NATIONAL RETROFIT HUB

WORKING GROUP 6

UNDERSTANDING DEMAND FOR RETROFIT

JULY 2025

ACKNOWLEDGEMENTS

AUTHORED BY

Cara Holmes, National Retrofit Hub

Technical Programme Manager

(While on secondment from Citizens Advice)

Thank you to all Working Group 6 participants, members of the literature review Task and Finish Group and co-creators. Your generous contributions of time, insight and experience made this report possible.

This resource is published alongside a communications directory - a growing bank of resources to support stakeholder engagement throughout the retrofit journey.

SUPPORTED BY

THE MCS FOUNDATION

INTRODUCTION

This report summarises key literature exploring what drives resident demand for retrofit measures and what holds it back. It provides a starting point for rethinking the customer journey and highlights the activities and skills that may be needed to significantly increase uptake.

When we talk about resident demand for retrofit, we often focus on how many people are actively seeking to install energy efficiency improvements or low carbon heat technologies in their homes.

But demand does not appear out of nowhere. Before someone makes a purchasing decision or chooses to engage with a scheme, a series of conditions need to be in place.

Residents must first be aware that changes are needed. They must view those changes positively. They need the means — financial, practical or otherwise — to take action. And often, they require a clear and timely trigger to prompt that first step.

Right now, too few people are taking that step. Uptake of retrofit measures remains far below what is needed to meet Net Zero targets, and too few are accessing the comfort, cost savings and health benefits that retrofit can bring.

To shift this, we need to broaden how we think about demand. That means looking beyond the moment of decision to everything that leads up to it, and rethinking how we nurture and support that journey from the very start.

CONTEXT

Inefficient buildings often cost residents more to run as well as having the potential to seriously impact occupants' health and wellbeing.[4, 5, 13] In the UK, poorly performing homes make up a large proportion of housing stock with UK,[2, 7, 16] with homes losing heat up to three times faster than those in other European countries.[17]

The worst performing homes cost residents hundreds of pounds per year more than better insulated homes.[4] Cold, damp homes are also a source of stress for residents and can exacerbate, or even cause, significant health conditions.[5, 10, 13] Improving energy efficiency brings benefits far beyond the individual household.[8] Estimates suggest that the £9 billion needed to improve the 2.4 million worst-performing homes in England would pay for itself within nine years through savings to the NHS alone, with a wider social return of more than £135 billion over the next 30 years.[3]

Yet progress remains slow. In 2024, fewer than 60,000 heat pumps were installed according to MCS data, well below the government's target of 600,000 per year by 2028.[1] Data on energy efficiency improvements is limited, but we know that only two in five homeowners are currently interested in installing common retrofit measures.[6] Among those considering upgrades, most are focusing on improvements costing £5,000 or less.[15]

There are multiple and confounding factors that are suppressing demand for retrofit in the UK. While this report primarily focuses on residents, it is important to acknowledge the wider systemic issues that can make it more difficult for people to upgrade their homes. These include inefficient housing stock,[9, 14] an imbalance in supply and demand for housing,[12] power dynamics between landlords and renters,[5, 14] a weak regulatory framework,[11, 18] an underdeveloped supply chain,[18] rising living costs,[6] and the price of electricity relative to gas.[18]

59%

of homes around the UK have an EPC of D or lower and could benefit from energy efficiency upgrades[7]

50%

of UK households can't afford to heat their homes in winter[13]

Retrofitting 13 million homes to EPC C would provide

£40 billion

of cumulative benefits by 2030 with initial investment paying for itself within a decade[8]

THE RESIDENT RETROFIT JOURNEY

This review covers UK adults across tenures and focuses on the following measures:

- Energy efficiency measures that improve thermal performance. For example, draught proofing and ventilation is within scope, low energy light bulbs are not
- Low carbon heating
- Home batteries
- Solar PV and solar thermal panels

The focus of this review is everything that happens up to and including the entry point stage, as outlined in our customer journey model.

While we recognise that these stages are often fluid and in practice don't happen in a linear fashion, breaking them down into distinct processes make it more straightforward to answer the question of demand. What is it, and how can it be increased?

UNDERSTANDING DEMAND

To set the analytical framework for the literature review, members of Working Group 6 considered how to frame the concept of demand in a way that recognises the cognitive, emotional, social, and practical enablers that need to be in place before someone decides to undertake a retrofit project.

Taking learnings from the COM-B model for understanding behaviour change, working group members develop the following framework:

- Residents should have an **awareness** of the need to retrofit or that retrofit might be the solution to challenges they are currently experiencing
- Residents should have a positive **attitude** towards the combination of measures required and the organisations who will deliver them
- Residents must have the practical **ability** to undertake these works
- Residents are then still likely to need an **appropriate trigger** that pushes them to do the work.

AWARENESS

How aware are residents of:

- The benefits of fabric efficiency and appropriate ventilation?
- The need to decarbonise their heating and the costs of inaction?
- The steps they can take to increase their home energy efficiency?
- The support available to them?

ATTITUDE

What are residents' attitudes towards retrofit measures and the organisations that deliver retrofit related products and services?

ABILITY

What factors influence residents' ability to undertake this work? Are there any wider contextual factors that are limiting or enabling people?

APPROPRIATE TRIGGER POINT

What external (or internal) events push people to undertake this work?

AWARENESS

While many residents are concerned about energy bills,[9] and report an awareness of the benefits of insulation,[13] very few take action to improve the energy efficiency of their homes.[3, 13] This appears, in large part, to be because many believe their homes are already efficient enough.[13] This suggests a mismatch between people's perceptions and the reality that most properties in the UK have an EPC rating of D or lower.[6, 11, 13]

Although most people have heard of Net Zero,[3, 8] and many say they recognise the need to address climate change,[7] there appears to be limited awareness of the need to decarbonise heating systems,[2] and of the positive impact that home energy efficiency can have on reducing carbon emissions.[10]

Funding and finance options for energy efficiency and low carbon heating are not well known among owner-occupiers or landlords.[4, 5, 12] A significant number of those aware of existing schemes incorrectly assume they are not eligible.[5]

There is currently no clear understanding of what constitutes a 'good' level of awareness, or what level is needed to prompt further action.[7]

72%

of homeowners think their property is energy efficient.[11]

53%

of homeowners do not know their home's EPC rating.[1]

87%

of adults unaware of the environmental benefits of heat pumps.[10]

ATTITUDE

Increases in energy bills appear to have made more people, especially renters, take an interest in energy efficiency.[8] Among those that don't have measures installed and aren't interested, some of the most common reasons are thinking that the products are too expensive, aren't suitable, or would cause problems like damp or mould in the home.[1, 4, 10]

People view heat pumps as new,[11] unfamiliar,[6] and untested,[11] with many saying they aren't interested in installing them until the technology improves or prices come down.[1, 5] Those most likely to feel positive about low carbon heating are often concerned about climate change,[5, 13] younger,[4, 5] and have higher incomes.[4] In general though, most people don't really think about their heating systems until they might need to change them.[5]

Many believe government and businesses are not taking enough responsibility for addressing climate change,[12] and that we should be relying on technology, rather than behaviour change to reduce emissions.[7]

Attitudes are heavily influenced by family and friends as well as by speaking to tradespeople.[3, 5] People are more likely to trust the views of those they view as having particular expertise, credibility and independence.[2, 6, 9]

24%

of homeowners would only make changes to their homes if forced to by legislation.[11]

48%

feel that the net zero transition is happening to them, not with them.[11]

41%

feel that you need a high income to be involved in the net zero transition.[11]

ABILITY

Owner-occupiers face significant barriers around upfront costs.[2, 3, 6, 10] This is exacerbated by a lack of policy support for middle-income households,[5] and the fact that many prefer to fund home improvements with cash rather than borrowing.[2, 3] The diversity of buildings also means that some homes are harder to upgrade than others, and residents can find it time-consuming and overwhelming to identify the right options for their specific circumstances.[8] Much of the available advice is generic rather than tailored, making it harder for people to make informed decisions.[10] Finding trusted tradespeople can also be a challenge,[1, 4] and some are put off by the potential disruption retrofit works may cause to themselves or their family.[1, 3]

For **social landlords**, the ability to upgrade properties is often constrained by the need to install fabric measures for heat pumps to perform according to specifications, particularly in the context of residents experiencing fuel poverty.[6]

Private landlords face similar challenges. A lack of regulation means there are no clear incentives to retrofit,[6] changes to Minimum Energy Efficiency Standards in England and Wales, and the introduction of these standards in Scotland, may bring positive change. Upfront costs and the potential loss of rental income due to lengthy, disruptive works also act as major barriers.[6, 7] For all these groups, **wider contextual factors**, such as a lack of installers,[6] old and poorly insulated homes,[9] and the costs of electricity relative to gas also limit their ability to undertake retrofit works.[6]

9 in 10

homeowners listed cost as a reason for their lack of interest in retrofit measures.[2]

1 in 10

homeowners who looked into installing insulation couldn't find a tradesperson.[4]

69%

of homeowners wanted advice better tailored to their property and circumstances.[10]

APPROPRIATE TRIGGER POINT

While much evidence focuses on the financial and environmental motivations for undertaking retrofit works such as saving money, or reducing emissions,[1, 10, 12] actually making a change is about more than knowledge or beliefs.[3, 8, 9, 12]

A growing body of research suggests that people view retrofit in the same way as wider home renovation work.[9, 12] Significant changes to the home are often prompted by an external event that makes the change feel necessary or more convenient.[11] This could include moving house,[9] a boiler breakdown,[11] extending for a growing family,[9] or adapting a home to suit the needs of older occupants.[4, 12]

These trigger points are often shaped by people's relationships and circumstances.[12] For example, the disruption of extending a home with young children might prompt someone to delay works for a few years. On the other hand, a trusted builder suggesting new windows may be enough to prompt action. Even people who have made changes to their homes for climate or cost related reasons still often do so at a time when external events have made changes easier or more convenient.[12]

Almost half of homeowners are planning a home renovation in the next 18 months, yet fewer than one in ten are considering new or improved insulation.[6] And while many say they are willing to stretch their budget to include energy efficiency measures, builders are often reluctant to promote additional works for fear of damaging the relationship with their client.[5]

46%

of homeowners are planning home improvements in the next 18 months.[6]

1.5 million

boilers are sold each year,[7] 15 times the number of heat pumps.[2]

85%

of people planning refurbishments would stretch their budget to include energy efficiency measures.[5]

RETROFIT PROJECT BEGINS

NEXT STEPS

This review of existing literature has demonstrated that demand is complex and that there is no single trigger that can drive uptake of performance upgrade retrofit.

This literature challenges the assumption that a single intervention such as financial assistance, or information campaigns are enough to significantly increase the uptake of retrofit measures. Indeed, poor uptake of even fully funded government schemes makes it clear that finance is necessary, but not sufficient, to support the delivery of retrofit at scale.

With this in mind, NRH Working Group 6 has begun the next phase of work, focusing on resident communications. This will explore what is being communicated, when, by whom, and what the outcomes are. By keeping the key components of demand in view, we will assess whether certain aspects are over- or under-emphasised and develop recommendations for improvement based on identified best practice.

We have begun by compiling existing communications resources which can be accessed here. And will follow-up with workshops to begin populating a communications activity map. To take part, or keep up to date on the progress of this work sign up to our newsletter or complete a working group registration form.

REFERENCES

CONTEXT:

1. MCS, 2024 was a record year for small-scale renewables, January 2025
2. BRE, The Housing Stock of the United Kingdom, February 2020
3. BRE, Poor Housing Costs £135.5bn Over 30 Years, July 2023
4. Citizens Advice, Insulation Nation, September 2022
5. Citizens Advice, Damp, cold and full of mould, February 2023
6. Citizens Advice, Demand: Net Zero, May 2023
7. Citizens Advice, Decarbonisation Dashboard, June 2023
8. Citizens Advice, Home Advantage: Unlocking the benefits of energy efficiency, June 2023
9. Data North Yorkshire, SPF Housing Stock Data Analysis Reports, June 2023
10. Gov.uk, Understanding and addressing the health risks of damp and mould in the home, August 2024
11. The Guardian, UK government scraps plan to ban sale of gas boilers by 2035, January 2025
12. House of Commons Library, Tackling the under-supply of housing in England, May 2023
13. Institute of Health Equity, Left out in the cold, February 2024
14. IPPO, Decarbonising Home Energy through Behaviour Change, December 2023
15. The MCS Foundation, Ramping up Retrofit, July 2024
16. Passivhaus Trust, The right time for heat pumps, April 2024
17. Tado, UK homes losing heat up to three times faster than European neighbours, February 2020
18. UK Collaborative Centre for Housing Evidence, Heat Pumps and Domestic Heat Decarbonisation in the UK, November 2023

REFERENCES

AWARENESS:

1. Atom, Low awareness of property EPC ratings costing homeowners thousands, January 2025
2. Becker, Demski, Smith & Pigeon, Public perceptions of heat decarbonization in Great Britain, July 2023
3. Capita, Road to Net Zero, The Road to Net Zero, Accessed January 2025
4. Chartered Trading Standards Institute, Energy-efficiency pledges 'undermined by lack of consumer confidence', June 2024
5. Citizens Advice, Insulation Nation, September 2022
6. Citizens Advice, Decarbonisation Dashboard, June 2023
7. Climate Exchange, Public awareness of and attitudes to low-carbon heating technologies, July 2020
8. Department for Energy Security & Net Zero, Public Attitudes Tracker: Net Zero and climate change, Spring 2024, July 2024
9. Department for Energy Security & Net Zero, Public Attitudes Tracker: Energy bills and tariffs, Spring 2024, July 2024
10. H&V News, Manufacturer survey highlights limited UK awareness of heat pump efficiency benefits, September 2023
11. Independent, Millions of homeowners wrongly believe that their home is energy efficient, January 2023
12. National Retrofit Hub, Raising Standards in the Private Rental Sector, February 2025
13. Which?, Empowering homeowners to insulate their homes through improved awareness and information, September 2023

REFERENCES

ATTITUDE:

1. Citizens Advice, Demand: Net Zero, May 2023
2. Citizens Advice, Taking the Temperature, August 2020
3. Citizens Advice, Home Safe: giving consumers confidence to install low carbon technologies, December 2023
4. Citizens Advice, Who are the Early Adopters?, January 2025
5. Department of Energy Security & Net Zero, Public Attitudes Tracker: Heat and Energy in the Home, March 2024
6. International Public Policy Observatory, Decarbonising Home Energy through Behaviour Change, December 2023
7. Nesta, Decarbonising homes, June 2021
8. Rightmove, Greener Homes Report, July 2023
9. Rowlatt, Reeves, Morton, Brown, Household Energy Efficiency - why the older owner is stalled, Accessed November 2023
10. Social Market Foundation, Lagging behind: New insights into the barriers to energy efficiency uptake, March 2023
11. Social Market Foundation, Whose energy transition is it anyway?, January 2025
12. Thinks Insight, The Net Zero Diaries: A citizen perspective on tackling the climate emergency, May 2022
13. UK Collaborative Centre for Housing Evidence, Motivations and Barriers Associated with Adopting Domestic Heat Pumps in the UK, April 2023

ABILITY:

1. Bolton, Bookbinder, Middlemiss et al., The relational dimensions of renovation: Implications for retrofit policy, February 2023
2. Citizens Advice, Demand: Net Zero, May 2023
3. Citizens Advice, Who are the Early Adopters?, January 2025
4. Citizens Advice, Home Safe: giving consumers confidence to install low carbon technologies, December 2023
5. Green Alliance, Locked out: Helping low to middle income households benefit from net zero, December 2022
6. Harrington, Nicholas, Heat Pumps and Domestic Heat Decarbonisation in the UK: A Systems Thinking Analysis of Barriers to Adoption, November 2023
7. National Retrofit Hub, Raising Standards in the Private Rental Sector, February 2025
8. RiDC, Understand Disabled Consumers Needs in Relation to Smart Energy Options, January 2024
9. Tado, UK homes losing heat up to three times faster than European neighbours, February 2020
10. Which?, Empowering homeowners to insulate their homes through improved awareness and information, September 2023

REFERENCES

APPROPRIATE TRIGGER POINT:

1. Ahmad, Sohail, Motivations and Barriers Associated with Adopting Domestic Heat Pumps in the UK, April 2023
2. BBC, UK homes install subsidised heat pumps at record level, March 2025
3. Bobrova, Papachristos, Fong Chiu, Tikhomirova, Coon, Home for the Common Future (HCF): The use of home-meaning to promote domestic energy retrofit, January 2024
4. Connected Places Catapult, Pathways to Healthy Ageing, November 2023
5. Energy Saving Trust, Trigger points: a convenient truth, 2011
6. Häfele, Homes for Living, January 2024
7. HHIC, Boilers bounce back as consumers invest in home renovation, May 2021
8. IPPO, Decarbonising Home Energy through Behaviour Change, December 2023
9. IPPR, More than money, Moving towards a relations approach to retrofitting, September 2023
10. Power Technology, Will heat pumps ever replace gas boilers in the UK?, October 2024
11. Thinks Insight, The Net Zero Diaries: A citizen perspective on tackling the climate emergency, May 2022
12. Wilson, Crane, Chryssochoidis, Why do homeowners renovate energy efficiently? Contrasting perspectives and implications for policy, May 2015

THANKS & ACKNOWLEDGEMENTS

Thank you to all Working Group 6 participants, members of the literature review Task and Finish Group and co-creators. Your generous contributions of time, insight and experience made this report possible.

Icons used in this report are from flaticon.com