

ENERGY AND INFRASTRUCTURE

Do Low-Income Earners Have Access to
Energy Efficient Homes in Leeds?

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Abstract

This report examines the critical tension between the UK’s housing market and current net-zero initiatives, specifically the accessibility of energy-efficient housing for low-income earners. Its focus is on Leeds, a city home to some of the oldest and most energy-inefficient housing stock in the country, which simultaneously has an ambitious net-zero target. This report asks the question of how effective current policy frameworks are in making energy-efficient housing available to low-income earners in Leeds. Leeds faces a significant, multi-faceted challenge. Its housing stock fails to reach both national and regional averages for age and energy-efficiency, with 37% of housing stock having been built before 1945. Retrofitting all homes to a net-zero standard is estimated to cost the city over £600 million. This inefficiency is directly contributing to fuel poverty which currently affects 16% of Leeds households, drawing low-income residents into a cycle of high energy costs and poor health outcomes. Our analysis critiques the local and national retrofit strategies currently being implemented. While Leeds City Council has demonstrated leadership through area-based, socially-targeted schemes in deprived areas such as Armley, efforts are undermined by short-term, fragmented national funding and a narrow eligibility criteria. A quantitative analysis of Leeds housing data from 2011-19 reveals a stark reality: a statistically significant correlation between higher energy efficiency and higher property prices. A 1-point increase in an area’s energy efficiency score is associated with an increase of between £6 and £22 per square metre in prices. As the above graph shows, this is hundreds of pounds per m2, adding up to an extra £15,000 - £49,000 for the average terraced house with an energy efficiency rating of B when compared to houses with a rating of D, which is up to 3 times the average first-time buyer deposit in Yorkshire. When combined with inconsistent standard enforcement and the performance gap of EPC ratings, this premium creates a formidable financial barrier, effectively pricing low income households out of the most efficient of homes and limiting their mobility. To transform ambition into reality, policies must move beyond the current narrow technical focus and towards a more holistic, enforceable and socially intelligent approach. By adopting these recommendations, national and local policymakers can begin to dismantle the barriers which inhibit low income households from the benefits of the green transition and can begin rebuilding a framework that ensures energy-efficient housing is not just a luxury for the few, but a right for all. These changes will help Leeds and the rest of the UK to meet net-zero targets and to do so in an equitable manner. Whilst significant financial and governance barriers exist, entrenching inequality and undermining environmental goals, this report proposes targeted and actionable policy recommendations which aim to bridge this gap.

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Policy Recommendations:

- 1. Establish Community Retrofit Hubs in High-Deprivation Neighbourhoods:** Proposing that Leeds City Council, in partnership with the West Yorkshire Combined Authority, establish a network of Community Retrofit Hubs - face-to-face support centres located directly within high-deprivation neighbourhoods, including Holbeck, Armley, Harehills and New Wortley. This hub must go beyond simply providing information to actively facilitating the end-to-end process: conducting household energy assessments, identifying and applying for grant funding on behalf of residents, coordinating with accredited installers, and providing post-installation follow-up. This hub model directly addresses the administrative friction and cognitive burden that have hitherto disproportionately weighed on low-income households.
- 2. Mandate a Fabric-First Approach in the Warm Homes Plan, with Ring-Fenced Insulation Funding:** Proposing that Leeds City Council formally urge the central government to provide a ring-fenced budget for insulation within the Warm Homes Plan, separate from the green technology fund covering heat pumps and solar panels, to prevent insulation from being sidelined by higher-cost technologies.
- 3. Adopt a Phased Delivery Trajectory: 2030 for Priority Stock, 2035 for Broader Private Rented Sector (PRS):** This report recommends that Leeds City Council, in collaboration with the West Yorkshire Combined Authority, advocate for a phased, differentiated approach to local and national retrofit planning. A credible policy framework must distinguish between political ambition and operational delivery capacity, particularly as the West Yorkshire retrofit sector, although growing, with Leeds accounting for 46.5% of the region's annual retrofit turnover of £1.9 billion, remains constrained by supply chain capacity and a shortage of skilled labour.
- 4. Strengthen Enforcement of Minimum Energy Efficiency Standards in the Private Rented Sector:** Leeds City Council must allocate dedicated resources to its housing standards team to carry out proactive and systematic inspections of compliance with the Minimum Energy Efficiency Standards (MEES).

- 5. The PRS Database and Ombudsman for Energy Efficiency Accountability:** The establishment of the Private Rented Sector (PRS) Landlord Database and the PRS Landlord Ombudsman presents an opportunity to institutionalise energy efficiency accountability:
- **Proactive Use of EPC Data:** As the PRS Database will require the inclusion of energy performance certificates, Leeds City Council must not allow this data to remain dormant. The Council must use this database as a proactive targeting tool to automatically identify non-compliant properties, thereby closing the information asymmetry that has long protected negligent landlords.
 - **Expansion of the Ombudsman's Mandate:** The PRS Ombudsman, which will become mandatory for landlords to join by 2028, must explicitly include MEES breaches within its mandate. This is crucial given the government's ongoing consultation to raise MEES standards to EPC Band C by 2030. Integrating these standards into the Ombudsman's mandate will empower low-income tenants to demand improvements to their homes' thermal conditions without fear of retaliatory eviction.
- 6. Adopt a 'Fabric-First' Framing in Leeds' Affordable Housing Policy:** The analysis of this report shows that the energy efficiency premium of up to £21/m² implicitly excludes low-income households from energy-efficient housing. Leeds City Council must therefore establish a policy requiring all new affordable housing units delivered through Section 106 agreements and Homes
- 7. Commission a Fair Funding Review for Fuel Poverty Allocations to Leeds:** Leeds City Council and WYCA should submit a formal representation to the central government calling for a Fair Funding Review for Fuel Poverty in the model of the government's recent review into council funding. This review must ensure that funding allocations under the Warm Homes Plan are weighted according to local energy poverty rates, the number of households, and the age of the housing stock, rather than based on the applicant's organisational structure (consortium versus independent authority). This reform will address the systematic bias against large city centres that have significant but dispersed needs.
- 8. Simplify Grant Access and Mandate Multi-Year Funding Commitments:** Leeds should adopt a pre-approval mechanism and automatic enrolment by cross-referencing council tax data, benefits data and EPC ratings to proactively identify eligible households. This approach reduces the administrative burden on the most vulnerable households and aligns with the principle of procedural justice, ensuring that support reaches those most in need without having to navigate obstructive bureaucracy.

Introduction

This report considers what is arguably one of the weakest links in the UK's housing strategy. At the intersection of the UK's net zero efforts, the Labour government's housebuilding target, and rising inequality, our question is whether policymakers can provide energy-efficient housing for low-income earners. We focus specifically on the relevance of this issue within the Leeds housing market for a variety of reasons. Firstly, as Leeds Policy Institute is based in the city, this report is relevant to the Institute's local environment, and the authors' pre-existing knowledge of this area also enhances our insight into Leeds' housing challenges.

Secondly, Leeds' housing stock is some of the oldest in the country, and falls short of the UK average in measures of energy efficiency. Finally, Leeds City Council, along with the wider West Yorkshire Combined Authority (WYCA), is one of the more active local authorities in tackling housing affordability and energy inefficiency. It is for these reasons that Leeds is a highly relevant city, both when studying the significance of this problem and when considering what initiatives local governments could implement to tackle it.

To explore this problem, our report first establishes why energy efficient housing is a necessity to contextualise the challenges facing Leeds' housing stock. It then critically evaluates the current policy landscape, arguing that both national and local strategies often rely on a narrow "rational actor" model that fails to account for the complex social and relational realities of housing renovation.

Following this policy review, the report presents a quantitative analysis of the Leeds housing market, highlighting the association between higher energy efficiency ratings and higher property prices.

This suggests the existence of significant financial barriers to entry for low-income households. The analysis further highlights how these economic barriers are compounded by governance failures, particularly within the private rented sector, where enforcement of standards remains inconsistent

Finally, our report concludes with a set of policy recommendations aimed at bridging the gap between technical ambition and social reality, calling for a shift toward more holistic, enforcement-backed, and socially targeted interventions.

This report makes two distinct contributions. First, it critically reviews existing policies surrounding local and national retrofitting. Secondly, and centrally, it presents new quantitative analysis of Leeds housing market data from 2011 to 2019. Using property transaction records and Energy Performance Certificate (EPC) data, we test whether energy-efficient homes carry a price premium that prices out lower-income households from access. This analysis is the empirical foundation for our policy recommendations.



The Need for Energy Efficiency

Firstly, we must establish why energy-efficient housing is so important in the UK. The UK has a legally binding target to reach net zero emissions by 2050, and housing is a particularly important component in meeting that target, responsible for 67% of total building emissions in the UK (DESNZ, 2024). Because of this, the UK government has pledged to ensure that all fuel-poor homes have at least a band C Energy Performance Certificate (EPC) rating by 2030, aspiring for as many homes as possible to be classified as band C by 2035 (Bolton, 2025). Notably, thus far, significant national progress has been made towards these goals, evident through an increase from 12% in 2010 to 52% in 2022 in the percentage of homes with an energy efficiency rating of band C or higher (see Figure 1) (Bolton, 2025).

Whilst progress has been made, this report goes on to discuss plans for continued advancement towards energy efficiency. At a local level, energy inefficiency is a particularly pressing issue in Leeds. As mentioned, the city has some of the oldest housing stock in the country with 37% built before 1945 and 36.8% built between 1945 and 1982 (Bullock, 2025). This correlates with the efficiency of housing as, on average, buildings in Leeds are less energy efficient than throughout the rest of the UK.

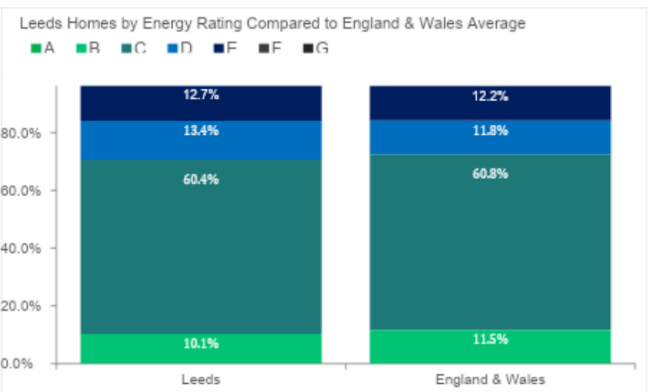
Table 1: The age and condition of housing in the city of Leeds (Bullock, 2025)

Age of Dwellings	Number	%
Pre-1919	64,840	17.70%
1919-44	70,950	19.30%
1945-64	71,070	19.40%
1965-82	64,070	17.50%
1983-99	33,280	9.10%
Post 1999	62,710	17.10%
Total	366,920	100.00%
Unknown	7,080	
Grand Total	374,000	

As the third largest Metropolitan District in the UK and the administrative and employment centre of the Yorkshire and the Humber region (Meegan, 2015), Leeds, like many major cities, has a large volume of older housing. Around 19,500 pre-1919 back-to-back houses are still in use, predominantly located in poorer neighbourhoods and assigned with an energy efficiency rating below the national average (Leeds City Council, 2022).

In addition to this, 53.9% of Leeds’ housing stock has an energy rating of C and above, compared with 54.9% recorded in England and Wales. Whilst this difference may seem minute, when examined alongside other major northern cities such as Manchester (60.9% band C or higher) (Plumplot, 2023b), Newcastle (65.4% band C or higher) (Plumplot, 2023c) and Sheffield (61.3% band C or higher) (Plumplot, 2023d), it becomes clear that significant improvements must be made for Leeds to match its northern counterparts.

Figure 1: Buildings in Leeds have worse energy efficiency than the UK average (Plumplot, 2023a)



Notes: A = 0.2% in both Leeds and England & Wales; F = 2.5% and 2.6% in Leeds and England & Wales respectively; G = 0.7% and 0.8% in Leeds and England & Wales respectively.

This housing inefficiency also has a serious impact on carbon emissions and household affordability, as well as on Leeds’ potential to reach its ambitious target of Net Zero by 2030. Improving the efficiency of housing stock is not a cheap or simple process. Making all the city’s housing net zero by 2030 is expected to cost £2.6 billion in the most cost-effective scenario (Gouldson et al., 2020, p.15), equivalent to £520 million every year. With Leeds City Council’s annual budget at just £2.9 billion for 2026-2027, with expected cuts to balance revenue and expenditure (Leeds City Council, 2026a), it is apparent that without significant national support or private sector involvement, housing will remain a large contributor to the city’s emissions.

While the council has committed to invest £100 million by 2025, this represents less than 4% of the total cost, and the council’s latest climate report explicitly highlights “a lack of long-term support” from the national government (Cook, 2023, p.71). These figures illustrate the enormity of the task, but should not suggest that fuel poverty in Leeds is an unavoidable and inevitable problem.

Instead, they should strengthen the normative case for sustained, holistic, and well-informed policy, particularly in a city which is nationally recognised for its leadership in delivering transformative energy-efficiency improvements (Leeds City Council, 2022).

Existing Retrofitting Initiatives

Local Schemes

Now that we have established the need for energy-efficient housing, we must examine existing support to build or refit homes and evaluate whether these are accessible for low-income households. Leeds City Council delivers a combination of locally designed and nationally funded energy-efficiency programmes aimed at improving both new builds affected by construction-related energy inefficiencies and older, persistently inefficient housing stock, while reducing fuel poverty. The Executive Member for Climate, Energy and the Environment states that tackling the heat inefficiency of homes “helps household finances, improves our health, and is good for the planet too” (Leeds City Council, 2024a), identifying the multiple benefits of this initiative.

A key strength of Leeds’ approach has been its use of area-based neighbourhood schemes, such as those in Holbeck and Armley. These schemes prioritised council housing in the first phase and subsequently generated a “snowball effect” in which private landlords and homeowners voluntarily joined retrofit works (Local Government Association, 2022). Alongside these place-based schemes, Leeds delivers targeted support for low-income and health-vulnerable households through programmes such as the Home Upgrade Grant (HUG) and Home Plus Leeds, which provide free or discounted insulation, heating upgrades and minor-energy efficiency improvements for eligible households including those with disabilities, long-term health conditions or low savings.

The Council also directs eligible households toward national schemes to improve household energy efficiency (Leeds City Council, 2026b). Previous retrofit projects have integrated important relational features, such as establishing local site offices to maintain a visible presence within neighbourhoods and employing contractors selected for their trusted community relationships and long-term engagement in the area. At a regional level, the West Yorkshire Combined Authority supports residents through the Home Energy Advice service, which provides free, trusted guidance and connects households with reliable, trusted suppliers offering financially-affordable options (WYCA, 2025a).

Socially- targeted approaches with an area-based focus are evident in the back-to-back retrofit of old housing stock in Armley, where many homes are more than a century old. The Cedars, for example, was selected for retrofit due to its **“comparatively high levels of deprivation, with an above-average proportion of residents living in fuel poverty”** (Leeds City Council, 2024b).

This strategy reflects Leeds’ attempt to target areas most affected by the energy-efficiency gap (Chaudhuri and Hauccha, 2023). Initiatives which tackle energy efficiency in the city are delivered through the Council’s use of national funding schemes (HUG, ECO, GBIS), alongside partnerships with contractors such as Everwarm Ltd, and organisations like Warmify.

Community intermediaries also play a key role in supporting the rollout and successful implementation of these schemes, helping to bridge the gap between technical policy design and the lived experience of residents. Leeds’ retrofit strategy exhibits several strengths, reflecting features of policy-in-practice that align with sociologically informed theories of retrofit.

The use of place-based, socially-targeted schemes directly responds to spatial patterns of deprivation and fuel poverty in the city, focusing interventions where they have the greatest impact. Past projects have shown that uptake improves when interventions are advertised as providing everyday benefits, comfort, health, and neighbourhood renewal, instead of focusing purely on technical efficiency measures (Local Government Association, 2022).

This identified correlation is consistent with wider literature which highlights the enhanced success of relational and social nuanced approaches that attend to lived experiences, household pressures and social differences (Bolton, et al., 2023; Middlemiss et al., 2024). Leeds’ focus on maintaining a visible community presence, through site offices, local contractors and trust-building demonstrates the potential for future strategies to become more inclusive, responsive and ultimately successful.

Despite these strengths, several limitations remain. Narrow eligibility criteria across national schemes continue to exclude households who face high energy costs but fall outside income thresholds. Short-term and fragmented national funding cycles also restrict the Council's ability to plan multi-year, neighbourhood-scale programmes, weakening continuity and trust with residents. This is particularly relevant given some studies find the return-on-investment from these schemes can happen years and even decades on from the original intervention (Fowlie et al, 2015). Past retrofit policy, oriented towards “**overcoming barriers**” to adoption, has therefore displayed “**little sociological imagination**” and reproduced a narrowly economic model that fails to capture these every day, lived constraints (Sorrell et al., 2004, cited in Davis et al., 2024).

In response, scholars call for a shift towards relational and sociologically informed approaches (Emden, 2023), grounded in the everyday practices of households (Shove and Walker, 2014). A growing consensus in the literature emphasises the need for energy policy that is cross-sector, multidisciplinary, place-based and people-centred (Davis et al., 2024; Middlemiss et al., 2024; Middlemiss et al., 2018). Middlemiss et al. (2024) identify two persistent gaps in current policy, including the failure to account for social differences between households, and the failure to recognise how energy use is interconnected with other areas of daily life. These limitations are further reinforced by fuel-poverty definitions and measurement tools on a national scale that encourage narrow technical interpretations, constraining local authorities' ability to pursue more holistic and socially nuanced strategies (Middlemiss et al, 2024, pp.2-3; Middlemiss et al., 2018).

This theoretical grounding therefore suggests that Leeds' retrofit policies must be evaluated not only in terms of technical performance, but also by the extent to which they effectively integrate relational, place-based and cross-sector principles in practice. Nevertheless, there remains meaningful scope for locally driven innovation. Building on the success of the Holbeck and Armley schemes, future delivery models should treat retrofit not simply as a technical upgrade but as a social process, where trust, and visible local presence are essential to uptake.

Relational elements, such as using trusted contractors, establishing neighbourhood site offices, and maintaining ongoing engagement, should be systemically embedded rather than added as an optional feature.

Finally, stronger alignment with regional partners such as the West Yorkshire Combined Authority would help stabilise funding streams and support multi-disciplinary planning. Such coordination would enable Leeds to advance energy efficiency strategies that better reflect the lived realities of lower-income, energy-inefficient households, while tackling the constraints imposed by national definitions and funding structures.

National Schemes

As well at a local level, national schemes also aim to improve energy efficiency, tackle fuel poverty and reduce carbon emissions. The Energy Company Obligation (ECO) was designed in 2013 to reduce fuel poverty by making it a requirement for energy suppliers with over 150,000 customers to deliver energy-saving measures such as insulation, first-time central heating, renewable heating, solar panels, and district heating connections to domestic premises (Adcock, 2025). The Great Britain Insulation Scheme was introduced in 2023 to complement the ECO and to further support low-income, energy-inefficient, and lower council tax band households (Bolton, 2025).

However, these schemes were effectively axed at the Autumn Budget, with funding withdrawn from March to December 2026 (HM Treasury, 2025). All national energy efficiency schemes now exist under the Government's recently published Warm Homes Plan (WHP). This latest national scheme launched in January 2026, and aims to deliver £15 billion of public investment to upgrade up to five million homes and to lift one million families out of fuel poverty by 2030 (DESNZ, 2026). The focus will be funding solar panels, heat pumps and batteries for households across the UK via low-interest loans and grants (Stallard, 2026).

The scheme aims to fit **4.5 million** more homes with solar panels by 2030, up from over 1.5 million as of last summer. The government has also reduced the heat pump target from 600,000 installations by 2028, to 450,000 per year (Pickard, 2026).

As of March 2025, Leeds City Council has been awarded £5,963,439 to help low-income households in privately owned or rented homes receive free energy-saving improvements (DESNZ, 2025b). The distribution of funding is managed by Leeds City Council, and households in Leeds with a gross annual income of £36,000 or less can apply for fully funded energy efficiency upgrades through a local grant online.

As seen in Figure 2, areas benefitting from the scheme include New Wortley (Leeds 071E), Harehills (Leeds 053C) and Burley (Leeds 063D), where on average, households are over 80% more income deprived than other communities in England which qualify to benefit. The allocation raises questions about both fairness and effectiveness, particularly given Leeds' high fuel poverty rate. Whilst Leeds is not rated among the top five local authorities with regards to fuel poverty, it still faces significant challenges due to its scale. As part of Yorkshire and the Humber, which has the second-highest regional fuel poverty rate in England (14.7%), the city operates within a structurally disadvantaged context (DESNZ, 2025a).

When compared to significantly larger allocations to tackle fuel poverty, such as £30 million to the Blackpool Consortium and £69 million to the Midlands Net Zero Hub, Leeds' £5.9m appears low given that its fuel poverty rate (15.8%) is higher than the national average of 11.4%. Analysis of government fuel poverty data reveals that Leeds, alongside many other local authorities, faces shortfalls in Warm Homes funding given their fuel poverty rate.

This indicates that the scheme seems to prioritise either smaller or more concentrated areas or regions rather than large urban centres with dispersed but substantial need. That being said, Leeds is being funded at a similar rate to other major Northern cities including Sheffield, York and Newcastle-upon-Tyne, but is being drastically outpaced by regional consortiums and former "**Levelling Up**" priority areas like Blackpool and the Tees Valley. Certain areas may then be leveraging pooled resources or political capital when making bids for funding.

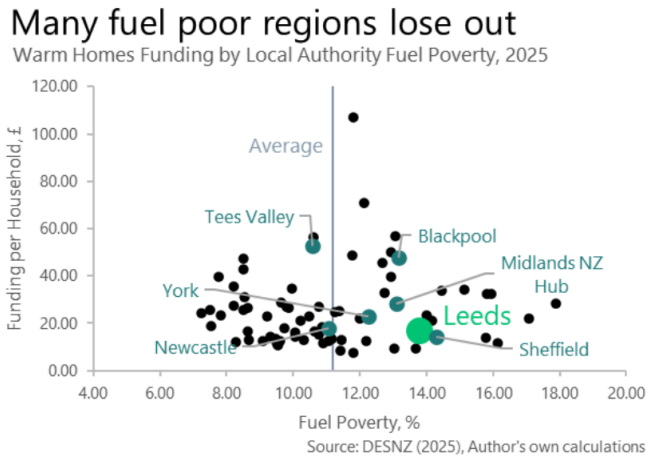
Indeed, our analysis finds that funding per household was higher for authorities bidding under a consortium. However, this disparity may partly be explained by overall deprivation rather than fuel poverty alone.

According to the 2019 Indices of Deprivation, Blackpool is ranked as the single most deprived local authority in England (Manchester City Council, 2019), while Birmingham ranks eight out of 296 authorities (Birmingham City Council, 2025).

By contrast, Leeds ranks **33rd out of 317 local** authorities on the proportion of neighbourhoods in the most deprived 10% nationally (Leeds City Council, 2019).

This suggests that while Leeds has significant pockets of deprivation seen in Figure 2, it lacks the concentrated, uniform deprivation of Blackpool or Birmingham, which may partly explain the discrepancy between allocations. Nonetheless, energy efficiency measures would be more effective if targeting fuel poverty rather than overall deprivation as poor energy efficiency is one of the root causes of the problem.

Figure 2: Warm Homes Funding by Local Authority Fuel Poverty, 2025 (DESNZ, 2025; author's own calculations)



The effectiveness of the Warm Homes Plan (WHP) is yet to be tested, but as it represents a major policy change from the discontinued Energy Company Obligation (ECO), it is important to consider the last shift in national energy efficiency policy. The 2010–2013 period saw the phase-out of the Warm Front Scheme, which offered grants to eligible households to improve efficiency, and the introduction of ECO, which ran until March 2026 and placed obligations on medium to large energy suppliers to fund insulation to tackle fuel poverty and reduce carbon emissions (Bolton and Watson, 2013; Ofgem, 2025).

The policy had considerable reach, helping 15 million homes and totalling an estimated £113 billion in savings nationally (E3G, 2025). However, after its introduction, rates of government-assisted loft and cavity wall insulation fell dramatically in 2013 (Bolton, 2025). Part of this was due to a shift in focus toward more complex solid-wall insulation (Mintel, 2014), though this priority shift was not reflected in installation rates.

Over the last decade, spending on these energy efficiency upgrades was largely under £200m per year, compared to the Warm Front Scheme's £516m budget in 2010/11 (Bolton and Watson, 2013).

Furthermore, ECO's final phase, ECO4, was littered with serious failings. The National Audit Office reported major issues needing fixing in 98% of homes receiving external wall insulation and 29% receiving internal insulation (National Audit Office, 2025), largely due to an underskilled workforce, uncertified firms, and poor governmental oversight. Business fraud involving falsified claims also affected between 5,600 and 16,500 homes (Scottish Housing News, 2025). Current Chancellor of the Exchequer Rachel Reeves claimed the scheme cost households £1.7 billion a year on bills, costing 97% of fuel-poor families more than it saved.

The government cited these failures as justification for scrapping ECO for the WHP (Elmhurst Energy, 2025), however, abolishing the scheme rather than reforming it is estimated to cost 10,000 jobs and prevent one million families from insulating their homes over the next four years (E3G, 2025). While insulation remains part of the WHP, Leeds' relatively low funding allocation and a shift in focus toward green technology risk repeating ECO's mistakes. Green tech can reduce bills, but poor insulation may fail to deliver these savings given high UK electricity prices (IEA, 2024). Insulation remains vital for providing relief to those facing fuel poverty, as suggested by the energy think-tank Regen which warns that shifting away from a fabric-first approach "could lead to perverse outcomes for some households" (Griffin, 2026).

The Impact of Energy Inefficiency on Inequality

Having evaluated both the UK Government's and Leeds City Council's initiatives to tackle energy inefficiency in housing, it is important to consider the actual impact of energy inefficiency on income inequality and fuel poverty.

Fuel poverty can be understood as the condition in which a household is "unable to afford the level of energy services required to allow its members to live a decent life" (Middlemiss, 2016, p.425). Between 2010 and 2015, however, the UK government reframed fuel poverty through the Low Income, High Costs (LIHC) definition, shifting the politics of the issue by positioning it largely as a technical problem of inefficient housing stock. This framing underplays fuel poverty's intrinsic links with inequality, health, tenancy relations and energy markets (Middlemiss, 2016, pp.425-436).

Although LIHC has since been replaced by the Low Income, Low Energy Efficiency (LILEE) indicator, concerns regarding the efficacy and limitations of this measure persist. Fuel-poverty metrics in England remain politically contested, the current metric definition has been critiqued as a narrow, efficiency-centred framework and described as a "blunt instrument" that is "not fit for purpose" (Semple et al., 2024, pp.10-11; McKnight, 2025), with the Committee on Fuel Poverty (2024) recommending its review.

These definitions continue to reinforce a predominantly technical understanding of fuel poverty and reflect an austerity-era logic that normalises acceptance of the view that "not all fuel poverty can be alleviated" (Middlemiss, 2016, p.425). This pattern reflects what Chaundhuri and Hauccha (2023) term the "energy efficiency gap", describing how local income deprivation reinforces the persistence of inefficient housing with high energy costs, a topic directly adjacent to the focus of this paper.

With the scale of the environmental challenge set out in the previous section, there are also economic and moral dimensions to consider in relation to the accessibility of energy-efficient housing for low-income earners. Leeds has a significant number of neighbourhoods where income is low and energy use is high (Childs, 2022; Middlemiss et al, 2024, p.1). Around 16% of households in the city experience fuel poverty (Leeds City Council, 2017; Middlemiss et al, 2024, p.11). Energy-efficient housing directly tackles this by lowering household bills.

One comprehensive study of the US Weatherization Assistance Programme (WAP) found that, whilst energy savings were less than the 25% predicted, households still benefited from energy bills that were 10-20% lower (Fowlie et al, 2015).

A more recent study, also carried out in the US, found "weatherization" installations led to savings of \$372 (£279.72) in energy bills annually for occupants, though this varied widely per household (Farrell et al, 2025). Whilst some of these savings were below predictions, meaning that return on investment is not realised even twenty years later (Fowlie et al, 2015, p.32), the benefits from these improvements are greater than simple cost savings. Lower household energy bills mean occupants are less likely to underutilise their heating to save money, which in turn means they are less likely to experience negative health effects from the cold (Marmot Review Team, 2011).

Alternatively, the money saved may be beneficial in other ways, for example, enabling occupants to spend more on transport or clothing, or allowing them to more easily access employment and leisure. One Cambridge study finds that by far the greatest impact on energy expenditure is not any kind of support payment, but a house's energy efficiency rating (Galvin et al, 2024).

Additionally, as energy-efficiency programmes for housing scale up globally to combat climate change, the building materials and techniques used are likely to develop and become more affordable. Thus, this will assist in benefitting the return on investment in these schemes. As energy efficiency improvements of this scale are unaffordable to low-income households, especially those in fuel poverty, a supply of energy-efficient housing is crucial for escaping what is essentially an income trap.

Without either affordable new-build energy-efficient housing, or achievable retrofitting schemes for existing homes, a serious economic inequality is entrenched. This inequality, without action, will only worsen given the projected rise in energy bills by the end of the decade and the growing impact of climate change on temperatures (Ambrose, 2025). That is why a measure of the affordability of housing to low-income earners is essential to this report's question.

The Need for Affordability

Affordability is the first barrier for any low-income earner seeking energy-efficient housing. This is the crux of the problem; if low-income earners cannot afford to move into energy-efficient housing, then they are entirely reliant on retrofitting and insulation schemes to reach them in order to achieve efficiency. However, as is evidenced in Leeds City Council's budget, current retrofitting schemes are not sufficiently resourced to reach many households in need of them.

Firstly, though, a **"low-income earner"** must be defined. The UK Government defines "relative low income" as someone who earns below 60% of the median wage in the UK for the current year (DWP, 2016). So, as of April 2025, this means individuals earning below £23,917.92 in full-time work. For Leeds specifically, where the median wage is lower than the UK's, this is £23,199.20 (ONS, 2025c).

Affordability can be understood **as the relationship between money earned, which for many is primarily income, and how much of it is spent on living costs**. A lower percentage, meaning less of one's income is spent on living, constitutes a high affordability rating. Currently, an affordability measure being employed by the UK government, specifically by the Office of National Statistics (2026), is the house price-to-income ratio. This compares the household earnings with the cost of housing and is calculated by dividing the median house price by the median annual income.

Practical working UK definitions often say affordability is a combination of two elements: firstly, a cap on housing costs as a share of income (between 25-30%) and secondly, a residual income test that ensures households have enough money left over after housing costs to cover essential living costs (Affordable Housing Commission, 2020; Barton and Cromarty, 2023).

This working definition also serves as the foundation for a framework in policymaking; that conversations around affordability must go beyond gross housing costs, and cover the after-housing residual income, so poverty is not hidden by a nominally sound, "affordable" housing strategy, but that it is actually effective at helping those who need it. In Leeds, the Strategic Housing Market Assessment (SMHA) fulfills the adoption of these principles to guide how many and where affordable houses will be built, so the necessity is addressed as a priority in the city (Bullock, 2025).

If housing affordability is sidelined in the conversation about energy-efficient housing, the inequality discussed in the previous section will be more difficult to eliminate. It will become a question solely of whether a retrofitting scheme can reach a household which becomes problematic as these schemes, as previously discussed, are flawed in their targeting of the most vulnerable, and can thus have low participation rates among the people who they intend to serve.

If new, affordable and energy efficient dwellings are available to low-income earners, then health and wealth inequality, which are significant contributors to income, are entirely avoided for those entering the housing market. Additionally, those individuals will have higher disposable income once purchasing their home, avoiding the higher bills which come with energy inefficient housing.



Methodology and Results

Now that we have outlined the need for affordable energy efficient homes and the policy landscape in which they must be delivered, we will assess how accessible energy efficient homes are for low-income households in Leeds. In theory, energy efficiency could have an effect on the price of homes, making this a desirable quality. Existing research has looked at national data; for example, in both the UK and Denmark, properties with a higher energy efficiency score sell at a premium (Jensen et al., 2016; Harvey, 2021).

Research in the Netherlands has looked specifically at affordable housing, finding that energy-efficient affordable housing also sells at a premium (Chegut et al., 2016). Chaudhuri and Huaccha (2023) also find that more deprived neighbourhoods in the UK have lower energy efficiency. Taking this into account, we expect this effect to extend to Leeds.

We analysed 482 neighbourhoods in Leeds using data from Chi et al. (2021). We constructed a Leeds-specific panel from 2011-2019 including mean energy efficiency scores and median price/m2 for each neighbourhood (adjusted to 2015 prices using ONS, 2025b).

We use price/m2 instead of income as this data is more available at the neighbourhood level, meaning we are directly measuring the financial barriers to households. Price/m2 also offers a comparable metric that ignores dwelling size, allowing neighbourhoods with different dwelling mixes (flats, terraced houses, detached, etc) to be compared.

Each neighbourhood is assigned its 2015 Index of Multiple Deprivation (ONS, 2015) rank. Since the IMD is calculated from a range of metrics including income, employment, education, health, crime, housing, and living environment, it acts as a suitable proxy for the general socio-economic condition of the LSOA, with 1 as most and 33,175 as least deprived. There are three years (2010, 2015, 2019) of usable IMD ranks, but MHCLG explicitly advises that they aren't designed to be compared over time (MHCLG, 2025a). IMD ranks themselves change little over time, with an average change of 0 and maximum of 400 (ONS, 2011; 2015; 2019). Since they are out of over 33,000, the single 2015 ranking is suitable to use as a control variable.

We conducted two OLS regressions, one with year fixed-effects and one with both year and LSOA fixed effects, both with standard errors clustered at the LSOA level. Because each LSOA has the same IMD value, IMD is dropped in the regression when LSOA FE are included due to multicollinearity.

Table 2: Increase of average price/m2 from an increase in energy efficiency and IMD rank

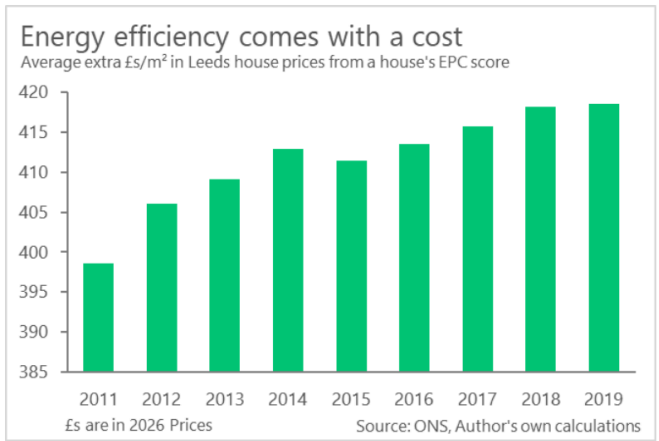
Variable	Year FE	Year + LSOA FE	Observations
Energy Efficiency	15.516163	4.89608	4324
P-Value	~0 ***	~0 ***	
IMD (scaled)	45.1015	—	4324
P-Value	~0 ***	—	
Adjusted R2	0.69854	0.935015	
Within R2	0.687656	0.013392	

Importantly, our aim is not to estimate the causal effect of energy efficiency on house prices. Instead it is to establish the financial barriers to households in accessing energy efficient housing. We see then that variation between areas is a big driver of house prices - the reduced coefficient and within-R2 when both FE are included suggest that wealthier areas have higher energy efficiency ratings.

These results do tell us though that energy efficiency comes with a premium both in and across local areas. However, households have a choice between areas when moving, and their budgets determine where they can realistically access. Therefore, the result with only Year FE, where variation between areas is part of the estimate, more accurately describes these barriers as the higher cost of an energy efficient area is itself a barrier. That said, the range between both regressions will be used when reporting results to account for a potential overestimate.

We see that there is a strong and significant correlation between energy efficiency and price per sq/m - a 1pt rise in an area's energy efficiency score is associated with a price premium of between £4.90 and £15.52/m2 - £6.86 and £21.72 in 2026 prices. This adds over £400/m2 to the average house price/m2 in Leeds (see below). As energy efficiency is slowly increasing, the amount added is also increasing over time - the increase from 2011 to 2019 2(where our data ends) is nearly £20, but is likely even higher in the present day.

Figure 3: Average extra £/m2 in Leeds house prices from a house's EPC score (ONS, 2026; author's own calculations)



We also see this with IMD (which was scaled by 1000). A 1000 place improvement in an area's IMD rank is associated with roughly £45.11 higher prices/m2 (£63 in today's prices). Averaging across areas (and therefore using the lower estimate) the price premium is visualised below. These results are visualised below. For the average terraced house (MHCLG, 2020), the difference between Band B and D properties is between £15,000 and £49,000 in today's prices (depending on which estimate is used). This suggests that low-income households - who by definition are much more sensitive to higher property prices - therefore do experience barriers to affordable, energy efficient housing in Leeds.

To provide more control variables, and allow for variation in IMD rankings, we conducted two cross-sectional OLS regressions using the IMD 'Domains of Deprivation' - separate rankings that are then combined for the final IMD. These were only available for 2015 and 2019:

Again, we find substantial and significant results for the effect of energy efficiency on house prices. Although the effect appears to be increasing over time, Z-tests indicate that they are not significantly different from each other. The estimate from the year fixed-effects regression also lies within the 95% confidence interval of both the 2015 and 2019 estimates, reinforcing our original results. We found the insignificance of certain variables, particularly income, surprising. This is due to significant correlation between domains which can affect coefficients and reduce significance.

The high and significant education estimate may suggest that it is capturing the effects of both income and employment. Still, the coherency of the energy efficiency estimates across each regression offer validity to our findings.

Table 3: Increase of average price/m2 from an increase in variables

Variable	2015		2019
	Estimate	P-Value	Estimate
Energy Efficiency	11.4	~0 **	17.9
Income (scaled)	5.61	0.3301	13.93
Employment (scaled)	12.65	.0236 *	0.41
Education (scaled)	23.43	~0 **	27.71
Health (scaled)	-4.12	0.2899	-0.6
Crime (scaled)	2.33	0.2967	1.78
Living Environment (scaled)	13.88	~0 ***	11.87
Adjusted R2	0.7613		0.7477
Observations	481		481

It is important to note however that the data is scraped from the official open Land Registry Price Paid Data and open Domestic Energy Performance Certificates (EPCs) register, therefore capturing house sales from 2011 to 2019. As LSOAs are small areas, sales in each LSOA per year are low (median 17), though price/m2 is near-symmetrically distributed, suggesting no substantial distortions of our estimates. The explanatory power, significance and magnitude of the models are all encouraging in terms of validity. Another important limitation is that the data looks at house prices rather than rents (as a result of a lack of data).

This is especially relevant because low-income households are much more likely to be renters. On top of this, the proportion of social renters has fallen in the past decades - in the 1980s this was the most common type of tenure among low-income households, but private renting is now the most common (Wernham and Waters, 2023). In contrast to privately rented dwellings, social renters typically have higher energy efficiency ratings (Wernham and Waters, 2023).

Literature on the link between house prices and rents is thankfully rich - higher house prices of both dwellings and areas typically command higher rents (Udagawa and Tang, 2008; Clark and Lomax, 2020), so the trend we see in our regression should hold across the rental market as well.



Secretary of State for Energy Security and Net Zero, Ed Miliband attending COP29 (Wikimedia Commons)

Energy and Infrastructure: Do Low-Income Earners Have Access to Energy Efficient Homes in Leeds?

To corroborate this, we can look at other advanced European economies with similar EPC reporting requirements. Research from Germany for example is consistent with our hypothesis, finding high-efficiency properties are rented at a premium (Cajias et al., 2019). We can therefore conclude that low-income households across tenures do face barriers to affordable, energy efficient housing.

To put this in explicit and precise terms: for a typical terraced house in Leeds, upgrading from an EPC rated band D to band B property, adds between £15,000 and £49,000 to the purchase price (depending on location). This is up to three times the average first-time buyer deposit in Yorkshire (Nationwide, 2026).

For a low-income earner, defined as below £23,900 per year, this premium is prohibitive. It effectively locks this demographic out of the most efficient homes unless they can access retrofitting schemes.

We therefore find a clear financial barrier: energy efficiency is not evenly distributed across the housing market, but in fact, more concentrated in more expensive properties and neighbourhoods in the same city. For the average terraced house (MHCLG, 2020), the difference between Band B and D properties is between £15,000 and £49,000 in today's prices. This suggests that low-income households - who by definition are much more sensitive to higher property prices - therefore do experience barriers to affordable, energy efficient housing in Leeds.

Limitations

While our quantitative analysis provides a useful starting point for understanding the relationship between energy efficiency and income mobility in Leeds, several limitations must be acknowledged. These limitations span methodological constraints, data quality issues, governance failures, and gaps in our understanding of the lived experiences of low-income households. Crucially, this study lacks qualitative data on the lived experiences of low-income households attempting to access affordable, energy-efficient housing.

Statistical associations cannot illuminate the specific barriers individuals face, such as discrimination in housing allocation, administrative complexity in accessing housing schemes, or insufficient awareness of available support. Interviews or focus groups with low-income residents in Leeds would provide invaluable insights into whether energy efficiency is a conscious consideration in housing decisions, or whether more immediate concerns - such as proximity to employment, schools, or family networks - take precedence. Understanding these decision-making processes is essential for designing effective policy interventions.

Our analysis relies on Energy Performance Certificates (EPCs) as the primary measure of energy efficiency. However, there is substantial evidence of a "performance gap" whereby properties do not achieve their certified energy ratings in practice. A 2023 study comparing EPC-modelled energy use with actual smart-meter data found that EPCs systematically overpredict energy consumption (Few et al., 2023). Additionally, a study of social housing properties found that homes rated F actually retained heat better on average than those rated C (Turner, 2025). Analysis of 1.6 million dwellings in England and Wales found that between 36% and 62% of domestic EPCs contain at least one identifiable error, resulting in frequent band misclassifications (Hardy and Glew, 2019). The quality of new-builds is another concern, with increasing numbers of homeowners reporting snagging issues and build quality problems in new homes over the past decade (CMA, 2024), which may contribute to properties not achieving their certified energy performance in practice.

Consequently, the supply of genuinely energy-efficient affordable housing may be considerably smaller than official EPC data suggests, and our analysis may overestimate the actual energy efficiency of housing stock in Leeds.

In Leeds specifically, special housing regulation schemes cover only a fraction of the city's private rented sector (Leeds City Council, 2025), and resources remain limited. This creates an accountability gap: while legal frameworks exist to mandate energy efficiency improvements, in practice many landlords operate below the required standards with minimal consequences. The Housing Act 2004 categorises excess cold as a Category 1 hazard under the Housing Health and Safety Rating System (HHSRS), obligating councils to take enforcement action (Office of the Deputy Prime Minister, 2006). Yet, low-income tenants often lack awareness of their rights or fear retaliatory eviction if they complain, despite legal protections under the Deregulation Act 2015 (UK Parliament, 2015a).

Beyond methodological limitations, there are significant concerns regarding governance failures in the enforcement of energy efficiency standards, particularly in the private rented sector. Under the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015, commonly known as the Minimum Energy Efficiency Standards (MEES), it has been unlawful since April 2020 for landlords to let properties with an EPC rating below E (UK Parliament, 2015b; MHCLG, 2015). However, enforcement of these regulations by local authorities, including Leeds City Council, has been inconsistent and under-resourced. Research by the UK Collaborative Centre for Housing Evidence (CaCHE) found that enforcement action is rare, with many councils lacking the capacity to systematically identify non-compliant properties or prosecute landlords (Harris et al., 2020). There also remain policy implementation gaps in the way energy inefficiency is tackled. Our research assumes that retrofitting schemes represent the primary mechanism for improving energy efficiency in existing housing occupied by low-income households.

However, take-up rates for available schemes remain poorly understood. Barriers to accessing retrofitting grants and programmes may include complex application processes, lack of awareness among eligible households, mistrust of government schemes, or requirements for upfront contributions that low-income households cannot afford (Rosenow and Eyre, 2016). Moreover, the split incentive problem - whereby landlords bear the cost of energy efficiency improvements while tenants benefit from reduced energy bills - discourages voluntary upgrades in the absence of stringent enforcement (Bird and Hernandez, 2012). This structural disincentive is particularly pronounced in areas with high rental demand, where landlords face little competitive pressure to improve property conditions.

Additionally, low-income households may be geographically locked in by proximity to employment (particularly for those in low-wage, inflexible jobs), children's schools, or informal support networks such as extended family and community ties (Reuschke and Houston, 2016). These constraints mean that even where affordable, energy-efficient housing is available elsewhere in Leeds, relocating may not be a viable option.

Research in other UK cities suggests that these characteristics can compound housing disadvantages, with minority ethnic households and disabled people disproportionately concentrated in poor-quality, energy-inefficient housing (Marmot Review Team, 2011). Future research should explore whether similar patterns exist in Leeds and how they interact with energy efficiency disparities. Finally, low-income households face structural barriers to mobility that extend beyond the availability of affordable, energy-efficient housing.

Access to mortgage finance is often constrained by poor credit histories, precarious employment, or lack of deposit savings, preventing low-income earners from purchasing even moderately priced homes (Corlett and Judge, 2017). In the affordable rented sector, local connection requirements - stipulating that applicants must have resided in a specific area for a certain number of years - limit geographic mobility and may trap households in neighbourhoods with poor housing stock.

Policy Recommendations

This report has demonstrated that low-income earners in Leeds face significant and compounding barriers to accessing energy-efficient housing. The quantitative analysis reveals a statistically significant price premium of between £6 and £21/m² for every one-point increase in an area's energy efficiency score — a gap of £15,000 - £48,000 between Band B and Band D terraced properties in today's prices (Internal Analysis based on Leeds Housing Market Data, 2026).

This premium, when combined with governance failures in enforcement, fragmented national funding cycles, and the administrative complexity of existing retrofit schemes, effectively excludes the households most in need of energy-efficient housing. Without urgent and targeted policy intervention, these structural inequalities will deepen as energy bills continue to rise and the 2030 fuel poverty targets approach.

To bridge the gap between technical ambition and social reality, this report proposes eight actionable recommendations organised across three thematic clusters: Delivery Reform, Technical Strategy, and Regulatory and Funding Governance.

Delivery Reform

Current retrofit schemes in Leeds — including the Home Upgrade Grant and Home Plus Leeds — depend on households navigating complex, multi-agency application processes independently. Evidence from the Holbeck and Armley area-based programmes demonstrates that trust, visibility, and end-to-end support are the decisive variables in determining uptake, not the financial value of grants alone (Local Government Association, 2022). This cluster moves beyond abstract calls for 'trusted intermediaries' to specify a concrete, evidence-backed delivery model grounded in procedural justice.

Recommendation 1: Establish Community Retrofit Hubs in High-Deprivation Neighbourhoods

Leeds City Council, in partnership with the West Yorkshire Combined Authority, must establish a network of Community Retrofit Hubs, face-to-face support centres located directly within high-deprivation neighbourhoods, including Holbeck, Armley, Harehills and New Wortley.

This hub must go beyond simply providing information to actively facilitating the end-to-end process: conducting household energy assessments, identifying and applying for grant funding on behalf of residents, coordinating with accredited installers, and providing post-installation follow-up.

This hub model directly addresses the administrative friction and cognitive burden that have hitherto disproportionately weighed on low-income households. This group often lacks the time or digital access to navigate fragmented, multi-agency processes (Panakaduwa et al., 2025). This is consistent with findings in the Review of the Fuel Poverty Strategy (DESNZ, 2025c) that national progress has stalled due to the complexity of existing schemes.

Evidence from pilot projects in the UK strongly supports this model. The Retrofit West programme in the West of England achieved a 75% progression rate from survey to installation and recorded a 43% increase in enquiries for local retrofit businesses (Centre for Sustainable Energy, 2026).

In Greater Manchester, the Local Energy Advice Demonstrator (LEAD) programme has demonstrated the effectiveness of in-person advice in reaching harder-to-reach residents who would not sign up via self-service online channels.

A systematic review of one-stop-shop models found that government-led models are highly effective for residents experiencing digital exclusion as they alleviate the burden of navigating bureaucracy (Panakaduwa et al., 2025). In fiscal terms, modelling by the Centre for Ageing Better and Demos estimates that the Good Home Hubs network would cost around £1.6 million per local authority, yet generate a net national fiscal benefit of £16 million per year (Goss, 2025; Cuff, 2026).

This benefit stems primarily from reduced pressure on the NHS due to illnesses linked to cold homes, which, according to a GOV.UK report (2025), cost the state £1.4 billion annually.

This recommendation has a regional precedent in the form of the Home Energy West Yorkshire One Stop Shop, commissioned by the WYCA in 2025 (WYCA, 2025b).

Leeds should align its local hub to function as a frontline access point integrated with the WYCA management system. WYCA's business analysis indicates a high benefit-cost ratio of 2.8:1 (WYCA, 2024). The hub should employ staff who are genuinely capable of acting as 'Energy Navigators'; community workers who are experts in the technical aspects of energy efficiency whilst also understanding the welfare support landscape. By locating these hubs within trusted community infrastructure (such as health centres, food banks or community centres), Leeds can address the 'trust gap' that has historically hindered programme uptake in the Holbeck and Armley areas (Middlemiss et al., 2024).

Technical Strategy

The analysis in this report highlights that the challenges of retrofitting in Leeds are not merely a matter of insufficient funding, but also a matter of technical sequencing. Both national and local strategies risk repeating past mistakes — particularly the 2013 shift away from the 'fabric-first' (insulation) principle, which led to the collapse of government-supported loft and cavity wall installations — unless an evidence-based technical hierarchy is embedded in their implementation. This cluster also addresses the credibility gap created by undifferentiated 2030 targets, which do not reflect the city's current capacity constraints.

Recommendation 2: Mandate a Fabric-First Approach in the Warm Homes Plan, with Ring-Fenced Insulation Funding

Leeds City Council must formally urge the central government to provide a ring-fenced budget for insulation within the Warm Homes Plan, separate from the green technology fund covering heat pumps and solar panels, to prevent insulation from being sidelined by higher-cost technologies. This recommendation is based on a consensus emerging amongst independent bodies that the current trajectory of energy efficiency programmes - which between 2022 and 2024 allocate only 30% of ECO4 measures to insulation, whilst 70% is directed towards heating systems and controls - does not provide adequate energy poverty reduction (Committee on Fuel Poverty, 2024). As stated by the Committee on Fuel Poverty in its 2024 Annual Report: efforts to tackle fuel poverty require the completion of insulation programmes for all fuel-poor and vulnerable households before resources are directed towards the integration of low-carbon heating systems into those properties.

This argument is particularly relevant to Leeds, where 37% of the housing stock was built before 1945. For older solid-wall properties, which dominate the city's most deprived neighbourhoods, installing heat pumps without first addressing the building's structure risks causing a "bill shock": higher running costs due to heat loss through uninsulated walls and roofs.

The energy think-tank Regen, has explicitly warned that a shift away from a 'fabric-first' approach under the Warm Homes Plan "could lead to detrimental outcomes for some households" (Griffin, 2026).

In the House of Commons Committee of Public Accounts' inquiry into the decarbonisation of domestic heating, National Energy Action submitted written evidence confirming that a fabric-first approach would reduce bills and cut energy consumption (NEA, 2023). However, others, including the Kensa Group, questioned whether improved insulation is an absolute prerequisite before the introduction of heat pumps (Committee of Public Accounts, 2024).

For low-income households in Leeds' pre-war housing stock, this report found that the burden of proof supports insulation as the primary intervention. For Leeds specifically, the fabric-first priority should be operationalised through a 'Worst-Stock-First' protocol: directing the allocation of the city's Warm Homes Local scheme primarily towards properties with an EPC rating of Band F and G, as well as pre-1919 back-to-back houses in the LSOAs with the highest levels of deprivation.

Recommendation 3: Adopt a Phased Delivery Trajectory: 2030 for Priority Stock, 2035 for Broader Private Rented Sector (PRS)

This report recommends that Leeds City Council, in collaboration with the West Yorkshire Combined Authority (WYCA), advocate for a phased, differentiated approach to local and national retrofit planning.

A credible policy framework must distinguish between political ambition and operational delivery capacity, particularly as the West Yorkshire retrofit sector — although growing, with Leeds accounting for 46.5% of the region's annual retrofit turnover of £1.9 billion — remains constrained by supply chain capacity and a shortage of skilled labour (Green Economy, 2025).

The proposed pathways are as follows:

- **2030 Target (Maintained):** All properties in EPC Bands F and G, all social housing, and all fuel-poor households in LSOAs with the highest levels of deprivation must achieve a minimum of EPC Band D, in line with the statutory energy poverty target.
- **2035 Target (Extended):** The wider PRS — where enforcement of the Minimum Energy Efficiency Standards (MEES) is inconsistent and supply chain pressures are most acute — must meet the EPC Band C requirement. This phased approach is consistent with the government’s aspiration for as many homes as possible to be in Band C by 2035 (Bolton, 2025).

This is not a retreat from ambition. The strict 2030 deadline for the most vulnerable stock remains in place, and the 2035 target for the PRS provides supply chain certainty that will accelerate rather than delay delivery. The Leeds retrofit workforce, whilst growing, is dominated by SMEs and sole traders who require stable long-term demand signals to invest in training and scaling up (Green Economy, 2025). Imposing a uniform 2030 deadline across the entire PRS risks encouraging poor-quality installations and repeating the supply-side collapse observed following the 2013 transition from the Warm Front Scheme to ECO (Bolton and Watson, 2013).

Regulatory and Funding Governance

The quantitative analysis and governance review in this report identify two structural failures that undermine the effectiveness of all other interventions: the enforcement deficit in the private rented sector, and the funding misalignment between national allocation formulae and local fuel poverty needs. This cluster proposes targeted regulatory and institutional reforms to address both.

Recommendation 4: Strengthen Enforcement of Minimum Energy Efficiency Standards in the Private Rented Sector

Leeds City Council must allocate dedicated resources to its housing standards team to carry out proactive and systematic inspections of compliance with the Minimum Energy Efficiency Standards (MEES). Since April 2020, letting a property with an EPC rating below Band E has been an offence (MHCLG, 2015).

This enforcement is now reinforced by the Renters’ Rights Act, which grants new investigative powers to local councils from December 2025, including the authority to enter properties and access third-party data to identify breaches (UK Parliament, 2025). Enforcement must be prioritised in high-priority LSOA areas identified in this report. Furthermore, financial penalties levied on non-compliant landlords must be reinvested back into housing standards enforcement. This self-funding model has a successful precedent in other authorities such as Bristol, which has proven to create a sustainable compliance ecosystem without burdening the council’s general budget.

Recommendation 5: Use the PRS Database and Ombudsman for Energy Efficiency Accountability

The establishment of the Private Rented Sector (PRS) Landlord Database and the PRS Landlord Ombudsman presents an opportunity to institutionalise energy efficiency accountability:

Proactive Use of EPC Data: As the PRS Database will require the inclusion of energy performance certificates, Leeds City Council must not allow this data to remain dormant. The Council must use this database as a proactive targeting tool to automatically identify non-compliant properties, thereby closing the information asymmetry that has long protected negligent landlords.

Expansion of the Ombudsman’s Mandate: The PRS Ombudsman, which will become mandatory for landlords to join by 2028, must explicitly include MEES breaches within its mandate. This is crucial given the government’s ongoing consultation to raise MEES standards to EPC Band C by 2030 (MHCLG, 2025b). Integrating these standards into the Ombudsman’s mandate will empower low-income tenants to demand improvements to their homes’ thermal conditions without fear of retaliatory eviction.

Recommendation 6: Adopt a 'Fabric-First' Framing in Leeds' Affordable Housing Policy

The analysis of this report shows that the energy efficiency premium of up to £21/m² implicitly excludes low-income households from energy-efficient housing. Leeds City Council must therefore establish a policy requiring all new affordable housing units delivered through Section 106 agreements and Homes England funding to achieve a minimum EPC rating of Band B.

For units specifically designated for the lowest-income households, the council must ensure this highest standard is applied without compromise, in order to minimise energy operating costs for those least able to afford them. This policy will ensure that the supply side of the market does not systematically reproduce the price barriers documented in this report.

Recommendation 7: Commission a Fair Funding Review for Fuel Poverty Allocations to Leeds

Leeds has received only £5.9 million from the Warm Homes Local scheme up to March 2025. This figure is extremely low given that Leeds’ energy poverty rate stands at 15.8% (55,274 households), well above the national average of 11.4%, and our analysis indicates this is a pattern across the country. Leeds City Council and WYCA should submit a formal representation to the central government calling for a Fair Funding Review for Fuel Poverty in the model of the government’s recent review into council funding (MHCLG, 2025b).

This review must ensure that funding allocations under the Warm Homes Plan are weighted according to local energy poverty rates, the number of households, and the age of the housing stock, rather than based on the applicant’s organisational structure (consortium versus independent authority). This reform will address the systematic bias against large city centres that have significant but dispersed needs.

Recommendation 8: Simplify Grant Access and Mandate Multi-Year Funding Commitments

The low take-up rate of grants is due to a complex application process. Leeds should adopt a pre-approval mechanism and automatic enrolment by cross-referencing council tax data, benefits data and EPC ratings to proactively identify eligible households. This approach reduces the administrative burden on the most vulnerable households and aligns with the principle of procedural justice (Middlemiss et al., 2024), ensuring that support reaches those most in need without having to navigate obstructive bureaucracy.

Conclusion

This report has examined whether low-income earners in Leeds have meaningful access to energy-efficient housing and finds that, despite considerable policy ambition at both local and national levels, access remains structurally unequal. While improving housing efficiency is increasingly positioned as essential to achieving net-zero targets and reducing fuel poverty, current delivery frameworks do not adequately address the financial and social barriers faced by lower-income households.

Our findings suggest that energy efficiency is not distributed evenly across the Leeds housing market. The quantitative analysis identified a clear and statistically significant relationship between higher energy efficiency and higher housing prices, indicating that the most efficient homes are also among the least accessible to those on lower incomes. For many households, particularly those below relative low-income thresholds, the additional cost associated with moving into more efficient housing is prohibitive. This effectively limits access to lower energy bills, improved thermal comfort and wider health and economic benefits, reinforcing existing patterns of inequality.

The report also demonstrates that affordability alone cannot explain this gap. Fragmented funding structures, narrow eligibility criteria, inconsistent enforcement in the private rented sector and overreliance on technically focused retrofit models reduce the effectiveness of existing interventions. Although Leeds has demonstrated strengths through socially targeted and place-based approaches, these successes remain constrained by short-term national funding cycles and governance limitations. At the same time, current policy frameworks continue to treat fuel poverty primarily as a technical issue rather than recognising its wider relationship with income, housing markets and lived experience.

Addressing this challenge requires more than accelerating retrofit delivery. It requires a shift towards policies that integrate affordability, enforcement and social realities into energy transition planning. If Leeds is to meet both its climate ambitions and its social obligations, energy-efficient housing must become an accessible standard rather than a premium commodity. Without this shift, the transition to net zero risks reproducing the very inequalities it aims to resolve.



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