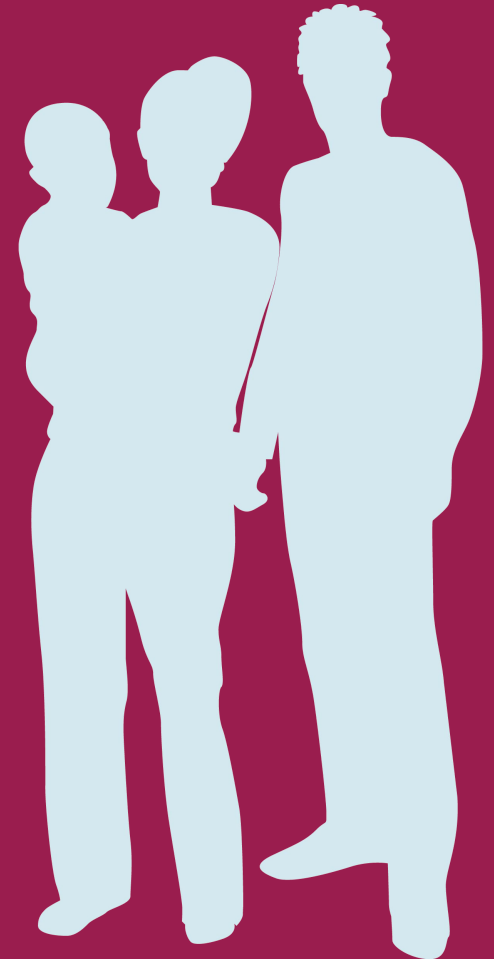


# Navigating net zero

A framework to give people the confidence to invest in home energy technologies

**citizens  
advice**



## Summary

Reaching the government's target of reaching net zero emissions by 2050 will require home energy improvements being installed in most homes across the country. Yet the current landscape of support for householders looking to invest in these technologies is limited and patchy. Navigating this market requires a certain level of knowledge and an investment in time and energy. Without a coordinated effort to demystify this market and simplify the consumer journey, it's likely that many people will find it hard to engage and install energy efficiency improvements or low carbon heating. Citizens Advice is calling for the government to establish a net zero homes guarantee. This would be a government-backed scheme focused on giving people confidence to install low carbon heating systems or energy efficiency measures.

Our research sets out a framework for advice and support that can help overcome these barriers. This framework should help to inform, protect and support people, so that they feel confident about making decisions and investing in the home energy improvements needed to help reach net zero.

These findings are based on new qualitative research carried out for Citizens Advice by Accent.

## A framework for advice and support



### De-risking the process

- Clear leadership
- Trusted sources of information
- A competitive but well-regulated market
- Support after purchase



### Informed choice

- A central information hub
- User-generated content
- Seeing solutions up close and in person



### Support centered on the consumer

- Flexible advice and support
- Personalised recommendations
- Local and community advice

# The public engagement challenge

The COVID-19 crisis is still being felt across the country. As the focus turns to economic recovery, it is essential that investments to boost the economy also help get the country on track to meet its target to reach net zero carbon emissions by 2050. The government's Ten Point Plan for a Green Industrial Revolution commits to making our homes greener, warmer and more efficient as part of the green economic recovery. In its Sixth Carbon Budget, The Committee on Climate Change (CCC) has also led calls for a green economic recovery to generate new jobs, reduce emissions, change behaviour and create a fairer economy.

Reaching net zero will mean dramatic changes the way we heat our homes. Over 90% of homes in the UK will need low carbon heating systems, up from just 4.5% today. Most of these homes will also need other home energy improvements, like improved insulation. The government's Energy White Paper reiterates its target for all homes to reach an Energy Performance Certificate Band C by 2035 in order to reach carbon targets.

Installing these measures in homes won't be possible without the support and buy-in from people across the country. People not on a low income are likely to have to pay for at least a part of the cost of these measures themselves, creating an added barrier to engagement for these households.

In 2016 Citizens Advice published **Energising homeowners**, research looking at how homeowners could be encouraged to invest in energy efficiency improvements. It highlighted significant barriers to consumers installing measures and set out recommendations for policies that could help overcome this.

Our report **Lessons for net zero** looked at what past energy efficiency and low carbon home improvement schemes tell us about making future schemes a success. This pointed to the need for better protections, incentives and information to get consumers to engage.

We also explored consumer views about changing the way their home is heated and moving to new low-carbon heating systems in our report **Taking the temperature**. This

showed that navigating the market for these new technologies will prove challenging for all but the most engaged, technology savvy consumers. It highlighted the need for early communication and government action to mitigate the risks of the change.

We also looked at how consumers understand and respond to information on smart technologies, in our report **Powering up or facing resistance?**

We brought together the findings of these and other pieces of work to set out our **principles for the future energy market**.

In **Home Truths**, we looked carefully at the sorts of things people contact Citizens Advice about. We took a 'deep dive' into three years of data about the problems consumers have faced with home energy technologies, like insulation, solar panels, and heat pumps.

Our research points to the challenge of engaging consumers with net zero home technologies. With this report we look at the advice and support consumers need to overcome this challenge.

## Research approach

We commissioned research agency Accent to carry out research that would help us to better understand the following questions:

- Consumer attitudes towards new home energy technologies and the support available around these technologies,
- The support consumers are likely to need in navigating these new technologies,
- What form this support should take,
- How consumers view the role of government and other bodies in providing this support and engagement,
- Where consumers have gone or would expect to go if things went wrong with their low carbon technologies - if they would know who to contact for repairs or where to seek advice.

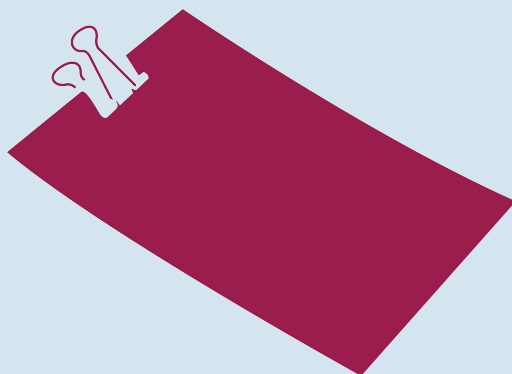
The research had 3 stages.



**The full research report  
can be found here**

### Desk review

**Desk review of the advice and support services available for home energy improvements**



### In-depth interviews

**15 interviews with people who has installed home energy technologies in the past 5 years:**

Participants completed a series of tasks on an app for a week leading up to the research interview to help refresh their memory of the purchasing process.

The interviews aimed at understanding:

- the customer journey,
- the detailed decision-making process that led them to adopt a low-carbon technology,
- where support options could have been improved.



Householders were selected so a wide range of measures were covered by the interviews including solid wall insulation, heat pumps and biomass boilers, solar panels and, in one case, a smart electric vehicle charger.



All participants were homeowners or private tenants who had installed and paid for the technology in the past five years and had been involved in the decision to install the technology.

## Workshops

**Deliberative workshops with homeowners who hadn't yet installed a home energy technology.**

The interviews aimed at understanding:

- current awareness and comprehension levels of the low carbon technologies,
- the barriers that prevent consumers from adopting (or considering) a particular technology,
- the support that consumers may need at different points of considering and adopting them.



4

workshops in  
England and Wales



39

Total participants



All participants recruited were homeowners who were not in fuel poverty. People were recruited with a range of characteristics eg. age, social-economic groups, property ages, property types, rural and urban areas, household size.


The workshops were guided to avoid the conversation being dominated by the question of the cost of measures and how they could be paid for, rather than advice and support needs.


## Workshop locations



## What are home energy technologies?

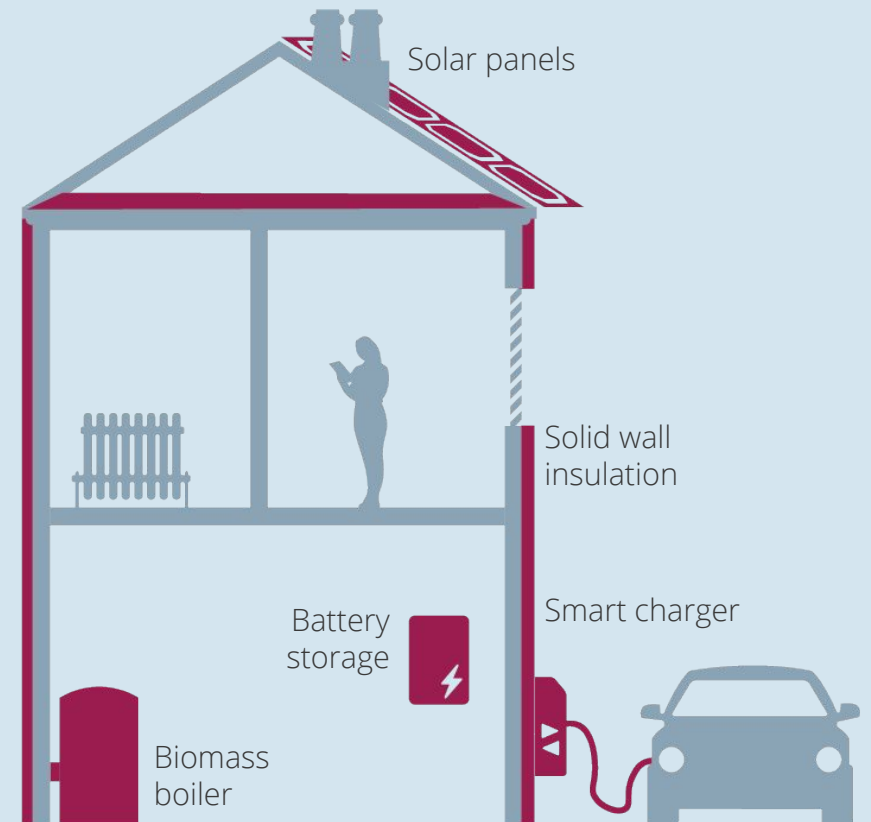
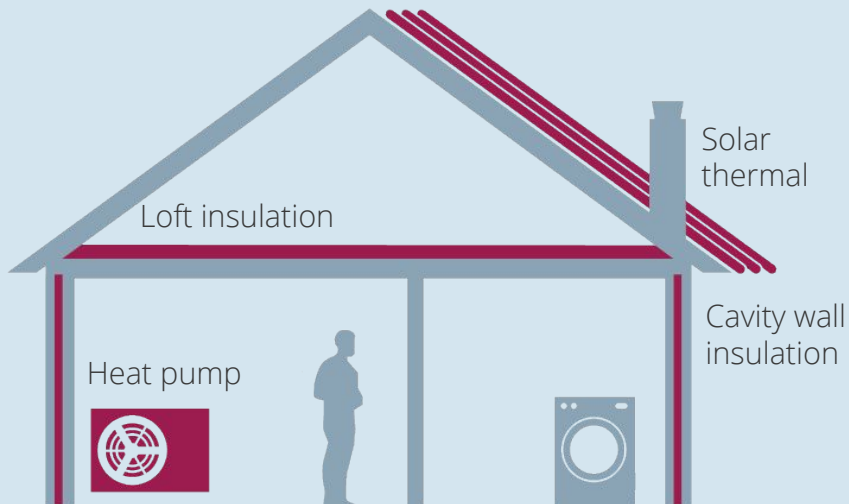
The research looked at a number of home energy technologies.

 **Insulation:** cavity wall, solid wall, and loft insulation

 **Heating systems:** biomass boilers, solar thermal, and ground-source and air-source heat pumps

 **Electricity generation:** solar panels

The interviews also included one experience with a smart electric vehicle charger.



# Findings

**Attitudes to net zero**

**Responses to different technologies**

**Motivation and barriers**

**The customer journey**

**Information needs**

## Attitudes to net zero

Most householders we spoke to were concerned about climate change. In many cases they have come round to this view in recent years, when they felt a tipping point in climate change was reached. But they tend to have little clear knowledge of what net zero means for them, and what actions they need to take to help reach it. This matches a survey we carried out last year, which found only 38% of people thought they would need to change how they heat their home to meet net zero.

Householders are concerned that the challenge and costs of meeting net zero could be forced onto them, especially as they see little advice and support available to help them.

## Motivation and barriers

There are a range of different factors that can lead to someone deciding to make home energy improvements. The most common are financial, for example, the length of time it will take for the savings and reducing energy bills. But people are also motivated by comfort and home improvement. Environmental factors can also help support a decision but they seem to rarely be the primary motivating factor behind a purchase.




	Motivations	Barriers
<b>Financial</b>	<ul style="list-style-type: none"> <li>Reducing, or at least controlling, energy bills</li> <li>Increasing the value of their property</li> <li>Available grant, free installation or other financial incentive</li> </ul>	<ul style="list-style-type: none"> <li>Upfront costs</li> <li>Uncertain payback</li> </ul>
<b>Home investment and improvement</b>	<ul style="list-style-type: none"> <li>Comfort, how to make home warmer</li> <li>Doing other renovation work</li> <li>A problem with existing technology</li> <li>Improving EPC</li> </ul>	<ul style="list-style-type: none"> <li>Disruption</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>Feeling they are doing their bit for environment</li> </ul>	






## Responses to different technologies

Householders are more familiar with some technologies than others. Even where they have heard of a technology, baseline knowledge is usually low, and they tend to have concerns about expense, complexity and the list of perceived things which may go wrong. Despite this most householders seem open to considering even those they are less familiar with and have some reservations about.

### Householders reaction to different technologies

	 <b>Benefits</b>	 <b>Concerns</b>	 <b>Specific support needed - where raised</b>
<b>Solar</b>	<ul style="list-style-type: none"> <li>A familiar technology</li> <li>Considered less intrusive (on the outside of the home)</li> <li>Potential for bill reduction, cashback and value added to the property</li> </ul>	<ul style="list-style-type: none"> <li>Visual impact a problem for some people</li> <li>Safety concerns</li> <li>Potential for damage to the property</li> <li>Suitability of their homes/roofs</li> </ul>	<ul style="list-style-type: none"> <li>A reliable, independent, property survey to reassure it's the right choice</li> </ul>
<b>Insulation</b>	<ul style="list-style-type: none"> <li>Help with a warmer home</li> <li>Could be installed at the same time as other home renovations or extensions</li> </ul>	<ul style="list-style-type: none"> <li>Finding a reputable and legitimate tradesman and being sure work would be carried out to a high quality</li> <li>Safety (for example, is it using fire-proof materials?)</li> <li>Disruption to home's interior (in the case of internal wall insulation)</li> </ul>	

## Householders reaction to different technologies

	 <b>Benefits</b>	 <b>Concerns</b>	 <b>Specific support needed - where raised</b>
<b>Air and ground source heat pumps</b>	<p>Could be externally-located and less intrusive than some of the other options</p> <p>A straightforward installation and possibly easy to take out if needed</p>	<p>People found it difficult to understand how they work: the mechanics and how they would fit with their current heating system in their homes</p> <p>Positioning of the heat pump, including the long term impact on the use of gardens for ground source pumps</p> <p>Potential need for maintenance</p> <p>A niche product - would there be sufficient choice of installers to do the job to a high standard?</p>	<p>Opportunity to see it in action in a home before committing to it</p>
<b>Biomass</b>	<p>Modern looking and visually appealing in the home</p> <p>Quiet to run</p>	<p>The long term commitment of fuel purchasing</p> <p>The environmental impacts of fuel burning</p> <p>Storage space of fuel</p> <p>Concern about savings that would be made on bills</p>	

# The customer journey

A householder can be proactive or reactive in their decision to install a home energy technology.

Most customer journeys tend to reflect one of two archetypes

### A proactive choice

- Consumer decides to look into either installing a specific technology or achieving a specific goal, like making their home more efficient.
- A consumer taking this route tends to have some existing knowledge of home energy technologies, or contacts who do.
- Self-guided research using a variety of online sources. Some people can draw on existing technical knowledge or contacts for support.

### A reactive decision

- The consumer responds to a sales pitch, a subsidised offer or a community push.
- Consumer may have little knowledge of home energy technologies.
- Research is limited. For example, the consumer may just look into potential problems.

A customer journey can also be a combination of the two. For example:

- an approach by an installer may lead some consumers to carry out extensive research of their own,
- a consumer may make a proactive choice to look into home energy technologies despite having little existing knowledge.

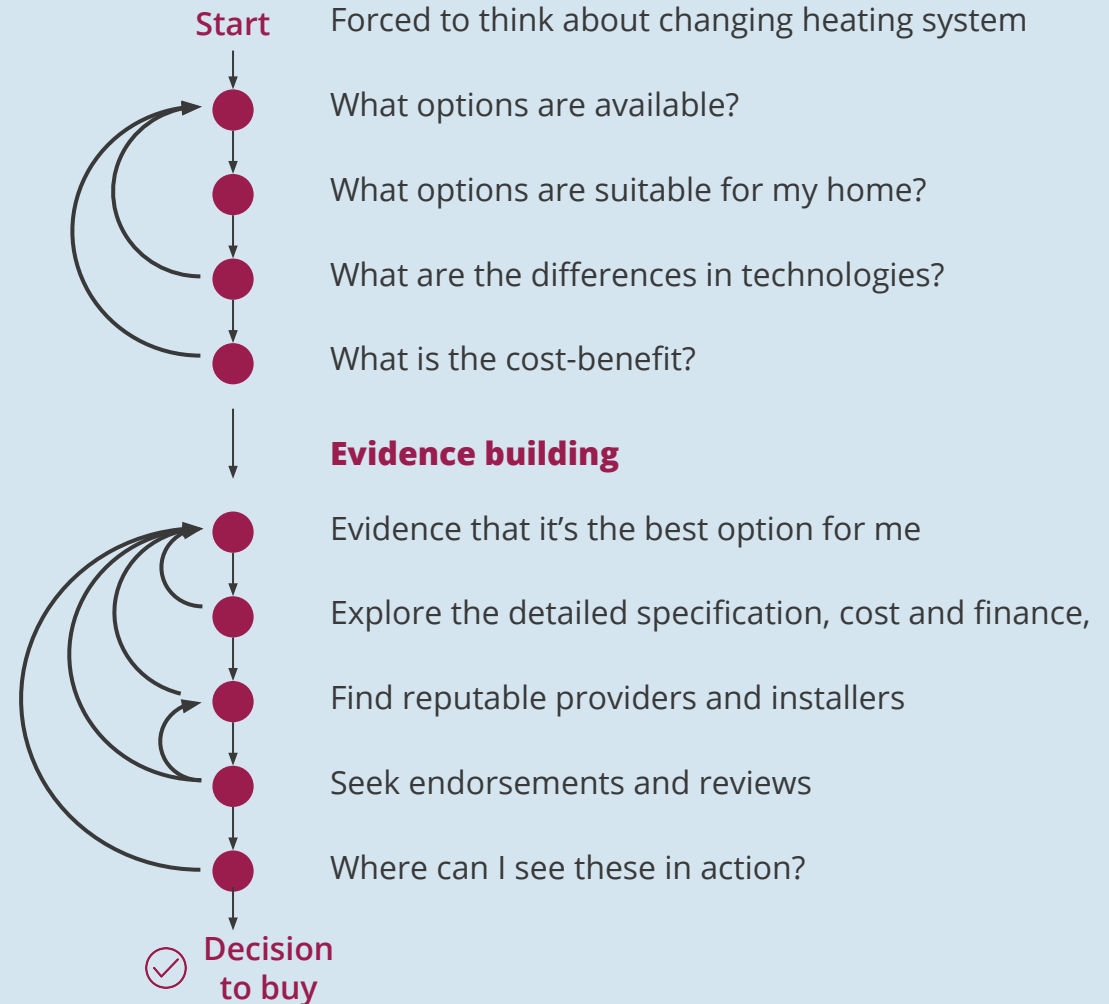
## People struggle to find the information and support they need

Householders told us that navigating the current market demands a level of knowledge they do not have. When they search online for information on home energy improvements they often struggle to find relevant and useful information from credible independent sources. They feel that they are left to their own devices to become experts, and are overwhelmed by the smallprint and potential pitfalls of a technology. This can apply even to early adopters who are better-placed due to their background, contacts, and approach to researching new products. This increases the risk that householders drop out of the process, or end up with a technology that is not right for them and their home. Once they have made their decision, householders often feel like there is no way of knowing whether or not it is the right one.

## Customer journey may not be linear

When making most high-cost purchases, customers tend to follow a linear path towards a decision. First, they decide what product they need, or want, then they gradually narrow down to the specific product type, then a supplier, and the specifics of the product.

For home energy technologies, because householders tend to lack both existing knowledge and effective support, the customer journey is often less straightforward. They often reach a dead-end, and find they have to repeatedly narrow or widen their search. This is particularly likely when the customer starts with a general question, such as how to lower their energy bills. But even when someone starts with a specific technology in mind the journey can still be complex and off-putting.



### Information needs

As well as issues with specific technologies the research showed the range of questions the householders were likely to have when thinking about installing home energy technologies.

This table shows some key areas that households are likely to need information about.

### Areas of information needed

#### Installer

Ability to search suppliers & installers  
Information on local installation firms  
Customer reviews to help select an installer

#### Financial

The cost of measures  
Financial support, including eligibility for grants  
Accurate assessment of the potential cost savings

- Ways of monitoring savings
- Breakeven dates

Information on impact on property value

#### Technology feasibility

How will it work in my home?  
What will the impact on my home be?

#### Design and appearance

What will it look like? What is the size, specification, colour?

#### Installation

What is the installation process?  
How long will it take?  
What are the logistics? Will it cause a mess or other disruption?

#### Maintenance and guarantees

What is the product lifespan?  
If there's a guarantee  
Whether there is a maintenance package  
Any risks associated with the technology  
Where to go if something goes wrong

#### Environmental

How it impacts their EPC or carbon footprint?  
Evaluation  
How to understand I've made the right choice?

# Building confidence

Despite significant challenges, the research points to a framework of advice and support measures that together can build householders confidence in investing in home energy technologies.



## De-risking the process

Clear leadership

Trusted sources of information

A competitive but well-regulated market

Support after purchase



## Informed choice

A central information hub

User-generated content

Seeing solutions up close and in person



## Support centered on the consumer

Flexible advice and support

Personalised recommendations

Local and community advice

## De-risking the process

### Clear leadership

While the consumers we spoke to are concerned about the climate crisis, they do not feel there is a convincing vision from the government about what net zero will mean for them. They want to see a clear strategy. This would include financial incentives, or penalties. They also want to see the government leading by example, for instance all MPs using electric vehicles or public transport, and installing solar panels or alternative heating solutions in all Government buildings. For some householders, trusted celebrity endorsements could also play a key role.

### Trusted sources of information

Householders will only take on information and advice if it comes from sources they trust. Information provided by companies, including energy suppliers, is viewed as potentially biased.

On the other hand, people place significant trust on information and websites from sources they trust.

People are more likely to trust organisations which are not-for-profit and which have a reputation for protecting consumer interests. This could be the government or an independent third-party organisation, with a minority of consumers favouring one over the other.

**“I trust the government because they want what’s best for the environment and not what’s best for their pockets.”**

Sutton Coldfield workshop

When getting an in-home assessment, householders are keen that the person doing it is independent from the company installing the measures to avoid bias. They would also like to see some regulation of the claims that providers can make.

**“I’d want fact-based, impartial information that can be tailor made to my circumstances and needs and also that is regulated by some sort of body like Ofcom.”**

Leeds workshop

**“Every time there’s been a government grant for something, out come the conmen to take advantage of it all and ruin it.”**

Brighton workshop

### **A competitive but well-regulated market**

When thinking about home energy improvements, householders are worried about the risk of unscrupulous firms looking to make a quick profit, particularly as they tend to have little existing experience or understanding of these technologies. People are often aware of problems with past schemes, particularly damp related to cavity wall insulation and this has made them more cautious about engaging with this market.

Householders want the market for home energy technologies to be competitive, so they can get good value. But they also want strong regulation, for example through accreditation of installers, as a safeguard against the kind of issues seen in previous schemes.

Householders want a simple directory to identify reputable suppliers and installers, and so they can be clear when something is a scam.

This would be helped by the introduction of a single accreditation framework for installers of household energy efficiency measures or low carbon heating solutions. This would need to be underpinned by an effective monitoring and audit regime to give people confidence that standards will be met.

**“If it’s government or local authority it tends to get very bureaucratic. Private’s okay so long as it’s severely-enough regulated... The regulator needs the power to come down with a tonne of bricks on misdemeanours.”**

Caerphilly workshop



## Support after purchase

Householders do not want to take on all the risk of getting a new energy technology installed in their home. They expect that if something goes wrong they will be protected. Too often in past schemes, people often faced a redress process that was confusing, difficult and frustrating.

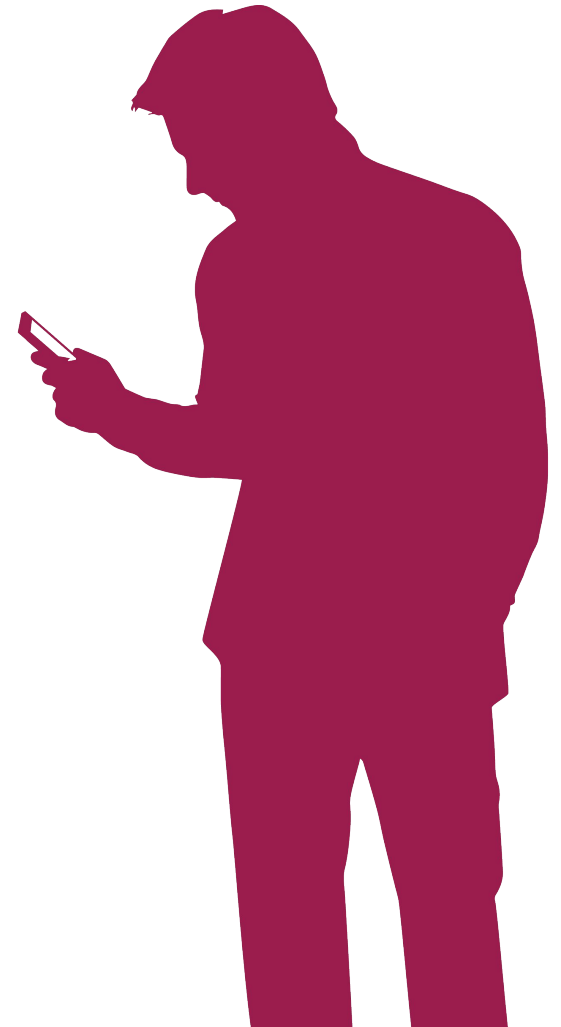
**“A guarantee you’d want as well... if the company that installed it went bust, because it’s a new technology.”**

Brighton workshop

To give householders confidence, all installers and other providers should have to meet minimum standards on quickly and satisfactorily dealing with problems that arise. People also need long-term guarantees, covering parts and installation, to provide financial protection if a firm goes out of business or won’t resolve their complaint.

At the time they are choosing a home energy technology, householders do not necessarily think in detail about what support they need if something goes wrong. This makes it important that requirements on minimum standards for redress are mandatory across all providers, technologies and schemes.

Householders’ need for advice and support does not end once they have installed a product. Householders want ongoing support in the form of a helpline with expert guidance, especially if something goes wrong. This specifically included potential technical problems with the technology such as damp problems caused by cavity wall insulation, inefficient operation of solar panels and heat pumps and faults with the technology. But they also want advice to cover ongoing support on how to use the technology, how to make sure it is working effectively, and on maintenance issues.



## Informed choice

**“My wife goes to Dr Google and Googles everything and you end up with about 50 different conflicting reports and probably go to the first thing you look at...”**

Caerphilly

### **A central information resource**

When they search online for information on home energy improvements householders often struggle to find relevant and useful information. They want to be able to find a central resource that is run by an organisation they trust that brings together all the information they need. A central information hub was also recommended by the Each Home Counts review as a way to build consumer understanding and confidence.

An information hub resource would need to cover the wide range of potential questions a consumer can have. For example on:

- The financial costs and benefits
- How to find a reputable installer
- The installation process
- Consumer protections

The breadth of issues that consumers need advice on is shown by the list of householder questions in the table on page 15. Advice should also cover specific concerns on individual technologies, which are outlined on pages 11-12.

The government's Simple Energy Advice website has some of the characteristics of a central information hub. The site was received positively when it was presented to participants in our research. However, it is currently in the early stages of development and has many gaps. There is limited information on consumer protection, installation processes, and many of the other consumer concerns raised in our research. This site, or any other site, would need to expand and constantly develop to meet the needs of consumers in the net zero transition.

This kind of resource is sometimes referred to as a one-stop shop, but it is only one part of the advice and guidance journey. It is important that an online advice hub is integrated well with other forms of advice, for example providing easy referrals to more in-depth personalised advice, face-to-face or local advice.

Householders were keen that a central information hub also provides offline support, through a phone line, so that it can be accessed by people who are digitally excluded. Digital exclusion remains a major barrier to consumer engagement in the energy market, as outlined in our report **Future for all: Making a future retail energy market work for everyone.**

## User-generated content

People making major purchases, including some home improvements, often rely on user-generated content, like online reviews. This gives them an unfiltered and relatable view of the technology and the installation process. There is currently relatively little of this type of content for home energy technologies. Householders can feel like they are making decisions in the dark, especially as they are relatively unlikely to have friends or family who have installed these products. This makes them less likely to be confident enough to make a purchase.

**“An account of someone actually talking about their journey; you get to hear about all of the things you’re not told, like it can be messy, that it’s better to not be in the property especially if you’re having a few rooms done.”**

**Adopter, solid wall insulation, Leicester**

Better availability of user-generated content, like reviews or social media content, could build trust in new home energy technologies. However, this kind of content also needs scrutiny to ensure that platforms are not overrun with paid-for commercial content, which could undermine consumer’s trust and engagement. Action may be needed to make sure suitable platforms develop to meet consumer needs, especially while the market is new.

## Seeing solutions up close and in person

Consumers are less willing to install technologies they don’t have direct experience of. This is a particular problem for technologies that few homes yet have, like heat pumps. Before they make a purchase, householders want to be able to see, touch and feel how these technologies work in real homes before they make a purchase.

## “I’d need to see it, witness it in action”

### Leeds workshop

Online support, like videos, can help. However, offline support is needed to provide the direct experience of these technologies in the home that some consumers want. This could be done through initiatives like local exhibitions or show homes. These can also provide opportunities to learn from other peoples’ first-hand experiences, speak to like-minded people and have questions answered.

Some organisations already provide this kind of support, for example the Green Homes Network, run by the Energy Saving Trust, and SuperHomes, run by the National Energy Foundation. But they may need to be expanded to meet the needs of the transition to net zero. They will also need to be well integrated with the wider customer journey, so consumers can access this support when it works for them.

## Support centered on the consumer

### Flexible advice and support

The customer journey for home energy technologies is often non-linear. It varies greatly between different people, who may have different circumstances and differing levels of existing knowledge or approaches to making a purchase.

To be effective, advice and guidance needs to be flexible. It needs to be provided through multiple channels, so consumers can easily get the support they need for the stage of the journey they are at. There needs to be integration between different channels and providers, so that a consumer can move easily back and forward between different stages of the journey, without having to start from scratch each time. Where possible, information should be easily passportable between advice providers.

Some people want to use an app to manage their customer journey. An app, or online portal, would give a consumer the ability to manage information about different products and their home. This would be particularly useful as part of an ongoing search, where the consumer may dip in and out.

Householders want to be able to input information about their homes and their lifestyle themselves, which would help them feel in control. Apps can also be easy to navigate and, along with online platforms, use video and images to help the consumer through the decision-making process.



## Personalised recommendations

Before they invest in home technologies, householders want to be confident that the measures they are getting are the right ones for their home. Advice needs to be tailored to the unique characteristics of each property and the lifestyle and needs of the occupants.

Householders see tailored advice as a key part of the decision to install measures:

When they are in the scoping phase, they expect an online central information hub to give them tailored advice based on information they submit.

There is a need for bespoke advice service answer the specific questions they may have about their home and about specific measures, before they have a retrofit assessment

Before installing measures they expect an in-home assessment by a qualified and independent assessor.

## Local and community advice

A key part of encouraging people to install the home energy technologies needed to meet net zero will be advice provided at a local level. People will need a range of face-to-face, in person and in situ support, alongside remote and online advice, which can often best be provided by local companies or organisations. Local advice can also better take into account specific local conditions, such as housing types and planning rules. As a result it can be more accurate and relevant to people's needs. It can also benefit from the higher degree of trust people have in local organisations.

When looking for an installer, people want recommendations in their local area. They are more likely to trust a local business - and local businesses are more likely to be able to carry out work.

People want support to help them collaborate with others in their area. Some measures will only be effective if installed collectively by a group of neighbours, for example solid wall insulation for a small terrace. People are open to this kind of collaboration, but currently don't have the support to help them through the process.

As we move towards net zero, localised advice is likely to become increasingly important. More consumers will be installing measures that have local impacts and planning implications, like electric charging points, solid wall insulation and ground-source heat pumps. Local authorities will be increasingly guided by local energy plans (LEPs). These will not only increase the need for local-specific advice, it will mean more energy expertise in local authorities, which can then be tapped into to help consumers.

**"I would be interested to know if you could do any of these as a group of neighbours.... It's a lot of work but actually as a whole - for the whole row - it might work better."**

**Brighton workshop**

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