



## BEIS Public Attitudes Tracker (December 2020, Wave 36, UK)

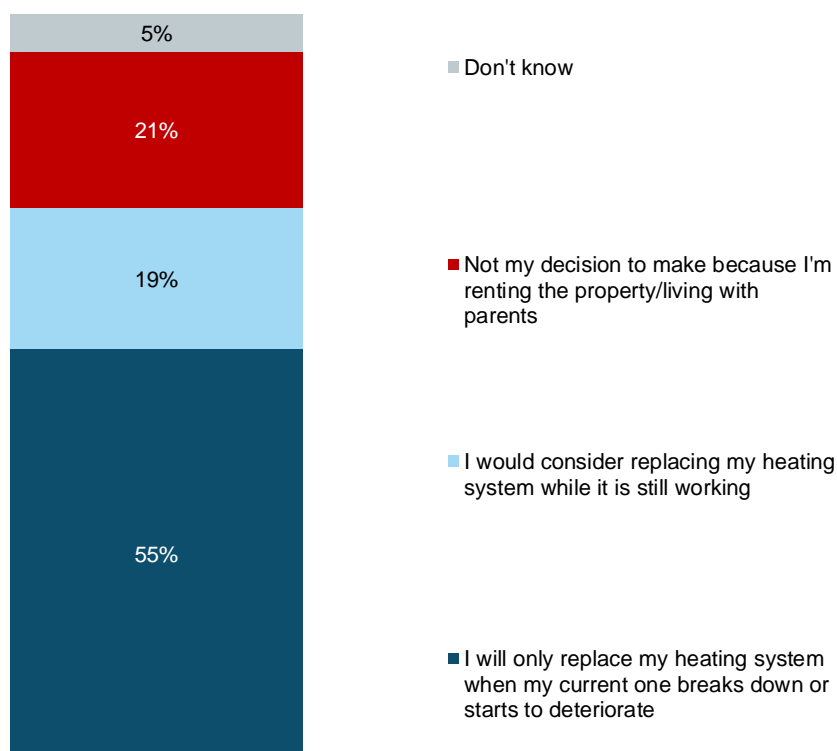
11 February 2021

Official Statistics

The December 2020 wave of the tracker focussed on heat including heat networks, renewable heating systems and installing or replacing heating systems, as well as the quarterly questions asked in each wave. In December 2020:

- 28% of people said they were aware of heat networks. Of those who were aware of them, just over half (54%) were positive towards heat networks and 11% were negative.
- 75% said that they paid a lot or a fair amount of attention to the amount of heat they used, ranging from 66% among 16 to 24 year olds to 79% for those aged 65 and over.
- Over half (55%) said they would only replace their heating system when their current one breaks down or starts to deteriorate but nearly a fifth (19%) said they would consider replacing it while it was still working (Figure 1)

**Figure 1: Plans for replacing heating system (based on all people), December 2020**



Please refer to Figure 23 for base size and question details.

**What you need to know about these statistics:** Face-to-face fieldwork was suspended halfway through the March 2020 wave of the tracker (wave 33) and the remaining data collection for wave 33 was carried out using the Kantar online omnibus panel. This online panel was also used in June, September and December 2020 (waves 34 to 36). This report only presents results collected via the online omnibus. These results should not be compared with face-to-face results from previous waves due to selection and measurement effects. See the Technical Notes for details.

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# Executive summary

The key findings for the December 2020 wave of the tracker are presented below. Please note that all questions are based on the surveys carried out on Kantar's online omnibus only. Therefore, results from December 2020 are compared with online data from September 2020, June 2020 and March 2020, where relevant. **Results are not comparable with earlier face-to-face waves.**

## Net Zero

- In December 2020, three quarters of people (76%) were aware of the concept of "Net Zero". Awareness has increased each wave since the question was first asked online in March 2020, when awareness was 52%.

## Climate Change

- Eight in ten people (81%) in December 2020 were either very concerned (37%) or fairly concerned (44%) about climate change. The level of overall concern about climate change has remained stable since June 2020 but increased slightly from March 2020 (78%).

## Renewable energy

- The proportion of people who supported renewable energy in December 2020 was 78%, a slight decrease from September 2020 (80%). Opposition to the use of renewable energy remained low at 3%.

## Shale Gas

- Almost nine in ten people (88%) had at least some awareness of fracking in December 2020. These findings have remained stable since March 2020 when the question was first asked online.
- Over a third of people (34%) opposed fracking and a quarter (25%) supported it. Support has remained stable since June 2020 but has increased slightly since March 2020 (19%).

## Condensing boilers

- In December 2020, six in ten people (59%) had a condensing boiler in their home.

## Heat networks

- Just under three in ten (28%) had heard of heat networks in December 2020.
- Of those who were aware of heat networks, six in ten (60%) said they would be likely to join one if given the opportunity. This equated to 17% of all people. Over half (54%) of those that were aware of heat networks were also positive about them.

## Renewable heating systems

- Eight in ten people (80%) had at least some awareness of renewable heating systems in December 2020.
- People were more aware of solar thermal panels (84%) than other renewable heating systems (62% were aware of biomass boilers, 60% were aware of ground source heat pumps and 57% were aware of air source heat pumps).
- Cost was the most common barrier (58%) among owner-occupiers who had heard of renewable heat measures but who did not want to install one.

## Heat usage in the home

- In December 2020, three quarters of people (75%) said they paid either a lot (24%) or a fair amount (51%) of attention to the amount of heat they used in their home. One in five (21%) said they did not pay very much attention to this, and 3% said they pay no attention to it at all.
- The most common reason given for paying attention to the amount of heat used in the home was to minimise the amount of money spent on heat (46%).
- The most common reason given for not paying attention to the amount of heat used in the home was because people wanted to use as much heat as needed to be comfortable (49%).

## Installing or replacing heating systems

- In December 2020, 55% of the public said they would only replace their heating system when their current one breaks down or starts to deteriorate. One in five (19%) said they would consider replacing their heating system while it was still working.
- People said they would mainly change their heating system to save money on bills (45%) but over a third (35%) said they would do this to switch to a more environmentally friendly heating system.
- Those involved in choosing a new boiler or heating system were asked which sources of information they had used to make their decision. The majority (58%) had sought information from their heating engineer or installer. People also sought information from their energy provider (27%), the internet (26%), and from friends and family (25%).
- Most people involved in choosing a new boiler or heating system (85%) said it was easy to get the information they wanted.
- When asked who they would most trust to provide advice about which heating system to install in their home, the most common responses were the Energy Saving Advice Service (ESAS) or Home Energy Scotland (22%) followed by a tradesperson (17%).

# Introduction

The Public Attitudes Tracker (PAT) survey covers public attitudes towards Department for Business, Energy and Industrial Strategy (BEIS) policies such as energy, climate change, consumer rights, artificial intelligence and workers' rights. The survey began in March 2012 and runs four times a year. Questions on issues where attitudes are expected to shift more quickly or to be affected by seasonal changes are repeated quarterly; other questions are asked annually. The tracker is regularly reviewed to ensure that the data continue to offer valuable insight.

Until March 2020 (wave 33) the survey was conducted using in-home interviews conducted via the Kantar UK face-to-face Omnibus. However, fieldwork in March 2020 stopped early due to the outbreak of Coronavirus (COVID-19) in the UK, and the associated lockdown measures. The findings from wave 33, based on a truncated face-to-face sample, were published in May 2020.<sup>1</sup> A parallel version of wave 33 was also conducted by web on the Kantar online omnibus. The purpose of this was to test and compare alternative methodologies with a view to deciding on the best approach for future waves, while lockdown restrictions remained in place.

At the point of publication, face-to-face survey fieldwork largely remains paused in the UK. Therefore, data for all further waves including wave 36 were also collected using the Kantar online omnibus. Fieldwork for wave 36 ran from 3 December to 8 December with a representative sample of 4,022 adults (aged 16 and over) in the UK.

This report provides selected headline findings and highlights statistically significant differences at the 95% level for questions which were asked on the four waves where the Kantar online omnibus was used:

- Wave 36 (December 2020)
- Wave 35 (September 2020)
- Wave 34 (June 2020)
- Wave 33 (March 2020)

Statistically significant differences at the 95% level are also made between subgroups for wave 36.

It should be noted that any change in methodology can lead to both selection effects (that is differences due to the different sampling methods employed) and measurement effects (that is differences due to the different interview modes). Although attempts have been made to reduce the selection effects between the online and face-to-face approaches (see Technical Notes), the **CAWI<sup>2</sup> results from wave 33 to wave 36 should not be directly compared with face-to-face results from previous waves**. For this reason, we have not made any direct comparisons with longer-term tracking measures collected via the original face-to-face surveys.

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<sup>1</sup> The March 2020 (wave 33) report can be found here:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/884028/BEIS\\_PAT\\_W33 - Key findings Final .pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/884028/BEIS_PAT_W33_-_Key_findings_Final_.pdf)

<sup>2</sup> Computer-assisted web interviewing

It should also be noted that fieldwork for wave 33 and wave 34 took place during the first COVID-19 lockdown period (March to July 2020) and wave 36 took place during the period when regional tiered restrictions were in place (December 2020), the level of restrictions varying across the UK. It is unclear what effect the COVID-19 outbreak and associated media coverage during fieldwork may have had on public behaviours, attitudes and perceptions towards the topics in this report. This is a further reason why comparisons with earlier face-to-face waves should be avoided.

The factors described above should be taken into consideration when interpreting these results.

Further information on the methodology used and the steps taken to minimise the risk of sample bias and adapt the questionnaire for CAWI can be found in the Technical Notes.

Alongside this report we have also provided PDF crosstabulations for the current wave.<sup>3</sup> This includes demographic and key question sub-group comparisons for all questions. These are also available in Excel.

The wave 36 questionnaire covered the following topics:

- Net Zero
- Climate change
- Renewable energy
- Shale Gas
- Condensing boilers
- Heat networks
- Renewable heating systems
- Heat usage in the home
- Installing or replacing heating systems

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<sup>3</sup> This data is available for wave 33, upon request.

# Headline findings

In this report all findings are based on the online survey version of wave 36 and findings are compared with previous online waves (waves 33 to 35) for questions which were asked in all four waves. Topics asked in all four waves include:

- Net Zero
- Renewables
- Shale gas
- Climate change

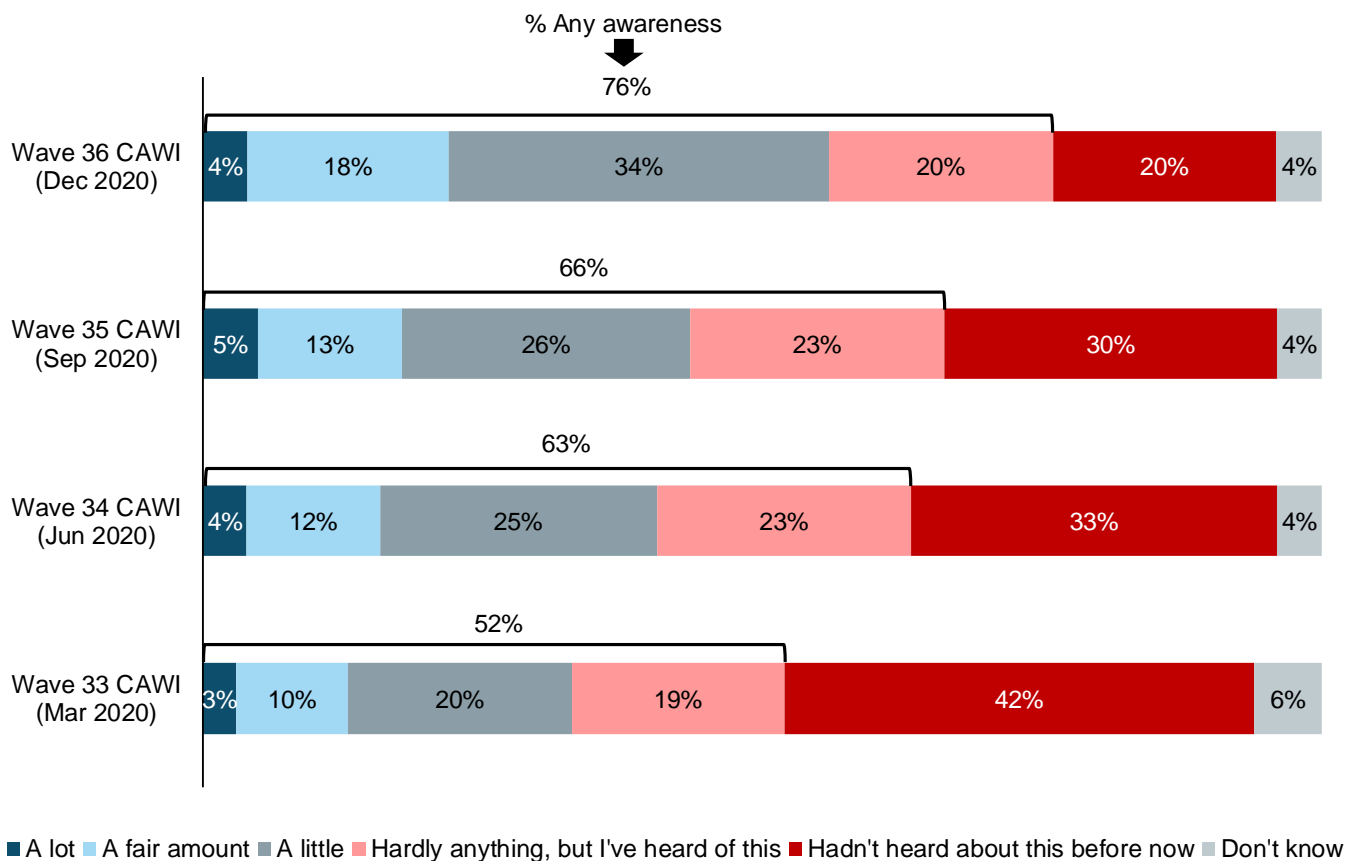
Comparisons with earlier waves conducted using face-to-face methods should be avoided as the results are not fully compatible (see Introduction and Technical Notes).

## Net Zero

In June 2019 the government announced a target which will require the UK to bring all greenhouse gas emissions to net zero by 2050. A question was introduced to the tracker in March 2020 to understand the public’s awareness of the concept of “Net Zero”.

In December 2020 three quarters (76%) of the public were aware of the concept of “Net Zero”. Awareness has increased each wave, since the question was first asked online in March 2020 when awareness was 52% (Figure 2). Although most of the public said they were aware of “Net Zero”, the level of knowledge remained relatively low. Only 4% knew a lot about it, two in ten (18%) knew a fair amount and 34% knew a little. One in five (20%) people knew hardly anything about the concept but had heard of it. The proportion who know at least a little has increased over time from 33% in March 2020 to 56% in December 2020.

**Figure 2: Awareness of the concept of “Net Zero” (based on all people), March 2020 to December 2020\***



Q220. The Government promotes the concept of ‘Net Zero’. Before today, how much, if anything, did you know about this concept?

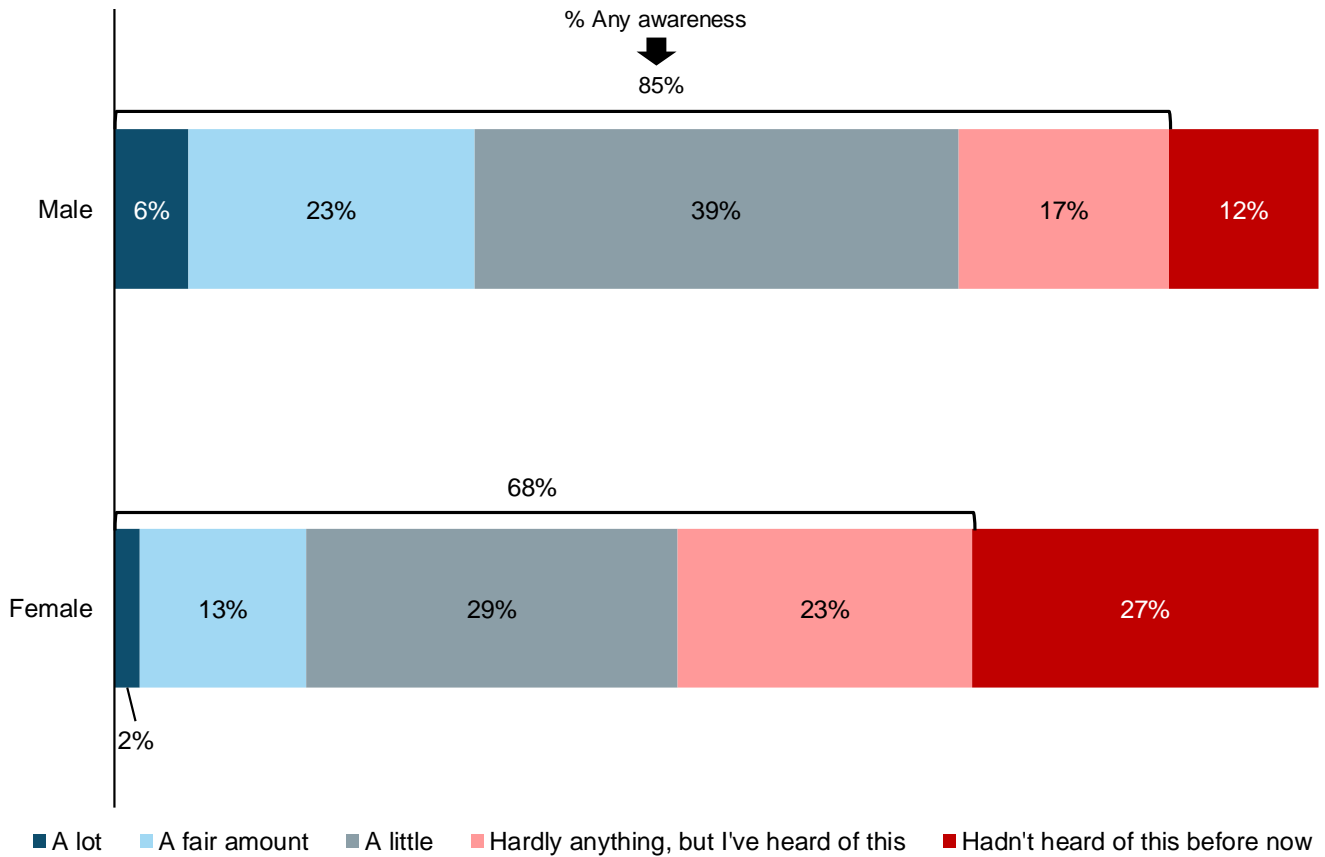
Base: All wave respondents – December 2020 (4,022); September 2020 (4,033); June 2020 (4,011); March 2020 (2,544). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).



Men (85%, compared with 68% of women) and those in social grades AB (84%, compared with 65% of those in social grades DE) were most likely to have at least some awareness of “Net Zero” (Figure 3; Table 8).

**Figure 3: Awareness of the concept of “Net Zero”, by gender (based on all people), December 2020\***



Q220. The Government promotes the concept of ‘Net Zero’. Before today, how much, if anything, did you know about this concept?

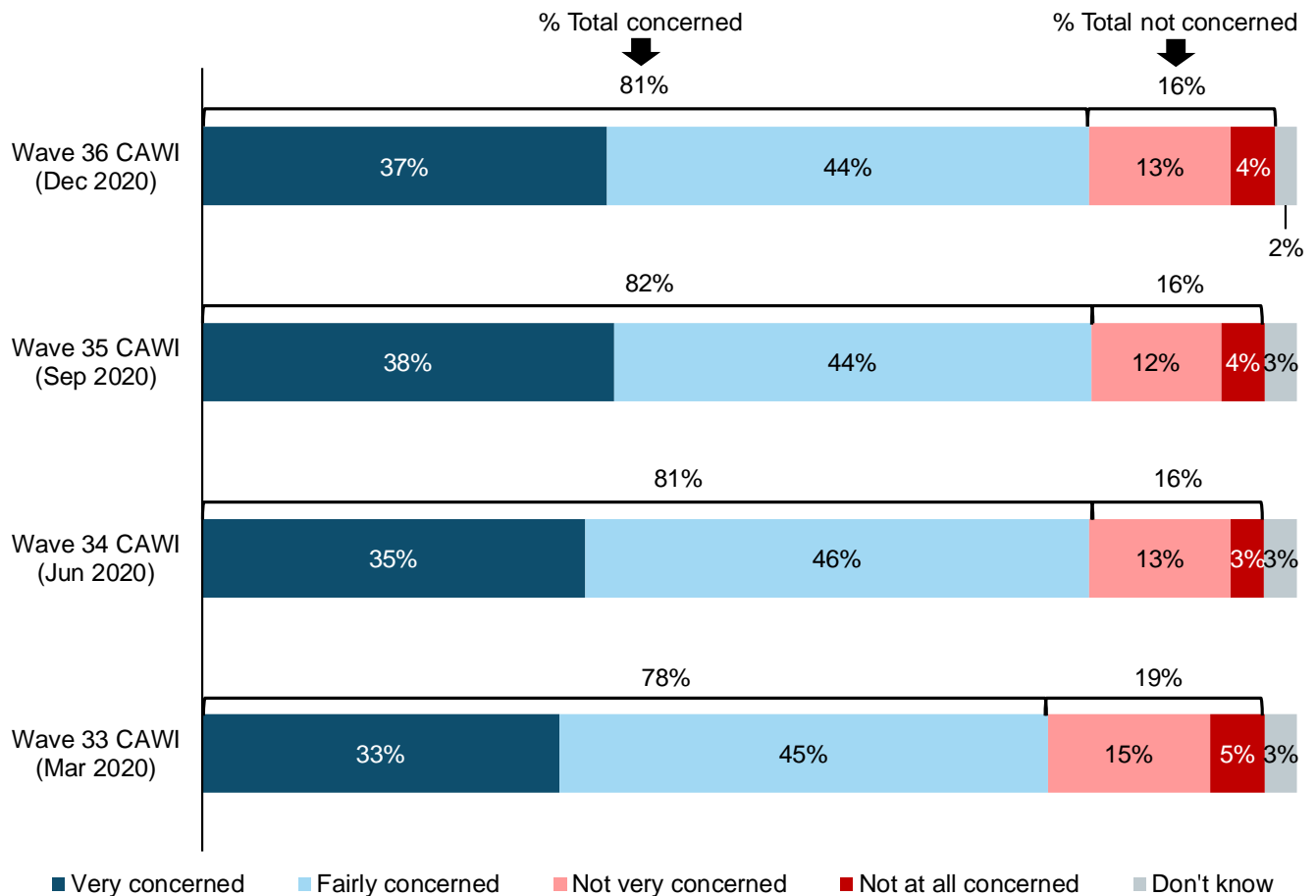
Base: All wave respondents (December 2020) – Male (1,967); Female (2,055). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

## Climate change

In December 2020, eight in ten people (81%) said they were concerned about climate change (Figure 4). This figure has remained stable since June 2020, but has increased slightly from March 2020 (78%).

**Figure 4: Concern about climate change (based on all people), March 2020 to December 2020\***



Q21. How concerned, if at all, are you about current climate change, sometimes referred to as 'global warming'?

Base: All wave respondents – December 2020 (4,022); September 2020 (4,033); June 2020 (4,011); March 2020 (2,544). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

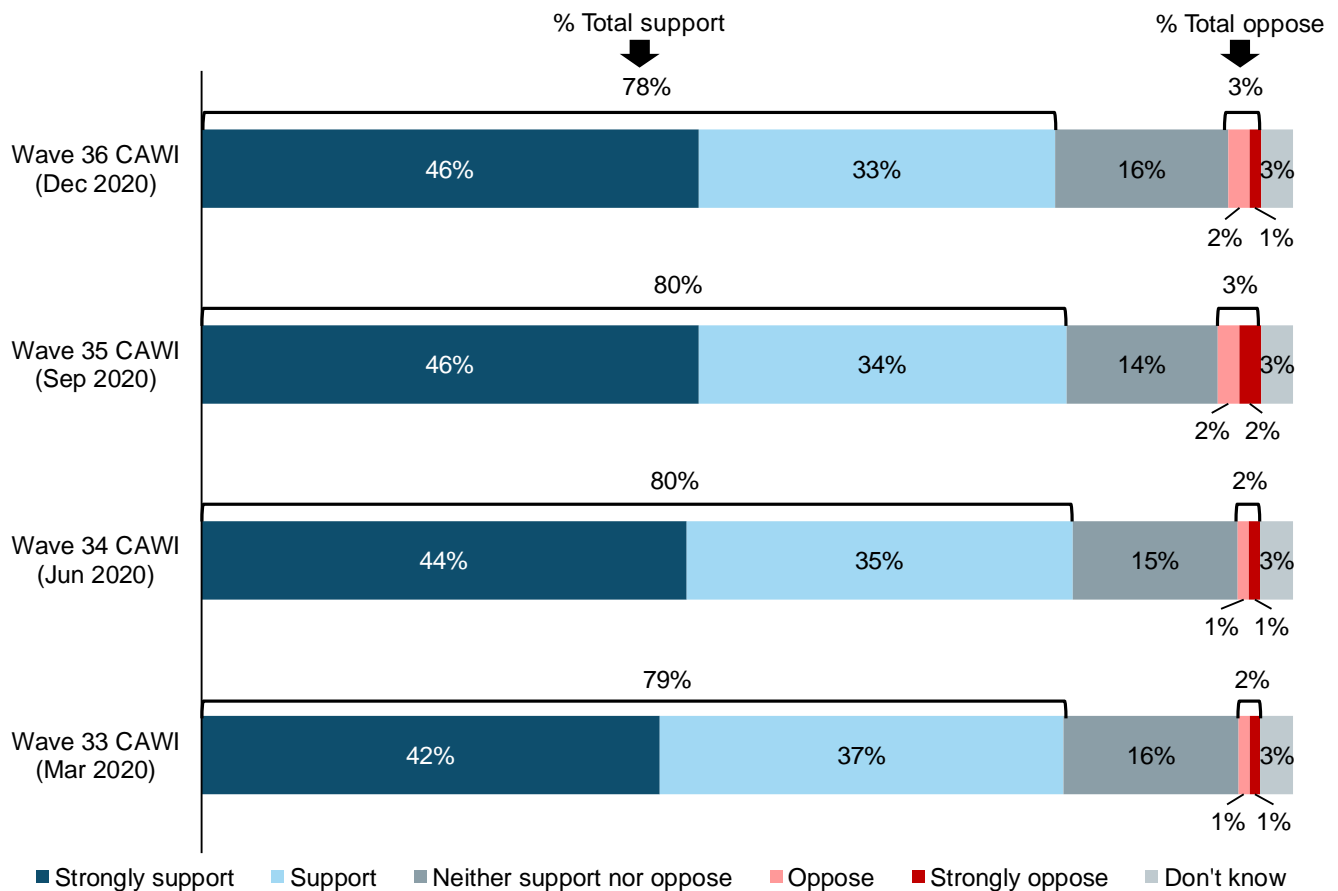
Women (83%, compared with 79% of men) and those in social grades AB (85%, compared with 76% of those in social grades DE) were most likely to be concerned about climate change (Table 7).

## Energy infrastructure

### Renewables

In December 2020, 78% of the public said that they supported the use of renewable energy for providing our electricity, fuel and heat, a slight decrease from September 2020 (80%) (Figure 5). Opposition to the use of renewable energy remained low at 3%.

**Figure 5: Support for renewable energy (based on all people), March 2020 to December 2020\***



Q3. The next question is about renewable energy. This covers a number of different forms, including wind power, solar energy and biomass. Do you support or oppose the use of renewable energy for providing our electricity, fuel and heat?

Base: All wave respondents – December 2020 (4,022); September 2020 (4,033); June 2020 (4,011); March 2020 (2,544). (Asked Quarterly).

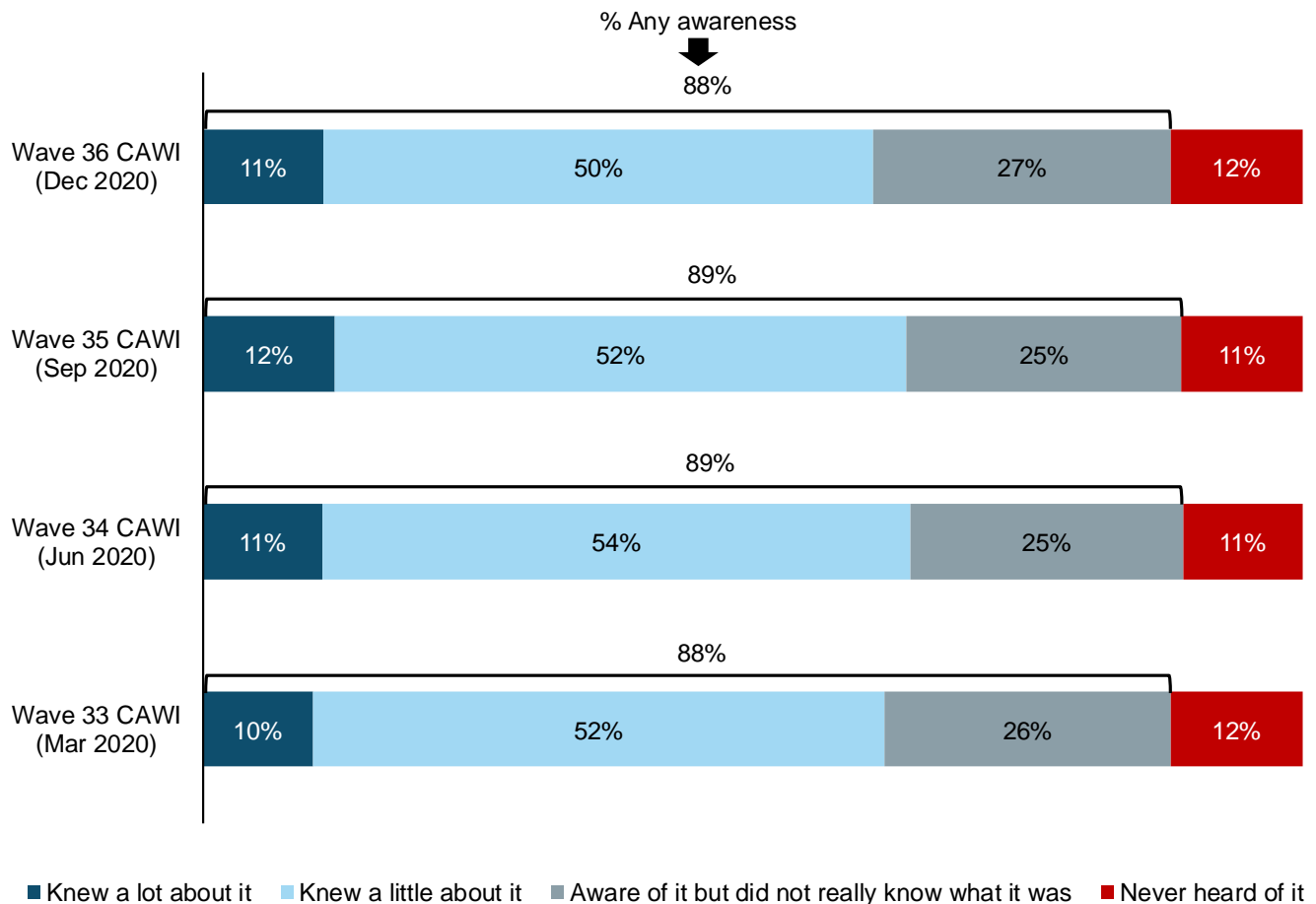
\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Those who were concerned about climate change (85%, compared with 53% who were not concerned about climate change) and those in social grades AB (85%, compared with 71% of those in social grades DE) were more likely to support the use of renewable energy (Table 1).

## Shale gas

In December 2020, the majority of the public (88%) had at least some awareness of hydraulic fracturing for shale gas, otherwise known as ‘fracking’ (Figure 6). One in ten (11%) said they knew a lot about it, with half (50%) saying they knew a little. Just over one in ten (12%) had never heard of fracking. These findings have remained stable since March 2020 when the question was first asked online.

**Figure 6: Awareness of fracking (based on all people), March 2020 to December 2020\***



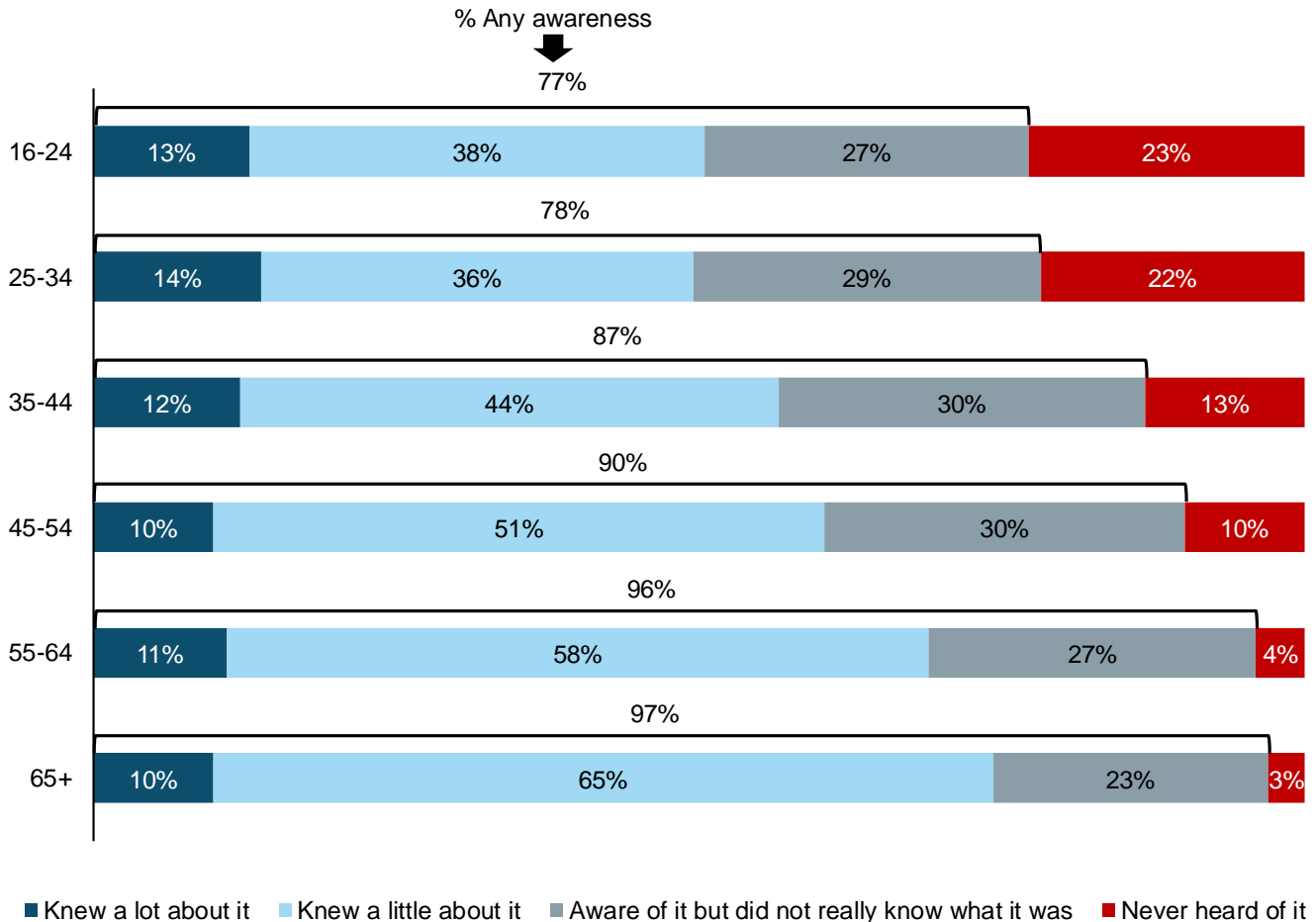
Q15a. Before today, how much, if anything, did you know about hydraulic fracturing for shale gas, otherwise known as 'fracking'?

Base: All wave respondents – December 2020 (4,022); September 2020 (4,033); June 2020 (4,011); March 2020 (2,544). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Men (93%, compared with 84% of women), older people (between 96% and 97% of those aged 55 and over, compared with 77% of those aged 16 to 24) and those in social grades AB (93%, compared with 83% of those in social grades DE) were more likely to report at least some awareness of fracking in December 2020 (Table 2; Figure 7). These subgroup findings are consistent with previous online waves.

**Figure 7: Awareness of fracking, by age (based on all people), December 2020\***



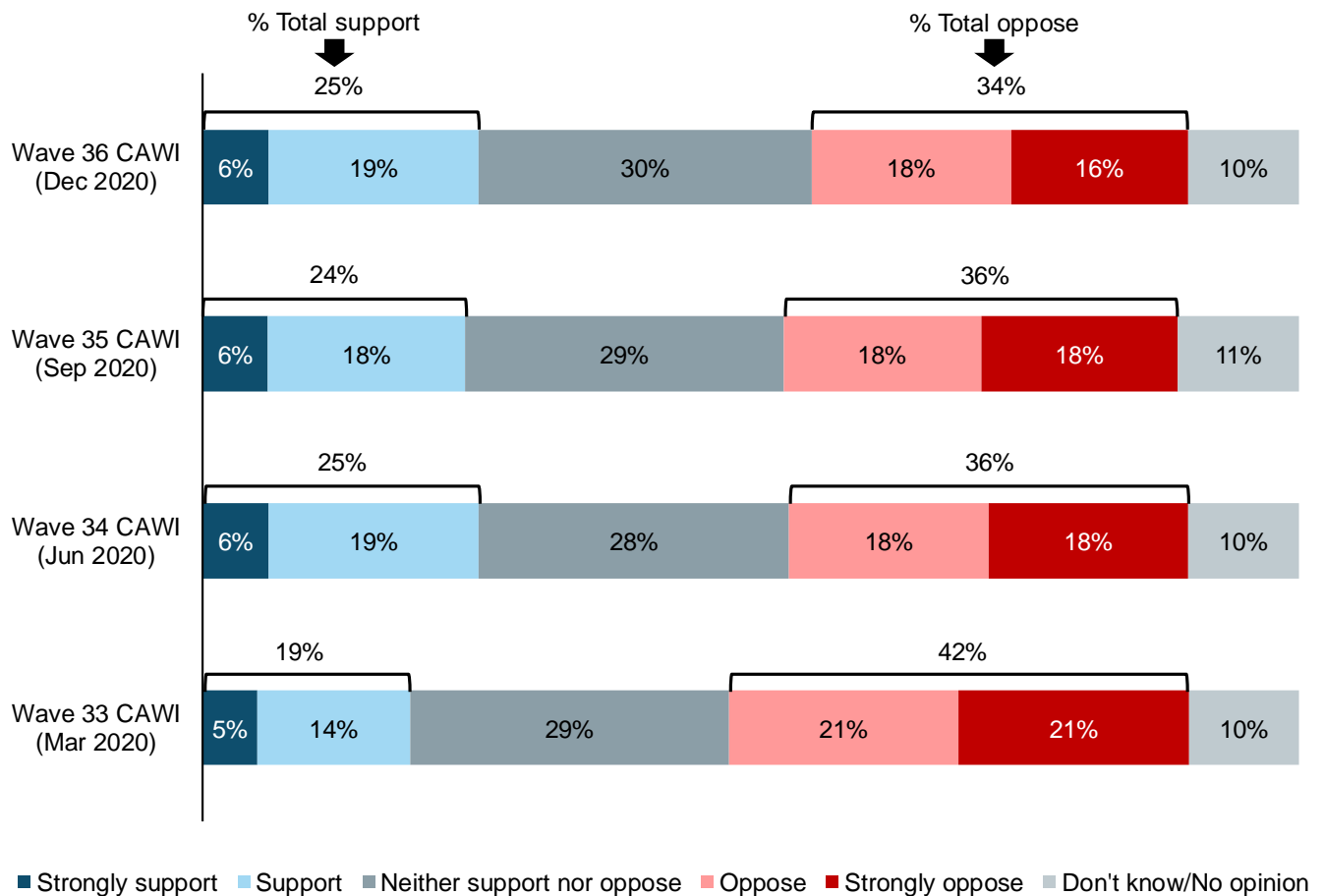
Q15a. Before today, how much, if anything, did you know about hydraulic fracturing for shale gas, otherwise known as 'fracking'?

Base: All wave respondents (December 2020) – 16-24 (581); 25-34 (701); 35-44 (655); 45-54 (705); 55-64 (628); 65+ (752). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

In December 2020, a quarter of the public (25%) supported fracking. This figure has remained stable since the increase observed between March 2020 and June 2020 (from 19% to 25%). Over three in ten (34%) opposed fracking. A further three in ten (30%) reported that they neither supported nor opposed fracking. These figures are consistent with those observed in September 2020 (Figure 8).

**Figure 8: Support for fracking (based on all people), March 2020 to December 2020\***



Q15b. From what you know, or have heard about, extracting shale gas to generate the UK's heat and electricity, do you support or oppose its use?

Base: All wave respondents – December 2020 (4,022); September 2020 (4,033); June 2020 (4,011); March 2020 (2,544). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Support for fracking was higher among men (33%, compared with 19% of women) and those in social grades AB (31%, compared with 20% in social grades DE).

Opposition to fracking was highest among those with greater knowledge of it. Over four in ten (45%) of those who reported knowing either "a lot" or "a little" about fracking opposed it compared with 30% who supported it (Table 3).

People were asked why they supported or opposed fracking.<sup>4</sup> In December 2020, the most common reasons for supporting fracking were: the need to use all available energy sources (56%); and the positive impact on the UK economy (49%) (Table 4).

The main reasons for opposing fracking were: the loss and destruction of the natural environment (62%); and concern about the risk of earthquakes (55%) (Table 5). The main reason for neither supporting nor opposing fracking was not knowing enough about it (47%) (Table 6).

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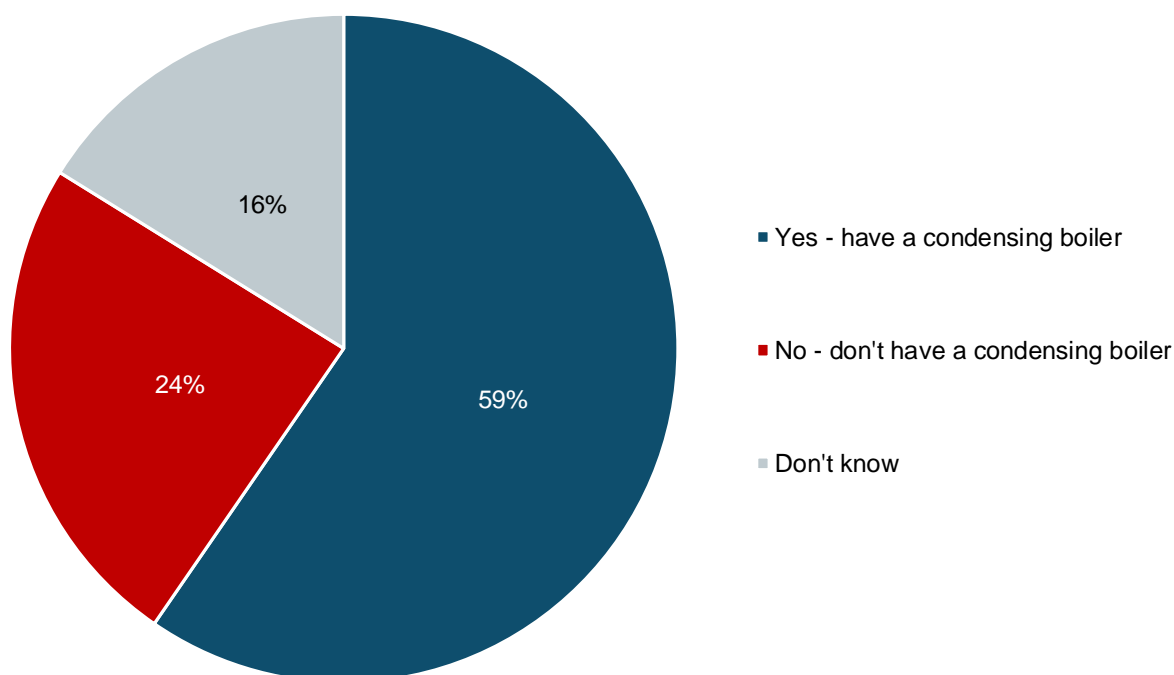
<sup>4</sup> These questions were asked spontaneously when the survey was conducted using a face-to-face approach, whereas for the online survey an answer list was presented to respondents.

## Heat

### Condensing boilers

In December 2020, six in ten people (59%) had a condensing boiler in their home. A quarter (24%) said they did not have a condensing boiler, with a further 16% saying they didn't know if they had one (Figure 9).

**Figure 9: Whether have a condensing boiler (based on all people), December 2020\***



Q52. As far as you know, do you have a condensing boiler in your home? If you're not sure, any gas boiler installed since 2006 will be condensing. Any oil boiler installed since 2008 will be condensing.

Base: All wave respondents – December 2020 (4,022). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

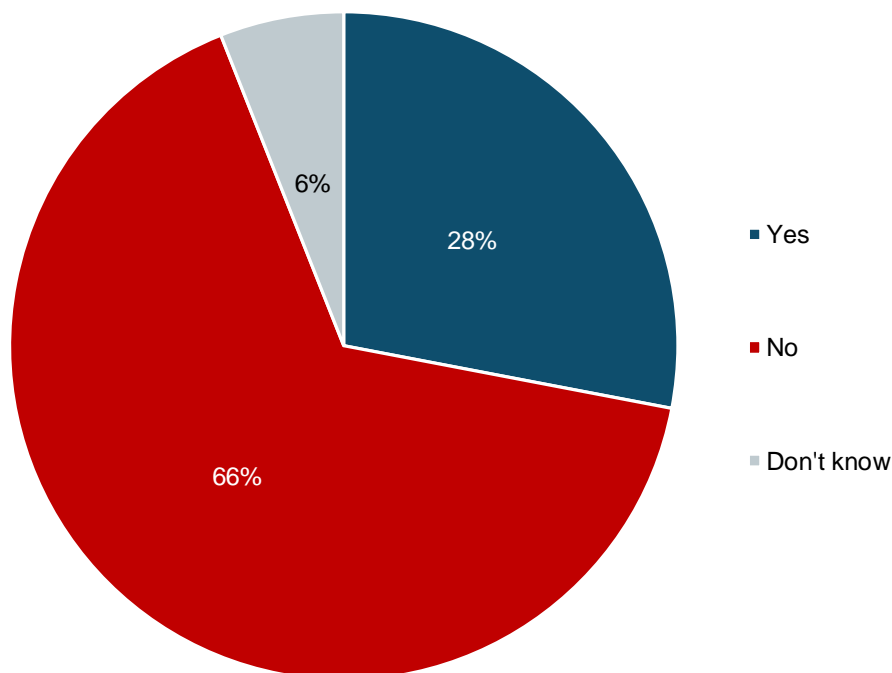
Older people (66% of those aged 65 and over, compared with 51% of those aged 16 to 24) and owner-occupiers (63%, compared with 52% of private renters and 53% of social renters) were more likely to report having a condensing boiler. Conversely, younger people (25% of those aged 16 to 24, compared with 8% of those aged 65 and over) and private and social renters (25% and 28% respectively, compared with 11% of owner-occupiers) were more likely to say they didn't know whether they had a condensing boiler installed (Table 39).



## Heat networks

In December 2020, the public were asked about their awareness of heat networks, also called district heating. Just under three in ten (28%) had heard of heat networks (Figure 10).

**Figure 10: Awareness of heat networks (based on all people), December 2020\***



Q24. The next two questions are about heat networks, also called district heating. These are heating systems where heat is generated locally and then provided to yours and other homes, rather than being generated in your home. Have you ever heard of these networks?

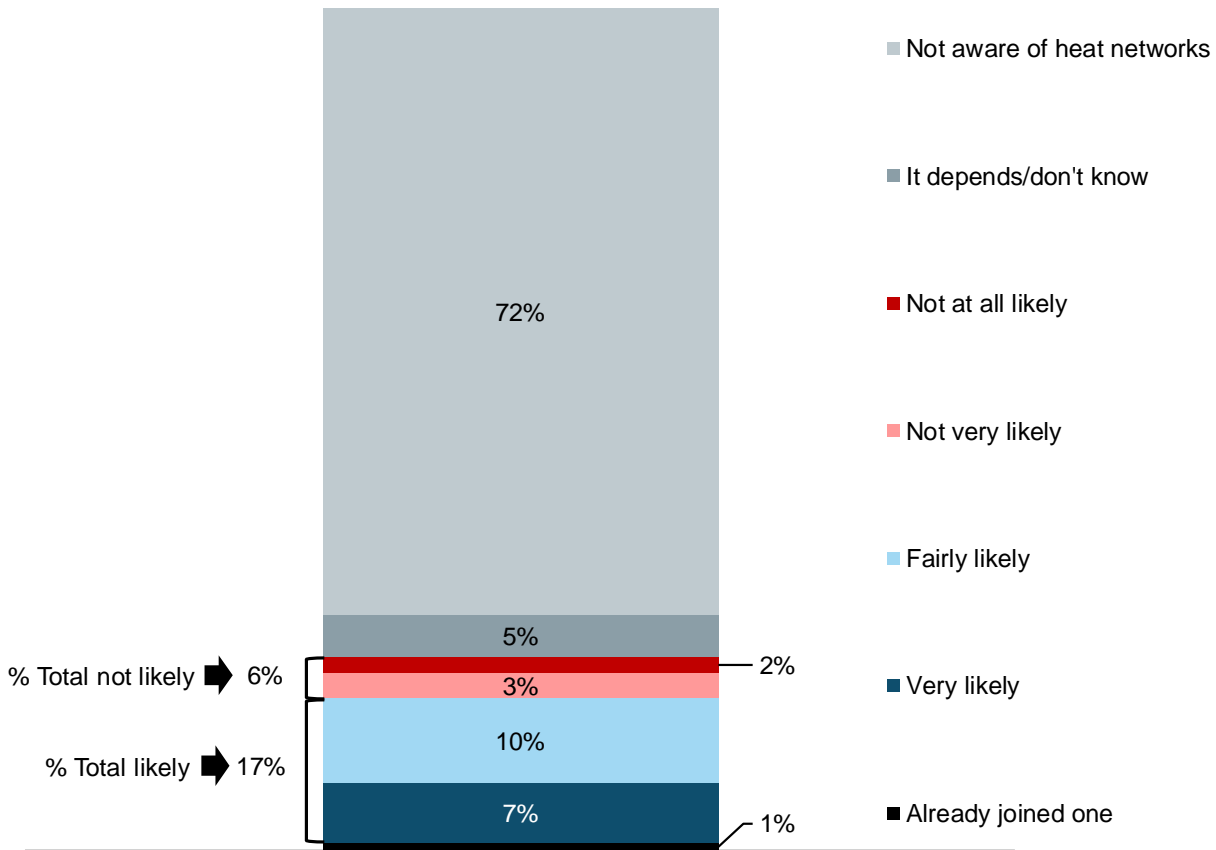
Base: All wave respondents – December 2020 (4,022). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Men (38%, compared with 20% of women) and those in social grades AB (36%, compared with 20% of those in social grades DE) were more likely to report that they had heard of heat networks (Table 9).

Of those who were aware of heat networks in December 2020, six in ten (60%) said they would be likely to join one if given the opportunity. A further 2% of this group said they had already joined one (Table 10). Based on all people interviewed, this equates to 17% overall who say they would be likely to join a heat network (Figure 11; Table 11).

**Figure 11: Likelihood of joining a heat network if given an opportunity (based on all people), December 2020<sup>5</sup>**



Q25. How likely do you think you will be to join a heat network like this if you were given the opportunity? When answering, please assume you would pay no more than you do at present.

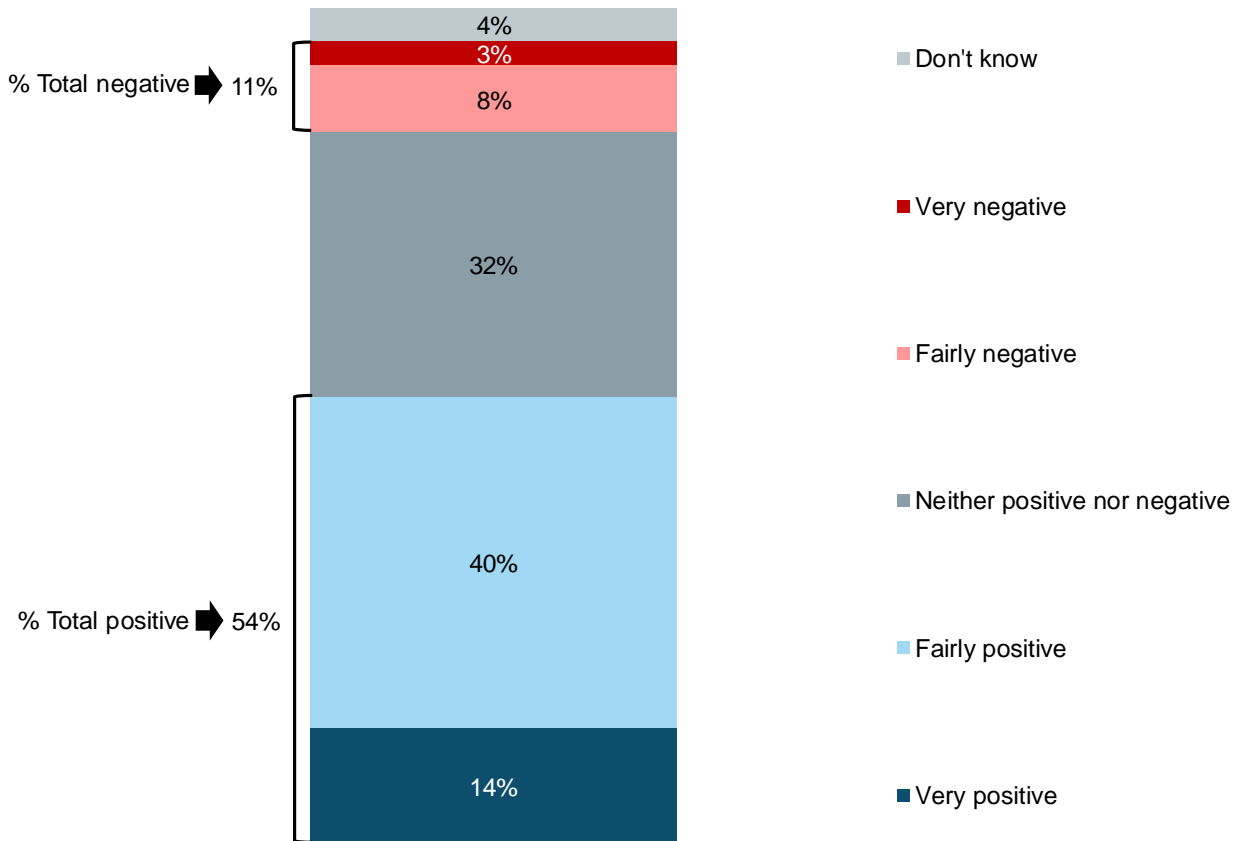
Base: All wave respondents – December 2020 (4,022). (Asked Quarterly).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

<sup>5</sup> Those who were not asked this question are included in the ‘Not aware of heat networks’ category.

People who were aware of heat networks in December 2020 were much more likely to be positive rather than negative about them (Figure 12). Over half (54%) were positive about them, with 14% being very positive; one in ten (11%) were negative, while 32% gave a neutral opinion.

**Figure 12: Positivity towards heat networks (based on all who are aware of heat networks), December 2020\***



Q25i. From what you know, or have heard about heat networks, generally how positive or negative would you say you are towards them?

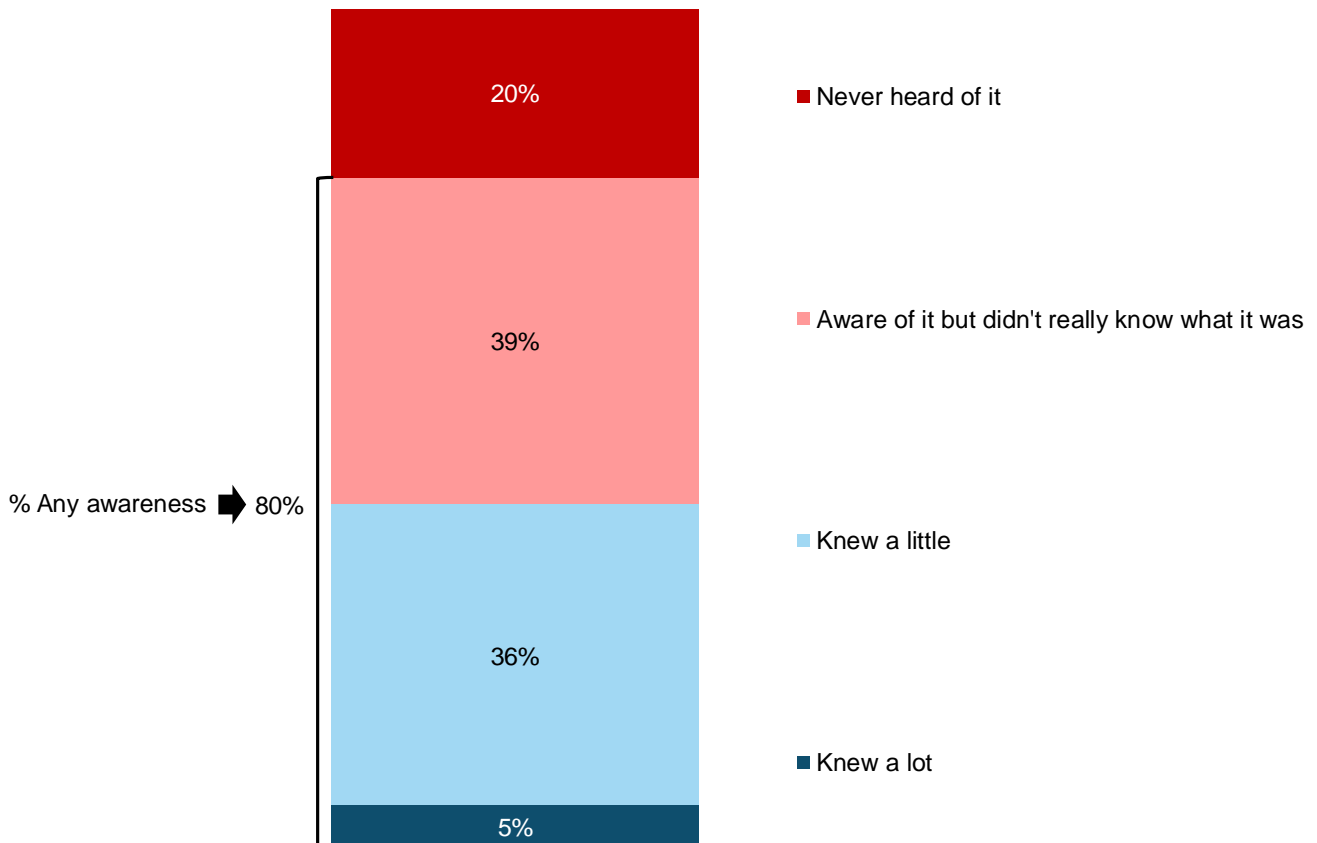
Base: All wave respondents aware of heat networks – December (1,226). (Asked annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

## Renewable heating systems

In December 2020, eight in ten (80%) people had at least some awareness of renewable heating systems (Figure 13). Although most of the public said they were aware of renewable heating systems, only 5% knew a lot about it. A further 36% said they knew a little about it and four in ten (39%) that they were aware of it but didn't really know what it was.

**Figure 13: Awareness of renewable heating systems (based on all people), December 2020\***



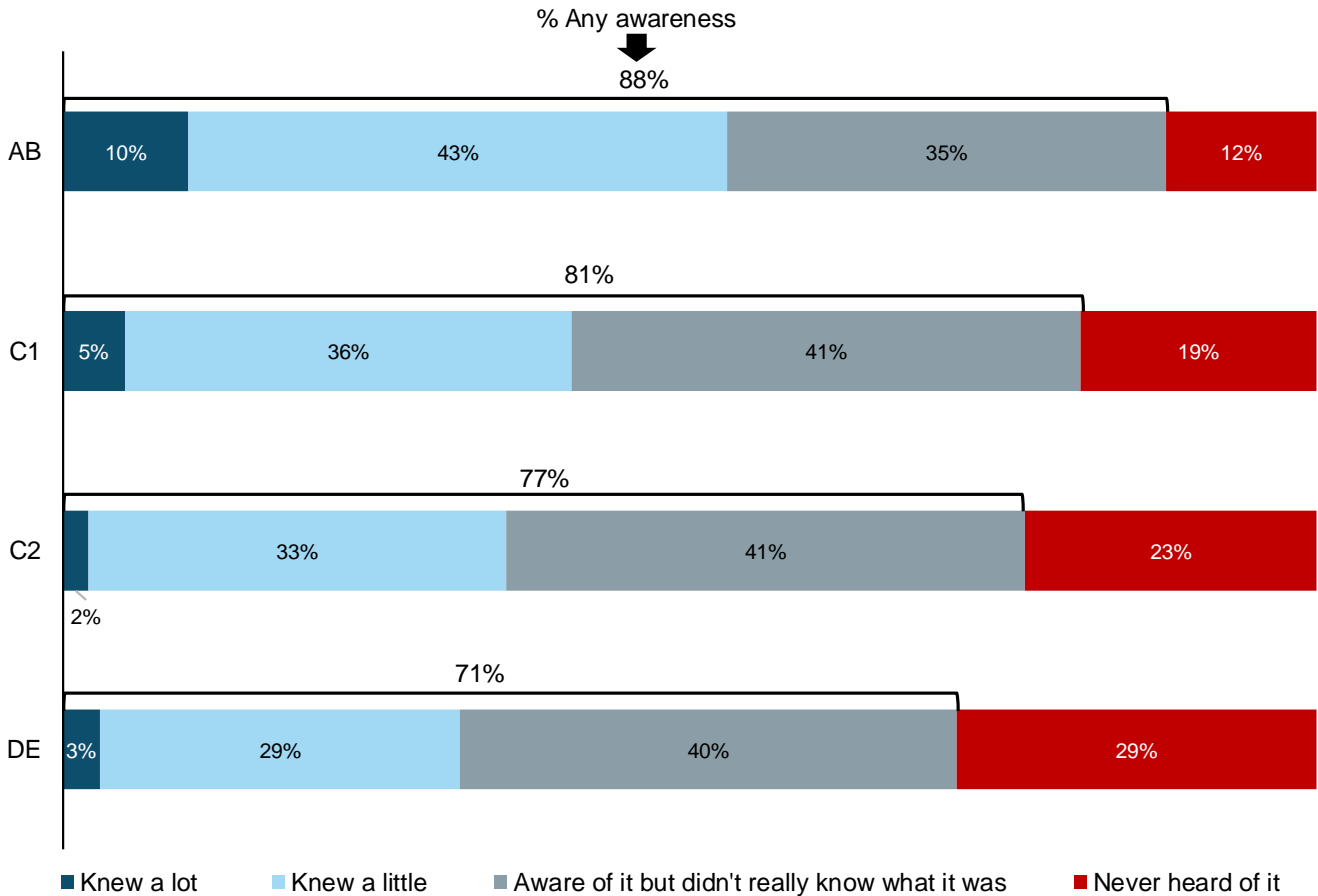
Q7\_1. The next few questions are about renewable heating systems. By renewable heat we mean heating systems which use energy from biomass or the sun, or which use electricity to draw heat from the ground, water, or air to heat your home. How much would you say you know about renewable heating systems? This includes air source heat pumps, ground source heat pumps and biomass boilers.

Base: All wave respondents – December 2020 (4,022). (Asked annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Men (86%, compared with 74% of women), those in social grades AB (88%, compared with 71% of those in social grades DE), and those aged 16 to 24 (86%, compared with between 77% and 81% for all other age groups) were more likely to have higher awareness of renewable heating systems (Figure 14; Table 13).

**Figure 14: Awareness of renewable heating systems, by social grade (based on all people), December 2020\***



Q7\_1. The next few questions are about renewable heating systems. By renewable heat we mean heating systems which use energy from biomass or the sun, or which use electricity to draw heat from the ground, water, or air to heat your home. How much would you say you know about renewable heating systems? This includes air source heat pumps, ground source heat pumps and biomass boilers.

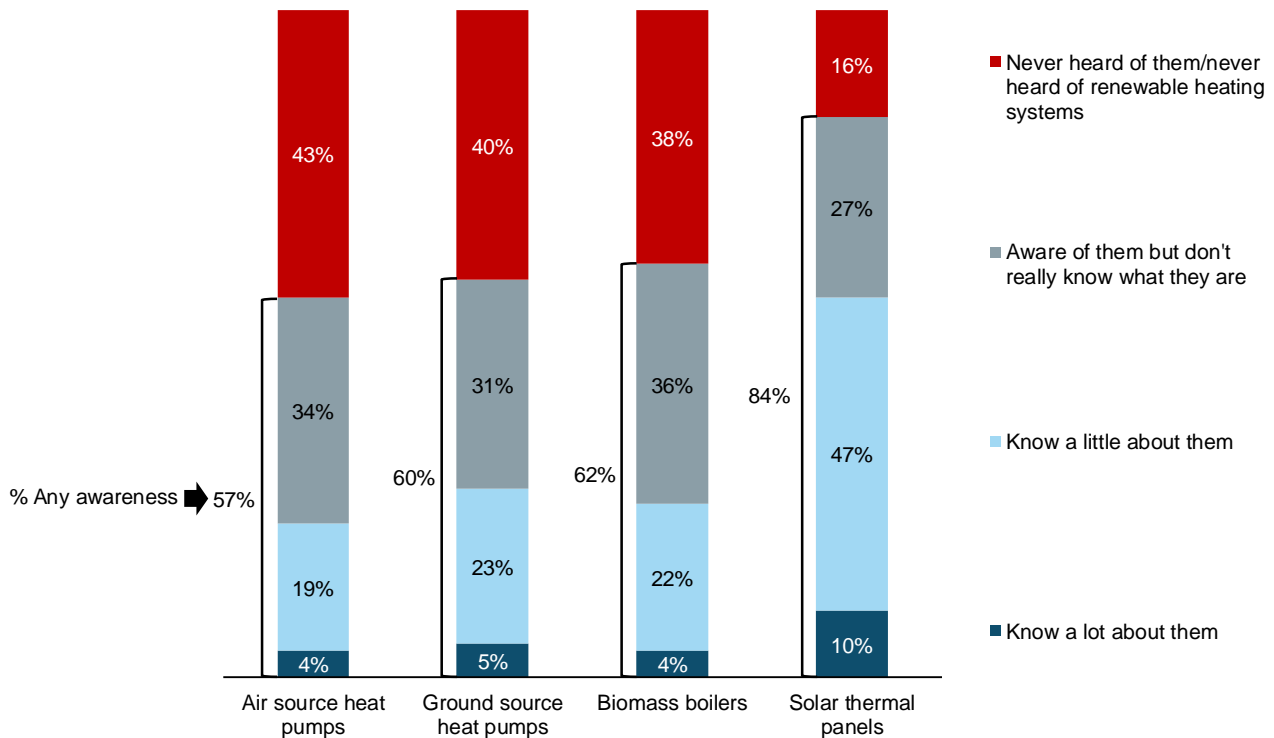
Base: All wave respondents (December 2020) – AB (1,305); C1 (1,151); C2(641); DE (925). (Asked annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Those who were aware of renewable heating systems were asked how much they knew about air source heat pumps, ground source heat pumps and biomass boilers. The public were also asked how much they knew about solar thermal panels, although this question was asked of everyone. The findings presented below are based on the whole population so that we can compare awareness across all four renewable heating systems.

In December 2020, awareness was highest for solar thermal panels (84%), while around six in ten people were aware of biomass boilers (62%), ground source heat pumps (60%) and air source heat pumps (57%) (Figure 15).

**Figure 15: Awareness of specific renewable heating systems (based on all people), December 2020\*<sup>6</sup>**



Q41. And how much would you say you know about solar thermal panels? By this we mean solar panels for hot water, not solar PV panels that generate electricity. / Q7\_1A. And now thinking about three different types of renewable heating system...How much, if anything, do you know about... ..Air source heat pumps / ...Ground source heat pumps / ...Biomass boilers?

Base: All wave respondents – December 2020 (4,022). (Asked annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

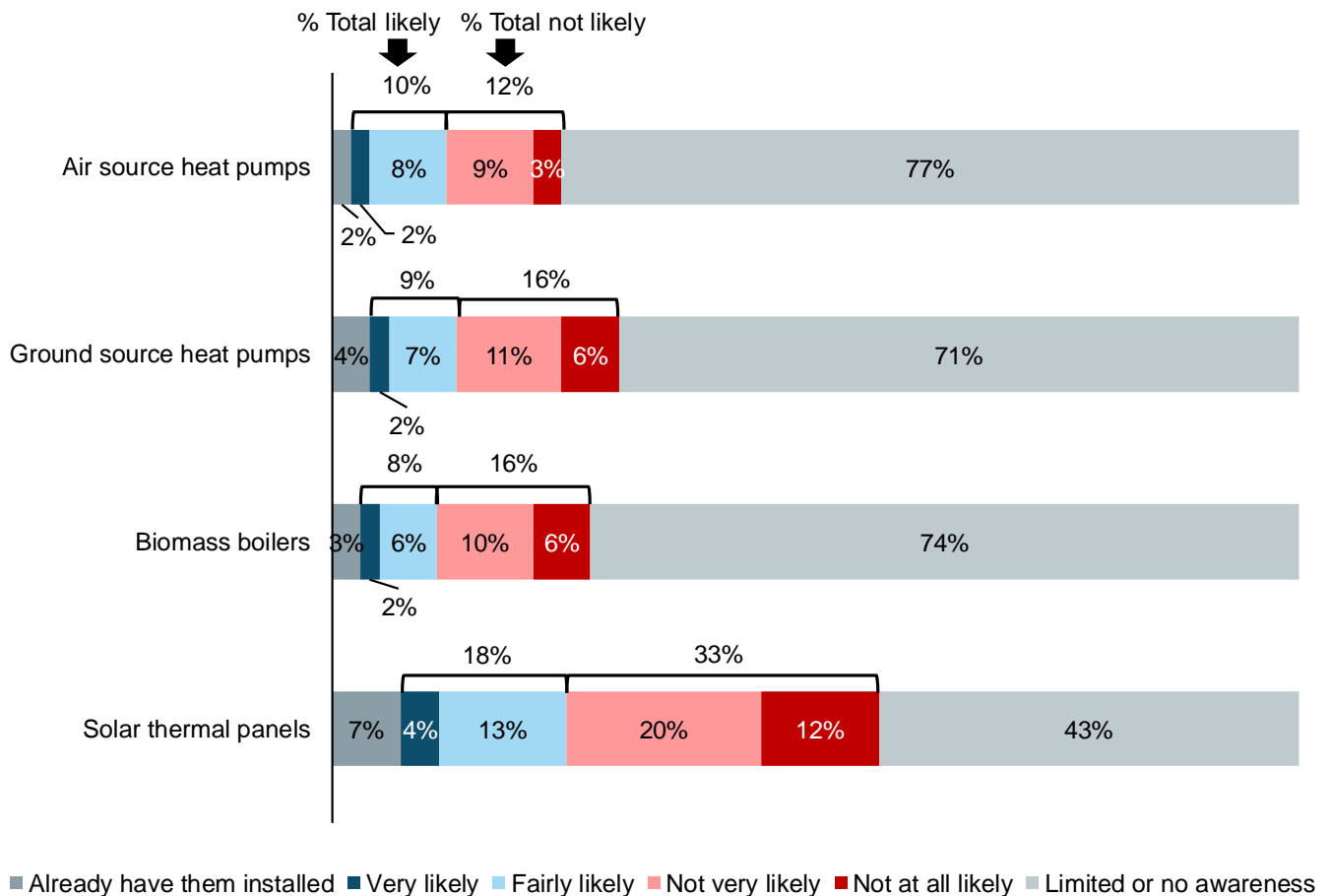
<sup>6</sup> Those who were not asked the question on how much they know about air source heat pumps, ground source heat pumps and biomass boilers are included in the ‘Never heard of them / Never heard of any renewable heating system’ category.

Those who were aware of a specific renewable heating system were asked if they had installed this system in their home. Those that did not have this system installed were then asked how likely they were to install it in their home over the next few years. The findings presented below are based on the whole population so that we can compare how likely people were to install different systems.

In December 2020, the most common renewable heating system to be installed was solar thermal panels, with 7% of people having done so (Figure 16). A further 18% were likely (either very or fairly) to install them in the next few years. However, a third (33%) were unlikely (either very or fairly) to install solar thermal panels over the next few years.

Between 2% and 4% of people had installed other systems, with between 8% and 10% likely to install them over the next few years.

**Figure 16: Likelihood of installing renewable heat systems in the next few years (based on all people), December 2020\*<sup>7</sup>**



Q41. And how much would you say you know about solar thermal panels? By this we mean solar panels for hot water, not solar PV panels that generate electricity.

Q7\_1A. And now thinking about three different types of renewable heating system...How much, if anything, do you know about... Air source heat pumps / ...Ground source heat pumps / ...Biomass boilers?

Q42 Which, if any, of these do you currently have installed in your home? When answering, please think about whether or not this has been done to your home, even if the decision was not made by you personally

Q43. How likely do you think you would be to install an air source heat pump in your home over the next few years?

Q44. How likely do you think you would be to install a ground source heat pump in your home over the next few years?

<sup>7</sup> The figures for Q43, Q44, Q45 and Q46 have been rebased on all people. All those who were not routed into the question are included in either the "Already have them installed" or "Not aware of them" category.

BEIS Public Attitudes Tracker (December 2020, Wave 36, UK)

Q45. How likely do you think you would be to install a biomass boiler in your home over the next few years?

Q46. How likely do you think you would be to install solar thermal panels in your home over the next few years?

Base: All wave respondents – December 2020 (4,022). (Asked annually).

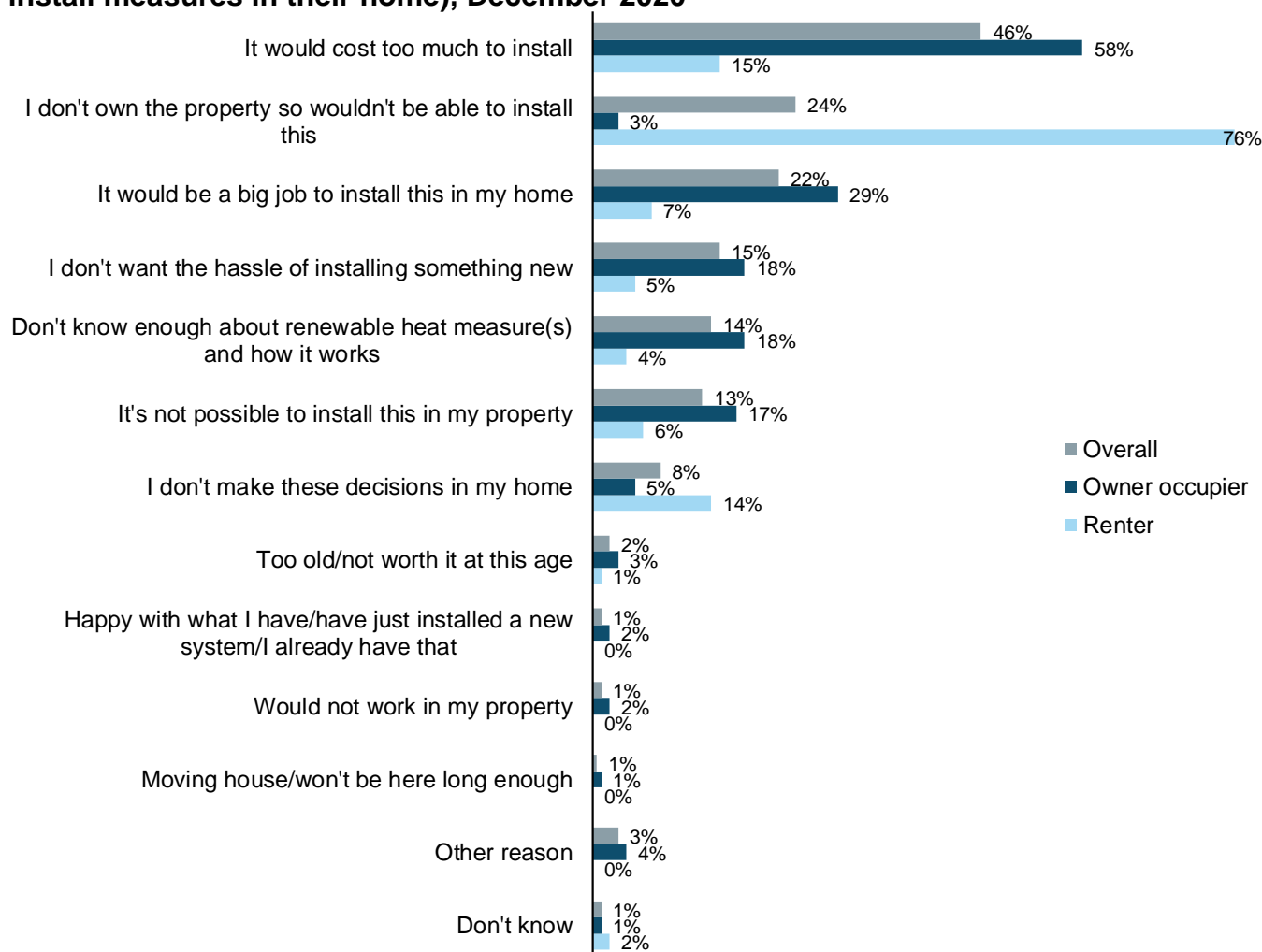
\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).



Those who had heard of at least one renewable heat measure but who said that they were unlikely to install any of them in the next few years were asked why this was the case<sup>8</sup>. The most common reasons given by this group were that it would cost too much to install (46%), that they don't own the property so wouldn't be able to install them (24%) and that it would be a big job to install them in their home (22%) (Figure 17).

Barriers to installation varied by tenure. Owner-occupiers were most likely to reject installation because it would cost too much to install (58%) and because it would be a big job to install them in their home (29%). Among those who were renting (either privately or socially), the over-riding barrier was because they did not own the property (76%). Other common reasons among renters were that it would cost too much to install (15%) and because they don't make these decisions in their home (14%) (Table 33).

**Figure 17: Why respondents are unlikely to install any renewable heat measures in their home by tenure (among those who are aware of renewable systems but unlikely to install measures in their home), December 2020\***



Q51. You said you would be unlikely to install the following measures in your home. Why is this?

Base: All respondents who were aware of at least one renewable heat measure and unlikely to install measures in their home (1,766); Owner-occupier (1,237); Renting privately or through social housing (496). (Asked annually).

<sup>8</sup> Respondents were presented with an answer list of reasons to choose from.

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Respondents who were aware of renewable heating systems were asked whether they agreed or disagreed with the following four statements:

- Renewable heating systems are expensive to install
- A renewable heating system would heat my home better than the heating system I have now
- Renewable heating systems are cheap to run
- Renewable heating systems are less reliable than conventional heating systems (for example a gas or oil boiler)

The results for this question have been based on all owner-occupiers aware of renewable heating systems (Figure 18). In December 2020, a large proportion of owner-occupiers said they neither agreed nor disagreed with three of the four statements or didn't know:

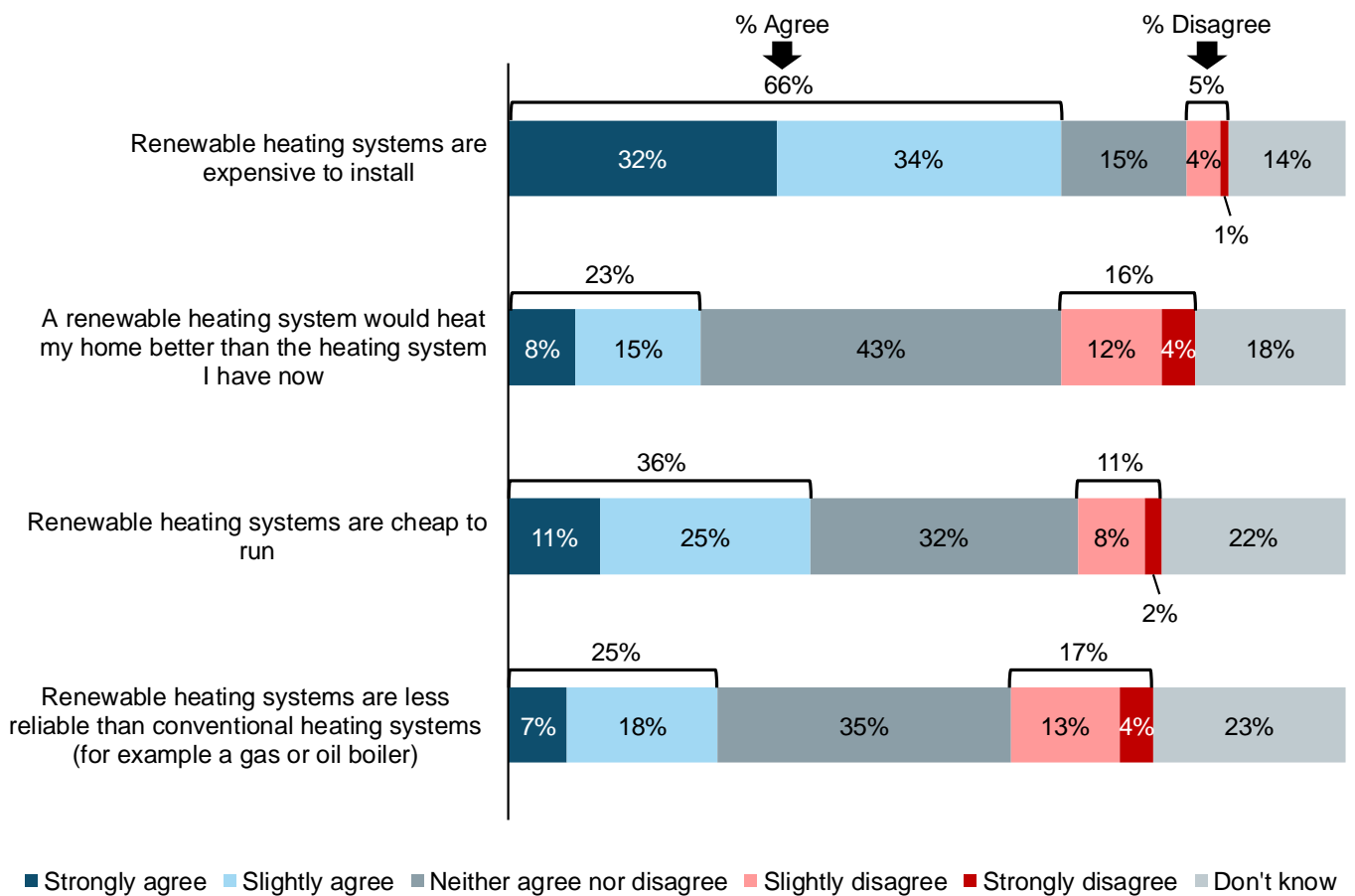
- A renewable heating system would heat my home better than the heating system I have now (neither agree nor disagree or don't know: 61%)
- Renewable heating systems are cheap to run (neither agree nor disagree or don't know: 54%)
- Renewable heating systems are less reliable than conventional heating systems (for example a gas or oil boiler (neither agree nor disagree or don't know: 58%)

This indicates that even when people have heard of these systems there is still a substantial lack of knowledge about how these systems work.

Owner-occupiers who were aware of renewable heating were more likely to agree than disagree with all four statements. In particular, a much higher proportion agreed (66%) than disagreed (5%) that renewable heating systems would be expensive to install. However, this group was also more likely to agree (36%) than disagree (11%) that these systems would be cheap to run.

Owner-occupiers aware of renewable heating were also more likely to agree (23%) than disagree (16%) that renewable heating would heat their home better than the system they have now, and that renewable heating systems are less reliable than conventional heating systems (25% agreed versus 17% that disagreed).

**Figure 18: Agreement with various statements regarding renewable heating systems (based on owner-occupiers who have heard of renewable heating systems), December 2020\***



Q7\_3. How much do you agree or disagree with the following statements? ...a) Renewable heating systems are expensive to install / ...b) Renewable heating systems are cheap to run / ...c) Renewable heating systems are less reliable than conventional heating systems (for example a gas or oil boiler) d) A renewable heating system would heat my home better than the heating system I have now.

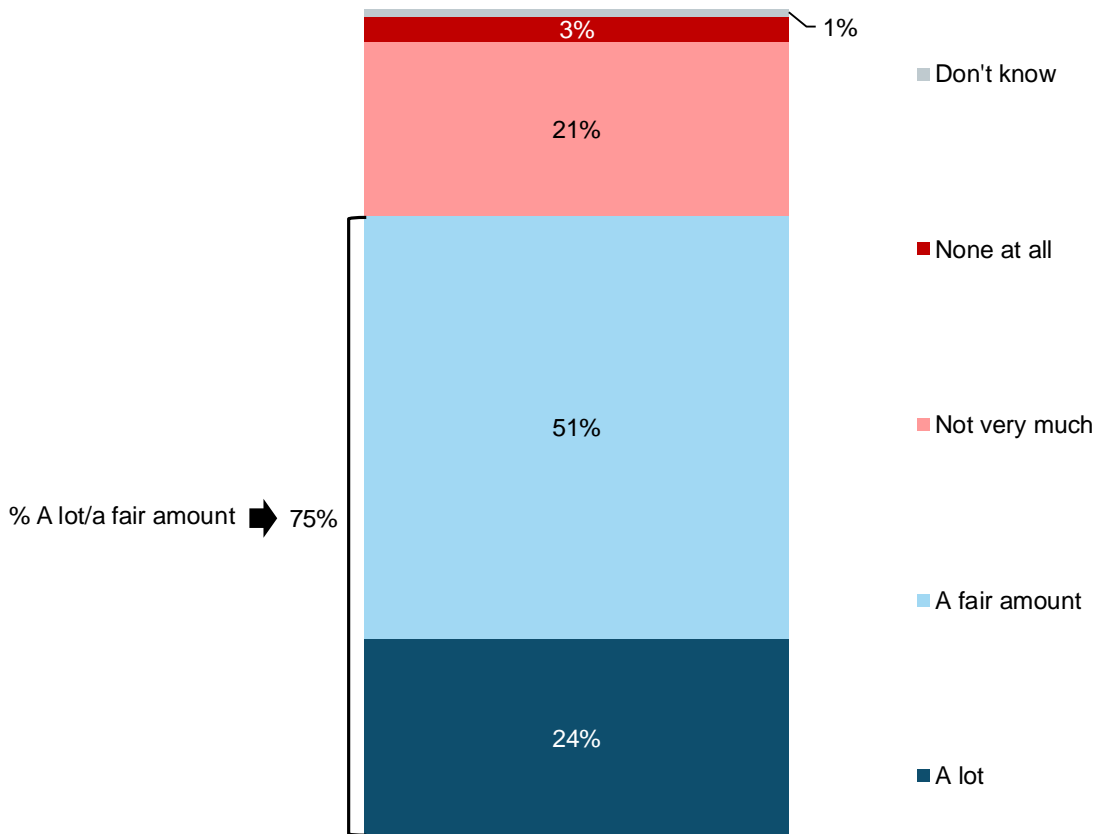
Base: All owner-occupiers who have at least heard of renewable heating systems (December 2020) - statements a,c,d (2,184); Statement b (1,264). (Asked annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

## Heat usage in the home

In December 2020, three quarters (75%) of the public said that they paid either a lot (24%) or a fair amount (51%) of attention to the amount of heat they used in their home (Figure 19). One in five people (21%) said that they did not pay very much attention to the amount of heat they use in their homes, and a further 3% said they pay no attention to this at all.

**Figure 19: Attention paid to the amount of heat used in the home (based on all people), December 2020\***



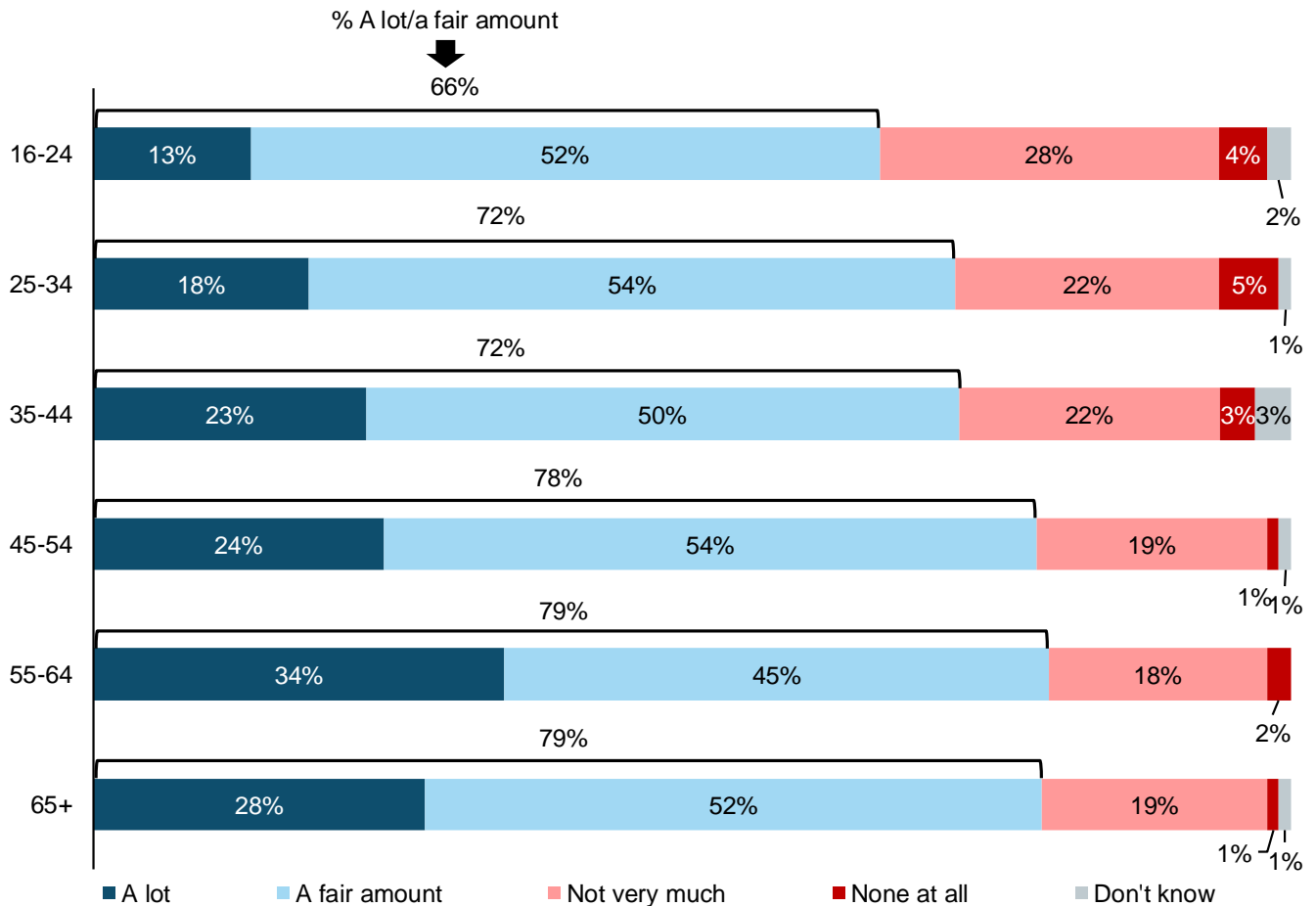
Q7\_8. How much attention do you pay to the amount of heat you use in your home?

Base: All wave respondents – December 2020 (4,022). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Older people (79% of those aged 55 and over, compared with 66% of those aged 16 to 24) were the most likely to pay a lot or a fair amount of attention to the amount of heat they use at home (Figure 20, Table 42). This may be because those aged 16 to 24 are more likely to be living with parents.

**Figure 20: Attention paid to the amount of heat used in the home, by age (based on all people), December 2020\***



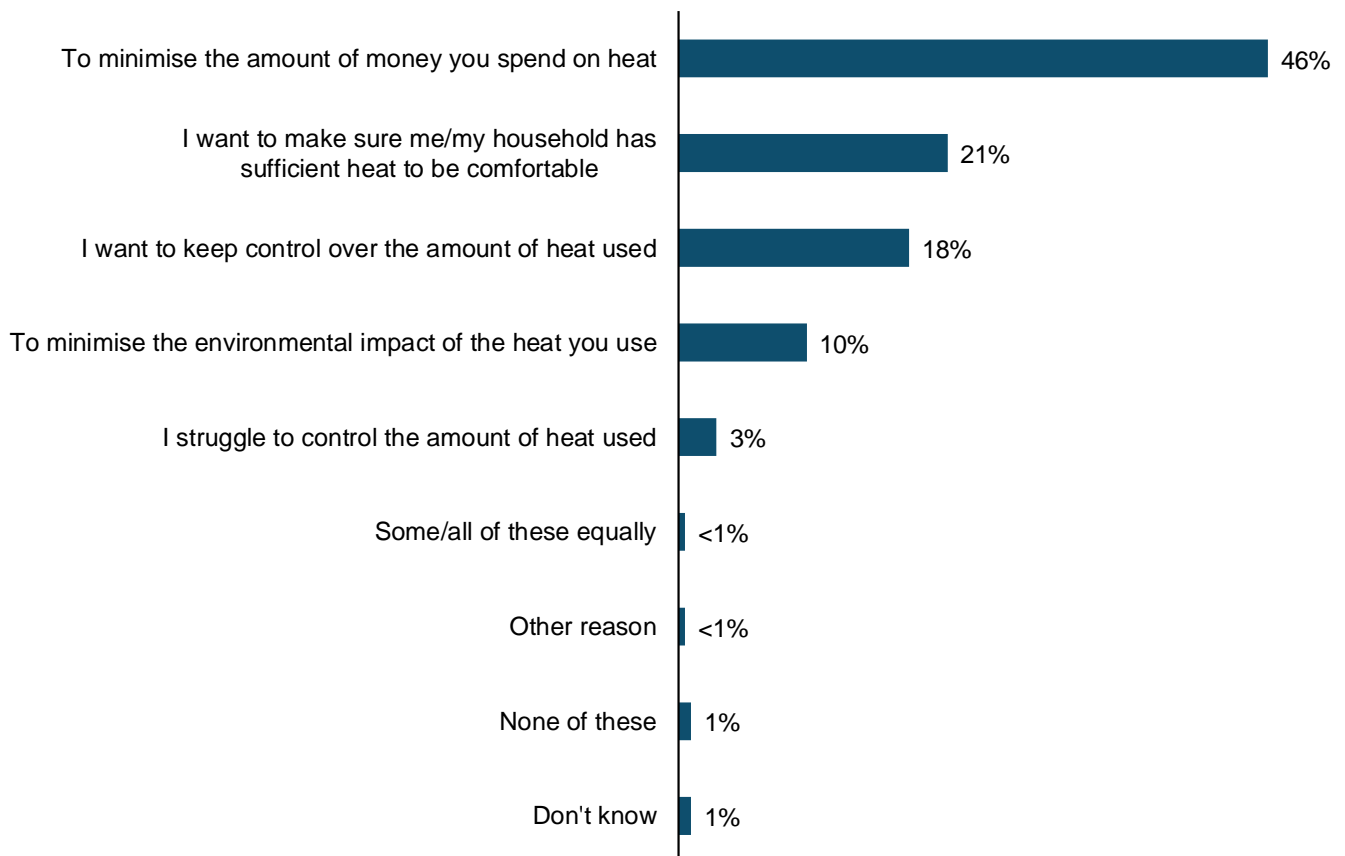
Q7\_8. How much attention do you pay to the amount of heat you use in your home?

Base: All wave respondents (December 2020) – 16-24 (581); 25-34 (701); 35-44 (655); 45-54 (705); 55-64 (628); 65+ (752). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

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 21)<sup>9</sup>. In December 2020, 46% said they did so to minimise the amount of money they spent on heat, 21% said this was to make sure they had sufficient heat to be comfortable, and 18% said they did so because they wanted to keep control over the amount of heat used. A further 10% said they pay attention to the heat they use in order to minimise its environmental impact, while 3% said they do so because they struggle to control the amount of heat used in their home.

**Figure 21: Main reason for paying attention to the amount of heat used in the home (based on those who pay a lot/a fair amount of attention to the amount of heat they use in their home), December 2020\***



Q7\_9. You said 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?

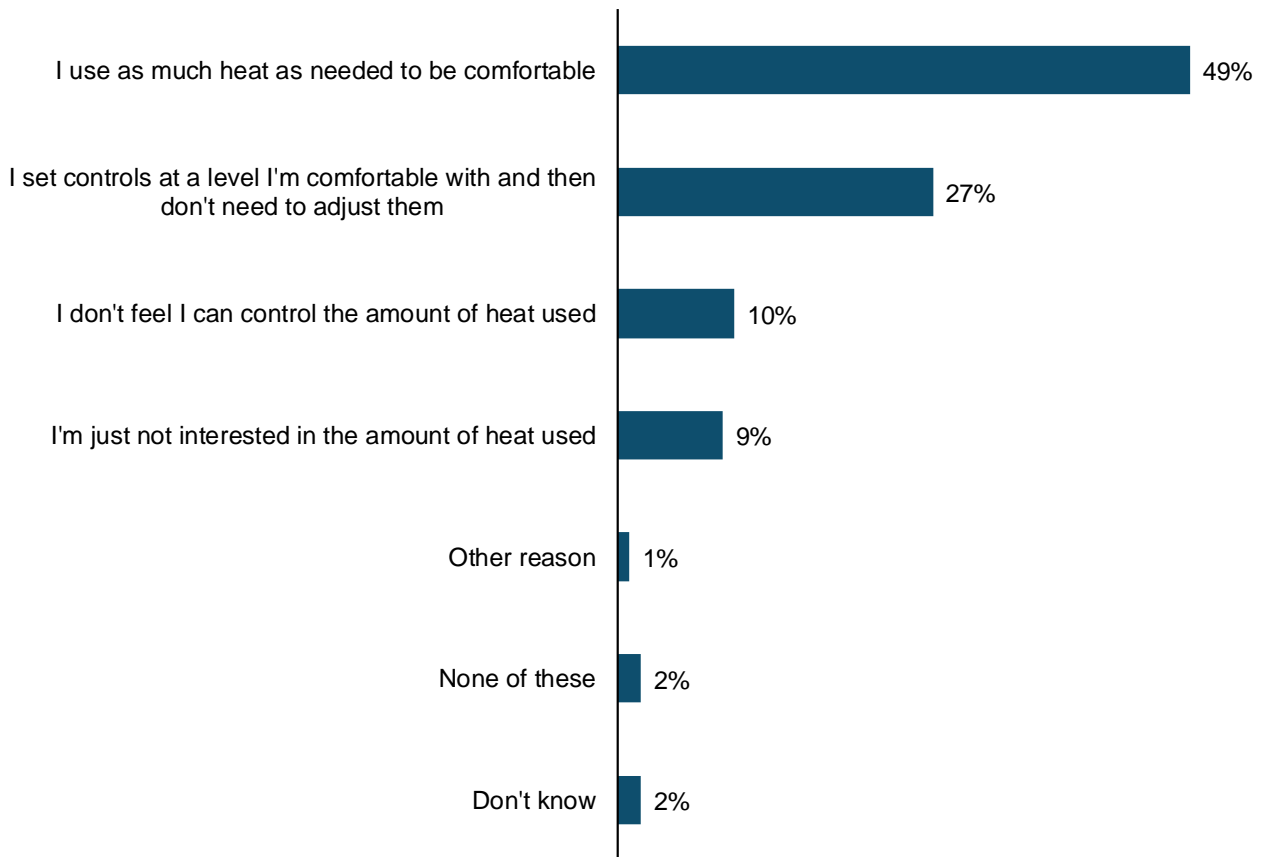
Base: All wave respondents who pay a lot/a fair amount of attention to the amount of heat they use in their home – December (2,996). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

<sup>9</sup> Respondents were presented with an answer list of reasons to choose from.

Those who said they did not pay much, or any, attention to the amount of heat used were also asked the reason for this (Figure 22). In December 2020, half (49%) said this was because they simply used as much heat as needed to be comfortable and 27% said they set their heating controls at a level they were comfortable with, and so didn't need to adjust them. One in ten (10%) said that this was because they didn't feel they could control the amount of heat used, and a further 9% said it is because they are just not interested in the amount of heat used.

**Figure 22: Main reason for not paying attention to the amount of heat used in the home (based on those who don't pay very much/any attention to the amount of heat they use in their home), December 2020\***



Q7\_10. You said you pay not very much/no attention to the amount of heat you use in your home. What is the main reason for this?

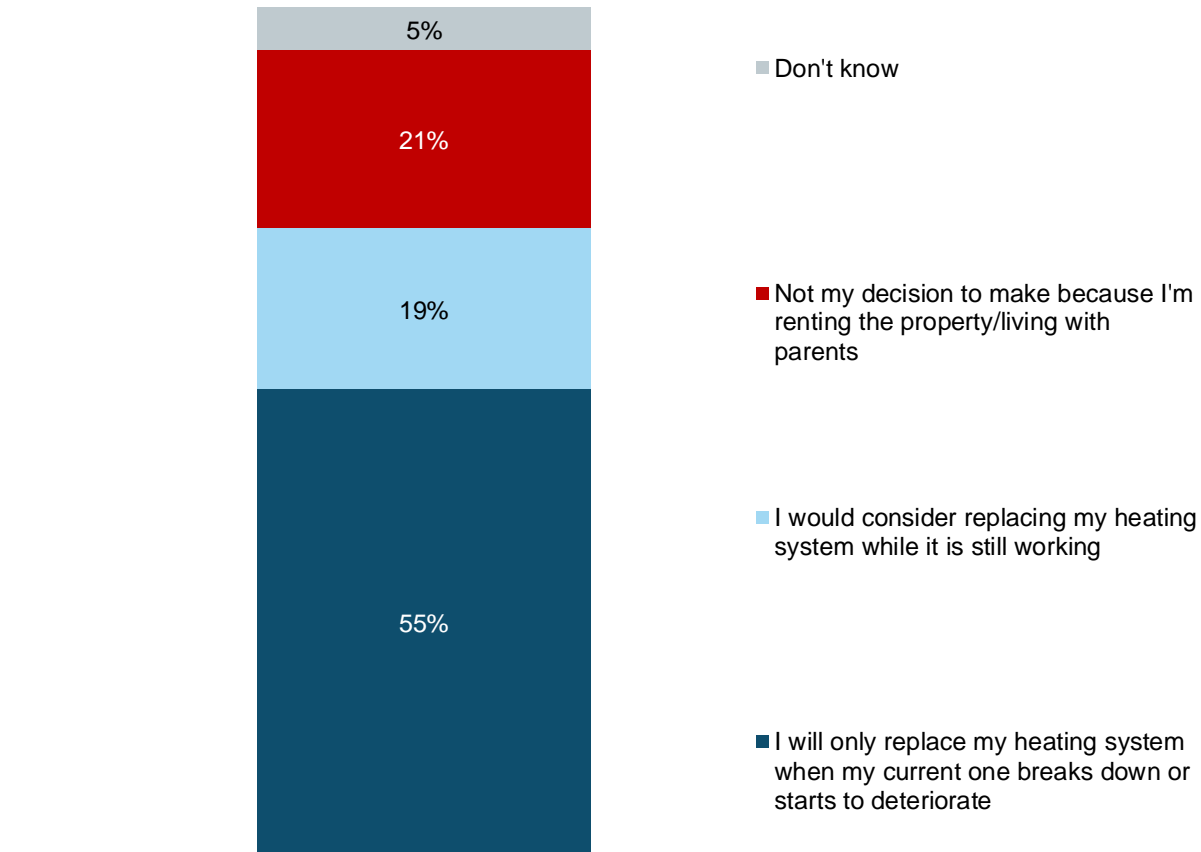
Base: All wave respondents who don't pay very much/any attention to the amount of heat they use in their home – December (939). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

## Installing or replacing heating systems

In December 2020, over half (55%) said they would only replace their heating system when their current one breaks down or starts to deteriorate. A further 19% said they would consider replacing their heating system while it was working, while 21% said this was not their decision to make because they were renting the property or living with parents (Figure 23; Table 45).

**Figure 23: Plans for replacing heating system (based on all people), December 2020\***



Q7\_11. Now thinking about your heating system. Which of the statements on this screen comes closest to your view?

Base: All wave respondents – December 2020 (4,022). (Asked Annually).

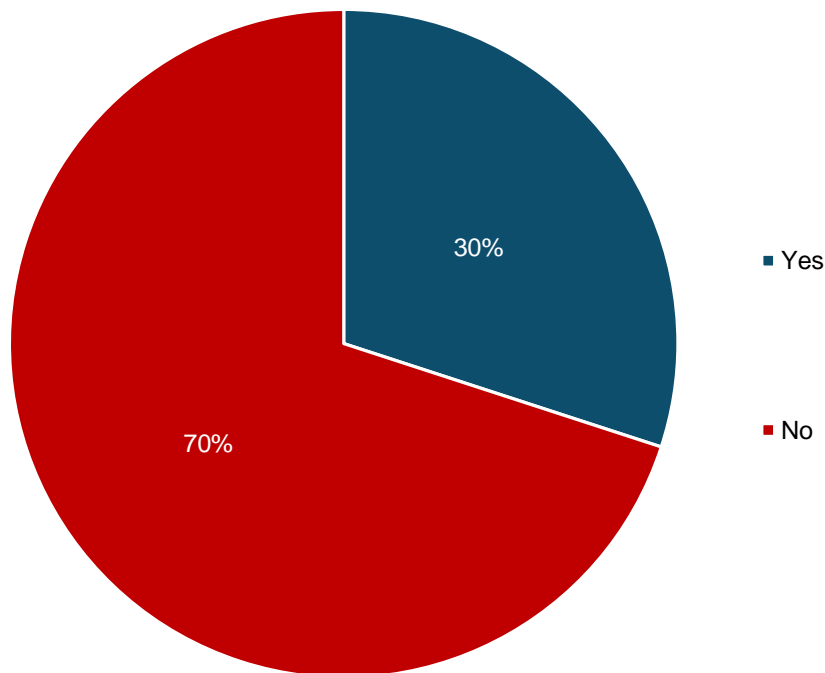
\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Those who said they would consider replacing a working heating system were asked which of a number of options would be their more important consideration for doing this. Over four in ten (45%) said to save money on bills, while 35% said they would do this to switch to a more environmentally friendly heating system. Just under two in ten (17%) said they would switch to have a more reliable heating system than the one they have now (Table 46).



Three in ten people (30%) said they had a boiler or heating system installed in the last three years (Figure 24).

**Figure 24: Whether had a boiler or heating system installed in the last three years (based on all people), December 2020\***



Q60. Have you had a boiler or heating system installed in the last three years? This could be either in your current home or anywhere else you have lived in this period.

Base: All wave respondents – December 2020 (4,022). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

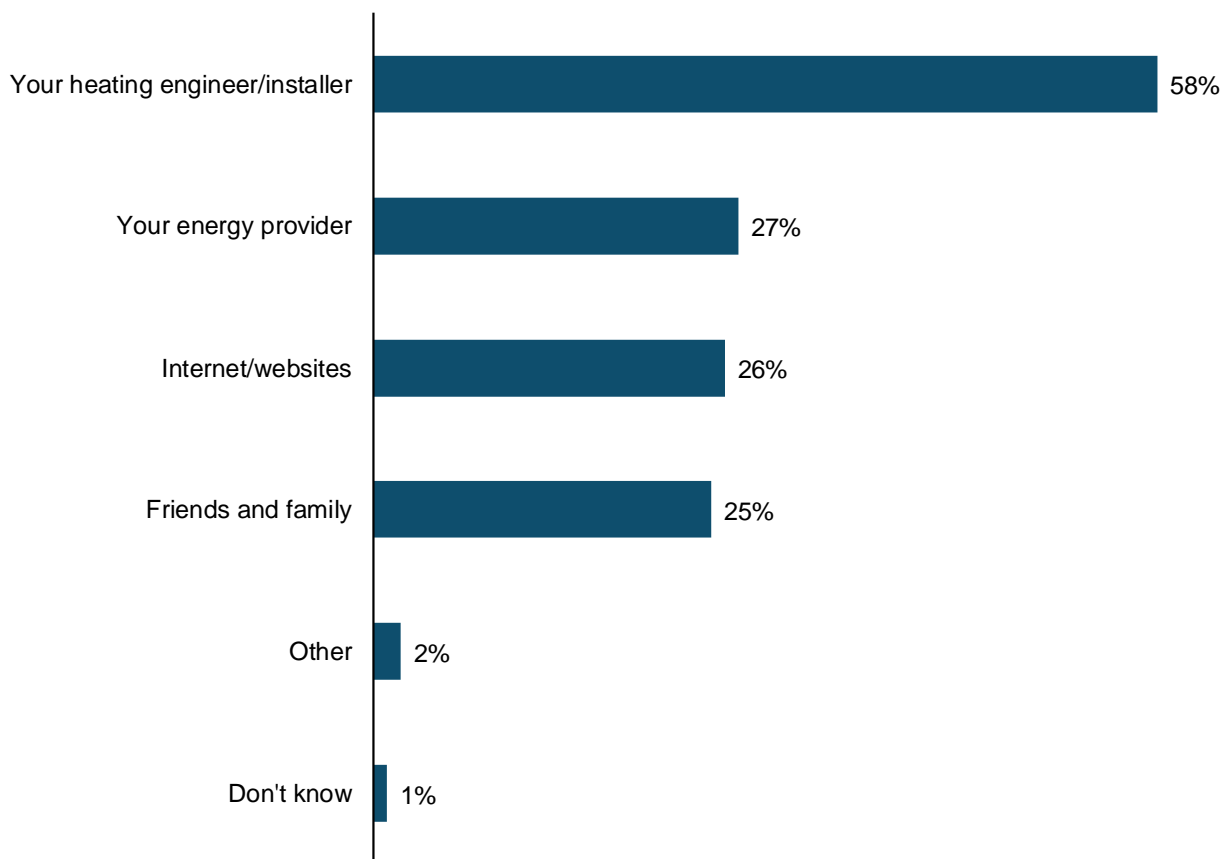
Younger people (45% of those aged 16 to 24, compared with 25% of those aged 65 and over) were more likely to have had a boiler or heating system installed in the last three years (Table 47).

Of those who have had a boiler or heating system installed in the last three years, over half (53%) had it installed 1-3 years ago while 44% had it installed more recently (Table 48). Eight in ten (79%) of those who had installed a new boiler or heating system said this was gas (Table 49).

Of those who have had a boiler or heating system installed in the last three years, most (65%) said they were involved in the decision-making process for choosing this. Unsurprisingly, owner-occupiers (76%) were much more likely to be involved in the decision-making process than private renters (43%) and social renters (36%) (Table 50).

Those involved in choosing a new boiler or heating system were asked which sources of information they had used to make their decision (Figure 25). Just under six in ten (58%) said they sought information from their heating engineer or installer, 27% from their energy provider, 26% from the internet and 25% from friends and family.

**Figure 25: Sources of information used to help make a decision when choosing new boiler or heating system (based on all who had a new boiler or heating system installed in the last three years and were part of the decision-making process), December 2020\***



Q64. When choosing your boiler or heating system, which sources of information did you use to make your decision?

Base: All who had a new boiler or heating system installed in the last three years and were involved in the decision-making process for this – December 2020 (850). (Asked Annually).

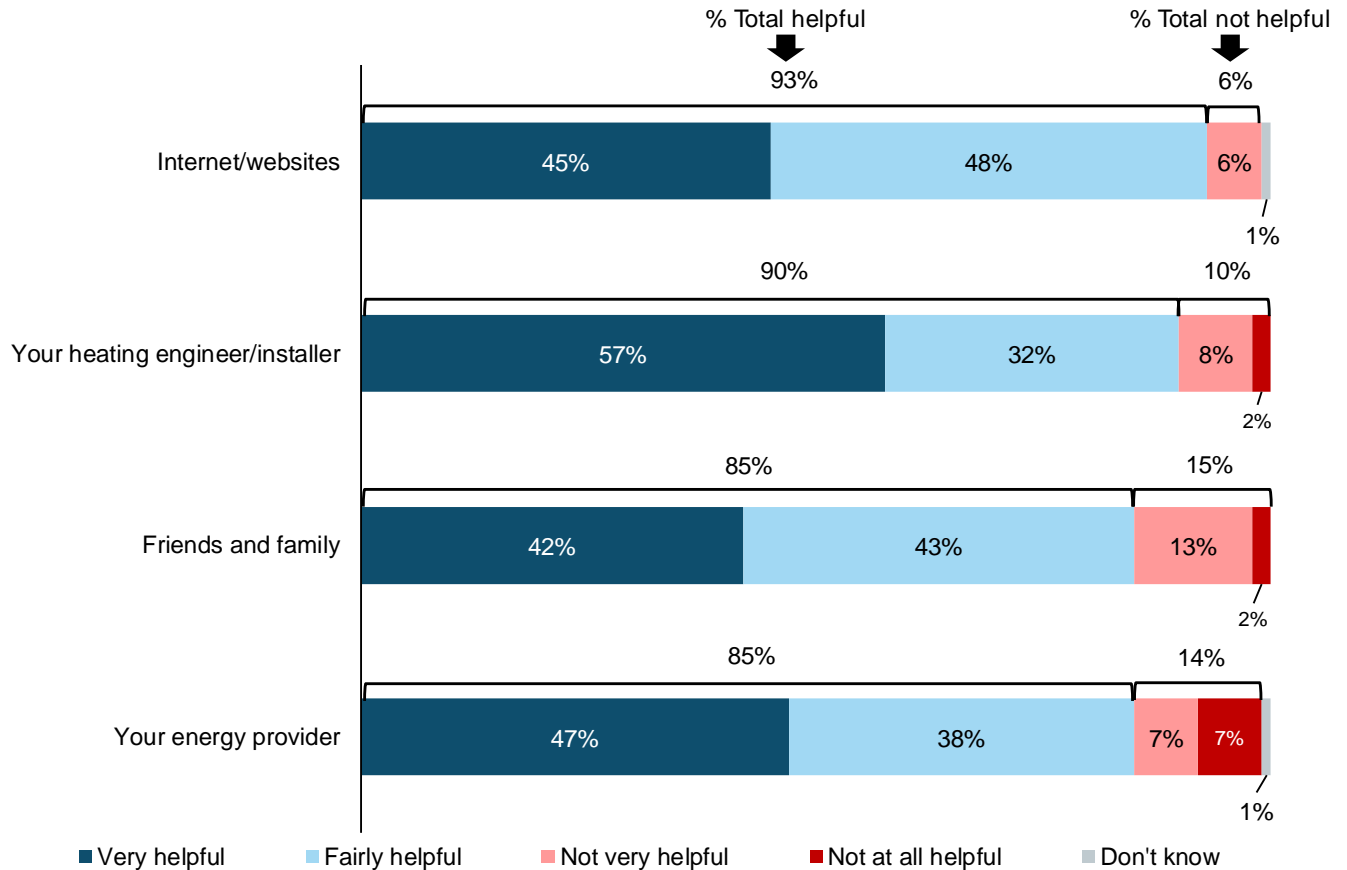
\*All questions are based on the surveys carried out on Kantar's online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Of those who said they had sought information from the internet, just under seven in ten (67%) said they used Google. Just under three in ten (28%) said they had used British Gas, with 22% saying they used Which?<sup>10</sup>.

<sup>10</sup> Respondents were presented with an answer list of reasons to choose from.

In December 2020, those who used each of these sources of information were then asked how helpful each source was in helping them to decide about which boiler or heating system to install. Over nine in ten (93%) found the internet either a fairly or very helpful source of information. Nine in ten (90%) found their heating engineer/installer a fairly or very helpful source of information. Over eight in ten found friends and family (85%) and their energy provider (85%) a helpful source of information (Figure 26).

**Figure 26: How helpful each source of information was in helping to make a decision (based on all who used sources of information to make a decision when choosing their boiler or heating system), December 2020\***



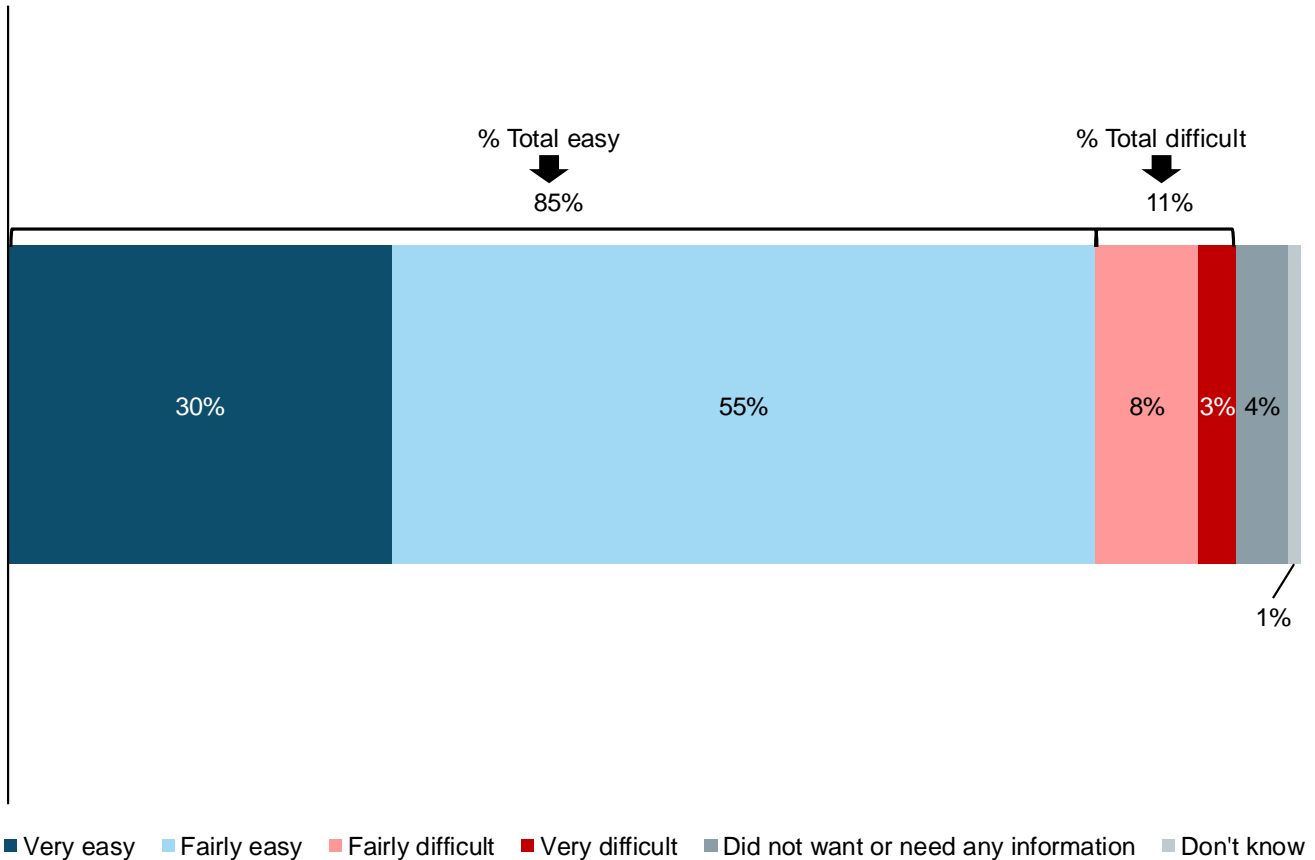
Q66. How helpful were each of these sources of information in helping you to make a decision?

Base: All who used sources of information to make a decision when choosing their boiler or heating system (December 2020) – Internet (213); Your heating engineer/installer (461); Friends and family (228); Your energy provider (258). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

In December 2020, 85% of those involved in the decision-making process about a new boiler or heating system said it was easy to get the information they wanted (Figure 27). One in ten (11%) found it difficult to get the information they wanted. A further 4% did not want or need any further information.

**Figure 27: Ease of finding information about a new boiler or heating system (based on those who had a new boiler or heating system installed in the last three years and were part of the decision-making process), December 2020\***



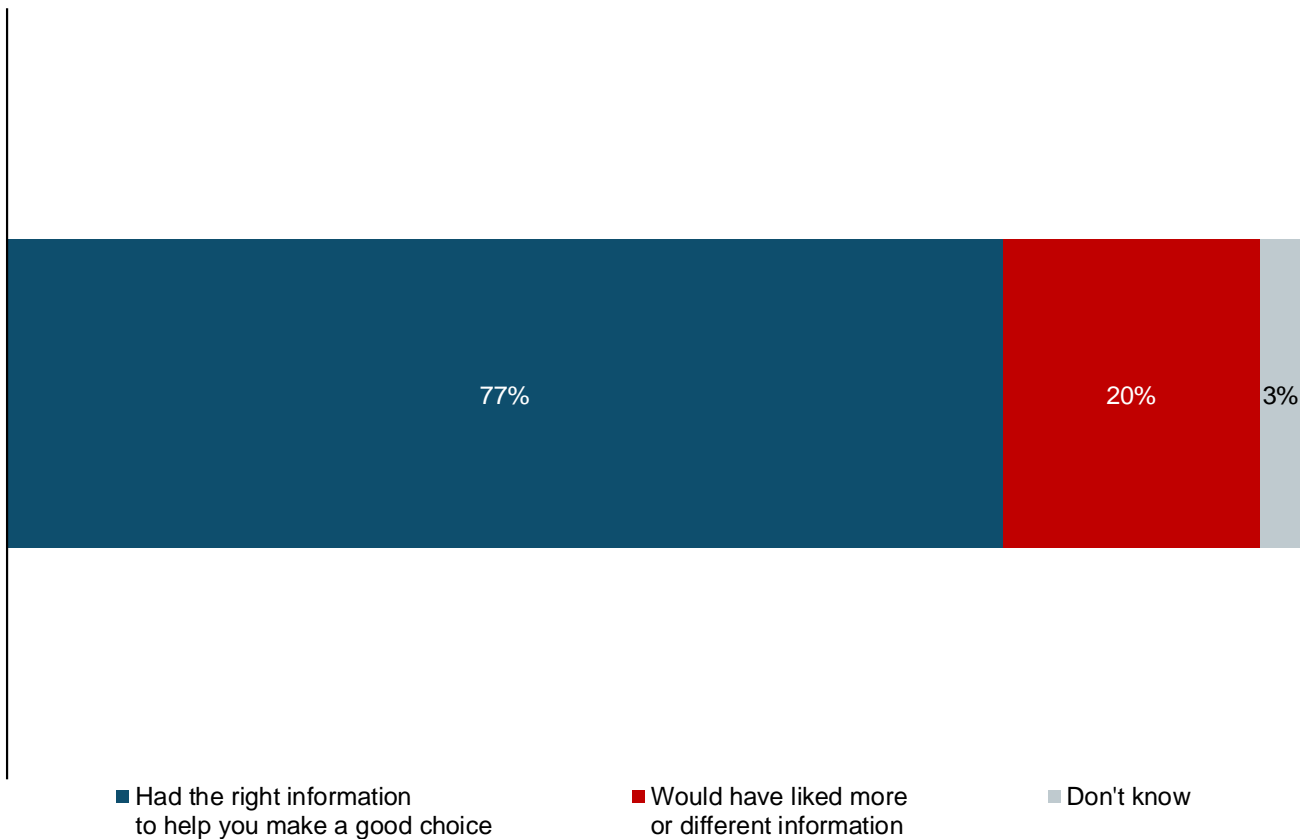
Q67. How easy or difficult did you find it to get the information you wanted about a new boiler or heating system?

Base: All who had a new boiler or heating system installed in the last three years and were involved in the decision-making process for this – December 2020 (850). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

Those who were involved in the decision-making process about replacing their boiler or heating system were asked whether they felt they had the right information to help them make a good choice (Figure 28). Just under eight in ten (77%) said they had the right information to help them make a good choice, with one in five (20%) saying they would have liked more or different information.

**Figure 28: Whether had the right information in order to make a good choice about a boiler or heating system (based on those who had a new boiler or heating system installed in the last three years and were part of the decision-making process), December 2020\***



Q68. Do you feel you had the right information to help you make a good choice or would you have liked more or different information?

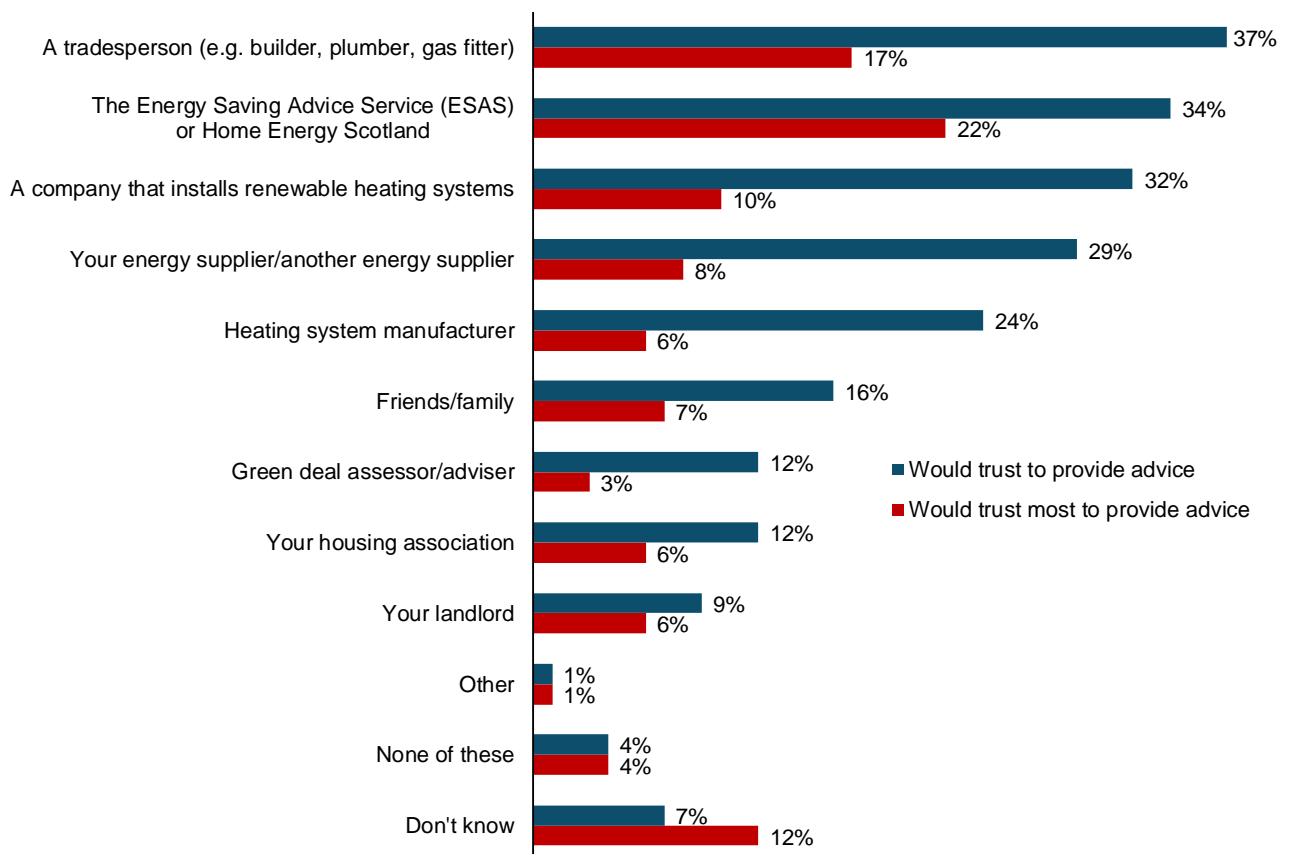
Base: All who had a new boiler or heating system installed in the last three years and were involved in the decision-making process for this – December 2020 (850). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

People were asked who they would trust to provide advice about which heating system to install in their home. They were first asked to select all the people or organisations they would trust from a list. If they selected more than one answer, they were asked who they would trust most. Figure 29 presents both sets of responses.

In December 2020, 22% said the source they would trust the most to provide advice would be the Energy Saving Advice Service (ESAS) or Home Energy Scotland (22%) followed by a tradesperson (17%). One in ten (10%) said they would trust a company that installs renewable heating systems most.

**Figure 29: Sources people would trust to provide advice about which heating system to install in their home (based on all people), December 2020\***



Q7\_7A. Which of the following would you trust to provide advice about which heating system to install in your home?

Q7\_7B. And which one would you trust the most to provide advice about which heating system to install in your home?

Base: All wave respondents – December 2020 (4,022). (Asked Annually).

\*All questions are based on the surveys carried out on Kantar’s online omnibus in December 2020, September 2020, June 2020 and March 2020 where applicable. Results are not comparable with earlier face to face waves, so no such comparisons are made in this report (see Technical Notes).

# Technical information

## Technical notes

This report provides selected headline findings and highlights statistically significant differences at the 95% level for the three waves where the Kantar online omnibus was used:

- Wave 36 (December 2020)
- Wave 35 (September 2020)
- Wave 34 (June 2020)
- Wave 33 (March 2020)

Statistically significant differences at the 95% level are also made between subgroups for wave 36.

Percentages included on charts in this report may not add up to 100% due to rounding, the exclusion of some categories (e.g. 'Don't know' and 'Refused') and the option for more than one response to be selected at some questions. Similarly, percentages based on aggregating categories (for example 'strongly support' and 'support') may not always reflect the sum of the individual answer categories.

This report is not an exhaustive overview of the findings. Please refer to the accompanying Excel dataset and PDF/Excel cross tabulation tables for the current wave, wave 35 and wave 34, along with the wave 33 (web) Excel dataset to see full responses to all survey questions.

Until March 2020 (wave 33) the survey was conducted using in-home interviews conducted via the Kantar UK face-to-face Omnibus. However, fieldwork in March 2020 stopped early due to the outbreak of Coronavirus (COVID-19) in the UK, and the associated lockdown measures. The findings from wave 33, based on a truncated face-to-face sample, were published in May 2020.<sup>11</sup> A parallel version of wave 33 was also conducted by web on the Kantar online omnibus. The purpose of this was to test and compare alternative methodologies with a view to deciding on the best approach for future waves, while lockdown restrictions remain in place.

At the point of publication, face-to-face survey fieldwork largely remains paused in the UK. Therefore, data for wave 36 were also collected using the Kantar online omnibus. Web-based fieldwork for wave 36 ran from 3 December to 8 December with a representative sample of 4,022 adults (aged 16 and over) in the UK.

The Kantar online omnibus primarily uses the Kantar online access panel as the sample source. The Kantar panel is part of an association of quality-conscious panel providers that work together to fulfil sample requirements that cannot be met by a single provider within the required timescales. For this survey the Kantar panel was supplemented with Lucid, which has been vetted by Kantar as reputable and offering high-quality sample. Panel members who had taken part in previous waves (wave 33, wave 34 or wave 35) were exempt from taking part at wave 36. This was to prevent panel conditioning which presents a risk to survey measurement

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<sup>11</sup> The March 2020 (wave 33) report can be found here:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/884028/BEIS\\_PAT\\_W33\\_-\\_Key\\_findings\\_Final\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/884028/BEIS_PAT_W33_-_Key_findings_Final_.pdf)

as respondents may answer differently purely as a result of having answered the same questions in prior waves.<sup>12</sup> The representativeness of the data was controlled through sample design, fieldwork quotas and post-fieldwork weighting. Quotas were set by age and gender and the sample was pre-stratified by region. Data were weighted for the following characteristics: sex, age, social grade, region, tenure, property type, main way the property is heated and whether there is someone with a long-standing illness or disability in the household. Results included here are based on data which have been weighted to reflect the UK population aged 16 and over.

Using online access panels to source samples brings a number of benefits. These include allowing for data collection while social distancing measures are in place, speed, cost-efficiency, and in helping to minimise social desirability bias (as there is no interviewer present). However, it is important to flag that there are some potential downsides to this approach as well:

- There is a risk that online panellists are not representative of the general population:
  - People volunteer to join online access panels and this approach may therefore be particularly prone to self-selection bias.
  - Online panel surveys exclude the off-line population.

With this type of sample, the accuracy of estimates is conditional on the assumption that the combined effects of sampling, fieldwork protocols, quota application, and weighting have successfully eradicated biasing selection effects on the data. However, this assumption is untestable without substantial – and impractical – expenditure on collecting benchmark data using a random probability sampling approach.

The steps we have taken to minimise the risk of bias are as follows:

- The panel uses a diverse set of recruitment sources and a variety of recruitment methods. This includes opt-in email, co-registration, e-newsletter campaigns, and traditional banner placements.
- The sample was stratified by region before it was drawn. This helped to ensure that the final sample reflected, as far as possible, the regional profile of the general population.
- Quotas were set to compensate for known biases in online panels. Younger people and men are generally under-represented on online panels, so we set an interlocking quota by age and gender.
- Weighting was applied to ensure that the demographic profile of our sample matched the profile of the general population.

The weighting matrix for the face-to-face surveys includes age by gender, region, social grade, and housing tenure. With this standard weighting applied there remained some large differences between the profile of the online sample and the profile recently achieved using face-to-face data collection. For this reason, it was decided to add the following variables to the weighting matrix – property type, main way the property is heated and whether there is someone with a long-standing illness or disability in the household. The online sample was weighted to match the profile achieved in recent waves of the face-to-face survey.

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<sup>12</sup> For example, a respondent may have said that they have no awareness of shale gas at wave 34, but may feel they have an idea of what shale gas is at wave 35 solely because they answered a question on it at that wave 34.



The variables included in the weighting matrix (and the source of the benchmark statistics) were as follows:

- Age by Gender - ONS Mid-Year Population Estimates 2019
- Region (former Government Office Region) - ONS Mid-Year Population Estimates 2019
- Social Grade – Kantar TGI (Jan 19 - Dec 19)
- Housing tenure – ONS Annual Population Survey (Jan 19 - Dec 19)
- Property type (waves 30 to 33 of the face-to-face PAT survey)
- Main way property is heated (waves 30 to 33 of the face-to-face PAT survey)
- Long-standing illness or disability in the household (waves 30 to 33 of the face-to-face PAT survey)

It should be noted that the weighting only corrects for observed bias (for the set of variables included in the weighting matrix) and there is a risk of unobserved bias. Furthermore, the raking algorithm used for the weighting only ensures that the sample margins match the population margins. There is no guarantee that the weights will correct for bias in the relationship between the variables.

### Comparisons with previous waves using face-to-face data collection.

It should be noted that any change in methodology can lead to both selection effects (that is differences due to the different sampling methods employed) and measurement effects (that is differences due to the different interview modes). Although attempts have been made to reduce the selection effects between the online and face-to-face approaches, the online results from wave 33 to wave 36 should not be directly compared with face-to-face results from previous waves. For this reason, we have not made any direct comparisons with longer-term tracking measures collected via the original face-to-face surveys.

When it comes to measurement effects, differences in results could be caused by a number of factors (see below). Measurement effects cannot be ameliorated by weighting, although it is sometimes possible to estimate their direction and scale and (at least partially) account for them in analysis.

Some examples of measurement effects:

- Face-to-face and telephone interviewers can provide motivation or clarification when required; this cannot truly be replicated online.
- People who would not disclose sensitive personal information or socially undesirable opinions/behaviours to an interviewer may be more willing to provide this information online.
- Where a response scale is used (e.g. running from “strongly agree” to “strongly disagree”), interview respondents are generally more likely to select a ‘strong’ response – at either end of the scale – than they would if they were completing the survey online.
- For logistical reasons, the questionnaire has to be adapted slightly for each mode and this can affect measurement:

- Long questions or response lists are not suitable for smartphone presentation and need to be edited in some cases.
- Unprompted questions ('do not show screen') have to be converted into prompted versions for online presentation which will limit compatibility.
- Presentation of "don't know" answer codes: In Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Telephone Interviewing (CATI) these are usually collected as spontaneous codes, i.e. the interviewer will only select these if the respondent mentions it. However, on Computer Assisted Web Interviewing (CAWI) these codes have to be available more obviously for respondents (though they can be 'hidden' in the initial presentation).

While an attempt was made to ensure comparability between presentation of questions on face-to-face and CAWI, inevitably some of the differences outlined above remained.

It should also be noted that fieldwork for wave 33 and wave 34 took place during the first COVID-19 lockdown period (March to July 2020) and wave 36 took place during the period when regional tiered restrictions were in place (October to December 2020), the level of restrictions varying across the UK. It is unclear what effect the COVID-19 outbreak and associated media coverage during fieldwork may have had on public behaviours, attitudes and perceptions towards the topics in this report. This is a further reason why comparisons with earlier face-to-face waves should be avoided.

## Fieldwork dates and sample sizes

Wave	Fieldwork dates	Sample sizes
Wave 1 (Mar 2012)	21 to 25 March 2012	2,121
Wave 2 (Jun 2012)	27 June to 1 July 2012	2,100
Wave 3 (Sep 2012)	26 to 30 September 2012	2,118
Wave 4 (Dec 2012)	12 December 2012 to 2 January 2013	2,107
Wave 5 (Mar 2013)	27 to 31 March 2013	2,051
Wave 6 (Jul 2013)	3 to 7 July 2013	2,124
Wave 7 (Sep 2013)	25 to 29 September 2013	2,103
Wave 8 (Dec 2013)	11 to 15 December 2013	2,110
Wave 9 (Mar 2014)	26 to 30 March 2014	2,040
Wave 10 (Jun 2014)	25 to 29 June 2014	2,087
Wave 11 (Sep 2014)	24 to 28 September 2014	2,103
Wave 12 (Dec 2014)	10 December 2014 to 8 January 2015	2,119
Wave 13 (Mar 2015)	18 to 29 March 2015	1,981
Wave 14 (Jun 2015)	24 to 28 June 2015	2,118
Wave 15 (Sep 2015)	23 to 27 September 2015	2,121
Wave 16 (Dec 2015)	9 to 13 December 2015	2,121
Wave 17 (Mar 2016)	23 to 27 March 2016	2,105
Wave 18 (Jun 2016)	29 June to 3 July 2016	2,114

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Wave 19 (Sep 2016)	28 September to 2 October 2016	2,080
Wave 20 (Dec 2016)	14 to 18 December 2016	2,138
Wave 21 (Mar 2017)	29 March to 2 April 2017	2,180
Wave 22 (Jun 2017)	30 June to 4 July 2017	2,097
Wave 23 (Sep 2017)	27 September to 1 October 2017	2,105
Wave 24 (Dec 2017)	13 to 17 December 2017	2,078
Wave 25 (Mar 2018)	28 March to 6 April 2018	2,102
Wave 26 (Jul 2018)	11 to 17 July 2018	4,268 <sup>13</sup>
Wave 27 (Sep 2018)	19 to 30 September 2018	4,258
Wave 28 (Dec 2018)	5 to 16 December 2018	4,273
Wave 29 (Mar 2019)	13 to 24 March 2019	4,224
Wave 30 (Jun 2019)	5 to 16 June 2019	4,231
Wave 31 (Sep 2019)	11 to 22 September 2019	4,201
Wave 32 (Dec 2019)	4 to 22 December 2019	4,212
Wave 33 (Mar 2020)	11 to 17 March 2020	1,851
Wave 33 CAWI (Mar 2020)	3 April to 7 April 2020	2,544
Wave 34 CAWI (Jun 2020)	4 June to 9 June 2020	4,011
Wave 35 CAWI (Sep 2020)	2 to 8 September 2020	4,033
Wave 36 CAWI (Dec 2020)	3 to 8 December 2020	4,022

<sup>13</sup> The sample size increased to c. 4,200 from Wave 26 (July 2018) onwards to allow greater scope for regional analysis.

## Definitions

<b>Base</b>	The number of people answering a survey question.
<b>CAWI</b>	Computer-assisted web interviewing.
<b>Climate change</b>	Long-term shift in the planet's weather patterns and rising average global temperatures.
<b>Cognitive testing</b>	An in-depth interviewing method to determine the reliability and validity of survey questions.
<b>Condensing boilers</b>	Water heating appliances that are run on either gas or oil, to improve energy efficiency.
<b>Energy infrastructure</b>	A term used to capture a range of different energy sources that are covered by the survey and the interconnections between them. This includes a range of renewable sources (on-shore and off-shore wind, solar, wave and tidal, and biomass), nuclear, shale gas, and carbon capture and storage as well as the pipeline and other interconnectors between them.
<b>Fieldwork</b>	The period where face-to-face or online interviews are conducted.
<b>Heat networks</b>	Heating systems where heat is generated locally and then provided to homes, rather than being generated within homes.
<b>Net Zero</b>	<p>Net zero means that the UK's total greenhouse gas (GHG) emissions would be equal to or less than the emissions the UK removed from the environment. This can be achieved by a combination of emission reduction and emission removal.</p> <p>The new Net Zero target was announced by the government in June 2019, which requires the UK to bring all greenhouse gas emissions to net zero by 2050.</p>
<b>Omnibus survey</b>	A method of quantitative survey research where data on a wide variety of subjects submitted by a range of funders is collected during the same interview.
<b>Quotas</b>	A target number of interviews for a certain characteristic during survey fieldwork (e.g. age).
<b>Random location quota sampling</b>	A form of quota sampling that combines elements of random sampling and quota sampling. Once a random sample is drawn, interviewers are tasked with interviewing a range of sub-groups across different timing patterns based on a pre-agreed number of respondents.
<b>Renewable heat</b>	Heating systems that use renewable energy to provide heat, such as air source heat pumps, ground source heat pumps, biomass boilers and thermal solar panels.
<b>Representativeness</b>	Similarity of the sample profile to benchmark population statistics, such as the Office for National Statistics mid-year population estimates.
<b>Sample size</b>	The number of people included in the sample (a subset of the population).

<b>Shale gas and fracking</b>	Shale gas is natural gas found in shale, a non-porous rock which does not allow the gas to escape. Hydraulic fracturing or “fracking” is a process of pumping water at high pressure into shale to create narrow fractures which allow the gas to be released and captured. The gas can then be used for electricity and heating.
<b>Social grade</b>	<p>Social grade is a classification system based on occupation. It contains the following categories:</p> <p>A: Higher managerial, administrative and professional</p> <p>B: Intermediate managerial, administrative and professional</p> <p>C1: Supervisory, clerical and junior managerial, administrative and professional</p> <p>C2: Skilled manual workers</p> <p>D: Semi-skilled and unskilled manual workers</p> <p>E: State pensioners, casual and lowest grade workers, unemployed with state benefits only</p>
<b>Statistical significance</b>	A statistical test to determine whether relationships observed between two survey variables are likely to exist in the population from which the sample is drawn. We only report on findings that are statistically significant at the 95% level.
<b>Survey outputs</b>	<p>The key deliverables from the survey. This includes:</p> <p>A key finding report, presenting summary headline findings from December 2020.</p> <p>Summary tables (Excel), showing trends across all waves of the tracker.</p> <p>An Excel dataset containing questionnaire variables, demographic variables and derived variables for further analysis. An SPSS version of the dataset is available upon request.</p> <p>Excel label data (CSV), containing labels for all variables.</p> <p>Excel numeric data (CSV), containing numeric values for all variables.</p> <p>Cross tabulation tables (PDF and Excel) for the current wave, including demographic and key question sub-group comparisons for all questions.</p>
<b>Weighting</b>	An adjustment made to the data to ensure that survey results are representative of the target population (in this case, all UK adults).

# Further information

## Future updates to these statistics

Results from the Public Attitudes Tracker are published quarterly. The next release is scheduled to be published in May 2021. Note that not all Tracker questions are included in each wave.

## Revisions policy

The [BEIS statistical revisions policy](#) sets out the revisions policy for these statistics, which has been developed in accordance with the UK Statistics Authority [Code of Practice for Statistics](#).

## Related Statistics

There are various other surveys which seek the general public's opinion on topics related to those covered by the BEIS Public Attitudes Tracker. These include:

### [Public Attitudes to Science](#)

A collection of studies looking at the UK public's attitudes to science, scientists and science policy.

### [Public attitudes towards transport](#)

The department for transport publishes a wide range of reports on the public's attitude to various modes of transport.

### [Biannual Public Attitudes Tracker - Food Standards Agency](#)

This survey monitors changes in consumer attitudes to food-related issues in England, Wales and Northern Ireland.

### [The English Housing Survey](#)

The English Housing Survey is a continuous national survey commissioned by the Ministry of Housing, Communities and Local Government (MHCLG). It collects information about people's housing circumstances and the condition and energy efficiency of housing in England. There are some waves of the PAT which cover similar topics such as the number of households with condensing boilers.

BEIS also publishes a wealth of energy statistics which provide context for the attitude data collected by the PAT. These are available on the [Statistics at BEIS](#) website.

## Uses of these statistics

These statistics are used by BEIS to guide BEIS policy, by many academics in their related studies, by ministers and by the general public. Some examples on the uses of previous waves of the PAT include

- Monitoring attitudes towards fracking by policy makers, the media and local groups to understand how this is changing over time and the reasons why people support or oppose it.
- Understanding public awareness of key BEIS policies such as the concept of net zero.
- Monitoring public attitudes to climate change and government policies associated with this and understanding how concern varies between demographic groups.
- Understanding public acceptability of different renewable energy sources which contribute to the government's aim to reduce the dependence on fossil fuels.

## User engagement

Users are encouraged to provide comments and feedback on how these statistics are used and how well they meet user needs. Comments on any issues relating to this statistical release are welcomed and should be sent to: [BEISPAT@beis.gov.uk](mailto:BEISPAT@beis.gov.uk).

The BEIS statement on [statistical public engagement and data standards](#) sets out the department's commitments on public engagement and data standards as outlined by the [Code of Practice for Statistics](#).

## Pre-release access to statistics

Some ministers and officials receive access to these statistics up to 24 hours before release. Details of the arrangements for doing this and a list of the ministers and officials that receive pre-release access to these statistics can be found in the [BEIS statement of compliance](#) with the Pre-Release Access to Official Statistics Order 2008.

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