

BEIS Public Attitudes Tracker: Heat and Energy in the Home Summer 2022, UK

15 DECEMBER 2022

Official Statistics

This report covers the results of questions on heating and energy usage in homes asked in the BEIS Public Attitudes Tracker. It covers the quarterly questions on awareness of changes to the heating of our homes to reach Net Zero, and awareness of low carbon heating.

It also covers annual questions asked on heating attitudes, low carbon heating, insulation, solar panels and Energy Performance Certificates (EPCs), which were asked either in Winter 2021 or Spring 2022.

What you need to know about these statistics: These results from the BEIS Public Attitudes Tracker (PAT) were collected using the Address Based Online Surveying (ABOS) methodology introduced in Autumn 2021, which uses random probability sampling. The results should not be compared with previous PAT surveys, which used different data collection methods. For details, see the [Technical Report](#). Some revisions were made following the publication of the Winter 2021 report. See the [Winter 2021 Revision Note](#) for details.

The table below shows the topics covered in this report and when these questions were included in the BEIS Public Attitudes Tracker. Links are included to the findings for each topic within this report.

Topic	When included	Link to findings
Awareness of heating changes to meet Net Zero targets and of low carbon heating	Quarterly	Link
Low carbon heating systems	Winter 2021	Link
Heating and cooling in the home	Winter 2021	Link
Attitudes towards heating in the home	Winter 2021	Link
Replacing heating systems	Winter 2021	Link
Insulation in the Home	Winter 2021	Link
Attitudes towards solar panels in the home	Spring 2022	Link
Energy Performance Certificates (EPCs)	Winter 2021	Link
Awareness of rental property energy standards	Spring 2022	Link

Awareness of heating changes to meet Net Zero targets and of low carbon heating

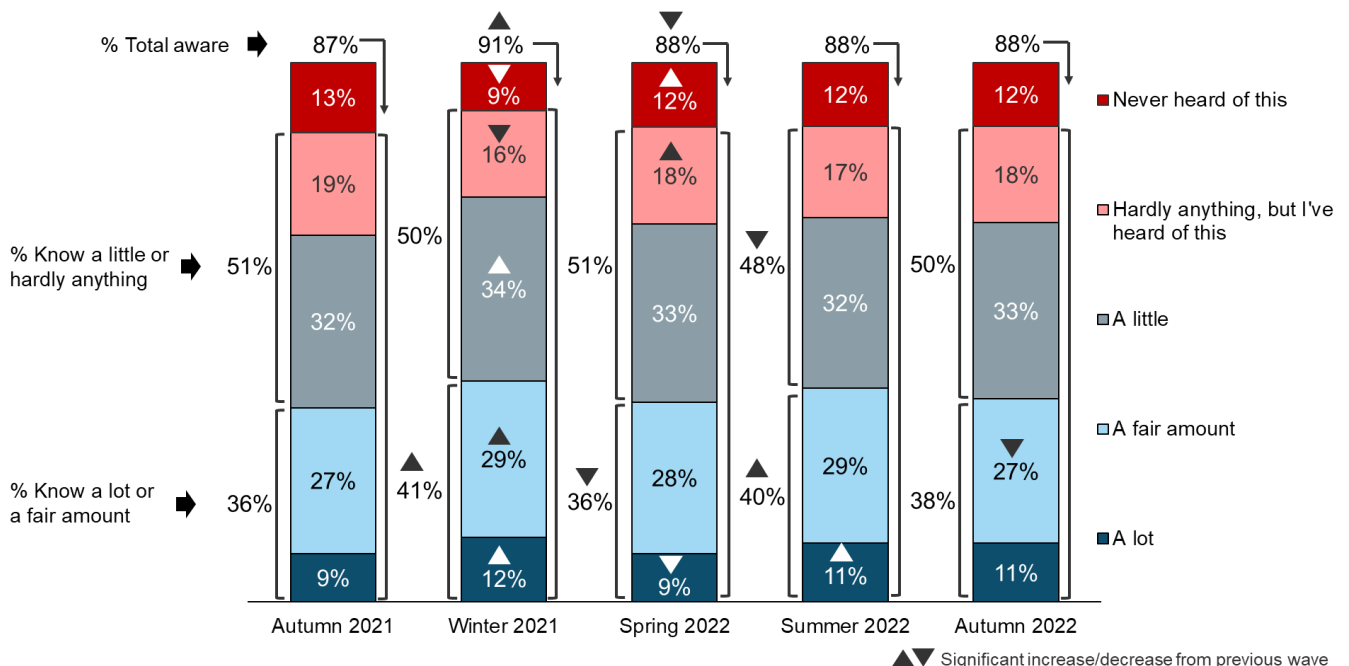
Awareness of need to change domestic heating to meet Net Zero target

Respondents were presented with the following explanation: 'In the lead up to 2050, the way we heat almost all of our homes and buildings will need to change in order to reach the UK government's net zero target'.

In Autumn 2022, after reading this explanation, 88% of people said they were aware of the need to change the way homes are heated to reach Net Zero targets, unchanged from Summer 2022.

The percentage of people who said they knew at least a fair amount (38%) as well as those who said they knew a little or hardly anything (50%) about the change in domestic heating to reach the Net Zero target remained stable from Summer 2022.

Figure 1.1: Awareness of the need to change the way homes are heated to reach Net Zero targets in 2050 (based on all people), Autumn 2021 to Autumn 2022



HEATHOMEKNOW. In the lead up to 2050, the way we heat almost all of our homes and buildings will need to change in order to reach the UK government's net zero target. Before today, how much if anything did you know about this? our homes and buildings will need to change in order to reach the UK government's net zero target. Before today, how much if anything did you know about this?

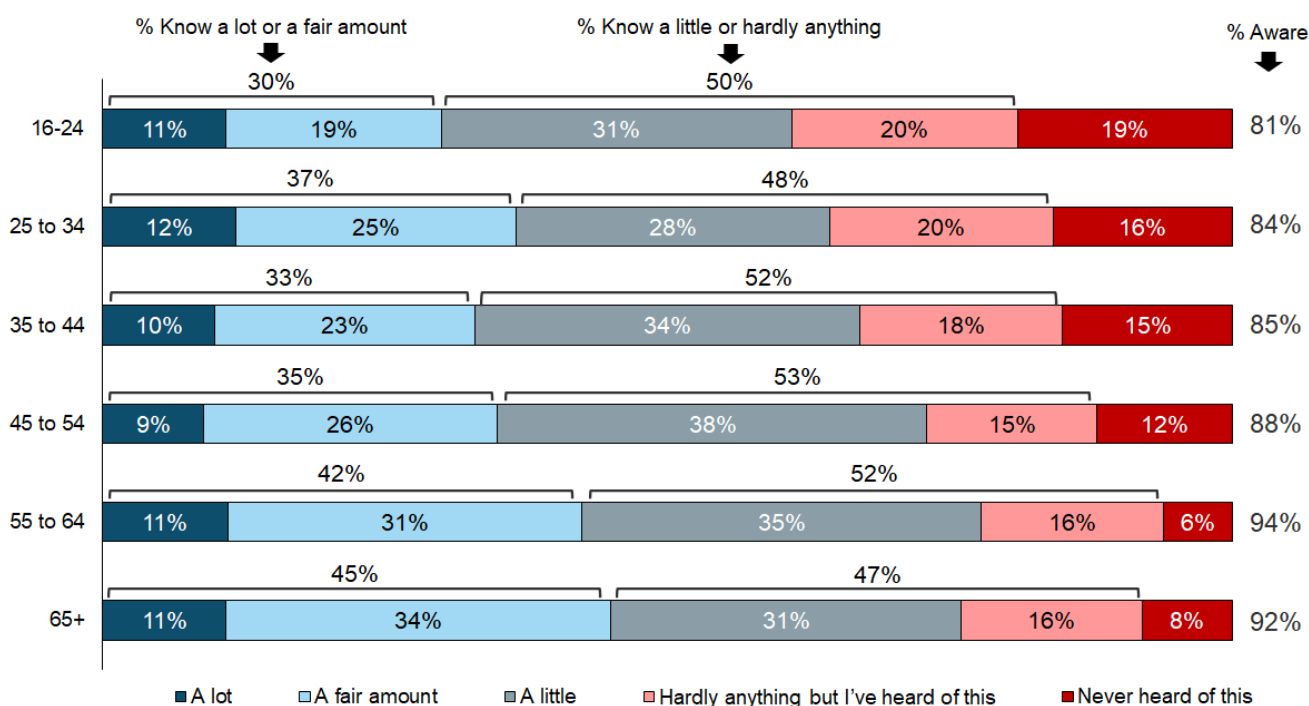
Base: All wave respondents – Autumn 2021 (5,552), Winter 2021 (3,705), Spring 2022 (4,374), Summer 2022 (4,489), Autumn 2022 (4,160) (Asked Quarterly)

In Autumn 2022 there were similar patterns of difference by key demographics to those seen in earlier waves. While there was only a moderate difference in overall awareness of domestic heating changes by gender (91% of men compared with 85% of women), men were considerably more likely to report knowing at least a fair amount about the need to change the way homes are heated (45%, compared with 30% of women).

Overall awareness of the need for domestic heating changes was also higher among people living in owner-occupied homes (92% compared with 81% of people living in rented homes), as was knowing at least a fair amount about this (42%, compared with 31% of renters). The proportion knowing at least a fair amount also varied by region: highest in the South West (47%) and London (43%), and lowest in the North East (24%).

The proportion of people who said they knew at least a fair amount about the need to change the way homes are heated was higher for people educated to degree level (53%, compared with 33% of those with another qualification and 25% of people with no qualifications). The percentage reporting knowing at least a fair amount increased by age, from 30% among those aged 16 to 24 to 45% among those aged 65 and over (Figure 1.2).

Figure 1.2: Awareness of the need to change the way homes are heated to reach Net Zero targets in 2050, by age (based on all people), Autumn 2022



HEATHOMEKNOW. In the lead up to 2050, the way we heat almost all of our homes and buildings will need to change in order to reach the UK government's net zero target. Before today, how much if anything did you know about this?

Base: All wave respondents – 16 to 24 (267), 25 to 34 (543), 35 to 44 (608), 45 to 54 (671), 55 to 64 (762), 65+ (1,253)

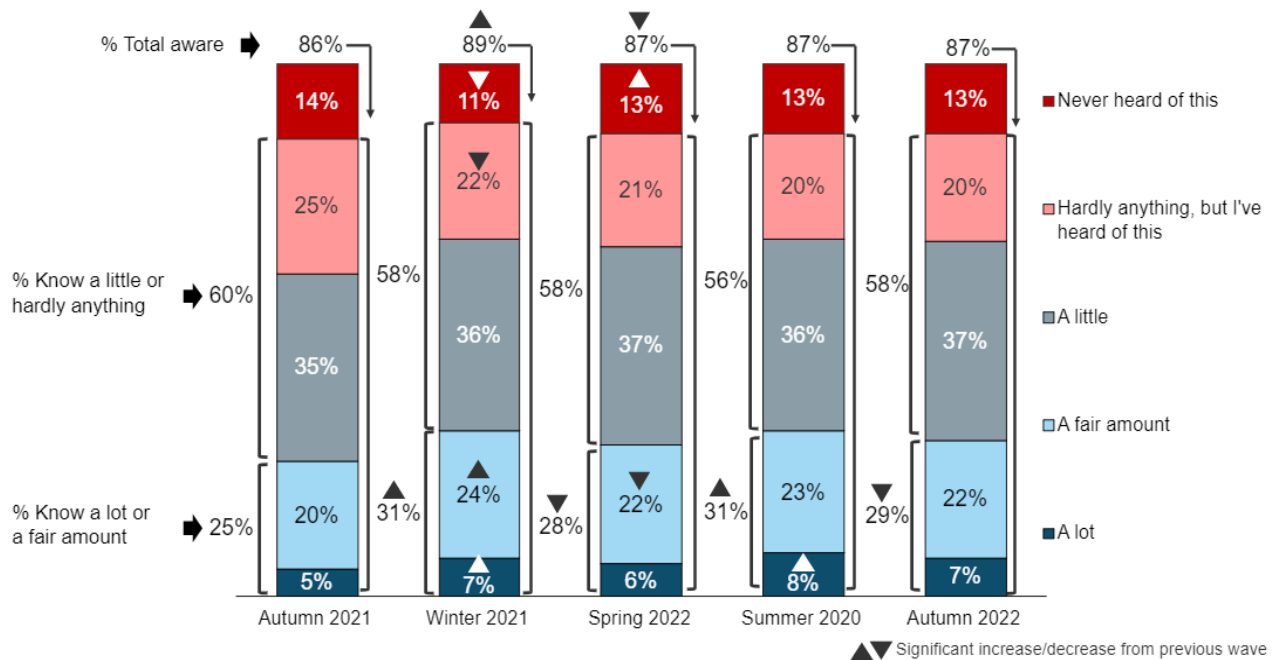
Awareness of low-carbon heating systems

Low-carbon heating systems were first described to respondents in general terms as “environmentally friendly heating systems which no longer rely on conventional gas central heating but instead use energy from low-carbon alternatives such as hydrogen, the sun, or heat pumps which draw heat from the ground, air or water to heat homes”. More detailed awareness of different types of low carbon heating is covered in the next section.

In Autumn 2022, after reading this explanation, 87% of people said they had heard of low-carbon heating systems, unchanged from Spring and Summer 2022.

Around three in ten (29%) said they knew at least a fair amount about low-carbon heating systems. With 7% saying they knew a lot and 22% saying they knew a fair amount (Figure 1.3). The proportion who had never heard of low-carbon heating systems remained constant at 13%.

Figure 1.3: Awareness of low-carbon heating systems (based on all people), Autumn 2021 to Autumn 2022



LOWCARBKNOW. The next question is about low-carbon heating systems. By this we mean environmentally friendly heating systems which no longer rely on conventional gas central heating but instead use energy from low-carbon alternatives such as hydrogen, the sun, or heat pumps which draw heat from the ground, air or water to heat your home. Before today, how much if anything did you know about low-carbon heating systems?
 Base: All wave respondents – Autumn 2021 (5,552), Winter 2021 (3,702), Spring 2022 (4,376), Summer 2022 (4,488), Autumn 2022 (4,161) (Asked Quarterly)

The proportion who knew at least a fair amount about low-carbon heating systems was higher among men (37%, compared with 21% of women) and people aged 55 or over (38% of those aged 65 and over and 33% of those aged 55 to 64, compared with 27% of 25 to 54 year olds and 20% of people aged under 25). The proportion knowing at least a fair amount was also higher among people educated to degree level (43%, compared with 25% of those with a lower qualification and 19% of people with no qualifications), and owner-occupiers (33% compared with 22% of renters). The proportion knowing at least a fair amount about low carbon heating also varied by region: highest in the South West (37%) and East of England (35%), and lowest in the North East (20%) and North West (22%).

Low carbon heating systems

Awareness of specific low carbon heating systems

In Winter 2021, people were then asked about their awareness and knowledge of different types of low carbon heating systems. A brief description of each type was provided as follows:

- **Air source heat pumps** - these extract heat from the outside air to heat your home and water.
- **Ground source heat pumps** - these extract heat from pipes buried in the ground to heat your home and water.
- **Hybrid heat pumps** - these combine heat pump and standard gas boiler technology to heat your home and water.
- **Heat networks (also known as communal or district heating)** – these take heat from a central source and distribute it to multiple customers in a building or across several buildings.
- **Biomass boilers** - these work in a similar way to standard gas boilers to heat your home and water but instead use a renewable material such as wood pellets as fuel.
- **Solar thermal panels** - these capture heat from the sun to provide hot water, typically in a storage tank. This is **not the same as solar panels** which use energy from the sun to produce electricity.
- **Hydrogen boilers** - these work in a similar way to standard gas boilers to heat your home and water, but use hydrogen rather than natural gas as fuel. This technology is not currently available in the UK.
- **Hydrogen-ready boilers** - These are designed to use hydrogen in the longer term but are initially constructed to use natural gas to heat your home and water. This technology is not yet available

In Winter 2021, awareness varied across the different types of heating system (Figure 2.1).

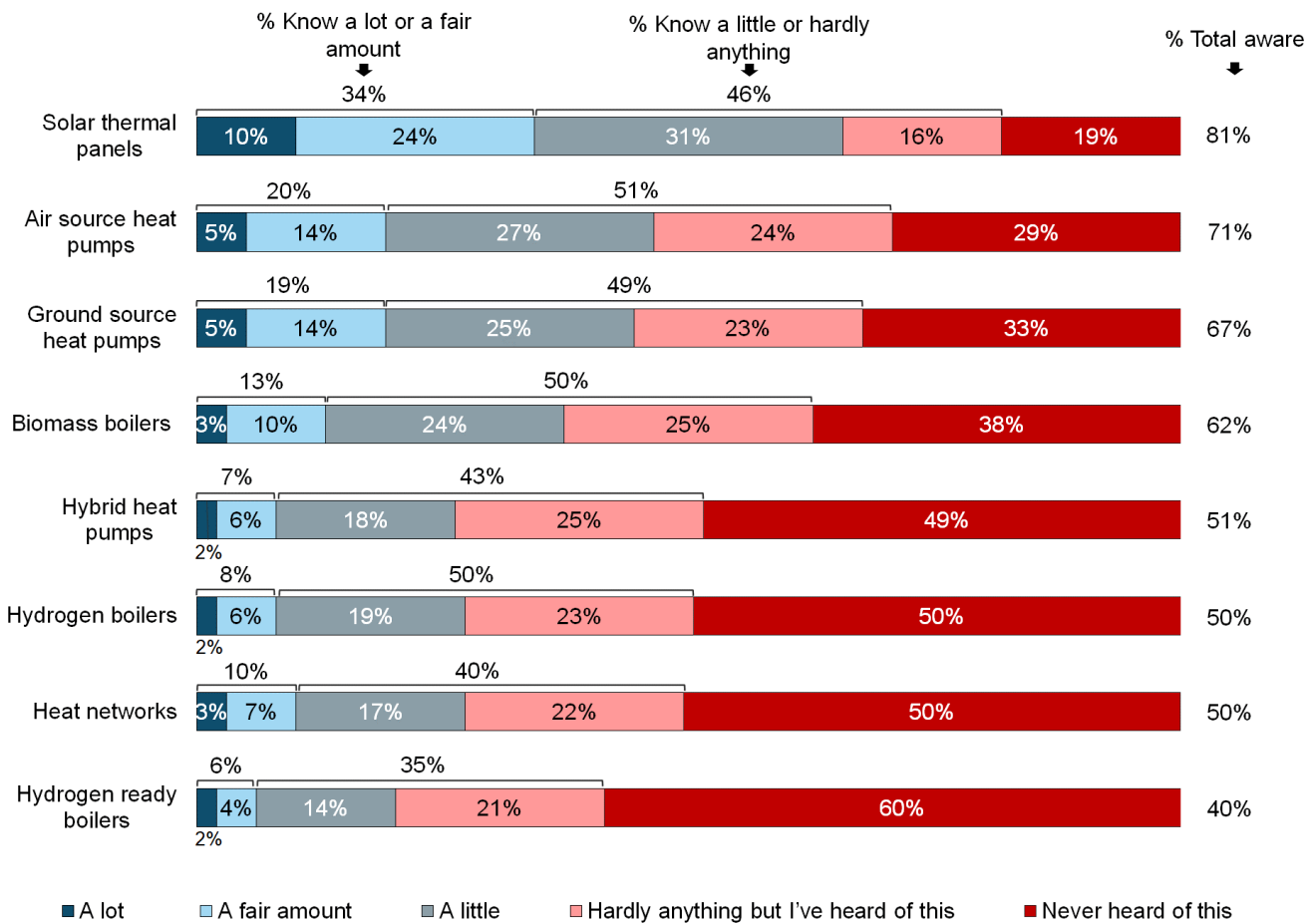
Awareness was highest for solar thermal panels (81%); however, it should be noted that we know that people often confuse these with the more common solar photovoltaic panels, so it is possible that this is an overestimate¹. Awareness was also relatively high for air source heat pumps (71%), ground source heat pumps (67%) and biomass boilers (62%). Around half had heard of hybrid heat pumps (51%), heat networks (50%) and hydrogen boilers (50%), while people were least aware of hydrogen-ready boilers (40%).

Although at least 40% had heard of at least one of these types of low carbon heating system, knowledge was considerably lower, and the variation in levels of knowledge of individual low carbon heating systems reflects the general patterns of awareness described above. The proportion who said they knew either a fair amount or a lot was highest for solar thermal panels (34%)², reducing to around one in five for air source heat pumps (20%) and ground source heat pumps (19%). At the other end of the scale, less than 10% knew at least a fair amount about hydrogen boilers (8%), hybrid heat pumps (7%) and hydrogen-ready boilers (6%).

¹ In the question wording, we explained that these were 'not the same as solar panels which use energy from the sun to produce electricity' although it is likely that some confusion remained.

² See comments above about this being a potential overestimate.

Figure 2.1: Knowledge about specific low-carbon heating systems (based on all people), Winter 2021



LCHEATKNOW1-8. How much would you say you know about the following low carbon heating systems?
 Base: All wave respondents – Winter 2021: Air source heat pumps (3,696), Ground source heat pumps (3,693), Hybrid heat pumps, (3,690), Heat networks (3,686), Biomass boilers (3,692), Solar thermal panels (3,693), Hydrogen boilers (3,694), Hydrogen-ready boilers (3,688)

In line with the overall awareness of low carbon heating described in the previous section, across all low carbon heating types, men and those with higher levels of education displayed higher levels of awareness and knowledge. The age pattern, on the other hand, differed by type of heating system. The proportion who knew a fair amount or a lot about ground source and air source heat pumps increased by age (air source heat pumps: from 10% of 16 to 24 year olds to 26% of those over 65; ground source heat pumps: from 12% of 16 to 24 year olds to 25% of those over 65). On the other hand, awareness of solar thermal panels was highest for the youngest age groups (43% of 16 to 24 year olds declining through the age groups to 32% of those over 65).

In general, awareness and knowledge of low carbon heating systems was higher for those who had a better knowledge of the concept of Net Zero. For example, 75% of those who were aware of Net Zero were also aware of air-source heat pumps, compared with only 34% of those who had never heard of Net Zero.

Likelihood to install low carbon heating systems

In order to gauge the propensity to adopt low carbon heating systems, people were asked if they would consider installing one of five different low carbon systems the next time they need to change their heating system or boiler³.

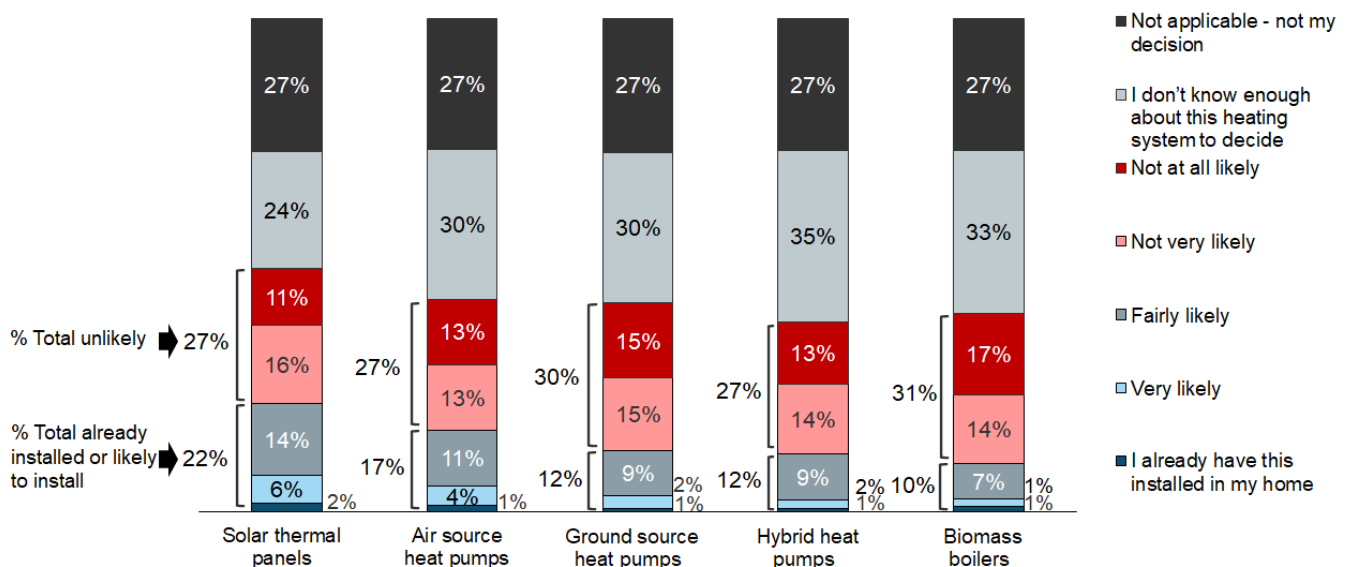
In Winter 2021, between a quarter and a third of people said they didn't know enough about these heating systems to decide, ranging from 24% who said they didn't know enough about solar thermal panels to 35% for hybrid heat pumps (Figure 2.2).

Where people did express an opinion, a greater proportion said they were unlikely to change to a low carbon heating system than the proportion who said they were likely to. Around three in ten (between 27% and 31%) said that they were unlikely to install each of these.

Including the very small proportions who had already installed these, people were most likely to adopt solar thermal panels (22%) or air source heat pumps (17%) and were least likely to adopt biomass boilers (10%).

22% of all respondents were likely to install any type of heat pump (air source, ground source or hybrid) or already had a heat pump installed. 21% of all respondents were likely to install a heat pump of any type but had not already got one installed.

Figure 2.2: Whether likely to install specific low-carbon heating systems next time they need to change (based on all people), Winter 2021



LCHEATINSTALLA-E. How likely is it that you would install each of the following heating systems in your home when you next need to change your heating system or boiler?

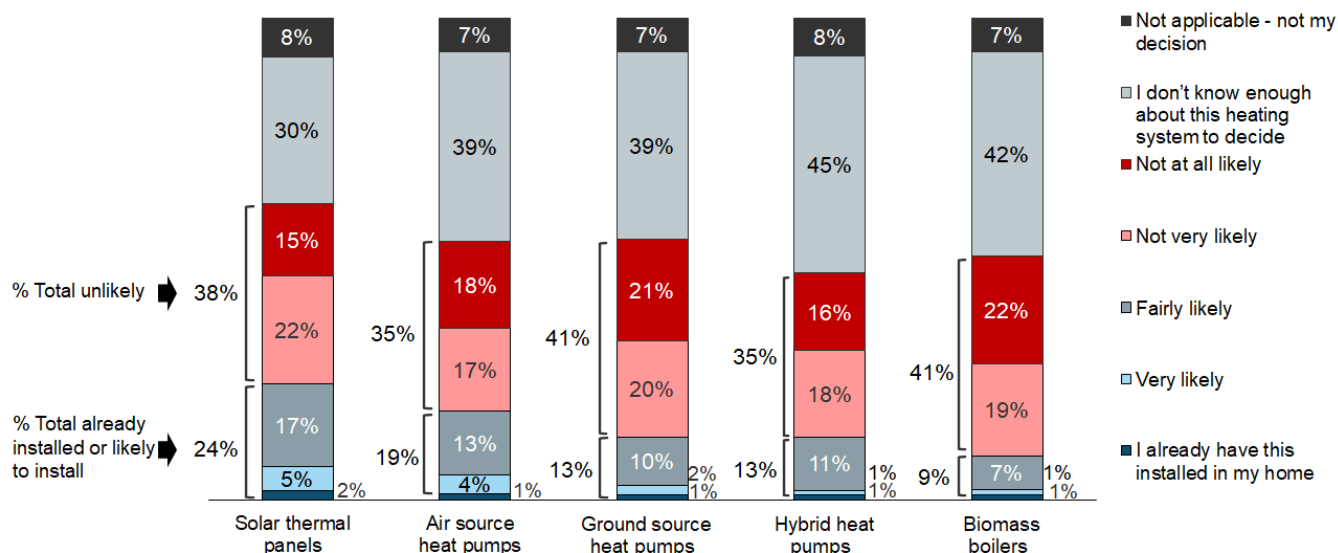
Base: All wave respondents – Winter 2021: Air source heat pumps (3,677), Ground source heat pumps (3,656), Hybrid heat pumps (3,656), Biomass boilers (3,652), Solar thermal panels (3,655)

Around a quarter (27%) said that this was not their decision to make. This was mainly explained by around seven in ten renters (between 67% and 69%) saying that this was not their decision to make for each given type of low-carbon heating system – a figure which was

³ The differences between weighting these results by individual or by household are minor and do not change the narrative of the results. Results throughout this section are weighted by individual.

much lower among owner-occupier households (between 7% and 8%). Figure 2.3 shows the same results based only on people living in owner occupied households.

Figure 2.3: Whether likely to install specific low-carbon heating systems next time they need to change among owner occupiers (based on people living in owner-occupied accommodation), Winter 2021



LCHEATINSTALLA-E. How likely is it that you would install each of the following heating systems in your home when you next need to change your heating system or boiler?

Base: All wave respondents living in owner occupier households – Winter 2021: Air source heat pumps (2,738), Ground source heat pumps (2,728), Hybrid heat pumps (2,730), Biomass boilers (2,725), Solar thermal panels (2,727)

A high proportion of those living in owner-occupied households did not know whether they would install a low carbon heating system in the future. This was highest for hybrid heat pumps (45%) and lowest for solar thermal panels (30%).

Amongst those who did express an opinion, a greater proportion said they were unlikely to change to a low carbon heating system than the proportion who said they were likely to. More than a third of those living in owner-occupier households (between 35% and 41%) said that they were unlikely to install each of these. Those living in owner-occupier households were most likely to say they were likely to install solar thermal panels or already had them installed (24%) followed by an air source heat pump (19%). This subgroup were least likely to install a biomass boiler with only 9% saying they were likely to install a biomass boiler or had one already installed.

24% of those in owner-occupier households were likely to install any type of heat pump (whether air source, ground source or hybrid). This proportion rises to 26% if those who have already installed a heat pump are included.

Among people living in owner-occupied accommodation, younger people were more likely than older people to be receptive to the installation of solar thermal panels; 27% of those living in owner-occupier households aged 16 to 34 were either likely to install solar thermal panels or had already done so, compared with 22% of those aged 55 or over.

Including those who had already installed this, people living in owner-occupier households who were concerned about climate change were more likely to change to an air source heat pump

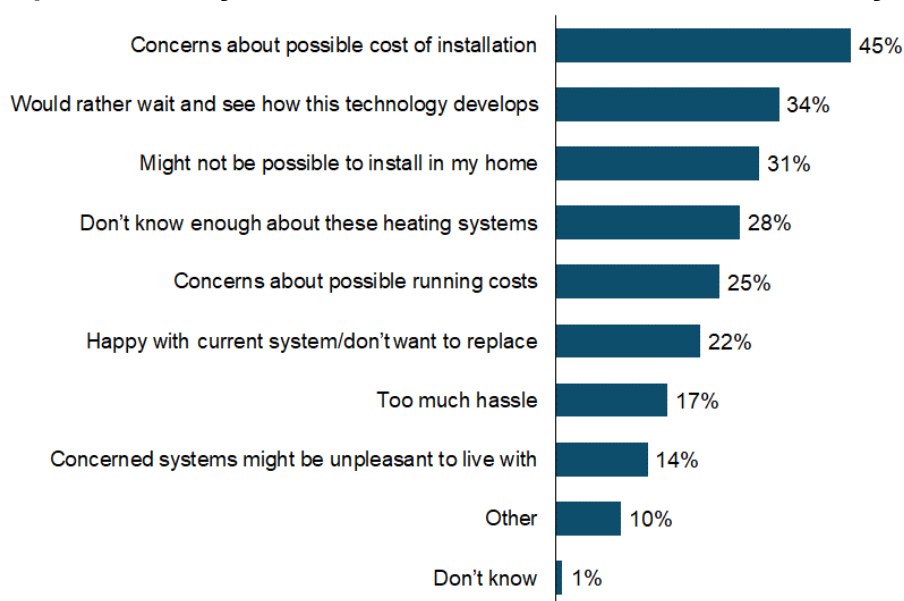
(20% of those very or fairly concerned, compared with 10% of owner-occupiers not very or not at all concerned), and solar thermal panels (26% compared with 10%).

Overall, in Winter 2021, 56% of people living in owner-occupier households, said that they were unlikely to install at least one of the five different types of low carbon heating systems if they needed to replace their heating system. This subgroup was asked their reasons for this (Figure 2.4).

The main barriers to changing to a low carbon heating system included concerns about the cost of installation (45%), a preference to wait to see how the technology develops in time (34%), or a perception that it might not be possible to install in their home (31%). The latter view was especially prevalent among those living in a flat or maisonette (59%).

Other barriers mentioned by at least one in ten included not knowing enough about the heating systems (28%), concerns about running costs (25%), because they were happy with their existing system (22%), thinking it was too much hassle (17%), concerns that it might be unpleasant to live with (for example, that it may be noisy or unsightly) (14%), or other reasons (10%).

Figure 2.4: Why unlikely to install specific low-carbon heating systems (based on owner occupiers unlikely to install one or more of the low carbon systems), Winter 2021



LCNOWHY. You said you would be unlikely to install the following heating systems in your home [...] Why is this?
Base: All owner occupier households who are unlikely to install one or more of low carbon types of heating in home – Winter 2021 (1,621)

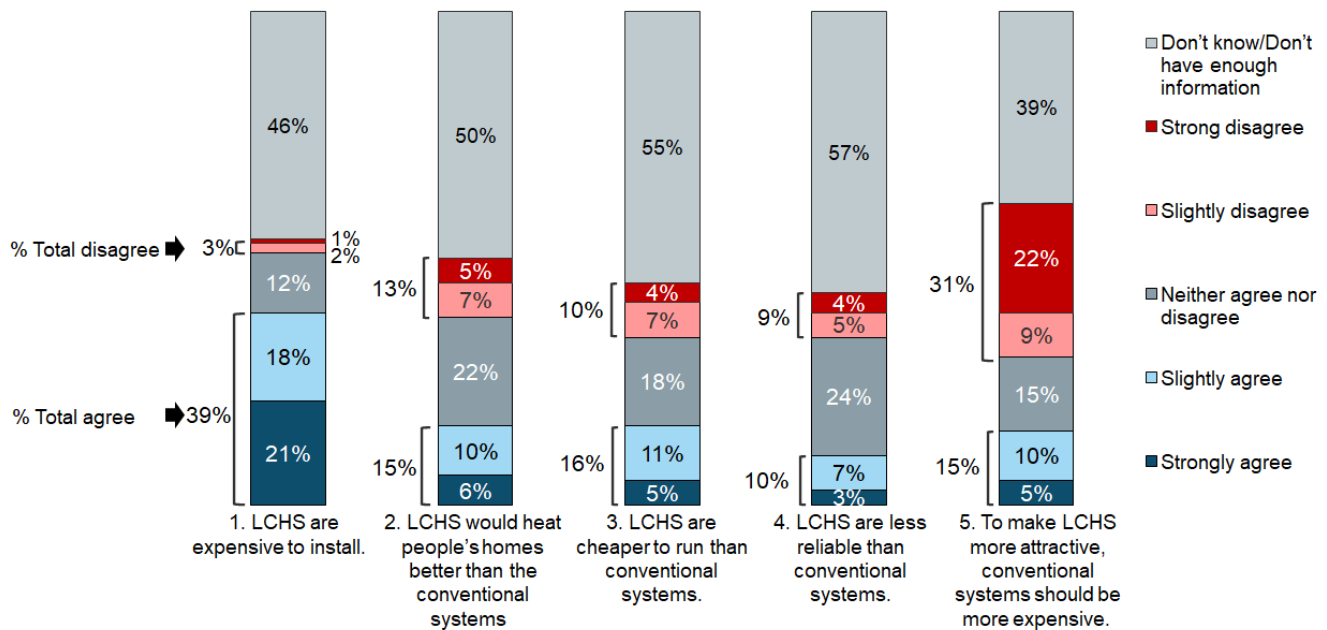
Attitudes towards low carbon heating systems

The public were asked the extent to which they agreed or disagreed with the following five statements:

1. Low-carbon heating systems are expensive to install
2. Low-carbon heating systems would heat people’s homes better than the conventional systems (for example, gas or oil boilers)
3. Low-carbon heating systems are cheaper to run than conventional systems
4. Low-carbon heating systems are less reliable than conventional systems
5. To make low-carbon heating systems more attractive, conventional systems should be made more expensive

In Winter 2021, a large proportion said they either didn’t know, didn’t have enough information or neither agreed nor disagreed with each of these statements (Figure 2.5). This combined proportion ranged from 54% for Statement 5 to 81% for Statement 4.

Figure 2.5: Attitudes towards low carbon heating systems (based on all people), Winter 2021



LOWCARBATT1-5. How much do you agree or disagree with the following statements? NOTE – LCHS is included in full as ‘low-carbon heating systems’ in the questionnaire statements

Base: All wave respondents – Winter 2021: LCHS are expensive to install (3684), LCHS would heat people’s homes better than the conventional systems (3679), LCHS are cheaper to run than conventional systems (3680), LCHS are less reliable than conventional systems (3677), To make LCHS more attractive, conventional systems should be more expensive (3676)

Even among people who said they knew at least a little about low carbon heating systems, the level answering ‘neither agree nor disagree’ or ‘don’t know/don’t have enough information’ was still high, ranging from 33% for Statement 5 to 77% for Statement 4. This indicates that, even among those with a reasonable level of awareness, there is still a substantial lack of knowledge about how these systems work.

Reinforcing the results in Figure 2.4 which showed that the strongest barrier for rejecting low carbon systems was cost, the public were considerably more likely to agree (39%) than disagree (3%) that ‘low carbon heating systems are expensive to install’, although they were

slightly more likely to agree (16%) than disagree (10%) that 'low carbon systems are cheaper to run than conventional systems'. The public were twice as likely to disagree (31%) than agree (15%) that conventional heating systems should be made more expensive to make low carbon alternatives more attractive.

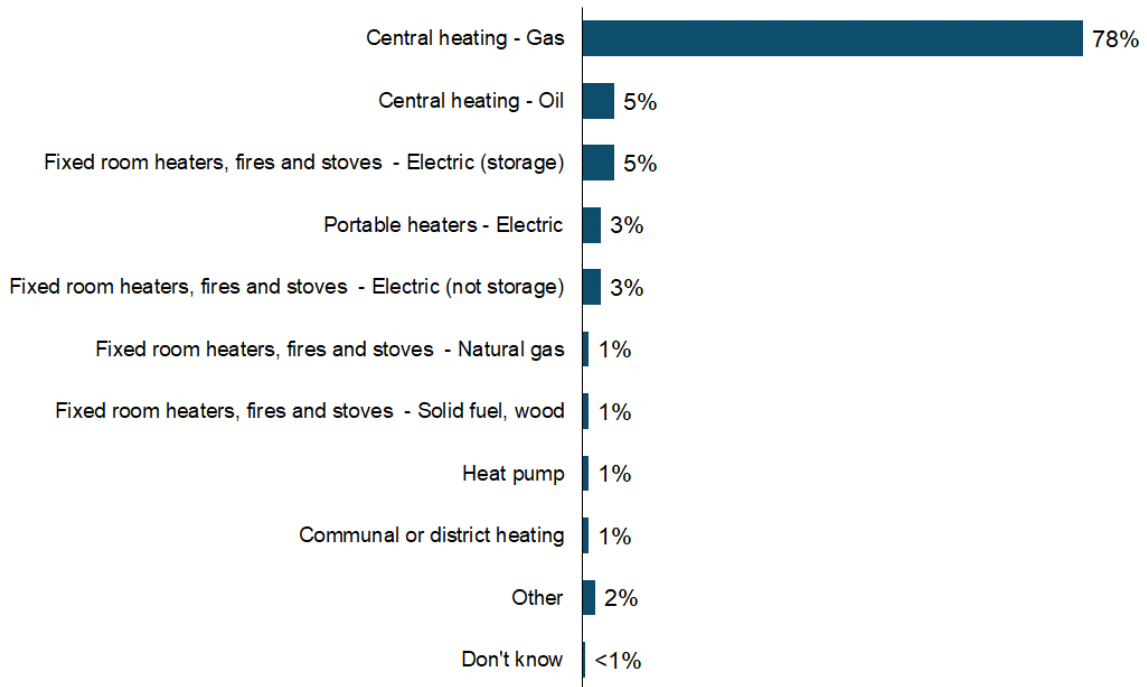
Views among those who felt able to offer an opinion were more evenly balanced when it came to efficiency ('Low-carbon heating systems would heat people's homes better than the conventional systems') and reliability ('Low-carbon heating systems are less reliable than conventional systems').

Heating and cooling in the home

People were asked about the main systems used at home to heat and cool their homes. The results have been weighted to represent all households.

In Winter 2021, the main system for heating the home was gas central heating (78%), while 5% had oil central heating and a further 5% used electric storage heaters (Figure 3.1). All other methods were used by less than 5% of people.

Figure 3.1: Main method of heating home (based on all households), Winter 2021



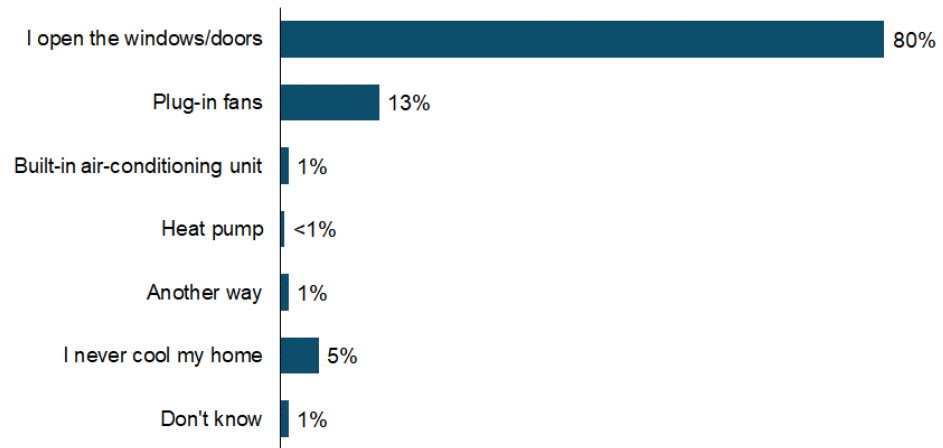
HEATMAIN. What is the main way you heat your home?

Base: All wave households – Winter 2021 (3,484)

Note: At this question, results are weighted to households (not individuals)

In Winter 2021, when households needed to cool their home, they mainly opened windows and doors (80%), although 13% used a plug-in fan as their main system of cooling (Figure 3.2).

Figure 3.2: Main method of cooling home (based on all households), Winter 2021



COOLMAIN. What is the main way you cool your home when you need to?

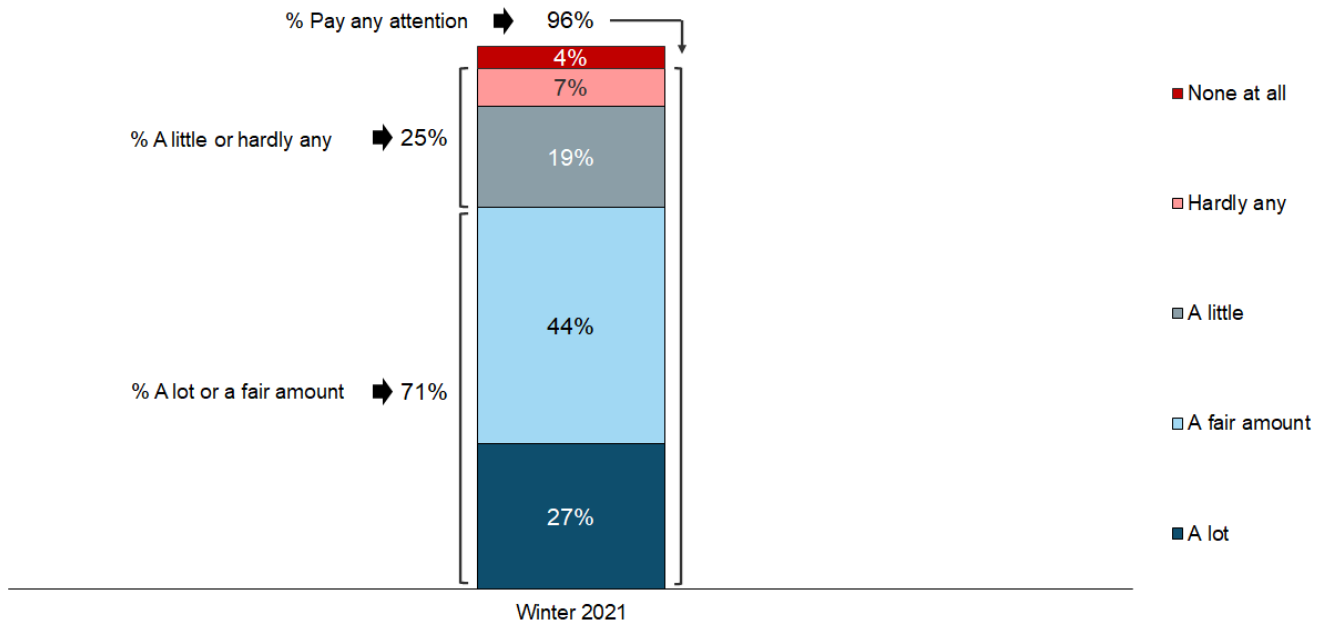
Base: All wave households – Winter 2021 (3,705)

Note: At this question, results are weighted to households (not individuals)

Attitudes towards heating in the home

In Winter 2021, seven in ten (71%) of the public said that they paid either a lot (27%) or a fair amount (44%) of attention to the amount of heat they used in their home (Figure 4.1). One in five people (19%) said that pay only a little attention to the amount of heat they use in their homes, and a further 10% said they pay hardly any or no attention at all to this.

Figure 4.1: How much attention paid to amount of heat used in home (based on all people), Winter 2021

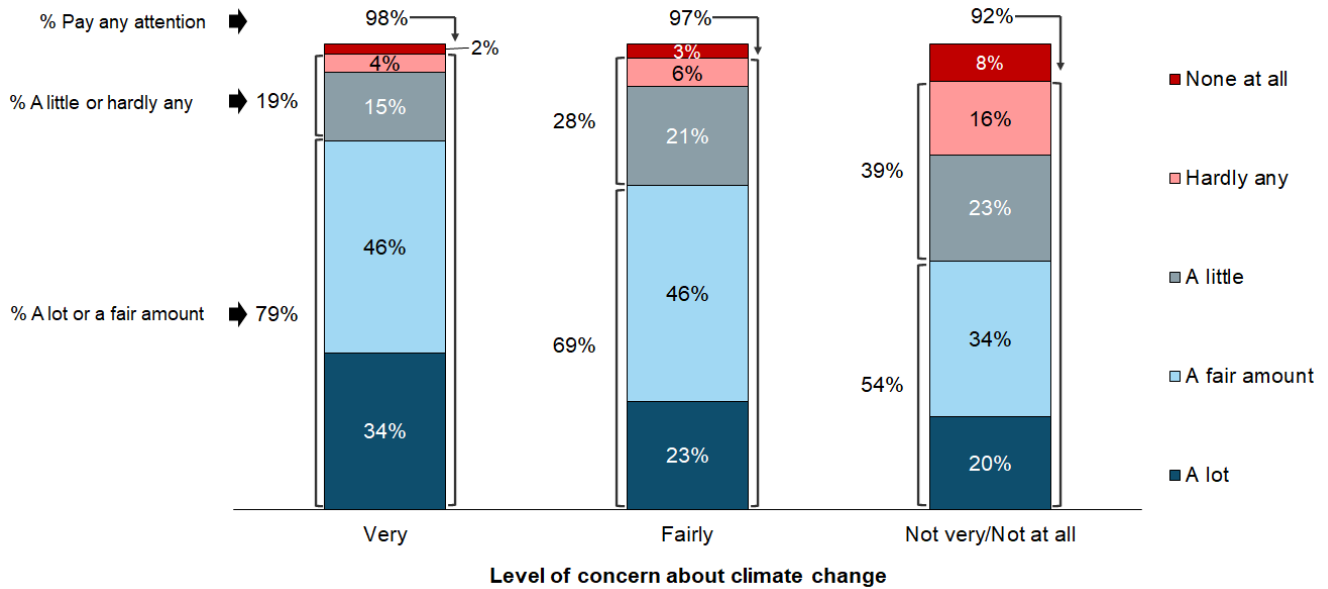


HEATUSE. How much attention do you pay to the amount of heat you use in your home?
Base: All wave respondents – Winter 2021 (3,701)

The extent to which people paid attention to their home increased with age. Older people (81% of those aged 65 and over) were the most likely to pay a lot or a fair amount of attention to the amount of heat they use at home, this figure declining through the age groups to 46% of those aged 16 to 24.

People who were concerned about climate change were much more likely than those who were not concerned to pay attention to the amount of heat used at home (Figure 4.2). Eight in ten (79%) of those who were very concerned paid either a lot of a fair amount of attention to heat use, compared with 69% of those who were fairly concerned, and 54% of those who were either not very or not at all concerned.

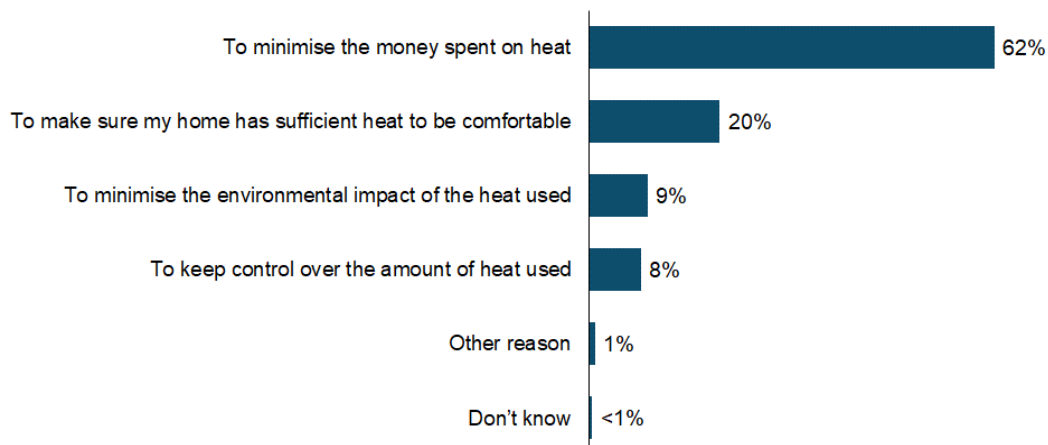
Figure 4.2: How much attention pay to amount of heat used in home (based on all people) by level of concern about climate change, Winter 2021



HEATUSE. How much attention do you pay to the amount of heat you use in your home?
 Base: All wave respondents – Winter 2021: Very concerned about climate change (1,713), Fairly concerned about climate change (1,490), Not very/Not at all concerned about climate change (458)

Those who paid a lot or a fair amount of attention to the amount of heat used in their home were asked their reasons for doing this (Figure 4.3). In Winter 2021, 62% said they did so to minimise the amount of money they spent on heat, 20% said this was to make sure they had sufficient heat to be comfortable, 9% said they did so to minimise the environmental impact, and 8% said it was to keep control over the amount of heat used.

Figure 4.3: Reasons for paying attention to the amount of heat used (based on those who pay at least a fair amount of attention), Winter 2021

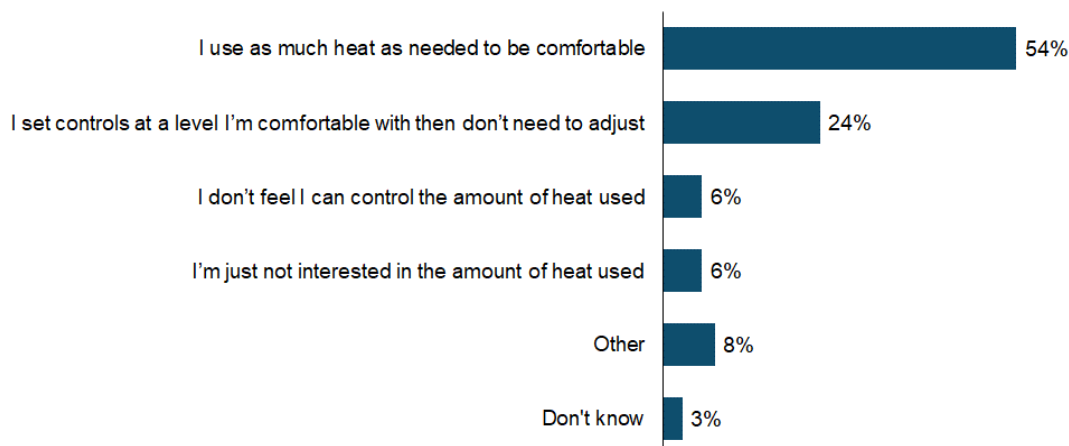


HEATATTWHY. You said that you pay [a lot / a fair amount] of attention to the amount of heat you use in your home. What is the main reason for this?

Base: All wave respondents who pay at least a fair amount of attention – Winter 2021 (2,769)

Those who said they paid a little, hardly any or no attention at all to the amount of heat used were also asked the reason for this (Figure 4.4). In Winter 2021, just over half (54%) said this was because they used as much heat as needed to be comfortable and 24% said they set their heating controls at a level they were comfortable with, and so didn't need to adjust them.

Figure 4.4: Reasons for not paying attention to the amount of heat used (based on those who pay at most a little amount of attention), Winter 2021



HEATNOATTWHY. You said that you pay [only a little/hardly any/no] attention to the amount of heat you use in your home. What is the main reason for this?

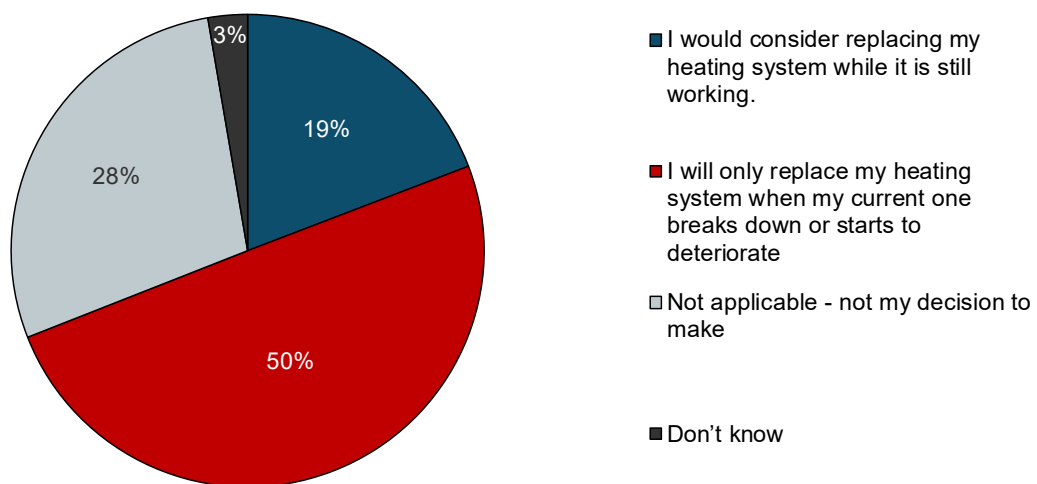
Base: All wave respondents who pay at most a little attention – Winter 2021 (925)

Replacing heating systems

Likelihood to replace heating system

In Winter 2021, half of people (50%) said they would only replace their heating system when their current one breaks down or starts to deteriorate, while 19% said they would consider replacing their heating system while it was working (Figure 5.1). A further 28% said this was not their decision to make.

Figure 5.1: Whether would replace heating system while it was still working (based on all people), Winter 2021



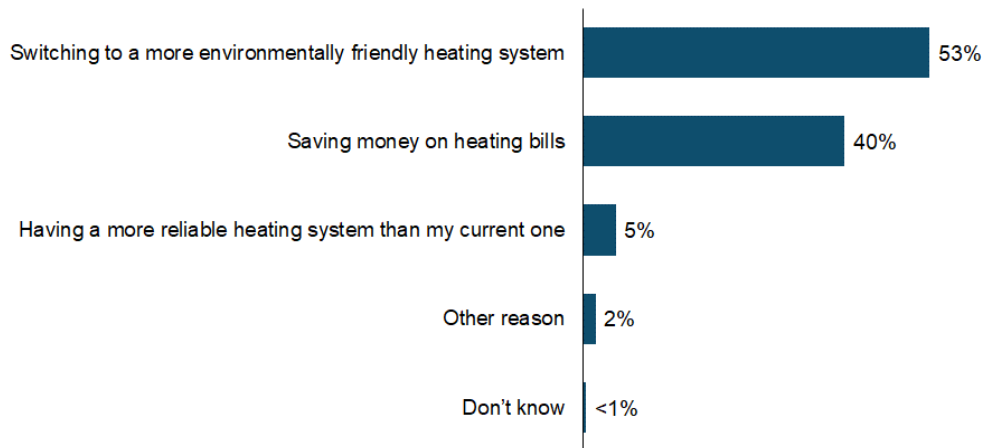
REPLACEHEAT. Now thinking about your heating system. Which one of these statements comes closest to your view?

Base: All wave respondents – Winter 2021 (3,702)

The propensity to consider replacing a heating system while it is still working was higher among people with higher levels of education (26% of degree-educated people compared with 14% of those with no qualifications), those who paid a lot or a fair amount of attention to heat use at home (22%, compared with 7% who paid hardly any or no attention to heat use), and people concerned about climate change (21% of those who were concerned compared with 8% who were not concerned).

In Winter 2021, those who said they would consider replacing a working heating system were asked to choose their most important consideration for doing this. Over half of this subgroup (53%) said this would be to switch to a more environmentally friendly heating system, while 40% said it would be mainly to save money on energy bills (Figure 5.2).

Figure 5.2: Most important consideration in changing heating system (based on those who would replace their system while it was still working), Winter 2021



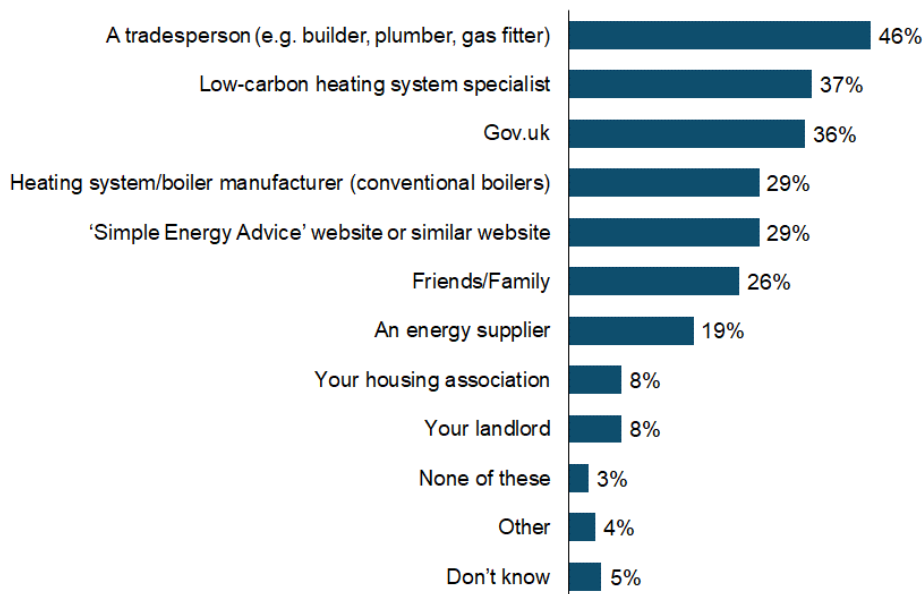
REPLACEIMP. Which one of these would be the most important consideration in changing your heating system?
Base: All wave respondents who would replace their heating system while it is still working – Winter 2021 (775)

Trust in heating system installation advice

People were asked who they would trust to provide advice about which heating system to install in their home.

In Winter 2021, trust was highest among tradespeople (46%), low carbon heating specialists (37%), official websites such as Gov.UK (36%), heating manufacturers (29%) and energy advice websites (29%) (Figure 5.3).

Figure 5.3: Who would trust to provide advice on which heating system to install in home (based on all people), Winter 2021



TRUSTHEAT. Which of the following would you trust to provide advice about which heating system to install in your home? Please select all that apply.

Base: All wave respondents – Winter 2021 (3,706)

Insulation in the Home

In Winter 2021, the public were asked whether any of the following types of insulation had been installed in their home, and if not installed whether they had considered it:

- Loft insulation or top-up loft insulation
- Double glazing in at least one window
- Cavity wall insulation or solid wall insulation
- Under floor insulation

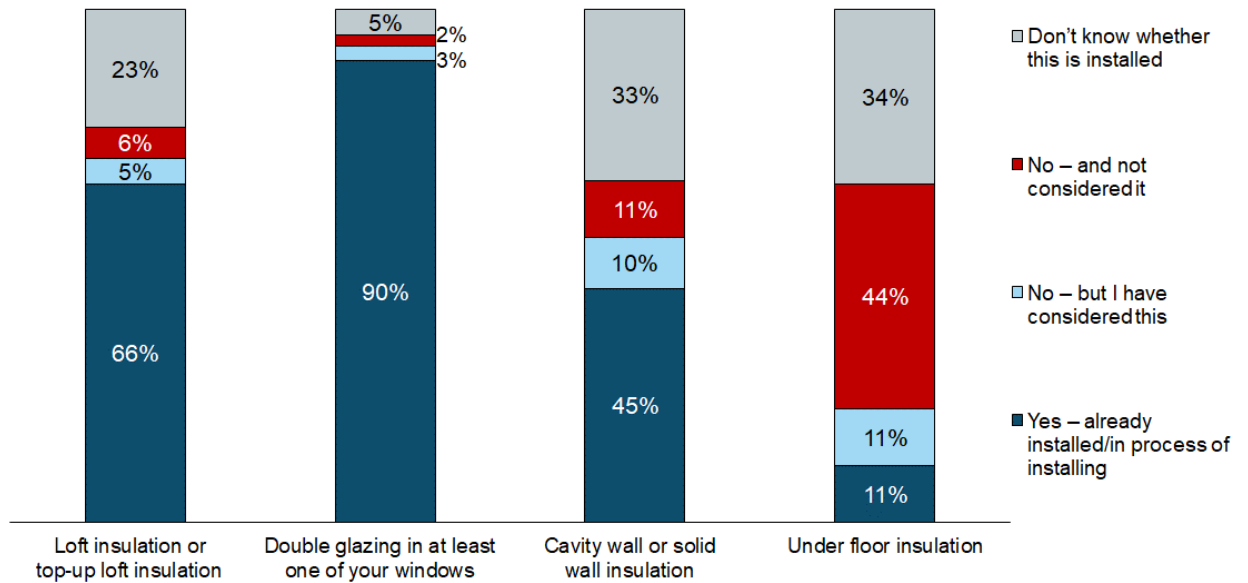
Figure 6.1 shows the results for this question based on all people. However, as people renting their homes are much less likely to be aware of, or to be responsible for making decisions about, insulation measures in their home, Figure 6.2 displays the results split out by tenure.

In Winter 2021, the most commonly installed measures were double glazing (90% of all people, 95% of people living in owner-occupier households) and loft insulation or top-up loft insulation (66% of all people, 82% of those living in owner-occupiers households). Smaller proportions had cavity or solid wall insulation installed (45% of all people, 56% of those living in owner-occupiers households), while 11% of all people (and 14% of those living in owner-occupier households) had under floor insulation installed.

However, around a third of all respondents did not know if their home had cavity or solid wall insulation (33%) or underfloor insulation (34%), while 23% did not know if their loft was insulated. The levels of 'don't know' were smaller for those living in owner occupier households although still a fifth of this group did not know if their home had cavity or solid wall insulation (19%) or underfloor insulation (21%).

Between 3% and 11% of people said they had considered installing these types of insulation. People were least likely to consider installing under floor insulation (44% had not considered this, increasing to 52% of owner occupiers).

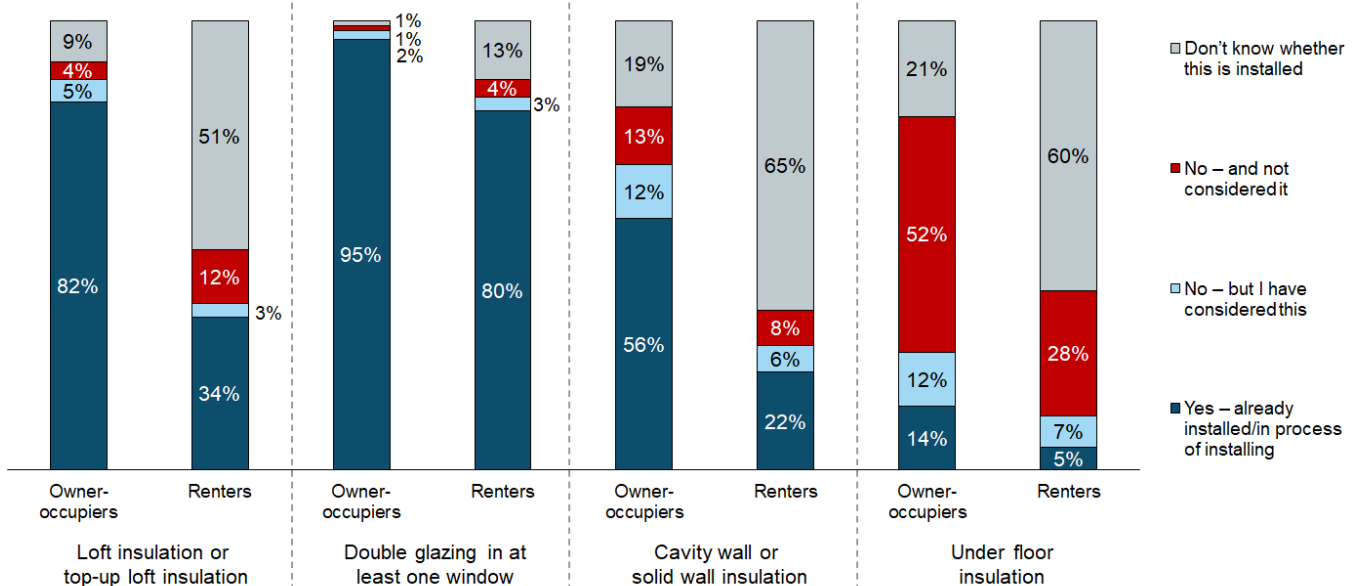
Figure 6.1: Types of insulation already installed in home (based on all people), Winter 2021



INSTALLA-E. Have any of these been installed in your home, even if not by you or your household?

Base: All wave respondents – Winter 2021: Loft insulation or top-up loft insulation (3,675), double glazing in at least one of your windows (3,691), cavity wall or solid wall insulation (3,627), under floor insulation (3,559)

Figure 6.2: Types of insulation already installed in home (based on owner-occupiers and renters), Winter 2021



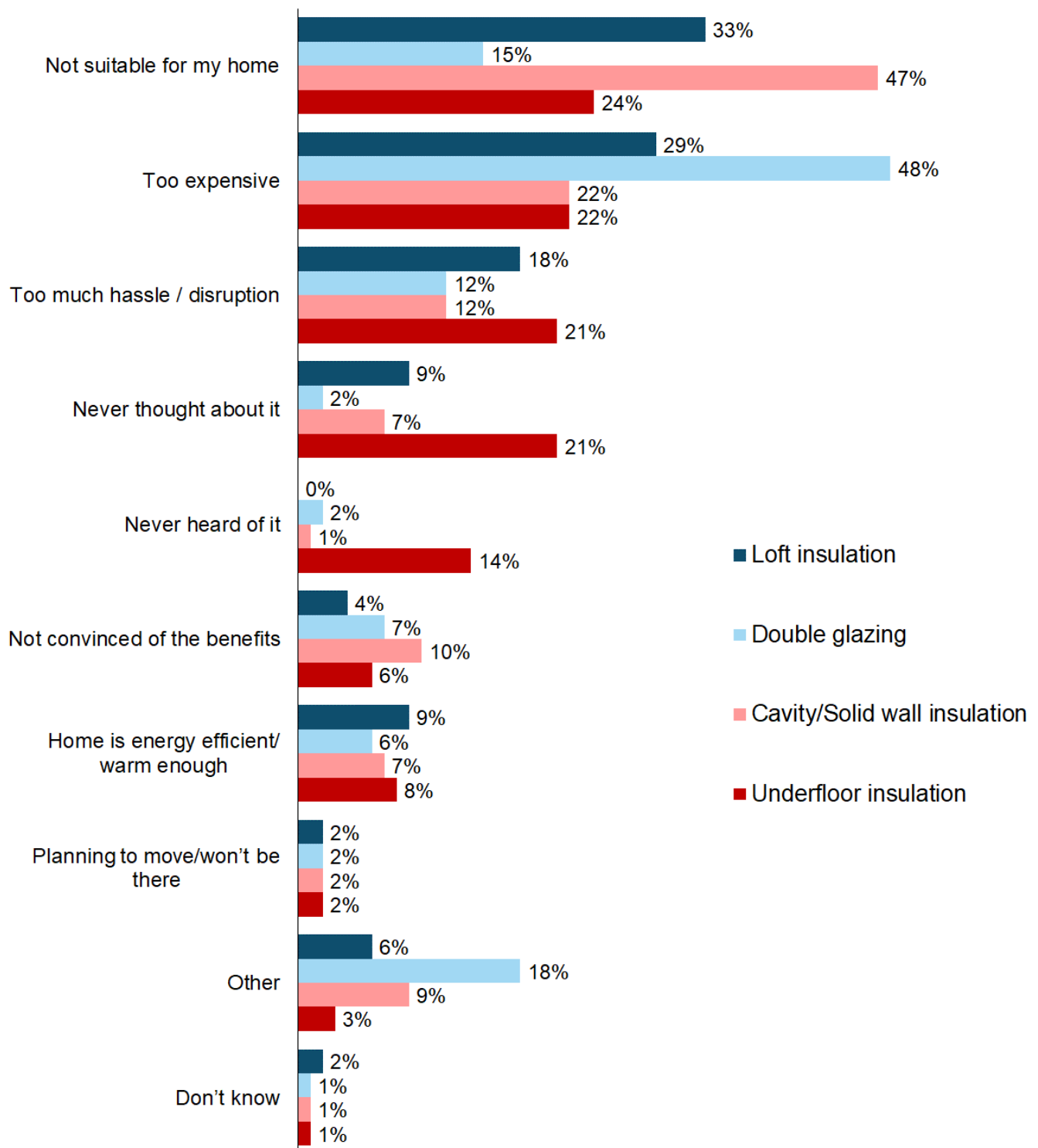
INSTALLA-E. Have any of these been installed in your home, even if not by you or your household?

Base: All wave owner-occupiers – Winter 2021: Loft insulation or top-up loft insulation (2,739), double glazing in at least one of your windows (2,754), cavity wall or solid wall insulation (2,704), under floor insulation (2,648) and All wave renters – Winter 2021: Loft insulation or top-up loft insulation (759), double glazing in at least one of your windows (761), cavity wall or solid wall insulation (750), under floor insulation (741)

For each insulation measure, people who knew whether their home already had this but who had not installed it were asked their reasons for this. These findings have been based on those living in owner occupier households only as a large proportion of renters say that this is not their responsibility.

In Winter 2021, for each type of insulation, among those living in owner-occupier households, the most common barriers to installing these included cost, feeling it was unsuitable for their home, or that it entailed too much hassle or disruption (Figure 6.3). Cost was the main barrier for double glazing (48% of those living in owner-occupier households who didn't have this gave this as a reason for not installing). The main barrier among those in owner-occupier households for installation of cavity or solid wall insulation was perceived unsuitability for their home (47%) and, while not as prevalent, this was also the main barrier to installation of loft insulation and under floor (respectively 33% and 24% of those living in owner-occupier households who didn't have this gave this as a reason for not installing).

Figure 6.3: Why have not yet installed specific types of insulation (based on owner occupiers who have not installed each), Winter 2021



WHYNOINSTA-E. Are there any particular reasons why you haven't installed [...] so far?

Base: All owner occupiers who have not installed loft insulation / double glazing / wall insulation / floor insulation – Winter 2021: Loft insulation (231), Double glazing (99), Cavity or solid wall insulation (701), underfloor insulation (1,729)

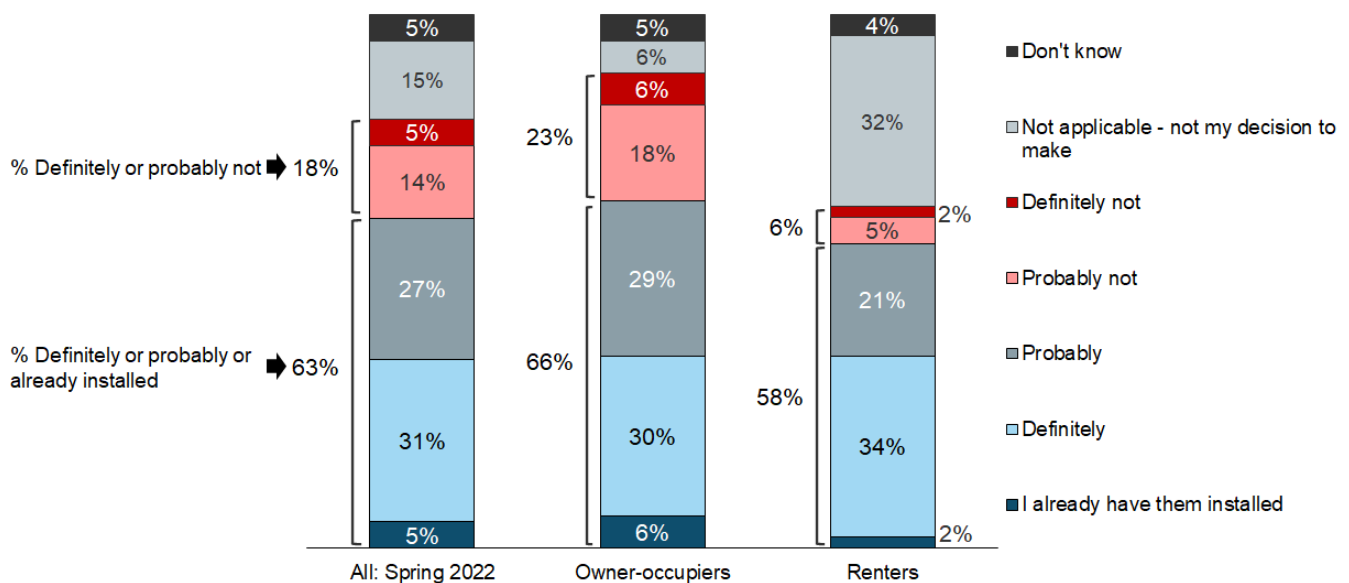
Attitudes towards solar panels in the home

In Spring 2022, people were asked about their propensity to install solar panels in their home in the next few years. The results are shown separately by tenure.

Two in three people living in owner-occupied homes (66%) said that they either already had or would be likely to consider installing solar panels in their home in the next few years, with 30% saying they would definitely consider this, 29% saying they would probably do so, and 6% who already had these installed (Figure 7.1). Almost a quarter (23%) of people living in owner-occupied homes said they probably wouldn't (18%) or definitely wouldn't (6%) do this.

Among renters, a third (32%) say that they wouldn't be in a position to make this decision, and as a result the likelihood of considering installing or already having these installed was lower (58%). Given that a large proportion of renters do not regard this issue as applicable to them, the remaining analysis in this section is based only on people living in owner-occupied homes.

Figure 7.1: Likelihood to consider installing solar panels in the home to generate electricity by tenure (based on all respondents), Spring 2022



SOLARHOME. Would you consider having solar panels installed in your current home to generate electricity, in the next few years?

Base: Spring 2022 - All wave respondents (4,367); Owner-occupiers (3,285); Renters (963)

Focussing on owner-occupied homes only, the following subgroups of people living in owner-occupied homes were more likely to be open to the idea of installing solar panels in their home⁴: people educated to degree level (72% compared with 57% of those with no qualifications); people aged 25 to 55 (74% compared with 62% of people aged 16 to 24, 67% of those aged 55 to 64 and 53% of those aged 65 or over); people who live in a house or bungalow (67% compared with 48% of people who live in flats); and people with higher level occupations (ranging from 70% of those in managerial and professional occupations to 54% of those in semi-routine or routine occupations).

⁴ These percentages include those who had already had these installed in their home

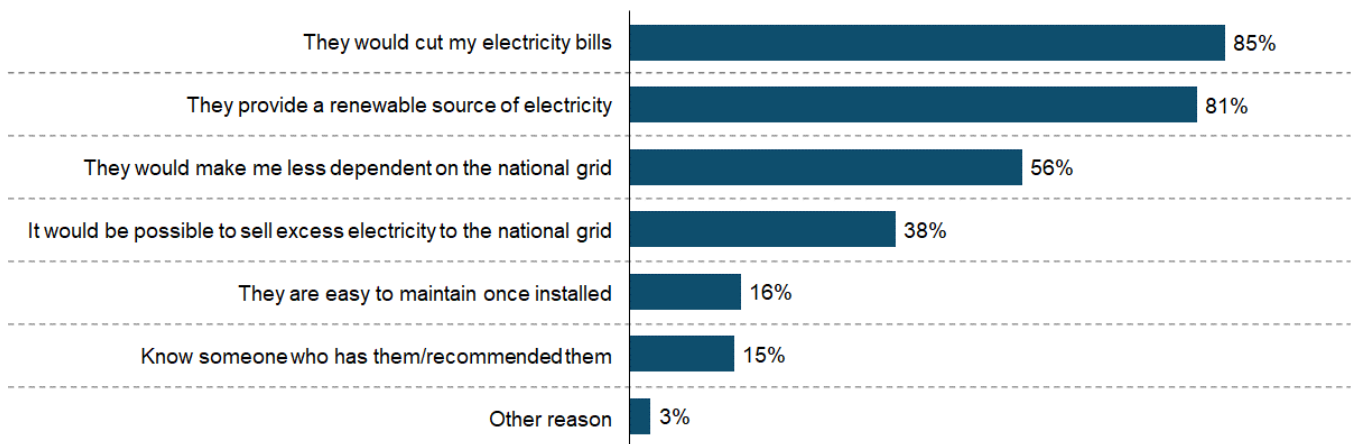
Reasons for being likely to install solar panels

People living in owner-occupied homes who didn't already have solar panels but said they were likely to install them in their home in the next few years were asked their reasons for this (respondents were presented with a list of possible reasons).

In Spring 2022, economic and environmental considerations both played a major role in propensity to install solar panels (Figure 7.2). The two main motivations for considering solar panels were to cut electricity bills (85%) and to provide a renewable source of electricity (81%).

Over half saw being less dependent on the national grid as a motivation (56%), with fewer choosing the ability to sell excess electricity to the grid (38%), ease of maintenance (16%), or being recommended them (15%) as motivations to install solar panels.

Figure 7.2: Reasons for considering installing solar panels in the home to generate electricity (based on owner occupiers who would consider this), Spring 2022



SOLARWHYINT. You said that you would consider installing solar panels. Why is this? Please select all that apply

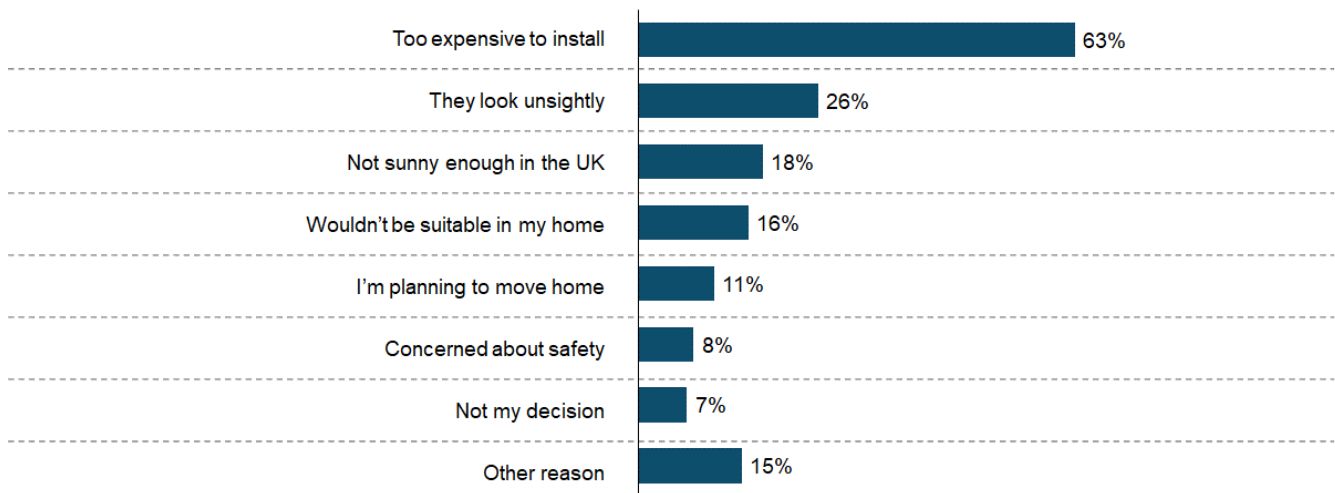
Base: All wave owner occupiers who would consider this - Spring 2022 (1,921)

Reasons for being unlikely to install solar panels

People living in owner-occupied homes who said they were unlikely to install solar panels in their home in the next few years were asked their reasons for this (respondents were presented with a list of possible reasons).

In Spring 2022, expense was by far the main barrier for owner-occupiers who would not consider solar panels with 63% of this group saying they were too expensive to install (Figure 7.3). Other more minority objections include looking unsightly (26%), insufficient sun in the UK (18%), not suitable to install in their home (16%)⁵ or a plan to move home (11%). A relatively high proportion (15%) mentioned other reasons not to install solar panels⁶.

Figure 7.3: Reasons for not considering installing solar panels in the home to generate electricity (based on owner occupiers who would not consider this), Spring 2022



SOLPANWHYNO. You said that you probably or definitely wouldn't install solar panels. Why is this? Please select all that apply

Base: All wave owner occupiers who would not consider this – Spring 2022 (845)

⁵ While this figure may seem relatively low, it is worth noting that 91% of people living in owner-occupied homes live in a house or bungalow and only 8% live in a flat.

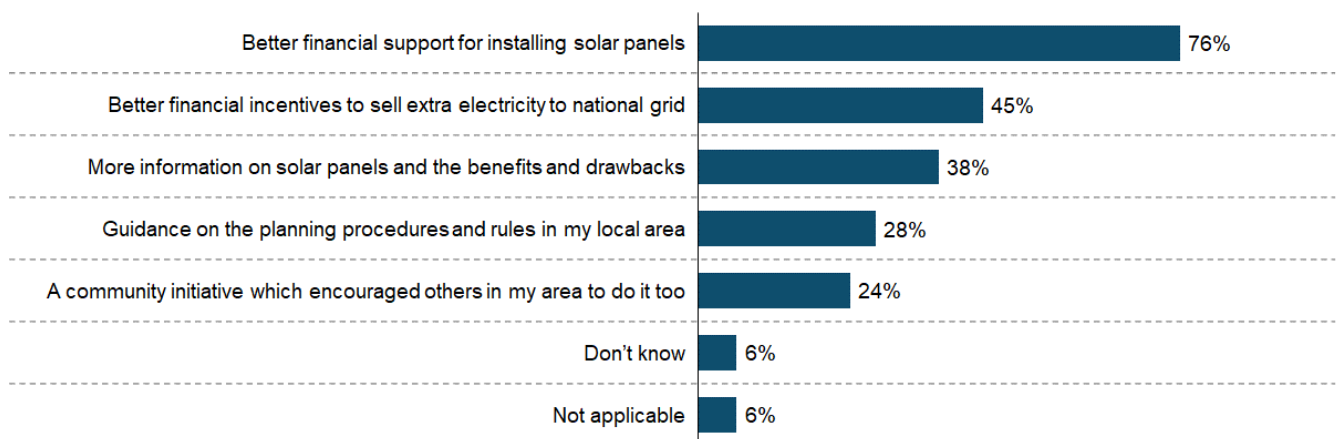
⁶ Other reasons cited included a belief that technology is ineffective or inefficient, the respondent feeling they are too old, and the hassle of installation and upkeep.

What might encourage people to install solar panels

Excluding those who said this was not their decision to make, people living in owner-occupied homes who did not already have solar panels were asked which of a list of possible factors might encourage them to install solar panels (Figure 7.4).

In Spring 2022, better financial support for installation was by the far the biggest encouragement factor: overall 76% selected this reason. Other people in this subgroup would be encouraged by incentives to sell electricity to the national grid (45%), and more information (38%). Fewer than three in ten would be encouraged by guidance on local planning rules (28%) or community initiatives (24%).

Figure 7.4: What would encourage people to install solar panels (based on owner-occupiers responsible for decision who have not yet installed panels), Spring 2022



SOLARENC. Which, if any, of the following might make you more likely to consider installing solar panels? Please select all that apply

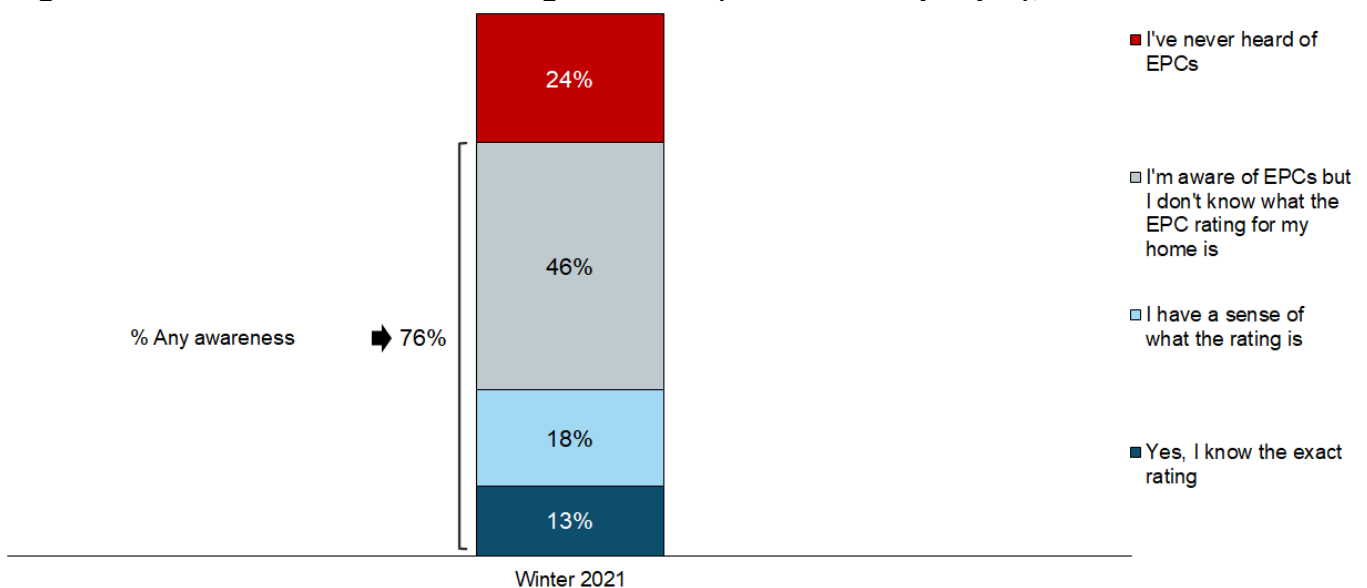
Base: All wave owner occupiers who have not already installed them excluding those who said it was not their decision to make – Spring 2022 (2,907)

Energy Performance Certificates (EPCs)

In Winter 2021, people were asked questions to assess awareness of Energy Performance Certificates (EPCs) and their ratings. They were also asked questions to assess their recollection of the recommendations in their home's EPC, and how useful those recommendations were.

Three quarters (76%) of the public were aware of EPCs in Winter 2021. Just over one in ten (13%) knew the exact EPC rating of their home, and a further 18% had a sense of the rating for their home. Just under half (46%) said they were aware of EPCs but didn't know the rating for their home. Overall, a quarter (24%) of the public had not heard of EPCs (Figure 8.1).

Figure 8.1: Awareness of EPC rating for home (based on all people), Winter 2021

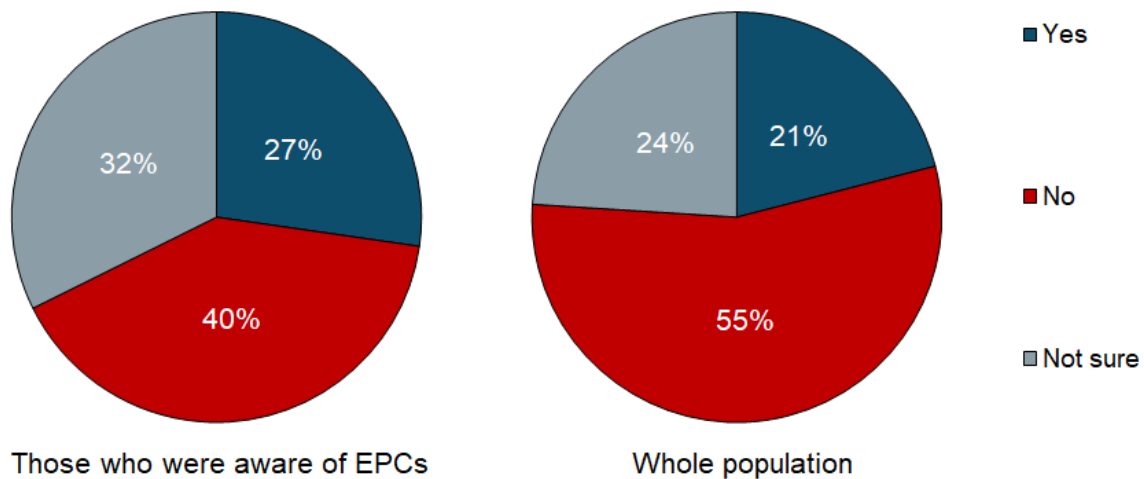


EPCKNOW. Do you know what the Energy Performance Certificate (EPC) rating for your home is?
Base: All wave respondents – Winter 2021 (3,700)

Based on tenure of their household, owner-occupiers (including those who part-own and part-rent) were more likely than renters to be aware of EPCs (82%, compared to 71%). Owner-occupiers were also more likely to know the exact EPC rating of their home (15%, compared with 11% of renters). Those who said they pay at least some attention to the heat used in their home were also more likely to be aware of EPCs (77%, compared with 49% who paid no attention to the heat used in their homes).

Those who were aware of EPCs were asked whether they recalled seeing the section in their home's EPC which recommends how they could improve energy efficiency. Over a quarter (27%) of those who were aware of EPCs said they did recall seeing the recommendations section in their EPC. Four in ten (40%) had not seen this section, and 32% said they weren't sure or couldn't remember whether they had seen it. Based all people, this equates to 21% who had seen the guidance section in their home's EPC, 55% who had not, and 24% who were not sure or couldn't remember (Figure 8.2).

Figure 8.2: Awareness of recommendations section on EPC (based on those who were aware of EPCs and based on all people), Winter 2021



EPCSEEN. Have you ever seen a section on your Energy Performance Certificate which recommended how you could improve the energy efficiency of your home?

Base: All wave respondents (3,684) and All wave respondents aware of EPCs (2,963) – Winter 2021

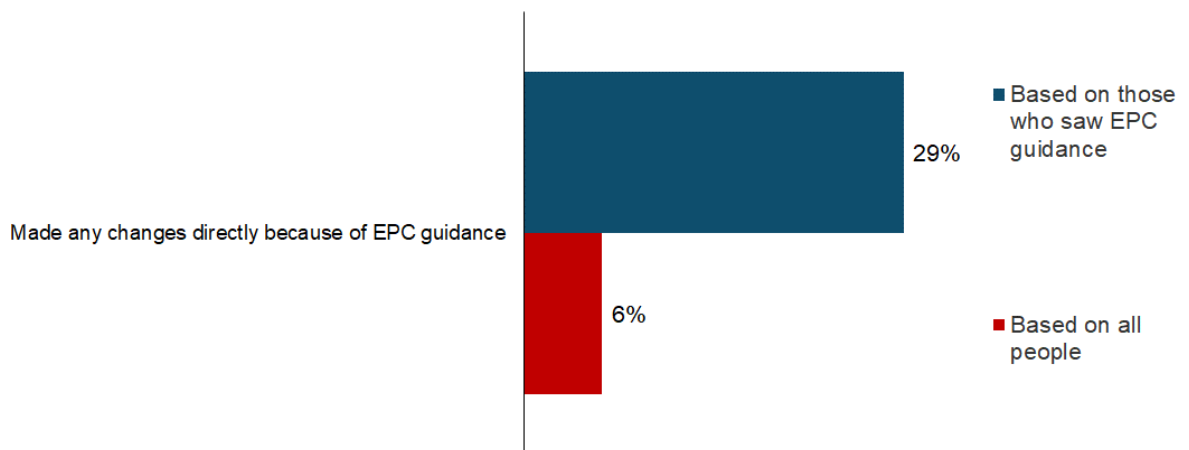
As with overall awareness of EPCs, and again based on tenure of their household, owner-occupiers who were aware of EPCs were more likely to recall having seen a section in the EPC on how to make their home more energy efficient. Amongst all those aware of EPCs, almost three in ten owner-occupiers (30%) said they had seen this, compared with two in ten renters (22%).

EPC Recommendations

Those who recalled seeing the section of their EPC on energy efficiency were asked whether they had made large or small changes to their home based on these recommendations. Overall, 22% of those who had seen the recommendations said they had made large energy efficiency changes to their home in the last 12 months. Around four in ten (43%) said they had made small energy efficiency changes to their homes, and a similar proportion (39%) said they had made no changes.

Where changes had been made, a clarification question was asked to confirm whether people had made the changes directly or partly because of the guidance in their home's EPC, or if they would have made the changes anyway. Of those who said they had made changes to their home to make it more energy efficient, 29% said they made these changes directly because of the EPC recommendations. Based on all people, this equates to 6% of all people who made changes to their home as a direct result of seeing the energy efficiency recommendations in their home's EPC (Figure 8.3).

Figure 8.3: Whether made changes to home based on recommendations on EPC (based on those who had seen the recommendations section), Winter 2021



EPCIMPROVE. Now think about the recommendations you saw on your Energy Performance Certificate on how you could improve the energy efficiency of your home. Did you make any changes to your home based on these recommendations? Please select all that apply.

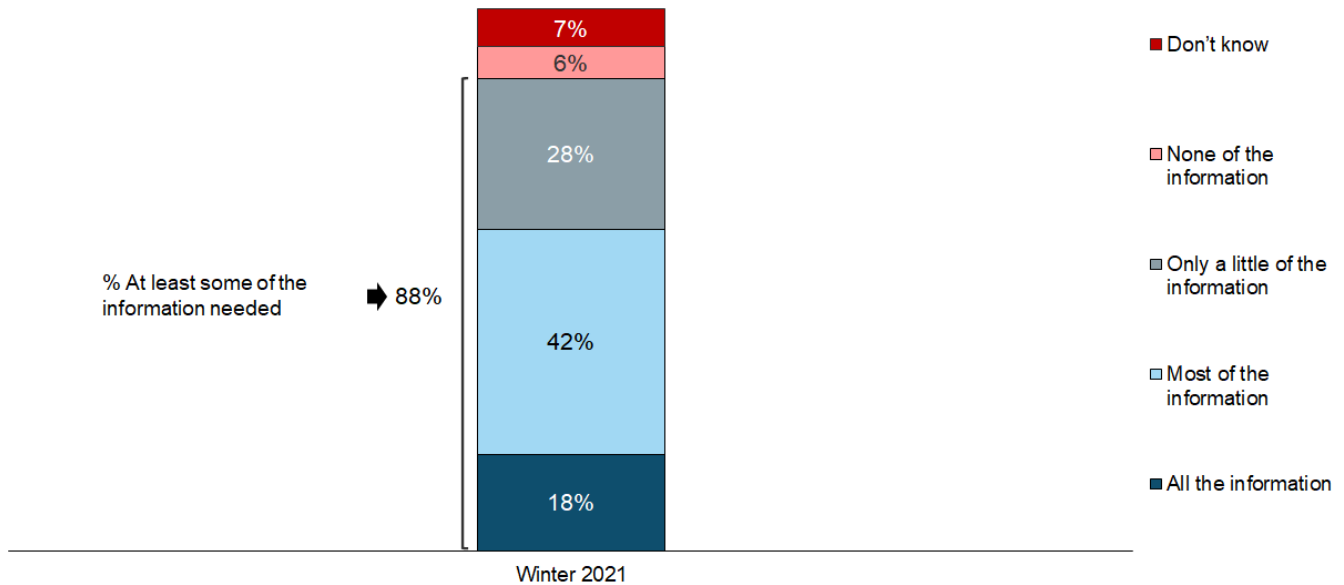
EPCDIRECT. And did you make these changes...?

Base: All wave respondents who saw EPC guidance – Winter 2021 (854) / All wave respondents – Winter 2021 (3,706)

Regardless of whether they were directly motivated by EPC guidance, all those who had seen the recommendations section of their EPC and subsequently made changes to their home were asked the extent to which their EPC gave them the information they needed to go ahead with these changes.

Just under two in ten (18%) in this subgroup said that the EPC gave them all the information they needed to make changes to their home to improve its energy efficiency (Figure 8.4). Roughly twice as many (42%) said the EPC gave them most of the information they needed, while 28% said it gave them only a little of the information they needed. Overall, 88% of those who made changes either directly or partly because of the guidance in their home's EPC said it gave them at least some of the information they needed to make changes to their home.

Figure 8.4: Extent to which EPC recommendations provided information needed to go ahead with changes (based on those who had made improvements either directly or partly due to EPC recommendations), Winter 2021



EPCINFORM. To what extent did the recommendations on the Energy Performance Certificate inform you about what was needed to go ahead with the changes you made? Did it give you...

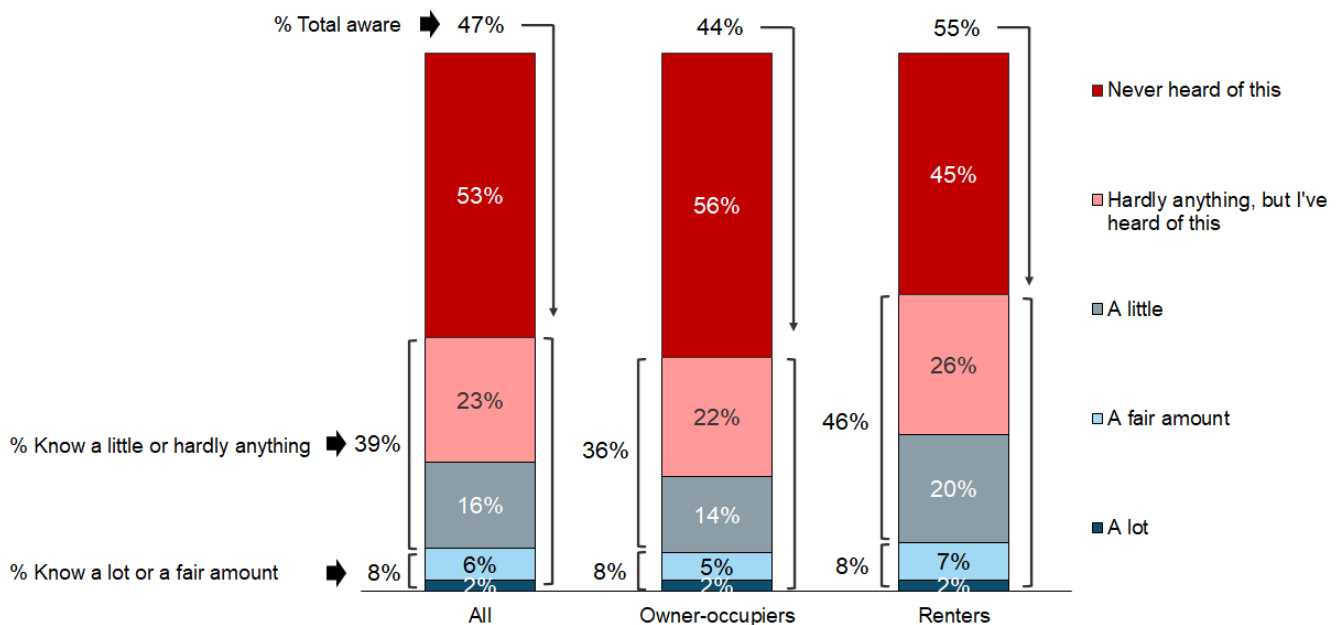
Base: All wave respondents who have made improvements based directly or partly on recommendations in their home's EPC – Winter 2021 (516)

Awareness of rental property standards

In Spring 2022, people were asked how much they knew about the minimum energy standards for rental properties. Just under half (47%) had at least some awareness of this, with 2% saying they knew a lot, 6% a fair amount, 16% a little and 23% hardly anything. Just over half (53%) of people said they knew nothing at all about the minimum energy efficiency standards for rental properties (Figure 9.1).

Awareness was higher among people living in rented accommodation (55%) compared with people living in owner occupied accommodation (44%). Among renters, awareness was higher among those living in private rented accommodation (62%) compared with those living in social rented housing (44%).

Figure 9.1: Awareness of energy efficiency standards in rental properties by tenure (based on all people), Spring 2022



RENTALSTAND. The next question is on energy standards in rental properties. How much, if anything, do you know about the minimum energy efficiency standards for rental properties?

Base: All wave respondents – Spring 2022 – all base respondents (4,286), Owner-occupiers (3,214), Renters (966)

Awareness of minimum energy efficiency standards was higher among men (52% compared with 42% of women) and among people educated to degree level (56% compared with 45% of those with other qualifications and 31% of people with no qualifications). Awareness was lower for people aged 65 and over (38% compared with 49% of those aged under 65).

Awareness was also higher than the UK average in London (54%) and the South West (55%) but lower than average lower in the North East (36%).



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