

## DESNZ Public Attitudes Tracker: Energy Infrastructure and energy security, Spring 2024, UK

03 July 2024

Official Statistics

The DESNZ Public Attitudes Tracker is a nationally representative annual survey of adults (aged 16+) in the UK that tracks public awareness, attitudes and behaviours relating to the policies of the Department for Energy Security and Net Zero (DESNZ), such as energy and climate change.

This report provides a summary of the headline findings relating to energy infrastructure and energy security from the Spring 2024 wave of the Tracker, which ran from 18 March to 22 April 2024.

Differences between groups are only reported where they are statistically significant at the 95% confidence interval level.

Two summary self-reported measures are used in this report:

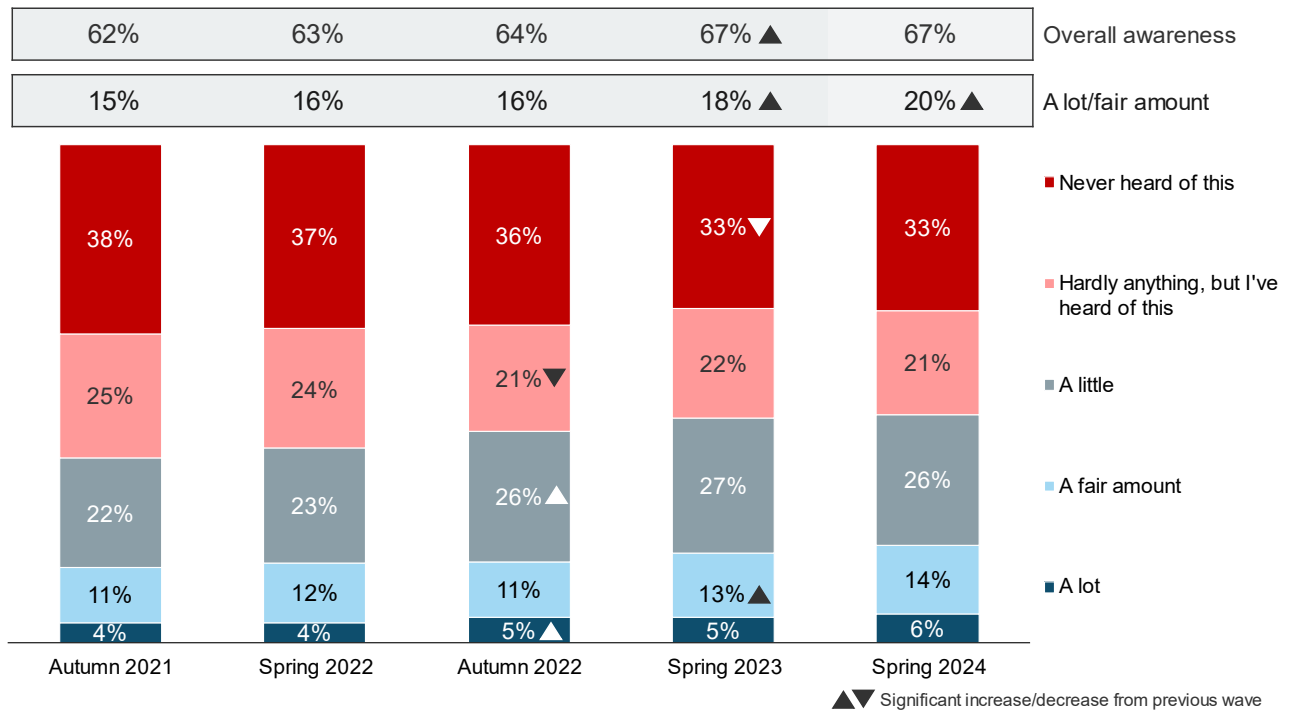
- **'Awareness'** encompasses all respondents who said they had heard of a particular concept or technology, including those who said 'hardly anything but I've heard of this', 'a little', 'a fair amount' or 'a lot'.
- **'Knowledge'** encompasses those who said that they know 'a fair amount' or 'a lot'.

## Awareness and support for fusion energy

Respondents were provided with the following explanation before being presented with some questions on this topic *'Fusion energy is an experimental technology that works by fusing together atoms in order to release energy. The UK is exploring whether this technology could be used to generate zero carbon electricity'*.

In Spring 2024, awareness of fusion energy remained unchanged from Spring 2023 at 67%, maintaining the higher level observed since Autumn 2022 (Figure 3.1). Overall, 20% said they knew 'a lot' or 'a fair amount' which maintains the increase over time (up from 18% in Spring 2023 and from 15% in Autumn 2021). Similar to previous waves, 6% said they knew 'a lot' about fusion energy.

**Figure 3.1: Awareness of fusion energy (based on all people), Autumn 2021, Spring and Autumn 2022, Spring 2023, Spring 2024**



FUSIONKNOW. Fusion energy is an experimental technology that works by fusing together atoms in order to release energy. The UK is exploring whether this technology could be used to generate zero carbon electricity. Before today, how much, if anything, did you know about fusion energy?  
 Base: All wave respondents – Autumn 2021 (5,558), Spring 2022 (4,378), Autumn 2022 (4,158), Spring 2023 (4,406), Spring 2024 (4,082)

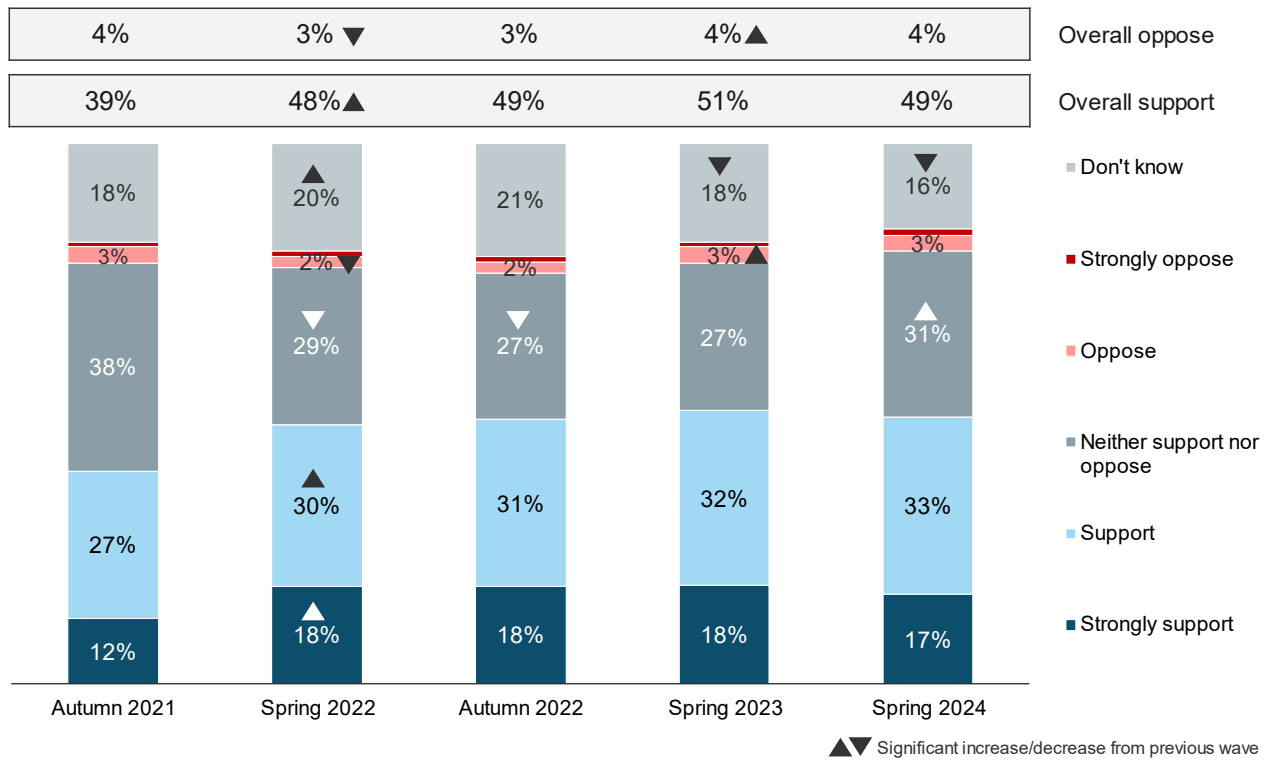
By age, people aged under 25 were more likely to say they knew 'a lot' or 'a fair amount' (28%) compared with those aged 25 and over (between 17% and 20%). The under-25s were also more likely to say they were aware of fusion energy (73%) compared with those aged 25 and over (between 62% and 67%).

People with a degree were more likely to be aware of fusion energy (79%) compared with those with other qualifications (63%) and those with no qualifications (52%), with a similar pattern of difference by education in levels of knowledge.

Those claiming to know at least 'a fair amount' about Net Zero were also more likely to claim they knew at least 'a fair amount' about fusion energy (32%), compared to those that know hardly anything/a little (6%) and those that are not aware of Net Zero (2%).

In Spring 2024, levels of overall support for fusion energy remained stable since Spring 2022 at 49%, with very few (4%) opposing it (Figure 3.2). Strong support (17% in Spring 2024) had also remained stable over this time period. A higher proportion said they neither supported or opposed it (31%) than in Spring 2023 (27%), although this remained below the baseline Autumn 2021 level of 38%.

**Figure 3.2: Whether support fusion energy (based on all people), Autumn 2021, Spring and Autumn 2022, Spring 2023, Spring 2024**



FUSIONSUPPORT. From what you know, or have heard about fusion energy, do you support or oppose the UK developing this technology?

Base: All wave respondents – Autumn 2021 (5,555), Spring 2022 (4,368), Autumn 2022 (4,157), Spring 2023 (4,408), Spring 2024 (4,072)

By age there was little difference in overall support, but levels of strong support were higher for those aged 25 to 54 (between 18% and 21% by age band) and lower for those aged over 55 (between 13% and 15%).

By geography, strong support was higher for those in London (21%), the East of England (20%) and Wales (20%) and lower in Scotland (12%) and Northern Ireland (11%), with a similar geographical pattern for overall support.

People with a degree were more likely to strongly support fusion energy (24%) compared with those with other qualifications (13%) and those with no qualifications (13%) with a similar pattern of difference by education in overall levels of support.

The total base size for respondents who reported that they opposed or strongly opposed fusion energy was very small (n=169). Therefore, due to small bases sizes, the reasons they provided for opposing fusion energy are not included in this report.

## Awareness and support for shale gas

Respondents were provided with the following explanation before being presented with some questions on this topic '*Shale gas is natural gas found in shale, a type of 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.*

## DESNZ Public Attitudes Tracker (Spring 2024, UK)

In Spring 2024, reported awareness of hydraulic fracturing for shale gas, otherwise known as 'fracking', had dropped since the question was last asked in Autumn 2022 (82%, down from 86%). There was also a drop in the level who said they knew 'a lot' or 'a fair amount' (36%, down from 41%). As in previous waves, only a small proportion (9%) said they knew 'a lot'.

By age, knowledge was highest for those aged 55 and over (between 41% to 43% said they knew 'a lot' or 'a fair amount') and lowest for those aged under 45 (between 29% and 32%).

By education, those claiming to know 'a lot' or 'a fair amount' was highest for those with a degree (47%) compared to those with another kind of qualification (31%) and those with no qualifications (25%). Opposition to fracking had increased between Autumn 2022 and Spring 2024 from 36% to 40%, while overall support had declined from 25% to 18%.

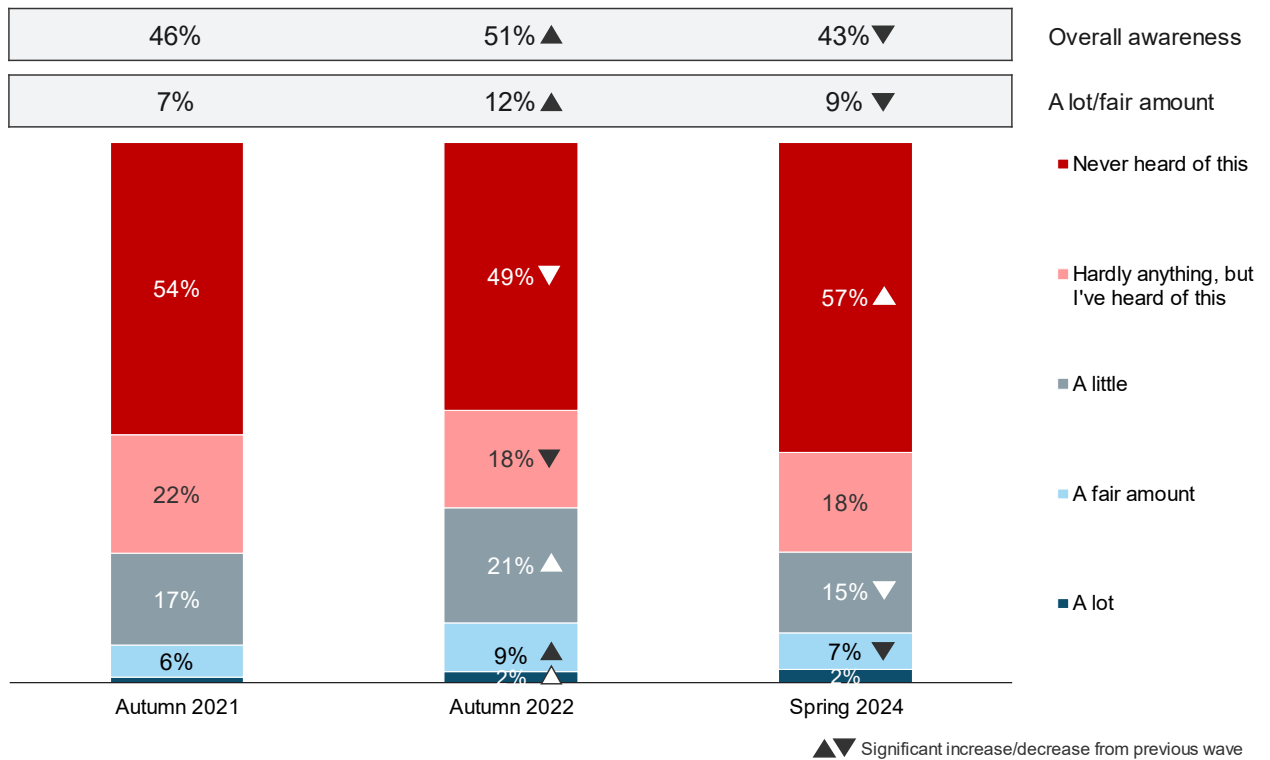
By geography, opposition was highest in Wales (48%) and Scotland (47%) and lowest in the North East (30%). Opposition was also higher for those in rural areas (44%) compared to urban areas (39%).

## Awareness of small modular reactors

Respondents were provided with the following explanation before being presented with some questions on this topic: *'These are new types of nuclear reactors, similar to the ones in existing nuclear power stations, but on a smaller scale. They can be used for electricity generation, to provide industry with heat and power, or to provide energy to UK communities not connected to the national gas grid'*.

In Spring 2024 there was a decline in awareness of small modular reactors (43%, down from 51% in Autumn 2022) (Figure 3.3). Knowledge also declined, with 9% saying they knew 'a lot' or 'a fair amount' about this topic, down from 12% in Autumn 2022.

**Figure 3.3: Awareness of small modular reactors (based on all people), Autumn 2021, Autumn 2022, Spring 2024**



SMRKNOW. The next question is about Small Modular Reactors. These are new types of nuclear reactors, similar to existing nuclear power stations, but on a smaller scale. They can be used for electricity generation, to provide industry with heat and power, or to provide energy to UK communities not connected to the national gas grid. Before today, how much, if anything, did you know about Small Modular Reactors?  
 Base: All wave respondents – Autumn 2021 (5,548), Autumn 2022 (4,158), Spring 2024 (4,086)

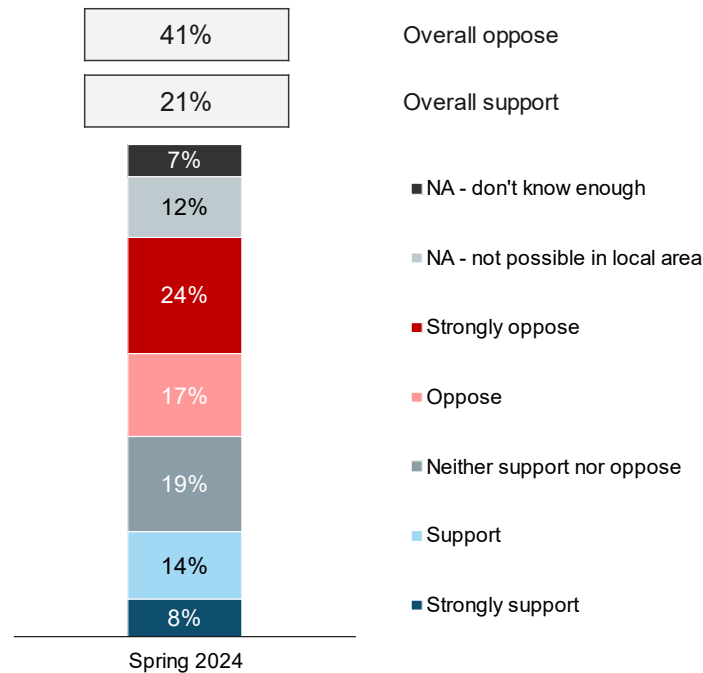
Reported knowledge (knowing ‘a lot’ or ‘a fair amount’) was higher in Wales (15%), as well as East Midlands (13%), the East of England (12%) and London (12%), and lowest in Northern Ireland (4%) and the North East (3%).

By education, reported knowledge was higher among people educated to degree level (15%) compared with those with other qualifications (6%) and no qualifications (7%), with a similar pattern by education for awareness of small modular reactors.

## Attitudes towards local nuclear power stations

In Spring 2024, a new question was included to assess the level of support for the construction of a nuclear power station in the local area. Overall support for this was 21%, while around twice as many (41%) said they opposed it (Figure 3.4). Around one in four were strongly opposed (24%).

**Figure 3.4: Support for construction of nuclear power station in local area (based on all people), Spring 2024**



NUCLOCALSUPP. Now imagine that there are plans for a nuclear power station to be constructed in your local area. To what extent would you support or oppose this? If you already have this in your local area, answer on the basis of how you feel about this now.

Base: All wave respondents – Spring 2024 (4,067)

By age, overall opposition for local construction of a nuclear power station was higher for those aged 25 to 64 (between 41% and 47%) and lower for those aged under 25 (35%) and 65 and over (35%).

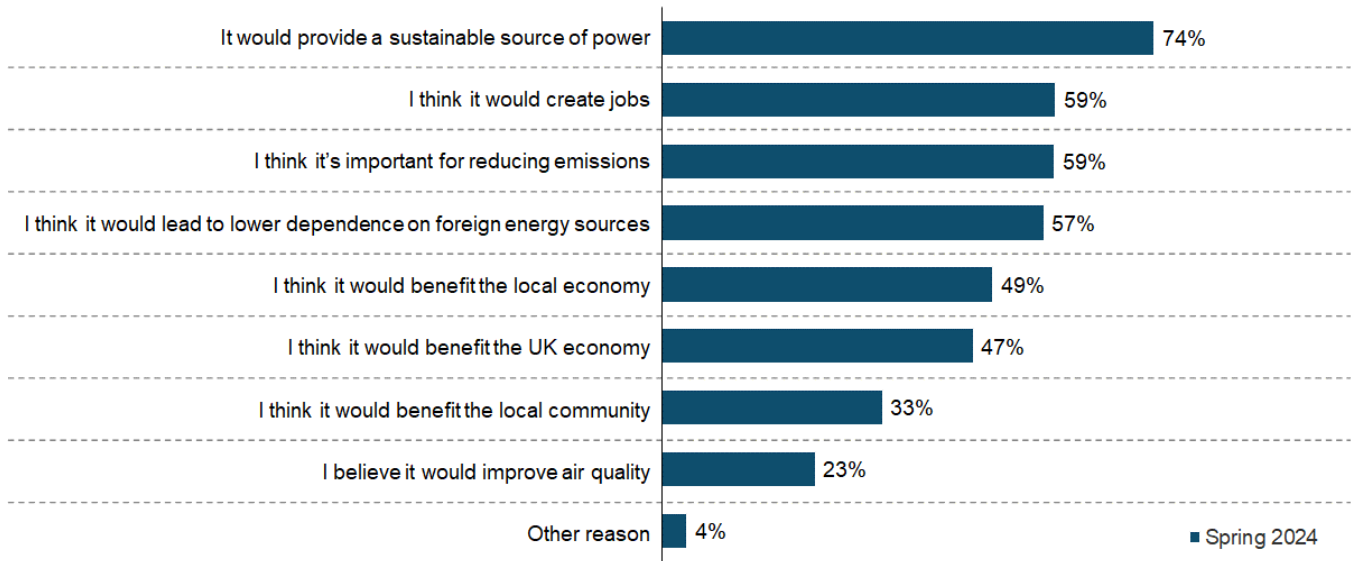
By geography, support for this was lower in Northern Ireland (10%) than in all other geographical areas (between 19% and 26%). Overall opposition was higher in the West Midlands (48%) and Scotland (46%). Those in London were more likely to say this would not be possible in their local area (24%) compared to other regions (between 7% and 15%).

Opposition was also higher among those with two or more children aged under 16 in the household (49%) compared with those with only one child (41%) or no children (39%).

Respondents who said they supported the construction of a nuclear power station in their local area (21%) were prompted to choose their reasons for support from a list of possible reasons (Figure 3.5).

The primary reason for support was that it would provide a sustainable source of power (74%), followed by the creation of jobs (59%), reducing emissions (59%) and lower dependence on foreign energy sources (57%). Around half thought it would benefit the local economy (49%) and the UK economy (47%), while 23% based their support on improvement of air quality.

**Figure 3.5: Reasons for supporting construction of nuclear power station in local area (based on all who support it), Spring 2024**



NUCWHYSUPP. You said you would support the construction of a nuclear power station to be built in your local area. Why is this? Please select all that apply.

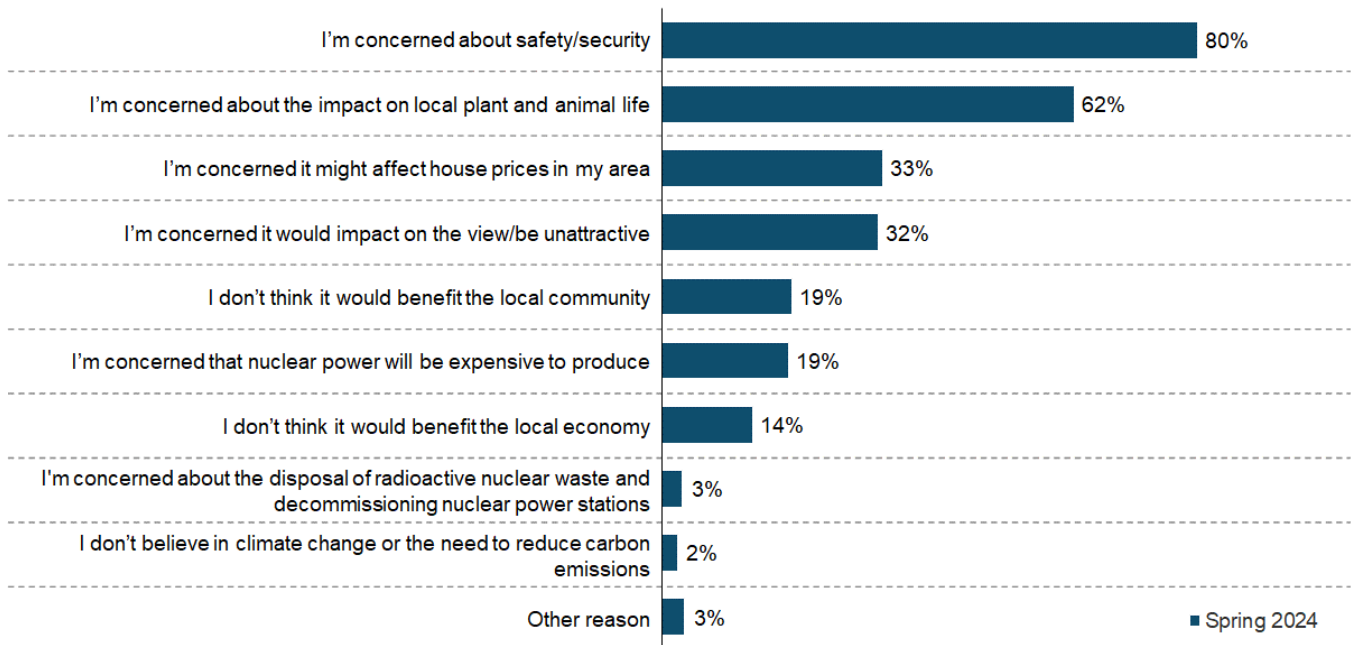
Base: All wave respondents who support local construction – Spring 2024 (853)

Respondents who said they opposed the construction of a nuclear power station in their local area (41%) were prompted to choose their reason for this opposition from a list of possible reasons (Figure 3.6)<sup>1</sup>.

The main reason for opposing construction was concern about safety and security (80%). Other concerns focussed on the impact on local plant and animal life (62%), impact on house prices (33%) and on the view or attractiveness (32%).

<sup>1</sup> The code 'I'm concerned about the disposal of radioactive nuclear waste and decommissioning nuclear power stations' was added in Spring 2024 from the open text data collected in 'Other reason' for the question NUCWHYNO.

**Figure 3.6: Reasons for opposing construction of nuclear power station in local area (based on all who oppose it), Spring 2024**



NUCWHYNO. You said you would be opposed the construction of a nuclear power station being built in your local area. Why is this? Please select all that apply.

Base: All wave respondents who oppose local construction – Spring 2024 (1,697)



# Awareness of hydrogen as fuel

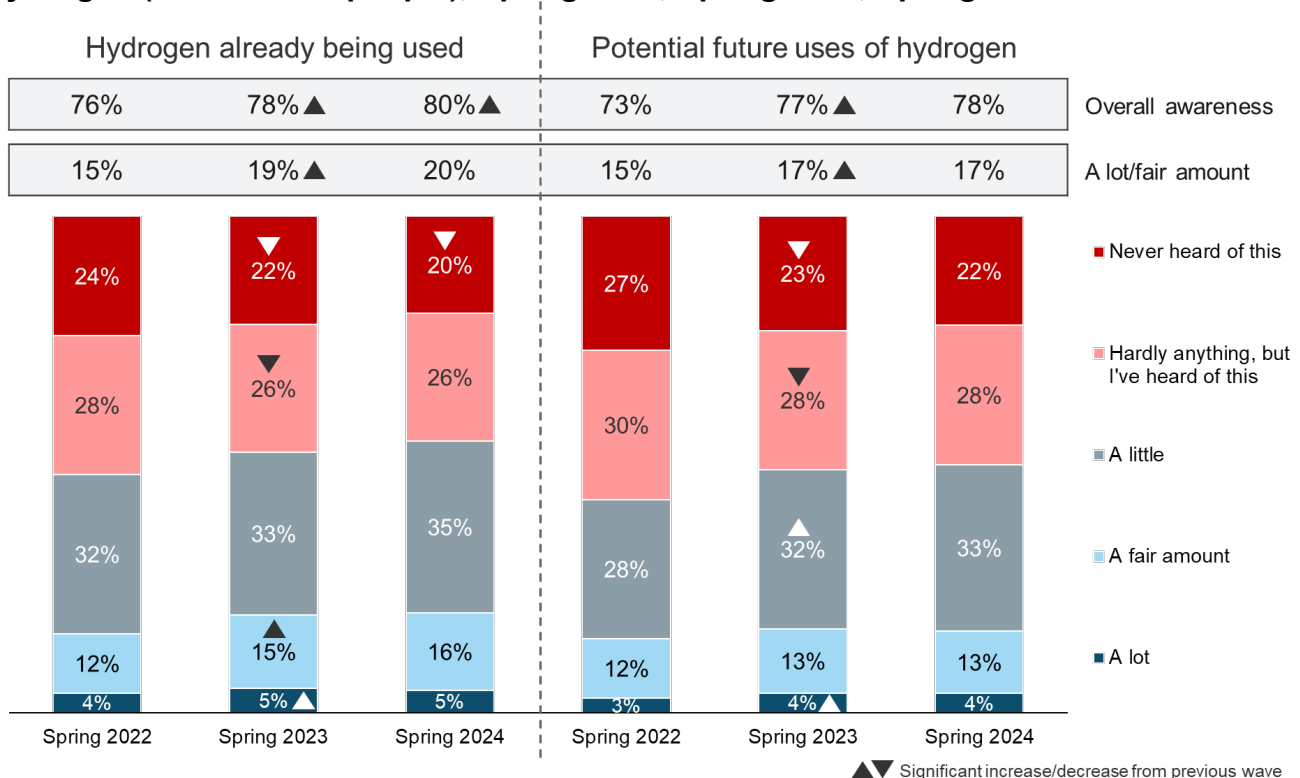
Respondents were introduced to the concept of hydrogen as a fuel by being provided with the following definition: ‘And now a question about hydrogen, which is used as a fuel in some industrial processes. Hydrogen is not naturally available. This means it needs to be produced from other sources to be used as a fuel. When produced in an environmentally friendly way, hydrogen can help reduce the carbon emissions in industries, power generation, lorries and shipping.’

Survey respondents were then asked about how much they knew about hydrogen **already** being used as a fuel in some industrial processes in the UK, and how much they knew about the potential **future** uses of hydrogen to reduce emissions in some industries.

Awareness and knowledge of hydrogen **already** being used as a fuel had increased between Spring 2022 to Spring 2023. In Spring 2024, overall awareness of this continued to rise to 80%, up from 76% in Spring 2022 and 78% in Spring 2023 (Figure 3.7). The level of knowledge about this (knowing ‘a lot’ or ‘a fair amount’) remained stable since Spring 2023 at 20%.

Awareness (78%) and knowledge (17%) about the potential **future** uses of hydrogen to reduce emissions in some industries remained unchanged since Spring 2023.

**Figure 3.7: Awareness of hydrogen already used as fuel, and of potential future uses of hydrogen (based on all people), Spring 2022, Spring 2023, Spring 2024**



HYDKNOW. And now a question about hydrogen, which is used as a fuel in some industrial processes. Hydrogen is not naturally available. This means it needs to be produced from other sources to be used as a fuel. When produced in an environmentally friendly way, hydrogen can help reduce the carbon emissions in industries, power generation, lorries and shipping. Before today, how much would you say you knew about hydrogen already being used as a fuel in some industrial processes in the UK?

Base: All wave respondents – Spring 2022 (4,372), Spring 2023 (4,400), Spring 2024 (4,079)

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HYDREDKNOW. Before today, how much would you say you knew about the potential future uses of hydrogen to reduce emissions in some industries?

Base: All wave respondents – Spring 2022 (4,372), Spring 2023 (4,402), Spring 2024 (4,084)

Reported knowledge (knowing ‘a lot’ or ‘a fair amount’) about **current** use of hydrogen as a fuel was higher among those aged under 25 (29%) compared with those aged 25 and over (between 17% and 21%). There was a similar pattern of difference by age for **future** use of hydrogen.

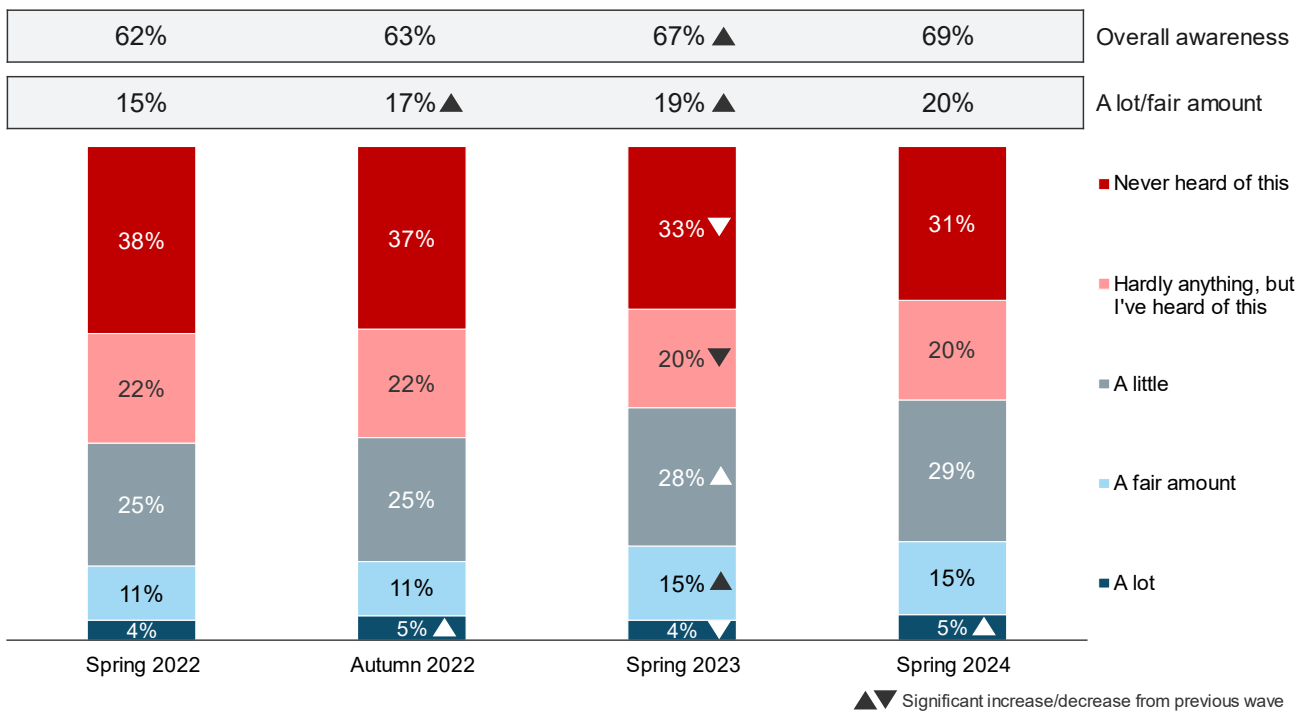
Reported knowledge was also higher amongst those educated to a degree level or above (27%), compared to those with another kind of qualification (18%) or those with no qualifications (11%).

## Awareness and support for carbon capture and storage

Respondents were provided with the following explanation before being presented with some questions on this topic: *‘Carbon capture and storage is a technology that stops greenhouse gases entering the atmosphere. It typically involves capturing carbon dioxide (CO<sub>2</sub>) emissions from power stations or industrial facilities where emissions are high. The CO<sub>2</sub> is then piped to offshore underground storage sites, where it can be safely and permanently stored.’*

In Spring 2024 awareness (69%) and knowledge (20%) of carbon capture and storage remained stable from Spring 2023 (Figure 3.8). Only 5% said they knew ‘a lot’ about this.

**Figure 3.8: Awareness of carbon capture and storage (based on all people), Spring and Autumn 2022, Spring 2023, Spring 2024**



CCSKNOW. Carbon capture and storage is a technology that stops greenhouse gases entering the atmosphere. It typically involves capturing carbon dioxide (CO<sub>2</sub>) emissions from power stations or industrial facilities where emissions are high. The CO<sub>2</sub> is then piped to offshore underground storage sites, where it can be safely and permanently stored. Before today, how much, if anything, did you know about carbon capture and storage?  
 Base: All wave respondents – Spring 2022 (4,375), Autumn 2022 (4,155), Spring 2023 (4,406), Spring 2024 (4,082)

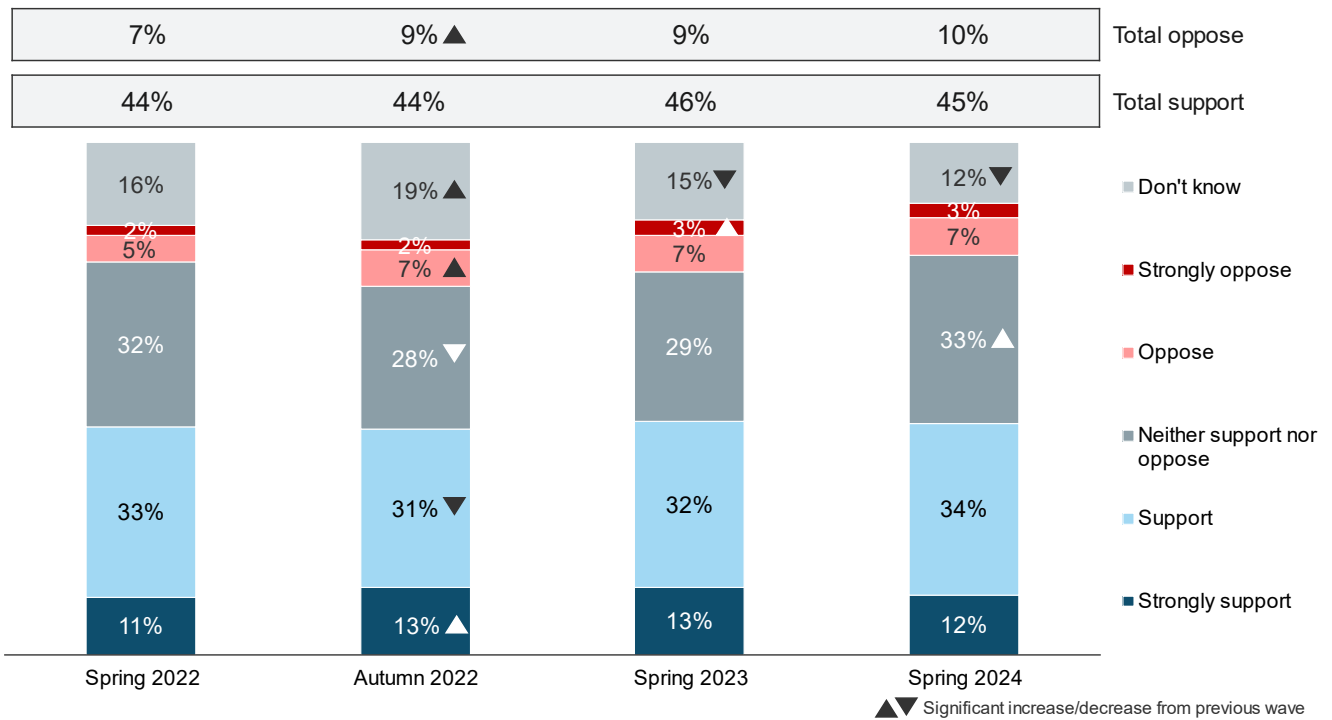
Awareness of carbon capture and storage peaked at either end of the age scale, being highest for those aged under 25 (74%) and 65 and over (74%), and lower for those aged 25 to 54 (between 61% and 67%). There was a similar age-related pattern for knowledge (that is knowing ‘a lot’ or ‘a fair amount’).

By geography, awareness was higher in Scotland (76%), London (75%), the East Midlands (73%), Wales (72%), and East of England (71%), and lower in the South East (63%) and Northern Ireland (56%). There was a similar geographical pattern in knowing at least ‘a fair amount’. This level of knowledge was higher in Wales (27%), London (27%) and Scotland (24%) and lower in the South East (18%) and Northern Ireland (12%).

By education, the proportion of those that reported any awareness was highest for those with a degree (79%) compared to those with another kind of qualification (63%) and those with no qualifications (62%). The trend was similar in those that claimed knowledge of carbon capture and storage, with 30% of those with a degree claiming knowledge compared to 14% with another qualification and 15% with no qualification.

In Spring 2024, overall support for the use of carbon capture and storage to reduce greenhouse gas emissions remained stable at 45%, with 12% saying they strongly supported its use. Opposition remained stable at 10%, unchanged from Spring 2023. The proportion saying that they did not know has declined over time from 19% in Autumn 2022 to 15% in Spring 2023 and 12% in Spring 2024, which complements the increase in overall awareness.

**Figure 3.9: Whether support or oppose carbon capture and storage (based on all people), Spring and Autumn 2022, Spring 2023, Spring 2024**



CCSUPPORT. From what you know, or have heard about it, do you support or oppose the use of carbon capture and storage to reduce greenhouse gas emissions?  
 Base: All wave respondents – Spring 2022 (4,366), Autumn 2022 (4,145), Spring 2023 (4,397), Spring 2024 (4,080)

Knowledge of carbon capture and storage was related to support, with those saying they knew ‘a lot’ or ‘a fair amount’ about carbon capture being more likely to say they supported it (65%) than those who knew ‘hardly anything’ or ‘a little’ (47%) or who were not aware of it (30%). However, those who reported knowing at least ‘a fair amount’ about carbon capture were also more likely to oppose it (18% compared with 8% who knew nothing, hardly anything or a little). This indicates that increased knowledge about the technology increases the likelihood to have an opinion about it in either direction.

## Reasons for supporting or opposing carbon capture and storage

As shown in Figure 3.9, 45% of people supported the use of carbon capture and storage, and 10% opposed it in Spring 2024. Respondents were asked to select their reasons for support or opposition from lists of possible reasons.

The main reason for supporting carbon capture and storage was the belief that it would help to combat climate change and reduce emissions (83%, down from 87% in Spring 2023). Other reasons for supporting carbon capture and storage included: it would create jobs (32%, down from 36%), provide an opportunity for the UK to be a world leader in this technology (32%, no change), benefit the UK economy (31%, down from 36%) and re-use existing infrastructure such as oil and gas pipelines (30%, no change).

There were two key reasons selected by those who opposed carbon capture and storage. Around half did not think it would be a long-term solution (51%, down from 58% in Spring 2023), and a similar proportion (49%, no change) felt more natural strategies should be used

instead. Further reasons for opposition included a belief that it would not tackle the causes of climate change (39%), that it would be locally disruptive (33%, up from 25% in Spring 2023) and too expensive (26%, up from 20%). Further concerns (no change over time) included safety (32%) and effectiveness (29%).

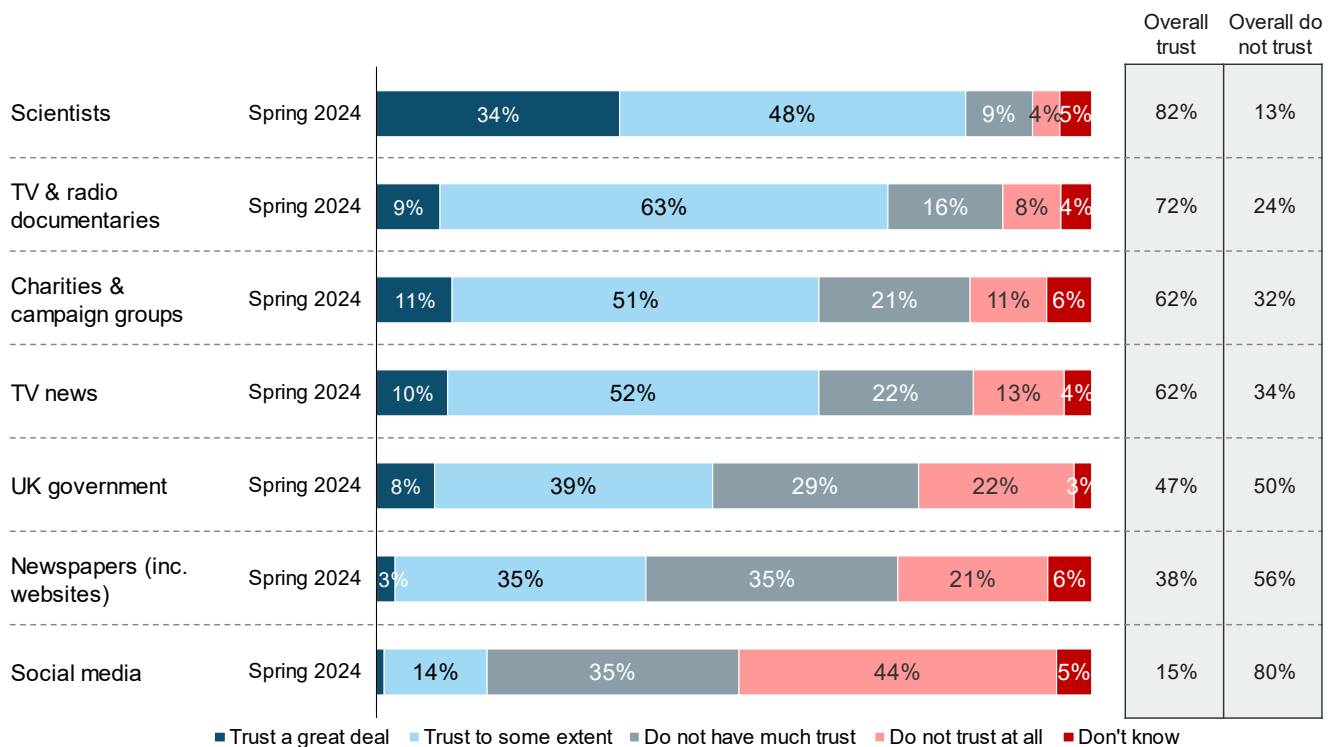
## Trust in information about new energy sources

Respondents were asked about their level of trust in various sources to provide accurate information about new and emerging energy sources such as fusion energy and hydrogen.

In Spring 2024, levels of trust were found to be highest for scientists (82% trusted, with 34% trusting them ‘a great deal’), TV and radio documentaries (72% trusted, with 9% trusting them ‘a great deal’), charities and campaign groups (62% trusted, with 11% trusting them ‘a great deal’) and TV news (62% trusted, with 10% trusting them ‘a great deal’) (Figure 3.10). Lower levels of overall trust were cited for the UK Government (47% trusted, with 8% trusting them ‘a great deal’), newspapers and their websites (38% trusted, with 3% trusting them ‘a great deal’), with especially low levels of trust associated with social media (15% trusted, with 1% trusting them ‘a great deal’).

As this was asked for the first time in Spring 2024, no previous tracking data are available.

**Figure 3.10: Level of trust in each source to provide accurate information about new energy sources (based on all people), Spring 2024**



NEWTECHTRUST. How much do you trust each of the following to provide accurate information about new and emerging energy sources such as fusion energy and hydrogen energy?

Base: All wave respondents – Spring 2024: Scientists (4,070), TV & radio documentaries (4,065), Charities & campaign groups (4,067), TV news (4,072), UK government (4,069), Newspapers (4,067), social media (4,057)

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Certain sources were more trusted by younger people. Those aged under 25 were more likely to trust charities and campaign groups (72% compared with 51% of those aged 65+) the UK government (57% compared with 43% of those aged 65+); and social media (34% compared with 4% of those 65+). Trust in social media decreased as the age ranges increased (decreasing to 23% for those aged 25 to 34, 18% for 35 to 44s, 10% for 45 to 55s, 11% for 55 to 64s, and 4% for those 65 and over).

Those aged 65 and over were most likely to trust newspapers and their websites (44% compared with between 34% and 38% of age groups under 65). Older age groups were also less likely to trust in scientific organisations than those in younger age groups (77% for those aged 65+ compared with 83% to 87% for age groups under 55).

There were also differences in level of trust in sources to provide accurate information about new energy technologies by education. With the exception of social media, those educated to degree level trusted all sources more than those with other qualifications or no qualifications. For example, TV news was trusted by 66% of those with a degree, compared with 62% of those with other qualifications and 53% of those with no qualifications, and a similar pattern was seen for trust in TV and radio documentaries (78% compared with 71% and 61%, respectively).

In contrast to other sources, social media was trusted slightly more by those with no qualifications (20%) and other qualifications (17%) compared with those with a degree (13%).

Most sources of information were trusted more by those who were concerned about climate change. For example, 72% of those who were 'very concerned' about climate change trusted TV news to provide accurate information about new energy technologies compared with 63% of those who were 'fairly concerned' and 40% of those who were either 'not very concerned' or 'not at all concerned'.

However, there was a different pattern of trust by climate change concern for two sources of information. Social media was trusted slightly more by those who were either not concerned about climate change (18%) or 'fairly concerned' (17%) compared with those who were 'very concerned' (12%). The UK government was most trusted by those who were 'fairly concerned' about climate change (54%), compared with 45% who were 'very concerned' and 36% who were not concerned.

# Further findings on energy infrastructure and energy security

In previous waves, questions were included on other topics relating to energy infrastructure and energy security. The latest findings relating to these topics can be found as follows:

- Attitudes towards fusion energy, see [Summer 2023 report on energy infrastructure and energy sources](#) - section on 'Attitudes towards fusion energy'.
- Reasons for either supporting or opposing fracking, see [Autumn 2022 report on energy infrastructure and energy sources](#) - section on 'Awareness and support for shale gas'.
- Attitudes towards nuclear energy, see [Winter 2023 report on energy infrastructure and energy sources](#) - section on 'Nuclear energy'.
- Attitudes towards electricity network infrastructure, see [Summer 2023 report on energy infrastructure and energy sources](#) - section on 'New electricity network infrastructure'.
- Attitudes towards energy security, see [Summer 2023 report on energy infrastructure and energy sources](#) - section on 'Concerns about energy security'.



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