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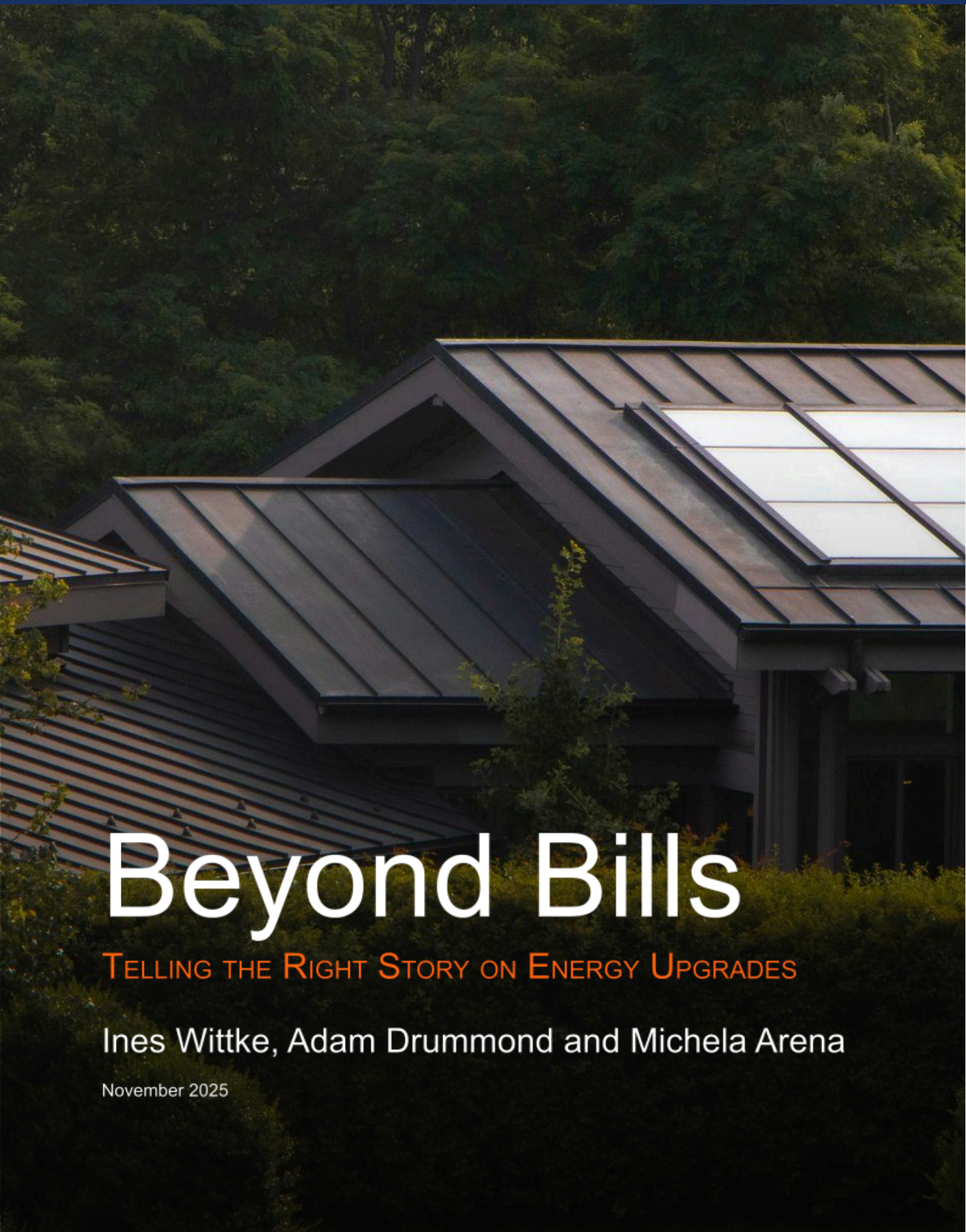

Beyond Bills

Telling the Right Story on Energy Upgrades

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The MCS Foundation drives positive change to decarbonise homes, heat and energy. It commissions robust, independent research that informs and shapes better decision making to drive a carbon-free future for all UK homes.

Executive summary

Homes carry meaning far beyond their walls. They are places where people invest time, money, and emotion: where they raise families, express identity, and take pride in improvement. In Britain, however, they also represent one of our biggest collective challenges: draughty, gas-dependent buildings that leave people exposed to high energy bills and make reaching climate goals harder.

For years, policy has leaned heavily on the economic case: promising lower bills, or providing support with upfront costs, to persuade households to upgrade their homes. While cost matters, relying on it alone has not shifted behaviour at scale. Too often, energy improvements are still framed as technical chores: a hassle rather than something to be desired. Ensuring the economics stack up is important, but it will only go so far in driving uptake unless it is paired with communication that speaks to people's everyday motivations and aspirations for their homes.

This report asks how to change that story. It draws from two research phases: an exploratory qualitative phase, where we held focus groups with middle and high-income homeowners to understand how people think about their homes, and a nationally representative survey of 4,000 homeowners. Together, these provided the basis for building a consumer segmentation rooted in the attitudes and values that shape decisions about energy upgrades.

We then tested 90 variations of messages across heat pumps, insulation, solar panels and smart thermostats to see which framings resonated with which segments. Rather than showing them all to every respondent, each participant only saw a randomised subset of messages. The result is a more detailed picture of how communication can connect with motivations that bills alone may not reach.

The research points to four key findings around energy upgrades communication and messaging:

1. **Bill savings are a baseline, not a hook.** People expect energy upgrades to cut costs, but they rarely choose on that basis alone. Messaging that emphasizes the availability of Government grants, on the other hand, consistently performs well across technologies in our research**.** Immediate, visible support is far more motivating than future savings spread over time.

2. **Everyday benefits resonate.** Messages about comfort ("a warmer, more reliable home") and greater control over energy use often proved more effective than bill savings or environmental arguments.

3. **Heat pumps offer the biggest scope for communications to make a difference across the technologies we tested**. With low awareness and adoption, views are less fixed - making them more open to being shaped by messaging than insulation, solar panels or smart thermostats. Messaging that emphasised comfort benefits, more control over one's energy use, access to government grants, and environmental benefits all tended to resonate well.

4. **Renovations and upgrades are seen differently - but messaging drawing on the theme of comfort can bridge the gap**. People talk about renovations as aspirational projects they enjoy doing, while they see energy upgrades as disruptive chores. This divide makes upgrades harder to sell. Comfort stood out as a framing that resonated in both contexts, suggesting it is one of the strongest ways to reframe upgrades as part of normal home improvement.

The broad findings above apply across the population, but our segmentation shows that certain framings work especially well for specific groups and technologies. This points to the potential for

much more targeted engagement - tailoring messages to the audience and the upgrade in question, rather than relying on generic appeals.

The task now is to re-tell this story. Government, industry, and media all have a role: making support simple and visible; emphasising everyday benefits; tailoring messages to different audiences; and weaving upgrades into the renovation story. Making sure the economics add up is vital, but we can accelerate the momentum with better framing and communication that connect with how people think about their homes.

1. The Context

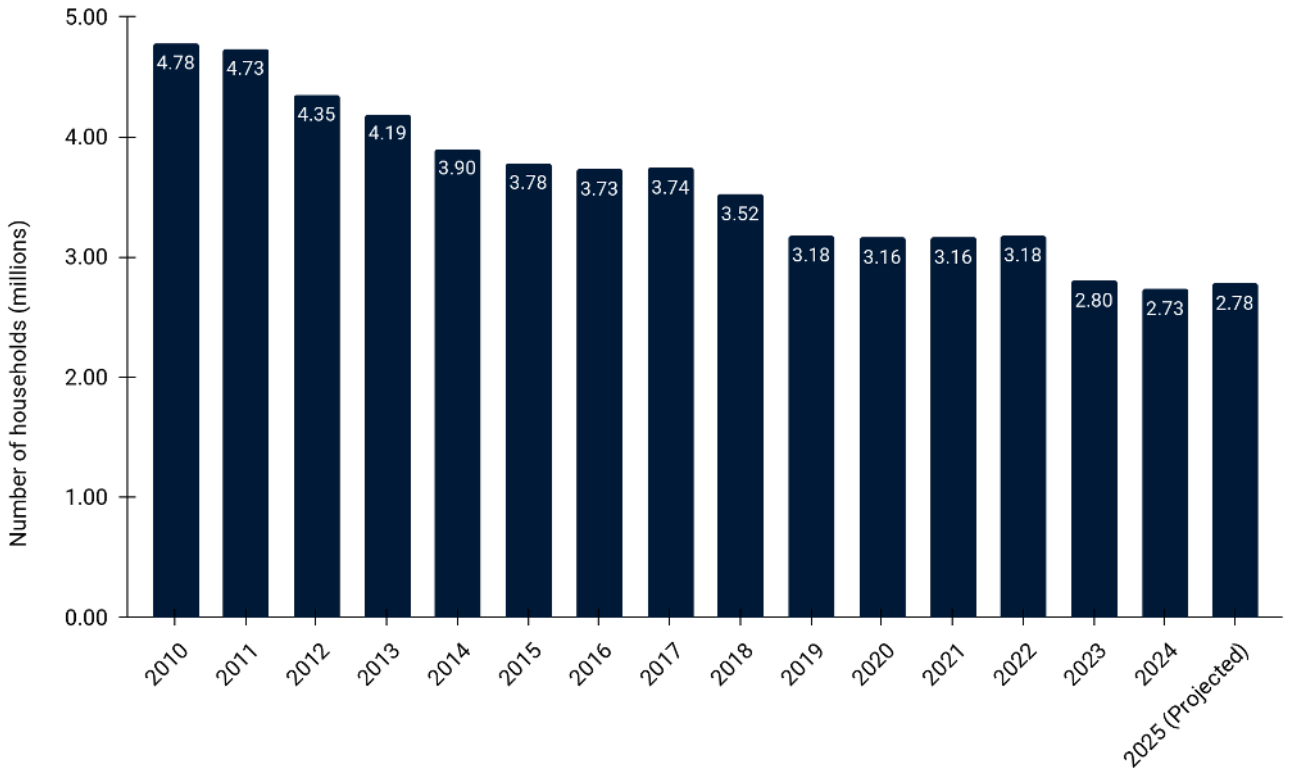
British homes have always been more than bricks and mortar. They are places of safety and belonging, the foundation for family life, and for those who own them, they are often their single biggest financial asset. For generations, owning a home has been tied to the idea of opportunity - for wealth creation, for security, and for a better future.

However, Britain's homes also face many long-standing problems. Chief among them is that they leak heat, waste energy, and leave millions of households paying more than they should, which is the focus of this project. In England and Wales, fewer than half of homes meet EPC band C, the threshold generally taken to mean a home is energy efficient (50% in England and just 44% in Wales).[1] Scotland performs only slightly better, but across the UK the picture is consistent: our housing stock is among the least efficient in Europe.[2] British homes are also overly reliant on gas for heating. As of December 2024, of the roughly 30 million households in the UK, 85% - or 25.5 million - still relied on natural gas for heating, leaving them exposed to inflated gas prices and price shocks.[3]

This has consequences, and the effects are felt in daily life. The NHS spends an estimated £1.4 billion annually on treating illnesses associated with living in cold or damp housing. When wider societal costs are considered, such as healthcare, that figure rises to £15.4 billion.[4] One of the most visible is energy affordability. Rates of fuel poverty remain stubbornly high, with millions of households struggling to heat their homes adequately, as shown in Figure 1. The lack of efficiency also leaves the UK unusually exposed to global energy price shocks. According to the IMF, British households were among the worst affected in Western Europe by the 2022 energy crisis.[5] The issue has not faded from public concern. Even three years on from the height of the energy crisis, energy bills continue to rank as one of the public's top worries in national polling, with 85% of people reporting the cost of living as one of the main issues facing the country right now, and 57% of those citing energy bills as a reason for it.[6]

[1] ONS, Energy Performance Certificate (EPC) Band C or above, England and Wales, 08 October 2024
[2] Resolution Foundation, Housing Outlook Q1 2024, 25 March 2024
[3] DESNZ, Hydrogen Heating: Overview, 17 December 2024
[4] House of Commons Library, Health Inequalities: Cold or Damp Homes, 16 February 2023
[5] The Guardian, Energy crisis: UK households worst hit in western Europe, finds IMF, 1 September 2022
[6] ONS, Public opinions and social trends, Great Britain: July 2025, 15 August 2025

Figure 1 - UK fuel poverty rates remain consistently high. *Number of households in fuel poverty under the LILEE measure.*



Source: PF Analysis of DESNZ Annual Fuel Poverty Statistics 2025[7]

These social and financial pressures are reason enough to act. But they also carry a climate cost. Homes are responsible for around 14% of the UK's greenhouse gas emissions, making them the second-highest emitting sector after transport.[8] The Climate Change Committee has been clear that progress to reduce emissions from housing will be critical through the 2030s.[9] If upgrades continue at the current rate, not only will bills stay high and homes cold, the UK will also risk falling behind on its long-term decarbonisation goals.

Today, our homes present a new kind of opportunity. Amidst high energy bills and a clean energy transition, improving our homes - whether that be through better insulation, cleaner heating, or smarter technology - will enable British households to benefit from better comfort and health, reduced costs, and tackling climate change.

Whilst this report focuses on homeowners, the task of upgrading extends further. However, the challenges in the case of rental properties, whether private or social, are different. Tenants may have limited say over improvements, while private landlords will more often weigh costs against returns. These dynamics call for a distinct set of policies and engagement approaches, beyond the scope of this report.

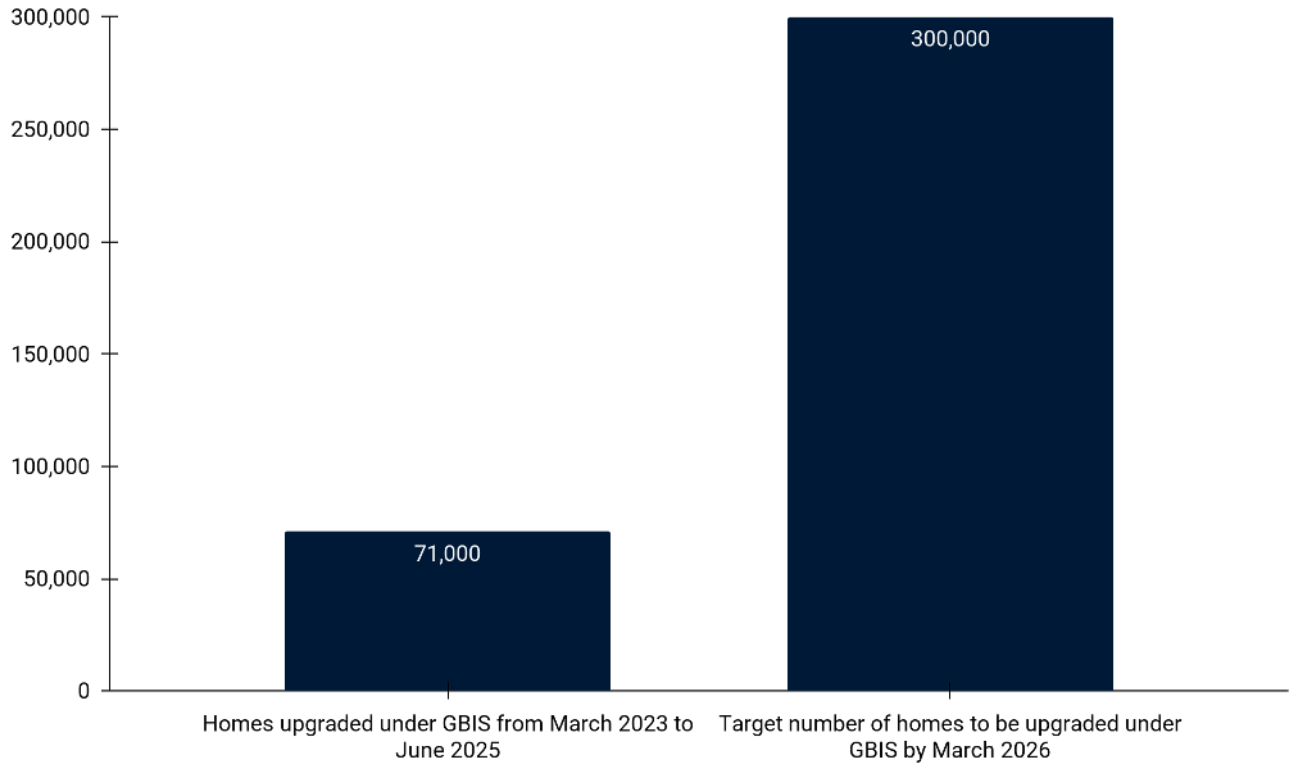
Efforts to date have focused on helping make the financial case

There has been no shortage of schemes designed to speed up improvement rates. From the Boiler Upgrade Scheme to the Energy Company Obligation (ECO), governments have put support on the table to help households install fabric measures and low-carbon heating technologies. Yet results have been mixed. Uptake has often lagged behind ambition, with the Boiler Upgrade Scheme issuing fewer than

[7] DESNZ, Annual Fuel Poverty Statistics in England, 2025 (2024 data), 27 March 2025
[8] DESNZ, 2024 UK Greenhouse Gas Emissions, Provisional Figures, 27 March 2025
[9] Climate Change Committee, Progress in reducing emissions - 2025 report to Parliament, 25 June 2025

half its available vouchers in its first year[10], and the Great British Insulation Scheme (part of ECO) reaching only a fraction of the households it was intended to serve - with only 71,000 homes upgraded out of the 300,000 target and the scheme set to end in March 2026.[11] There are reasons for cautious optimism. When the Boiler Upgrade Scheme grants were increased in 2023–24, heat pump installations climbed to record levels.[12] Installations however remain far short of what is needed if the housing stock is to be upgraded at the pace required, which reveals the limits of money on its own.

Figure 2 - GBIS is significantly behind schedule on its upgrade targets.



Source: PF Analysis of DESNZ Summary of the Great British Insulation Scheme data

What's missing: looking beyond money

Research already shows that the barriers to upgrading homes are not just financial. Even when grants are available, many households do not take action for other reasons: doubts about the quality of installations, confusion over how to navigate the process, or a reluctance to face disruption for savings that feel modest.[1314] Some research also suggests that social and identity factors may play a role. Decisions about the home can be shaped not just by cost calculations, but also by what people aspire to, how they want their home to feel, and the influence of friends, family or neighbours.[1516]

[10] National Audit Office, Low heat pump uptake slowing progress on decarbonising home heating, 18 March 2024
[11] DESNZ, Summary of the Great British Insulation Scheme: August 2025 - GOV.UK, 21 August 2025
[12] BBC News, UK homes install subsidised heat pumps at record level, 6 March 2025

[13] Citizens Advice, Understanding homeowner demand for heat pumps, January 2025
[14] Public First, Upgrade: How to deliver better homes by 2030, July 2024
[15] IPPR, More Than Money, September 2023
[16] C. Wilson et al., Why do homeowners renovate energy efficiently? Contrasting perspectives and implications for policy, 24 March 2015

That means good policy is not just about the level of support, but also about how it is framed: If upgrades are described in ways that feel confusing or disconnected from everyday experiences, people are unlikely to engage.

Despite this, much of the public communication around upgrades has continued to focus narrowly on cost and bill savings. There are signs, however, that government is beginning to experiment with different approaches. The Department for Energy Security and Net Zero's (DESNZ) recent "Warm and Fuzzy" campaign, for instance, placed comfort and wellbeing at the centre of its messaging on heat pumps.

All of this suggests there is value in looking beyond bills and savings to see what else might resonate. Improving the economic incentives for upgrades is vital, but it will not be as effective as it could be unless we also change how we talk about them. Policy and communication need to work together if we want to unlock higher uptake.This report sets out to explore to explore that second point: to test whether messages that speak to comfort, identity or other motivations can shift how people think about upgrading their homes, and to understand what role they might play alongside finance in encouraging upgrades.

2. Taking a Different Lens to Upgrade Decisions

Much of the existing research into home upgrades primarily considers household and property characteristics: income, tenure, property type and age. These factors matter: they shape what people can afford and what options are open to them. But they rarely explain everything. Two households with similar incomes and homes can respond very differently, depending on how they see their home, what they value, and how open they are to change.

This project set out to explore those differences more directly. Instead of beginning with standard property and household characteristics, we segmented UK homeowners according to a set of attitudes and orientations relating to their home, environmental concerns and broader attitudes to technology.

By starting from these factors, the segmentation helps to reveal people's baseline motivations: the values and assumptions they might bring to decisions about their homes. We then tested messages aimed at encouraging the uptake of energy efficiency and low carbon technologies across segments to see what resonated more, and where financial or non-financial framings made a difference.

Importantly, the project did not treat all upgrades as the same. We focused on four technologies: insulation, heat pumps, solar panels and smart thermostats, because together they span a range of costs, benefits and impacts on the home. That variety allowed us to test our intuition: that some technologies may be more appealing than others depending on what they offer. Equally, the same message does not land in the same way for every group. That is why tailoring matters. By exploring this systematically, the project asks whether campaigns built mainly on "saving money" are overlooking opportunities to connect with people's wider motivations, and whether certain framings may be better suited to some technologies and audiences than others.

Progress on upgrades has been slow, and there is no single lever that will change that overnight. The aim here is not to find a silver bullet, but to understand where there may be openings. Some households may be more ready for certain technologies than others; some will respond to messages about comfort or climate, while others may only be moved by a clear financial case. Meeting people where they are, with the right starting point and the right framing, is a pragmatic way to communicate with households and encourage them to take the first (or next) step.

The Government has said it will launch its new Warm Homes Plan in the autumn, with delivery details still to come. [17] It has also committed to publishing a Public Participation Strategy for Net Zero in 2025, setting out how it will engage the public on major household and consumer choices - including home heating. [18] Together, these initiatives create a clear opportunity for government to consider how best to frame the case for upgrades so that more households are willing to take them up.

[17] UK Parliament, Retrofitting homes for net zero: Government Response, 18 August 2025
[18] Climate Chance Committee, Progress in reducing emissions – 2025 report to Parliament, June 2025

This research was designed with that moment in mind. Previous efforts have shown the limits of relying too heavily on promises of lower bills. It is therefore important to understand what else might help move the dial given the values that shape people's decisions around their homes. This does not replace the need for policy and financial support, but it can help make engagement more effective, and ensure the upcoming campaign has the best chance of building lasting momentum.

Why this report uses "upgrades," not "retrofit"

This report deliberately uses the language of *upgrades* rather than *retrofits*. The choice is intentional.

Previous Public First research shows that the term "retrofit" does not resonate with most households.[19] It is unfamiliar, overly technical, and frames the issue as a one-off fix imposed from outside. Multiple participants across previous focus groups have even questioned if it means returning something to an older state - conjuring more negative associations than positive. By contrast, *upgrade* is intuitive, aspirational, and forward-looking. It allows people to imagine energy efficiency as part of a wider set of improvements they might want for their home, whether that means a warmer living room, a modernised kitchen, or lower running costs.

Framing matters. Policy is not only about achieving measures and targets, but also how households experience change in their daily lives. If the language does not make sense to the public, then the policy risks failing.

Using "upgrade" signals two points relevant to this research. First, that households should be placed at the centre of the story, in terms they understand. Second, that the energy transition is about more than cutting bills or carbon: it is also about making homes better to live in. This is consistent with the approach taken in this report, where segmentation focuses on people's values, identities and motivations, not just their income or housing type.

At a glance: international perspectives on framing upgrades

Outside of the UK, governments and industry alliances have taken different approaches to making home upgrades more appealing. The three examples below illustrate how, in different contexts, both the design of the offer (whether a policy, product, or service) and the way it is presented to households have been considered. In each case, there is a clear effort to shape the narrative around upgrades, helping consumers see them more positively.

This is not a comprehensive survey, but it shows that elsewhere, actors are experimenting with ways of talking about upgrades that go beyond cost - aiming to make support easily accessible, reassure households, reduce the sense of hassle, and present improvements as a normal, and sometimes even desirable, part of caring for a home. The lesson for us is that communication itself can perhaps play a bigger role in driving uptake in the UK. This report seeks to explore exactly that: whether there are opportunities to reshape how upgrades are talked about in the UK, and, if so, what the most effective framings might be.

[19] Public First, Upgrade: How to deliver better homes by 2030, July 2024

Table 1: International examples of approaches to framing and supporting home upgrades

Scheme	What it is	How it's communicated	Why it matters
France: MaPrimeRénov'	Launched in 2020, MaPrimeRénov' consolidated a patchwork of earlier subsidies and tax credits into a single, national programme. It offers income-based grants for a wide range of energy-related improvements (insulation and heating systems, ventilation, solar panels). Applications are channelled through one online portal. Additional funding is available when measures are combined. [20]	Presented as a mainstream "home improvement" offer. Promoted through consumer-facing channels (banks, advice services, housing sites), with branding designed to make it feel accessible and routine. The slogan "A better home for me, a better home for the planet" links personal comfort and pride directly with environmental benefit.	Shows how policy design and communication together can make upgrades feel like an ordinary renovation choice, not a niche energy policy. Wraparound support and clear branding help simplify the process and normalise uptake at the time of renovation.
Denmark: BetterHome	BetterHome was an industry-led one-stop-shop model set up by four major Danish building companies to tackle the non-technical barriers that often deter homeowners from upgrading. Instead of coordinating multiple contractors, households worked with a single certified installer who acted as their point of contact throughout. A shared online platform gave both homeowners and installers a clear, visual way to track progress. The scheme was funded directly by the participating firms, without requiring the use of their own products. [21]	Presented upgrades as a way to improve how the home feels and functions. Installers were trained to speak about indoor comfort, air quality, and wellbeing, helping highlight everyday living benefits. The one-stop-shop model simplified choice and reassured people that upgrades would be coordinated and reliable.	Communication and delivery design work in tandem. By combining a single point of contact with messaging around comfort and wellbeing, it makes upgrades feel like straightforward, desirable improvements.
Netherlands: Energiesprong	Energiesprong ("Energy Leap") began as a Dutch government innovation programme aimed at showing whole-house upgrades could be done quickly, at scale, and to net-zero standards. Pilots in social housing showed the model (prefabricated façades and roofs, new windows, heat pumps and solar panels) could transform homes in days. It then evolved into Stroomversnelling, an alliance of housing providers, contractors and financiers that develops these standardised solutions and the business models to make them marketable products. [22]	Rebrands upgrades as a lifestyle product and a movement. Messaging emphasises speed ("a new home in under a week"), Framing is aspirational (slogans like "a home better than new") and highlights comfort, modernisation, and pride, tapping into similar emotions as buying a new kitchen or car. It also aims to build a sense of belonging/community by calling adopters "frontrunners" and positioning them as pioneers of the future of housing.	By positioning deep upgrades as modern, quick, attractive, and low-risk, Energiesprong helps make retrofit something people want, not just tolerate. Underlines the potential for communications that treat energy upgrades like lifestyle improvements and making change feel aspirational.

[20] FEANTSA, France: Ma Prime Rénov, December 2023
[21] Buildings Performance Institute of Europe, Boosting renovation with an innovative service for homeowners: BetterHome: An industry-driven one-stop-shop solution, 2017
[22] Energiesprong, What is Energiesprong?

3. Our Segmentation

Segmentation is a research tool used to divide a broad population into smaller groups who share similar outlooks, values, or behaviours. Instead of treating all homeowners as one audience, or dividing them only by simple demographics like income or tenure, segmentation allows us to see the patterns that cut across those categories.

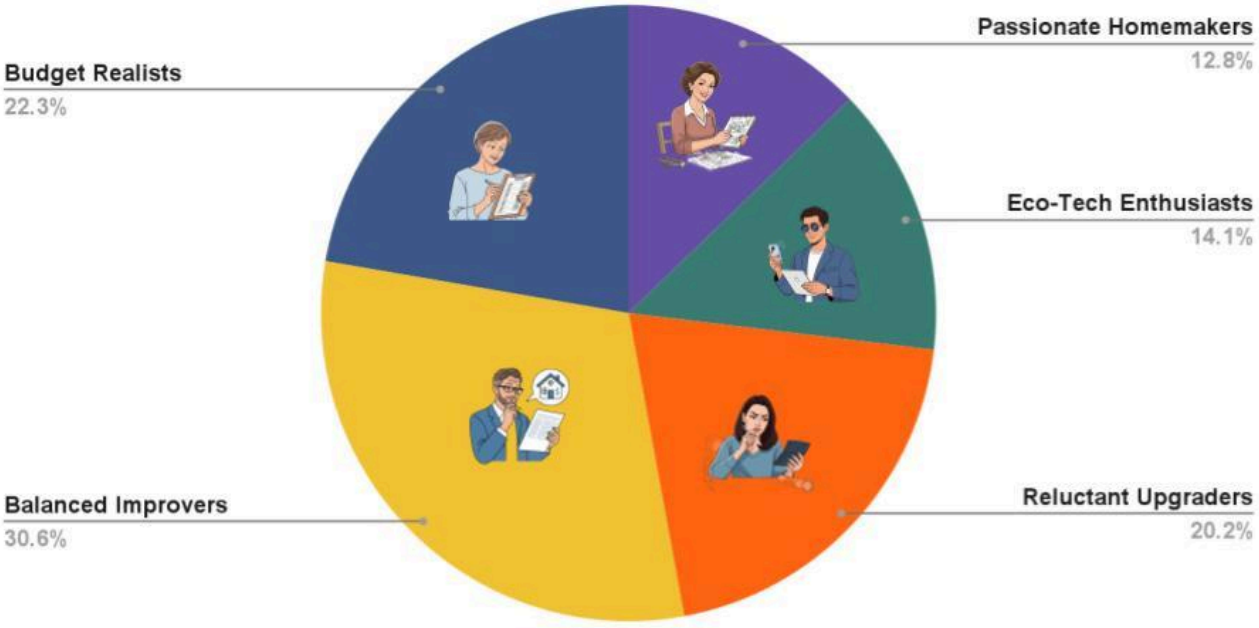
To build the segmentation, we first aimed to identify the key dimensions that influence how people think about their homes and make decisions about upgrading them. This was informed by both a review of existing evidence and two focus groups we conducted with middle and high-income homeowners (see appendix for details). The literature highlighted recurring barriers such as upfront cost, low trust in installers, and confusion about how to get started, alongside motivators such as comfort, property value, and environmental concern. The focus groups helped us look at the question with a wider lens: they showed how people talk about their homes in general, what they hope to achieve through improvements, and the mix of everyday motivations that can drive action. These included not only comfort and cost, but also pride in their home's appearance, the appeal of a modern and functional space, and the desire to feel more secure by shielding oneself from energy price shocks. We then used these insights to design survey questions, structuring the segmentation around the following themes that emerged as playing a role in shaping upgrade decisions:

- **How people view their home**: some see it mainly as a financial asset, others as a place of comfort, a project to work on, or an expression of identity.
- **Levels of environmental concern**: ranging from those motivated to act on climate change, to those who see it as someone else's responsibility, to those who are indifferent or sceptical.
- **Attitudes to renovation**: whether people are willing to invest for long-term benefit, focus on comfort now, or avoid upgrades because they see them as stressful and disruptive.
- **Attitudes to technology**: from early adopters who enjoy trying new solutions, to those who feel overwhelmed by choice or see tech as unnecessary complications for basic household functions.

The segmentation analysis revealed five distinct groups of homeowners (Figure 2). Each represents a different way of thinking about the home, technology, and change. These are not rigid categories, but useful portraits of the attitudes and motivations that shape decisions.

The value of this segmentation lies in showing how these factors cluster together. For example, our segments reveal that people who avoid renovations because they find them stressful are often the same people who resist new technology. Those who see their home as an expression of identity are also more likely to embrace renovation and experiment with new devices. By combining these patterns, the analysis highlights the distinctive mindsets that campaigns will need to engage with.

Figure 2: Share of segments across the UK homeowner population



Source: Public First analysis

Table 2: Description of UK homeowner segments for upgrading homes

	Reluctant Upgraders	Passionate Homemakers	Budget Realists	Balanced Improvers	Eco-Tech Enthusiasts
Care for the environment	Minimal environmental engagement and prefers cheap energy regardless of its source. They believe that addressing climate change is mainly the role of governments and industries	Moderate to high environmental concern. While they believe systemic actors should lead on climate action, they also accept some personal responsibility	Environmental concern is low. They are aware of climate responsibility but would not be willing to pay a premium on their bills for cleaner or renewable energy	Moderate commitment. Supportive of renewable energy but not particularly willing to increase their bills for it to come from cleaner sources	High environmental commitment. Willing to invest in renewable energy even at a higher cost, combining systemic responsibility with personal action.
Attitude towards technology	They are resistant to adopting new smart home technologies, perceiving them as unnecessary complications.	They keep reasonably informed about home technology developments, though they are not usually first adopters. They balance curiosity with caution when adopting new devices.	They struggle to keep up with emerging tech and are not eager adopters. They focus on practicality over novelty.	Feels somewhat overwhelmed by technology but not strongly resistant. May adopt tech selectively if it's seen as practical.	Enthusiastic about home technology, often among the first to try new products. They see tech as a way to enhance both comfort and sustainability.
View of the home	The home is viewed as a functional space rather than a personal expression or a long-term creative project. Aesthetics and style play a minimal role in decision-making.	Their home is a reflection of personal style and values, and they take pride in continuous improvement. They see their property as a personal project and a long-term investment.	Their focus is on function and maintaining property value rather than on aesthetic expression. Home improvements are pursued for practical or financial reasons. Balanced between style, comfort, and practicality.	Appreciates a pleasant home but without extreme focus on aesthetics or continuous improvement.	Strong style orientation, viewing the home as a dynamic project that reflects identity. They enjoy continuous upgrading and aesthetic refinement.
Attitude towards renovation	They typically defer renovations until something needs repairing. The process of renovating is seen as stressful and undesirable, so proactive improvements are rare.	Highly proactive, willing to endure disruption for long-term benefits and comfort upgrades. Renovation is seen as a positive process of improvement.	Although home renovation does not make them anxious like Reluctant Upgraders, they are selective in making upgrades, typically choosing those that provide clear functional or cost benefits.	Cautious but open to upgrading for long-term benefits. May delay unless benefits are clear or urgent.	Proactive and enthusiastic about investing in both comfort and long-term sustainability. Less concerned about disruption during improvements.

Source: Public First analysis

Demographic makeup of segments

Although the segmentation is built on attitudes and values, it is still possible to sketch a broad picture of how the groups differ demographically. These profiles are not what defines the segments, but they give a sense of who is more likely to fall into each group:

- **Reluctant Upgraders** are more likely to be men, and much older than the other segments (six in ten are over 65). They are the least likely to live in an urban or city-centre area, and more often found in the South of England outside London. This group has the lowest earnings, possibly reflecting the large proportion of retirees. They are most often in flats or terraced homes, and are the most likely of all segments to own their homes outright.

- **Passionate Homemakers** are more likely to be younger (38% are under 35) and more often women. They tend to live in urban areas, especially city centres and suburbs, with many based in London and the South of England. They are the most likely to be in higher socioeconomic groups (66% in AB, which corresponds to those in intermediate managerial, administrative, and professional occupation), and include a significant share of high earners (28% with household income over £80k). They live in a mix of housing types, but are the most likely of any segment to still have a mortgage rather than owning outright.

- **Budget Realists** are evenly spread across age groups, but slightly more likely to be men. They are distributed relatively evenly across the country. Most are mid-income earners, with 63% reporting household incomes between £30k and £80k. They most often live in semi-detached or terraced houses.

- **Balanced Improvers** are more often women, and like Reluctant Upgraders they skew older (44% are over 65). They are neither strongly urban nor rural, but more typically live in large towns or suburban areas. This group tends to have lower incomes and to come from lower social grades. They live in a variety of housing types but are more likely to own outright than to have a mortgage.

- **Eco-Tech Enthusiasts**, like Passionate Homemakers, are more likely to be younger (40% are under 35). They are strongly urban, with many living in London. They are the highest earners of all segments, with the largest share in the AB social grades. They are more likely than other groups to still be paying a mortgage, and are spread across a range of home types.

Uptake of upgrade measures by segment

It is important to note that the segments start from different baseline levels of adoption and interest in home energy efficiency and low carbon measures. Eco-Tech Enthusiasts are furthest ahead, with the highest uptake across all technologies, followed by Passionate Homemakers. Budget Realists and Balanced Improvers sit in the middle, with more mixed adoption patterns. Reluctant Upgraders are at the other end of the spectrum, showing the lowest levels of uptake.

Across all segments, insulation was by far the most common upgrade, with more than 85% uptake in every group. Smart thermostats came next at 33%, though adoption varied widely - from 65% of Eco-Tech Enthusiasts to just 14% of Reluctant Upgraders. Solar panels were less common, installed by around 15% of homeowners in our sample. Heat pumps showed the lowest uptake at 11%, though again the spread was stark: a third (33%) of Eco-Tech Enthusiasts reported having one, compared to only 1% of Reluctant Upgraders. It is worth noting that these figures are higher than government statistics, such as the English Housing Survey, which estimated that only around 1% of owner-occupier dwellings in England had a heat pump as their main heating system in 2023. [23] The discrepancy likely reflects two factors: with heat pumps still relatively new in the UK, many people are unsure what counts as one, leading to misreporting; and, more generally, self-reported surveys tend to overstate uptake compared

[23] Ministry of Housing, Communities & Local Government, English Housing Survey 2023 to 2024: low carbon technologies in English homes - fact sheet, 15 May 2025

with administrative data. While the exact numbers should be treated with caution, the contrast between groups still illustrates meaningful patterns. Overall, these differences between segments highlight the challenge at the heart of mass adoption: moving beyond the most engaged groups to find ways of encouraging uptake among the wider population.

Figure 3: Uptake and interest in heat pump by segment

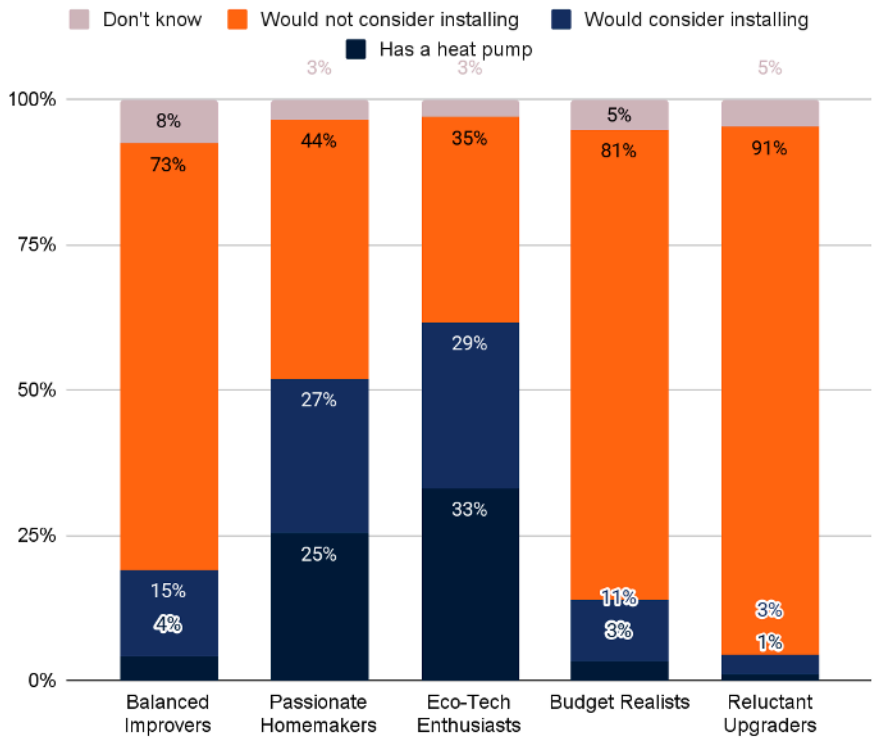
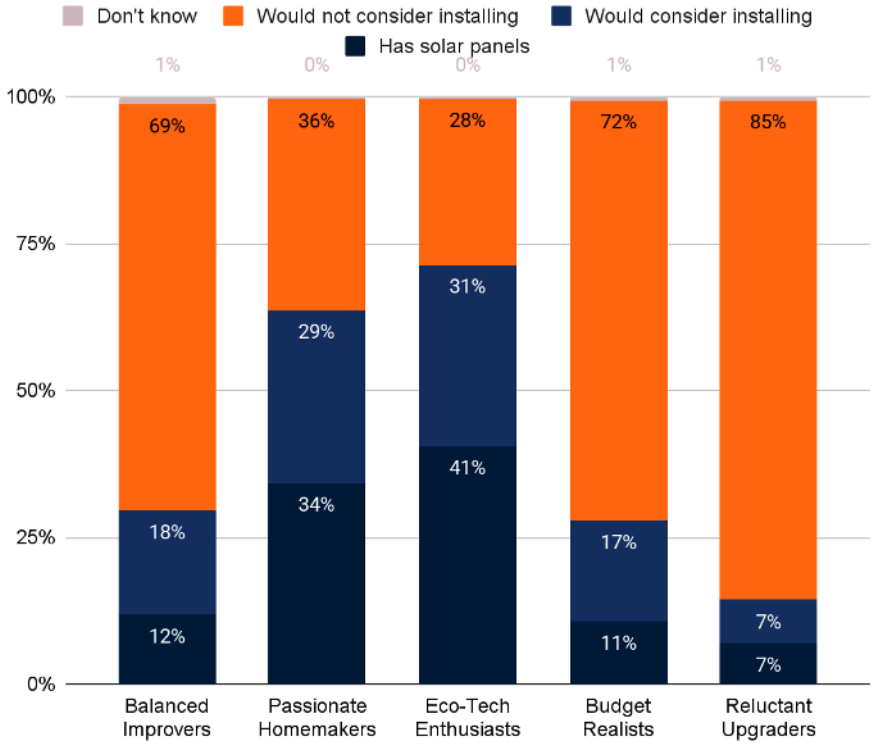


Figure 4: Uptake and interest in solar panels by segment



Source: Public First analysis

Figure 5: Uptake and interest in smart thermostat pump by segment

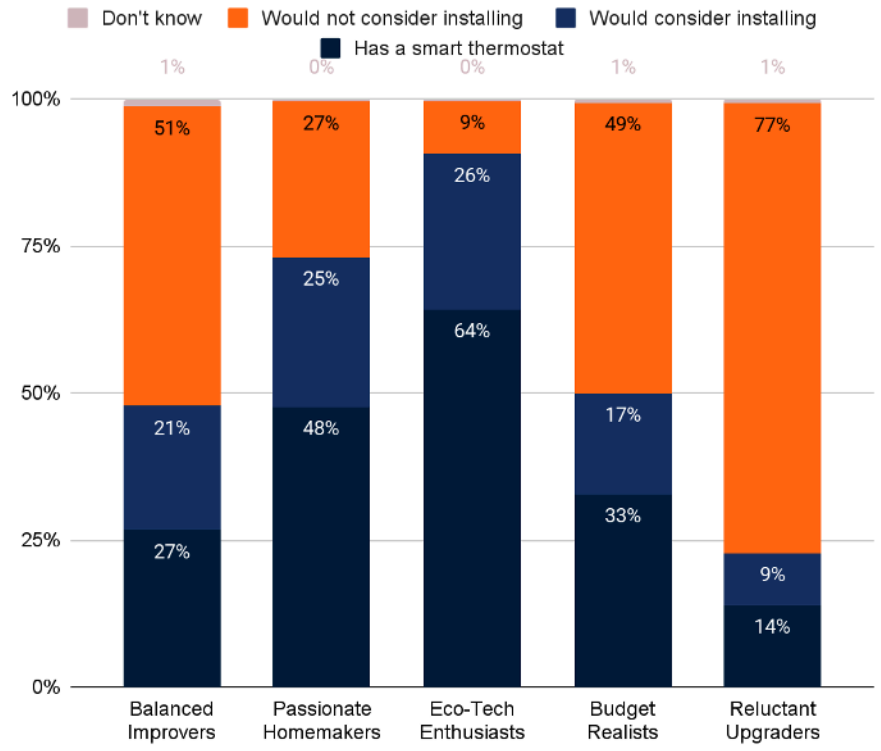
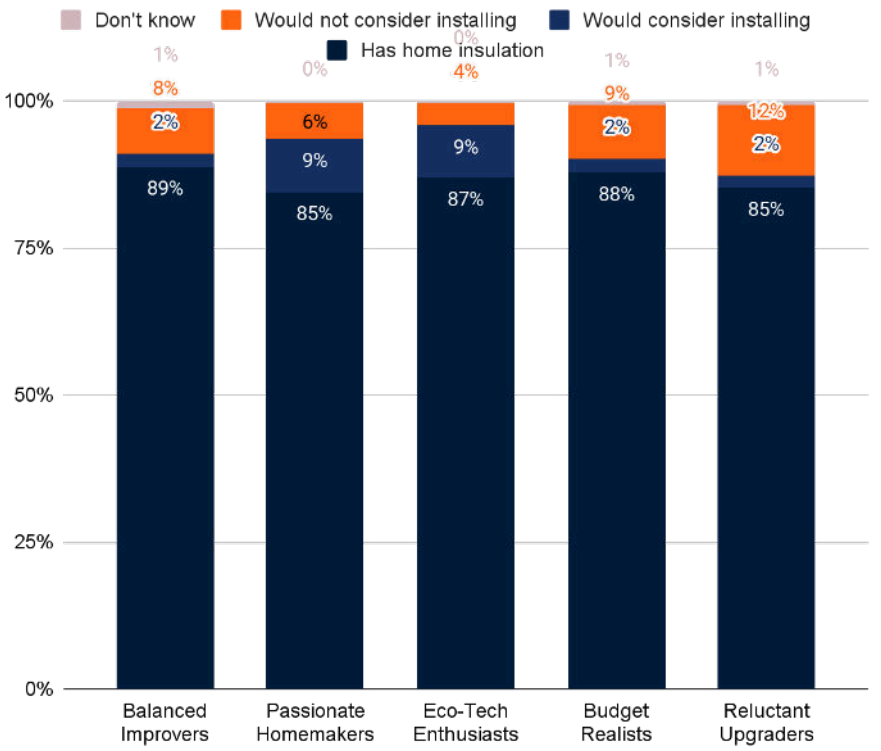


Figure 6: Uptake and interest in insulation by segment



Source: Public First analysis

4. Message Testing

Most research on home upgrades asks people what would convince them to make improvements. People usually give sensible answers: they say they would expect more money off their bills.[24][25] But what people say is not always what influences their decisions.To dig deeper, we tested how people responded in the moment to different messages.

The exercise worked by asking respondents a baseline question about their interest in an upgrade, showing them a randomly allocated message, and then repeating the same question. By comparing responses before and after exposure, we can assess the relative strength of different messages. This gives us a measure of impact that goes beyond stated preference, and helps reveal which framings can shift attitudes, even modestly, when people are confronted with them directly.

In the wider literature, barriers and motivators are often treated separately (for example, surveys will ask people what they feel is stopping them from upgrading, or what would motivate them to upgrade). Because we were interested in whether communications could shift interest overall, rather than isolating each factor, we did not test barriers and motivators as separate categories. Instead, we turned these themes into messages that could plausibly be used in campaigns and messaging.

Each message combined what we classified as “rational” and “emotional” motivators. Rational motivators focused on tangible outcomes such as bill savings or property value, while emotional motivators drew on themes like comfort, pride, or climate responsibility. We paired one rational with one emotional theme in each message, since testing every possible combination individually would have been impractical and risked overburdening respondents. In total, 90 combined messages were tested, with each respondent seeing on average six exercises covering upgrades they did not already own.

Below is a list of all themes we tested across technologies, with examples of how these were turned into messages (adapted to fit the technology in question - in this case, heat pumps). The appendix contains the full list of messages tested.

Table 3: Example of survey message design, by theme

	Access to incentives	Increases home value	Lower energy bills
Care for the environment	Message 1	Message 2	Message 3
Comfort in the home	Message 4	Message 5	Message 6
Ease	Message 7	Message 8	Message 9
Modernises the home	Message 10	Message 11	Message 12
Pride and aesthetics	Message 13	Message 14	Message 15
Control	Message 16	Message 17	Message 18

Installing a heat pump will reduce your home's carbon footprint and will add lasting value to your property.

Heat pump installation and maintenance are quick and easy, and government grants are available to help you cover the costs.

[24] Citizens Advice and Flourish, Homeowner attitudes to energy efficiency improvements and government-backed low-interest loans, 7 August 2025
[25] Citizens Advice, Understanding homeowner demand for heat pumps, January 2025

Source: Public First

Our exercise did not test every possible type of upgrade. Instead, we focused on four technologies: heat pumps, insulation, solar panels and smart thermostats, which together cover a range of prices, levels of disruption, and functions in the home. This gave us a broad view of how people respond to upgrades of different kinds, without overburdening the survey. We also asked about home renovation more broadly, to understand whether responses differed significantly when compared to energy efficiency upgrades.

- Home renovation overall (all respondents)
- Heat pumps (shown to those without a heat pump)
- Insulation (shown to those without insulation)
- Solar panels (shown to those without solar panels)
- Smart thermostats (shown to those without smart thermostats)

Although a survey cannot perfectly replicate the moment of a purchase decision, this approach provides a sharper view than asking people to speculate about what might matter. Small differences in how interest shifts across messages point to their relative strength, offering practical insight into which types of framing are more likely to encourage action.

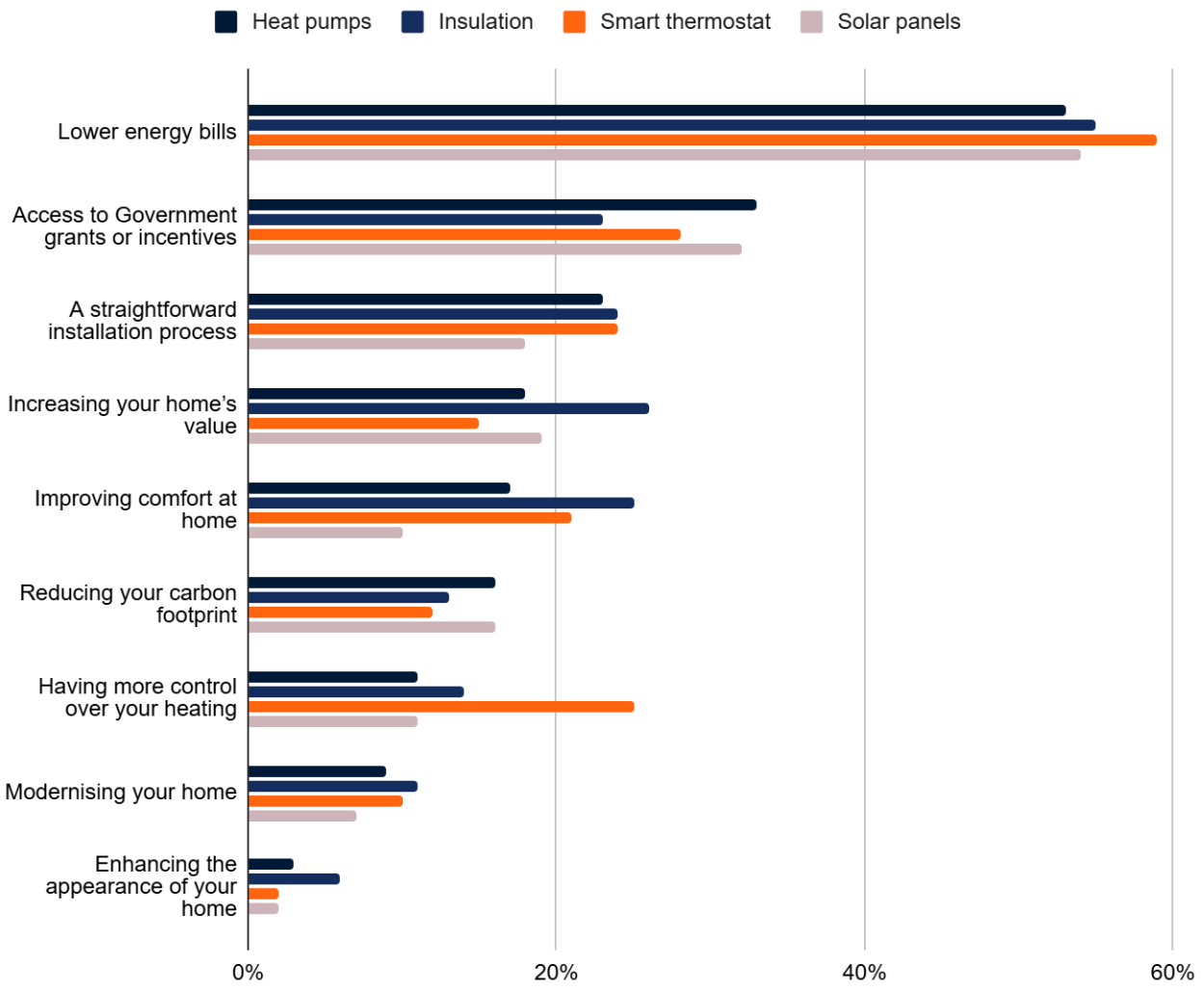
Key Findings

1. Lower energy bills are a given

Our research found that contrary to common research wisdom, bill savings did not come out as one of the best performing messages across technologies. When asked directly what would convince them to upgrade to various technologies, people consistently chose saving money on their bills as the top answer (Figure 7). Yet when tested in message form against other themes, “lower bills” did not perform as strongly (Figure 8). The results of our message testing are shown as ‘uplift scores’, which capture the change in people’s interest in a measure after seeing a message (on a scale from 1 to 4) compared with their baseline view before seeing the message (on a scale of 1 to 4). A positive score means the message increased interest or appeal; a negative score means it reduced it. Full details of how these scores are calculated are included in the appendix (p. 39).

The pattern suggests that people may treat bill savings as a given. “Lower bills” works more like a hygiene factor: people expect it if they make upgrades, but it is not what drives their decision. Just as someone would expect a restaurant to be hygienic for them to eat at it but that factor alone would not be a convincing enough draw. Bill savings are expected from home upgrades, but on their own, they are not enough to spur action.

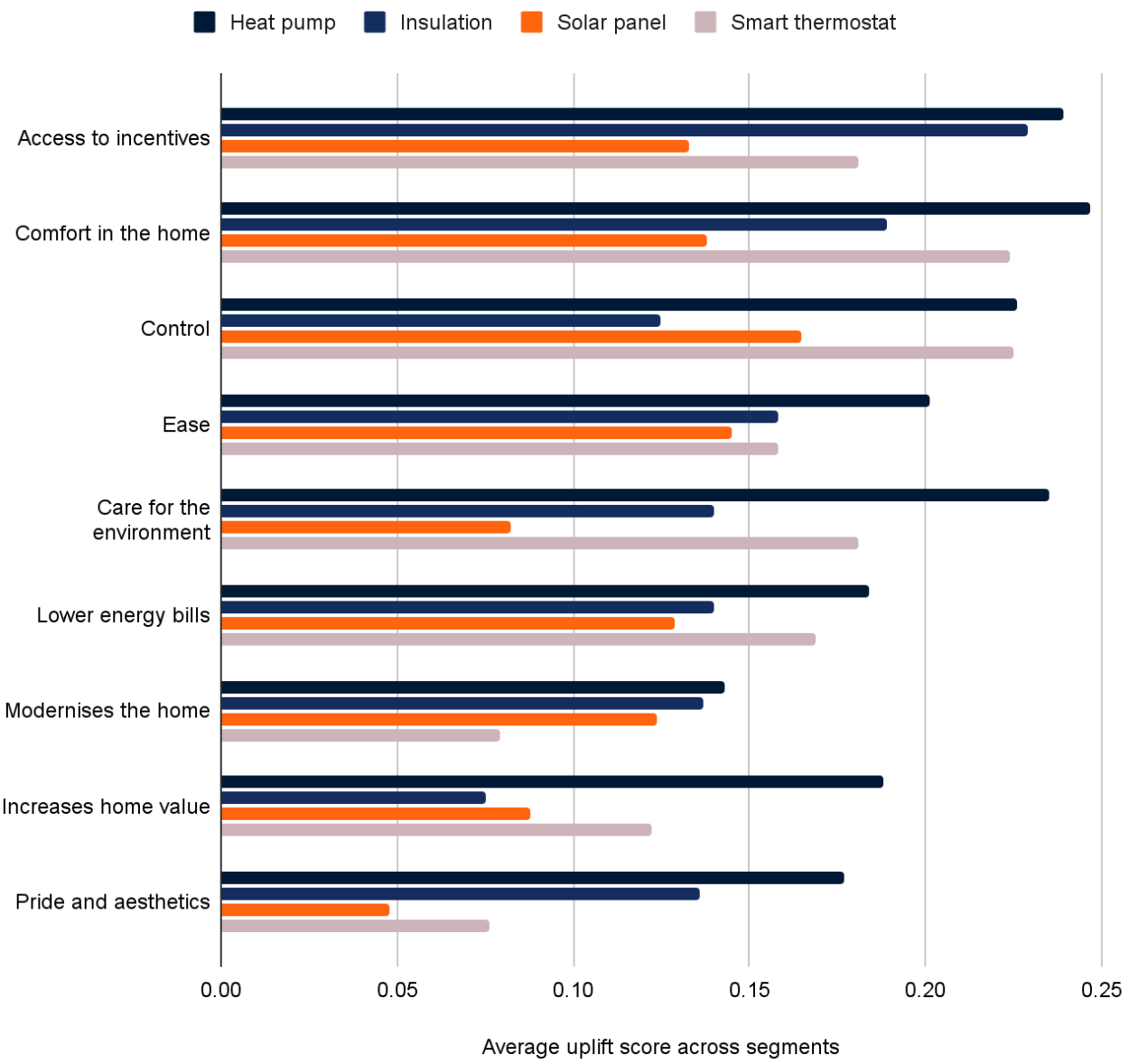
Figure 7: Stated motivations for installing different measures



Source: Public First polling of 4,044 homeowners. Polling question: "Which of the following factors are most likely to influence your decision to install [x] on your home, if any? Select up to three" (Question only shown to respondents who did not already have this measure installed)

Even some messages that pointed to other benefits that might be considered less 'rational' (such as making a home more comfortable, reducing their home's carbon footprint, or giving them greater control over how their home runs) often outperformed messaging that focused on bill reductions. This held true even for groups we might expect to be more financially driven, such as Budget Realists and Passionate Homemakers.

Figure 8: Average uplift score across segments per technology and message frame



Source: Public First analysis

Increasing property value also landed poorly, indicating that perhaps for most, a higher resale value is too distant or uncertain to outweigh the immediate disruption of an upgrade.

By contrast, messages that focused on the availability of government grants to help cover the upfront cost performed better than cutting bills. Behavioural research has long shown that people are prone to "present bias," the tendency to value what they can access right now more than those that come later. A cash grant or discount speaks directly to this bias: it is visible today, while lower bills accumulate slowly and are easier to discount in people's minds.

Taken together, the results suggest that while 'lower bills' remain important, they are better seen as a baseline expectation than as the best argument to persuade people to upgrade.

2. Greater control and comfort in the home also tend to perform well as themes

Besides messages that pointed to the availability of government grants, those that highlighted everyday benefits, such as feeling comfortable in the home and having greater control over how it runs or consumes energy were consistently strong performers across technologies and segments.

How well they performed relative to each other differed slightly by technology. For smart thermostats and solar panels, messages that stressed the benefit of "greater control over your energy use" came out on top, with comfort ("keep your home at just the right temperature") close behind. For insulation, comfort messages ("make your home feel cosier") performed best, though these were still behind messages focused on government grants.

At first glance, the fact that comfort performed best in messaging for heat pumps might be unexpected, because comfort is precisely where many feel uncertain about the technology, especially compared to conventional gas boilers. But it may be precisely for that reason that reassurance on warmth may be effective. Reassuring people that they can still enjoy a warm, comfortable home may cut through precisely because it challenges that concern.

The focus groups underline these themes. People instinctively linked insulation with both physical and financial comfort, whilst some described the appeal of smart thermostats as being about control and convenience, not just cost:

> It feels like a nice warm nest when you've got insulation and it's also comforting if you know you're not going to have huge bills in the future. "
>
> Woman, 60s, London

> A smart thermostat is something I've been thinking about and that I've been interested in. It's modern, something you can manage from your phone."
>
> Man, 50s, West Midlands

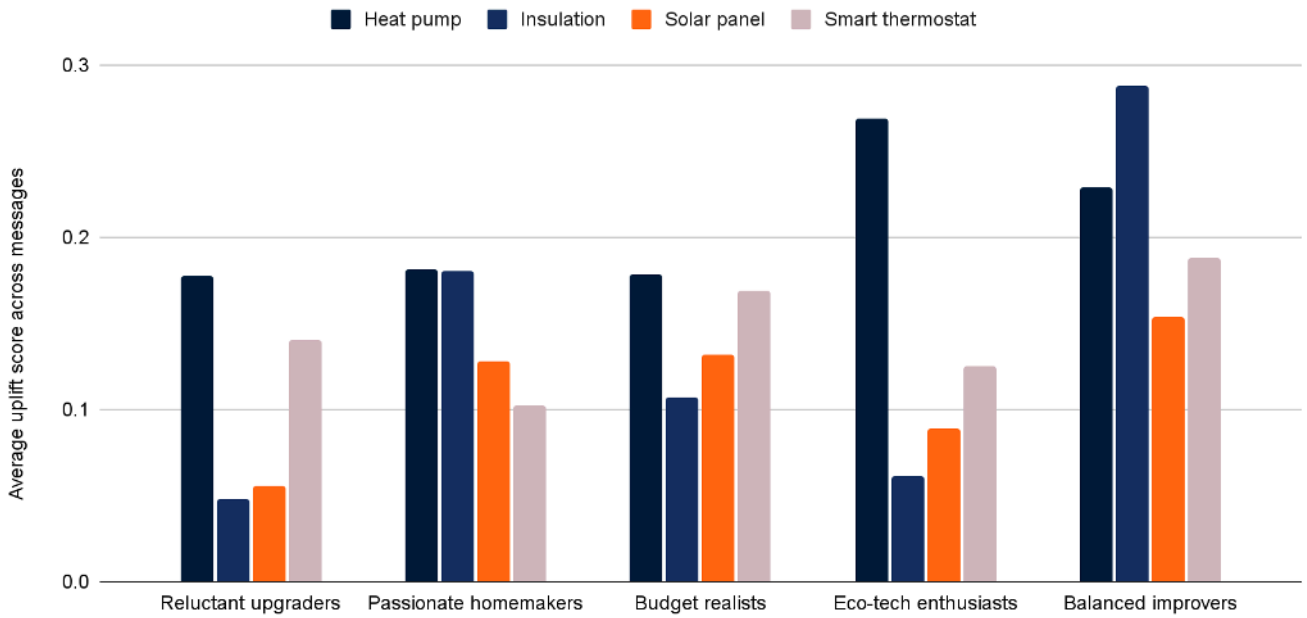
Overall, the findings show that for certain technologies, people can respond positively to messages when upgrades are described as tools that can make their homes easier to manage (for example, being able to decide when and how heating is used) or as improving day-to-day comfort, rather than when they are solely presented as cost-saving measures.

3. Heat pumps: the technology where messaging can make the biggest difference

Heat pumps stood out as the technology where messaging had the strongest impact (Figure 9). Adoption and awareness are still relatively low, which means people's views are less set, and messages can make

a bigger difference. By contrast, for familiar upgrades such as insulation or solar panels, people already have established opinions, so messaging tends to shift attitudes less.

Figure 9: Average uplift score per segment and technology across all message frames tested



Source: Public First analysis

Across segments, messages focused on comfort ("installing a heat pump will provide even, consistent warmth to your home all year") emerged as the most effective. As noted above, this may be because heat pumps are sometimes seen as less reliable at keeping homes warm or thought to not work as effectively in cold temperatures. Our focus groups highlighted exactly these doubts: people often described heat pumps as expensive, and worried they might not perform as well as a boiler. Messages that directly counter this concern appear especially persuasive.

"I'm not an eco-warrior, but you know, if this was a similar price, I would do environmentally friendly stuff and maybe pay a little bit more…I really don't want to pay double the amount for something that might not work as well."

Man, 60s, South East

Among Eco-Tech Enthusiasts, however, messages that highlighted the aesthetic appeal of the technology worked best ("A heat pump will look sleek in your home"). Heat pumps were also the only technology where this group responded distinctively well to that kind of message. For this segment, part of the appeal may be that heat pumps are still a new technology, which fits with their identity as early adopters.

Messages that emphasised the environmental benefits ("Installing a heat pump will reduce your home's carbon footprint") ranked among the top three messages for three segments: Eco-Tech Enthusiasts, Balanced Improvers, and Passionate Homemakers. This is striking, because the same framing tended to perform poorly for insulation, solar panels, and smart thermostats. One possible explanation is that people view heat pumps as more directly linked to sustainability, making the environmental benefit feel natural and believable. By contrast, insulation is mostly associated with comfort and cost, while solar panels carry more contested stories about their environmental impact.

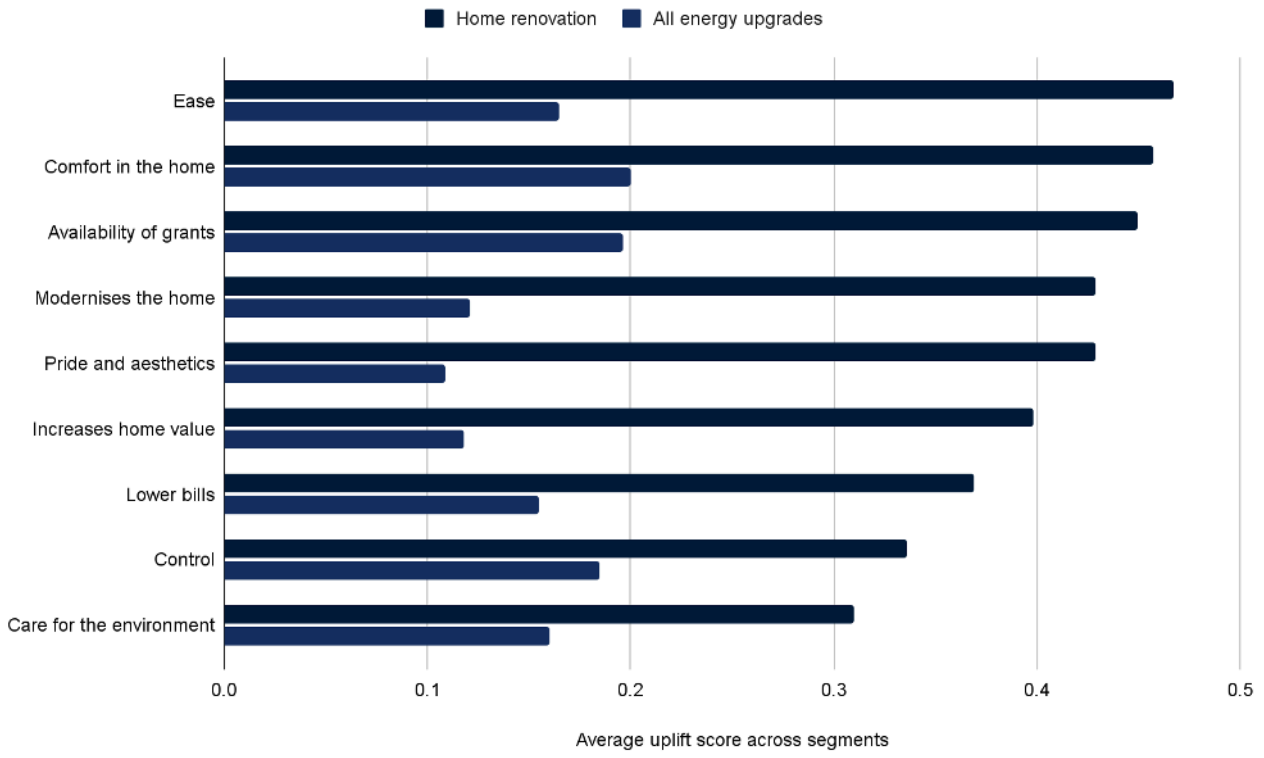
These results suggest that, more than any other upgrade, heat pumps offer the greatest scope for communications to shape perceptions and drive uptake. But this potential depends on how the story is told. Messages that emphasise comfort, aesthetics, or environmental benefits, and that are targeted to the audiences most likely to respond, can make a real difference in whether people choose to adopt them

4. People instinctively see renovation and energy upgrades differently, but messaging focused on comfort benefits could bridge the gap

Messages about home improvements in general produced a stronger response overall compared to energy upgrades. A slightly different set of motivations also came to the fore. The messages that worked best highlighted ease ("quick and easy to do"), comfort ("making your home feel more comfortable"), access to government incentives ("government grants are available to help you cover the costs"), and modernising the home ("modernise your property"). In short, renovation is more often tied in people's minds to enjoyment and pride in their home, even if cost and disruption remain in the background. By contrast, messages about having more control, cutting bills, or helping the environment were much less persuasive in the renovation context. These factors may matter when people think about specific energy upgrades, but they don't appear central to how people picture "renovating" their home.

When the focus shifted to specific energy efficiency upgrades, messages focused on modernity and pride/aesthetics faded into the background. In other words, the same people draw on different motivations depending on whether they are thinking about "renovating" their home or "upgrading" it for energy.

Figure 10: Average uplift score across segment for home renovation vs energy upgrades (bundled)



Source: Public First analysis

This pattern also came through clearly in the focus groups. Participants talked about their homes in deeply emotional terms: “a sanctuary,” “a safe haven,” “where our memories are,” “where I want to grow old.” Even practical improvements were described as part of that emotional story: “we wanted it to feel welcoming” or “we’ve made it our own.”

By contrast, energy efficiency upgrades did not naturally surface in these conversations. Even when people had undertaken them, they rarely mentioned them until prompted. When upgrades were introduced in the conversation, warm narratives about identity and pride gave way to colder, more transactional debates about cost, disruption, and payoff.

“I'd love to put solar panels on the house, but we'd never get the payback for the time that we envisage living here. “

Man, 50s, West Midlands

“In the summer it's warm, so we're spending zero on electricity. And it feels like we don't spend anything for six months of the year, and then for four months when it's cold, we do. So it just balances it out. So yeah, I'd rather spend 10-15 grand towards an extension.”

Man, 50s, West Midlands

This distinction matters. It may explain why upgrades struggle to compete for attention alongside kitchens, gardens, or extensions. But it also points to a way forward: comfort in particular emerged as a theme that resonated in both contexts, suggesting it can help bridge the gap between the aspirational story people tell about renovation and the more functional way they think about upgrades.

Case study: DESNZ's Warm and Fuzzy Campaign

Earlier this year the government launched its "Warm and Fuzzy" campaign to raise awareness of heat pumps and demand for available grants through the Boiler Upgrade Scheme. Our findings show that DESNZ's messaging struck the right notes for driving awareness and interest. By focusing on the availability of the grant and the promise of a warmer, more comfortable home, the campaign highlighted exactly the themes our research shows resonate most strongly. It was also notable for moving beyond bills alone and for presenting heat pumps in a friendlier, less technical way than is typical.

When we tested the campaign in focus groups, people immediately picked up on the size of the grant, and many said it felt like a significant sum. Some also liked the look and tone of the campaign. A few participants did connect with the theme of warmth and comfort, but it was not a message that was instinctively picked up by everyone. Importantly, we also saw a recurring assumption that the grant would not apply to them. Several participants jumped quickly to the conclusion that they would be ineligible or excluded, even before they knew the details.

> *"I think immediately, without looking at it, would I have to pay the first, I don't know, £500 or £1,000 or something? But it's a good ad."* - Woman, 40s, North West

The discussions made clear the limits of what a campaign like this can achieve on its own. People quickly asked what costs the grant would still leave them to cover. They worried about whether heat pumps would work in cold weather, and some recalled stories of poor installations that left households facing high electricity bills. Overall, awareness of how the technology works remained low. The campaign generated interest, but without answers to these doubts, many said they would hesitate to take the next step.

> *"If some people are telling us that it doesn't quite work as efficiently as it really should, you have a lot of work to try and convince the general public."* - Man, 50s, North West

The lesson is that messaging is important, but alone is not a silver bullet for driving more upgrades. Communication that highlights comfort and incentives is a good start, but it must be paired with measures that build trust: clearer information about how heat pumps perform in practice, visible assurance about installer quality, and efforts to normalise the technology. Without this, awareness may rise but uptake will remain slow.

Source: Government 'Warm and Fuzzy' marketing campaign

How to Engage Different Segments

Much of the existing evidence looks at the public as a whole, or assumes that one motivator will work everywhere. Our approach was designed to go deeper: to see if nuance at the level of segment and technology reveals patterns that matter for how campaigns should be designed. A full summary of results by segment, technology and message is included in the appendix. Here, we highlight the findings that stood out most clearly to us - the differences that illustrate why a one-size-fits-all approach to public engagement may not be enough on its own.

Reluctant Upgraders (20% of homeowners)

This group is the hardest to reach. Messages generally have little effect, and neither 'rational' appeals (like saving money or increasing home value) nor emotional ones (like pride or aesthetics) really land. The few things that get some traction are messages about the environment, access to government grants, and having a sense of control.

Heat pumps show the most positive response, especially when linked to comfort in the home and lowering bills. Smart thermostats also have a little impact when framed around comfort. Messages about solar panels or insulation barely move this group at all.

This segment is unlikely to be persuaded by communications alone. If they are to be moved, it may be less about what we say and more about making upgrades cheaper, easier, and more trustworthy to do in practice. Until those improvements materialise, the role of communication might not to sell individual technologies but to signal progress: highlighting guarantees, clearer standards, and protections that make upgrades feel less risky and more straightforward over time.

Passionate Homemakers (13% of homeowners)

For this group, home is much more than just an investment: it is where they want to feel comfortable and express their identity. Messages that stress comfort in the home, access to government grants, and a sense of modernity work best. They are less swayed by messages about lower energy bills and interestingly, home value or aesthetics.

It is surprising that although this group sees their home as central to identity, direct appeals to aesthetics fall flat. But people who care about design and style are unlikely to be moved by someone telling them that something "looks nice." Instead, their choices may be shaped more by taste, trends, and how things fit with the character of their home. Direct messaging on aesthetics is therefore unlikely to work.

The strongest responses come with insulation (especially when linked to incentives, the environment, modernity, and comfort) and heat pumps (comfort, incentives, and the environment). Solar panels do reasonably well when framed around control and comfort, but smart thermostats show little effect.

For this segment which see themselves as style-conscious, what actually moves them are everyday benefits and practical enablers.

Budget Realists (22% of homeowners)

This segment does not seem strongly moved by long-term savings on bills. Instead, access to government grants to help with upfront cost, comfort, and a sense of control seem to matter more.

Messaging on heat pumps works particularly well, especially when it focuses on themes such as a greater sense of control, comfort, and increasing home value.

Smart thermostats also do relatively well (possibly because they are a lower-cost option) with sense of control, incentives, and comfort working best.

This may indicate that even budget-conscious homeowners place more weight on upfront support and tangible benefits than on abstract, long-term savings.

Eco-Tech Enthusiast (14% of homeowners)

Many in this group have already adopted (some of) the technologies tested, so the challenge is engaging the remainder. This makes them harder to shift overall, though heat pumps appear to be an exception, with stronger messaging impact there.

Interestingly, this group does not seem to respond more strongly than others to environmental or modernity appeals. Comfort and incentives are more consistent motivators. For heat pumps, aesthetics resonate most, followed by control and incentives. For smart thermostats, comfort seems to land best. For solar panels, incentives and modernity appear effective. For insulation, comfort and ease work best.

It may be that Eco-Tech Enthusiasts are already well aware of the environmental benefits, so repeating those arguments does little to move them further. For the smaller number who have not yet adopted certain technologies, other factors such as comfort, control, or aesthetics appear more persuasive. Heat pumps stand out: adoption is still relatively low, and this group responds positively to a wide mix of messages, suggesting they could be a prime audience for further uptake.

Balanced Improvers (31% of homeowners)

This group does not show a single clear motivator. They seem to weigh different factors depending on the technology. Overall, comfort, incentives, and control perform better than modernity or aesthetics.

They are also unusual in that insulation messaging performs better overall for them than heat pump messaging. For insulation, comfort, incentives, and bills resonate. For heat pumps, messages that emphasize environmental benefits and access to grants perform stronger. For smart thermostats, control matters most. Messages about solar panels are weaker, with lower bills and ease being the main points that cut through.

While there isn't one single motivator that consistently works, they seem open to different arguments depending on the technology. This means they may be more persuadable if they are offered a mix of reasons to upgrade, rather than being targeted with just one type of message or one technology.

What our Evidence Shows

Across technologies and homeowner segments, the results point to a clear lesson: messages focused on lowering bills were less persuasive than expected. This suggests that bill savings may be treated as a given, and that communication needs to offer more than this baseline to generate real interest. Access to government grants tended to cut through more effectively, as well as messaging framed around enhanced comfort and better control over energy use.

The results also show the limits of one-size-fits-all communication. Some themes, especially comfort, resonate broadly, but others vary a lot more in effectiveness depending on the audience and the technology. Heat pumps, for instance, offer the most scope for messaging to improve interest, while insulation showed much less movement, likely because people already feel familiar with it and messaging adds little. The segmentation analysis reinforces this point: homeowners approach their

properties with different mindsets, so a message that motivates one group may have little effect on another.

The findings also point to a cultural gap between how people think about “renovation” and how they think about “energy upgrades.” In our focus groups, renovation was more often described in aspirational terms: tied to pride, enjoyment, and the sense of making a home more comfortable, functional, or stylish. Upgrades, by contrast,were often reduced to cost calculations or necessary chores to be put off until unavoidable, rather than improvements that make everyday life better. This difference in mindset was echoed in the message testing, where slightly different frames resonated in each context. Yet the strength of comfort messages across both contexts indicates a window of opportunity for bridging this divide: upgrades may become more appealing when they are presented through a clear benefit people already associate with renovation.

Taken together, these findings set the stage for the communication challenge ahead on home upgrades. The next section distils the key lessons for communicators: what to emphasise, what to avoid, and how to engage homeowners in ways that build interest in these technologies.

5. Key Takeaways for Communication

Upgrading Britain's homes is about more than saving money. It is about creating spaces that are warmer, healthier, and more resilient, and helping households feel confident that change is worth it. Improving financial support for upgrade measures is essential, but it will not achieve its full impact on its own. Our research shows that the way upgrades are talked about is just as important. Unless policy and communication are considered together, uptake will not be as effective as it could be.

Too often, communication has been framed narrowly around bills. That risks missing what people actually respond to: comfort, control, visible support, and the sense that improving their home is a natural part of life.

Government (both central and local), industry, and consumer organisations all have a role to play in reshaping this story. The following takeaways set out what communication in this space needs to know to be more effective.

1. Do not lead with bill savings alone

Bill savings should be acknowledged, but not used as the main hook. When used as the central message, bill savings do not prove the most effective way to spark interest in upgrades. They are best treated as reassurance, a baseline expectation, rather than the main selling point. Campaigns that hinge only on bills may be accepted by the public, but they are unlikely to drive up interest.

2. Make upfront support visible and simple

People respond strongly to offers they can see and use immediately, such as government grants. By contrast, long-term savings feel distant and are easily discounted. Communication should put upfront support at the centre, not hidden in the small print, and point them clearly to the next step.

It could also mean being transparent about the process ("*apply online in 10 minutes*"), and above all, making eligibility obvious, as people can easily assume grants are "not for them." Effective communication should spell out who qualifies, use examples of ordinary households, and show that support is genuinely available to a wide range of people.

3. Lean more into everyday benefits

Messages about comfort, warmth, and greater control over the home often outperformed bill-saving frames. Communication should focus on how upgrades improve daily life: a home that feels better, runs more smoothly, and gives people more control over their energy use, not just how much it costs. This could be brought forward in multiple ways. For example, describing the lived experience (*"even, consistent warmth through winter," "set each room to the temperature you want"*) rather than technical features, setting the upgrade against the pain points people already know (*draughty rooms,*

unpredictable bills, damp walls) and showing how life improves afterwards, as well as showing it visually (*imagery of families feeling cosy, or someone using a phone to control their heating*).

The Warm and Fuzzy campaign is a useful illustration of this: while its knitted characters gave the ads a memorable look, the Government website showcased case studies featuring real people telling real stories. To lean into everyday benefits, communicators need to show people their audience can relate to and see themselves in, making the promise of comfort and control feel real and achievable.

4. Layer broad appeals with targeted framings

Some themes, like increased comfort, performed well across the board and can anchor most communication. But our testing also revealed more specific "nuggets" that spoke strongly to particular groups or technologies. For example, the aesthetic appeal of heat pumps only resonated with one particular segment, while others responded well to messages that emphasised more control over electricity consumption from solar panels.

These nuggets will not persuade everyone, and they are not enough on their own. But they provide extra ways in, small shifts in framing that make messages feel more relevant and appealing to certain people. Communication that draws on them can reach audiences who might otherwise tune out.

5. Make energy upgrades part of the renovation story

The biggest challenge is cultural. Our research showed that people draw a mental distinction between projects they see as a home renovation/improvement and those they see as energy upgrades. This came through in message testing, where renovation messages not only drew stronger responses overall but also revealed more aspirational motivations, and in focus groups, where people spoke warmly about renovating or extending their homes but struggled to do the same for insulation or heating improvements. Framed like this, upgrades inevitably struggle to compete for attention or budget.

Industry should work with home and lifestyle media, renovation TV shows, and influencers to show upgrades in the same breath as kitchen makeovers or design trends. Seeing them in those spaces helps normalise them as part of "what people do" to improve their homes.

Upgrades should also be embedded in practical advice. Consumer organisations can help shift habits by weaving upgrades into renovation checklists (*"ten things to do when you renovate: don't forget insulation and a smart thermostat"*). By making them routine advice, upgrades become part of the natural rhythm of home improvement.

Policy can also help link upgrades to renovation moments by offering rebates, tax relief, or grants when upgrades are bundled with wider renovations, as is done in France through the MaPrimeRénov' programme.

Appendix

Summary of literature review

Before designing the segmentation and message testing, we reviewed existing evidence on how households think about energy upgrades. The aim was to understand what is already known about the barriers and motivators people face, and what lessons could inform the design of our research. In particular, the review helped us identify potential framings to use in our message testing exercise (such as comfort, property value, bill savings). The key findings from the literature are summarised below.

Barriers to action:

- Upfront costs and limited disposable income are one the most commonly reported barriers to uptake, even when grants are available (Citizens Advice 2023; Lloyds Banking Group 2023; Social Market Foundation, 2023; Public First, 2024).
- Low trust in installers and delivery quality undermines willingness to engage (Public First, 2024)..
- Confusion and lack of clarity about which technologies are suitable, how to get started, and what the process involves (DESNZ, 2022; Citizens Advice, 2023; the MCS Foundation, 2024).
- Perceived disruption and hassle are strong deterrents, particularly for more invasive measures like underfloor insulation (DESNZ, 2022).

Motivators for action:

- Lower energy bills (or more clearer information on the impact measures would have on bills) are one of the most frequently cited reasons when asking the public what would increase their interest (Public First, 2024; The MCS Foundation, 2024).
- Improved comfort (e.g. reducing draughts, warmth) and increasing property value also feature as drivers of interest in certain measures (Public First, 2024; Citizens Advice, 2023).
- Environmental concern matters for some groups but is rarely the main driver.

Variation across audiences

- The same message can land differently depending on context. Evidence from behavioural studies shows that messages effective for higher-income groups can fail or even backfire among more financially vulnerable households (Chlond et al., 2024; Existing Homes Alliance Scotland, 2023).
- Older homeowners have much lower interest in heat pumps, and seem more likely than younger homeowners to be worried about their effectivenessless (Citizens Advice, 2025).
- Focus group evidence reveals lower income groups seem more motivated by comfort and immediate and sizable energy bill reductions compared to higher income groups, who seem more interested in the impact on property value and more comfortable with smaller bills savings, though it requires more thorough research to verify findings (Public First, 2024).

Selected references

Chlond et al. (2024), *Transporting behavioural insights to low-income households: A field experiment on energy efficiency investments*.

Citizens Advice (2023), *Demand: Net Zero – Tackling the barriers to increased homeowner demand for retrofit measures*.

Citizens Advice (2025), *Who are the early adopters? Understanding homeowner demand for heat pumps*.

Department for Energy Security and Net Zero (2022), *Great British Insulation Scheme Willingness to Cofund: A Discrete Choice Experiment*.

Existing Homes Alliance Scotland (2023), *Right people, right message, right time*.

Lloyds Banking Group (2023), *Upfront costs biggest barrier to green home improvements*

Public First (2024), *Upgrade: How to deliver better homes by 2030*.

Social Market Foundation (2023), *Lagging behind: New insights into the barriers to energy efficiency uptake*

The MCS Foundation (2024), *Ramping up Retrofit: What are Homeowners Willing to Pay?*.

Research methodology

Focus groups

The focus groups were designed to explore how people think and feel about their homes and how they respond to ideas around energy efficiency. Insights from these were used to shape the survey design portion of this project.

Two focus groups were conducted with homeowners in July 2025, split by income level to provide meaningful contrasts in financial circumstances and priorities.

- Group 1: Average household income (between £45,000 - £65,000)
- Group 2: Higher household income (between £65,000 - £100,000)

The two groups included participants from across England. We deliberately excluded those living in Wales, Scotland, and Northern Ireland to avoid discussions drifting into cross-nation policy comparisons. For instance, a participant referring to a Scotland- or Wales-specific scheme could have unintentionally shifted the conversation toward differences in national policy, which was not the purpose of this stage. Limiting recruitment to England ensured a consistent policy and scheme context for all participants.

Survey

A nationally representative 4,044 sample of UK homeowners. Fieldwork dates: 25th Jul - 6th Aug 2025. All results were weighted using iterative proportional fitting, or 'raking'. The results were weighted by interlocking age, region, house tenure, and home type to Nationally Representative Proportions.

The polling tables can be accessed here.

Details of the message testing exercises that were in the survey are included in the next section.

Message testing

Format

Example message testing exercise: Heat pumps

- Pre-question:
  Thinking about the next 12 months, would you consider installing a heat pump in your home?
  5 = Definitely would consider this
  4
  3
  2
  1 = Definitely would not consider this
  Don't know
- Show message
  Respondent randomly assigned to one of 18 possible messages
- Post-question:
  Repeat of the Pre-question
- Stated importance question (asked once per upgrade category):
  Which of the following factors are most likely to influence your decision to install a heat pump in your home, if any? Select up to three

Respondent randomly assigned to one of 18 possible messages. Each message is a combination of one rational and one emotional motivator.

Messages tested

Home Renovation

	Rational Motivators:		
Emotional Motivators:	Increases home value	Lower energy bills	Access to government grants
Control (over how home runs)	Home improvements can give you more control over how your home runs, and will add lasting value to your property.	Home improvements can give you more control over how your home runs, while helping you to reduce your everyday living costs.	Home improvements can give you more control over how your home runs, and government grants are available to help you cover the costs.
Care for the environment	Home improvements will reduce your home's carbon footprint and will add lasting value to your property.	Home improvements will reduce your home's carbon footprint, while helping you to reduce your everyday living costs.	Home improvements will reduce your home's environmental impact, and government grants are available to help you cover the costs.
Comfort in the home	Home improvements can make your home feel more comfortable to live in, and will add lasting value to your property.	Home improvements can make your home feel more comfortable to live in, while helping you to reduce your everyday living costs.	Home improvements can make your home feel more comfortable to live in, and government grants are available to help you cover the costs.
Modernises the home	Home improvements can modernise your property and will add lasting value to your property.	Home improvements can modernise your property, while helping you to reduce your everyday living costs.	Home improvements can modernise your property and government grants are available to help you cover the costs.
Pride and aesthetics	Home improvements will enhance your home's style and appearance and will add lasting value to your property.	Home improvements will enhance your home's style and appearance, while helping you to reduce your everyday living costs.	Home improvements will enhance your home's style and appearance, and government grants are available to help you cover the costs.
Ease	Home improvements and maintenance are quick and easy, and will add lasting value to your property.	Home improvements and maintenance are quick and easy, while helping you to reduce your everyday living costs.	Home improvements and maintenance are quick and easy, and government grants are available to help you cover the costs.

Heat pump

	Rational Motivators:		
Emotional Motivators:	Increases home value	Lower energy bills	Access to government grants
Control (over energy use)	Installing a heat pump will give you more control over your energy use and will add lasting value to your property.	Installing a heat pump will give you more control over your energy use while helping you to reduce your everyday energy costs.	Installing a heat pump will give you more control over your energy use, and government grants are available to help you cover the costs.
Care for the environment	Installing a heat pump will reduce your home's carbon footprint and will add lasting value to your property.	Installing a heat pump will reduce your home's carbon footprint while helping you to reduce your everyday energy costs.	Installing a heat pump will reduce your home's carbon footprint, and government grants are available to help you cover the costs.
Comfort in the home	Installing a heat pump will provide even, consistent warmth to your home all year and add lasting value to your property.	Installing a heat pump will provide even, consistent warmth to your home all year while helping you to reduce your everyday energy costs.	Installing a heat pump will provide even, consistent warmth to your home all year, and government grants are available to help you cover the costs.
Modernises the home	A heat pump brings cutting-edge tech to your home and adds lasting value to your property.	A heat pump brings cutting-edge tech to your home while helping you to reduce your everyday energy costs.	A heat pump brings cutting-edge tech to your home with a heat pump, and government grants are available to help you cover the costs.
Pride and aesthetics	A heat pump will look sleek in your home and will add lasting value to your property.	A heat pump will look sleek in your home while helping you to reduce your everyday energy costs.	A heat pump will look sleek in your home, and government grants are available to help you cover the costs.
Ease	Heat pump installation and maintenance are quick and easy, and will add lasting value to your property.	Heat pump installation and maintenance are quick and easy, while helping you to reduce your everyday energy costs.	Heat pump installation and maintenance are quick and easy, and government grants are available to help you cover the costs.

Insulation

	Rational Motivators:		
Emotional Motivators:	Increases home value	Lower energy bills	Access to government grants
Control (over how warm home is)	Insulating your home will give you more control over how warm it stays and will add lasting value to your property.	Insulating your home will give you more control over how warm it stays while helping you to reduce your everyday energy costs.	Insulating your home will give you more control over how warm it stays, and government grants are available to help you cover the costs.
Care for the environment	Installing insulation will reduce your home's carbon footprint and add lasting value to your property.	Installing insulation will reduce your home's carbon footprint while helping you to reduce your everyday energy costs.	Installing insulation will reduce your home's carbon footprint and government grants are available to help you cover the costs.
Comfort in the home	Installing insulation will make your home feel cosier and will add lasting value to your property.	Installing insulation will make your home feel cosier while helping you to reduce your everyday energy costs.	Installing insulation will make your home feel cosier, and government grants are available to help you cover the costs. .
Modernises the home	Installing insulation brings your home up to modern energy standards, and will add lasting value to your property.	Installing insulation brings your home up to modern energy standards while helping you to reduce your everyday energy costs.	Installing insulation brings your home up to modern energy standards, and government grants are available to help you cover the costs.
Pride and aesthetics	Insulation is a discreet energy upgrade and will add lasting value to your property.	Insulation is a discreet energy upgrade while helping you to reduce your everyday energy costs.	Insulation is a discreet energy upgrade, and government grants are available to help you cover the costs.
Ease	Insulation installation and maintenance are quick and easy, and will add lasting value to your property.	Insulation installation and maintenance are quick and easy, while helping you to reduce your everyday energy costs.	Insulation installation and maintenance are quick and easy, and government grants are available to help you cover the costs.

Smart thermostat

	Rational Motivators:		
Emotional Motivators:	Increases home value	Lower energy bills	Access to government grants
Control (over energy use)	Installing a smart thermostat will give you control over your energy use and add lasting value to your property.	Installing a smart thermostat will give you control over your energy use while helping you to reduce your everyday energy costs.	Installing a smart thermostat will give you control over your energy use, and government grants are available to help you cover the costs.
Care for the environment	A smart thermostat will help you use only the energy you need, reducing your home's carbon footprint and add lasting value to your property.	A smart thermostat will help you use only the energy you need, reducing your home's carbon footprint while helping you to reduce your everyday energy costs.	A smart thermostat will help you use only the energy you need, reducing your home's carbon footprint and government grants are available to help you cover the costs.
Comfort in the home	A smart thermostat will help keep your home at just the right temperature and add lasting value to your property.	A smart thermostat will help keep your home at just the right temperature while helping you to reduce your everyday energy costs.	A smart thermostat will help keep your home at just the right temperature, and government grants are available to help you cover the costs.
Modernises the home	A smart thermostat brings cutting-edge tech to your home, and adds lasting value to your property.	A smart thermostat brings cutting-edge tech to your home while helping you to reduce your everyday energy costs.	A smart thermostat brings cutting-edge tech to your home, and government grants are available to help you cover the costs.
Pride and aesthetics	A smart thermostat adds a sleek touch to your home and will add lasting value to your property.	A smart thermostat adds a sleek touch to your home while helping you to reduce your everyday energy costs.	A smart thermostat adds a sleek touch to your home, and government grants are available to help you cover the costs.
Ease	Smart thermostat installation and maintenance are quick and easy, and will add lasting value to your property.	Smart thermostat installation and maintenance are quick and easy, while helping you to reduce your everyday energy costs.	Smart thermostat installation and maintenance are quick and easy, and government grants are available to help you cover the costs.

Solar panels

	Rational Motivators:		
Emotional Motivators:	Increases home value	Lower energy bills	Access to government grants
Control (over energy use/less reliance on grid)	With solar panels, you're generating your own power, making you less reliant on electricity from the grid while adding lasting value to your property.	With solar panels, you're generating your own power, making you less reliant on electricity from the grid while helping you to reduce your everyday energy costs.	Solar panels make you less reliant on energy from the grid while you generate your own power and government grants are available to help you cover the costs.
Care for the environment	Installing solar panels will reduce your home's carbon footprint and add lasting value to your property while raising your home's resale price	Installing solar panels will reduce your home's carbon footprint while helping you to reduce your everyday energy costs.	Installing solar panels will reduce your home's carbon footprint and government grants are available to help you cover the costs.
Comfort in the home	Solar panels will help keep your home at just the right temperature and add lasting value to your property.	Solar panels will help keep your home at just the right temperature while helping you to reduce your everyday energy costs.	Solar panels will help keep your home at just the right temperature, and government grants are available to help you cover the costs.
Modernises the home	Solar panels bring cutting-edge tech to your home and add lasting value to your property.	Solar panels bring cutting-edge tech to your home while helping you to reduce your everyday energy costs.	Solar panels bring cutting-edge tech to your home, and government grants are available to help you cover the costs.
Pride and aesthetics	Solar panels will enhance your home's style and add lasting value to your property.	Solar panels will enhance your home's style while helping you to reduce your everyday energy costs.	Solar panels will enhance your home's style, and government grants are available to help you cover the costs.
Ease	Solar panel installation and maintenance are quick and easy, and add lasting value to your property.	Solar panel installation and maintenance are quick and easy, while helping you to reduce your everyday energy costs.	Solar panel installation and maintenance are quick and easy, and government grants are available to help you cover the costs.

Message testing results

Uplift result per individual message

The results below are given in the form of ‘uplift scores’ per ‘motivator’. These were calculated with the following formula:

Uplift = Score on outcome question (1-5) - Score on pre question (1-5), therefore maximum possible answer is 4, minimum is -4

The figures below show the average uplift figure for all exercises containing each type of motivator. For example, in messages about heat pumps, the "care for the environment" emotional motivator appeared as part of three messages (with each of the three rational motivators being the other part). The average uplift scores for exercises containing these three messages were 0.300, 0.193 and 0.213 for access to government grants, increasing home value, and lowering energy bills respectively, giving an average of 0.253.

			Home renovation	Heat pump	Insulation	Solar panel	Smart thermostat
All segments	Emotional	Care for the environment	0.310	0.235	0.140	0.082	0.181
		Comfort in the home	0.457	0.247	0.189	0.138	0.224
		Ease	0.467	0.201	0.158	0.145	0.158
		Modernises the home	0.429	0.143	0.137	0.124	0.079
		Pride and aesthetics	0.429	0.177	0.136	0.048	0.076
		Control	0.336	0.226	0.125	0.165	0.225
	Rational	Availability of grants	0.450	0.239	0.229	0.133	0.181
		Increases home value	0.398	0.188	0.075	0.088	0.122
		Lower energy bills	0.369	0.184	0.140	0.129	0.169
		Average	0.406	0.204	0.148	0.116	0.157
Reluctant upgraders	Emotional	Care for the environment	0.312	0.161	0.106	0.077	0.162
		Comfort in the home	0.395	0.238	-0.070	0.030	0.246
		Ease	0.560	0.178	0.067	0.066	0.151
		Modernises the home	0.456	0.160	-0.007	-0.012	0.069
		Pride and aesthetics	0.477	0.126	0.159	0.040	0.061
		Control	0.206	0.197	0.021	0.135	0.151
	Rational	Availability of grants	0.446	0.163	0.166	0.032	0.154
		Increases home value	0.359	0.170	-0.022	0.029	0.140
		Lower energy bills	0.406	0.201	0.014	0.108	0.123
		Average	0.402	0.177	0.048	0.056	0.140
Passionate homemakers	Emotional	Care for the environment	0.241	0.237	0.298	-0.015	0.112
		Comfort in the home	0.297	0.296	0.234	0.198	0.171
		Ease	0.188	0.159	0.166	0.135	0.103
		Modernises the home	0.375	0.117	0.256	0.191	0.085
		Pride and aesthetics	0.158	0.128	0.148	-0.018	0.015
		Control	0.216	0.143	0.007	0.279	0.129
	Rational	Availability of grants	0.271	0.272	0.321	0.136	0.106
		Increases home value	0.311	0.144	0.125	0.123	0.080
		Lower energy bills	0.130	0.137	0.066	0.122	0.120
		Average	0.243	0.181	0.180	0.128	0.102
Budget realists	Emotional	Care for the environment	0.077	0.159	0.007	0.075	0.159
		Comfort in the home	0.554	0.225	0.006	0.213	0.214
		Ease	0.577	0.160	0.080	0.142	0.150
		Modernises the home	0.278	0.128	0.369	0.130	0.145
		Pride and aesthetics	0.327	0.170	0.024	0.104	0.105
		Control	0.288	0.234	0.170	0.127	0.242
	Rational	Availability of grants	0.403	0.198	0.124	0.169	0.240
		Increases home value	0.313	0.218	0.137	0.102	0.086
		Lower energy bills	0.371	0.114	0.046	0.124	0.183
		Average	0.354	0.178	0.107	0.132	0.169
Eco-tech enthusiasts	Emotional	Care for the environment	0.293	0.274	-0.052	0.082	0.134
		Comfort in the home	0.453	0.201	0.192	0.087	0.217
		Ease	0.350	0.260	0.169	0.124	0.052
		Modernises the home	0.486	0.145	0.147	0.175	0.056
		Pride and aesthetics	0.413	0.396	0.015	-0.114	0.117
		Control	0.506	0.338	-0.098	0.164	0.169
	Rational	Availability of grants	0.471	0.303	0.024	0.201	0.169
		Increases home value	0.404	0.205	0.023	0.013	0.113
		Lower energy bills	0.351	0.294	0.132	0.070	0.097
		Average	0.414	0.269	0.061	0.089	0.125
Balanced improvers	Emotional	Care for the environment	0.524	0.327	0.286	0.124	0.245
		Comfort in the home	0.499	0.268	0.516	0.156	0.234
		Ease	0.511	0.240	0.277	0.224	0.208
		Modernises the home	0.511	0.150	0.059	0.162	0.046
		Pride and aesthetics	0.612	0.158	0.286	0.083	0.077
		Control	0.456	0.238	0.301	0.177	0.318
	Rational	Availability of grants	0.574	0.289	0.422	0.157	0.186
		Increases home value	0.522	0.189	0.104	0.131	0.151
		Lower energy bills	0.461	0.206	0.342	0.171	0.226
		Average	0.519	0.229	0.288	0.154	0.188

Average uplift results per segment and technology

	Home renovation	Heat pump	Insulation	Solar panel	Smart thermostat
Reluctant upgraders	0.403	0.178	0.052	0.057	0.139
Passionate homemakers	0.242	0.186	0.180	0.127	0.102
Budget realists	0.363	0.177	0.101	0.131	0.170
Eco-tech enthusiasts	0.412	0.265	0.058	0.088	0.127
Balanced improvers	0.519	0.229	0.288	0.152	0.188

Uplift result per message combination across all segments for all upgrades (excluding home renovation)

	Access to incentives	Increase home value	Lower bills
Care for the environme	0.215	0.154	0.124
Comfort in the home	0.193	0.138	0.266
Ease	0.219	0.119	0.153
Modernise the home	0.194	0.067	0.105
Pride and aesthetics	0.158	0.074	0.095
Sense of control	0.200	0.161	0.194

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