



Research report

How accessible is consumer information on renewable home energy & heating solutions?

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About RiDC

RiDC is the leading expert in inclusive research involving disabled consumers. We are an independent, national charity with over 50 years of experience in consumer research and insight in this specialist area.

It's the only type of research we do.

We are run by, and for, people with a personal experience of disability.

We always start from the perspective of disabled and older consumers.

By working with disabled and older people, listening to their needs and reflecting on their experiences, we make sure nobody is excluded, and the insights we gather are grounded in real life.

RiDC was one of the first organisations to establish a UK panel of disabled and older consumers. Our panel includes over 3,400 people and is the most extensive pan-disability panel in the UK.

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Background

This research study is part of a broader RiDC research programme investigating whether disabled and older consumers can easily access and use low carbon energy products and services. The research programme - **Enabling Inclusive Innovation and Sustainable Choice** is funded by the Energy Savings Trust under the Energy Redress Scheme Round 11 (Innovation). The programme is being led by RiDC and delivered in partnership with Energy Systems Catapult (Living Lab).

This research study aims to provide insight into disabled consumers' experiences of investigating, choosing, and installing renewable home heating and/or energy. With a specific focus on the accessibility of the information they encountered.



Executive summary

This research investigates the needs and experiences of disabled people when choosing and installing alternative renewable home heating and home energy solutions, e.g., solar panels, air, and ground heat pumps.

This research comprised three main elements:

- Survey of RiDC panel
- Two user workshops
- Mystery shopping

The research outputs are twofold, a research report and consumer guidance, both published on the RiDC website (www.ridc.org.uk). A stakeholder workshop has been organised for Autumn 2022 to maximise the impact of our findings and help make change happen.

Main findings

Five key takeaways can be drawn from the research

1. There is a lack of awareness amongst information providers of the specific needs of some disabled people. This not only impacts on digital information not being accessible and available in different formats, but also on the content not addressing the concerns of disabled people.
2. The circumstances of how disability might impact the installation and running of renewable energy and heating sources is not addressed in the information provided by equipment suppliers. The dynamic of some disabilities can mean quite different future requirements of energy and heating solutions and in some cases could result in moving property.
3. There is concern about renewable energy and heating solutions providing a secured supply and what the role of priority services registers would be.

4. Disabled people participating in the research experienced significant difficulty in identifying suitable equipment, comparing prices, and finding grants. Information was found to be confusing and full of complex language and jargon.
5. Clear standards and codes of practice are required to ensure that both product and installation are accessible and meet the needs of all people, including those with different abilities and age.

Recommendations

We hope that the research findings will provide increased understanding for industry, regulators and policy makers about the needs and experiences of disabled and older energy consumers when choosing and installing renewable heating and energy solutions for their homes. Below we propose some future actions to mitigate the problems highlighted, identifying the organisations recommended to make the change.

■ **Accessible consumer information (all providers)**

All providers of consumer information should carry out UX research focused on the accessibility of their websites to ensure easy access by disabled users including those using assistive technologies. Providers should seek to achieve as a minimum WCAG 2.1 AA accessibility standards. Websites that have high standards of accessibility are easier to use for all users and help to widen customer bases to include disabled and older users.

■ **Jargon (all providers)**

All providers of consumer information around renewable home energy and heating information should reduce the amount of technical jargon used. Current language and terminology are confusing and excluding to consumers and work against renewable sources such as solar panels and heat pumps becoming mainstream consumer products and services.

- **Installation risk assessments (suppliers and installers)**

Industry should take all reasonable steps to carry out a detailed risk assessments prior to installation work beginning. This should identify any specific vulnerabilities that might arise from the customer's need to regularly charge or power assistive or medical equipment, and or to maintain certain heating levels for health.

- **Priority services for vulnerable households (Ofgem – the regulator)**

Ofgem should consider how vulnerable consumers with renewable home heating and energy solutions might be best safeguarded in terms of any future interrupted supply or failed equipment. For those households who are no longer eligible for Priority Services Registration (linked to being a mainstream gas or electricity customer) health and well-being could be at risk.

- **Accurate cost benefit estimates (All)**

Without doubt cost was amongst the greatest concerns for participants in this research study. It is important for all consumers that detailed and accurate information is available on total predicted costs at the outset. This includes equipment, fees, any additional works and predicted long term energy savings. This enables people to consider, based on their personal circumstances, whether installing a renewable energy or heating source is right for them.

- **Grants (Government)**

It is important that any future grant programmes meet the needs of disabled and older consumers. This would include ensuring that the application process is straightforward, timely and accessible. Disabled and older consumers' needs, and circumstances should also be considered in terms of required investment levels,

timescales for investment return, as well as property type and tenure restrictions. If the UK is to transition to a lower carbon future, Government financial support and incentives need to be more equitably available across society.



Methodology

Survey

A short survey was sent out on 8th April 2022 to 2,413 RiDC panel¹ members to help gain a better understanding of disabled people's view of alternative heating sources and collect any experiences they might have in finding and installing these.

In the survey we asked panel members about points of interest, including but not limited to, whether they used any renewable energy sources in their homes, their biggest worries about using these sources and any barriers to when using sustainable energy. We recorded 683 responses the outputs from which are highlighted in this report and used to inform the scope and detail of the two user workshops.

Workshops

Scope

These workshops were designed to gain a deeper understanding of disabled people's experiences of alternative heating sources. They investigated the entire customer journey from looking to install a renewable energy source in the home through to the installation and running of renewable energy solutions, and focused on:

1. The extent to which the information available on renewable energy sources is accessible
2. The accessibility of funding a renewable source
3. The installation of these sources
4. The running of these sources

¹ <http://www.rica.org.uk/our-panel>

Online

Both workshops were conducted over Zoom and lasted for approximately 90 minutes. They were split in two sessions with a short comfort break in-between the two sessions. Details about the content of each workshop is given at the end of this section of the report.

Each workshop was facilitated by a researcher who followed a Topic Guide whilst another researcher took notes onto a Miro board. Both sessions were audio recorded and transcribed for analysis with quotes taken and used in this report.

Participants

Participants for these workshops were drawn from the responses from the survey and selected because of their experience of applying and installing alternative heating solutions, or from having an interest in finding out more about this topic.

Workshop 1 involved participants **who had experience** with renewable home energy and heating source.

Workshop 2 involved people **without a renewable home energy and heating source** but an interest in finding out more about the topic.

Each participant received a £50 'thank you' payment for their participation. Although we did not specifically select people based on their disability, we found we included broad range of impairments. Appendix 1. Participant details, table 1 and 2. All names used in this report are pseudonyms.

Aim

The aim of both workshops was to provide insight into panel members experiences of and/or thoughts on the accessibility of energy information and renewable home heating including the installation and running of these sources.

Workshop 1

Participants

Six participants attended this workshop. All had experience of having a renewable energy source in their home and of applying for funding, for example through a government grant, to install this source.

The participants had either solar power/solar electricity panels (photovoltaics), solar water/solar thermal heating, air source heat pumps or ground source heat pumps. Participants also had experience of applying to different government schemes including the Green Homes Grant, the Domestic Renewable Heat Incentive, the Warm Home Discount, and the Smart Export Guarantee.

Online workshop

The workshop consisted of a remote focus group (using Zoom), took place on Tuesday 17th May 2022 at 2pm, and consisted of two sessions as described:

Session 1

Explored the accessibility of energy information available. Participants took it in turns to consider the following:

1. Whether they had faced any barriers when looking for information on installing a renewable energy source in their home
2. Their experience of funding a renewable energy source
3. The accessibility of any websites used to search for this information
4. Any workarounds used, based on their needs
5. What they would advise a close friend with similar needs to them, to look out for when applying for funding

Session 2

Explored renewable home heating, specifically focusing on their installation, and running of these sources. Participants took it in turns to consider the following:

1. What made them choose the renewable energy source they have installed
2. Any barriers faced during the installation process
3. Any hidden costs with the installation
4. Experience of the installation work itself, considering the flexibility of timings and how this impacted them
5. Any changes they would make to the running of their installation, when considering their needs
6. The impact of disability if long investment times were experienced
7. What they would advise a close friend with similar needs to them, when looking out for choosing a renewable energy source
8. If there is anything they have seen in the workshop they wish they knew during installation.

Workshop 2

Participants

Five participants attended this workshop. **None of the participants had a renewable energy source installed in their home, however all said in their survey responses that they were interested in finding out more about this topic.**

The workshop consisted of a remote workshop (using Zoom), took place on Thursday 19th May 2022 at 2pm, and consisted of two sessions as described:

Session 1

Explored the accessibility of energy information available. Participants took it in turns to consider the following:

1. Whether they had experienced or envisaged any barriers when looking for information on installing a renewable energy source in their home

2. If applicable, their experience of looking into funding a renewable energy source
3. For those who had researched this previously, whether the website they used was accessible to them.

Session 2

Explored renewable home heating, specifically focusing in on the installation and running of these sources. Participants took it in turns to consider the following:

1. Any barriers envisaged during the installation process
2. Their number one reason for not installing a renewable energy source
3. Their biggest concerns with the installation and running of a renewable energy source (considering for example having a regular supply of energy/interference with charging assistance aids)

Mystery Shopping

Aim

The aim of the mystery shopping exercise was to investigate the accessibility and usability of websites that provide information about obtaining a quote for a renewable energy source and looking to fund a renewable energy source.

Participants

20 mystery shoppers were recruited from the RiDC panel, 18 of which completed the research. The participants were chosen to be broadly representative of a range of disability which included the following impairments: mobility, dexterity, hearing, visual and cognitive. Various forms of assistive technology were used during the mystery shopping task these included screen readers, screen magnification software and speech input software. See Appendix 1. Participant details.

Instructions

The mystery shoppers were asked to visit seven websites, chosen for their prominence as providers of alternative heating sources information, and asked to follow one of two typical customer journeys dependant on the type of site visited.

Customer journey 1. To locate on the website the place for renewable energy quotes, without obtaining a quote.

Customer journey 2. To locate on the website the place where information could be found about grants for renewable energy.

Participants were given a 'website instructions' word document which included a list of tasks to undertake for each website and links to the following seven website home pages:

<https://www.britishgas.co.uk/> (Customer journey 1)

<https://www.eonenergy.com/> (Customer journey 1)

<https://www.scottishpower.co.uk/> (Customer journey 1)

<https://www.edfenergy.com/> (Customer journey 1)

<https://www.gov.uk/> (Customer journey 2)

<https://www.ofgem.gov.uk/> (Customer journey 2)

<https://energysavingtrust.org.uk/> (Customer journey 2)

After each website visit, the participants were asked to complete a short questionnaire detailing their experience by recording their satisfaction scores and answers to a series of nine accessibility heuristics questions.

Approach

Customer journey 1

Participants were instructed to follow links to the four energy supplier websites listed above i.e., British Gas, EDF, Eon and Scottish Power. They were asked to locate the webpage that provided information about renewable energy sources and asked to choose one renewable energy source (ideally one they had a genuine interest in). Further to this we asked participants to imagine they were trying to obtain a quote for a renewable energy source and to follow this process on the website without actually obtaining a quote.

Customer journey 2

Participants were instructed to follow links to three further websites listed above, i.e., Government (.gov), Ofgem and Energy Savings Trust. They were asked to locate the webpage that provided more information about any renewable energy grants available and asked to choose up to two grants they would like to find out more information about, and to note down the names of the grant(s) they looked at. Further to this we asked participants to imagine they were trying to find out more information and to look towards applying for a renewable energy grant. Participants were asked to follow this process on the website without actually applying for a grant.



Results

Survey (681 responses)

Key findings

- The majority of respondents (79%) did not use have a renewable energy source at home. Of those respondents who said they had a renewable energy source, solar electricity (photovoltaics) was the most common (12%), with solar thermal heating systems coming second (2%), followed by air source heat pumps (2%), other (4%), ground heat pumps (1%).
- The biggest worry with using a renewable energy source was cost (76%). Following this, the installation (45%) and maintenance (47%) of the source were also a worry for many. Having a regular supply of energy (37%) and interference with charging of assistance aids (31%) were selected next. Access to renewable energy information (15%) being the least of their worries out of the options available.
- Twice as many respondents said they had faced or had envisaged barriers to using sustainable source (43%), than those who said they had not (21%). Highly mentioned barriers included: cost, living situation for example having social housing or living in a rented property gaining permission from landlord, having enough space.
- The majority of respondents (80%) had not applied for a government funding scheme, nor had they investigated it previously. 12% had not applied for a scheme but had investigated one previously.

Workshops 1 & 2

Both workshops uncovered common themes about the complexity and disparate nature of renewable heating information, as well as identifying concerns about possible barriers to installing and running of renewable heating solutions. This is summarised in the following section.

Information

The first sessions in both workshops 1 & 2 focused on the accessibility of information available about renewable energy sources.

Participants who already had experience of researching installation and applying for funding of a renewable energy sources highlighted the difficulty of navigating the 'system' and its complexities. One participant said...

“It is a minefield...even if you have your acuity and you are able to navigate the system and look at what is available, it is still extremely complex. It's almost as if they are trying to trip you up” _Denise, Mobility

She spent a huge amount of time researching information on installation and grants to fund it, only to find out her bungalow didn't fit the necessary requirements.

Another participant stated ...

“It was a quite involved process then of actually applying through the different providers... it was quite work intensive. You have to really know what you are doing” _Maria, Mobility

In part these complexities were due to the language used in the information available. Participants emphasised that the use of jargon was a barrier for them, highlighting the need for information to be in Plain English.

In the second workshop, the discussion centred around the information available, and the language style used. When thinking about their own needs, many participants said there was limited information available and when there was information, it was hard to understand and overcomplicated.

A huge amount of time and effort is put into weighing and understanding this information to make the right choice. For many of the participants time is already at a premium due to the pressures from taking care of their needs.

Installation and Running

The second sessions of both workshops (1 & 2) focused on the installation and running of renewable energy sources.

Participants in workshop 1 who had already gone through getting a renewable energy source, faced problems during and after installation. One participant had trouble following the installation of their solar panels. After approximately four years of the system functioning without problem, they found a leak which resulted in them being without central heating for two years (this was due to further insulation work being undertaken after being recommended by the repairer). This was of particular concern as she needed a reliable and continuous supply of heat to minimise the discomfort from her disability. She also noted the lack of a priority services register for solar panels and how it impacts her existing energy supply.

Others did however have very positive experiences ...

“Installing the heat pump, it was the best thing I ever did, it has saved me over £2000 a year”_Lawrence, Mobility

Those participants who had not had an alternative energy/heating source installed said it was the installation that concerned them the most. In particular, the uncertainty of the time frames for the work being carried out would need to be carefully planned for.

Another concern highlighted was the potential for trip hazards, both during installation and on completion. This was a particular worry about both ground and air outdoor heat pumps.

In both workshops the continuity of energy at the time of installation was an issue especially for those participants who needed to charge their electric wheelchairs.

When reflecting on the running of the renewable energy source, reliability and cost were of greatest concern. The need to maintain the charge of assistance aids was foremost in the participants' mind. Participants were unsure of how the status of their enrolment on current priority service registers (PSR) might be affected by the installation of alternative heating and electric solutions.

The cost of these alternative 'green energy' solutions is often framed in terms of return on investments (ROI) which can span many years. ROIs of over 15 years are not uncommon. The dynamic of some disabilities can mean these long-term benefits will not be seen by some people because of a need to move home or having a shorter life expectancy. This can make the motivation for uptake more difficult to justify.

Mystery shopping

The mystery shopping part of this research concentrated on online information available from different stakeholders. A series of seven website evaluations was undertaken each one by 18 disabled people who followed typical customer journeys of

1. Searching for information about renewable energy and heating sources
2. Researching government funding schemes and obtaining installation quotes.

The results are detailed under the following headings:

- A. Finding the way from the website homepage to the renewable energy information
- B. Finding a quote for a renewable energy source and
- C. Finding how to apply for government grants.

A. Finding the way from the website homepage to the renewable energy information

When asked about how easy or difficult it was to navigate from the homepage to the renewable energy information pages, the shoppers reported not have too much difficulty. 38% found this task extremely easy, whilst only 14% found it extremely difficult, which was largely consistent across all websites visited.

Availability of accessibility tab/format

Mystery shoppers were complimentary of the accessibility tool bar where available:

“I found it very easy to navigate around this website, I was very pleased to see British Gas have an accessibility Tool Bar & also Access for All, BSL ect”
_Amy, Mobilty, British Gas

However, others struggled to find an accessibility tool bar at all:

“I couldn’t find an accessibility tab anywhere, so I am not even an afterthought!” _Jess, Mobility & Visual, EDF Energy

Mystery shoppers emphasised the need to ensure websites have the option of an accessibility tool bar, whilst also ensuring that this tool bar is easy to locate/stands out on the homepage.

One shopper stated the importance of having accessibility settings and could only find an accessibility statement in a pdf format. This contained too much of information to process and was not accessible to them.

“The Gov website did not have accessibility settings just an Accessibility Statement which basically told me nothing, well nothing I could understand easily anyway... In my experience document downloading

involves big, wordy, convoluted and inaccessible information. I backed away” _Jess, Mobility & Visual

Minimising the need to provide personal information

Many mystery shoppers found that they could not access sufficient information without having to first provide a lot of personal details. They emphasised the importance of being about to find information about renewable energy, without having to supply so much personal information first.

**“We did try clicking on the air source heat pumps icon to see if we could find more information, but the link took us to a request for personal information”
_Jess, Mobility & Visual, British Gas**

Having direct links to minimise searching using the toolbar

Mystery shoppers found they had to spend time trying to search for the information they needed, as it wasn't readily available or easy to access. They highlighted the importance of ensuring there are more direct links to information about renewable energy options.

Additionally, the mystery shoppers underlined the need to have a concise list of the renewable energy sources available and for the headings to be clear for each subsection.

“The menus are pretty miserable to navigate so searching for it was time consuming and frustrating. I would have given up if I wasn't doing it specifically for this task” _Ben, Mobility, Visual & Neurodiverse, Scottish Power

“It took me time to navigate to find Air Source Heat Pumps. I did find it it the end bit took me a little extra time. It was not displayed easy enough for me to find, But after a bit of searching I found what I wanted” _Amy, Mobility, Eon Energy

“I would have thought they would be there on a link on the home page. Not hidden. Definitely off putting. I like easy to find information. In my face and not a trek to source the information. Something as new and improvising as this should take centre stage on the home page” _Judith, Mobility, Visual & Hearing, British Gas

B. Finding a quote for a renewable energy source

Ensuring terms and conditions are big and clear enough to read

Some shoppers found the terms and conditions on the websites challenging to read. They have emphasised the importance of website content, in particular terms and conditions, being big and clear enough for visually impaired users to read.

One shopper explains the importance of website allowing devices to zoom in to see the information...

“I found some tiny terms and conditions type text at the bottom of the page but my pinch and expand options would expand so far, sadly not enough for me to be able to read it” _Jess, Mobility & Visual, Scottish Power

Availability of online quotes

Mystery shoppers commented on the lack of options for obtaining quotes. They wanted a way to obtain online quotes without having to arrange for someone to call as this isn't always accessible for some people. Although this impacts many individuals, it is of particular concern, but not limited to, deaf users and those with speech impairments.

This points to the importance of providing initial information and clear guidelines so that people can get an overall idea first before committing to more specific, individual quotes appropriate to their home and circumstances.

This would in turn might reduce the need for too much personal information being given.

“I couldn't get an online quote, I had to fill in all my details and arrange for someone to call to discuss this heating option. I wouldn't want to do this. I prefer an online quote” _Holly, Mobility, Visual & Hearing, EDF Energy

Alternative ways of obtaining quotes

The data has highlighted the significance of providing alternative ways to obtain quotes, other than simply over the phone or by having a visit. For example:

1. Adding in a live chat box function that includes multiple ways of obtaining quotes (not just a call back)
2. The option for a video call back rather than simply a phone call
3. Subtitled videos alongside transcripts
4. The availability of British Sign Language Interpretation for example SignLive

“There was no option to obtain a quote online or even via chat (a chat box did pop up when I was browsing the page but it only gave the phone number or asked me to give my email address so I could be kept up to date). I struggle to speak on the phone” _Beth, Mobility, Scottish Power

“I didn't get a complete quote. I had the option to leave my details for an outside contractor to ring me back. I have problems using the phone because my hearing is poor even with hearing aids, I always prefer to use email or text so I can make sure I've understood the conversation and have a record to refer back to as well” _Violet, Mobility & Hearing, EDF Energy

“I was told that yes my home may be suitable and asked to provide contact information and ‘we will call you back’. This is a total no-no for Deaf people who are unable to make and receive telephone calls in the normal way. It just isn't possible for us to receive telephone calls...

I also looked at the information video about air source heat pumps. This was informative but it did not have subtitles, just some text on the screen. A transcript is provided to download alongside the video. I really don't understand why they couldn't have subtitled the video if the transcript was available. It's not rocket science. No BSL interpretation available.

A plus with EDF is they have live chat within the website, this is really helpful for Deaf people”
_Sandra, Hearing, EDF Energy

As Sandra further explains...

“I would strongly urge you to look at the particular needs of Deaf BSL users and other deaf and hard of hearing people. BSL users are not catered for at all, and English using deaf people aren't always given the right support eg subtitles on videos, and no options offered apart from call back or making a telephone call. If this isn't sorted out then quite a number of people won't be able to access information on renewable energy at all” _Sandra, Hearing

Providing rough quotes before committing

Many of the mystery shoppers wanted rough quotes and cost brackets so they can think about this in their own time before committing to an installer visiting their home.

“There’s no way to get a quote short of browsing for an installer and asking them to come visit and give me a quote, which feels like a massive commitment and very intimidating” _Ben, Mobility, Visual & Neurodiverse, EDF Energy

Minimising jargon

It was thought there was too much use of jargon which our shoppers found confusing and specialised terminology. One solution suggested was to add a key to explain technical language so people do not have to take time to find this out on their own which can be difficult and time consuming. This could also be made easier by reducing lengthy text and using short sentences to summarise key information.

“Complicated language, jumbled information [across] businesses, suppliers and domestic [homes]. It seemed like an awful lot of words for very little actual information” _Jess, Mobility & Visual, Ofgem

One participant noticed that some of the language she came across was outdated.

“Their Priority Services Register page uses out of date terminology. It refers to ‘the deaf’ and ‘the ill or disabled’. Both of these are unacceptable to the groups they refer to” _Jess, Mobility & Visual, Scottish Power

C. Finding how to apply for government grants

Clear information

There is a need to provide clear information with step-by-step guidance on how to apply for grants. The route to information should be clearer and require less steps rather than having to continuously type and search for information. This is particularly important for people with dexterity impairments or those who have arthritis or pain in hands.

“There was no simple list of what was available and what it applied to, or simple steps to show how to apply for it” _ Beth, Mobility, Gov.uk

“Too many links to click on in different places. I found the information I wanted to know but had to search and search and click. A straightforward place for all available grants would be ideal” _Judith, Mobility, Visual & Hearing, Energy Saving Trust

The availability of grants

Our shoppers reported on the difficulty of finding grants which considered their situation, i.e., being disabled and /or not a homeowner, and/or being on benefits, which is quite a common for many disabled people.

‘I could find nothing anywhere that a disabled, social housing tenant living on disability benefits could apply for.’ _Jess, Mobility & Visual, Gov.uk

The onus for instigating a change to a renewable energy and heating source lies firmly with the property owner. There is a potential conflict between the property owner and the tenant, where government incentives are in place to install these solutions however the potential to save money with reduced energy bills is with the tenant. There is a need to **provide information about alternatives solutions for those who do not own their own home**

Discussion

Throughout all three strands of this research (Survey, Workshops and Mystery shopping), common themes emerged about information on renewable energy and home heating solutions that was difficult to find, difficult to understand and in many cases not fully accessible.

Although much of the underlying technology supporting renewable energy and heating solutions has been available for some time, it is only recently that its uptake has become more mainstream. With the surge of interest driven by climate change, rising energy costs and government policy, the development and variety of solutions has likewise increased. Finding and understanding information about this fast-changing market (technology and financial support) has proved problematic. The following highlight the three main areas where difficulties were found by our panel members when undertaking this research.

Information channels

Most of the information available on renewable energy and heating sources can be found online. This puts a burden on the providers of this information to ensure it is accessible to people with different needs. Not only should this digital information be readable by different assistive technologies (screen readers, zoom text, tracking pads etc) but also be compatible with different hardware platforms (desktop, tablet, mobile).

Web designers should be mindful that they design-in different information formats such as supporting video audio content with captions or BSL. Alternative channels for information should also be available where possible, e.g., print, phone or SignLive.

Information content

It is recognised that the complexity of possible installation solutions for renewable energy and heating sources requires the information to be tailored to a person's situation. This at present centres around the physical

nature of the property and does not include information that asks about a person's needs now and in the future. This is an important area for some disabled people who might have very particular concerns about the level of investment required, the timescale for returns through lower energy costs, the installation process, continuity of supply, or if they qualify for grant support.

It was felt that the perspective of disabled people was not considered when providing information, which in-turn led to a sense of being excluded from contributing to the green agenda.

Installation information

Participants also felt that there was a lack of guidance when searching for a qualified and trustworthy installer. In addition, whilst the onus should be on the installer, many participants felt that they needed guidance on what sorts of questions to ask the installer to ensure that the installation would be done in their best interests.



Achieving change

A key strategic priority for RiDC is to ensure that disabled people can make sustainable choices and easily access and use low carbon products and services. This is the research objective of our over-arching research programme **'Enabling Inclusive Innovation and Sustainable Choice'** in which this research study into alternative home energy and heating information sits.

To further support and achieve change we will be sharing and discussing our research findings widely with key stakeholders and through mainstream, trade, and social media. We will also be promoting online consumer information, based on our research findings, and published at www.ridc.org.uk. This aims to ensure that disabled people know where to find information to help them make informed choices.

Finally, we will be convening a stakeholder workshop event in Autumn 2022 to develop action plans to help deliver the necessary changes.

Key stakeholder groups

It is important to note that there is a huge number and range of private, public and consumer stakeholders involved in the delivery of alternative home heating solutions within the UK. These include:

- Manufacturers and installers (e.g., The renewable energy hub; The green energy group)
- Energy providers (e.g. Octopus; E.ON; UKPN)
- Comparison websites (e.g., bigcleanswitch.org; comparethemarket.com)
- Trade associations and bodies (e.g., Beama.org.uk; REAL (Renewable assurance Ltd)
- Government legislators & policy makers (e.g., renewablescongress.org; Ofgem)

- UK and International Standards bodies (e.g., BSI; ISO; MCS certification)
- Consumer groups representing the interests of and/or advising house holders. (e.g. Which?; National Energy Action; Citizens Advice)
- Independent consumer information providers (e.g., Which?; Energy Savings Trust)
- Landlords and property freeholders (public and private)

Future actions

Below we summarise our broad recommendations for action based on our research findings and identify the stakeholder/s best placed to deliver. These will be discussed, refined, and expanded into targeted action plans at the stakeholder workshop event.

- Codes of practices and staff training for home installation to specifically consider and address the needs of disabled and older users. (Trade bodies & installers)
- Offer pre-installation customer visits. (Installers and trade bodies)
- Provide more detailed consumer information and guidance on alternative home heating choices and checklists on what to consider (Government; consumer and housing organisations; comparison websites and alternative home heating industry)
- Ensure consumer websites meet basic accessibility standards minimum Web Content Accessibility Guidelines (WCAG) 2.1 AA (all stakeholders)
- Build requirements around best practice in installation of accessible alternative home heating solutions into building regulations
- Encourage further research on the (UX) user experience of disabled people's experience

Appendix 1. Participant details

Table 1 Focus Group 1 participants

Group	Number	Details
Mobility	6	Secondary progressive MS, heart condition, tetraplegia, spinal cord injury, double stoma (colostomy and urostomy), peripheral muscular atrophy, chronic fatigue syndrome, fibromyalgia, primary lateral sclerosis

Table 2 Focus Group 2 participants

Group	Number	Details
Mobility	4	Prolapsed discs in spine, spinal injuries, Ehlers Danlos syndrome, polio, systemic vasculitis with psoriatic spondyloarthritis, fracture point osteoporosis, chronic obstructive pulmonary disease with emphysema
Visual	1	Blind with no light perception
Hearing	1	Hard of hearing
Mental health	1	Mental health issues such as depression, stress, anxiety, bipolar disorder

Table 3 Mystery shopping participants

Group	Number	Details
Mobility	16	Neurodegenerative condition, spinal injuries, osteoarthritis, ehlers-danlos syndrome, functional neurological disorder, polio, mitochondrial cytopathy, myalgic encephalomyelitis or chronic fatigue syndrome, stenosis, systemic vasculitis with psoriatic spondyloarthritis, chronic obstructive pulmonary disease with emphysema, fracture point osteoporosis, stroke & spinal cord compression tumour, spinal arteriovenous malformation, fibromyalgia,
Visual	4	Blind with residual vision, blind with no light perception, partially sighted
Hearing	3	Hard of hearing, deaf
Neurodiverse	1	Autism
Mental Health	3	Depression, bipolar disorder, anxiety, obsessive compulsive disorder

Table 4: Assistive technology

Group	Assistance given
2	Screen magnification software
1	Screen colour tint app
3	Screen reader, including Recite
1	Speech input software (Dragon)
1	Apple accessibility settings
1	Dolphin SuperNova



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