

Report

Consumer Opinion about Climate Change and Decarbonisation

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Over the past year, Ofgem has undertaken a number of consumer research projects exploring domestic consumers' understanding of decarbonisation, their related attitudes and what behaviours they are taking to reduce their impact on the environment. Our research has covered consumers from many walks of life and from around Great Britain. This document brings together some of the findings from the different pieces of research.

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Executive Summary

In February 2020, Ofgem published its Decarbonisation Action Plan¹ which sets out the steps we will take as a regulator over the next 18 months to ensure that we enable the most effective decarbonisation of the energy sector at the lowest cost to consumers.

To achieve net zero greenhouse gas emissions, the way energy is used in Great Britain will change. The action plan highlighted the importance of consumers' engagement and behaviour in order to achieve net zero. We want to understand what changes we, as the energy regulator, need to make to the energy system to enable and support all consumers in this energy future.

In 2019 and 2020, Ofgem carried out a number of consumer research projects focusing on understanding how consumers use energy, their attitudes towards climate change, decarbonising the economy and perceptions about the different technologies and energy tariffs that could help Great Britain achieve net zero. This research shows that many consumers are concerned about the environment and want to protect it, but there is a long way to go before wide-scale adoption of low carbon-emissions technologies is achieved.

Many consumers don't know what they can do as individuals to reduce carbon emissions. There are many factors that prevent them from changing their energy use behaviours (even if they want to). For example, perceptions about a lack of infrastructure or a high up-front cost put some off electric vehicles or alternatives to gas central heating. Existing habits drive others away from using flexible energy tariffs. None the less there are consumers who have embraced low carbon technologies, showing that behaviours can be changed.

This report summarises the main findings from the decarbonisation-related consumer research projects Ofgem has undertaken. The findings have been used to inform what actions we will take. We will continue to carry out research to keep abreast of consumer sentiment and energy use behaviour and use the findings as input to our policies.

¹ <https://www.ofgem.gov.uk/publications-and-updates/ofgem-s-decarbonisation-action-plan>

1. Introduction

Context and related publications

To achieve net zero greenhouse gas emissions by 2050 Great Britain needs to, among other things, decarbonise domestic heating and greatly reduce the use of transportation powered by internal combustion engines. To achieve this the way we all use energy will need to change.

Ofgem has undertaken a number of consumer research projects to help us understand the ways consumers use energy and their attitudes towards climate change and decarbonisation. The findings from the research have provided us with a starting point to help identify what might encourage or inhibit consumers from playing a greater role in achieving net zero.

This document is a synthesis of the findings of this consumer research. It also refers to externally commissioned research and Ofgem's regular consumer surveys when relevant supporting evidence is available from these sources.

Decarbonisation related consumer research projects

Ofgem has carried out four studies directly relevant to decarbonisation.

Consumer Awareness of Climate-Related Government Policies, November 2019

An online survey of 2112 consumers to measure their awareness and understanding of Government policies introduced to help reduce the impact of climate change. The research was undertaken on 2nd November 2019 by DataPad on behalf of Ofgem.

Consumer Attitudes Towards Decarbonisation and Net Zero, November 2019

This project was undertaken as part of our Customer First panel, a qualitative forum with domestic energy consumers where we hold extended discussions about policy issues. The wave referred to in this document explored consumers' understanding of the meaning of net zero, how they currently use energy and their opinions about which organisations should be responsible for achieving the 2050 net zero target. The research was carried out by Revealing Reality on behalf of Ofgem. Fieldwork ran from 18–28 November 2019, covering nearly 100 people in four locations around Great Britain.

Experiences and Perceptions of Smart ‘Time of Use’ tariffs, March 2020

A qualitative research project with 38 domestic energy consumers who did and didn’t use time of use tariffs to understand the experiences of using these tariffs as well as how non-users perceived them. The research was conducted by PWC on behalf of Ofgem. Fieldwork ran from 10-30 March 2020.

Deep Dive on Consumer Attitudes Towards Decarbonisation, March 2020

A qualitative research project with 74 domestic energy consumers to get feedback about a variety of issues related to decarbonisation. The research was conducted by Impact Research on behalf of Ofgem. Fieldwork ran from 18-26 March 2020.

A note on generalising from qualitative research

Most of the research findings referred to in this report are based on results from qualitative research conducted by Ofgem, with sample sizes of fewer than 100 consumers. Qualitative research provides an in-depth understanding of consumer opinions, but because of the small sample sizes, inferences cannot be made about the scale of the opinions held.

Research of the type discussed in this document relies on consumers telling us what they think, feel or do. It reflects what consumers are consciously aware of and is very useful for understanding how consumers perceive the world. However, behaviour is influenced by conscious and unconscious factors, and consumers are not always able (or willing) to express the reasons why they act in the way they do. Therefore the research projects discussed in this document cannot provide a complete picture of the reasons why people behave in the way they do.

2. Summary of consumer research

Consumer concern about climate change

- 2.1. Undoubtedly, many consumers are concerned about climate change. Most (81%) are very or somewhat concerned about it² and many (47%) believe it is mainly or entirely caused by human activity³. Consumers generally say they want to 'do their bit' to 'help the environment' but many are not sure what they can do to reduce the impacts of climate change. Indeed many (not all) feel that individuals can't make a difference to reducing the impacts of climate change.⁴
- 2.2. While they're concerned, consumers find it hard to relate the effects of climate change to their own circumstances or behaviour. Few have seen any impacts of climate change (at least in their local area - 10%)⁵ and some believe they will not see the impact in their lifetime.⁶ As many consumers aren't sure what they can do to reduce the impacts of climate change they look to the Government and the Energy sector to take action.⁷
- 2.3. Concern about climate change doesn't mean there is wide-scale understanding of Government policies to reduce its impact. In November 2019 Ofgem surveyed consumers and found that while 63% were aware of the term 'net zero carbon emissions', only half (54%) agreed the term related to offsetting carbon emissions, a quarter (25%) thought it meant completely stopping the creation of greenhouse gas emissions and one in eight (13%) didn't know.^{8,9}
- 2.4. The lack of tangible experience of the effects of climate change, uncertainty about what actions to take and an expectation that the Government and the energy sector will provide solutions may mean that consumers don't prioritise environmental

² BEIS Public Attitudes Tracker, Wave 34, June 2020

³ BEIS Public Attitudes Tracker, Wave 33, March 2020

⁴ Consumer Attitudes Towards Decarbonisation and Net Zero, November 2019

⁵ BEIS Public Attitudes Tracker, Wave 33, March 2020

⁶ Deep Dive on Consumer Attitudes Towards Decarbonisation, March 2020

⁷ Consumer Attitudes Towards Decarbonisation and Net Zero, November 2019; Deep Dive on Consumer Attitudes Towards Decarbonisation, March 2020

⁸ Consumer Awareness of Climate-Related Government Policies, 2019.

⁹ BEIS found similar results in its most recent Public Attitudes Tracker, wave 34, June 2020. In that survey 63% of consumers were aware of the term 'net zero' but only 16% claimed to know a lot or a fair amount about it.

issues compared to other issues affecting their lives. Indeed, in our research some consumers commented that while they wanted to 'do their bit' for the environment, it often wasn't the primary consideration when making choices related to energy use.¹⁰

- 2.5. The tendency for organisations to use terminology that is unfamiliar to consumers may exacerbate the tendency to prioritise factors other than the environment when making choices. For example, awareness of the term decarbonisation (40%) is far lower compared to terms often used by the media, advertising or product marketing like carbon footprint (92%), greenhouse gases (91%) or sustainability (86%)¹¹. If the language being used to talk about environmental issues isn't used by consumers then it may be even harder to create a sense of urgency among them about the issue.

What consumers say they're doing to help the environment

- 2.6. Consumers want to 'do their bit' to protect the environment. Many are carrying out activities they believe are good for the environment, but the most widely adopted are things that fit around existing lifestyles (i.e. are easy and convenient) or which are seen as a socially desirable thing to do.¹²
- 2.7. The behaviours that have been most widely adopted are focused on reducing waste (84% of consumers recycle and 71% are trying to reduce their use of single use plastics) rather than reducing carbon emissions (5% have an electric or hybrid vehicle and 2% have a heat pump).¹³

Drivers and barriers to behaviour change

- 2.8. As highlighted in Ofgem's Decarbonisation Action Plan,¹⁴ the system changes that are needed in order to decarbonise rely on consumers either engaging more with
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¹⁰ Deep Dive on Consumer attitudes Towards Decarbonisation, 2020

¹¹ Consumer Awareness of Climate-Related Government Policies, 2019

¹² Deep Dive on Consumer Attitudes Towards Decarbonisation, 2020

¹³ Energy Systems Catapult, Understanding Net Zero, A Consumer Perspective, April 2020

¹⁴ <https://www.ofgem.gov.uk/publications-and-updates/ofgem-s-decarbonisation-action-plan>

their energy use or adopting technologies that will make the relevant changes on their behalf. For consumers this could mean increasing the use of alternatives to gas heating, improving home insulation, adopting electric vehicles, encouraging the use of appliances at off-peak times or adopting new products or services that enable them to use electricity more flexibly.

Barriers to changing energy use behaviours

2.9. Achieving this will not be easy. There are many barriers to consumers adopting new behaviours or low carbon-emitting technologies, some of which aren't salient to them.

2.10. When asked why they wouldn't use low carbon technologies, consumers focus on protecting existing lifestyles. They tell us that price, convenience and reliability are fundamentally important when making choices relating to energy. Electric vehicles are widely perceived to be expensive, inconvenient or unreliable (e.g. long charging times for electric vehicles or high cost to purchase), creating a barrier to adoption. Alternatives to gas central heating like heat pumps are unfamiliar to many consumers and those who know of them often perceive them to be costly to install.¹⁵ Furthermore, many consumers are risk averse and reluctant to adopt lower-emissions technologies such as electric vehicles until they are 'proven'. That is they must be satisfied that the infrastructure is in place to quickly charge an electric vehicle at an acceptable cost. Some consumers also say they want to wait until they see other people like themselves driving an electric vehicle before they would consider it.¹⁶

2.11. Some consumers are unfamiliar with tariffs or technologies that could help them use energy more efficiently or cannot see how they would fit into existing lifestyles. We spoke to consumers about time of use tariffs and smart appliances, which are options that may help defer network reinvestment costs, indirectly lowering bills for all consumers, and which could directly benefit those who adopt them by lowering their bills.

¹⁵ Consumer Attitudes Towards Decarbonisation and Net Zero, 2019; Deep Dive on Consumer Attitudes Towards Decarbonisation, 2020

¹⁶ Consumer Attitudes Towards Decarbonisation and Net Zero, 2019; Deep Dive on Consumer Attitudes Towards Decarbonisation, 2020

2.12. When asked about time of use tariffs, non-users commented that they couldn't see how they could change when they use appliances to take advantage of lower energy pricing at off-peak times.¹⁷ The idea of adopting smart appliances that could be run automatically by an external company when the cost of energy falls is also resisted as many consumers are nervous about giving away control of how and when they use energy. In our 2019 Consumer Survey we found that just 17% of consumers would be comfortable with the idea of using an externally controlled smart appliance with the main barriers to use being a preference to keep personal control of appliance use (32%), fears of 'big brother' watching them (13%) or concerns about the impact on personal liberty (11%).

Situational factors that can impact consumers' ability to change how they use energy

2.13. For some consumers, the barriers to adoption are related to their circumstances. For example, those renting their homes often feel unable to install low carbon technologies¹⁸ either because they don't want to spend money on something they don't own or because they don't believe the landlord would allow it or wouldn't spend the money on upgrading the property.

2.14. Given the perception that low carbon technologies are currently more expensive than conventional alternatives, it's unsurprising that few consumers with low incomes use them. For example, our 2019 Consumer Survey highlights that those who own electric vehicles or who have installed smart heating controls tend to have above average household incomes.¹⁹

2.15. Household composition may also affect the ability to adapt behaviour to take advantage of price savings offered by time of use tariffs or 'smart' appliances that can be set to run at low-demand times. Our 2019 Consumer Survey highlighted that fewer households with school-aged children or with adults working full or part-time

¹⁷ Experiences and Perceptions of Smart 'Time of Use' tariffs, March 2020

¹⁸ Deep Dive on Consumer Attitudes Towards Decarbonisation, 2020

¹⁹ Ofgem Consumer Survey, 2019, <https://www.ofgem.gov.uk/publications-and-updates/consumer-survey-2019>

felt they would be able to adapt when they use appliances to take advantage of off-peak energy pricing.²⁰

- 2.16. Complexity can also make decision making difficult. Behavioural insights tells us that people struggle to trade-off upfront costs with longer-term cost savings. If they need to carry out a considerable amount of 'mental arithmetic' in order to determine if a product or tariff will save them money (e.g. weighing up upfront costs against long term running costs or savings), then the inclination is to dismiss it.

Factors that encourage use of low carbon technologies

- 2.17. Whilst many consumers are at the start of the journey towards engaging in ways that will support decarbonisation, there are some who are 'passionate about the environment' and actively seek out technologies that help them reduce their impact. For example, some consumers who use time of use tariffs or who participate in peer-to-peer energy trading express a great desire to reduce their carbon footprint and often own low carbon-emitting technologies such as electric vehicles, energy efficient appliances or heat pumps. These 'energy enthusiasts' are highly engaged in the energy market, knowledgeable about the energy system, and have actively sought out low emission solutions. Their experiences with using low emissions technologies have generally been positive and they can become great advocates of the products.²¹

- 2.18. It's important to note that saving money is a key motivator for adopting lower carbon technologies, even among the most 'environmentally conscious'. There is a cohort of consumers who have adopted lower carbon technologies (e.g. electric vehicles) primarily to save money. The environmental benefit is an important, but a secondary consideration.²² There are also consumers who have adopted lower carbon technologies passively, for example by moving into properties that have solar panels or because their employer arranged their electric vehicle use.²³

²⁰ Ofgem Consumer Survey, 2019, <https://www.ofgem.gov.uk/publications-and-updates/consumer-survey-2019>

²¹ Experiences and Perceptions of Smart 'Time of Use' tariffs, 2020

²² Experiences and Perceptions of Smart 'Time of Use' tariffs, 2020

²³ Deep Dive on Consumer Attitudes Towards Decarbonisation, 2020

2.19. This tells us that if convenient, cost effective and proven solutions become available which produce fewer carbon emissions, consumers could be motivated to adopt them, even if they don't understand (or aren't interested in) the environmental benefits.

So what does this all mean?

2.20. It is clear that consumers have a role to play in helping to achieve decarbonisation and combat climate change.

2.21. Our research tells us that most consumers are concerned about the environment and want to play their part in protecting it, but many things get in their way. Of course there are technological barriers to adoption, but perceived barriers are also strong. This seems to be a combination of factors – not knowing what more individuals can do to help is a big barrier. Some may misunderstand the urgency of the action needed. Many consumers believe that low emissions solutions are expensive, un-proven and don't fit with their lifestyle. For others, circumstances prevent them from taking action.

2.22. Our research suggests that there is a large gap between where consumers are now and where we want them to be to get to a net zero society.

2.23. Ofgem will continue to conduct research to measure and understand consumer attitudes and behaviour in this sphere. This will be used to inform our policy development and help us to facilitate the behaviour changes needed while also protecting consumers.