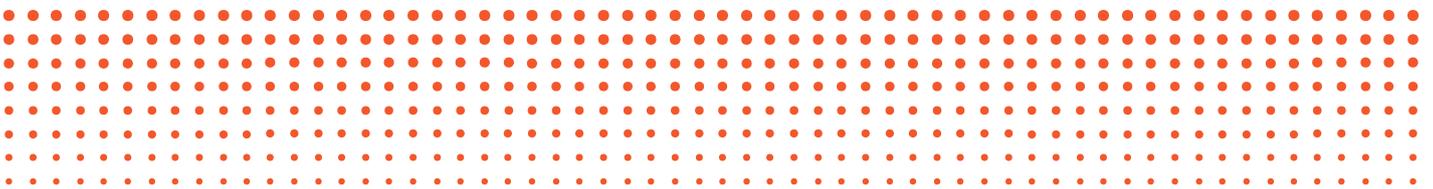
By Garry Felgate, CEO, The MCS Foundation

The UK’s transition to a low-carbon economy depends on the complete electrification of heat. An effective transition can benefit every UK household, lowering bills and creating warmer, more comfortable homes. Yet progress is being slowed by the high cost of electricity, disincentivising the switch to heat pumps and other low-carbon heating systems. High electricity prices also disproportionately impact the most vulnerable, at a time when a record number of Britons are struggling with energy debt.

The high cost of electricity is influenced in part by the social and environmental levies applied to household electricity bills. While the funds collected through these levies are critical in financing our progress to net zero, the way they are collected is no longer fit for purpose.

Moving levies off bills and into general taxation is the fairest and most sustainable way of cutting the cost of electricity, with Government setting an important precedent by reducing some levies from bills in the 2025 Autumn Budget. This is positive progress, and what is hopefully the start of wider reforms that empower households to make the switch to more efficient, clean heating. I hope this report provides further evidence that moving the remaining levies off electricity is the right choice, both for British households and for our progress towards a low-carbon future.

MCS data shows that 2025 was a record year for renewables, and that heat pump installations have more than quadrupled since 2020. Having launched the Warm Homes Plan, the Government now has the chance to make real, lasting change to drive installations up further by fully addressing the “spark gap” - that is, the difference between gas and electricity prices for households. While it is encouraging to see the Government intervening in the retail cost of energy, we would urge them to deliver on the Review of Electricity Market Arrangements to address the structural issues with the wholesale market. Alongside permanently moving remaining levies into general taxation, these actions would help households - and the country - make the switch from an outdated system of burning fossil fuels inside our homes to more modern, efficient, cleaner heating.



Executive Summary

The high cost of electricity in Britain, in part because of the social and environmental levies placed on households' electricity bills, is widely acknowledged to be holding back the transition to heat pumps and exacerbating fuel poverty.

This report examines how the 2025 levy framework affected household energy bills and assesses whether recent Government policy changes go far enough. It assesses what can and should be done to reform electricity pricing structures to ensure fairness, affordability and progress toward clean heat.

Ofgem data was used to model household energy bills across Great Britain, specifically 2025 price cap data for different household groups, known as archetypes.

For each archetype, we calculated energy costs and policy levy contributions under three scenarios:

- 1. The levy system in place in 2025**
- 2. The Government's post-Autumn Budget 2025 reforms (removal of the Energy Company Obligation and partial funding of the Renewables Obligation through taxation)**
- 3. Full levy reform where all electricity levies are funded through general taxation.**

We analysed impacts on total bills, the share of net income spent on energy, fuel poverty risk, and comparative running costs of gas boilers and heat pumps using standard efficiency assumptions.



KEY FINDINGS

- **Low-income households are disproportionately affected by levies.**
In 2025, some low-income households paid more on levies than they did on bread, rice and cereals.
- **Electric-heated households are unfairly penalised.**
Households using direct electric heating – who are already twice as likely to be in fuel poverty as households connected to the gas grid – paid as much or more on levies than gas-heated homes, despite lower total energy use.
- **Heat pumps only just reach cost parity with gas under 2025 prices.**
At typical efficiencies (SCOP \approx 3-3.1), heat pumps reached cost parity with gas, but delivered little or no annual savings, weakening incentives to switch to heat pumps.
- **Autumn Budget 2025 measures improve affordability but do not fix structural issues.**
Post-Budget reforms would reduce bills by £115–£343 per year, but are temporary and risk being offset over time by the addition of new levies, including those linked to the Nuclear Regulated Asset Base.
- **Full levy reform delivers substantially larger and fairer savings.**
Funding all social and environmental levies through taxation rather than electricity bills would increase savings to as much as £170–£530 per year and deliver a permanent structural correction to the regressive way levies have been historically funded.
- **Levy reform materially strengthens the case for heat pumps.**
Households switching from a gas boiler to a heat pump operating at standard efficiency would see annual bill savings of £147–£165 under full levy reform, and even at lower system efficiencies savings are virtually guaranteed. Alongside the Boiler Upgrade Scheme (BUS) grant, these savings enable heat pumps to achieve lifetime cost parity with gas boilers under current cost assumptions.

KEY IMPLICATIONS AND RECOMMENDATIONS FOR THE UK GOVERNMENT INCLUDE:

- **Permanently fund electricity levies through general taxation.**
This would remove regressive charges from bills, align costs with ability to pay, and reduce the spark gap, helping incentivise the switch to heat pumps.
- **Use levy reform to support electrification, not delay it.**
Narrowing the spark gap is essential to give households confidence that switching to clean heat will reduce running costs.
- **Continue targeted bill support alongside structural reform.**
Levy reform alone will not eliminate fuel poverty; targeted schemes remain necessary while broader market reforms take effect.
- **Accelerate wider electricity market reform (REMA) and flexibility measures.**
Long-term affordability depends on reducing exposure to gas prices and better reflecting low-cost renewable generation in consumer bills.

The current levy framework is regressive, disadvantages more vulnerable households, and is holding back the transition to clean heating. While recent Government measures provide welcome short-term relief, they do not offer a permanent or structural solution. Fully funding electricity levies through general taxation would deliver fairer outcomes, reduce fuel poverty risk, and significantly strengthen incentives to adopt heat pumps—supporting both social objectives and the UK's net zero commitments.

Introduction

→ Background

The UK Government has made a legally binding commitment to achieve net zero emissions by 2050.

Decarbonising heat in homes will be central to meeting this goal, as domestic buildings account for around 14% of the UK's total emissions,¹ while the majority of households still rely on natural gas for heating.²

There is strong evidence that the electrification of heat represents the most efficient and cost-effective route to decarbonising homes at scale, both in the UK, and globally.^{3,4,5} The UK Government has identified heat pumps as the primary low-carbon heating technology, and the Climate Change Committee's (CCC) Seventh Carbon Budget sets out the scale of transformation required.



To stay on track for the CCC's Balanced Pathway, the UK will need to install 450,000 heat pumps per year in existing homes by 2030, rising to 1.5 million installations annually by 2035.⁶

Current deployment levels fall far short of this trajectory. In 2025, just over 60,000 MCS-certified heat pumps were installed.⁷ Achieving the CCC's targets will therefore require exponential growth in the market over the coming decade.

To help incentivise this growth, The MCS Foundation argues that the UK Government must address the high cost of electricity in the UK. The current economics of electrified heat are weakened by the price differential between electricity and gas, driven in part by the concentration of social and environmental policy costs on electricity bills. Projections suggest that electricity prices will remain above historical averages for much of the decade, highlighting the importance of policies that address electricity affordability across households as well as the economics of electrified heating.⁸

→ In this report, we set out evidence showing how reforming the way these levies are funded could rebalance energy prices, improve fairness, and strengthen the running-cost case for heat pumps—helping to support the scale-up needed to meet the UK's decarbonisation targets.



→ The spark gap: a key barrier to heat pump deployment

While there are many challenges to mass-scale heat pump deployment,^{9,10} including limited public confidence,^{11,12,13} regulatory uncertainty,¹⁴ and the need to develop a skilled and trusted supply chain,¹⁵ one of the most significant economic barriers remains the high cost of electricity relative to gas—commonly referred to as the spark gap.

Installing a heat pump for the first time can involve additional work, such as upgrading radiators, altering pipework and/or installing a hot-water cylinder, creating a higher upfront ‘transition cost’ compared with a like-for-like boiler replacement.¹⁶ While the Boiler Upgrade Scheme (BUS) in England and Wales¹⁷ and the Home Energy Scotland¹⁸ grant help to reduce these upfront costs, the overall economic case for households ultimately depends on achieving lower running costs over the lifetime of the system.¹⁹

In 2025, electricity cost on average four times more per unit than gas. Consequently, even though heat pumps are around three times as efficient as a gas boiler, the high unit price of electricity limits possible energy bill savings. This has clear implications for deployment. Across Europe, countries with smaller spark gaps tend to see much higher levels of heat pump uptake than those with large electricity-gas price differentials, as shown in Figure 1. In 2024, the UK had the largest spark gap in Europe—an imbalance reflected in its low rate of heat pump uptake.

Lower electricity-to-gas price ratios lead to more heat pump sales per household

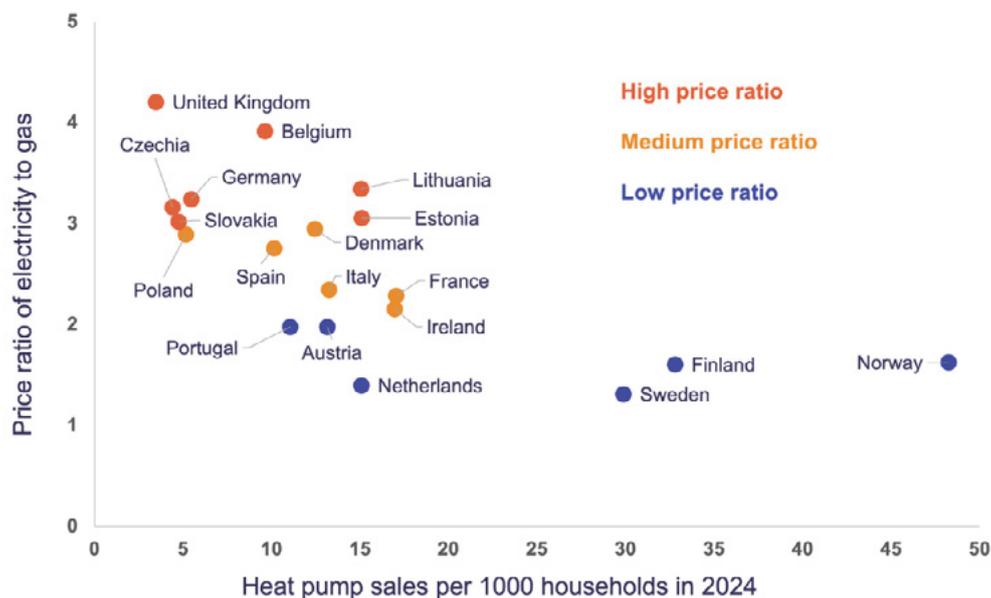


Figure 1 - Relationship between electricity-gas price ratios (spark gap) and heat pump sales per 1,000 households across selected European countries in 2024. [Source: European Heat Pump Association]²⁰

Recognising the challenge posed by high electricity prices, a number of energy suppliers have begun offering time-of-use or dedicated heat pump tariffs. These tariffs can significantly reduce heat pump running costs, with one piece of research suggesting savings of between £200 and £600 per year.²¹ Despite the clear benefit of these types of tariffs, a survey conducted by The MCS Foundation found that a substantial proportion of respondents with low-carbon technologies remain on standard tariffs, despite being well suited to time-of-use options.²² This not only highlights the need to improve awareness of consumer-flexibility opportunities, but also reinforces the case for addressing the underlying structure of energy pricing, rather than relying on opt-in tariff solutions alone to make electrified heating affordable.

→ Drivers of the spark gap

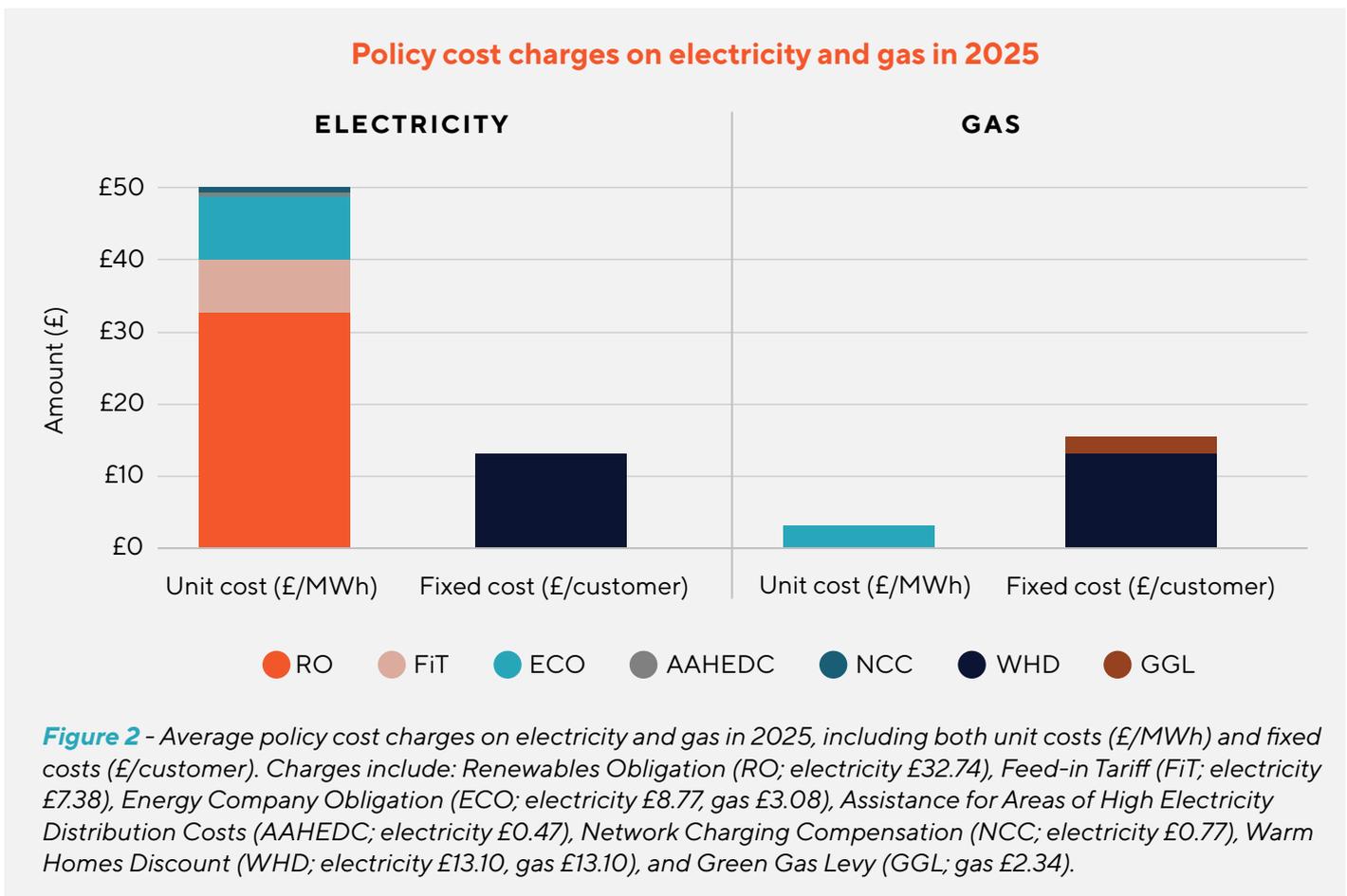
There are a number of factors that contribute to the high cost of electricity in the UK.²³ Firstly, wholesale electricity market arrangements are no longer fit for purpose for a power system increasingly dominated by renewables.²⁴ This has led to rising system costs associated with balancing supply and demand, managing constraints, and integrating variable generation.²⁵ The Great Britain wholesale market works on a marginal pricing basis, where the most expensive generation needed to meet demand sets the wholesale price. As a result, when gas-fired generation is required to balance the system, wholesale electricity prices can rise, despite the increase of generation provided by cheap renewables.

What's more, existing wholesale and retail market structures provide weak signals for flexibility, offering limited incentives for demand side response (DSR), battery storage, or other forms of low-carbon flexibility that could reduce reliance on gas and lower system costs.²⁶ In response, the UK Government is undertaking a major programme of work through the Review of Electricity Market Arrangements (REMA), alongside parallel efforts to reform and improve the retail electricity market.²⁷ One of the key aims of these programmes is to ensure that the efficiencies and lower generation costs of a renewables-based electricity system are better reflected in wholesale prices, with benefits passed through to consumers in lower electricity bills.²⁸ This programme of reform has been underway for three years, and while some progress has been made, further detail and decisions are still pending, with additional announcements expected from government in 2026. The priority must now be to move from consultation to delivery, ensuring that these reforms are implemented in a way that improves the long-term efficiency of the electricity market and supports sustained reductions in costs for consumers.²⁹

Electricity also bears a greater share of system and decarbonisation costs than gas, including carbon pricing. For example, gas-fired powerplants used for electricity generation are subject to carbon costs through mechanisms such as the UK Emissions Trading Scheme and Carbon Price Support, while gas used for residential heating is not subject to an equivalent carbon charge.³⁰ This uneven treatment of carbon costs widens the price gap between electricity and gas.



Finally, a further contributor to the electricity–gas price differential is how non-commodity costs are allocated within energy bills. For both gas and electricity, bills include more than just the wholesale cost of energy; they also incorporate network costs, system operation costs, and policy-related charges.³¹ Policy costs – also known as social and environmental levies – are used to fund a range of government-backed schemes aimed at supporting vulnerable households, improving energy efficiency, and accelerating the transition to low-carbon energy.³² However, in 2025, electricity bills carried a much larger share of these policy costs than gas, as shown in Figure 2.



Across the four Ofgem price cap quarters, the average customer paid:

- £148.45 on policy costs via their electricity bills (based on a 2.7 MWh consumption) – 17% of their electricity bill.
- £50.86 on policy costs in 2025 via their gas bills (based on a 11.5 MWh consumption) – 6% of their gas bill.

The result is a clear distortion: electricity is made artificially more expensive than gas, even though it is increasingly low-carbon and central to the UK’s transition away from fossil fuel heating.

While The MCS Foundation advocates for action across all drivers of high electricity costs, wholesale market and system reforms will take place over a longer period, with benefits to consumers unlikely to be felt for several years. However, some interventions can deliver more immediate benefits. Addressing the unfair distribution of social and environmental policy costs between electricity and gas bills represents a practical short-term step to narrow the spark gap, and one that has long been recognised by both industry^{33,34,35,36} and government^{37,38} as an important lever for change.

BREAKDOWN OF ALL THE POLICY COST SCHEMES.

1. Renewables Obligation (RO)³⁹

The Renewables Obligation (RO) was introduced in 2002 and closed to new generation in 2017, and was a key mechanism for encouraging the deployment of renewable electricity in the UK. It is a legacy subsidy scheme, with ongoing payments to existing generators funded by electricity suppliers and fully passed through to domestic and non-domestic electricity bills as a levy.

2. Feed in Tariff (FiT)⁴⁰

The Feed-in Tariff (FiT) scheme was introduced in 2010 to support small-scale renewable and low-carbon electricity generation by providing fixed payments for electricity generated and exported to the grid. The scheme closed to new applicants in 2019 and operates as a legacy programme funded through levies on electricity bills.

3. Green Gas Levy (GGL)⁴¹

This places obligations on licensed gas suppliers, including a requirement to make quarterly levy payments, in order to fund the Green Gas Support Scheme (GGSS) – which provides financial incentives for new anaerobic digestion biomethane plants.

Social levies fund government schemes for fuel-poor households:

4. The Energy Company Obligation (ECO)⁴²

Supports energy efficiency measures in the home of those in fuel poverty, which works by placing a Home Heating Cost Reduction Obligation (HHCRO) on medium and large energy suppliers. Under this, obligated suppliers must promote measures that improve the ability of low-income, fuel poor and vulnerable households to heat their homes. Note that this scheme will be discontinued in 2026.

5. Warm Homes Discount (WHD)⁴³

Supports low-income households who are most vulnerable to the high energy prices, who can obtain an annual £150 rebate to help with costs.

6. Assistance for Areas with High Electricity Distribution Costs (AAHEDC)⁴⁴

A government initiative, overseen by Ofgem, that reduces electricity distribution costs for consumers in the North of Scotland.

7. Network Charging Compensation (NCC)⁴⁵

An additional policy cost added to electricity bills in April 2025 which provides Energy Intensive Industries (EIIs) with 60% compensation for eligible electricity network charges. This compensation is funded through a levy on electricity suppliers—the EII Supplier Levy—with costs passed on to electricity consumers through the NCC.



→ Why the current levy system is unfair

The way policy costs are recovered through bills raises fundamental fairness issues. Levies are applied through energy bills either as a flat rate per customer (£/customer) or through charges based on consumption (£/MWh), meaning contributions are not linked to household income or ability to pay.⁴⁶ This structural unfairness has been recognised for almost a decade. An IPPR report in 2015 highlighted that lower-income households were contributing a much higher proportion of their net income towards policy costs on energy bills, even though many of these schemes were specifically designed to support them.⁴⁷

This sits against a wider backdrop of worsening energy affordability. The UK remains in the midst of a cost-of-living crisis, with many households struggling to afford essential energy use.⁴⁸ According to the Department for Energy Security and Net Zero (DESNZ) Public Attitudes Tracker, energy bills are the number one financial concern for UK households, with 42% selecting them as their most worrying expense.⁴⁹ Ofgem statistics also show that energy debt has increased by 71% since 2023.⁵⁰

IN ENGLAND

3.1 million

households were estimated to be in fuel poverty in 2024 under the Government's definition.ⁱ

In England, 3.1 million households (around 11%) were estimated to be in fuel poverty in 2024 under the Government's definition.ⁱ Rates are higher in the devolved nations, reaching around 34% in Scotland and 14% in Wales.⁵¹ Using the broader National Energy Action (NEA) definition—households spending more than 10% of net income on energy to maintain a satisfactory heating regime—around 4.5 million households were in fuel poverty in 2025.⁵²

Across England, Scotland and Wales, the UK and devolved governments operate a range of schemes to help low-income households with the cost of energy, each with distinct eligibility rules, as shown in Table 1. However, analysis undertaken in 2025 found that, even after the expansion of the Warm Homes Discount (WHD) to around 2.7 million additional households in winter 2025/26, measures are still insufficient to adequately protect low-income households.⁵³ Notably, WHD costs are recovered through levies on both electricity and gas bills, meaning that many low-income households—including those receiving support—contribute towards funding the scheme themselves. As a result, while the expansion extends eligibility to more households experiencing fuel poverty,⁵⁴ the mechanism through which the scheme is funded remains regressive and counterintuitive.



i. Government defines a household as fuel poor if it falls below the poverty line after energy costs are taken into account and has an EPC rating between D and G.

Table 1 – Schemes designed to help low-income households with the cost of energy across UK nations.

Scheme	Nation(s)	Who Is Eligible?	What You Get (2025–26)
Winter Fuel Payment (WFP)	England, Wales, Northern Ireland	Born before 22 September 1959; most receive it automatically. Payment is recovered if individual (not household) income is over £35,000.	£200–£300 per household (amount varies by age).
Pension Age Winter Heating Payment (PAWHP)	Scotland	Scottish replacement for the Winter Fuel Payment. Eligible if born before 22 September 1959. Paid automatically, but recovered if individual (not household) income is over £35,000.	£101.70 - £305.10 per households (depending on circumstances).
Warm Home Discount (WHD)	UK-wide (administered separately in Scotland)	Pension Credit (Guarantee Credit) recipients; or low-income households meeting their supplier's criteria / high-energy-cost data-matched group.	£150 off the electricity bill.
Cold Weather Payment (CWP)	England and Wales	Households on certain means-tested benefits (e.g. Pension Credit, Income Support, income-based JSA/ESA, Universal Credit with additional vulnerabilities). Triggered by 7 days of very cold weather.	£25 for each qualifying 7-day cold period (Nov–Mar).
Winter Heating Payment (WHP)	Scotland	Replaces Cold Weather Payments. Households on certain low-income benefits with potential extra heating needs. Paid automatically.	£59.75 (paid once per winter).
Child Winter Heating Payment (CWHP)	Scotland	Disabled children and young people on qualifying benefits who may have extra heating needs. Paid automatically.	£255.80 (paid once per winter).

The levy system also disadvantages those who are already electrified. Over 8% of households in the UK rely on electricity as their main source of heating, and these households are around twice as likely to be in fuel poverty as those using other fuels.⁵⁵ They are particularly exposed to the UK's high spark gap because traditional forms of direct electric heating, such as electric boilers and panel heaters, are usually at best 100% efficient, and do not benefit from efficiency gains that can offset higher electricity costs. Because around 75% of policy costs are recovered through electricity bills, households using electric heating pay a higher proportion compared to those connected to the gas mains.

→ Autumn Budget 2025 interventions – do they go far enough?

In the 2025 Autumn Budget, the Government acknowledged the ongoing cost-of-living pressures facing households, highlighting energy bills as a major source of concern.⁵⁶ To address this, from April 2026, it plans to fund 75% of the Renewables Obligation (RO) through general taxation and to scrap the Energy Company Obligation (ECO) entirely. They estimate that this will reduce energy bills by £150 for the average household.⁵⁷

While any steps to ease household electricity costs are welcome, we believe the decision to end ECO before the establishment of a new scheme carries risks. Improving the energy efficiency of homes represents the most effective long-term route to reducing household energy costs. In 2025, the cost disparity between efficient and inefficient properties was stark: households living in Energy Performance Certificate (EPC) band F homes paid around £570 more each year on dual-fuel bills than those meeting the EPC band C.⁵⁸



Despite its challenges, ECO4 has been successful at delivering clean heat and solar panels into fuel-poor homes. Since the start of the scheme in 2022, more than one in four MCS-certified air source heat pump installations have been delivered through ECO, underlining its importance to the market and the risks that its removal poses to supply chains and market confidence. While the Warm Homes Plan, launched in January 2026, confirms the intention to replace ECO with a new centralised low-income energy efficiency scheme,⁵⁹ the absence of detailed design and a clear timetable could result in a hiatus in delivery. Rapid clarity on the structure and launch of the new scheme will be essential to avoid a gap in support for low-income households.

It is positive that the Government has set a clear precedent for funding social and environmental schemes through general taxation by committing to part-fund the RO. However, from April 2029 onwards, the RO is set to return to being fully funded through electricity bills, while the Office for Budget Responsibility (OBR) also forecast levies to increase by up to a third by 2031.⁶⁰ In addition, further levies are being added to electricity bills from 2026, including those associated with new nuclear investment. As such, the current policy approach represents a temporary rather than permanent solution.

While the Warm Homes Plan, released in January 2026, represents a significant commitment to improving housing quality and reducing energy bills, it does not introduce any further reforms to electricity pricing.⁶¹ This is a notable omission, particularly given the Government's recognition that high electricity prices are a key barrier to the uptake of low-carbon heating.

The MCS Foundation's position is that all social and environmental policy costs levied on electricity should be permanently funded through general taxation. The schemes these levies support are essential to meeting both net zero and fuel poverty objectives, but the way they are paid for is regressive and outdated. Funding them through taxation would be the fairest and most effective way to rebalance electricity and gas prices, ensuring that the costs of decarbonisation do not unfairly fall on those least able to pay.

→ Study objectives

To illustrate the impact of this reform, this report first examines what households paid in 2025 under the incumbent levy structure, highlighting the effects of this market distortion across different households in Great Britain. The analysis draws on Ofgem’s housing archetypes⁶² and the average price cap for the year. It then explores what households would have paid had the Government’s post-Budget interventions—part-funding the RO and removing ECO—been in place at the time. Finally, it models what households would have paid if all social and environmental levies on electricity had instead been funded through general taxation in 2025.

Across these three scenarios, we assess the effect on three key groups that are most exposed to the unfairness of the current levy system: lower-income households, those reliant on direct electric heating, and households transitioning to a heat pump. The key aim of this report is to highlight that while the Government’s post-Budget policies go some way towards addressing the high cost of electricity and unfairness of the levy system, funding all social and environmental policy costs through general taxation would deliver greater affordability and fairness, while also accelerating progress towards the UK’s heat pump targets.



Methodology

→ Ofgem archetypes

Ofgem's consumer archetypes are a set of distinct household profiles designed to represent energy consumers across Great Britain. They are defined using survey and housing data to capture characteristics of each group, including household income, tenure, dwelling type, heating fuel, and average energy use, alongside indicators of vulnerability such as disability, age, and whether households fall below the poverty threshold. The archetype profiles provide a framework for assessing how different types of households are affected by changes in policy and are widely used to analyse the distributional impacts of reforms across the energy system.⁶³ For example, Ofgem's housing archetypes have previously been used by other organisations to support analysis of levy reform proposals.⁶⁴

There are limitations to this approach: the archetypes are unlikely to represent the full diversity of all households, but rather offer a snapshot that supports comparisons across groups. In addition, the latest iteration draws on 2023 data, meaning they are already out of date in comparison to the price cap 2025 data. Even so, they remain the most practical and transparent tool available for assessing how different policy choices are likely to affect different households. Table 2 shows the Ofgem archetype data which was extracted for this analysis.ⁱⁱ

Table 2 - Average heating fuel type, net income and annual electricity and gas consumption across Ofgem household archetypes.⁶⁵

Archetype	Main heating fuel	Average net income (£)	Average annual electricity consumption (kWh)	Average annual gas consumption (kWh)	Number of households
A1	Mains gas	£14,990	2,742	10,933	578,333
A2	Mains gas	£16,115	2,849	9,464	868,191
A3	Mains gas	£17,114	3,519	10,622	883,413
B4	Electricity	£17,649	4,811	-	731,318
B5	Electricity/Other (Solid fuel/LPG)	£20,671	6,597	-	465,288
B6	Mains gas	£21,996	3,028	10,525	920,172
C7	Mains gas	£26,122	3,649	13,119	659,595
C8	Electricity	£27,815	5,587	-	228,477
C9	Mains gas	£29,196	3,337	13,685	3,408,514
D10	Mains gas	£29,307	3,881	13,981	1,163,946
D11	Mains gas	£34,219	2,482	8,782	1,197,075
D12	Mains gas	£34,760	3,952	16,065	1,457,829
E13	Mains gas	£34,782	5,075	16,722	690,892
E14	Mains gas	£37,015	4,070	14,606	1,178,684
F15	Other/Electricity	£38,893	6,883	-	323,433
F16	Electricity	£40,868	4,317	-	989,639
G17	Oil/Other (solid fuel/LPG)	£41,996	5,901	-	163,166
G18	Other (solid fuel/LPG)	£42,160	5,294	-	667,836
H19	Oil	£44,376	4,907	-	675,712
H20	Mains gas	£47,649	3,143	11,677	3,540,270
I21	Mains gas	£49,052	4,070	15,461	2,210,494
I22	Mains gas	£55,535	4,684	18,530	1,792,593
J23	Mains gas	£59,239	4,532	16,330	1,956,103
J24	Oil	£62,859	7,523	-	231,658

ii. Note that because Northern Ireland is integrated into the all-island energy market with the Republic of Ireland, the Ofgem archetypes apply only to households in Great Britain.

The average annual energy consumption was converted to MWh for use in calculations to correspond with Ofgem price cap data, which uses MWh for average annual consumption.ⁱⁱⁱ Ofgem price cap data⁶⁶ was used to calculate the cost of levies on electricity and gas bills for each archetype across all quarters of 2025, as outlined below. This analysis explored the results using 'Other Payment' data, which is the price cap for direct debit customers, as the majority of households in the UK pay for energy bills via direct debit.^{67,iv}

→ Electricity and gas costs

This analysis is based on 2025 data, the most recent full year available when analysis for this report began. Indicative analysis using first-quarter 2026 data shows that the same underlying trends persist. Table 3 shows the breakdown of policy costs for both electricity and gas as an average of the four quarters in 2025. They are split into policies that are measured "per MWh" (unit rate levy) and "per customer" (fixed cost for each household). For the purposes of comparison, the analysis assumes that household energy use remains consistent across the four price cap periods and it takes a national average. While actual consumption varies seasonally and prices vary across Great Britain, using an average consumption level provides a clear and straightforward basis for comparing the different policy scenarios.

Table 3 - Variable (£/MWh) and fixed (£/customer) policy costs for electricity and gas across the four price cap quarters of 2025.

	Policy costs (£/customer)	Policy costs (£/MWh)
Electricity	£13.10	£50.13
Gas	£15.44	£3.08

Table 4 shows the average annual standing charge (fixed cost) and the average annual variable costs (£/MWh) for gas and electricity across the four quarters in 2025.

Table 4 - Variable (£/MWh) and standing charge (£/customer) costs for electricity and gas bills across the four price cap quarters of 2025.

	Standing charge (£/customer)	Annual variable costs (£/MWh)
Electricity	£191.04	£247.54
Gas	£111.39	£61.77

The total cost of gas and electricity bills for each household archetype was calculated using the average annual electricity and gas consumption (MWh) provided in the Ofgem Archetype report. The total energy costs for each archetype were calculated by adding the annual electricity bill and annual gas bill (if applicable to that archetype). Note that this value was then multiplied by 1.05 to account for the 5% VAT on energy bills. Using this data, the percentage of net income spent on electricity levies could be calculated under each scenario.

iii. 2.7 MWh for average single-meter electricity use, and 11.5 MWh for average gas consumption.

iv. Note that the standing charge and unit costs for electricity and gas increase for households on Standard Credit payment methods. For Pre-Payment Meter (PPM) customers the standing charge is the same as Direct Debit customers, whilst the unit cost is lower. The policy costs are consistent across all payment methods – therefore energy bills savings presented in this paper will be consistent across all households. The results that may differ for PPM and Standard Credit customer are the "total energy bills" and "percentage of net income paid on energy bills".

→ Policy costs selection

- This analysis used the policy costs as defined within the Ofgem price cap methodology and modelled the impact of these costs being funded through general taxation rather than recovered through domestic electricity bills.
- These policy costs include social and environmental schemes that are explicitly itemised within the price cap and levied on electricity consumption or customers, such as the RO, FiT, WHD, ECO, and related compensation mechanisms.
- Some additional schemes are also sometimes described as social or environmental levies—notably the Contracts for Difference (CfD) and the Capacity Market. However, these schemes are recovered through the direct fuel methodology and are treated separately within Ofgem’s price cap framework.
- As these costs are not classified as policy costs within the price cap, they were not included in the modelling or in the core policy recommendations set out in this report.
- Excluding these schemes does not imply opposition to them being funded through general taxation in future. Rather, the analysis prioritises the core policy costs already recognised by Ofgem.

→ Fuel poverty calculations and assumptions

- Fuel poverty was assessed using the National Energy Action (NEA) definition, whereby a household is considered fuel poor if it spends more than 10% of its income on energy bills while maintaining a satisfactory heating regime.
- The Ofgem archetype data used in this analysis does not provide information on whether households are maintaining a satisfactory heating regime.
- As a result, the estimates presented may be conservative, as some households may be under-heating their homes to manage costs and would therefore not be captured by this metric.

→ Heat pump and gas boiler calculations

- We assumed that all gas usage listed on the Ofgem archetypes is for space and water heating (and not cooking).
 - The gas boiler efficiency used to calculate heating demand was 85%, in alignment with analysis undertaken by Rosenow.⁶⁸ We followed the same logic that the minimum standard for efficiency for gas boilers is 92%, however, one of the most up to date in-situ performance tests for gas boilers in the UK found a mean efficiency of 80.3%.⁶⁹ We therefore chose 85% as a middle ground.
 - To calculate heat demand (MWh) for archetypes connected to the gas grid, the annual gas consumption was multiplied by 0.85, reflecting 85% efficiency of the gas boiler.
 - Annual energy bills with a heat pump were calculated on the assumption that the gas meter is removed, and therefore the household no longer pays a gas standing charge.
-

→ Lifetime savings

- Lifetime savings were estimated by discounting annual bill savings over a 15-year system lifespan, consistent with the typical operating life of a domestic heat pump.
- A real discount rate of 3.5% was applied, in line with the HM Treasury Green Book social discount rate for the first 30 years of a proposal.⁷⁰
- The first year of savings was treated as occurring at year zero and was therefore not discounted; savings in subsequent years were discounted accordingly.
- Annual savings were assumed to remain constant in real terms over the lifetime of the system.

$$PV_{\text{total}} = \sum_{t=0}^{14} \frac{S}{(1+r)^t} \quad \text{where:}$$

- *PV=Present value of lifetime savings*
- *S=Annual savings*
- *r=Discount rate*
- *t=Year in which savings occur*

→ Cost to the Treasury calculations

- The estimated cost to the Exchequer was calculated by assuming that all social and environmental levies applied to domestic electricity bills in 2025 were instead funded through general taxation.
- The calculation was based on the number of households represented by Ofgem's consumer archetypes (26,982,631 households), which cover Great Britain only and exclude Northern Ireland, reflecting the separate electricity market arrangements in Northern Ireland.
- The estimate includes the costs of all electricity policy schemes in place in 2025, including ECO, which was active during the year modelled.
- Costs were calculated using 2025 price cap data, providing an estimate of the fiscal impact in that year only.
- Policy costs were assumed to be recovered in full by the Treasury for the purposes of this analysis.
- We recognise that policy costs evolve over time: some legacy schemes such as the RO and FIT are expected to decline over the coming years as contracts expire, while other schemes—such as the WHD—may increase in scale.
- As such, the estimate should be interpreted as an indicative snapshot of the cost to the Treasury in 2025, rather than a forecast of future fiscal impacts.



SECTION 1

The impact of levies on energy bills in 2025

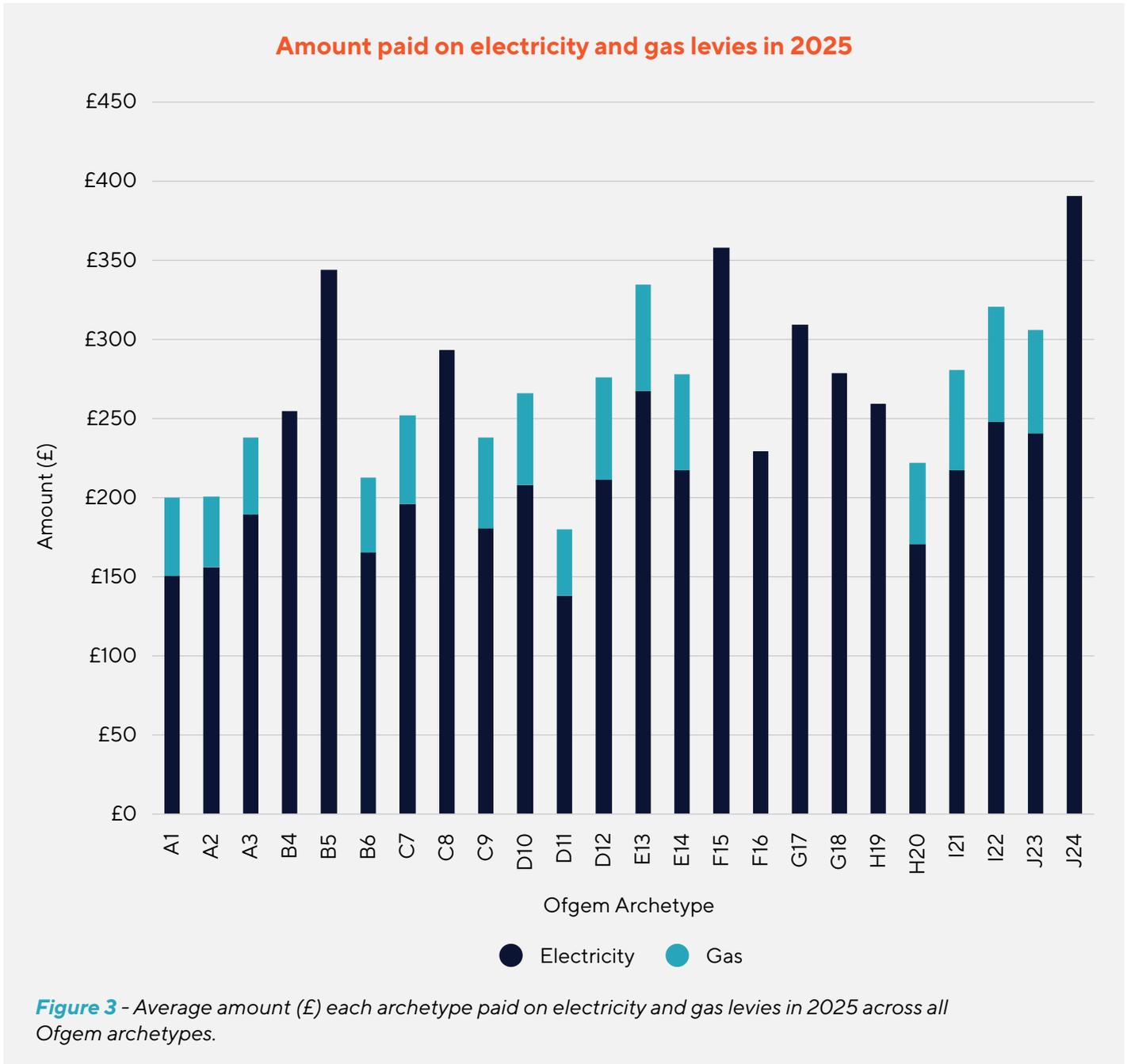
Section 1 examines the impact of social and environmental levies on household energy bills in 2025 on GB households using Ofgem housing archetypes.

The analysis established a baseline for comparing the effects of alternative policy scenarios considered later in the report.

KEY FINDINGS

- 1.** Under the incumbent levy system in 2025, low-income households faced a disproportionate share of policy costs. Five of the lowest-income archetypes paid more than 1.2% of their net income on social and environmental levies alone—more than the average weekly spend on bread, rice and cereals.
 - 2.** Several low-income archetypes spent more than 10% of their net income on energy bills in 2025, placing them above commonly used fuel poverty thresholds. Our analysis shows that existing support schemes were not always sufficient to fully offset this risk.
 - 3.** Households using electric heating were significantly affected by the 2025 levy structure. Despite having substantially lower overall energy consumption than households connected to the gas grid, they typically paid more in social and environmental levies overall.
 - 4.** For heat pumps, cost parity with gas boilers was achievable across archetypes at Seasonal Coefficient of Performances (SCOPs) of 3.1 and over. However, levy reform is needed to guarantee savings for all households switching to a heat pump from a gas boiler.
-

Across all Ofgem housing archetypes, households paid substantially more in electricity levies than in gas levies in 2025, ranging from £137 to £390 per household compared with £42 to £72, as shown in Figure 3.^v Even among gas-heated households, which typically consume three to four times more gas than electricity, the amount paid in gas levies in 2025 was minimal. This clearly illustrates how policy cost recovery in 2025 placed a much greater burden on electricity bills than on gas bills, contributing to the high spark gap.



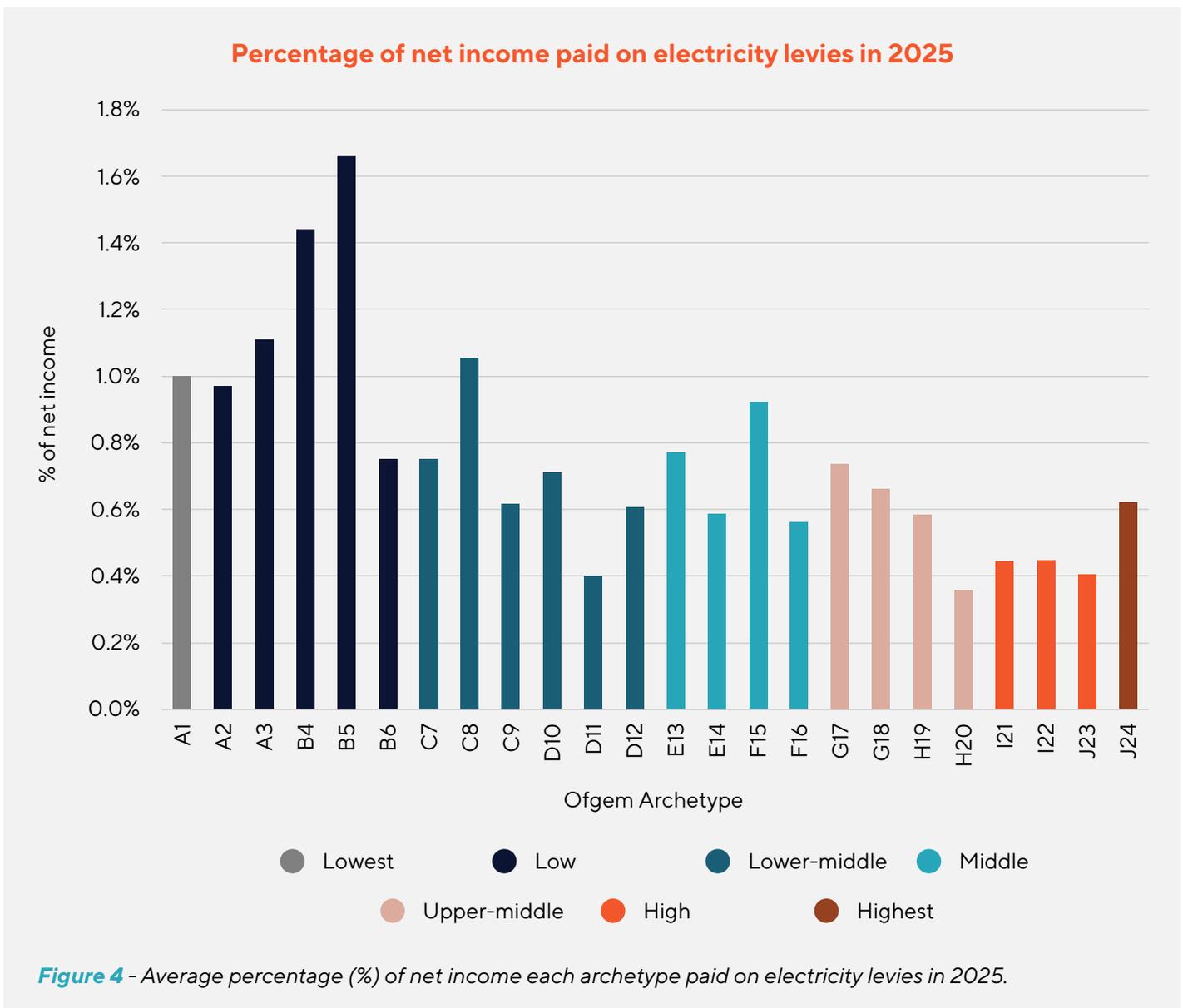
Although policy costs added significantly to electricity bills for all households in 2025, the following sections focus on the distributional impacts for three groups that are most affected by the allocation of these costs: low-income households, households using direct electric heating, and households transitioning to heat pumps.

v. These figures reflect the policy costs themselves and do not include the additional 5% VAT applied to household energy bills.

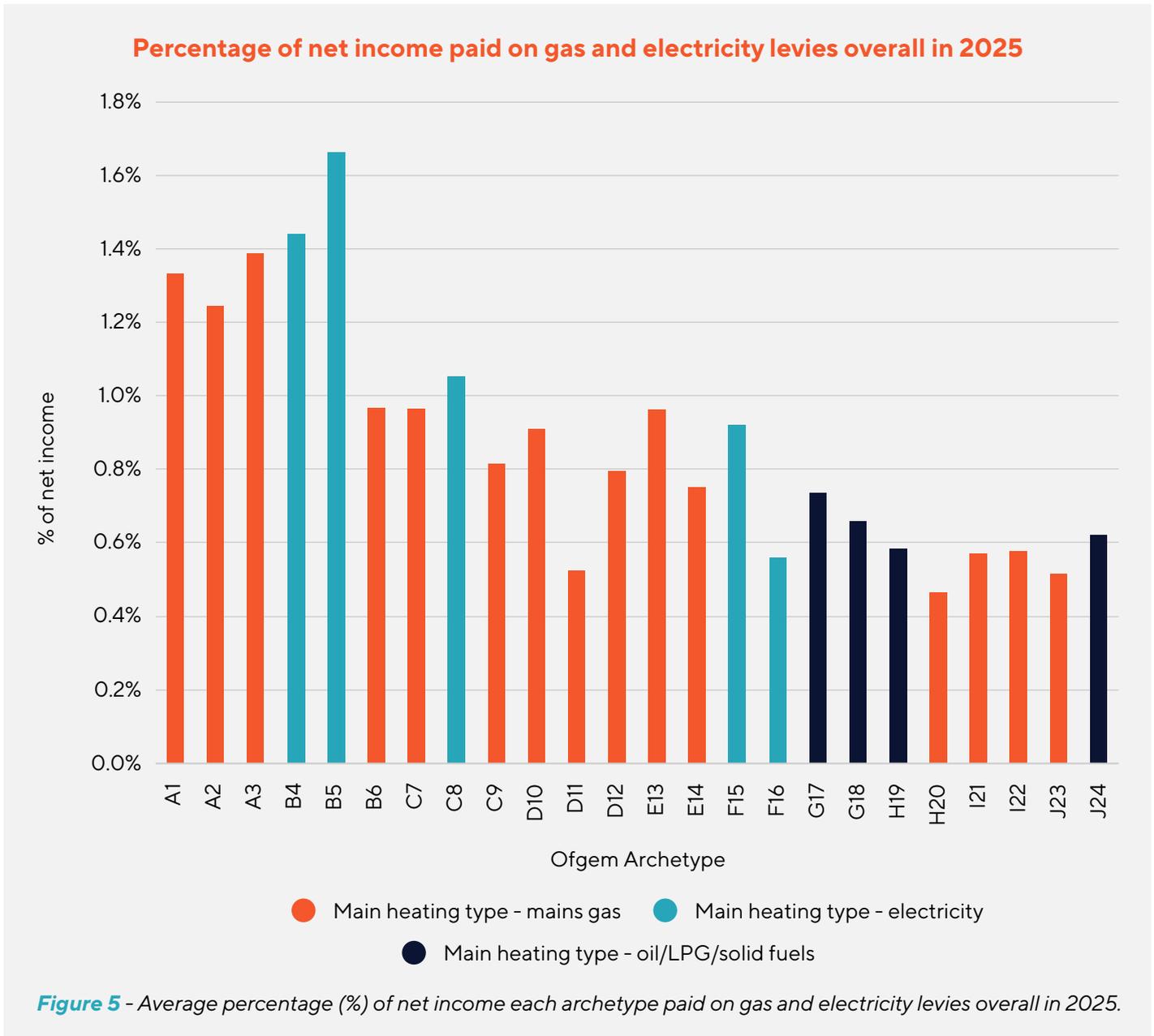
→ Impact on low-income households

The cost of levies in 2025 was not evenly distributed across households. When the cost of levies is assessed relative to net household income, substantial inequalities emerge across the Ofgem archetypes.

Households with lower incomes paid a much larger share of their income on electricity levies than wealthier groups. For example, households in archetype B5, a low-income archetype, paid over four times the proportion of their net income on electricity levies compared with higher-income archetypes, such as H20, I21, I23 and J23 (Figure 4). For these households, the levies represent a much more material financial burden.



The inequality is still evident even when electricity and gas levies are considered together. Figure 5 shows that archetypes with lower incomes and reliance on electricity pay a disproportionately high share of their income on policy costs, while higher-income gas-heated households contribute a far smaller proportion.



Although the percentages may appear modest at first glance—ranging from around 0.97% to 1.66% of net income for lower income households—they are significant when placed in context. UK expenditure statistics suggest that households in the lowest two income deciles (equivalent to archetype A1- A3, and B4-B6) typically spend 0.92-1.18% of their net income on bread, rice and cereals.⁷¹ Levies therefore represented a cost greater than a typical essential weekly household expense across the low-income archetypes analysed.

These findings underscore the overarching fairness concern: the levy structure places the greatest relative burden on those least able to absorb additional costs, reinforcing existing inequalities within the energy system.

Households classified within Archetypes A and B represent the lowest-income households across Great Britain, with the majority falling within the bottom two income deciles. These households have an average net income of between £14,990 and £21,996, which is significantly lower than the average across Great Britain, as illustrated in Figure 6.

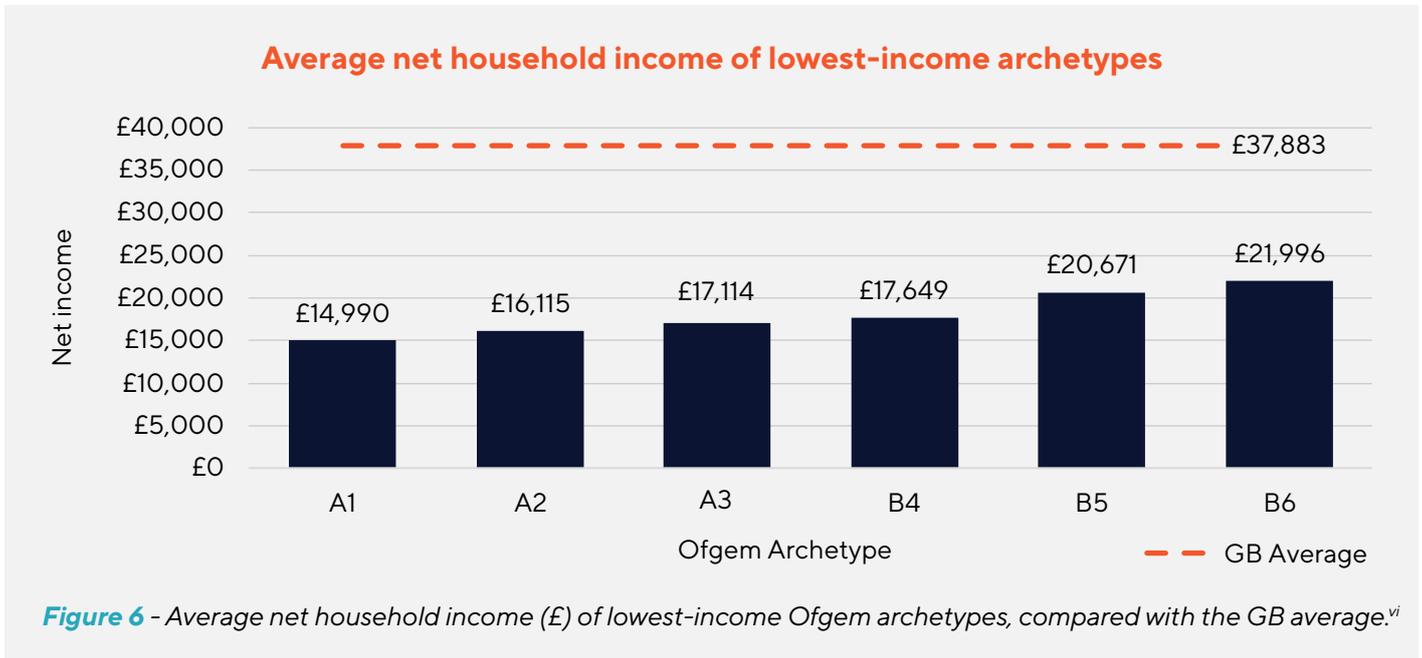


Figure 6 - Average net household income (£) of lowest-income Ofgem archetypes, compared with the GB average.^{vi}

Using the NEA definition of fuel poverty, whereby a household is considered fuel poor if it spends more than 10% of its net income on energy bills, analysis of 2025 price cap data shows that, in the absence of any government intervention or support schemes, three archetypes (A1, A2 and A3) would fall into fuel poverty, with a fourth (B5) close to the threshold at 9.3%, as shown in Figure 7. These archetypes represent some of the lowest-income households in Great Britain, including older owner-occupiers, social renters, and households in receipt of disability benefits.

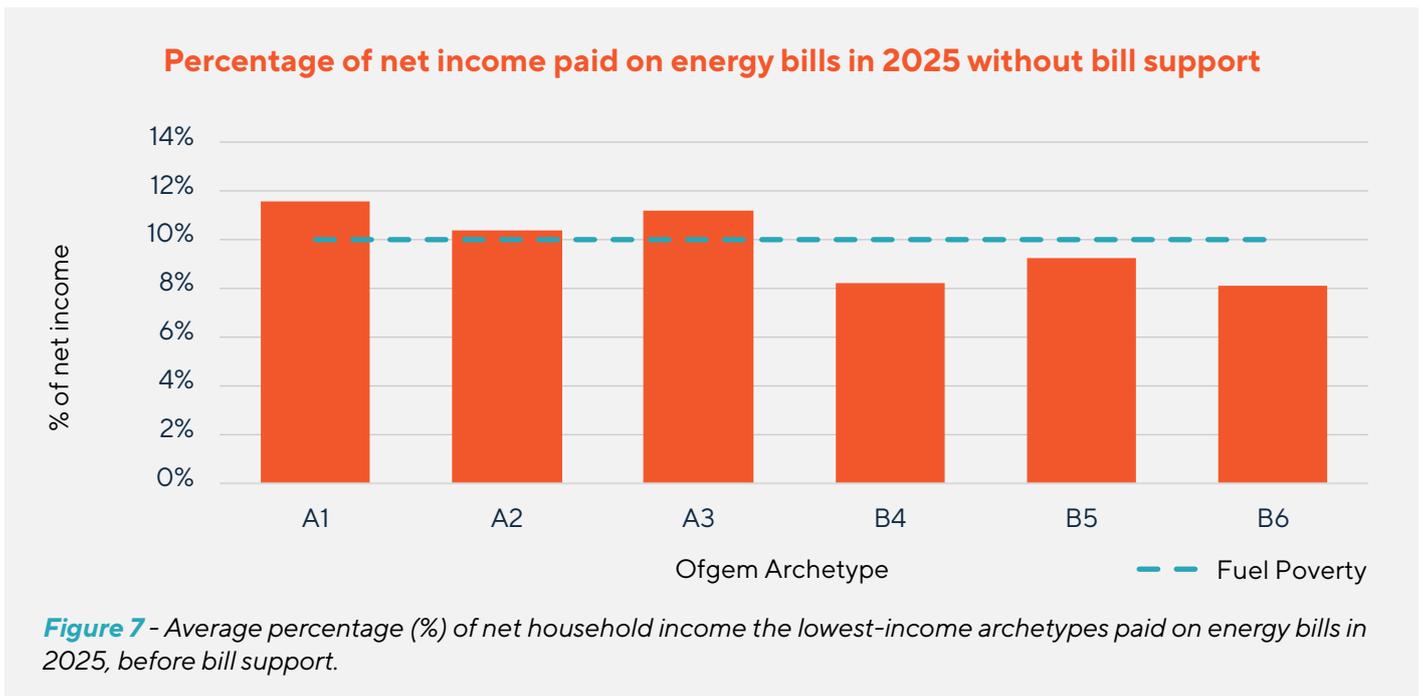
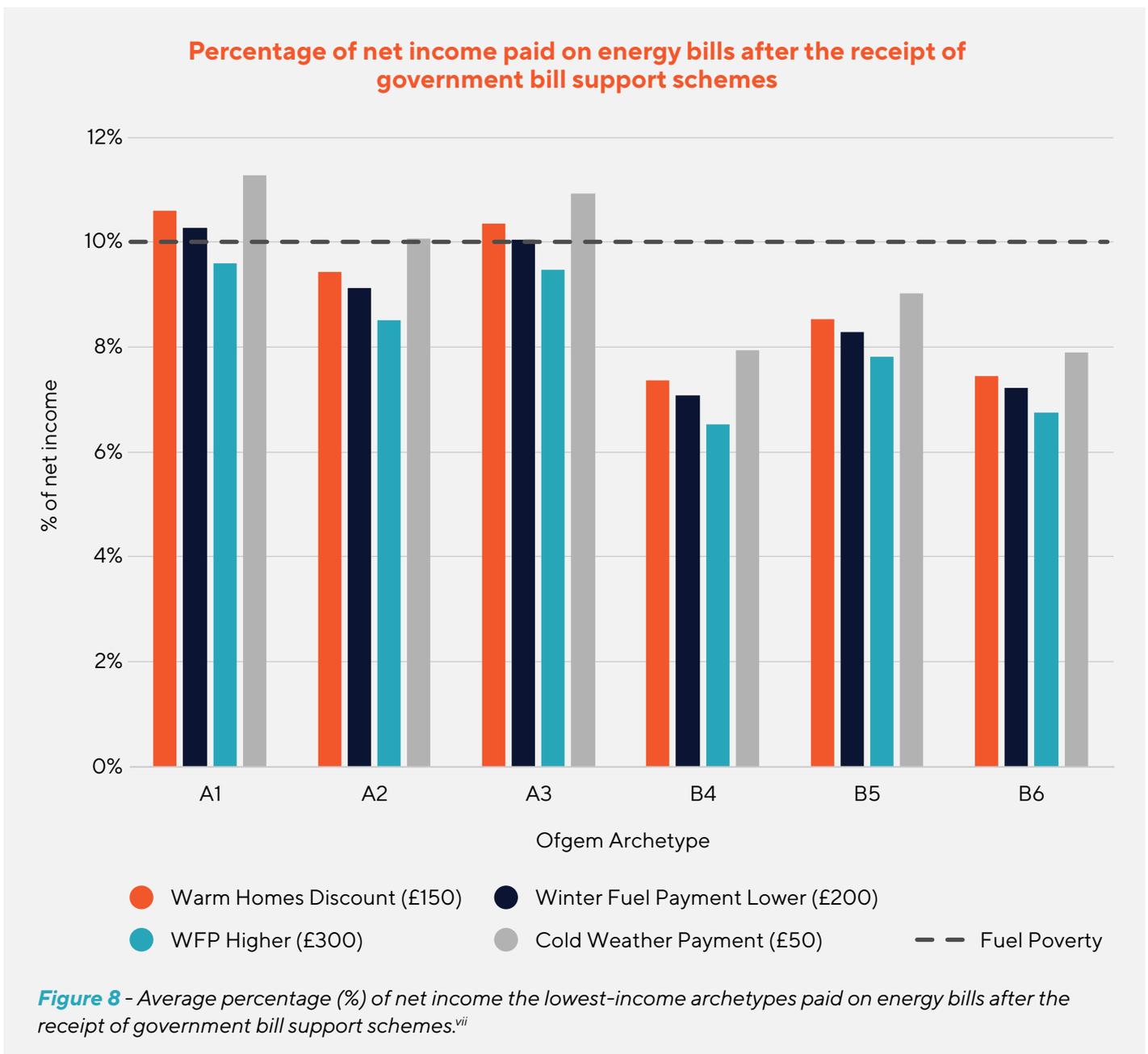


Figure 7 - Average percentage (%) of net household income the lowest-income archetypes paid on energy bills in 2025, before bill support.

vi. GB average according to the Ofgem Archetype report https://www.ofgem.gov.uk/sites/default/files/2024-02/Ofgem_archetypes_update_2024_FinalReport_v4.1.3.pdf

Most households within these archetypes receive at least one form of government support, and some households are eligible for more than one scheme depending on their age, income and circumstances. Most households in A1 are retired owner-occupiers over the age of 75 and are almost universally eligible for Winter Fuel Payments in England and Wales, or the Pension Age Winter Heating Payment in Scotland. A2 households, which largely consist of older single social renters, have more mixed eligibility across schemes, including the WHD, Winter Fuel Payments and Cold Weather Payments. A3 households, all of whom are in receipt of disability benefits, show particularly high eligibility for Cold Weather Payments and the WHD.⁷²

Figure 8 shows the proportion of net income spent on energy bills for these low-income archetypes under different bill support scenarios, benchmarked against the 10% fuel poverty threshold. While government support does reduce the share of net income spent on energy across all archetypes, some households in Archetype A1 and A3 still paid more than 10% of their net income on energy bills even after receiving bill support. Overall, this highlights that while bill support plays an important mitigating role, it is not sufficient on its own to fully protect the lowest-income households from fuel poverty.

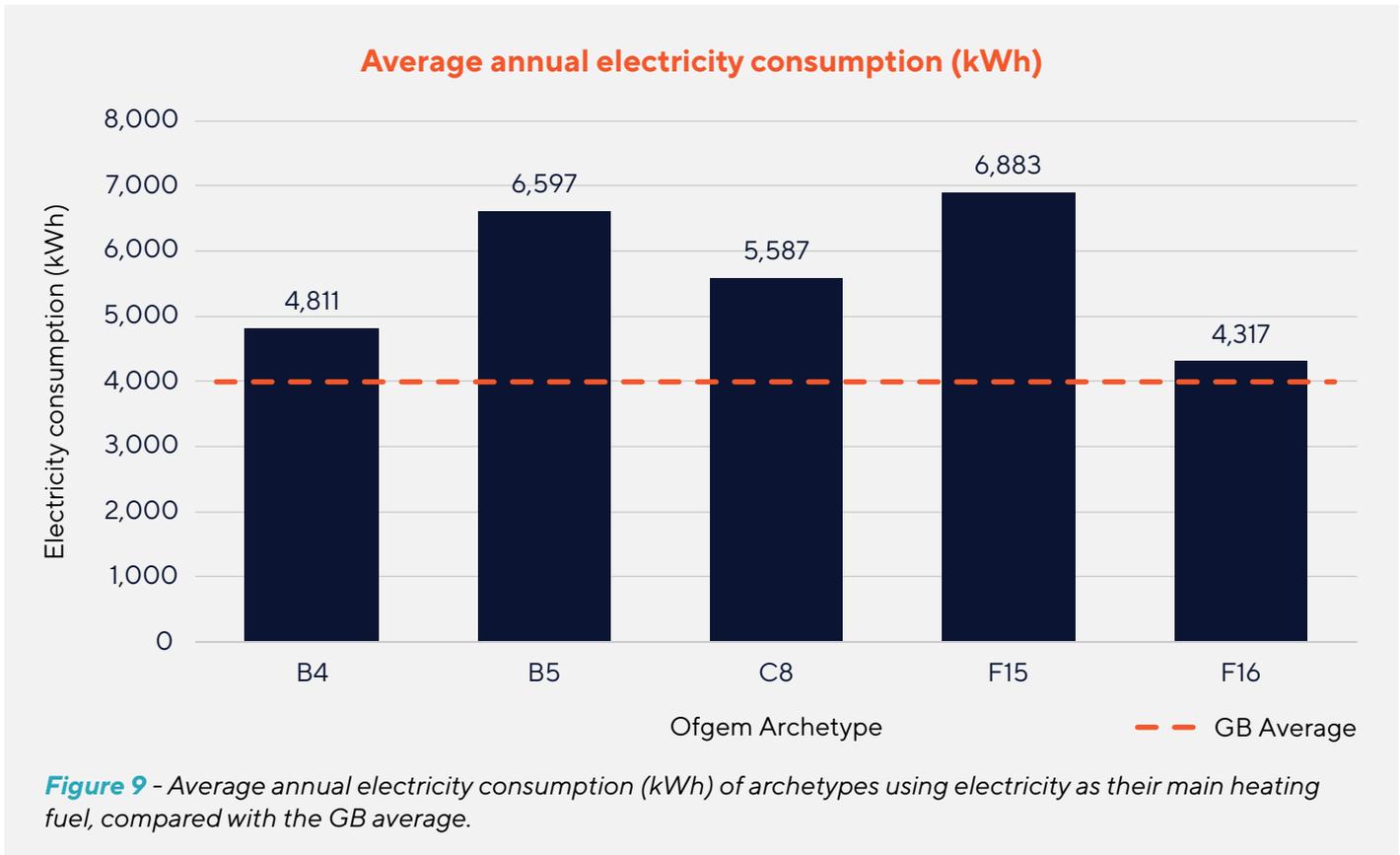


vii. For Cold Weather Payments, this report assumes two qualifying cold periods at £25 each, totalling £50.



Impact on households heated electrically

Archetypes B4, B5, C8, F15, and F16 are comprised of households off the gas grid that use electricity as their primary source of heating. As a result, electricity consumption across these groups is above the GB average of 3,955 kWh, as shown in Figure 9.^{viii}

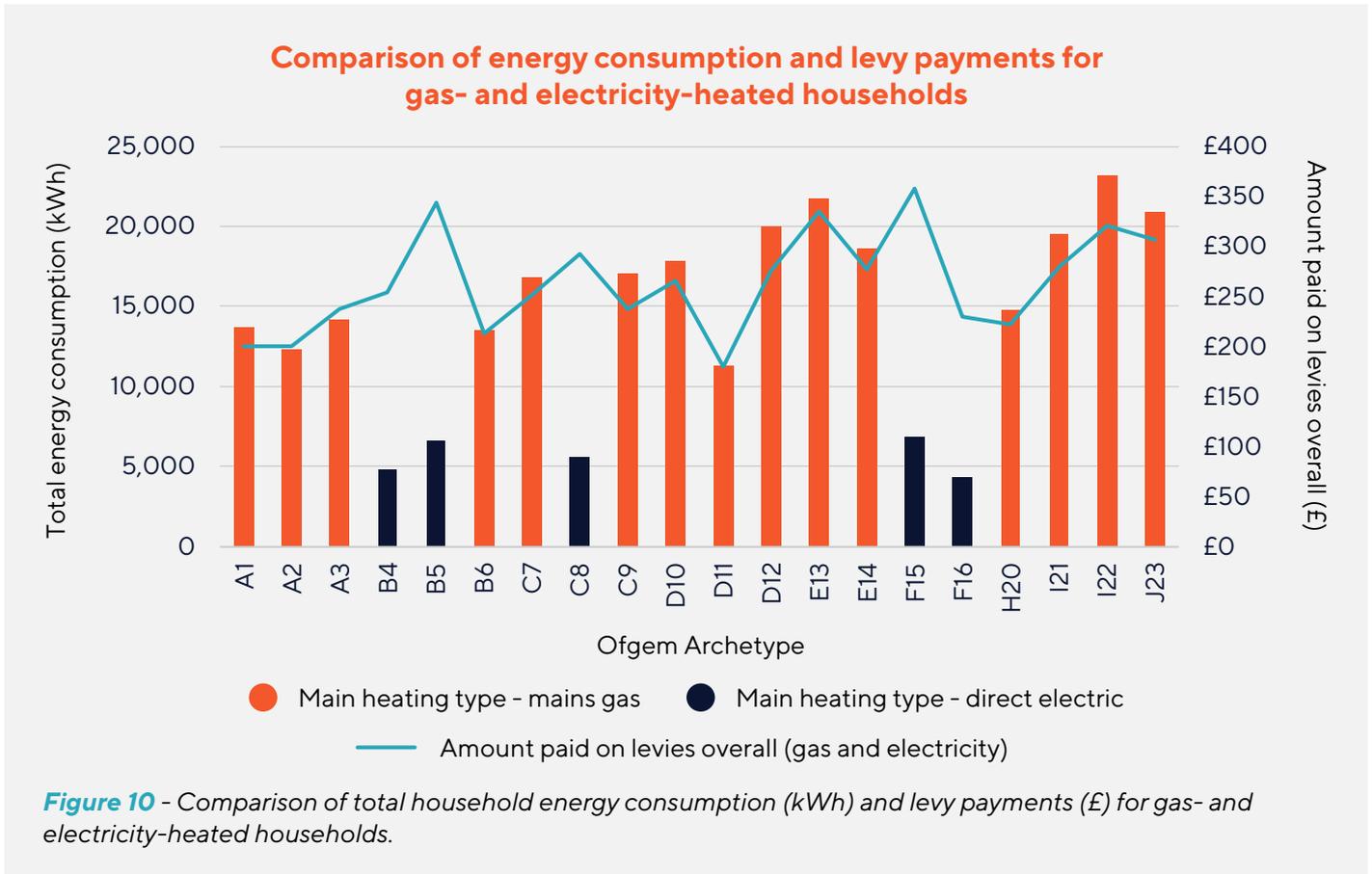


When archetypes are compared within the same income deciles (denoted by the letters A-J), those using electricity for heating consistently pay more in levies than those using gas, as shown in Figure 5. For example, archetype B5, which sits in the same income group as B6, pays around £130 more per year in levies than B6, despite similar income characteristics. B5 is also the archetype that pays the highest percentage of its net income on levies – 1.66%. A similar pattern is evident in the C group, where C8 pays more in levies than both C7 and C9.

What further exacerbates this inequity is that, despite having higher electricity consumption than the GB average, households using electric heating typically have much lower overall energy consumption than households using gas. Figure 10 compares the total energy consumption and the amount paid in levies across household archetypes heated by gas and electricity.

Households that rely on electricity for heating consistently show lower overall energy consumption than those on mains gas, yet they are paying the same or, in several cases, a higher absolute amount in levies. This shows that direct electric households contributed a disproportionately high share towards funding social and environmental schemes in 2025. Given that electricity-heated households are already around twice as likely to be in fuel poverty compared to those on mains gas,⁷³ this once again demonstrates the unfairness of the levy structure.

viii. GB average according to the Ofgem Archetype report https://www.ofgem.gov.uk/sites/default/files/2024-02/Ofgem_archetypes_update_2024_FinalReport_v4.1.3.pdf



➔ Impact on heat pump running costs

The majority of households in Great Britain rely on mains gas for heating.⁷⁴ However, meeting decarbonisation targets over the next decade will require a substantial and sustained increase in annual heat pump installations, including a significant number of households transitioning from gas. This shift is already beginning: MCS data shows that heat pump deployment has continued to rise over the past eight years, with 2025 marking another record year for installations.⁷⁵

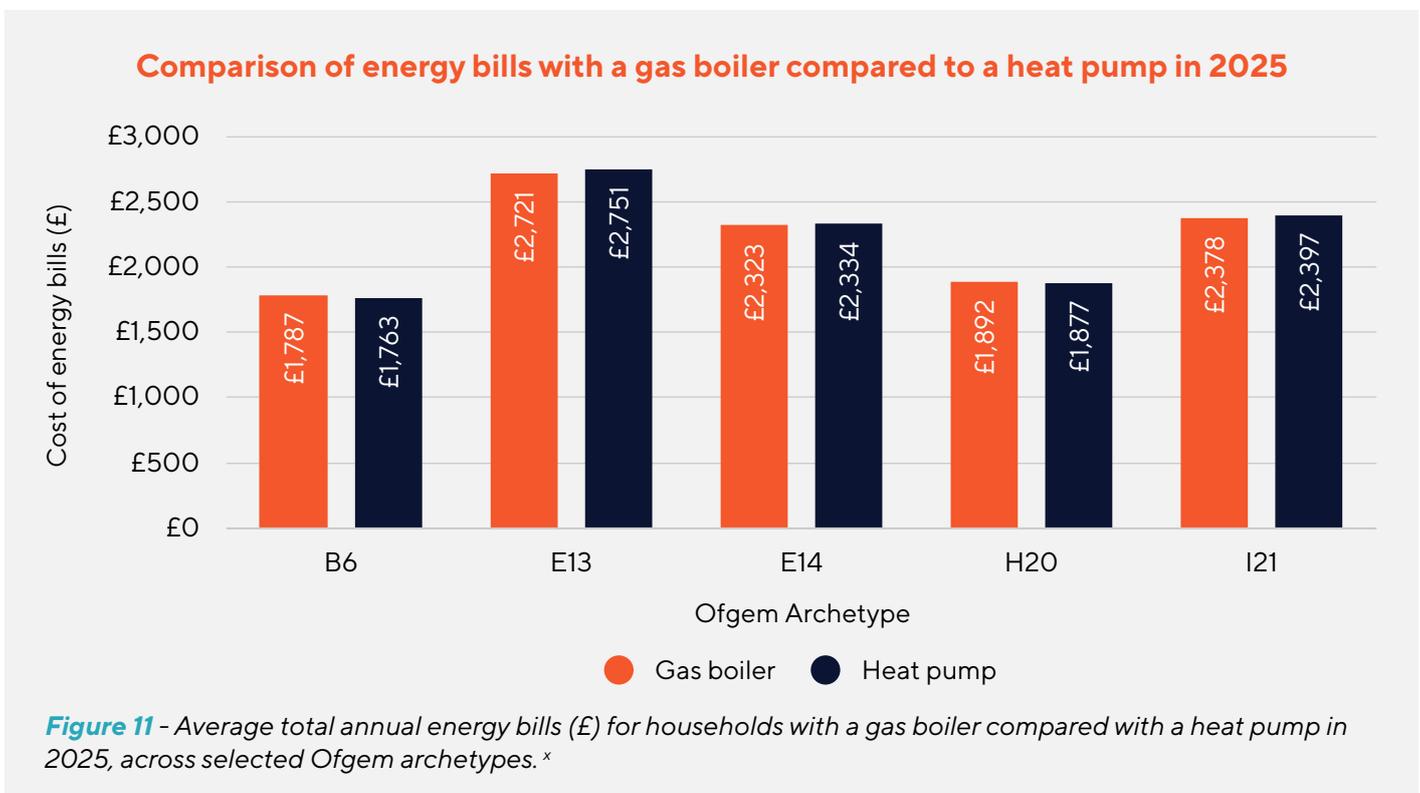
To understand the potential bill impacts that transitioning to a heat pump from gas would have implied, we modelled the savings that selected gas-heated archetypes would have experienced had they switched to a heat pump in 2025.

The archetypes selected for this analysis were chosen primarily on the basis of their high self-identification as early adopters, indicating a greater stated willingness to engage with innovation, including potentially low-carbon technologies such as heat pumps. These archetypes represent a range of different household types, reflecting variation in tenure, dwelling type, and income.



- **B6** – Low-income households living in smaller properties (five rooms or fewer). Around 68% consider themselves early adopters. Tenure is mixed, with 37% renting from a local authority, 12% from a housing association and 49% in the private rented sector.
- **E13** – Middle-income households living primarily in semi-detached or terraced properties. A very high proportion (97%) consider themselves early adopters. Tenure is mixed, with around 30% owner-occupiers and 50% renting from a local authority or housing association.
- **E14** – Middle-income households living mainly in semi-detached properties. Owner-occupation is relatively low at 26%, with most households in the private rented sector.
- **H20** – Upper-middle-income households living in semi-detached or terraced properties, with relatively poor EPC ratings (typically band D). A high proportion are owner-occupiers (73%), and 98% consider themselves early adopters.
- **I21** – High-income one-child families living primarily in semi-detached or terraced houses. All households (100%) consider themselves early adopters, and 73% are owner-occupiers.

Figure 11 shows the difference in annual energy costs for the selected archetypes in 2025 when heating with a gas boiler compared with a heat pump.^{iv} Across all five archetypes, switching to a heat pump would have resulted in broadly similar annual running costs to continuing with a gas boiler under 2025 price conditions. In some cases, such as B6 and H20, households would have seen small cost savings, while in others, including E13, E14 and I21, running costs would have increased slightly. This indicates that, despite the high spark gap, heat pumps broadly achieved cost parity with gas boilers in terms of annual energy bills in 2025, reflecting both their higher efficiency and the additional savings from avoiding gas standing charges. However, the absence of clear running-cost savings means that a heat pump operated on a standard electricity tariff would not have provided a strong financial incentive to switch, particularly given that upfront installation costs remain higher than for gas boilers.⁷⁶



ix. This includes both heating and non-heating energy consumption.

x. Modelling assumes (1) a gas boiler efficiency of 85%, (2) a heat pump seasonal coefficient of performance (SCOP) of 3, (3) that household gas demand is used for space and water heating only, and (4) that the gas standing charge (and gas meter) is removed when switching to a heat pump. All costs are calculated using 2025 price cap energy prices and archetype-specific demand profiles.

Figure 12 shows the total energy bill cost savings of a household with a heat pump across a range of system efficiencies^{xi} compared with a gas boiler. Under the 2025 levy regime, cost savings begin to emerge for systems with a SCOP of 3, with two archetypes achieving savings at this level. At a SCOP of 3.1, all archetypes realise bill savings, with archetype B6 achieving a total saving of £49.50. Evidence from in-situ monitoring studies in the UK⁷⁷ and Germany⁷⁸ indicates that these levels of system efficiency are achievable in practice, albeit with variation across installations. Furthermore, additional performance data from UK installations suggests that higher efficiencies are possible in some cases.⁷⁹ This suggests that many households could have achieved cost parity with a gas boiler when switching to a heat pump in 2025. It also highlights the potential for levy reform to strengthen savings at lower efficiency thresholds, as explored in the following chapters.

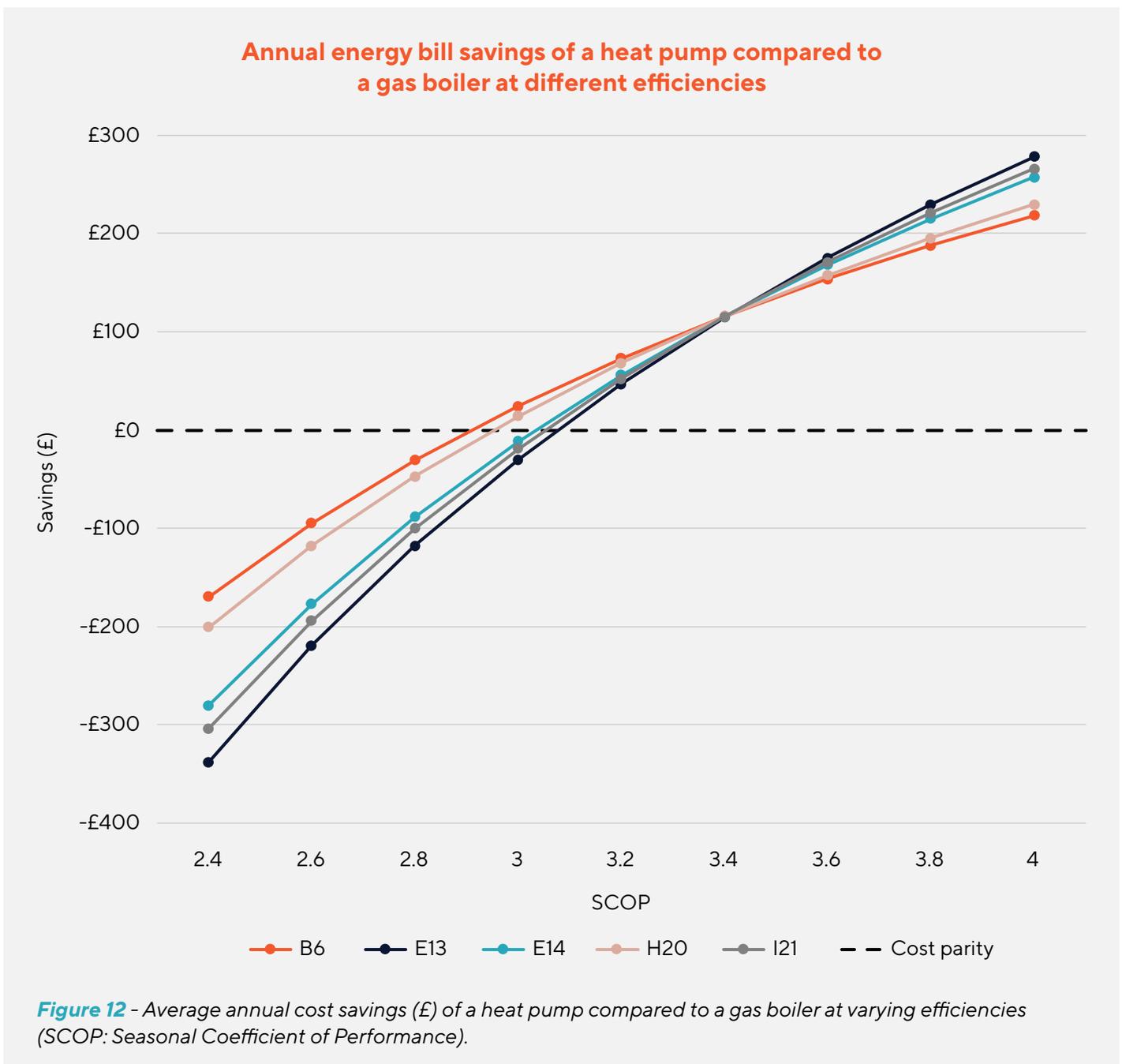


Figure 12 - Average annual cost savings (£) of a heat pump compared to a gas boiler at varying efficiencies (SCOP: Seasonal Coefficient of Performance).

xi. Seasonal Coefficient of Performance (SCOPs).

SECTION 2

Budget 2025 policy interventions: do they go far enough to address structural issues in energy pricing?

In response to growing concern about the affordability of energy bills, the Government implemented two key policy interventions in the 2025 Autumn Budget.

From April 2026, the Government is scrapping ECO, and therefore this element of the policy costs will be removed from both electricity and gas energy bills. Government is also temporarily funding 75% of the RO scheme for domestic consumers in 2026-27, 2027-28 and 2028-29. The Government's own calculations suggest that this will save the average household £150 per year from April 2026, when these policies come into force.⁸⁰

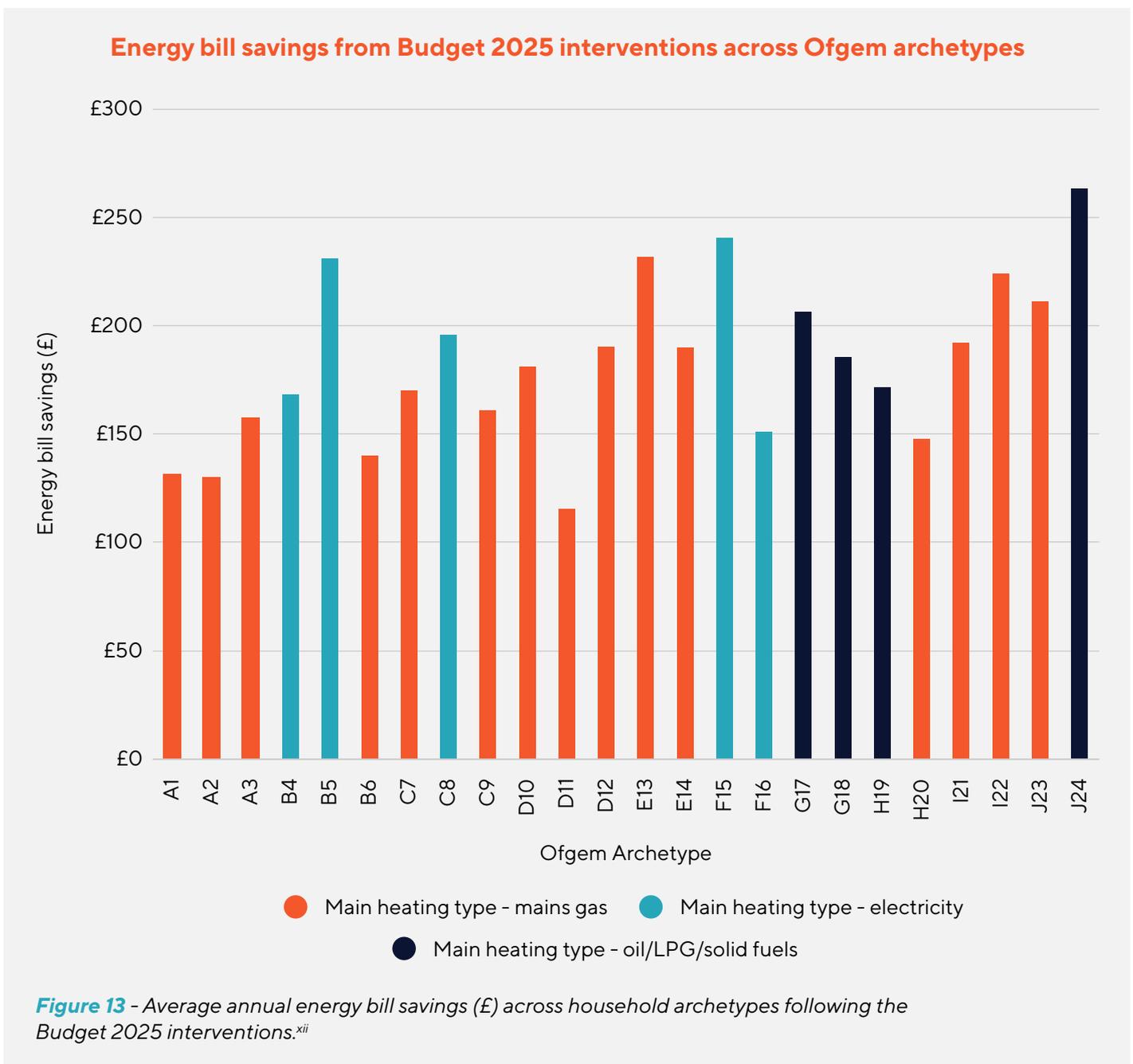
This section assesses the impact that these interventions would have had on households in 2025, and whether they go far enough to address the challenges outlined in the previous section.

KEY FINDINGS

- 1.** The post-2025 Budget measures would have delivered positive effects, including reduced pressure on fuel-poor households, lower bills for households using direct electric heating, and an improvement in the running-cost case for heat pumps compared with a no-intervention scenario.
 - 2.** However, the interventions would not have fully addressed the underlying structural issues in energy pricing. Households using direct electric heating would still have faced a relatively high-cost burden, continuing to pay a larger share of policy levies than gas-heated households.
 - 3.** For households switching from gas to a heat pump, the resulting savings—around £80–£95 per year—would have been relatively limited, and unlikely on their own to provide a strong economic incentive for widespread adoption.
 - 4.** The post-Budget changes do not represent a permanent or systemic solution. The 75% funding of the RO is due to end in March 2029, while additional levies (including those to support new nuclear capacity) and rising electricity network costs are expected to be added to bills from 2026.
 - 5.** This indicates that the benefits observed under the post-Budget framework may not be sustained over time without further reform.
-

Figure 13 shows the estimated annual bill savings that households would have seen in 2025 as a result of the Government’s post-Budget energy bill interventions. The results indicate that all household archetypes would have experienced a reduction in their overall energy costs, with savings of between £115-£265. While the scale of savings varies by archetype, the direction of impact is consistently positive. In absolute terms, households with higher electricity consumption tend to see larger savings from the post-Budget reforms. Archetype J24, which has the highest electricity consumption, benefits most, with £263 annual savings. By contrast, savings for archetype D11 are smaller, as households in this group typically have significantly lower electricity and gas consumption than the Great Britain average.

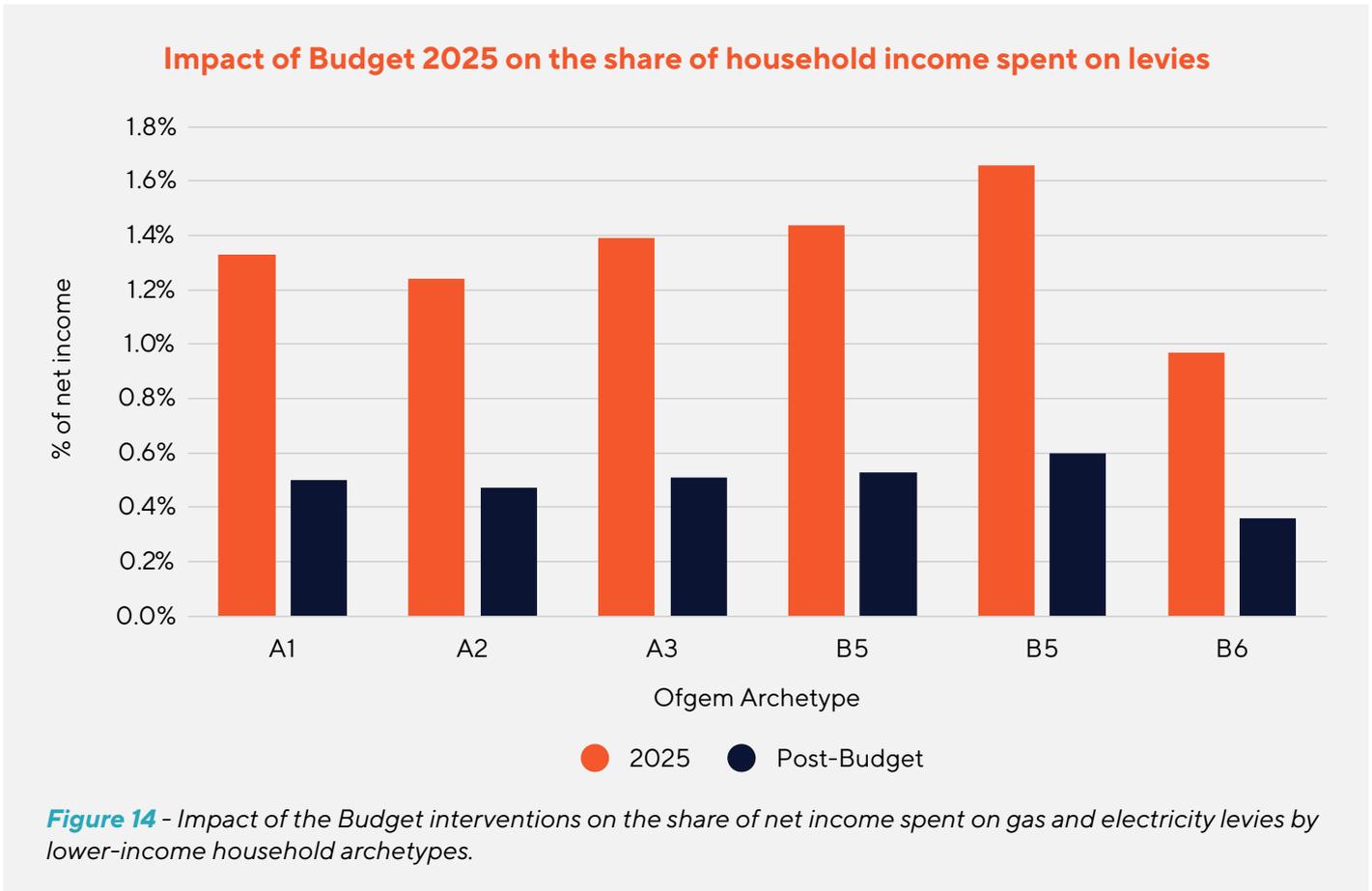
Electricity-heated households also emerge as clear beneficiaries of the reform. This reflects the fact that these households were previously paying particularly high amounts in social and environmental levies under the 2025 pricing framework. This suggests that the reforms go some way towards rebalancing costs between electricity and gas, an issue explored in more detail in the following sections.



xii. Savings reflect the removal of ECO and 75% of RO from energy bills, together with the associated 5% VAT charged on these amounts.

➔ Impact on low-income households

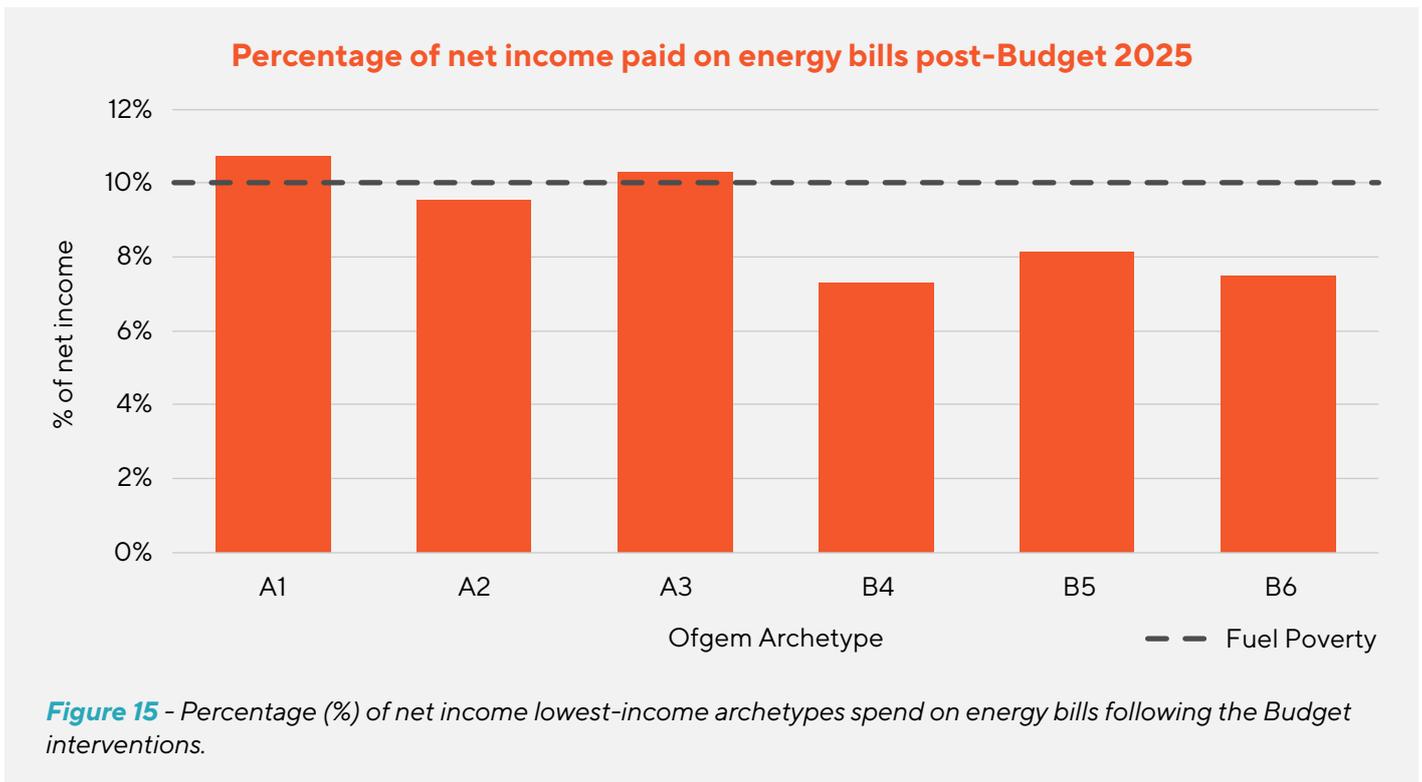
In 2025, the lowest-income Ofgem archetypes (archetypes A and B) were paying the equivalent of between 0.97% and 1.66% of their net income towards social and environmental schemes. This exceeds typical weekly spending by these households on bread, rice and cereals. Had the post-Budget interventions been in place, it would have more than halved the share of net income that these households paid in levies, reducing the relative impact of policy costs on lower-income groups, as shown in Figure 14.



This suggests that the 2025 Autumn Budget measures make meaningful progress in reducing the regressive effects of the levy system.

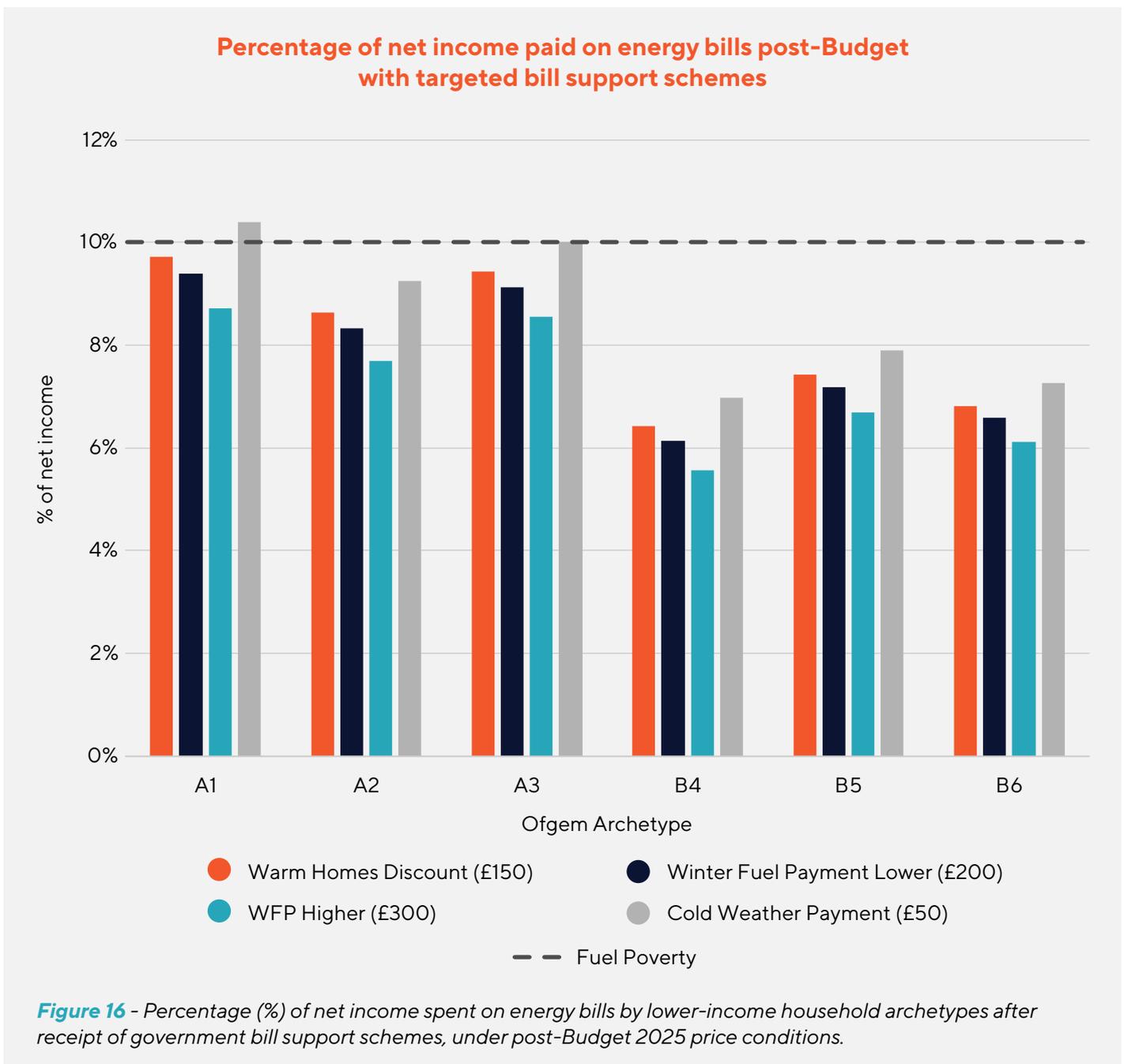
These changes also reduce the share of net income that lower-income households spend on energy bills overall, as shown in Figure 15. For example, A1 households, which under the 2025 pricing structure were paying almost 12% of their net income on energy bills, would have seen this fall to just under 11%. Furthermore, A2 households, who in 2025 sat above the fuel poverty threshold, would be brought below it following the interventions.

However, despite these improvements, the results also show that further government support remains essential: without any additional fuel subsidy support, both A1 and A3 households would still be above the fuel poverty threshold. This indicates that while the post-Budget measures represent a step in the right direction, they are not in themselves sufficient to fully protect the lowest-income households from fuel poverty.



When combined with targeted support schemes for low-income households, post-Budget interventions would have been sufficient to bring all Ofgem archetypes below the 10% fuel poverty threshold on average. As shown in Figure 16, households receiving support through measures such as the WHD and Winter Fuel Payments would have seen the share of net income spent on energy bills fall below the fuel poverty line across all low-income archetypes.

While the figure shows that A1 households receiving only Cold Weather Payments would have remained above the fuel poverty threshold, this does not reflect the most likely real-world outcome. In practice, 99% of households in this archetype would be eligible for the Winter Fuel Payment, meaning that the vast majority would have seen the proportion of their net income spent on energy fall below 10% had these policies been in place. While the post-Budget measures alone would not have fully resolved affordability pressures, their interaction with targeted support would have played an important role in reducing fuel poverty risks in 2025.

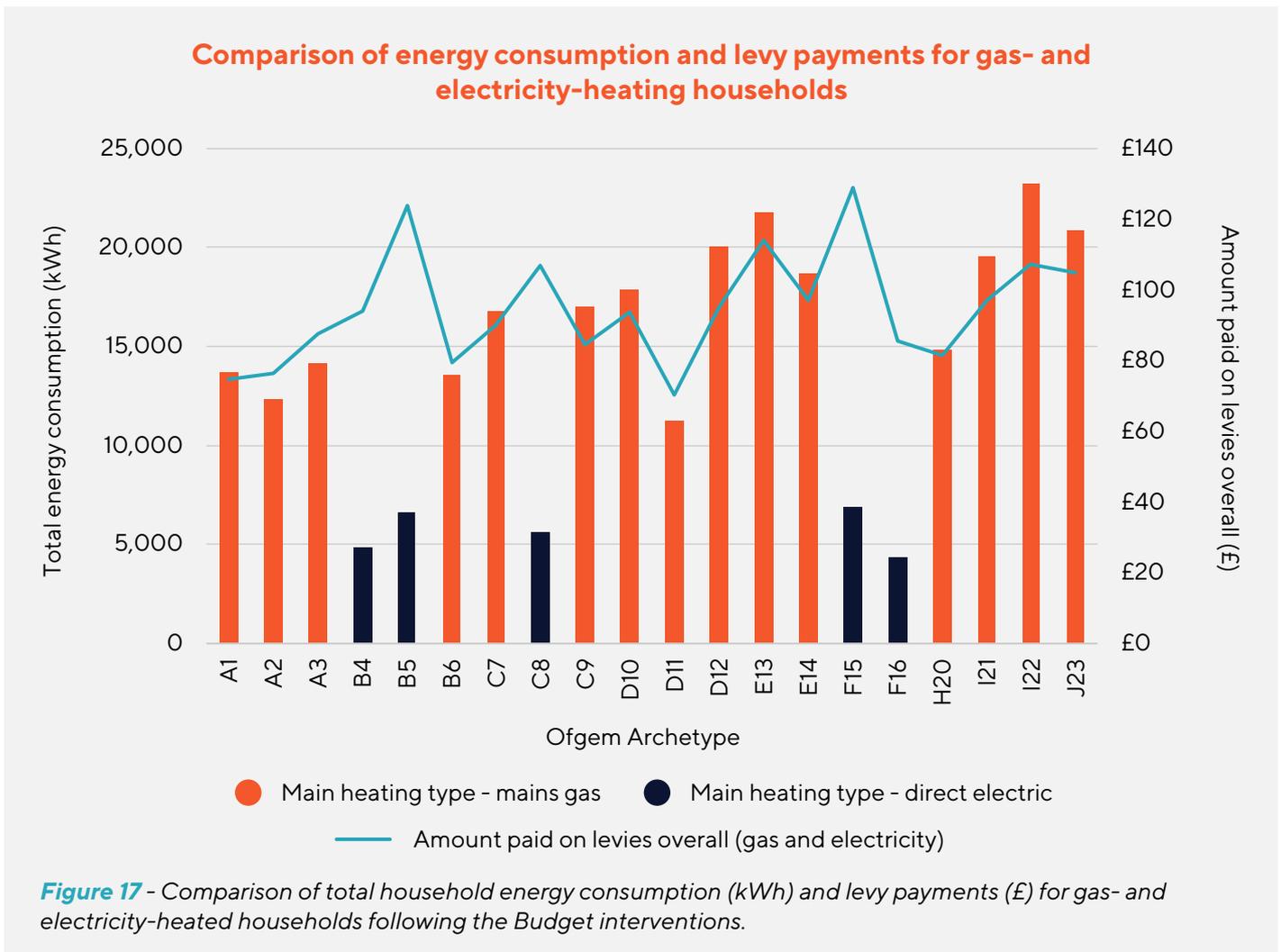


➔ Impact on households heated electrically

Households using direct electric heating would have benefited from the post-Budget interventions, as most of the savings are driven by the 75% subsidisation of the RO and the removal of ECO costs from electricity bills. As shown in Figure 13, these households would have saved between £150 and £250 in 2025 had the measures been in place.

Households using electricity as their main heating source tended to see larger savings from the post-Budget interventions than other archetypes in the same income group. For example, B5 households, which rely on electric heating, would have saved around £230 in 2025, compared with savings of approximately £140 for B6 households, whose main heating fuel is gas. A similar pattern is observed for archetype C8, which also shows higher savings than comparable gas-heated archetypes C7 and C9. This reflects the fact that electricity-heated households were paying higher amounts in levies in 2025 and therefore benefit more from the partial subsidisation of the RO. These results indicate that the post-Budget interventions go some way towards correcting the imbalance created by the concentration of policy costs on electricity bills, though they do not fully resolve it.

As Figure 17 shows, despite these changes, a distortion still remains; direct electric households continue to have much lower overall energy consumption than gas-heated households yet still pay comparatively high amounts in levies. This indicates that while the post-Budget measures provide some relief, they do not fully address the underlying imbalance in how levies are applied across fuels.

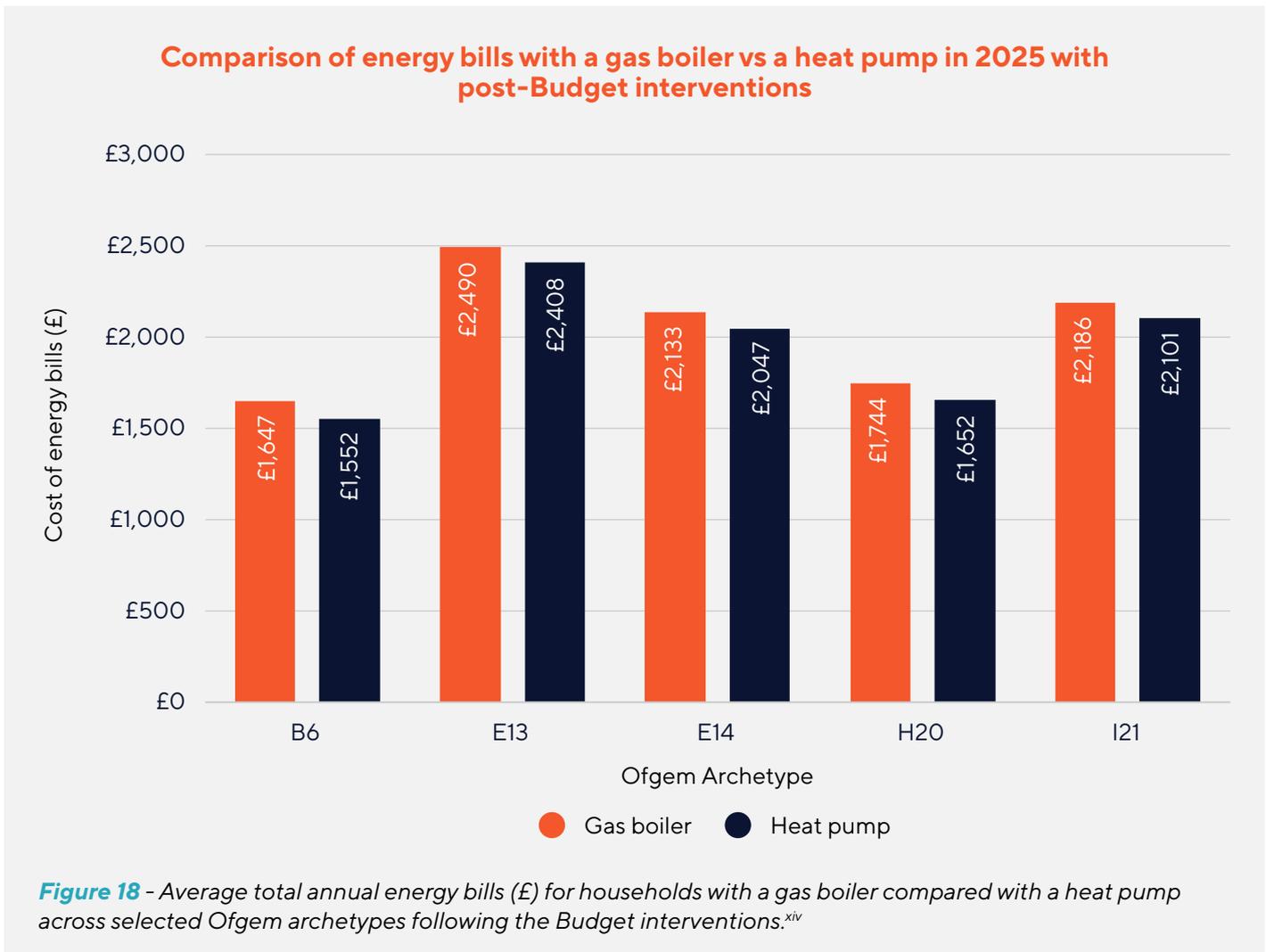


→ Impact on heat pump running costs

Across 2025, the electricity–gas spark gap averaged just over 4. Had the post-Budget interventions been in place, this gap would have fallen to around 3.6. While this represents clear progress, the spark gap would still have remained higher than in many European countries.⁸¹

Looking first at the impact on households already using heat pumps, the post-Budget interventions would have delivered meaningful bill reductions. Under these revised price conditions, households with heat pumps would have saved between £210 and £343 compared with their actual 2025 energy costs, reflecting the benefits of a narrower electricity–gas price differential.^{xiii}

Turning to the relative running costs of heat pumps and gas boilers under the post-Budget price framework, the economics also improve. Prior to the intervention, a heat pump operating at a SCOP of 3 had broadly similar running costs to a gas boiler and, for some archetypes, slightly higher overall bills. Under the post-Budget price conditions, this balance shifts in favour of heat pumps: every archetype modelled would have achieved lower running costs by switching from a gas boiler to a heat pump (SCOP 3), with annual savings of around £80–£95, as shown in Figure 18.



xiii. This comparison uses the same Ofgem archetypes as set out in Section 1: Impact of levies on heat pump running costs and assumes that households previously heated by gas had transitioned to a heat pump (SCOP 3). All other household characteristics and energy demand profiles are held constant.

xiv. Modelling assumes (1) a gas boiler efficiency of 85%, (2) a heat pump seasonal coefficient of performance (SCOP) of 3, (3) that household gas demand is used for space and water heating only, and (4) that the gas standing charge (and gas meter) is removed when switching to a heat pump. All costs are calculated using 2025 price cap energy prices and archetype-specific demand profiles.

Furthermore, even with a SCOP of 2.8, every archetype would have saved at least some money switching to a heat pump from a gas boiler had the post-Budget interventions been in place in 2025 (Figure 19).



While this analysis shows that the post-Budget interventions are a positive first step towards financially incentivising heat pump uptake, it is important to note that additional levies and rising network costs are going to be added to bills from 2026, including the levy to support new nuclear capacity, which wasn't included in this analysis. In addition, the subsidisation of the RO is set to end in March 2029. This means that the savings observed here may not persist in the future under the current funding approach. This makes the case for further, permanent levy reform, including a fundamental rethink of how social and environmental levies and wider policy costs are funded.

SECTION 3

Full levy reform: permanently funding electricity levies through general taxation

The MCS Foundation's position is that the fairest way to cut energy bills, support low-income households and incentivise electrification is to permanently fund all social and environmental levies from domestic electricity bills through general taxation.

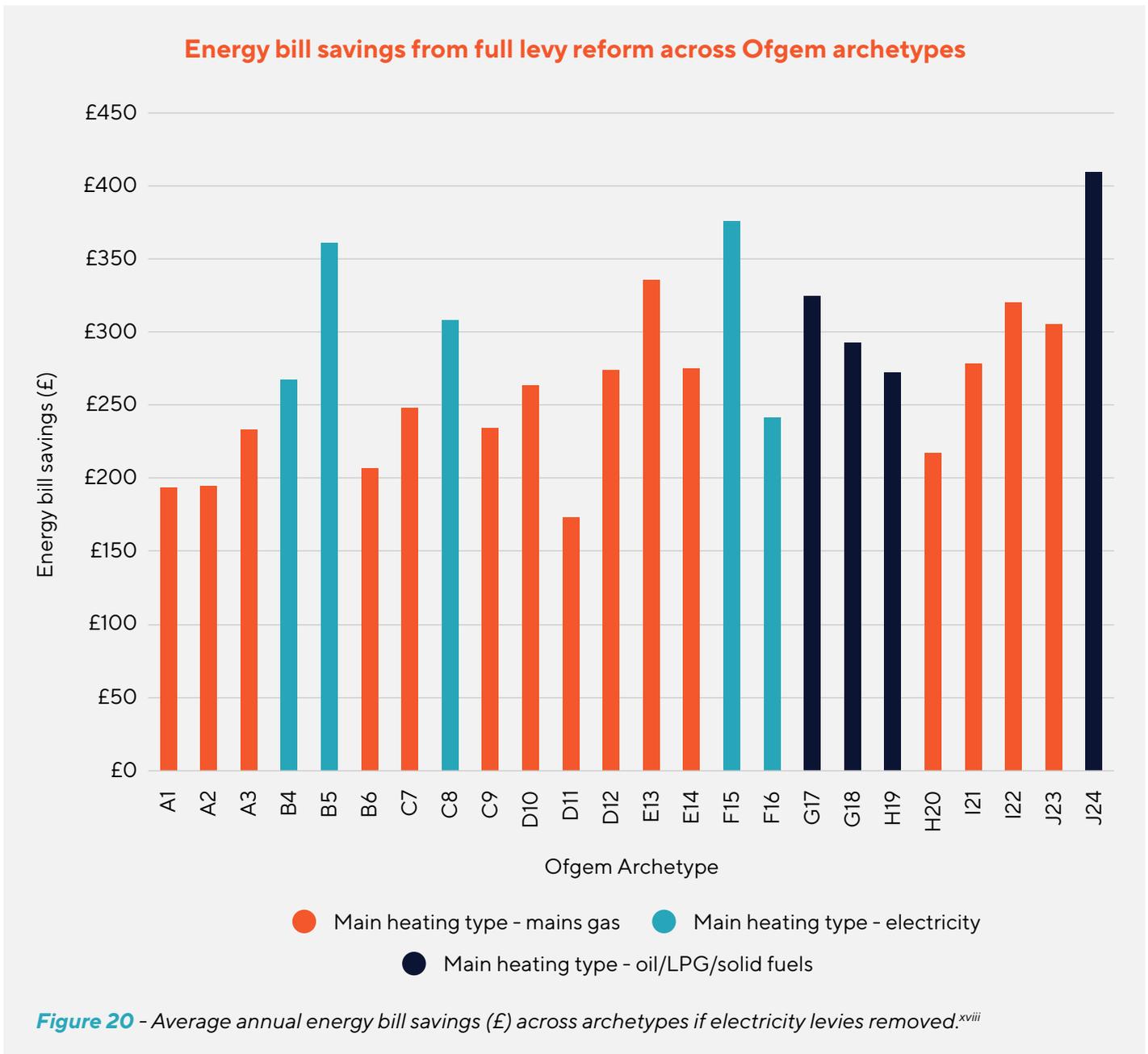
This would go beyond the partial funding of the RO and extend to all Ofgem policy costs, including the WHD, FiT, Assistance for Areas with High Electricity Distribution Costs, Network Charging Compensation, the remaining 25% of the RO, and any future levies such as the Nuclear Regulated Asset Base levy. This section analyses the effect of removing all policy costs from electricity bills using the same 2025 price data, to illustrate the additional benefits this approach could deliver.^{xv}

KEY FINDINGS

- 1.** Full levy reform would have delivered substantially larger bill reductions than the post-Budget interventions alone, with annual savings of £170–£410, at an estimated fiscal cost of just under £5.7 billion.
- 2.** This approach would improve fairness by reducing the share of net income that low-income households spend on policy levies to close to zero, addressing a key regressive feature of the current energy pricing structure.
- 3.** Full levy reform would bring an additional low-income archetype below the fuel poverty threshold and, when combined with existing targeted support schemes, would be sufficient to lift all lower-income archetypes below the fuel poverty line.
- 4.** Removing the remaining electricity levies would materially reduce running costs for households using heat pumps, delivering additional annual savings of £120–£185 beyond the post-Budget package.
- 5.** Under this scenario, heat pumps reach cost parity with gas boilers at efficiencies as low as 2.5 (SCOP), and deliver annual savings of £147–£165 at a SCOP of 3.
- 6.** Full levy reform would significantly strengthen the economics of electrification and, alongside the BUS, can deliver lifetime cost parity between heat pumps and gas boilers. However, ensuring heat pumps remain cost-competitive in a subsidy-free future will require complementary reforms, including progress on REMA.

xv. The results presented in this section include savings from the removal of ECO from gas bills.

Figure 20 shows that every household would have benefited further from all electricity levies from bills being paid for through general taxation in 2025. Under this scenario, households would have saved between £170 and £410 in 2025, compared with savings of £115 to £265 under the Government’s post-Budget interventions alone – an increase by around 50%. Furthermore, around a third of Ofgem archetypes, totalling more than 5.8 million households, would have saved more than £300 in 2025, consistent with the Government’s target. Funding all these levies in 2025 for just under 27 million households^{xvi} would have cost the Treasury just under £5.7 billion, according to our calculations.^{xvii} Without the presence of ECO, this number would have been just under £4.8 billion.



xvi. Total households based on the Ofgem archetypes equals 26,982,631.

xvii. This includes the cost of funding ECO which was in place in 2025.

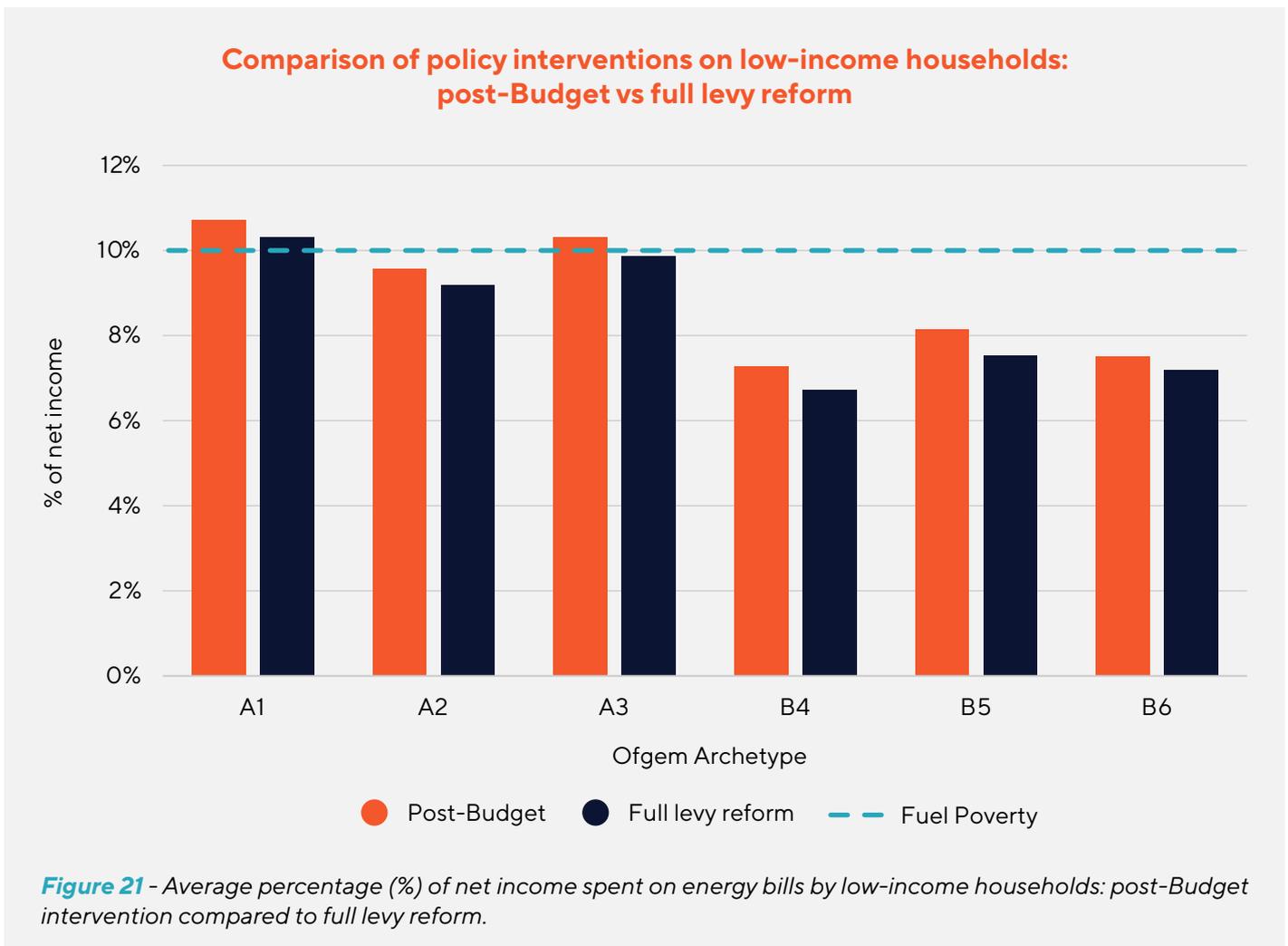
xviii. Savings reflect the removal of policy costs from electricity bills and the removal of ECO from gas bills, together with the associated 5% VAT charged on these amounts.

→ Impact on low-income households

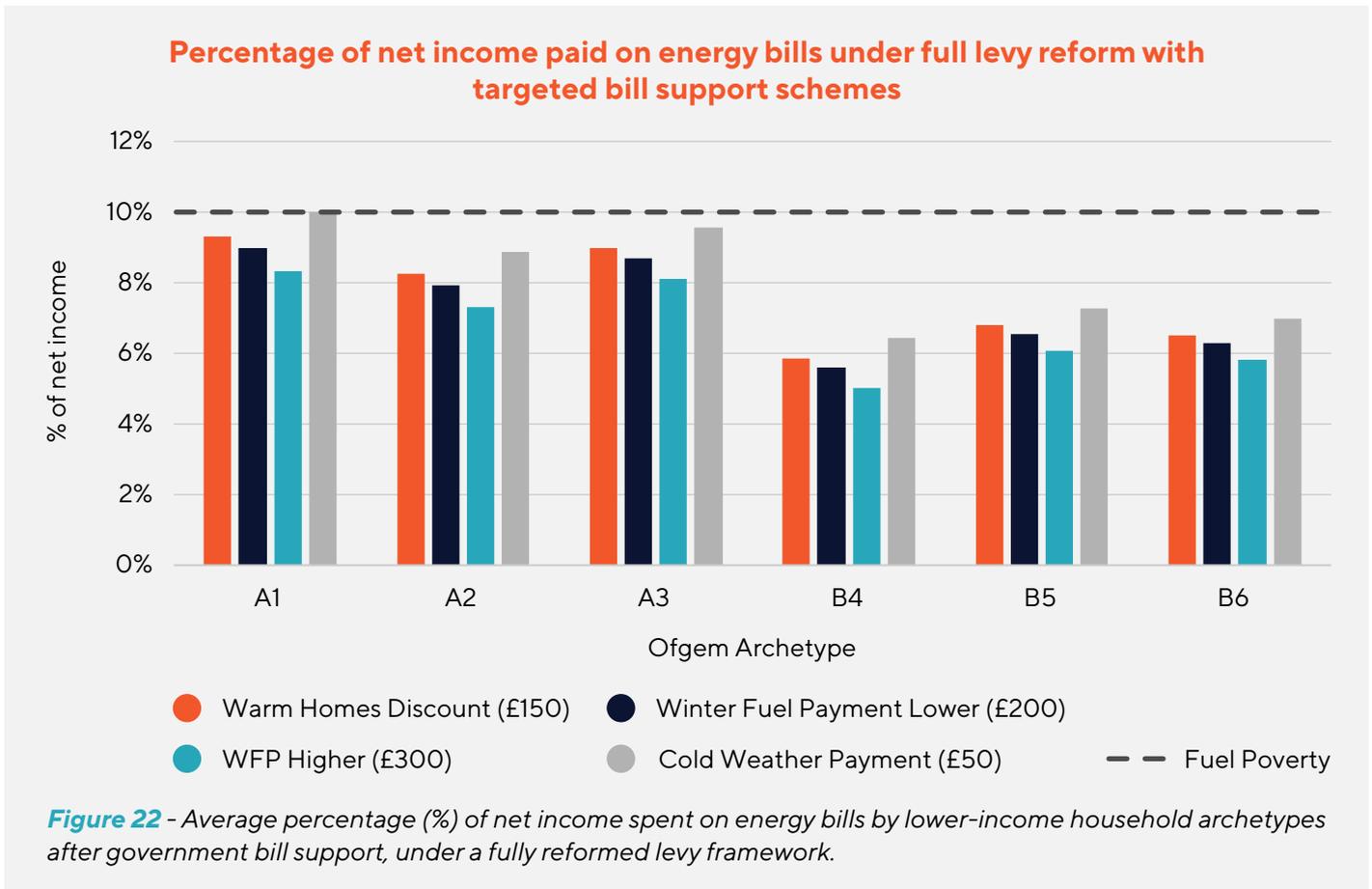
In 2025, lower-income households spent a higher share of their net income on social and environmental levies than higher-income households. Among the lowest-income Ofgem archetypes, levies accounted for around 0.97–1.66% of net income. This exceeds the proportion of net income that these households typically spend on bread, rice and cereals, illustrating the scale of the burden that policy costs have placed on households least able to absorb it.

Had the post-Budget interventions been in place, this share would have decreased to around 0.36–0.60% of net income. Under full levy reform, this falls close to zero (around 0.00–0.10%), and the structural unfairness of how policy levies are funded is effectively removed. Recovering electricity policy costs through general taxation replaces charges that are applied uniformly through bills with contributions linked to income. This means higher-income households bear a greater share of the cost, while those on the lowest incomes—including households outside the tax system—are no longer required to contribute. This is notable given that some low-income households contribute to schemes such as the WHD via electricity levies, despite being the intended recipients of that support.

Moreover, funding the remaining electricity levies through general taxation would have resulted in a further archetype (A3) being brought below the fuel poverty threshold, while households in archetype A1 would also see a modest additional improvement, with the share of net income spent on energy falling by around 0.4% - from 10.7% to 10.3%, as shown in Figure 21.



However, the results also show that full levy reform alone would not be sufficient to eliminate fuel poverty completely. Some households—particularly from archetype A1—would likely remain just above the threshold without additional support. Figure 22 illustrates that when levy reform is combined with any one of the existing support schemes, all lower-income archetypes would have been brought below the fuel poverty line. This highlights the importance of continuing targeted assistance for the most vulnerable households, until further reforms can be implemented which also reduce the cost of electricity, such as REMA.



➔ Impact on households heated electrically

Removing all policy costs from electricity bills would have had a significant impact on households using direct electric heating. As shown in Section 1, these households paid a high share of levies relative to their overall energy consumption in 2025 but, under a full levy reform scenario, would not have paid any policy costs.

As Section 2 showed, households using electricity as their main heating fuel do benefit from the post-Budget interventions. However, the analysis also demonstrated that even after these changes, direct electric households continue to pay a disproportionately high share of policy levies compared with their overall energy use. Full levy reform therefore goes substantially further in addressing this imbalance. Compared with what they actually paid in 2025, direct electric households would have seen a clear reduction in the share of net income spent on energy, as illustrated in Figure 23. Across all archetypes, this reduction is substantial, exceeding one percentage point in most cases. For example, for archetype B5, the share of net income spent on energy would have fallen by around 1.75%, equivalent to approximately £361 per year.

This implies that electricity levies are a key driver of high energy costs for direct electric households, and that their removal would materially reduce the financial burden faced by this group. Given that households relying on electric heating are around twice as likely to experience fuel poverty,⁸² full levy reform would play an important role in easing cost pressures for those most exposed to high electricity prices.

Impact of removing electricity levies on energy affordability for direct electric households

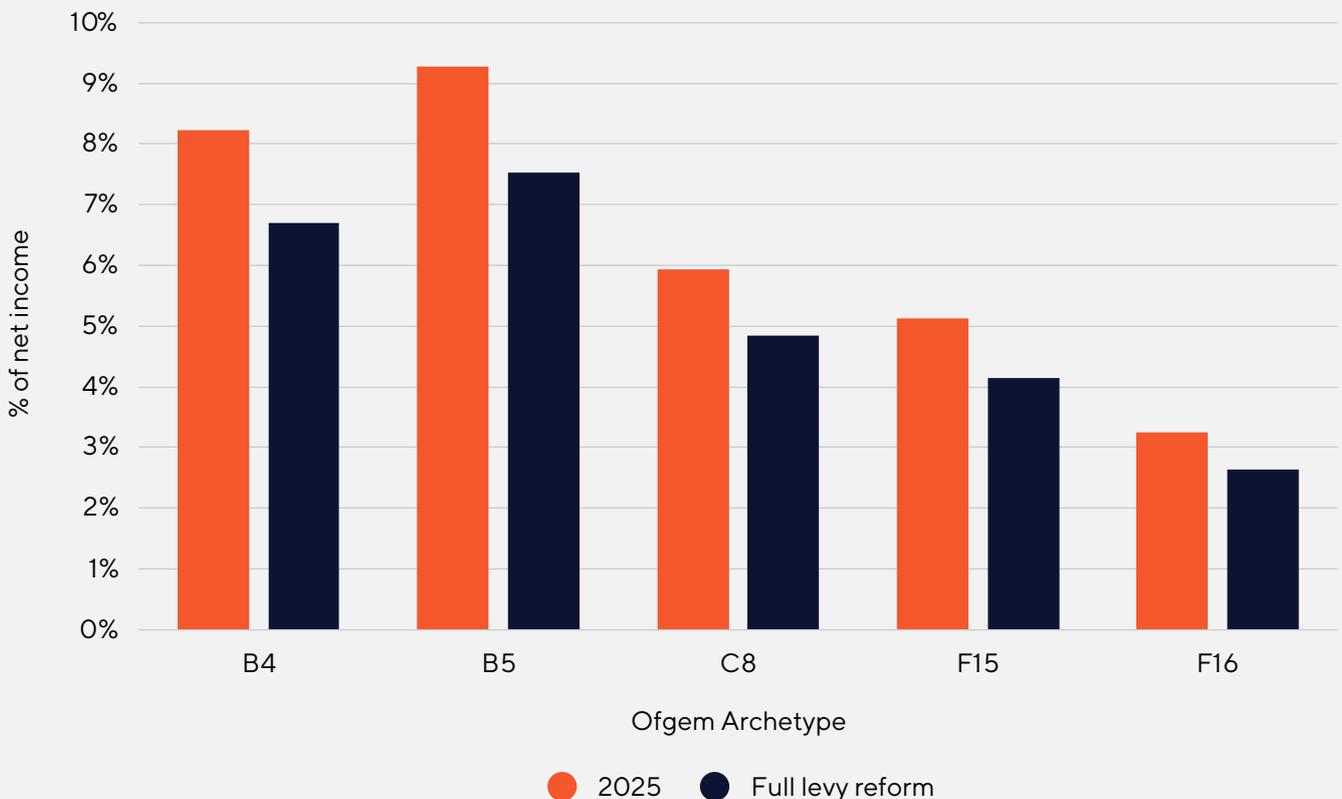


Figure 23 - Comparison of the percentage (%) of net household income spent on energy bills for households with electric heating in 2025 and under a fully reformed levy scenario.

→ Impact on heat pump running costs

When interpreting the impact of full levy reform on heat pump running costs, it is important to recognise that the Government has already committed to removing ECO. As ECO has historically been recovered from both electricity and gas bills, its removal reduces costs for both fuels. This moderates the relative effect of further electricity levy reform on the electricity–gas price differential. Nevertheless, households transitioning to a heat pump would still have benefited materially from the removal of the remaining electricity levies in 2025. Funding these levies through general taxation would have reduced the electricity–gas spark gap to 3.4, compared with 3.6 under the post-Budget proposals alone (based on 2025 prices). Under this scenario, households with a heat pump would have saved between £330 and £530 per year relative to what they would have paid in 2025 with no interventions.

By comparison, under the post-Budget interventions alone, households with a heat pump would have saved between £210 and £343 per year relative to 2025 prices. Removing the remaining electricity levies would therefore have delivered an additional £120–£185 in annual savings beyond the post-Budget package.

Looking specifically at the relative running costs of heat pumps and gas boilers under this proposal, full levy reform also provides further benefits. For a heat pump operating at a SCOP of 3, households switching from a gas boiler would see annual bill savings of £147–£165 across the archetypes modelled. Compared with the post-Budget framework alone, this represents an additional £65–£70 per year in savings relative to a gas boiler. For higher-performing systems (SCOP 4), annual savings increase to £300–£410, as shown in Figure 24.

Cost savings of a heat pump vs a gas boiler at different efficiencies under full levy reform

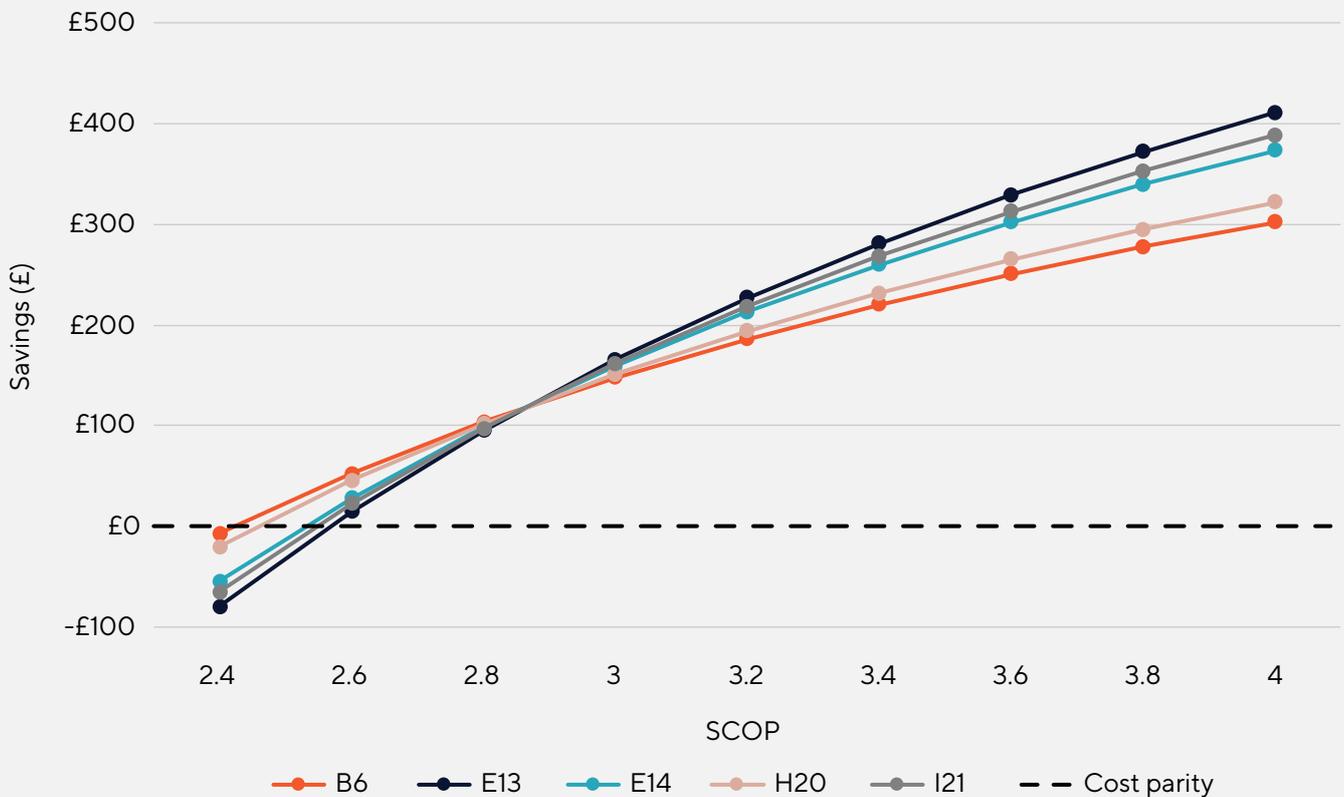


Figure 24 - Average annual cost savings (£) of a heat pump compared to a gas boiler at varying efficiencies (SCOP: Seasonal Coefficient of Performance) under full levy reform.

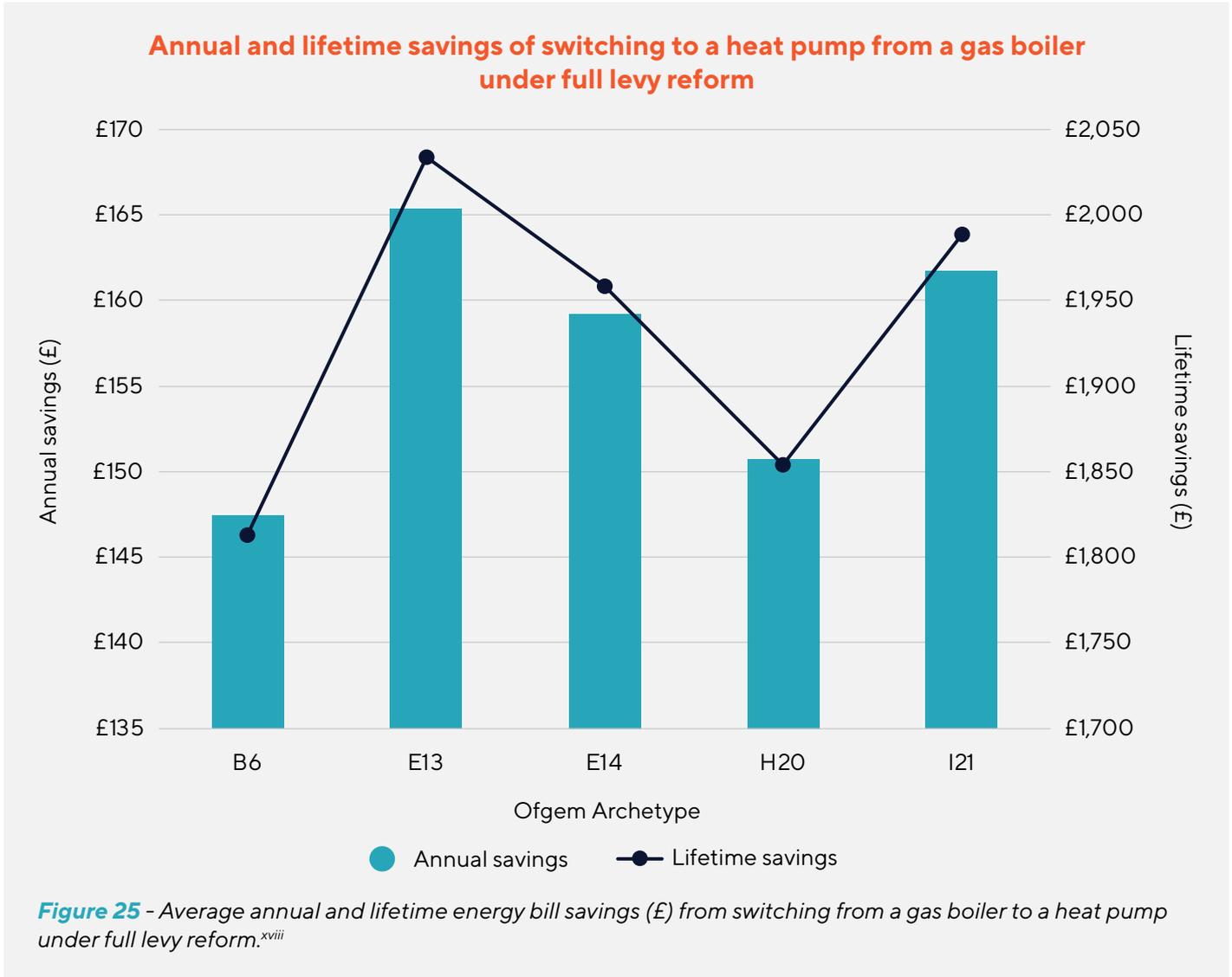
Importantly, under this reform scenario, heat pumps reach cost parity with gas boilers at efficiencies as low as SCOP 2.5. This indicates that removing the remaining electricity levies would effectively ensure that households either save money or, at a minimum, reach cost parity with a gas boiler, even at relatively low system efficiencies. This is particularly relevant for high-temperature heat pumps, which typically operate at slightly lower seasonal efficiencies but can be installed in harder-to-heat properties, and may reduce upfront costs by avoiding extensive upgrades.⁸³

This finding is especially important as heat pump deployment accelerates across social housing and lower-income households, where it is essential that low-carbon heating technologies not only decarbonise but also reduce energy bills. Furthermore, with this baseline established from levy reform, further savings can be achieved when heat pumps are combined with fabric efficiency improvements, battery storage, solar PV, and effective use of time-of-use tariffs—an approach highlighted in the Government’s Warm Homes Plan, which emphasises the opportunities from whole-home electrification and consumer-led flexibility.⁸⁴



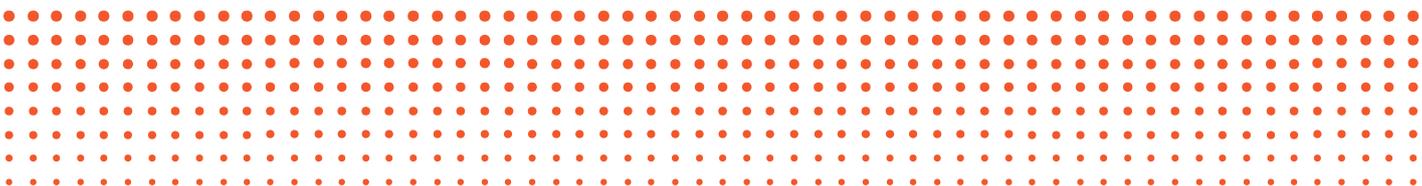
This analysis shows that full levy reform also helps to address the higher upfront installation cost challenge. Figure 25 presents annual and lifetime savings for a heat pump with a SCOP of 3 compared with a gas boiler under this pricing scenario. Across all archetypes, lifetime savings over a 15-year lifespan are approximately £1,800–£2,000.

In 2025, the average installed cost of a heat pump under the BUS was around £12,500.⁸⁵ After accounting for the £7,500 grant, this leaves a net upfront cost of approximately £5,000. While exact gas boiler installation costs are difficult to establish, one estimate places the cost of installing a new combi boiler at between £1,600 and £6,000, with an average of around £3,800.⁸⁶ Under these conditions, levy reform combined with the BUS can deliver lifetime cost parity – and modest net savings – across the archetypes analysed. However, this outcome is contingent on installation costs and the continuation of subsidy support.



Consistent with wider evidence,^{87,88} these findings show that while removing the remaining electricity levies would provide an immediate and sensible boost to the economics of heat pumps, additional reforms will be needed to ensure lifetime cost parity can be maintained in a subsidy-free scenario.

These include progress on REMA, better use of low-carbon system flexibility (including consumer-led flexibility),⁸⁹ and reducing the UK’s continued reliance on volatile and expensive gas.



xix. Heat pump with a SCOP of 3.

Conclusions and recommendations

This report has compared household energy costs under three scenarios: first, what households actually paid in 2025 under the levy structure in place at the time; second, what households would have paid had the Government's post-Budget interventions been in place; and third, what households would have paid if all remaining electricity levies were removed from domestic bills. These were tested using Ofgem price cap data to understand the impacts on three key groups: low-income households, households using electric heating, and households transitioning from a gas boiler to a heat pump. While the analysis is grounded in 2025 data, indicative checks using first-quarter 2026 price cap data show that the same underlying patterns persist, suggesting that the findings reflect structural features of the current levy framework rather than conditions specific to a single year.

The results demonstrate that the levy system in 2025 was fundamentally unfair. Low-income households paid a disproportionately high share of their net income on social and environmental levies, with five of the lowest-income Ofgem archetypes paying a greater share than is typically spent on bread, cereals and rice. Three archetypes, equivalent to over 2.3 million households, spent over 10% of their net income on energy, falling within the definition of fuel poverty. The analysis also showed that the system was particularly punitive for households using direct electric heating, who, despite having lower overall energy consumption, faced high levy payments due to the concentration of policy costs on electricity. Finally, the results show that under the 2025 pricing structure, cost parity between heat pumps and gas boilers was achievable for most archetypes at a SCOP of 3.0, with some households realising small savings at this level. However, outcomes varied across archetypes, meaning that savings were not consistent for all households. This indicates that while the 2025 pricing structure supported cost parity in some cases, further reform is needed to strengthen the economic incentive to switch and guarantee savings for all households.

The Government's post-Budget interventions were found to have a positive impact across all three groups. Low-income households saw the share of income spent on levies and subsequently energy bills fall, with one archetype brought below the fuel poverty threshold. Across comparable income groups, direct electric households generally saw higher savings than gas-heated archetypes, reflecting the positive impact on these households of a narrower electricity-gas price differential. Heat pump users would have saved £210–£343 relative to what they paid under 2025 prices. In addition, under the post-Budget pricing framework, heat pumps would have achieved cost parity with a gas boiler at a SCOP of 2.8, with savings of around £80–£95 per year across the archetypes modelled for a heat pump with a SCOP of 3. These measures therefore represent a clear step in the right direction.

However, the Autumn Budget 2025 interventions are not a permanent solution. The partial funding of the RO through general taxation is time-limited, with current plans for these costs to return to electricity bills in April 2029. At the same time, electricity network costs are predicted to rise, whilst other levies, including the Nuclear Regulated Asset Base levy, are being added to electricity bills from April 2026. Without further reform, the benefits delivered by the post-Budget measures are therefore unlikely to be sustained. This reinforces the case for permanent levy reform, ensuring that essential social and environmental policy costs are funded in a way that is fair, durable, and aligned with long-term electrification.

Against this backdrop, the final scenario—funding the remaining electricity levies through general taxation—delivers the strongest and most consistent benefits across all three groups. Low-income households see further reductions in the proportion of income spent on energy, with an additional archetype brought below the fuel poverty line. Households with electric heating would no longer pay

any social and environmental levies, with most archetypes seeing the share of net income spent on energy fall by at least one percentage point, and in some cases by more. Households operating a heat pump would have saved between £330–£530 per year compared with what they would have paid under 2025 prices with no intervention. When comparing heat pump running costs directly with those of a gas boiler, the reforms also strengthen the relative economics of electrified heat. For a heat pump operating at a SCOP of 3, households switching from a gas boiler would have achieved annual bill savings of £147–£165 across the archetypes modelled. Moreover, cost parity with a gas boiler can be achieved even at SCOP 2.5 for some archetypes. This has the potential to open up opportunities for high-temperature heat pumps, which typically operate at slightly lower seasonal efficiencies but may reduce the upfront cost of the install.

Finally, the analysis shows that levy reform would significantly strengthen the economics of heat pumps and, alongside the BUS, enable lifetime cost parity with gas boilers. However, sustaining this position without ongoing subsidy support will require wider reform of electricity market arrangements, greater deployment of low-carbon flexibility, and continued investment in renewables to reduce exposure to volatile gas prices. Moreover, levy reform alone will not be sufficient to fully address fuel poverty, strengthening the case for further reform.

The overarching conclusion of this report is that while the 2025 Autumn Budget interventions represent a meaningful step towards addressing the impacts of the current levy framework, fully reforming how social and environmental policy costs are funded would go further and deliver more consistent benefits. The analysis shows that funding these costs through general taxation would provide stronger and more uniform improvements in affordability for lower-income households, reduce costs for households using direct electric heating, and further strengthen the economic case for heat pumps. Unlike the post-Budget measures, this approach would provide a permanent solution by ensuring that all existing and future social and environmental electricity levies are funded through general taxation, rather than being recovered through electricity bills.

KEY IMPLICATIONS AND RECOMMENDATIONS FOR THE UK GOVERNMENT:

- **Permanently fund electricity levies through general taxation.**

This would remove regressive charges from bills, align costs with ability to pay, and reduce the spark gap, helping incentivise the switch to heat pumps.

- **Use levy reform to support electrification, not delay it.**

Narrowing the spark gap is essential to give households confidence that switching to clean heat will reduce running costs.

- **Continue targeted bill support alongside structural reform.**

Levy reform alone will not eliminate fuel poverty; targeted schemes remain necessary while broader market reforms take effect.

- **Accelerate wider electricity market reform (REMA) and flexibility measures.**

Long-term affordability depends on reducing exposure to gas prices and better reflecting low-cost renewable generation in consumer bills.

The current levy framework is regressive, disadvantages more vulnerable households, and is holding back the transition to clean heating. While recent Government measures provide welcome short-term relief, they do not offer a permanent or structural solution. Fully funding electricity levies through general taxation would deliver fairer outcomes, reduce fuel poverty risk, and significantly strengthen incentives to adopt heat pumps—supporting both social objectives and the UK’s net zero commitments.

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