Consumer Scotland
Luchd-Cleachdaidh Alba

Consumers and the transition to net zero

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Contents

1. Acknowledgments

This report is based on survey research commissioned from The Diffley Partnership research agency, using the ScotPulse online panel. The interpretation of the findings and writing up of the report was undertaken independently by Consumer Scotland in fulfilling our general function of using data, research and analysis to inform our work on the key issues facing consumers in Scotland. Our thanks are due to those individuals that gave up their time to respond to the surveys.

2. Summary

Context

2.1. The Scottish and UK governments have both made commitments to achieving net zero emissions so that by 2045 in Scotland, and 2050 in the rest of the UK, we will no longer be adding to the total amount of greenhouse gases in the atmosphere. However, for the transition to net zero to be a success, all sectors will need to play their part in tackling climate change. For consumers this will involve changes to how most of us travel, how and what we buy, reducing our waste, and changing how we use energy and water at home.

2.2. To help understand consumer engagement with the rapidly developing net zero agenda and associated approaches to climate change mitigation and adaptation, Consumer Scotland commissioned a consumer survey that would help identify consumer engagement and progress towards decarbonisation in Scotland. This report presents the key findings to emerge from the evidence we have collected.

2.3. The aim was to allow Consumer Scotland and key decision makers to appreciate the extent to which government policies and market progress are driving change and innovation in relevant consumer sectors. Where behavioural or policy gaps exist, these can be identified and recommendations made on how gaps in coverage can be filled or additional interventions proposed to help make further progress.

Our research

2.4. In late 2022/early 2023 Consumer Scotland commissioned an online survey with adults (aged 16+) resident in Scotland. Our research sought to understand how consumers are responding to decarbonisation, their hopes for the future, the opportunities available, and the barriers they might face in relation to:

- reaching net zero
- the supply of energy and its use in the home
- water supply and its use in the home
- general consumer markets, covering household goods, transportation, parcel deliveries, food and drink, and recreation with a focus on holidays for leisure

2.5. The aim of our research was to complement existing evidence on consumer attitudes and behaviours to decarbonisation in Scotland by establishing a baseline measurement against which Consumer Scotland could begin to track consumer engagement with and progress towards decarbonisation.

2.6. The project was delivered across two workstreams. Workstream 1 comprised a representative survey on energy and water topics, with fieldwork taking place between 24the and 28th February 2023. A total of 2,269 completed responses were achieved. Workstream 2 comprised a representative pilot survey covering general consumer markets.

Fieldwork took place between 7th and 9th March 2023, with a total of 622 completed responses achieved.

Key points

- Most consumers in Scotland (77%) are concerned about climate change, with one in five (21%) stating they are unconcerned, and fewer than one in 10 (9%) stating they are not at all concerned
- A third of consumers (34%) agree they know what they need to do to help Scotland reach net zero, a third disagree (33%), and a further third (34%) state they are unsure
- Consumers rank the Scottish and UK governments and businesses as having most responsibility for reducing emissions, followed by organisations that regulate markets. Consumers are ranked as having least responsibility
- Consumers rely mostly on news media and local/national government for information about services. Almost a third (31%) of energy consumers look mostly to the news media for information. Around a quarter (24%) of water consumers look mostly to local authorities for information
- For 'big ticket' technological items in the energy sector that are more expensive to purchase or install (such as zero emissions heating systems or electric vehicles) consumers perceive cost as the single biggest barrier. Around two thirds (66%) of respondents agree renewable technologies are more expensive to install, with only 4% disagreeing
- For the minority of energy consumers not already doing simple low cost measures (such as switching off lights or turning down thermostats) these actions are perceived as being ineffective in reducing the environmental impact, or can be viewed as inconvenient or too much hassle
- There are high levels of consumer awareness of water-related effects of climate change: 80% believe drought is connected to climate change, 82% believe flooding is connected, 73% believe water scarcity is connected, and 50% believe poor water quality is connected
- The convenience and hassle factor are a significant barrier perceived by consumers in relation to water efficiency behaviours. Using a watering can was seen as being too much hassle by 58% of respondents and wiping or scraping cooking pans was seen as too much hassle by 53%
- A dominant perception persists among consumers that many water saving behaviours might be ineffective in reducing the environmental impact
- Across the general consumer markets we looked at (household goods, transportation, parcel deliveries, food and drink, and recreation/holidays), our results suggest that many of the sustainable behaviours and choices being presented to consumers can appear as optional or are perceived as only having a limited impact on the environment or tackling climate change
- A lack of reliable trustworthy information is making it difficult for many consumers across all of the markets we looked at to fully understand the issues and from there make informed choices that leads to changes in behaviour

Next steps

2.7. Many consumers in Scotland are concerned about climate change, but many report they are already doing what they can to help tackle the problem or they do not know what they need to be doing to help Scotland achieve net zero or to adapt to those climate change impacts that are unavoidable.

2.8. Consumers look to governments, businesses and regulators to provide the leadership, guidance and solutions for tackling climate change. The result is that many consumers do not see themselves as a central part of the current narrative around adapting to a changing climate or the transition to net zero.

2.9. The barriers consumers report they face in relation to decarbonisation and net zero vary depending on the sector and/or the particular set of behaviours being asked about. But across markets it is clear a lack of reliable information is making it difficult for consumers to fully understand the issues and as a result make informed choices.

2.10. For many consumers sustainable behaviours are viewed as either unaffordable or niche, so they can lack widespread appeal. More work is required therefore on making sure the more sustainable alternatives are both affordable and accessible. Only then will they compete with the less sustainable but more familiar options that dominate current behaviours and practices.

2.11. A persistent difficulty if net zero ambitions are to be achieved will be changing consumers' habits and engrained behaviours, particularly when it comes to doing anything that appears to be a hassle or is inconvenient. Given the scale of the challenge and the significant costs attached with some options that are being put forward as part of the solution, this will be especially difficult to overcome.

2.12. Our research was designed to help Consumer Scotland establish a baseline in our understanding of where consumers currently are at in terms of decarbonisation and the transition to net zero. Future iterations of our surveys will allow us track on an ongoing basis the extent to which consumers in Scotland are engaged in the transition to net zero so that we can recommend to government where policy gaps may exist or where support may need to be provided or enhanced.

2.13. To help complete the picture and further improve our understanding, Consumer Scotland plans to commission follow up qualitative research in 2023/2024 that will explore our survey results further by examining in more detail consumers' motivations, values, and social norms and how these intersect with the real and perceived barriers consumers face.

3. Introduction

3.1. The Scottish and UK governments have both made commitments to achieving net zero emissions. This means that by 2045 in Scotland and 2050 in the rest of the UK, we will no longer be adding to the total amount of greenhouse gases (GHG) in the atmosphere, which increase global temperatures by trapping the sun's energy (Energy Saving Trust, 2021).

3.2. Examples of GHGs are carbon dioxide, methane and nitrous oxide. Carbon dioxide is released when oil, gas and coal are burned in homes, factories and to power transport, methane is produced through farming and landfill, and nitrous oxide is produced in the production of food and soil fertilisers. Examples of other impacts include those on product availability, the use of building materials, and growing cotton for clothing.

3.3. If the transition to net zero is to be a success all sectors will be required to play their part in tackling climate change. For consumers this will involve changes to how most of us travel, what we buy, reducing our waste, and changing how we use energy and water at home. This will require widespread changes to how we will go about our daily lives and how businesses will conduct their day to day activities.

3.4. Having consumers at the centre of the transition to net zero should enable them to fully participate on an equitable basis by being provided with more sustainable and zero carbon alternatives as the most polluting technologies and practices are phased out. This will also involve the right support being provided in the right way so that all consumers are able to make the wide-ranging changes required to homes, lifestyles, transportation, and business activities. It should be noted, however, that progress in reducing emissions in Scotland has stalled in recent years, with the risk that interim and longer term targets are unlikely to be met without significant change.

3.5. To inform understanding of consumer engagement with the rapidly developing net zero agenda and associated approaches to climate change mitigation and adaptation, Consumer Scotland commissioned a consumer survey in late 2022 and early 2023 that would help identify consumer engagement in and progress towards decarbonisation.

3.6. This report presents the key findings to emerge from the evidence we have collected. The intention behind our research was to provide insight on where consumers currently are in relation to net zero and associated approaches. In recent years the nature of the climate change debate has moved from asking if changes are required to how we go about our daily lives, to now being about how those changes should be undertaken. As a result, monitoring consumer participation in the transition is a priority for Consumer Scotland.

3.7. Understanding the issues in this report will allow us and key decision makers to appreciate the extent to which government policies and market-driven shifts are driving change and innovation in relevant sectors. Where behavioural or policy gaps exist, these can be identified and recommendations made on how gaps in coverage can be filled or additional interventions proposed to help make further progress.

3.8. Any reluctance by consumers and businesses to change from current behaviours that are carbon intensive will be a key risk to meeting statutory emission reduction targets, as well

as having a negative impact on current and future consumers. It is essential therefore that we are able to identify consumer views on efforts to decarbonise Scotland's economy and other every day practices. This will also allow us to identify the help and support consumers may require if they are to fully participate so that the transition is successful and no one is left behind.

3.9. The research this report is based on sought to understand how consumers are responding to decarbonisation, their hopes for the future, the opportunities available, and the barriers they might face. The key issues Consumer Scotland wanted to gain insight on included:

- Consumer understanding and awareness of key terminology and language used in the transition to net zero
- The behaviours and practices that consumers are currently engaged in and those that they are not doing
- How invested consumers are in decarbonisation in terms of understanding, attitude and action
- The barriers and opportunities that exist in relation to consumer participation in decarbonisation
- Consumer views on policies and drivers which will enable behavioural change and Scotland's net zero targets to be met
- The source and types of information consumers require that they view as trustworthy and reliable
- How consumers can be motivated to engage in decarbonisation

3.10. The report is structured as follows. In the next chapter the background and context are outlined, with a particular focus on climate change as a global problem, recent policy responses in the UK and Scotland, and Scottish public opinion on climate change. This is followed by a discussion of the key methodological features of the research, which includes the approach taken to analysis and reporting. The main findings are presented in four standalone chapters related to: reaching net zero, energy supply and its use in the home, water supply and its use in the home, and general consumer markets, covering household goods, transportation, parcel deliveries, food and drink, and recreation with a specific focus on holidays for leisure.

3.11. The findings are brought together in a concluding discussion, which highlights key implications of the research. The report ends with an overview of next steps and where Consumer Scotland plans to go next with our research.

4. Background and context

Climate change as a global problem

4.1. Climate change has been identified by the United Nations as the defining issue of our time. On this basis humanity is at a critical moment for agreeing and implementing the actions that will be required to tackle problems associated with a heating planet, and adapting to those unavoidable changes that are already being experienced globally.

4.2. The Intergovernmental Panel on Climate Change (IPCC) recently reported that the difference between 1.5°C and 2°C of global warming presents significant risks to natural and human systems (IPCC, no date). However, unless emissions are reduced rapidly, the world is likely to exceed 2°C of warming, with a real possibility of reaching - or even exceeding - warming in excess of 4°C by the end of this century. In this scenario, the modelled data suggest catastrophic outcomes would be experienced around the world.

4.3. The impacts of climate change are global in scope and unprecedented in scale. Rising sea levels and shifting weather patterns will lead to water scarcity, flooding, seasonality changes, heat stress, and damage to infrastructure, disrupting travel and food production and availability, among others. While the extent of risks will vary around the world, climate change has been marked out as a global justice issue (Klinsky, 2021). This creates a moral duty on the most polluting nations to take a lead in both reducing their own emissions as well as coming up with solutions that work for everybody on an equitable basis. Indeed, the Scottish Human Rights Commission (2023) has been working with the Scottish Government, Scottish Parliament and civil society to encourage the development of a human rights-based approach to securing climate justice.

4.4. In the lead up to the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow from 31st October to 13th November 2021, it was made clear that the level of dangerous climate change the world will experience will depend on how quickly we are able to reduce emissions being released into the atmosphere (McGrath, 2022). Importantly, however, even if all emissions were stopped today, it would likely not be enough to prevent some changes already taking place. That said, the sooner emissions are cut the smaller negative changes will likely be.

Climate change policy at the UK level

4.5. The UK's Met Office (2021) has predicted that we will see winters that are warmer and wetter and summers that are hotter and drier, with more frequent and intense weather extremes experienced in unpredictable ways. With warmer air holding more water, average rainfall is increasing in the UK and around the world. In some places increased rainfall is becoming more intense and in other areas less rain is falling due to changes in wind patterns.

4.6. The UK's ten warmest years on record have all occurred since 2002. Modelling in 2018 by the Met Office (2018) estimated that heatwaves are now 30 times more likely to happen in the UK than would have been the case without climate change. By 2050, it is predicted that heatwaves (like that seen in 2018) will likely happen every other year. In addition, although

cold or dry winters will still occur, UK winters will likely become warmer and wetter on average, with a range of impacts on the natural and built environment.

4.7. The economics of acting on climate change have been well understood ever since the Stern Review in the mid-2000s which concluded that the "the benefits of strong and early action far outweigh the economic costs of not acting" (Stern, 2006: vi). As a result, there is now political consensus that without strong and drastic action on an unprecedented scale being taken, it will not only become more difficult over time to tackle climate change, but also more costly for both current and future generations.

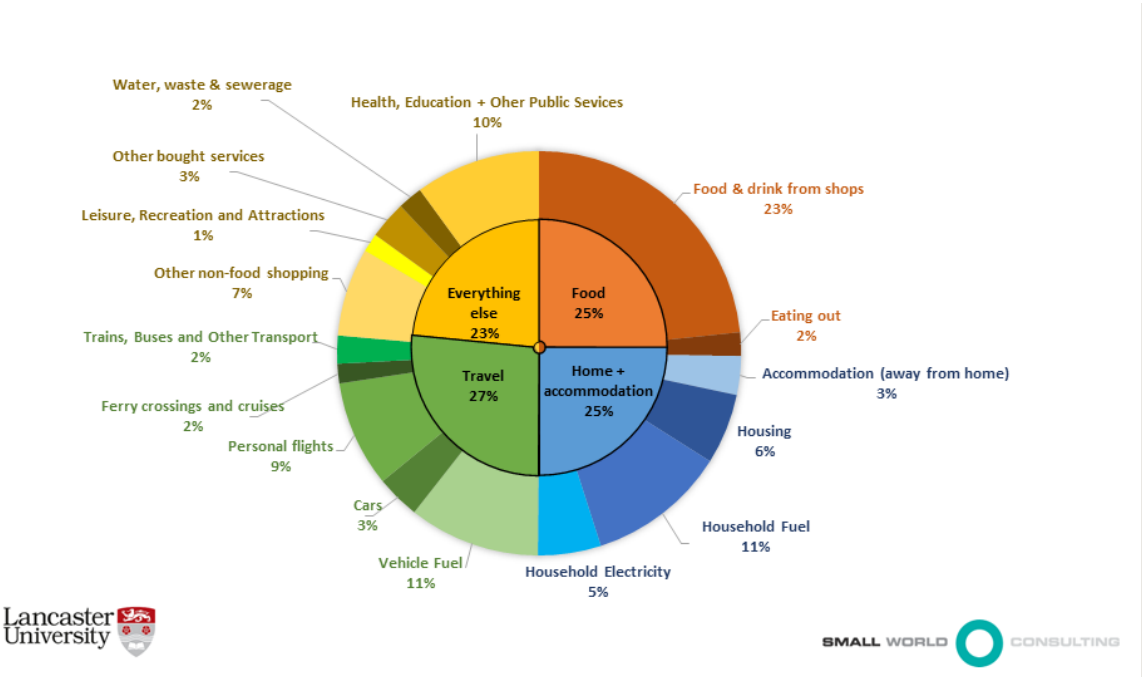
4.8. As scientific, economic and political concern about climate change has increased in the UK, the Climate Change Committee (CCC) was established under the UK Climate Change Act 2008 as an independent statutory body. Its purpose is to advise the UK and devolved governments on emissions targets and to report to parliaments on progress made in the UK and its constituent parts in reducing greenhouse gas emissions and preparing for and adapting to those impacts of climate change that are unavoidable.

4.9. In 2019 the UK was one of the first major global economies to pass laws aimed at ending its contribution to climate change by 2050 (HM Government, 2019). The target required the UK to bring all greenhouse gas emissions to net zero by 2050, compared with a previous target of at least 80% reduction from 1990 levels.

4.10. Figure 1 summarises the carbon footprint by source of a typical UK person. This was presented by Mike Berners-Lee (2020) to the UK Climate Change Assembly.

Figure 1: Average UK person's Greenhouse Gas footprint: 12.7 tonnes CO_2e per year

The main components of an average UK person's carbon footprint: at home it is domestic energy use; for travel it is car travel and flights; for food it is food and drink from shops; and for everything else it is the use of public services, such as health and education (reproduced from Berners-Lee, 2020).



4.11. Berners-Lee calculated that in 2020, the average annual carbon footprint was 12.7 tonnes carbon dioxide equivalent (CO2e) per person per year. This estimate was calculated just before the pandemic, with COVID-19 lockdowns leading to a significant drop in emissions before gradually rising again (Roy, 2022). Figure 1 is significant for highlighting the context within which emission reduction targets operate. The main components of an average UK person's carbon footprint at home are domestic energy use, for travel it is car travel and flights, for food it is food and drink from shops, and for everything else the main components are use of public services, such as health and education.

4.12. It should be noted that different footprint calculators will give different results depending on the underlying assumptions, sources of data, and what they include or exclude. The Berners-Lee calculator attempts to be comprehensive by including the effects of income, goods and services consumption and infrastructure emissions as well as the usual energy, food and transport footprints. Nevertheless, we should treat these sorts of calculator with caution and useful in so far as they provide a quick and easy to use way of exploring options on how individuals can reduce their own emissions footprints.

4.13. The CCC published its Sixth Carbon Budget report in December 2020 (CCC, 2020a). This was based on an extensive programme of analysis and consultation and resulted in a recommended pathway that would require a 78% reduction in UK territorial emissions between 1990 and 2035. In effect, this would bring forward the UK's previous 80% target by nearly 15 years. The CCC set out in four key steps how the Sixth Carbon Budget can be met:

- Take up of low carbon solutions
- Expansion of low carbon energy supplies
- Reducing demand for carbon intensive activities
- Land and greenhouse gas removals

4.14. In 2021 the UK Government published its Net Zero Strategy, setting out a pathway for reaching net zero greenhouse gas emissions by 2050 (HM Government, 2021). However, more recently the economic outlook in the UK has changed considerably as a result of the UK's exit from the European Union driving up prices, a protracted recovery period following the COVID-19 pandemic, and Russia's invasion of Ukraine driving up the costs of wholesale energy. These additional pressures on households and businesses have been experienced as excessively high energy prices and wider inflationary pressures.

4.15. Given the changed economic context, the UK Government commissioned a review into its approach to net zero. The review set out to better understand the impact of the different ways to deliver its net zero pathway on the UK public and economy and to maximise economic opportunities of the transition, such as improved public health outcomes or further economic growth in relevant sectors. Chris Skidmore MP was appointed by the then Business, Energy and Industrial Strategy (BEIS) Secretary of State as chairperson to review the approach being taken to net zero in the UK with a view to ensuring that delivering the net zero target did not place undue burdens on businesses or consumers (Skidmore, 2021).

4.16. The net zero review considered the potential exposure of businesses and households to the transition and highlighted factors to be taken into account when designing decarbonisation policy. This approach allocates costs over a given time horizon, so that policy can help to make the most of opportunities that will arise and support households as necessary. In doing so it made 129 recommendations, covering areas including the greater role that business can be supported to play, making better use of infrastructure and delivering more energy efficient homes.

4.17. In response to the Skidmore Review, as well as a High Court ruling in July 2022 that the UK Government's current plan for achieving net zero was not detailed enough to show how the UK would meet its goal to reduce its greenhouse gas emissions to net zero by 2050 (Gayle, 2022), a series of policy papers were published by the UK Government under the overarching title of 'Powering Up Britain' (HM Government, 2023). These papers set out the government's preferred approach for the UK's energy security and net zero commitments to be met, in a way that would aim to maximise the economic opportunities of the transition. The priority for the UK Government was to create the right conditions so that the UK's energy security was enhanced in a way that would also ensure the economic opportunities of the transition to net zero could be realised and the government's net zero commitments achieved.

4.18. Central to the UK Government's strategy is the storage of CO2 under the North Sea using Carbon Capture Storage, which UK Ministers have stated also aims to lower energy bills (Stallard, 2023). Although carbon capture has been recommended by the UK's CCC as a way to remove carbon dioxide already in the atmosphere, concern has been expressed that it could allow the UK to keep using oil and gas rather than focusing on renewable energy or reducing demand. Heating in homes currently accounts for around 14% of UK emissions. However, though it is one of the most effective ways to bring down energy consumption for heating and therefore emissions, there has been no significant increase in funding from the UK Government for home insulation.

4.19. In a report co-produced by the Intergenerational Foundation and the Social Market Foundation, key economic and moral questions surrounding how to share the costs between generations of the transition to net zero were considered (Anderson-Samways and Hobby, 2022). A range of factors were identified in the paper, each noted as playing a role in shaping policymaking decisions on how much should be spent on the transition to net zero:

- Moral attitudes to future generations
- Prospects for future economic growth
- Attitudes to inequality between and within generations
- Attitudes to risk

4.20. The report makes the case that these considerations are not just economic ones, but also moral and ethical ones that should be decided by open dialogue within society and not simply left to policymakers. The report concluded that, in the interests of intergenerational fairness, the UK Government should commit to spending significantly more at present in

order to reach net zero commitments. Singling out the 'polluter pays' principle, this investment should be primarily financed by increasing the carbon price in the UK Emissions Trading Scheme and carbon taxation today rather than borrowing from future generations.

Climate change policy in Scotland

4.21. Scotland is playing its part in the global effort to tackle climate change by recognising that all of our homes, businesses and communities will need to be using less energy and water, using different sources of energy, and reducing consumer participation in the full range of carbon intensive activities whose exponential growth we have long become accustomed to. It will also require our cities, towns and villages to become more resilient when unexpected and unpredictable weather events occur.

4.22. Scotland's emissions reduction targets were first set out in the Climate Change (Scotland) Act 2009 (Scottish Parliament, 2009). This created the statutory framework for greenhouse gas emissions reductions in Scotland. The 2009 Act was later amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (Scottish Parliament, 2019). This significantly increased the ambition of Scotland's emissions reduction targets, setting a target to be net zero by 2045. This renewed target was ahead of many other countries at the time, including the UK, where the target set was to reach net zero by 2050 (HM Government, 2021).

4.23. In passing the 2019 legislation the Scottish Parliament also set new statutory interim targets: 56% reduction by 2020; 75% reduction by 2030; and 90% reduction by 2040. These interim targets were relative to 1990 levels of carbon dioxide, methane and nitrous oxide and 1995 levels of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride. To help ensure delivery of the long-term targets, the framework also included statutory annual targets for every year to net zero.

4.24. However, despite the Scottish Government stating its ambition to reduce emissions, the UK CCC has remained concerned that "underlying progress in reducing emissions in Scotland has largely stalled in recent years. Since the Scottish Climate Change Act became law in 2009, the Scottish Government has failed to achieve 7 of the 11 legal targets" (CCC, 2022c).

4.25. To support delivery of Scotland's targets, the Scottish Government publishes a statutory strategic delivery plan every five years. The updated Climate Change Plan (CPP) in December 2020 responded to the Scottish Government's declaration of a climate emergency in 2019 (Scottish Government, 2019). The updated CPP set out a pathway for the economy and society for Scotland's emissions reduction targets to be met over the period to 2032 (Scottish Government, 2020a).

4.26. However, the CCC has noted that, in its view, Scotland's legislated 2030 interim target of a 75% reduction in Scottish emissions goes beyond the level of any of the CCC's five scenarios on the path to net zero set out in the Sixth Carbon Budget (CCC, 2020b). Their analysis indicates that meeting the statutory 2030 target will be extremely challenging. Nevertheless, while the CCC has expressed concern, they have not gone as far to recommend that the target should be changed in law and instead focus on encouraging delivery of appropriate policy levers.

4.27. Importantly all of Scotland's statutory targets are economy wide. They include all territorial greenhouse gas emissions as well as an estimated fair share of emissions from international aviation and shipping and territorial removals, including from the land use sectors. The statutory framework used by the Scottish Government for Scotland's emissions reduction activities sets out a default position that Scotland's targets will be met only through domestic action, without the use of international offset credits.

4.28. The Scottish Government believes that Scotland becoming a net zero nation will benefit the environment, people, and society by transforming Scotland's economy, environment, and communities. Our energy sources will be more sustainable, our buildings more energy efficient, how we travel will be cleaner, our diets healthier, and the natural environment will recover.

4.29. However, achieving targets will not be straightforward, nor easy, but it will affect us all. As the Scottish Government has stated, it will need to be "a truly national endeavour with business, communities, and individuals contributing fully. It will require us to be innovative, utilising new and exciting technologies and learning by doing" (Scottish Government, no date (a)). Achieving this will require the whole of Scotland taking action to reduce emissions, at the same time as adapting and building resilience to those impacts of climate change that are unavoidable.

4.30. However, to meet targets, a rapid transformation across all sectors of economy and society will be required. Box 1 summarises some of the steps some utility network providers plan to take in the transition to net zero.

Box 1 – Utility networks plans towards net zero

Water supply and waste water services – Scottish Water (no date) responded to Scotland's statutory target by committing to net zero by 2040, five years earlier than the national target. This target includes both embedded carbon and carbon emitted from day-to-day operations. To be achieved, however, Scottish Water has recognised this will require Scottish Water undergoing a sweeping transformation over the next 25 years.

Energy distribution – Ofgem (no date) sets price controls for the gas and electricity network companies in Great Britain. These controls balance the relationship between investment in the network, company returns and the amount that they charge for operating their respective networks. RIIO-2 was the second set of price controls implemented under our RIIO model. It's an investment programme to transform the energy networks and the electricity system operator to deliver emissions-free green energy in GB, along with world-class service and reliability.

Telecommunications – As a sector, telecoms has been on its own journey to net zero. As an example, BT Group (2021) announced in 2021 they were planning on building on significant progress in reducing their emissions by bringing forward their target for achieving net zero from 2045 to 2030 for their own operational emissions, with their supply chain and customer emissions following in 2040.

4.31. Without doubt achieving annual emissions reductions has proven challenging, however much progress has been made. Despite this the CCC has been clear that there is a need for the Scottish Government to urgently provide a quantified plan for how its polices will combine and interact with the UK Government's separate plans to achieve emissions

reductions. The CCC noted that progress was starting to fall behind the levels required to meet legally binding targets and that progress towards adapting to the impact of climate change had stalled (CCC, 2022a).

4.32. Becoming a net zero nation also presents as a moment of opportunity for Scotland as a whole by transforming Scotland's economy, environment, and communities. The 2019 Act embedded the principle of a just transition, where reducing emissions is done in a way that tackles inequality and promotes fair work. Central to this will be effective engagement with the people living in Scotland, which the Scottish Government believes marks a new chapter in a "people-centred approach to climate change policy" that is different from anything that has come before (Scottish Government, no date (b)).

4.33. It also led to the publication of the Scottish Government's 'Net Zero Nation: public engagement strategy' (2021b), which set out an overarching framework for engaging the people of Scotland in the transition to a net zero nation so that everyone is prepared for the effects of a changing climate by ensuring the people of Scotland "recognises the implications of the global climate emergency, fully understands and contributes to Scotland's response, and embraces their role in the transition to a net zero and climate ready Scotland" (p.7).

4.34. The costs of the transition to net zero will be significant, but the potential benefits substantial. The Scottish Government has estimated that undertaking energy efficiency upgrades and installing low carbon heating systems in homes could cost around £33 billion over the period to 2045 (Scottish Government, 2021c). However, consumers and businesses across the UK are facing significant financial pressures due to high inflation and declining real disposable household incomes. This holds the potential to lead to increased likelihood of vulnerability being experienced by a wider range of consumers in Scotland. As a result, to be a success, the transition to net zero will require financial incentives and dedicated support for many consumers, including small and medium sized businesses.

4.35. Despite the significant cost, the transition to net zero also creates opportunities, such as encouraging sustainable economic growth, improved employment opportunities, and better housing conditions leading to enhanced health and wellbeing among the population. A policy briefing by the Centre for Energy Policy at the University of Strathclyde concluded that real household income gains resulting from reduced energy bills could lead to sustained economic expansion due to the level of disposable income increasing, which would be available to spend elsewhere in the economy (Katris et al, 2021).

4.36. In responding to the Just Transition Commission's report recommendations, the Scottish Government committed in the draft 2023-2024 Scottish Budget to delivering an enhanced package of policies to be set out in an updated Climate Change Plan and a new Energy Strategy and Just Transition Plan by the end of 2023 (Scottish Government, 2022a). Together these documents set out the actions required to deliver a net zero energy system that supplies affordable, resilient, and clean energy to Scotland's workers, households, communities, and businesses. The CCC has welcomed the Scottish Government's focus on a just transition based on fairness, however it raised concerns about the lack of a clear delivery plan on how targets will be achieved (CCC, 2022a).

4.37. Finally, it should be noted that a range of other relevant policy and legislative developments in Scotland are upcoming that will shape the nature of climate change policy in Scotland for some time to come. These include a new Climate Change Plan for Scotland, a Circular Economy Bill and Route Map to deliver a circular economy, an updated Climate Emergency Skills Action Plan, and new public engagement strategies for climate change and heat in buildings.

Scottish public opinion on climate change

4.38. In terms of public opinion on climate change, we know from the 2021 Scottish Household Survey (SHS) that there has been an increase in the proportion of adults in Scotland viewing climate change as an immediate and urgent problem, rising from 80% in 2020 to 83% in 2021 (Scottish Government, 2023). While comparisons across multiple years of the SHS is not possible due to changes in methodology, increases in concern about climate change amongst the adult population has been steadily increasing over time. Notably, in 2021 the largest increase was seen was amongst those aged 75+, increasing from 69% in 2020 to 76% in 2021. However, this is still lower than the results for all other age groups which range from 82% to 86%.

4.39. In November 2022, the Scottish Government published the results of a representative survey with the Scottish public, focused on attitudes and engagement with climate change. The results were intended to act as a baseline for a forthcoming public engagement strategy for climate change. These results indicated that while concern about climate change is not the most important policy issue for the Scottish population it is one of the top three issues. The Scottish public are more likely to rank the economy (24%) and health and social care (24%) as the policy issues that are most important to them, with climate change being ranked third, being selected as the top issue by 15% of the population.

4.40. The same Scottish Government survey indicated the extent of the Scottish population's knowledge about climate change. Over half (58%) of respondents stated that they know at least "a fair amount" about climate change. However only around one in ten (12%) are confident enough to say that they know "a lot" about it. Just 4% say they don't know anything about it. In this survey those respondents aged 18-34 were significantly more likely than older respondents to say that they know a lot or a fair amount about climate change. School aged young people (aged 14-17) included in the survey were more in line with the Scottish average.

4.41. It is also worth noting however previous research for the Postcode Lottery on consumer attitudes to sustainable lifestyles and the environment highlighted a tendency for individuals to overestimate the impact of day-to-day behaviours (such as recycling or active travel) and to underestimate the relative impacts of larger, high-impact lifestyle shifts (such as switching to an electric vehicle, flying less often, or cutting down on consuming meat and/or dairy produce) (The Diffley Partnership, 2021).

4.42. This suggests that any reluctance by consumers and businesses to change from current carbon intensive behaviours will be a key risk to Scotland meeting its statutory emission reduction targets, as well as having a negative impact on current and future consumers. It is essential therefore that Consumer Scotland and other key decision makers are able to

identify current consumer attitudes in terms of the transition to net zero and efforts to decarbonise Scotland's economy and other social practices. Only then will we be able to identify the help and support that they may require if they are to fully participate on an equitable basis, ensuring that the transition is a success where no one is left behind.

5. Methodology

5.1. In late 2022/early 2023, Consumer Scotland commissioned The Diffley Partnership research agency to conduct an online survey with adults (aged 16+) resident in Scotland. The aim of the survey was to complement existing evidence on consumer attitudes to decarbonisation by establishing a baseline measurement against which Consumer Scotland would be able to track consumer engagement with and progress towards decarbonisation.

5.2. The project was delivered as two distinct workstreams:

- Workstream 1 – Development of a new quantitative questionnaire and associated fieldwork that covered decarbonisation attitudes, behaviours, and intentions of the public in the energy and water sectors
- Workstream 2 – Development and piloting of a new quantitative questionnaire covering decarbonisation attitudes, behaviours, and intentions of the public in other consumer markets of interest to Consumer Scotland: household goods, transportation, parcel deliveries, food and drink, and recreation, with a focus on holidays for leisure

5.3. To develop the Workstream 1 questionnaire previous surveys undertaken by the Consumer Council for Northern Ireland (CCNI) and the Consumer Council for Water (CCW) were consulted to help identify appropriate topics and questions. To support development of the Workstream 2 pilot questionnaire, a rapid evidence review was undertaken by the research agency to further understand the policy context and potential evidence gaps. The aim was to help determine the sectors and sub-topics to include in the Workstream 2 pilot survey covering a number of wider general consumer markets of interest to Consumer Scotland. The questionnaires for both workstreams are shown in the appendices to this report.

5.4. The surveys for both workstreams were administered through the ScotPulse online panel of over 42,000 adults (aged 16+) resident in Scotland. Panel members sign up on a voluntary basis and are not paid to complete surveys. The panel is recruited through a range of advertising, including advertising on national television as well as on social media profiles. Panel participants are chosen at random to take part in the surveys.

5.5. The survey fieldwork for Workstream 1 took place between 24th and 28th February 2023 with a total of 2,269 completed responses achieved. The pilot survey fieldwork for Workstream 2 took place between 7th and 9th March 2023 with a total of 622 completed responses achieved.

5.6. Summaries of the profile of the survey respondents across a number of key demographic variables appear in Table 1. This includes the weighted sample sizes achieved for each category. For both workstreams the survey data was weighted by the panel manager to the age and gender profile of the population in Scotland using mid-year population estimates.

Table 1: Demographic profile of the survey respondents in Workstreams 1 and 2

Demographic category	Workstream 1 weighted sample size	Workstream 2 weighted sample size
Gender – all	2,269	622
Male	1,094	300
Female	1,175	322
Age band – all	2,269	621
16-34	656	179
35-44	338	93
45-54	372	102
55-64	374	103
65+	529	144
Number of people in household – all	2,269	622
1 person	367	113
2 people	1,001	274
3 people	451	125
4+ people	451	111
Presence of children – all	2,269	622
Yes	496	143
No	1,773	479
Day to day activities limited by health or disability – all	2,269	621
Yes – limited a lot	238	80
Yes – Limited a little	495	136
No	1,535	405
Estimated annual household income before tax – all	2,269	621
Under £15,000	282	93
£15,000-£29,999	450	127
£30,000-£49,999	462	122
£50,000-£74,999	389	113
£75,000-£99,999	151	38
£100,000+	102	20
DK/rather not say	433	109
Working status – all	2,264	621
Working full time	993	265
Working part time	302	84
Self employed	125	30
Unemployed - looking for work	75	17
Unemployed - not looking for work or long-term sick/disabled	154	33
Housewife*	64	12
Retired	476	138
Student/pupil/education	203	60
Housing tenure	2,263	621
Owns with mortgage or loan	872	261
Owns outright	820	221
Rent – social landlord	297	70
Rent – private landlord	188	51
Other arrangement	70	16
Part own, part rent	16	4

* Current variable name used by panel manager that is under review

Approach to analysis and reporting

5.7. The responses for both workstreams were tabulated by the research agency and analysed quantitatively. The analytical approach allowed the prevalence of views amongst respondents to be identified in addition to differences in opinion by key demographic variables. This report summarises key findings of both surveys and makes connections to the policy context to draw out noteworthy findings and between-groups differences.

5.8. Where percentages do not sum to 100%, this is due to rounding, the exclusion of 'don't know' categories, or multiple answers being provided. Aggregate percentages (for example where 'agree' and 'strongly agree' responses are combined and reported as net agree or net disagree) have been calculated from the absolute values. Therefore, aggregate percentages may differ from the sum of individual scores due to rounding of percentage totals.

Significance testing and margin of error

5.9. Significance testing and margin of error both use a confidence interval (95% or 99%). These are complementary but look to measure difference aspects. A 95% confidence level in significance testing is standard practice in social research. This means that where significant differences are found, we're at least 95% sure that these didn't happen by chance. A 99% confidence level is typically used when measuring the margin of error and is calculated by using population estimates and sample sizes. This means that we are 99% sure that, given the sample size we have, the attitudes/behaviours for the full population lie within a range of percentage points (confidence intervals) above or below what was found in the survey.

5.10. In this research significance testing at a 95% confidence level ($p < 0.05$) was applied to determine between-groups differences in opinion. Differences are only reported in this report when statistically significant unless otherwise stated. The reporting does not include every result of every statistical test conducted; only results identified as most relevant for this report are highlighted. The full data tables showing statistical significance are available on request.

5.11. The margin of error for the data, based on a nationally representative survey of the adult population of Scotland is 3% at the 99% confidence level. The margin of error refers to the range of values above and below the actual survey result that we can be sure the views of the public will lie between. For example, if 50% of the sample surveyed strongly agree with a statement, a 3% margin of error means that we can be sure that between 47% to 53% of the general population strongly agree with the same statement.

6. Reaching net zero

Consumers in Scotland are concerned about climate change

6.1. Our results indicate that most consumers in Scotland are concerned about climate change, with 77% of respondents net concerned compared to 21% net unconcerned. Fewer than one in ten respondents (9%) stating they are not at all concerned about climate change. These results point in the same direction as other survey evidence, including the Scottish Household Survey (SHS), where the proportion of adults in Scotland viewing climate change as an immediate and urgent problem has been reported to have risen from 80% in 2020 to 83% in 2021 (Scottish Government, 2023).

6.2. In terms of demographic differences, our survey results indicate that females are more likely (86%) to be net concerned about climate change than males (68%) and, as a result, males are more likely (32%) to be net unconcerned than females (12%). These results are also consistent with the SHS, where women were reported to be more likely than men to view climate change as an immediate and urgent problem, although the gap has narrowed; 84% compared to 82% in 2021 and 82% compared to 77% in 2020.

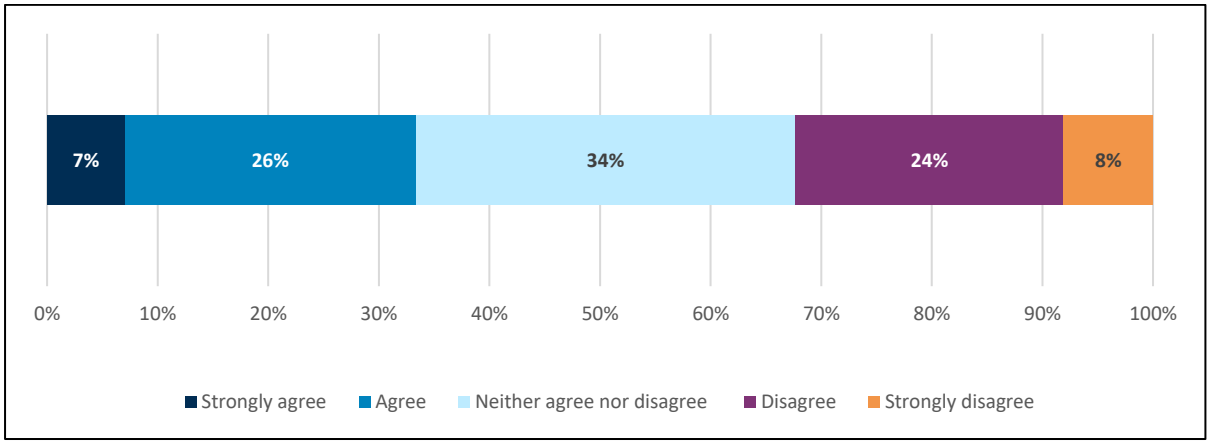
6.3. Our survey results also suggest that those in the ABC1 social grades categories are more likely (83%) to be net concerned about climate change than those in the C2DE social grades categories (70%), and subsequently, those in the C2DE social grades categories are more likely to be net unconcerned (27%) about climate change than those in the ABC1 social grades categories (17%).

Consumers self-report a lack knowledge about what they can do to help Scotland reach net zero

6.4. In our full sample survey, one third (34%) of respondents stated they net agree that they know what they need to be doing to help Scotland reach net zero (Figure 2).

Figure 2 - Scotland's population are evenly split between agreeing, disagreeing or unsure they know what do to help Scotland reach net zero.

Proportion of respondents answering Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree to the statement "I know what I need to do to help Scotland reach net zero by 2045".



Weighted base: 2,262

6.5. A further third (33%) of respondents stated they do not know what they need to do to help Scotland reach net zero, and a final third (34%) are unsure (neither agreeing nor disagreeing). This indicates that while Scotland appears to be in a good position from which to build further support for action on climate change and engagement with decarbonisation and net zero policies, there is more work to be done in terms of the two thirds (67%) stating they do not know or are unsure what they need to do to help reach net zero.

6.6. The strongest demographic differences in our survey for this issue was by age group, with the oldest age group (aged 65+) being more likely (39%) to state they know what they need to be doing to help Scotland reach net zero, compared to 29% of those aged 16-34 years old stating the same.

6.7. Our results are important because over 60% of the required emissions reductions to meet net zero will be "predicated on some kind of individual or societal behavioural change" (research by the CCC cited by Scottish Government, 2020a: 111). The Scottish Government's overall approach is based on an assumption that higher impact emissions savings will need to come from behavioural changes, so increased public engagement on domestic emissions reductions will be fundamental to success. However, current levels of awareness of what is required are low, which sits alongside poor public understanding of the issues.

Consumers view governments and businesses as most responsible for reducing emissions

6.8. Respondents to our survey were asked to rank who they thought had most responsibility for reducing carbon emissions in the energy, water and other more general consumer markets. Across all of the sectors we were interested in exploring, respondents tended to rank the Scottish and UK governments and the businesses delivering services within those markets as having most responsibility for reducing emissions, followed by organisations that regulate those markets.

6.9. Respondents ranked consumers as having least responsibility for reducing carbon emissions. Though it should be noted that this does not mean that consumers see themselves as not having any responsibility. Rather consumer responsibility is being ranked relatively lower compared to other categories, such as governments, businesses and regulators.

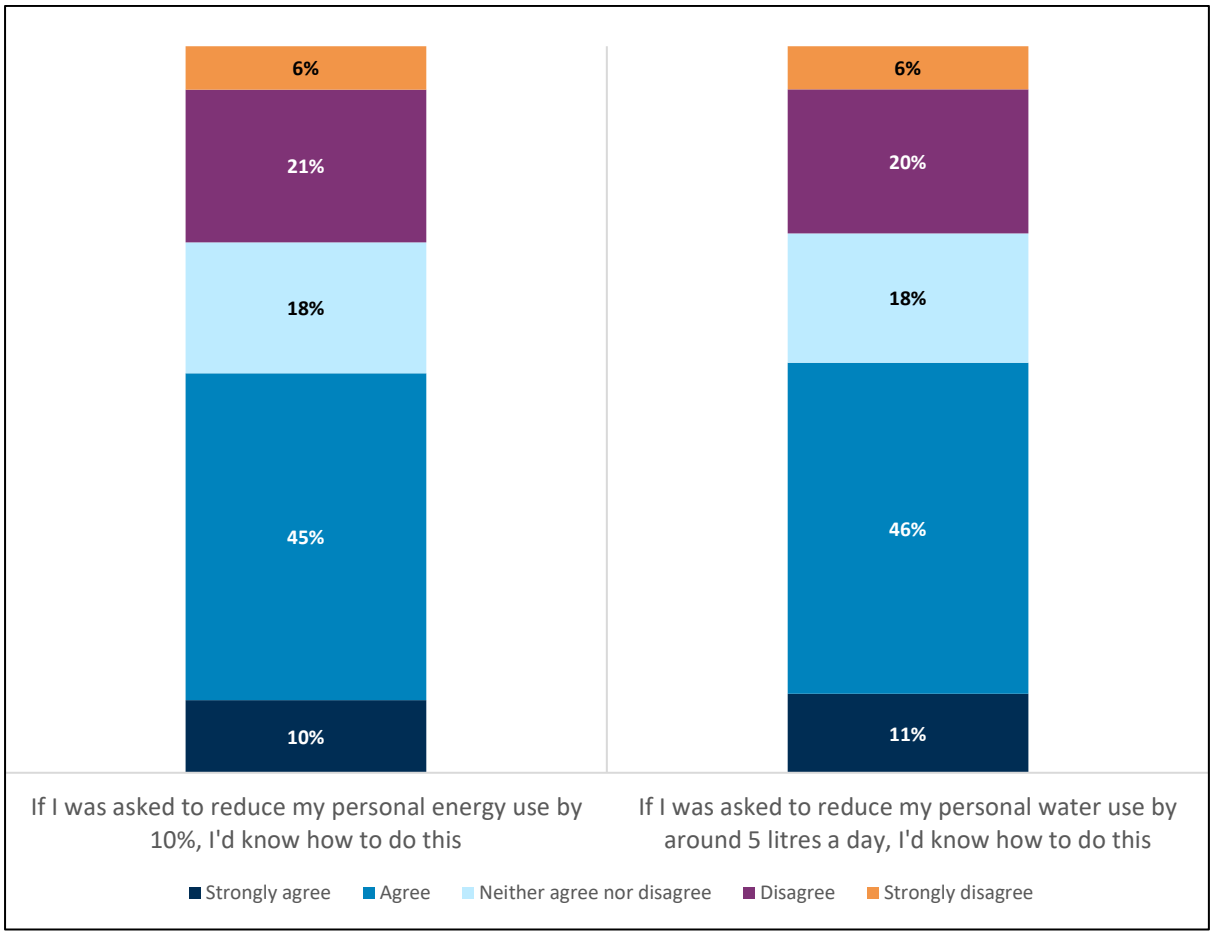
6.10. This finding that consumers were ranked as having least responsibility for reducing carbon emissions across the sectors is an important one when viewed alongside the earlier finding that most people in Scotland view climate change as an important issue. This indicates that it appears to be an issue where the role of consumers in tackling climate change is difficult to get across, which in turn may support the Scottish Government's plans for an effective public engagement campaign that can help everyone understand their role if they are to play their part and help Scotland reach the goal of transitioning to net zero. Though this is unlikely to be sufficient on its own, with a mix of levers including incentives and regulation likely required.

Self-reported consumer awareness of how to save energy and water is high, but raising more awareness among the wider population is feasible

6.11. Our survey respondents were also asked to agree or disagree with two hypothetical statements about self-reported knowledge of how to reduce personal energy and personal water use in the home. The results are summarised in Figure 3.

Figure 3 - Most consumers state they would know how to save energy and water if asked to do so, but there is potential for more awareness raising among the wider population.

Proportion of respondents answering Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree to two hypothetical statements: "If I was asked to reduce my personal energy use by 10%, I'd know how to do this" and "If I was asked to reduce my personal water use by around 5 litres a day, I'd know how to do this".



Weighted base: 2,265

6.12. For the hypothetical energy question, the results show that over half (55%) of respondents net agreed that they would know how to reduce their personal energy use by 10% if they were asked to do so. Though it should be noted that there was a strong age effect in the data, with around two thirds (65%) of those aged 65+ stating they would know how to reduce their personal energy use by 10%, compared to well under half (43%) of those aged 16-34 stating the same.

6.13. For the hypothetical water question, the results show that 56% of respondents net agreed they would know how to reduce their personal water use by around five litres a day if they were asked to do so. This is broadly comparable with previous survey results published by the Consumer Council for Water (CCW), where 57% of water consumers in England and Wales in 2022 net agreed with the same statement.

6.14. There was also a strong age effect for the hypothetical water question, with two thirds (63%) of respondents aged 65+ year olds stating they would know how to reduce their personal water use by around five litres a day, which was significantly more than those aged 16-34 years old (50%) and 35-44 years old (49%).

Energy and water consumers rely mostly on news media and local/national government for information

6.15. Successful engagement with the markets consumers are participating in largely hinges on the provision, appropriateness and adequacy of information that can be relied upon to provide the right information in the right format and at the right time. This is particularly important for complex and emerging issues that may be unfamiliar to consumers.

6.16. Our survey results indicate the sources of information used by consumers in the energy and water markets and the extent to which that information is held to be trustworthy and helpful:

- **Energy:** the most prominent source of information related to energy and its supply was from the news media (31%), followed by the Scottish Government (26%). Roughly similar proportions of respondents reported receiving information via the UK Government (16%), social media (15%) and local authorities (14%)
- **Water:** the most prominent source of information related to water and its supply was from local authorities (24%), followed by the news media (22%), and the Scottish Government (20%). Roughly similar proportions report receiving this information via public bodies (12%), which will include Scottish Water and relevant regulators, and social media (11%)

6.17. Respondents were asked to rank whether information about energy and water supply and its use is trustworthy or helpful. Scientists were ranked as having the highest rates of trust and helpfulness in terms of energy, though only a minority of energy consumers are getting their information from this source. The news media was the most commonly reported source of information regarding energy supply and its use, with trust and helpfulness for this category being ranked around the midpoint. Among those who receive information about energy use from the Scottish Government, there were relatively high levels of trust and helpfulness being reported.

6.18. In terms of water, the minority of respondents who get their information from scientists reported this source as having a high rate of trust and helpfulness. Local authorities were the most reported source of information regarding water use in the home and those respondents who get information from this source tended to report a generally positive view in terms of trust and helpfulness. Among those who receive information from Scottish Government about water use, there were also high levels of trust and helpfulness reported.

6.19. Our results on trust can be contrasted with the spring 2023 wave of the Department for Energy Security and Net Zero's (DESNZ) Public Attitudes Tracker (DESNZ, 2023). Respondents from across the UK as a whole were asked in that survey to rank levels of trust in summer 2022 in a range of sources of information about climate change, including:

- Newspapers or newspaper websites
- UK Government
- TV news (e.g. BBC, ITV, Sky)
- Scientists working at universities
- Social media (e.g. Facebook, Twitter)
- Scientific organisations (e.g. Royal Society, Met Office; TV/radio documentaries)
- Charities, environmental, campaign groups (e.g. Greenpeace, Friends of the Earth)

The highest levels of trust in information related to climate change were reported for scientists at universities (86% trusted, with 39% trusting them a great deal), scientific organisations (85% trusted, with 39% trusting them a great deal), and TV and radio documentaries (74% trusted, with 12% trusting them a great deal). The sources of information most likely to be ranked as not being trusted were social media (77% not trusted, with 41% not trusted at all), newspapers or newspaper websites (51% not trusted, with 16% not trusted at all), and the UK Government (47% not trusted, with 12% not trusted at all).

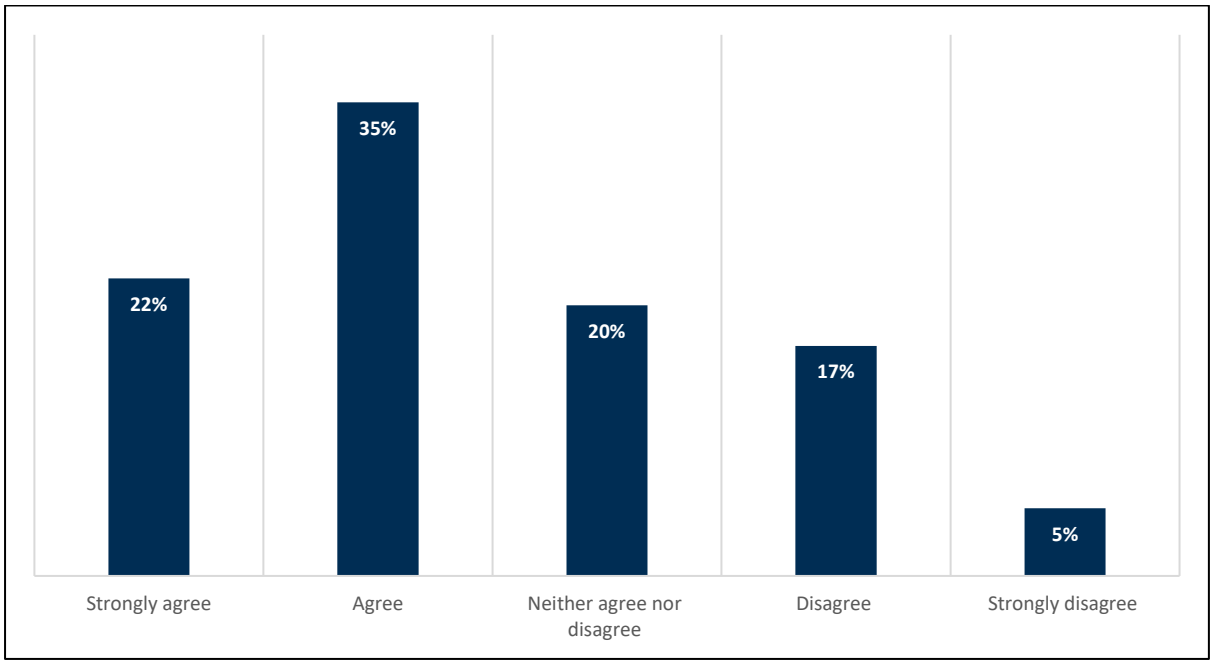
7. Energy supply and its use at home

Most consumers are concerned about their energy use at home

7.1. Our survey asked respondents the extent to which they agreed or disagreed with the statement: “I’m concerned about how much energy is used in my home”. The results are summarised in Figure 4 and show that the majority of the respondents (58%) net agreed with the statement, but one in five (20%) neither agreed nor disagreed, with a similar proportion net disagreeing (22%).

Figure 4 - Most consumers in Scotland are concerned about how much energy is being used in their home.

Proportion of respondents answering Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree to the statement: "I’m concerned about how much energy is used in my home”.



Weighted base: 2,249

7.2. There was no statistically significant difference between income groups net agreeing with the statement, I’m concerned about how much energy is used in my home. However, those in the middle and highest income categories were significantly more likely than those on the lowest incomes (under £15,000) to net disagree with the statement: 25% of respondents with an income of £30,000-£49,999, 27% of respondents with an income of £50-£74,999, 25% of those on an income in excess of £100,000 compared to 15% of those with an income under £15,000.

7.3. While it is not possible to state definitively what the main concern here is primarily related to, we know from other evidence that consumers in Scotland continue to find meeting the high costs of energy challenging. In particular, the winter 2022 wave of Consumer Scotland’s energy tracker showed that one-third of consumers report they are not managing their household finances well, which was consistent with the previous wave findings in autumn

2022 (Consumer Scotland, 2022). In the same winter 2022 wave of the energy tracker, 68% of consumers were also reporting that their household was rationing their energy use, which had remained consistent with the previous wave (autumn 2022). This was a 16% increase in consumers reporting they were rationing energy due to financial concerns since the spring 2022 wave.

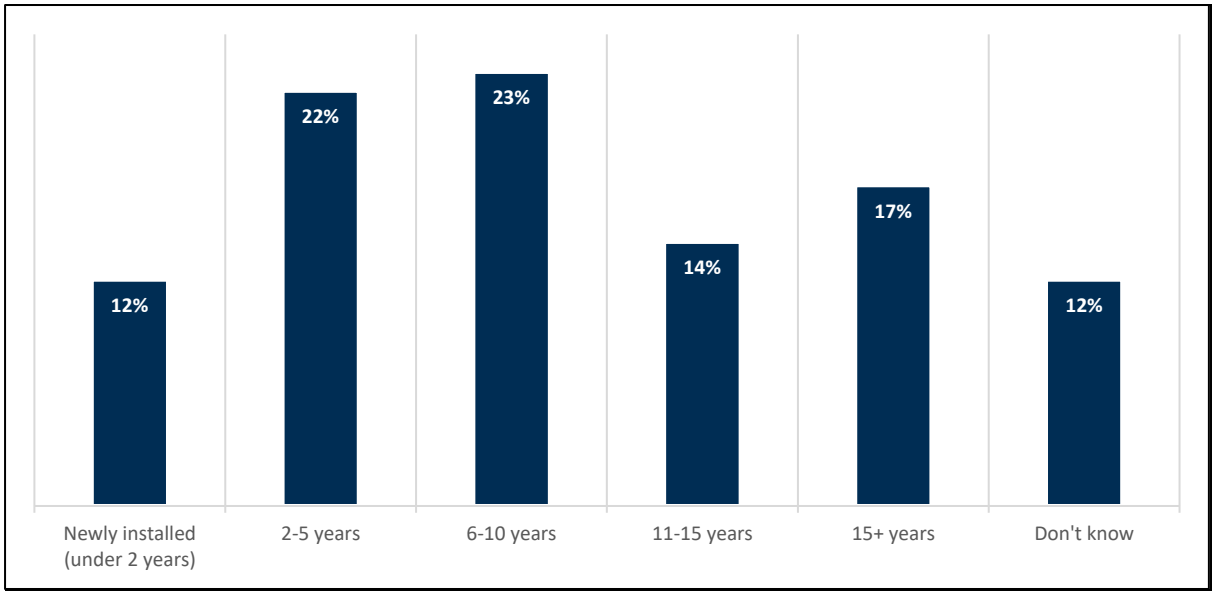
The estimated age of home heating systems in Scotland varies considerably

7.4. Trends in boiler efficiency are closely related to developments in energy efficiency and building standards regulations, with 94% of domestic gas and oil boilers in Scotland having been installed since 1998, as a result of the European Boiler Efficiency Directive minimum standards coming into effect. In addition, the proportion of new boilers installed in Scotland has increased by 24 percentage points since 2010. The Scottish House Condition Survey also estimates that in 2019 around 87% of households in Scotland were using a gas or oil-fuelled boiler and over three-quarters (76%) of gas and oil boilers in Scotland were condensing boilers. This represented an increase of four percentage points since 2018 and 54 percentage points since 2010 (Scottish Government, 2020b).

7.5. In our survey respondents were asked to estimate how old they thought their home heating system is. The results are summarised in Figure 5.

Figure 5 – The estimated age of home heating systems in Scotland varies

Age of home heating systems in Scotland estimated by respondents in answer to the question: "To the best of your knowledge, how old is your home heating system?"



Weighted base: 2,264

7.6. The results in Figure 5 show that 57% of heating systems in Scotland are estimated to be under ten years old, with just over one in ten (12%) having been newly installed (less than two years old). A significant proportion (31%) are estimated to be over ten years old which will likely therefore need replaced sooner as those products reach the end of their serviceable lifespan. These may be the consumers more easily engaged in a conversation

about low and zero emissions heating systems, as repair and servicing older systems becomes more difficult or expensive. A more challenging group of consumers to engage in the conversation around home heating systems will be the nearly half of respondents (45%) in our survey estimating that their heating system is between two and ten years old, as these are relatively recently installed systems that could work well for several years if they are serviced, and the costs of fuel remain affordable.

7.7. There was some variation in the estimated age of home heating systems by housing tenure. Those who own their home with a mortgage or loan are most likely to estimate that they have a newly installed system (16%), compared to those who own outright (11%), social renters (10%), shared ownership (8%), and 3% of those renting from a private landlord. Though this variation may also be concealed by the higher rates of private renters (47%), social renters (19%) and those in shared ownership (17%) not knowing how old their home heating system is compared to those that own outright (7%) or buying with a mortgage or loan (7%). Caution is therefore advised when interpreting this data.

Consumer interest in renewable technologies is low, but will likely grow in the future

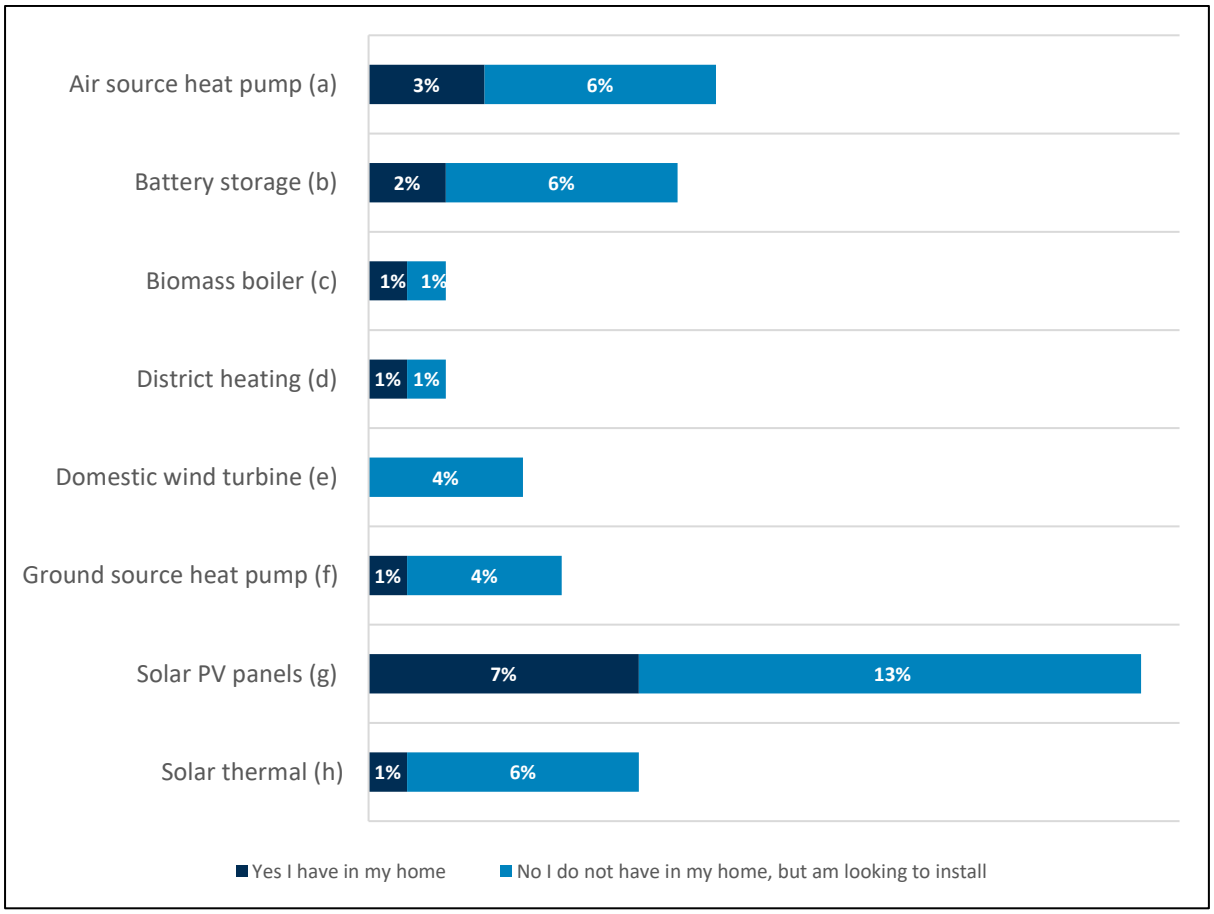
7.8. In our research we asked respondents whether they currently have or are looking to install in the future different renewable technologies at home. The results are summarised in Figure 6 and show that while a start has been made in Scotland, there is a considerable way to go. A minority of respondents stated in our survey they have an air source heat pump (ASHP) (3%) or ground source heat pump (GSHP) (1%). It should be noted, however, that our survey results may be overestimating the prevalence of heat pumps in Scotland.

7.9. In an update by the Scottish Government (2021d) on progress made toward meeting the target of 11% of non-electrical heat demand from renewable sources by 2020, it was estimated that by the end of 2020 heat pumps saw the largest increase in number of installations and output in Scotland with an additional 3,020 installations contributing to an additional 83 GWh of output, compared with 2019. This brings the total heat output from heat pumps in Scotland to 390 GWh and the total number of installations to around 21,000. The year on year increase of useful renewable heat produced by heat pumps was split between large heat pumps and new small units typically installed in domestic settings for the provision of heating and hot water. With annual rates of installation continuing around the 3,000 mark (Bowes, 2021), we might reasonably expect to be around 30,000 currently – so about 1% of all households in Scotland, allowing for the above covering commercial and industrial too.

7.10. While caution is therefore advised regarding our survey results on the self-reported prevalence of heat pumps in Scotland, the Energy Saving Trust's (2022) data on 2020-2021 Home Energy Scotland Loans shows that demand for funding to support the installation of heat pumps in increasing. Funding committed through the Home Energy Scotland Loan scheme increasing by almost a third, from 586 systems in 2019-2020 to 762 systems in 2020-2021.

Figure 6 – Take up of renewable technologies in Scotland is low currently, but there is some consumer interest in these being installed in the future.

Proportion of responses to the statement: "For each of these please tell us if you have them in place or are looking to install" capturing whether renewable technologies are installed at the respondents' homes, or they are looking to have them installed in the future.



Weighted bases:
(a) 2,207; (b) 2,241; (c) 2,249; (d) 2,248; (e) 2,234; (f) 2,203; (g) 2,251; (h) 2,242

7.11. Our results also show that around one in five state that they are looking to install either of these technologies in the future: 6% are looking to install an ASHP and 4% are looking to install a GSHP. Around three quarters (76%) stated they do not have an ASHP and they are not looking to install them and a similar proportion (78%) stated they do not have GSHP and they are not looking to install them. Around 16% of respondents stated they do not know if they have an ASHP and 17% of respondents stated they did not know if they have a GSHP.

7.12. The other renewable technologies currently installed at home or technologies the respondents to our survey are looking to install in the future are also summarised in Figure 6. The results show that 7% of consumers in Scotland currently have solar photovoltaic (PV) panels, with a further 13% stating they do not have these currently, but they are looking to install the technology in the future. It is estimated that there are more than 144,000 homes with solar panels in Scotland, according to the Microgeneration Certification Scheme (cited by Jackman, 2023), which is roughly 6% of homes, indicating our survey results are broadly in keeping with official estimates.

7.13. There were only very low levels of respondents stating they currently have battery storage at home (2%), with a further 6% stating they do not have these but are looking to install them in the future. Similarly, only 1% of our respondents stated they currently have solar thermal for heating water, while a further 6% don't have these but are looking to install in the future. A further 1% currently use district heating and biomass boilers, with a further 1% interested in installing/connecting to these in the future. There was no one included in our survey with a domestic wind turbine, though 4% of respondents were interested in having these installed in the future.

7.14. The renewable technology with most variation by age was related to solar PV panels and solar thermal technology. Those aged 16-34 (17%) and 35-44 (19%) were significantly more likely to say that they were looking to install solar PV panels than those aged 55-64 (9%) and 65+ (6%). Similarly, those aged 16-34 (9%) and 35-44 (6%) were significantly more likely to say that they were looking to install solar thermal than those aged 65+ (3%).

7.15. Our findings on attitudes towards renewable technologies are significant in showing that while there appears to be some consumer interest in newer technologies that can help reduce the emissions from homes, there is some way to go in terms of building widespread consumer interest and support. This may indicate a lack of consumer awareness or knowledge around less familiar types of technology. This is related to the point made earlier that while consumers in Scotland are concerned about climate change, they may lack knowledge on what they can do about it.

7.16. This lends support to the Scottish Government speeding up its proposals for public engagement exercises for climate change and heat in buildings. This will go some way to equipping consumers with the knowledge they will need to feel adequately informed and from that behaviours will be able to change. This will, however, need to be backed up with adequate guidance and support, including financial support for the most vulnerable consumers to ensure that everyone benefits from the transition on an equitable basis.

7.17. The Scottish Government's Heat in Buildings Strategy (HiBS) makes clear that to achieve Scotland's net zero ambitions the country will need to rapidly scale up deployment of zero emissions heating systems so that by 2030 over one million homes and the equivalent of 50,000 non-domestic buildings are converted to zero emissions heat (Scottish Government, 2021a). In an online blog for ClimateXChange it was estimated that currently Scotland installs 3,000 low carbon domestic heating systems a year across all technology types and between 517,000 and 717,000 domestic properties will be required to install heat pumps in Scotland by 2030 to meet climate targets (Bowes, 2021). However, for the heat transition to be a success, all of this will need to be done in a way that will protect those in or at risk of fuel poverty from increased energy costs and avoid placing a burden on those least able to pay.

Consumers perceive renewable technologies as better for the environment, but more costly to install and run

7.18. To be able to promote the uptake of renewable technology alternatives at the scale required to meet the Scottish Government's ambitions as laid out in the HiBS will require

widespread and improved awareness of renewable technology options available to consumers.

7.19. The homebuilding, extending and renovation sector estimates the cost for an air source heat pump installation on a new build property would be between £8,000 to £16,000 and potentially as much as £28,000 on an existing property (Hilton, 2021). This estimated cost is at the top end of estimates and would include upgrading radiators and replacing pipework. The homebuilding, extending and renovation sector also estimates the cost of installing a ground source heat pump would be around £14,000 to £25,000 or possibly more if a large borehole collector is required. Though other estimates of the capital costs of adopting heat pumps have suggested replacing gas and oil-heated homes heating systems will cost between £11,290 and £14,300 (Palmer and Terry, 2023). In the same analysis, electrically-heated homes replacement heating systems is estimated to cost somewhere in the range £10,480 to £19,980. This compares to the average cost for purchasing and installing a standard combi boiler being between £2,000 to £3,000 for a simple gas boiler replacement.

7.20. In our survey, two thirds (66%) of all respondents net agreed that renewable energy technologies are more expensive to install when compared to gas-based alternatives. Interestingly, 80% of respondents on the highest incomes (> £100,000) believe renewable energy technologies are more expensive to install when compared to gas-based alternatives, versus 59% of respondents on the lowest incomes (< £15,000) stating the same. Speculatively it could be that people with most money have looked into the cost of renewable technology, so therefore have a more realistic understanding of the costs involved.

7.21. Over a quarter (27%) of all respondents stated a belief that renewable energy technologies are cheaper to run when compared to gas-based alternatives. There was no statistically significant difference in the responses by income group, though respondents on higher incomes were marginally more likely than those on lowest incomes to state a belief that they are cheaper to run (29% of those on incomes > £100,000 compared to 25% of those on incomes < £15,000).

7.22. Our survey results also indicate a significant majority of all respondents (62%) agreed that renewable technologies are better at reducing carbon emissions, with only a minority agreeing that renewable energy technologies are more reliable to use (19%) and that they are better at heating homes than gas (16%).

7.23. These results should be caveated by the fact they are gathering consumers immediate responses to the question asked. There is no way of knowing from the data collected how aware or experienced the respondents were of renewable technologies. It should also be noted that there were high occurrences of “don’t know” responses to the question. This may reflect an unfamiliarity with renewable technologies in the general population or a lack of accurate knowledge from which to form an opinion. But if the results are taken at face value, it is clear that there was a dominant view amongst respondents that renewable energy technologies are more costly to run in comparison to gas alternatives.

Consumers recognise the impact of specific energy related behaviours, but convenience and cost matters

7.24. Our survey asked respondents to rank the impact on the environment they believe would stem from undertaking a range of specific energy related behaviours:

- Improving energy performance
- Saving energy through low cost measures
- Installing a new home heating system
- Installing renewable energy technology
- Switching to hybrid or electric vehicles
- Installing heat pumps

7.25. The respondents generally viewed the full list of different types of measures as having at least some impact on the environment, but to varying degrees. Saving energy at home by improving the home's energy performance (e.g. better insulation, replacing doors/windows, installing underfloor heating, etc.) was considered to be the most impactful intervention, closely followed by saving energy at home (e.g. switching off lights, turning down a heating thermostat, etc.), and installing new home heating systems that produce fewer greenhouse gas emissions (e.g. more efficient electric heating). The intervention viewed as having least impact on the environment was installing heat pumps, closely followed by switching to a hybrid or electric vehicle when you replace your current vehicle.

7.26. Our survey asked the respondents to indicate which of the energy related behaviours listed above they personally do/have done and those they personally do not do/have not done. The results are summarised in Figure 7 and show that the majority of respondents (91%) self-reported that they are already saving energy at home through low cost measures (such as switching off lights and turning down a heating thermostat). In addition, more than half (54%) of respondents reported they have saved energy at home by improving their property's energy performance, for example through better insulation, replacing doors/windows, or installing underfloor heating.

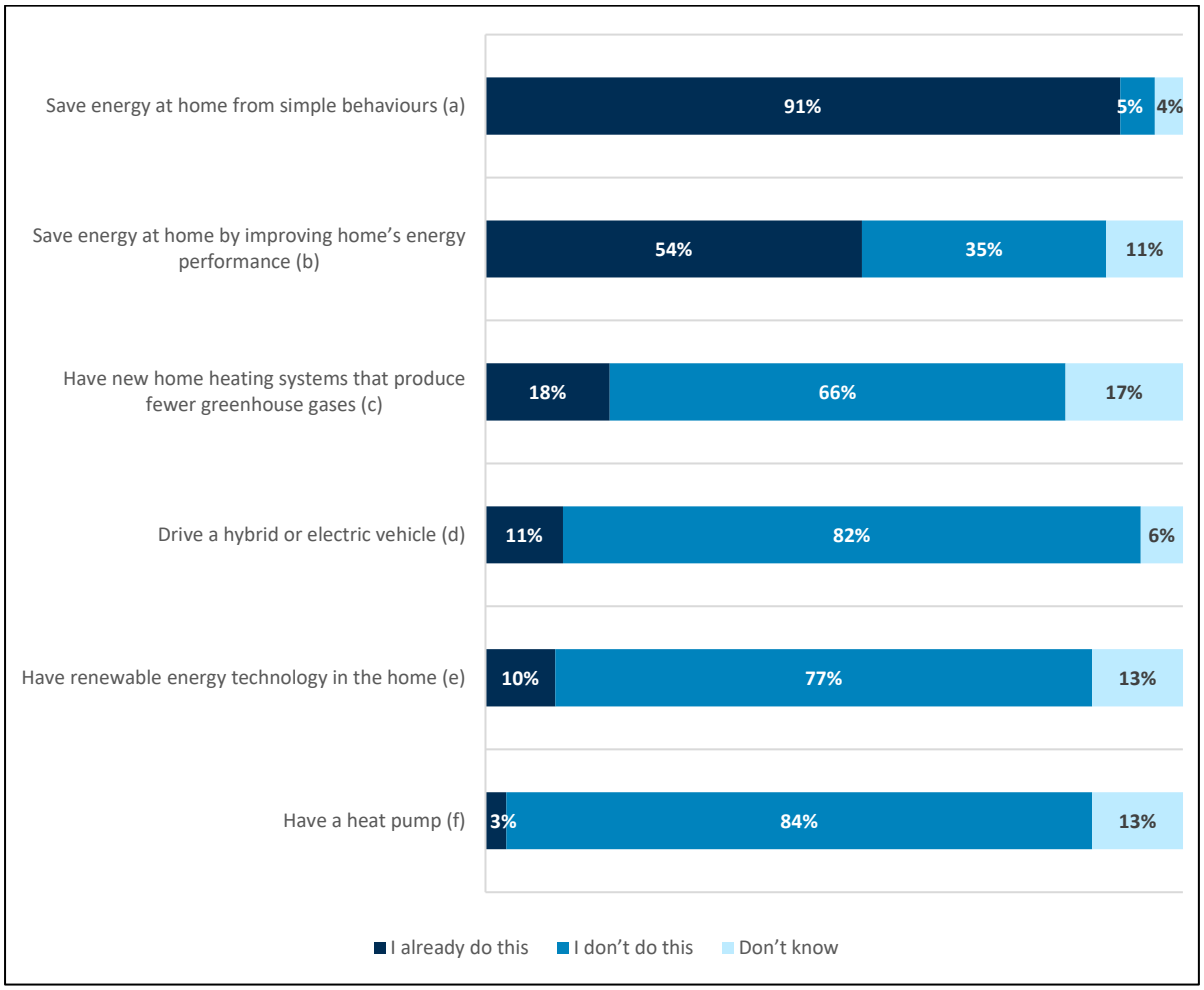
7.27. However, over a third (35%) of respondents stated they have not sought to save energy at home by improving their property's energy performance already and most respondents reported they do not have a heat pump (84%), drive a hybrid or electric vehicle (82%), nor have renewable energy technology in their home (77%). The apparent consumer reluctance around switching to electric or hybrid vehicles is particularly interesting, given that according to Transport Scotland (2022), new registrations of electric or hybrid-electric vehicles have seen steady increases in new registrations in recent years, to currently be sitting at around 18,437, or 10% of new registrations.

7.28. In addition, of the 10% of respondents in the survey stating they had installed/have some sort of renewable energy at home, the single biggest motivating factor was lowering energy

costs (63%), followed by increasing the energy efficiency of the home (39%), and a third (33%) stated a belief that it is their personal responsibility to help tackle climate change.

Figure 7 – The majority of respondents self-report they are already saving energy at home through low cost measures and more than half report they have saved energy at home by improving their property's energy performance.

Responses to the statement: "Looking at the list below, some people already do some of these things while others do not. Please indicate which you already do and which you do not do currently".



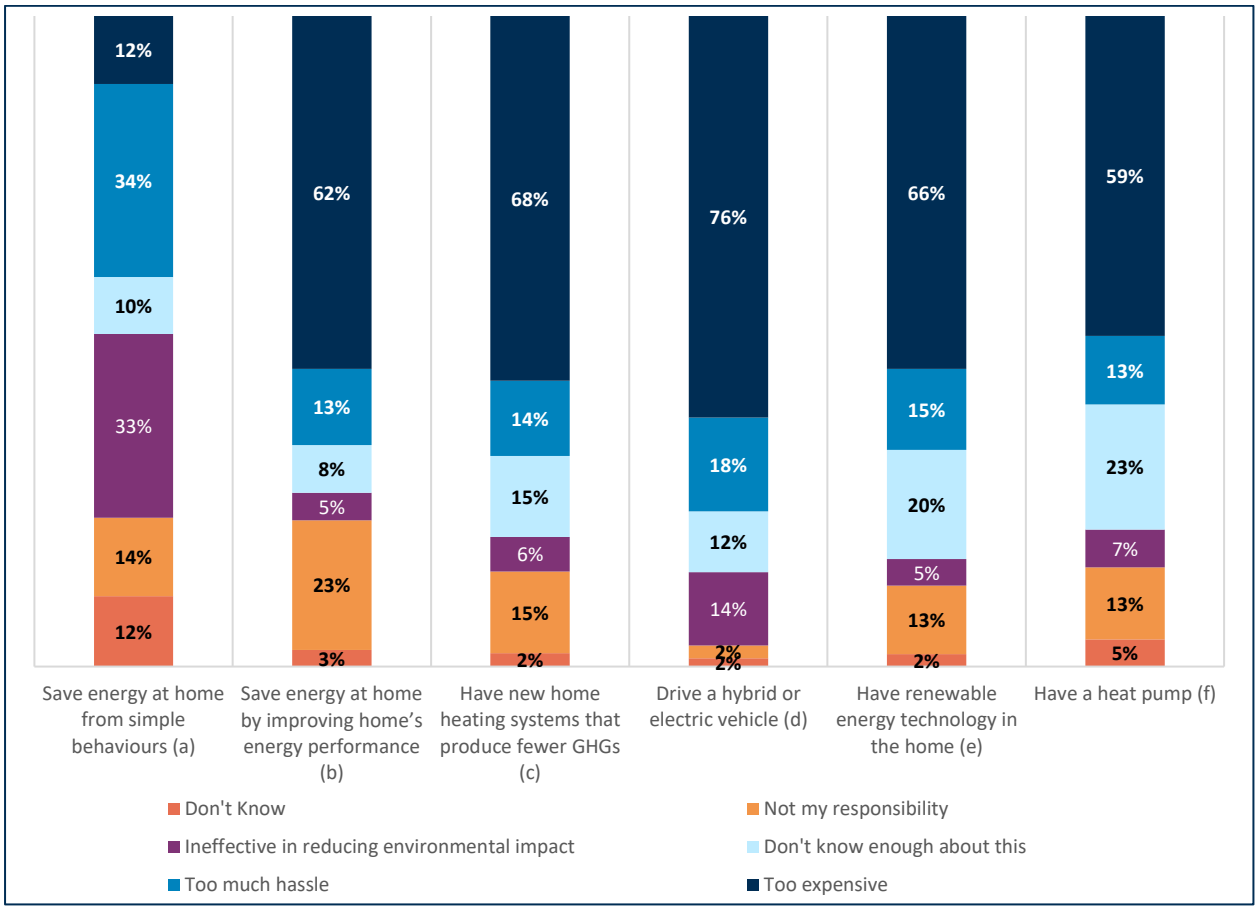
Weighted bases:
(a) 2,242; (b) 2,239; (c) 2,242, (d) 2,241; (e) 2,243; (f) 2,243

Cost remains a significant barrier to some energy interventions

7.29. In terms of the barriers consumers face for installing or having energy interventions at home our research suggests that a lack of information is important. As shown in Figure 8, cost was identified as the biggest barrier to driving a hybrid or electric vehicle (76%), having a new home heating systems installed that produce fewer greenhouse gases (68%), having a renewable technology in their home (66%), saving energy by improving the home's energy performance (62%), and having a heat pump installed at home (59%).

Figure 8 – The most commonly self-reported barrier for installing energy interventions is cost, especially for measures perceived by respondents to be higher cost interventions.

Responses to the question: "If selected 'I don't do this' (in Figure 7), why do you not?" Select all that apply.



Weighted bases:
(a) 108; (b) 711; (c) 1,382; (d) 1,589; (e) 1,630; (f) 1,732

7.30. Just under a quarter (23%) of respondents stated that they do not know enough about heat pumps to be able to form a view, indicating a potential lack of appropriate knowledge around that particular measure. However, making comparisons about installation and running costs between familiar carbon intensive technologies and less familiar renewable technologies, such as heat pumps, can be difficult because these can depend on the size and type of property, how much insulation it has, the type and age of radiators, the efficiency of the boiler, the price of gas relative to electricity over time, and grants available for installation. Nevertheless, if there is a perception amongst the public that heat pumps are more costly to install and run than gas boilers, then it is reasonable to assume that more work will be required to help consumers understand the true extent of installation and running costs.

7.31. For the minority of respondents not currently saving energy at home by undertaking low cost interventions (such as switching off lights or turning down a thermostat), the main view expressed here was related to this type of intervention being too much hassle to do consistently (34%), or the intervention is perceived as being ineffective in reducing the environmental impact (33%).

Key insights on energy supply and its use at home

7.32. Overall, our survey results related to energy supply and use in the home indicate that those consumers who are most concerned about climate change appear to have a good level of awareness about undertaking a range of energy related behaviours, but others with less concern appear not to. While consumers in Scotland are generally interested in climate change and want to take personal action in relation to energy supply and its use, for many people they do not appear adequately equipped with appropriate knowledge required to allow full participation in the transition to net zero on an equal footing.

7.33. For many consumers there are real and perceived barriers to participation that may be difficult for some to overcome, particularly where interventions come with a real or perceived high financial cost to the consumer, at least initially. This is despite the considerable consumer interest in climate change as an issue and consumers wanting to undertake at least some interventions at home.

7.34. For low cost and easy to do everyday actions, most consumers state they are already doing what they can, and for those who are not doing what they can, more may need to be done to raise greater awareness that can build on interest that already exists. But for a significant number of consumers a lack of information that can be relied upon to help consumers form accurate views and from their make informed choices in the future. Attending to these barriers will enable all consumers to find their place in the transition to net zero and undertake the behavioural changes that will be required.

8. Water and its use at home

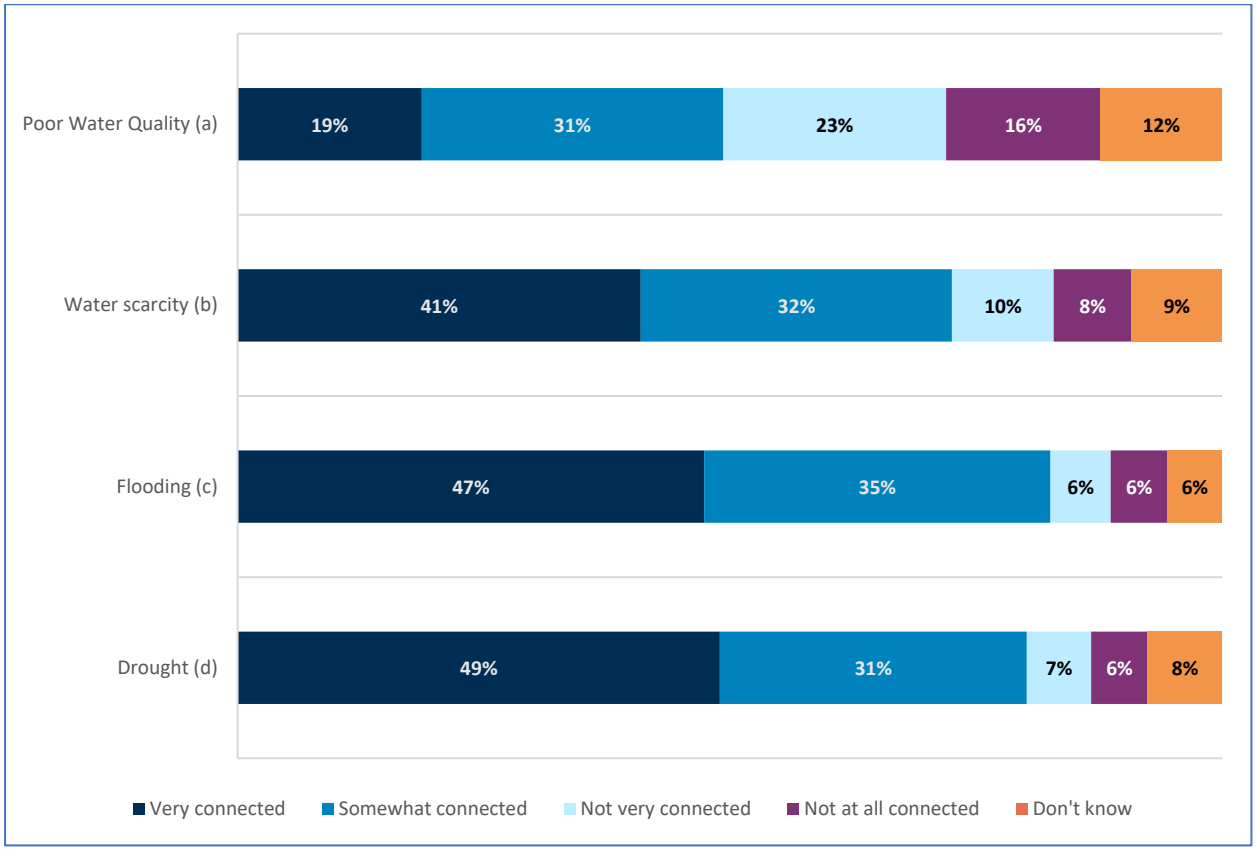
Consumers believe there are water related impacts of climate change

8.1. Our survey asked respondents to indicate if they had directly experienced any water related effects of climate change. While the vast majority of respondents (69%) had not experienced any water related effects of climate change, around three in ten (31%) had experienced some kind of effect in their local area. Flooding was the most common impact experienced (19%), followed by poor water quality (10%). Water scarcity (4%) and drought (1%) were reported as being experienced by far fewer people.

8.2. Respondents were also asked to indicate their beliefs around water-related effects of climate change are summarised in Figure 9, after not applicable responses were removed.

Figure 9 – Consumers report high levels of awareness of water-related effects of climate change, with drought and flooding being connected to climate change by most consumers.

Proportion of respondents answering they are Very Concerned, Somewhat Concerned, Not Very Concerned, Not Concerned At All, Don't Know to the question: "To what extent do you think the following are connected to climate change?".



Weighted bases (N/A excluded):
(a) 2,158; (b) 2,157; (c) 2,166; (d) 2,162

8.3. The results in Figure 9 show: around eight in ten (80%) believe that drought (a natural hazard, caused by large-scale climatic variability, and cannot be prevented by local water management) is connected to climate change; a similar proportion (82%) believe that when

unexpected flooding occurs, it is connected to climate change; around three-quarters (73%) stated they think that water scarcity (related to the long-term unsustainable use of water resources) is connected to climate change; and around half (50%) of our respondents believe that poor water quality is connected to climate change.

8.4. In Scotland household water use is high compared to the UK as a whole. Scottish Water estimates that each person in Scotland uses around 180 litres of water per day (Scottish Water, 2023). This compares to an average in England and Wales of 145 litres (Water Wise, 2023). Most consumers appear to be unaware of how much water they use and, when asked, most people significantly underestimate their usage. While it can be difficult to state definitively why this is the case, forthcoming research by Consumer Scotland to be published later in 2023 has suggested that the indirect relationship between Scottish Water and its customer base and water being paid for on a 'flat rate' basis as opposed to how much is used in each dwelling due to a lack of metering may be contributing factors.

8.5. The challenge of trying to reduce water consumption in Scotland stems from public perceptions of high rainfall and surface water supplies being plentiful. Scotland's northerly position means that in some regions rainfall remains high overall, particularly so on the west coast. Eastern Scotland is typically drier, causing water scarcity warnings in many areas to become increasingly common. Although it should be noted that in summer 2023 the west suffered more from greater water scarcity than the east for the second time in recent years. This is partly due to the type of ground in the west being rocky, so water sources dry up quickly when there is low rainfall, which there has been in recent years. As already mentioned in this report, long term analysis of climatic trends for Scotland suggest winters are becoming warmer and wetter and summers drier and hotter.

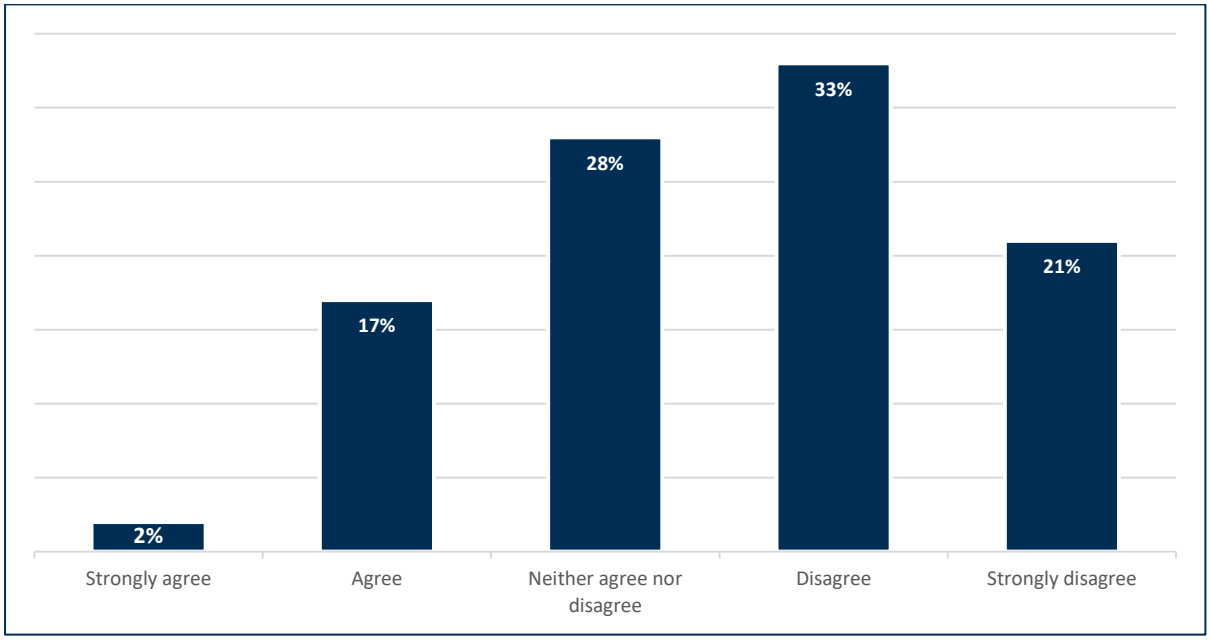
8.6. This will have implications for future water security in Scotland, putting pressure on existing water infrastructure and potentially leading to increased instances of flooding of homes, businesses and communities, alongside contributing to untreated sewage discharges.

Most consumers are not concerned about how much water is used at home

8.7. In our survey respondents were asked to indicate the extent to which they are concerned about how much water is used in their home. The results are summarised in Figure 10. These indicate that more than half of respondents (53%) do not report being concerned, with only around one in five (19%) agreeing that they are concerned. This is consistent with the earlier point about consumers being unaware of how much water they use. This is perhaps not surprising given the indirect relationship consumers have with Scottish Water due to billing occurring alongside Council Tax collections by local authorities in Scotland and may go some way towards explaining why many consumers go to their local authority for information on water.

Figure 10 – More than half of consumers in Scotland are not concerned about how much water is used in their home, with only around 1 in 5 stating they are concerned.

Proportion of respondents answering Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree to the statement: "I'm concerned about how much water is used in my home".



Weighted base: 2,265

8.8. When asked for their views on the environmental impact of water use, a majority (58%) of our respondents stated a belief that water use at home increases energy costs borne by water companies in general to treat and pump waste water, and that water use at home reduces the amount of water in lakes (or lochs in Scotland), rivers and reservoirs (51%). Thirty eight per cent of respondents stated they think that water use at home can make droughts worse, while 27% stated that water use at home can create pollution in the natural environment. Just under a quarter (24%) stated that water use at home can produce carbon emissions/greenhouse gases.

8.9. These views are important because water is the primary medium through which each of us will feel the effects of climate change. Indeed, as outlined by WaterWise (2023), the combination of population growth, rising water use, and a changing climate will increasingly affect future water resources in the UK and, if water efficiency action is not increased, the UK could be hit by significant water shortages by 2050.

Water behaviours are viewed by consumers as impactful, but the hassle factor looms large

8.10. Our survey also captured respondents' views on a range of water-related behaviours and identified self-reported perceptions of their impact on the environment. The following behaviours were asked about:

- Avoiding pouring chemicals/medicines, fats, oils and greases down the sink
- Ensuring dishwashers and washing machines are full

- Reducing water use in dry seasons
- Fixing leaky taps
- Wiping/scraping cooking pans before washing
- Using a watering can rather than a hose in the garden
- Using cold water as much as possible
- Only flushing “pee, paper and poo”
- Putting a bin in the bathroom for things that can’t be flushed
- Shortening the length of showers
- Turning off taps while using the bathroom sink

8.11. All of the measures asked about were viewed by respondents as being impactful in some way, but to varying degrees. The avoiding pouring/rinsing chemicals/medicines, fats, oils and grease down the sink option was seen as the most impactful behaviour by respondents, followed by flushing ‘pee, paper and poo’ that will dissolve in water, and ensuring dishwashers and putting a bin in the bathroom for things that can’t be flushed, such as sanitary products and cotton buds. While all of the behaviours asked about were deemed impactful by respondents in some way, those ranked as having less relative impact were: (1) using cold water as much as possible; (2) using a water can in the garden, rather than a sprinkler or hose; and (3) wiping/scraping cooking pans before washing to get as much fat/oil out as possible.

8.12. When asked to indicate those personal water behaviours that respondents currently do and those they currently do not do, the vast majority of consumers claim that they are already wiping cooking pans to get out as much fat/oil as possible (86%), only flushing ‘pee, paper, and poo’ that will dissolve in water (85%), and avoiding pouring chemicals, fats, oils and greases down the sink (85%).

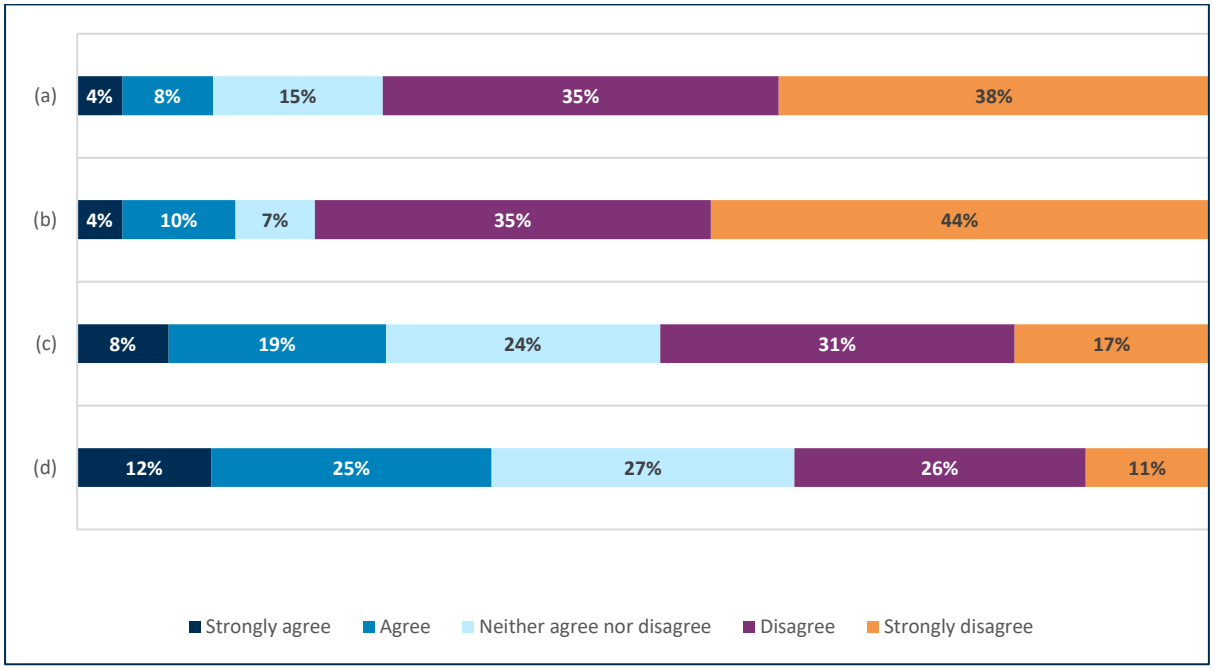
8.13. Around three-quarters (78%) also report putting a bin in the bathroom for things that can’t be flushed such as wet wipes, cotton buds and sanitary products; 76% ensure that dishwashers and washing mashing machines are full before running, and 76% fix leaking taps. Fewer than half (46%) reported they already reduce their water usage in dry seasons and 47% use a watering can in the garden rather than a sprinkler or hose.

8.14. It is clear from the responses to our survey that consumers in Scotland appear to hold a range of views when it comes to how the water environment is managed and where personal responsibility resides. A summarised in Figure 11, the vast majority (73%) of respondents disagreed that they expect their water company to deal with anything they

want to pour down their sink and 79% stated they know how to get rid of cooking fats and oils other than down the sink. Just over a quarter (27%) agree that they would only reduce their personal water use if it saved them money. While over a third (37%) agreed that it rains so much where they live that there is no need for them to use less water, the same proportion (37%) disagreed with the statement.

Figure 11 – Consumers in Scotland hold a broad range of views when it comes to how the water environment is managed and where personal responsibility resides.

Proportion of respondents answering Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree to the question: "Looking at the statements below, to what extent do you agree or disagree with each?"



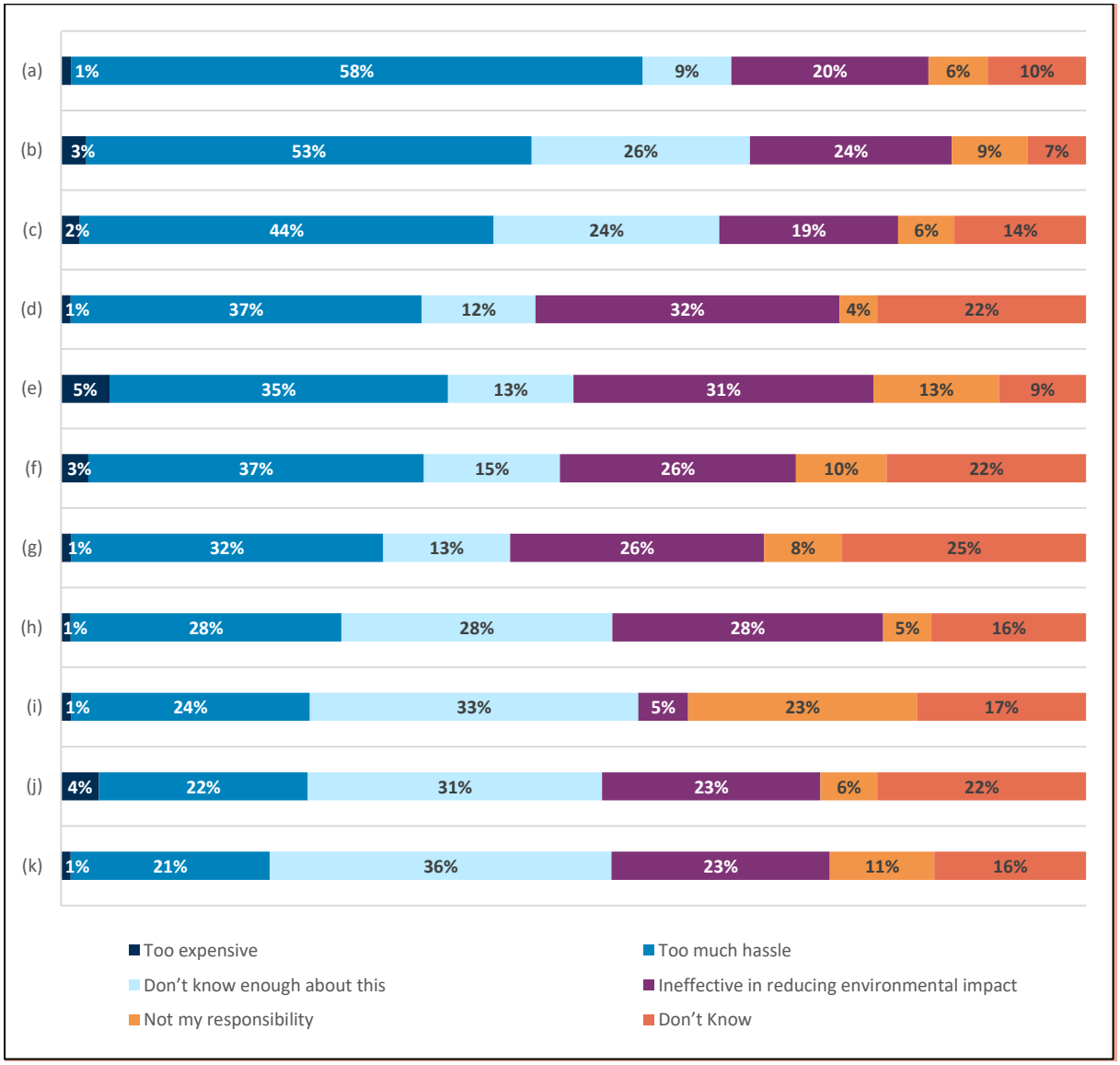
Weighted bases (N/A excluded):
(a) 2,181; (b) 2,178; (c) 2,186; (d) 2,207

(a) I expect my water company to deal with anything I want to pour down the sink or drain or flush down the toilet
(b) I don't know how else to get rid of cooking fats and oils other than down the sink
(c) I would only reduce my personal water use if it saved me money
(d) It rains so much where I live that there is no need for me to use less water

8.15. The barriers to doing a range of water interventions are summarised in Figure 12. The results show that using a watering can, as opposed to a hose, was seen as being too much hassle by over half (58%) of respondents and wiping or scraping cooking pans was seen as too much hassle by a similar proportion (53%). It is notable that almost a third of respondents considered turning off the tap while brushing teeth, shaving, or washing face (32%) and ensuring dishwashers and washing machines are full before running (31%) to be ineffective at reducing the environmental impact.

Figure 12 – There is variation in the self-reported reasons given by consumers for not undertaking a range of water interventions at home.

Reasons given by respondents for not doing a list of water-related behaviours at home. Respondents could select all that apply.



Weighted bases (N/A excluded):
(a) 533; (b) 203; (c) 206; (d) 559; (e) 167; (f) 248; (g) 608; (h) 657; (i) 130; (j) 197; (k) 703

(a) Use a watering can in the garden rather than a sprinkler or hose
(b) Wipe/scrape cooking pans before washing to get as much fat/oil out as possible
(c) Avoid pouring/rinsing chemical/medicines, fats, oils and greases down the sink
(d) Turn off the tap while brushing teeth, shaving, or washing face
(e) Ensuring dishwashers and washing machines are full before running
(f) Put a bin in bathroom for things that can't be flushed, like wet wipes, cotton buds, sanitary products
(g) Shorten length of showers
(h) Use cold water as much as possible
(i) Fix leaking taps
(j) Only flush pee, paper, and poo that will dissolve in water
(k) Reduce water usage further in dry seasons

8.16. There were, however, very high levels of not knowing enough about the issues and “don’t know” responses across each of the interventions listed in Figure 12, suggesting that the barriers provided to respondents in the list may not necessarily explain why people did not carry out those behaviours. Caution is therefore advised when interpreting these results.

Key insights on water and its use at home

8.17. Taken together our results related to water supply and its use at home indicate that on the whole consumers self-report high levels of awareness of general water efficiency and best practice behaviours. Scottish Water (2023a) has put significant resources into key campaigns that aim to engage with customers and communities across Scotland, to share advice and important messages around our essential services, health, safety and the environment. Some recent examples include:

- The Your Water Your Life campaign, launched in June 2018 to highlight the role water plays in the lives of people across the Scotland

- The Nature Calls campaign asked people to 'bin the wipes', due to many wipes containing plastic, meaning they don't break down in the sewer and can cause blockages

- Water is Always Worth Saving campaign aimed to raise awareness of the vital role water plays in people’s lives and highlight that as it is a precious resource we can all make small changes to save water and energy all year round, which is good for the planet and for people’s pockets

8.18. While these efforts to improve water literacy among the population are welcomed, it remains the case that most consumers seem to get most of their information about water from local authorities. This points towards more being done to raise wider awareness about the nature of the water sector in Scotland.

8.19. Our survey results also show that unlike with the barriers we saw related to energy, where costs were largely seen as the single biggest barrier for action, the convenience or hassle factor associated with undertaking water interventions stands out in relation to water. This is important when played out alongside prominent barriers such as consumers appearing to not know enough about specific issues, or perceptions persisting that certain behaviours might be ineffective in reducing environmental impact. It should, however, be noted that for many of the water interventions asked about in our survey there were many instances of ‘don’t know’ reported. The results should, therefore, be treated with caution.

9. General consumer markets

> Please note, the key findings discussed in this section are based on a pilot study with a reduced sample size (n=622). The results are therefore less robust than those achieved with the full sample that informed the topics discussed above.

9.1. In this section top level findings related to what Consumer Scotland defines as general consumer markets are outlined. Here we examine consumer views, lifestyles, attitudes, choices, and behaviours in the following areas within the context of emissions reductions and adapting to the impacts of a changing climate: household goods, transportation, parcel deliveries, food and drink, and recreation, with a focus on leisure holidays. These sectors were selected as either being relevant to Consumer Scotland's remit as the statutory consumer advocate in Scotland or they are also areas where individuals can support the global effort to tackle and adapt to climate change (CCC, n.d.). In the UK, the CCC's pathways to reduce UK greenhouse gas emissions to net zero point to actions that individuals and households can take to reduce their carbon footprints and contribute to the UK and global goals. Each of the areas looked at in this part of our research touch in some way on these actions that can be undertaken by individuals and/or households.

9.2. The Scottish Government (2020a) has been clear that achieving net zero will require everyone working together so that we can collectively help empower consumers so that they can make informed choices that will allow them to contribute towards Scotland achieving our climate change targets as a national endeavour. Working together will also mean that the risks of consumer detriment are identified early on so that they can also be minimised or tackled, so that everyone is able to participate in the transition, with no one left behind.

9.3. Another key driver for undertaking this pilot survey was the development of proposals for the Circular Economy (Scotland) Bill that is currently at Stage 1 in the Scottish Parliament (Scottish Parliament, 2023). The proposed Bill will require Scottish Ministers to introduce measures to help develop a circular economy. This includes publishing a circular economy strategy, developing circular economy targets, reducing waste, increasing penalties for littering from vehicles, making sure individual householders and businesses get rid of waste in the right way, and improving waste monitoring in Scotland.

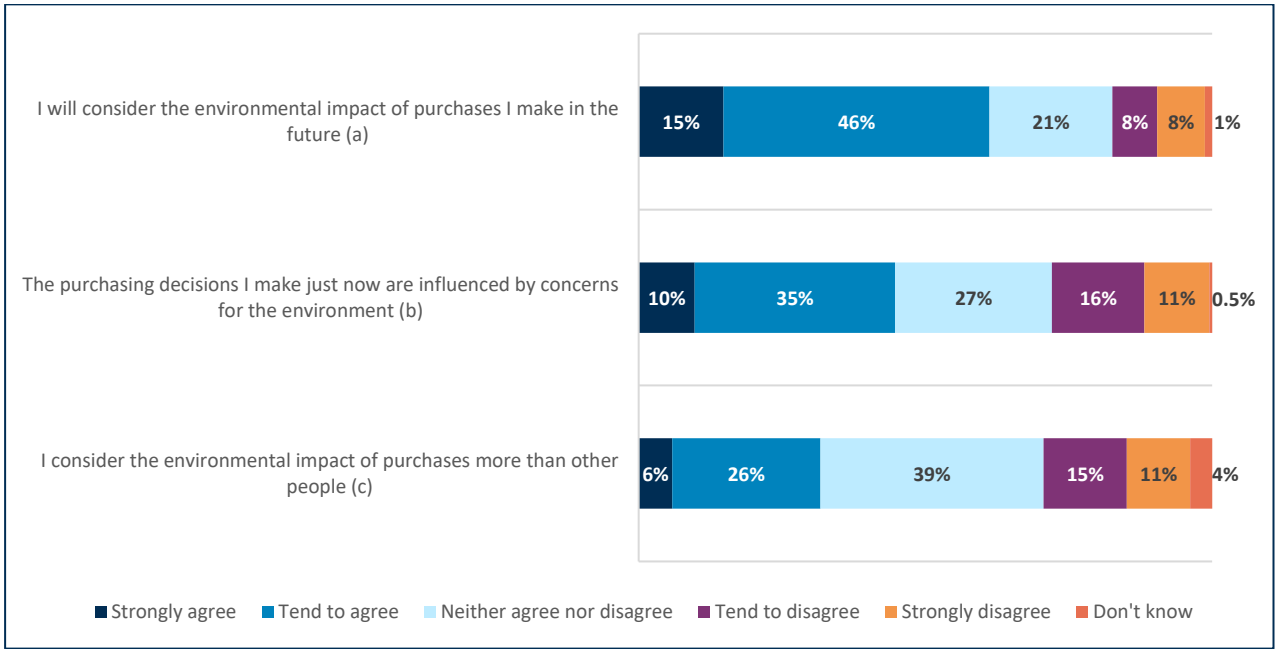
9.4. Circular economy has been defined as processes that will help reduce the demand for raw material in products, encourage the reuse and repair of products, and promote the manufacture and design of products and materials to last as long as possible (Scottish Government, 2020a). The priority areas for the Scottish Government have been encouraging more sustainable consumer purchasing, implementing a deposit return scheme and improving local authority recycling collection infrastructure. The updated Climate Change Plan set out the Scottish Government's early thinking on how to help Scotland move towards a circular economy as a crucial part of responding to climate change (Scottish Government, 2020a). It highlighted research that has estimated that circular actions could eradicate up to almost a fifth of Scotland's carbon footprint by 2050 (Reuse and Recycling EU Social Enterprises network, 2015).

The environment only has a marginal influence on consumers purchasing decisions

9.5. Respondents to our pilot survey were asked the extent to which they agreed or disagreed with a range of statements about various household goods purchasing decisions and whether the environment has a bearing on their decision making. The headline results are summarised in Figure 13.

Figure 13 – Consumers in Scotland do not currently appear to be overly influenced by concerns for the environment when it comes to making household purchasing decisions.

Proportion of respondents answering Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree to the question: "To what extent do you agree or disagree with the following statements?"



Weighted bases:
(a) 605; (b) 620; (c) 608

9.6. The survey results indicate that fewer than half (45%) of respondents agreed that their current purchasing decisions are influenced by concerns for the environment, with over a quarter (27%) disagreeing with the statement. This suggests that consumers in Scotland do not currently appear to be overly influenced by concerns for the environment when it comes to making household purchasing decisions.

9.7. Having said that, more than half of our survey respondents (61%) believe they will consider the environmental impact of purchases they will make in the future, with 16% disagreeing with the statement. In addition, a third (32%) of respondents agreed that they believe they consider the environmental impact of purchases more than other people, with just over a quarter (26%) disagreeing. Though it should be noted that a far higher proportion of respondents stated they neither agreed nor disagreed with the statement (39%).

9.8. These results are important because, as stated earlier, the Scottish Government considers that over 60% of the emissions reductions required to meet net zero in Scotland will require some kind of individual or societal behavioural change (Scottish Government, 2020a). In

addition, while Zero Waste Scotland (2021) has estimated that in Scotland around four fifths (80%) of our carbon footprint comes from all the goods, materials and services produced, used and thrown out, often after minimal use. Only one fifth of people are fully aware of the negative environmental impacts of our consumption of new products that are often only used a few times before being discarded as waste.

Consumers support a range of use, reuse or disposal of household goods measures

9.9. While consumers do not appear to be overly influenced by concerns for the environment when it comes to purchasing household goods, there is broad support for a range of measures that can help promote more environmentally friendly behaviours. The respondents to our survey were asked for their views on a range of measures related to the use, reuse or disposal of household goods:

- There should be more promotion of repair and re-use services, as well as recycling services
- Products should be made so that they are easy to repair and their components can be re-used
- Companies that sell products should be responsible for taking them back for recycling or disposal at end of product life
- Products which can't be repaired or recycled should be taxed more than those that can be
- Products which can't be repaired or recycled should be banned
- I have avoided purchasing a product in the last three months because of its negative environmental impact

9.10. The highest level of agreement was for the statement: there should be more promotion of repair and reuse services, as well as recycling services (92%). This was closely followed by the statement: products should be made so that they are easy to repair, and their components can be re-used (90%), and third was the statement: companies that sell products should be responsible for taking them back for recycling or disposal at the end of product life (80%). Taken together the results indicate broad support in Scotland among consumers for a range of measures that can help promote more environmentally friendly behaviours.

9.11. Just over a third (35%) of respondents stated they had avoided purchasing a product in the last three months because of its negative environmental impact, but a similar proportion (35%) disagreed with the statement, indicating consumers overall are split fairly evenly on this issue. Though an age effect was apparent in the data, with those aged 16-34 more likely to have avoided purchasing a product in the last three months because of its negative environmental impact (44%) compared to 27% of the oldest age group (aged 65+). This was also the case for those living in rural areas (41%) compared to those living in urban areas (35%).

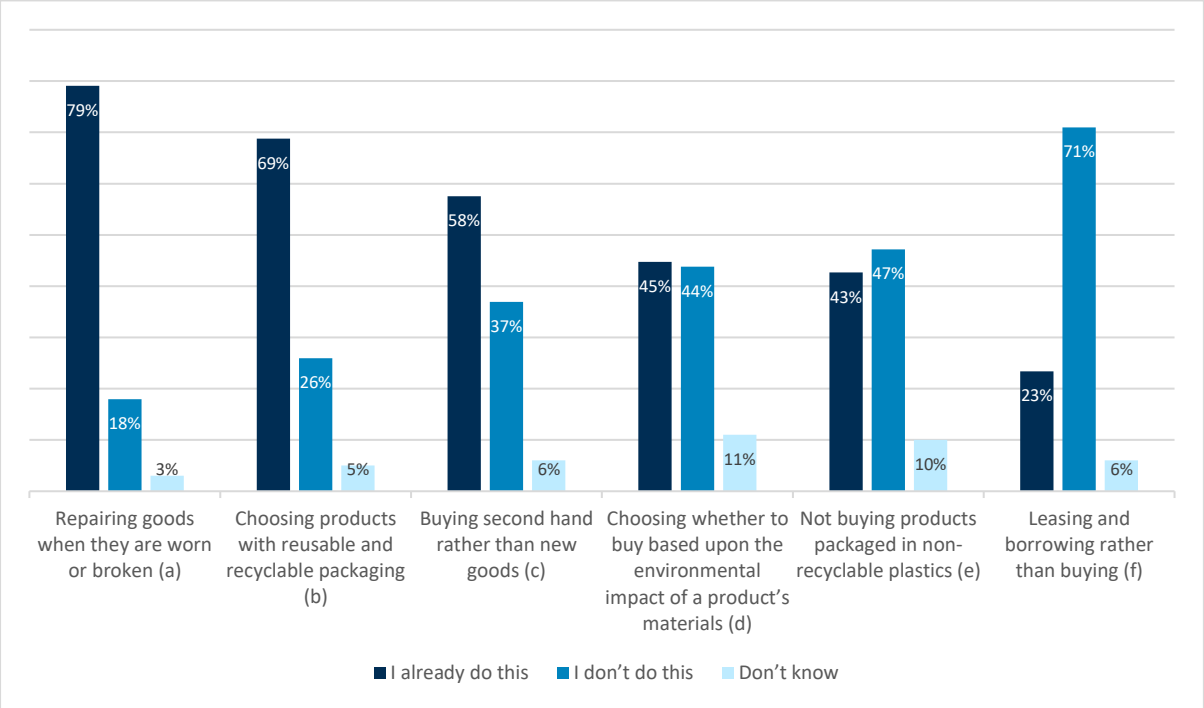
9.12. In addition, more than half of all respondents supported the suggestion that more tax should be charged and paid for on products which can't be repaired or recycled (53%), and a little under half of respondents supported a ban on products which can't be repaired or recycled (46%).

There is more consumer awareness and engagement with familiar and easy to do repairing, reusing, recycling and buying second-hand behaviours

9.13. Respondents to our pilot study were also asked to self-report a range of behaviours related to household goods and whether those behaviours are being undertaken or not. The results are summarised in Figure 14 (with N/A responses excluded).

Figure 14 – There is consumer awareness and engagement with a range of repairing, reusing, recycling and buying second-hand behaviours in Scotland.

Responses to the statement: "Some people do some of these things on environmental grounds while others do not. Please indicate which you already do and which you do not do currently".



Weighted bases (N/A excluded):
(a) 588; (b) 575; (c) 583; (d) 549; (e) 569; (f) 537

9.14. The results indicate there is consumer awareness and engagement with a range of repairing, reusing, recycling and buying second-hand behaviours in Scotland. After not applicable responses were removed from the sample, over three-quarters (79%) of respondents stated they are repairing goods when they are worn or broken, compared to 18% stating they do not do this currently. Over two-thirds (69%) stated they are choosing products with reusable and recyclable packaging, though around a quarter (26%) state they are not doing this currently. In addition, over half (58%) of respondents stated that they are buying second hand rather than new goods, compared to 37% stating they do not do this currently.

9.15. Our respondents were more evenly divided on whether the environmental impact of a products materials (45% versus 44%) or a product coming in non-recyclable packaging (43% versus 47%) impacting purchasing decisions. Though fewer than a quarter (23%) of respondents stated they are leasing or borrowing rather than buying items new, compared to 71% stating they are not doing this behaviour.

9.16. The Scottish Government previously set a 60% household recycling target by 2020, and an all-waste recycling target of 70% by 2025 (Zero Waste Scotland, 2023). However, achieving these targets has proven challenging to meet. In data recorded by the Scottish Environment Protection Agency (SEPA), the total amount of household waste generated in Scotland in 2021 was 2.48 million tonnes, with a Scottish household waste recycling rate of 42.7%, representing an increase of 0.7 percentage points from the 42.0% rate achieved in 2020 (SEPA, 2021).

9.17. According to Zero Waste Scotland (2023) no single policy or practice is sufficient on its own to produce household recycling rates of 65% and above. To achieve these sorts of rates requires significant commitment from local and national government, as well as householders. In an analysis of international comparisons by Zero Waste Scotland (2023), those countries that exceed a 65% household recycling rate use a combination of levers, including stretching local targets, comprehensive local collections, direct charging for residual waste collections and other incentives to encourage recycling.

9.18. Within this context our survey results are important because they indicate that consumers are more likely to report to be doing the more familiar and easier to do behaviours of repairing, reusing, recycling and buying second-hand. Consumers appear to be less likely to claim to be doing behaviours that are unfamiliar or perceived to be less convenient or more hassle. This highlights a significant challenge for government if consumers are not fully engaging with consumer behaviours and policy levers, which will make achieving targets more difficult.

The drivers of consumers purchasing decisions varies by the type of item

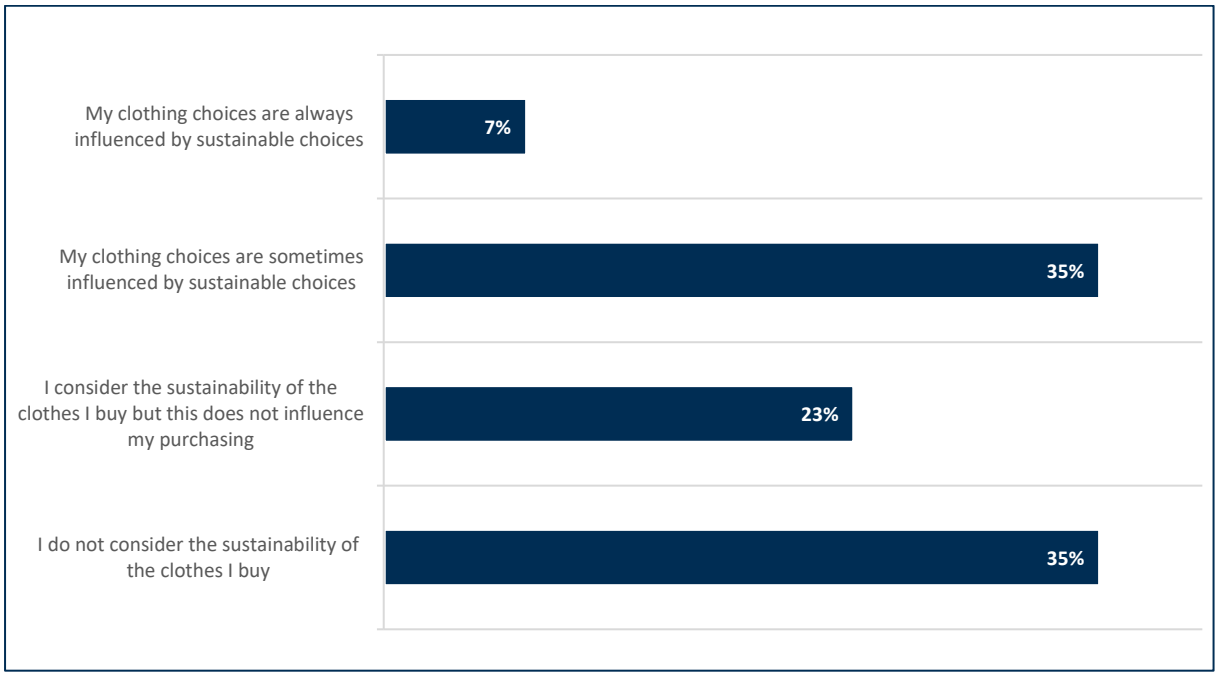
9.19. Replacing an item that was broken was the main reason selected when respondents had last purchased: a home appliance (81%); electronic device (67%); or piece of furniture (53%). Over one in ten (16%) reported replacing another item that was out of fashion for the last piece of furniture they bought, with 14% stating the same for the last electronic device bought, and 11% for the last piece of clothing bought. When it comes to purchasing items to add to belongings, over half (52%) selected this reason for purchasing a piece of clothing, over a third (37%) for purchasing a bicycle, and a quarter (25%) for purchasing a piece of furniture. For each of these percentages, any not applicable responses were removed prior to analysis.

9.20. Figure 15 illustrates the findings related to sustainability concerns, including carbon emissions, influencing respondents' clothes purchasing behaviours. The Scottish Government's updated Climate Change Plan has identified tackling 'fast fashion' as an area where they want to support consumers to make sustainable decisions to tackle climate change by, for example, encouraging consumers to move away from fast fashion clothing

choices (Scottish Government, 2020a). This also links directly to the principles underpinning the proposed Circular Economy Bill that was discussed earlier in this report.

Figure 15 – A mixed picture when it comes to sustainability concerns influencing purchasing decisions, with only a small minority of respondents stating sustainability concerns always influence their choices when purchasing clothes.

Proportion of responses to the question: "Do sustainability concerns, including carbon emissions, influence your choice of clothes you buy?"



Weighted base: 606

9.21. The results in Figure 15 suggest a varied picture exists when it comes to sustainability concerns influencing purchasing decisions. Only a small minority of respondents (7%) stated sustainability concerns always influence their choices when purchasing clothes. With just over a third of respondents (35%) stating that their clothing choices are sometimes influenced by sustainable choices. However, a further 35% stated they do not consider the sustainability of clothes when making their purchasing decisions. Interestingly, the sustainability of clothes purchased are sometimes considered by almost a quarter (23%), but this does not go on to affect their decision to buy.

9.22. In our survey results females are more likely (11%) to consider purchasing clothing based on sustainable choices than males (4%), and those in the ABC1 social grade are more likely to consider the sustainability of the clothes they buy, than those in the C2DE social grade (28% ABC1 vs 17% C2DE).

9.23. When asked to state what they did the last time an item was broken or became damaged, our pilot survey shows that only a minority of respondents stated they disposed of the item in their general household waste: items of clothing (15%), an electronic device (9%), and a home appliance (8%). Over half of the respondents recycled the item through their local

authority collection service or local recycling centre: home appliances (61%), a piece of furniture (58%), or an electronic device (52%). The last time a bicycle broke or became damaged, respondents stated they were more likely to repair it or give it to someone else (71%), rather than taking it for recycling (22%), or disposing of it (2%). For each of these percentages, any not applicable responses were removed prior to analysis.

9.24. Respondents were presented with a range of options that could help consumers to reduce the carbon emissions from household items they purchase. The options ranked as most helpful were: (1) lower cost of products which have lower environmental impact, (2) more products with lower environmental impact being available, and (3) clearer labelling allowing consumers to compare products. The options ranked as being least helpful overall were: (1) encouragement from influencers in media and social media, (2) encouragement from friends and family, and (3) being able to try products before buying them.

Consumers in Scotland don't currently look to reduce emissions from their parcel deliveries

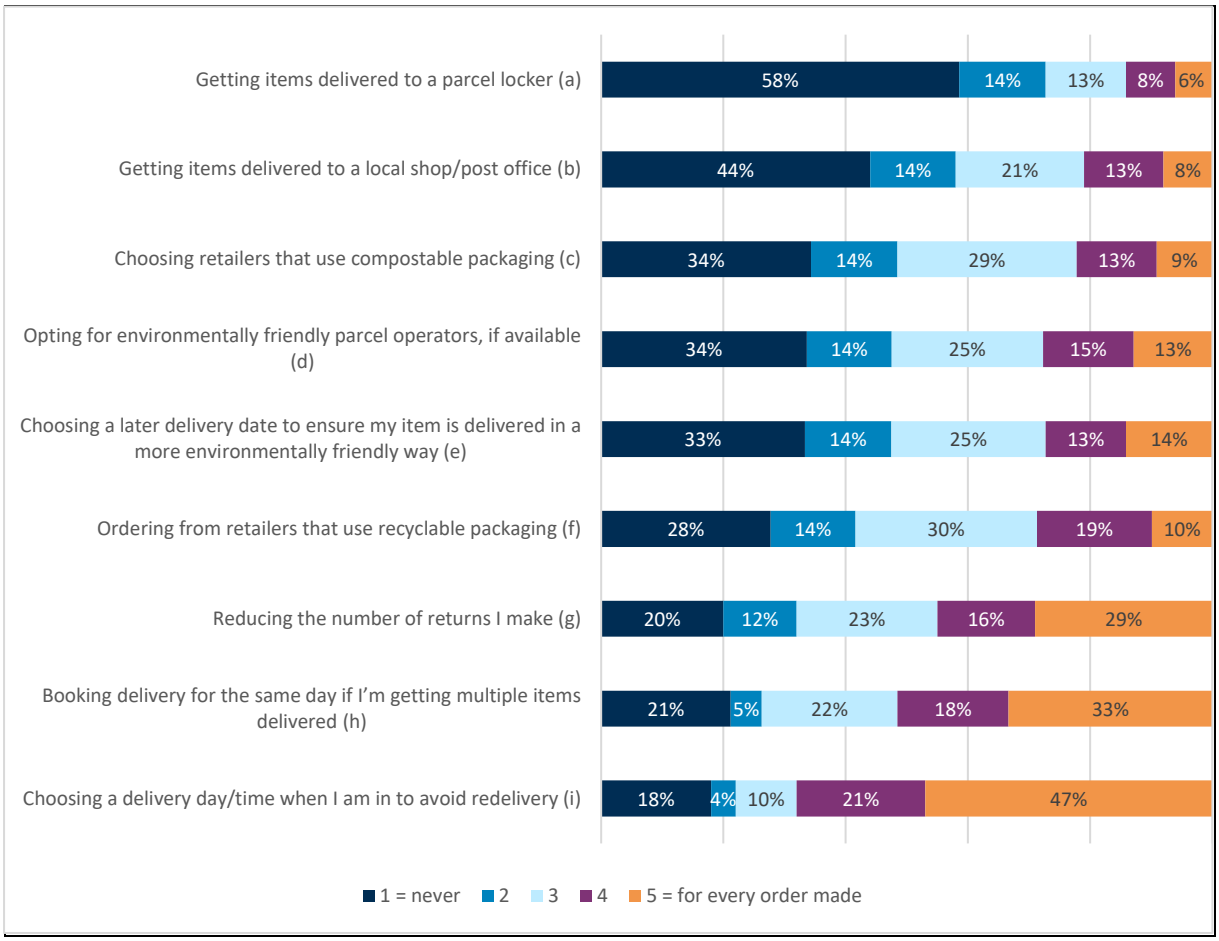
9.25. Figure 16 summarises the actions respondents report they are undertaking to reduce emissions from their online orders, where 1 is 'never' and 5 is 'for every order made'.

9.26. The results indicate almost half (47%) of respondents report always trying to avoid redelivery for every order made by choosing a delivery day or time when they will be home. A third of respondents (33%) look to book delivery for the same day if they are getting multiple items delivered for every order made, and less than a third (29%) reduce the number of returns they make for every order as a way of reducing emissions from online orders.

9.27. The results also show that over half (58%) of consumers in Scotland state they never look to reduce emissions from their parcel deliveries by having items delivered to a parcel locker. Similarly, around two in five (44%) never get items delivered to a local shop or post office to reduce emission from their parcel deliveries. Around a third of respondents never opt for environmentally friendly parcel operators, even if one is available (34%), never choose retailers that use compostable packaging (34%), nor choose a later delivery date to ensure items are delivered in a more environmentally friendly way (33%).

Figure 16 – A mixed picture emerges in consumer engagement in a range of choices and behaviours associated with reducing emissions from online orders.

Responses to the question: "What actions do you take to reduce emissions from your online orders, where 1 is 'never' and 5 is 'for every order made'?"



Weighted bases:
(a) 602; (b) 602; (c); 597; (d) 604; (e) 602; (f) 606; (g) 602; (h) 603; (i) 602

9.28. Our pilot survey results suggest that there are ample opportunities for engaging consumers in a range of choices and behaviours, which aligns with the Scottish Government's (2020a) view that there are a range of opportunities available to make lower carbon deliveries, such as the introduction of consolidation centres, of pick-up and drop-off points, or the widespread use of e-bikes and cargo bikes. To be a success however, these will need to appeal to consumers. The challenge to the Scottish Government, local authorities and the wider industry, therefore, will be to look at the issue holistically so that comprehensive and effective solutions are developed that will meet the needs of consumers.

Many consumers are trying to make more sustainable transport choices, but many options lack widespread appeal

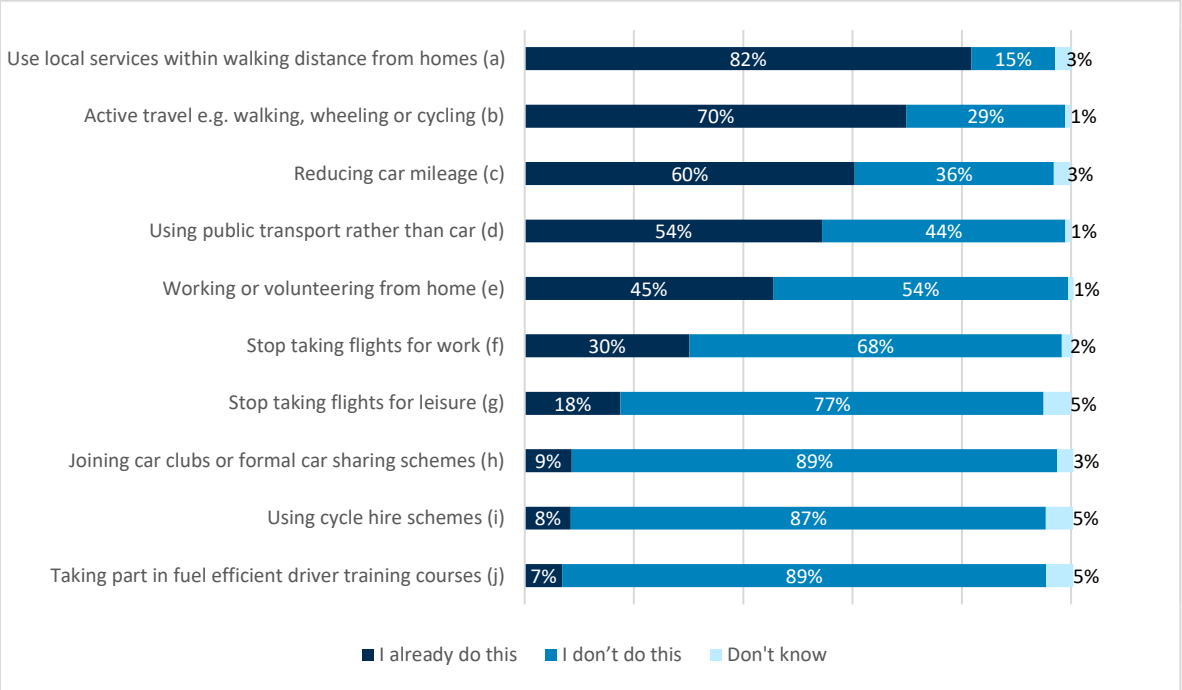
9.29. The use of transport services is essential for people day to day, but transport is Scotland's biggest sector contributing to emissions. Indeed, Transport Scotland (2019) estimates that, including international shipping and aviation, transport accounts for 37% of Scotland's

greenhouse gas emissions under the definition set out in the Climate Change (Scotland) Act 2009 and road transport makes up 69% of Scottish transport greenhouse gas emissions. The Scottish Government's (2020a) updated Climate Change Plan states that ensuring more people choose active and sustainable travel will not only result in fewer emissions but can also promote healthier lifestyles and better equality of access to transport connections.

9.30. In our pilot survey, respondents were asked to select from a list of transport related behaviours those activities they currently do and those that they do not do currently. The results are summarised in Figure 17, with N/A responses excluded.

Figure 17 – A mixed picture exists in relation to the transport choices and behaviours currently being undertaken by consumers in Scotland.

Responses to the statement: "Looking at the list below, some people already do some of these things while others do not. Please indicate which you already do and which you do not do currently."



Weighted bases (N/A excluded):
(a) 548; (b) 548; (c) 481; (d) 552; (e) 395; (f) 209; (g) 416; (h) 395; (i) 392; (j) 395

9.31. For those transport choices and behaviours currently being undertaken, the majority (82%) state they are already using local services (for example doctors, schools and shops) within walking distance from their homes. Similarly, 70% state they are making active travel choices, by walking, wheeling or cycling. One in six (60%) of respondents state they are trying to reduce their car mileage. Just over half use public transport rather than use a car (54%). The transport related behaviours that respondents are least likely to be doing currently are: 7% stating they have taken part in fuel efficient driver training courses and 8% have made use of a cycle hire scheme. Nine per cent have joined a car club or formal car sharing scheme. For each of these percentages, not applicable responses were removed from the base numbers prior to analysis.

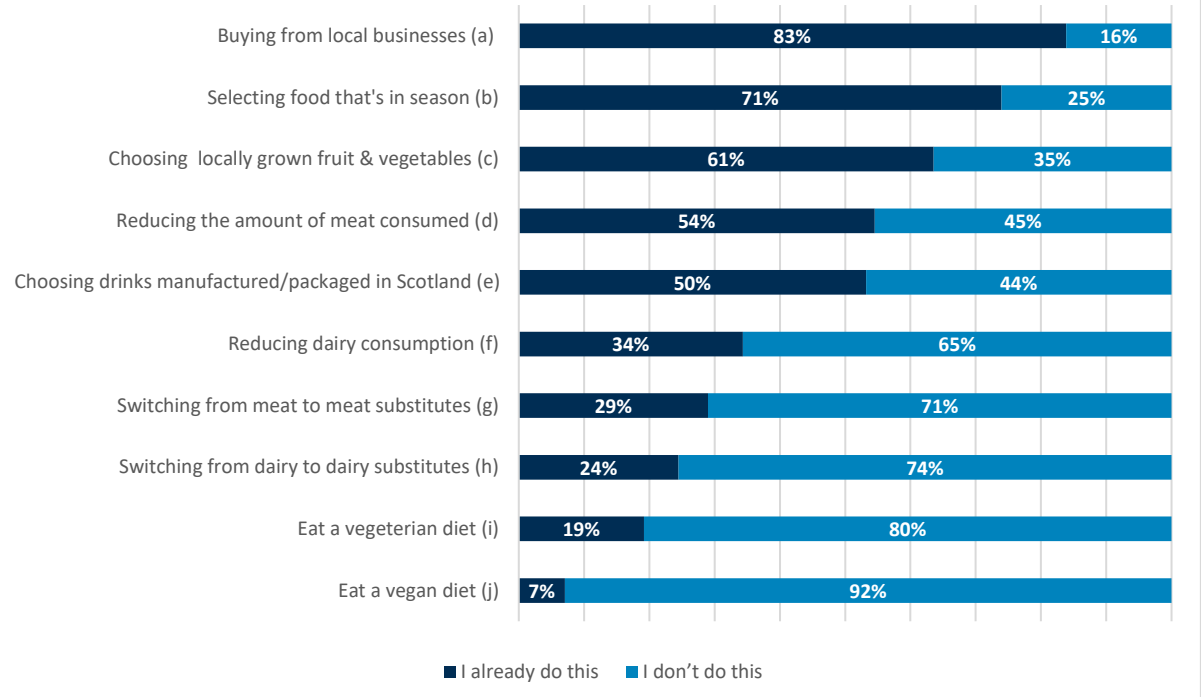
9.32. The Scottish Government (2020a) has been clear that individuals have a significant contribution to make to help reduce emissions from transport in Scotland. This may involve individuals needing to consider their transport choices holistically and to weigh up personal need to travel on a daily basis. Our survey results suggest that many consumers claim they are already doing many of the low cost and more convenient sustainable travel options, such as using local services, undertaking active travel, and using the car less. Where it will be difficult to shift consumer behaviour will be in those areas that are perceived to be ineffective for helping tackle climate change or are perceived to be less convenient or more hassle than less sustainable alternatives.

Many consumers are trying to make more sustainable food and drink choices and behaviours, but many options lack widespread appeal

9.33. Respondents in our pilot survey were asked to select from a list of different food and drink choices and behaviours those they do currently and those they do not do. The results are summarised in Figure 18, with don't know and N/A responses not included.

Figure 18 – A mixed picture emerges in relation to food and drink behaviours currently being done and those that are not, with consumers more likely to state they are buying locally and selecting food that is in season.

Responses to the statement: "Looking at the list below about food and drink, please indicate which you already do and which you do not do currently".*



Weighted bases (N/A excluded):
(a) 591; (b) 591; (c) 577; (d) 582; (e) 541; (f) 577; (g) 578; (h) 574; (i) 561; (j) 563

*It should be noted that our pilot survey results related to the proportion of people eating a vegetarian or vegan diet appear high compared to UK figures cited by the Vegetarian Society (2022). It states the number of people in the UK who maintain a vegetarian or vegan diet 100% of the time is around 4.5% of the population.

This was based on analysis of the National Diet & Nutritional Survey 2018/19. The society point out that where other surveys are suggesting much higher numbers of vegetarians, this can perhaps be attributed to either the survey not clearly defining "vegetarian" or the results include people who are vegetarian "some of the time" or who eat only fish or chicken.

9.34. The majority of respondents (83%) stated that they buy from local businesses (compared to 16% that state they do not), 71% state they select food that is in season (compared to 25% that say they do not), and almost two thirds (61%) state that they choose locally grown fruit and vegetables (compared to 35% that state they do not).

9.35. Interestingly, over half (54%) of respondents state they have already reduced the amount of meat they consume, though a significant minority (45%) state they have not done this. This is consistent with research by Food Standards Scotland (2022b) on the Scottish diet, which confirms that there has been a decline in red meat consumption in Scotland. Across 2016-2018, the average intake of red and processed meat was 55g per day, compared to the Scottish Dietary Goals of 70g per day and intakes have significantly decreased from 65g per day since 2001-2003.

9.36. In our pilot survey the food and drink behaviours least likely to be done currently in Scotland are eating a vegan diet (92%), with 7% stating they are eating a vegan diet at least some of the time. Eating a vegetarian diet has not been done by 80% of respondents (19% stating they do) and switching from dairy to dairy substitutes is not being done by 74% (24% have switched).

9.37. In more recent research for Food Standards Scotland (2023) on consumer attitudes towards the diet and food environment in Scotland it was found that more than a third of consumers (35%) say they actively reduce meat consumption most or all of the time, while 28% actively reduce dairy intake. While only 8% in this survey stated they adopt a vegan or plant based diet all of the time, a significant minority (32%) are eating a plant based diet at least occasionally. Our pilot survey results related to diet therefore need to be treated with caution as the terms 'vegetarian' and 'vegan' were not explicitly defined in the questionnaire. So some respondents may have selected this response when they may eat some other diet, e.g. fish and no meat wasn't provided as a response option. It was also possible for more than one response to be selected.

9.38. When asked to reflect on the barriers they face to making more sustainable food and drink choices, the most cited reason given was it 'doesn't appeal to me'. Around three quarters of respondents who do not currently engage in these behaviours said eating a vegan diet (77%), a vegetarian diet (76%), reducing dairy consumption (73%), switching to meat substitutes (72%) and switching to dairy substitutes (72%) does not appeal to them. Similarly, around two thirds (65%) have not reduced their meat consumption as this doesn't appeal to them.

9.39. The respondents to our survey were also asked what would help them to make more sustainable food and drink choices. Lower cost of products with lower environmental impact was identified by respondents as the most helpful intervention to help reduce the carbon emissions from the food and drink consumed. This was followed by having more choice of products with lower environmental impact, and clearer labelling on products. Encouragement from influencers on media and social media was regarded as the least

helpful measure, followed by encouragement from family and friends, and opportunities to try different products before buying.

9.40. Our survey results on attitudes and behaviours towards food and drink are consistent with evidence from Food Standards Scotland (2022). FSS's consumer tracking survey indicated that 66% of consumers in Scotland are concerned about the impact of food production and packaging on the environment (e.g. carbon emissions, water scarcity). However, environmental concern was only ranked 8th out of a list of 10 areas of most concern with food prices (85%), animal welfare (77%), and use of pesticides, etc. (76%) all ranked as the issues of most concern to consumers currently regarding food production and packaging.

9.41. The Scottish Government (2020a) has stated that improving market conditions for Scottish manufacturers who produce relatively low carbon goods will help promote more sustainable consumer behaviour and preferences. Our pilot survey results indicate that many consumers are already trying to make more sustainable food and drink choices and behaviours, but many of the options available to them may lack widespread appeal. Opportunities to further support consumers in making sustainable choices do exist, for example, more product labelling detailing the environmental impact or benefit of different products will help inform consumer purchasing decisions. Consumer Scotland shares the government's view that this will be particularly important for the food and drink sector in Scotland as well as other energy intensive products that are produced, sold, and consumed.

Only a minority of consumers are influenced by the environmental impact of holidays

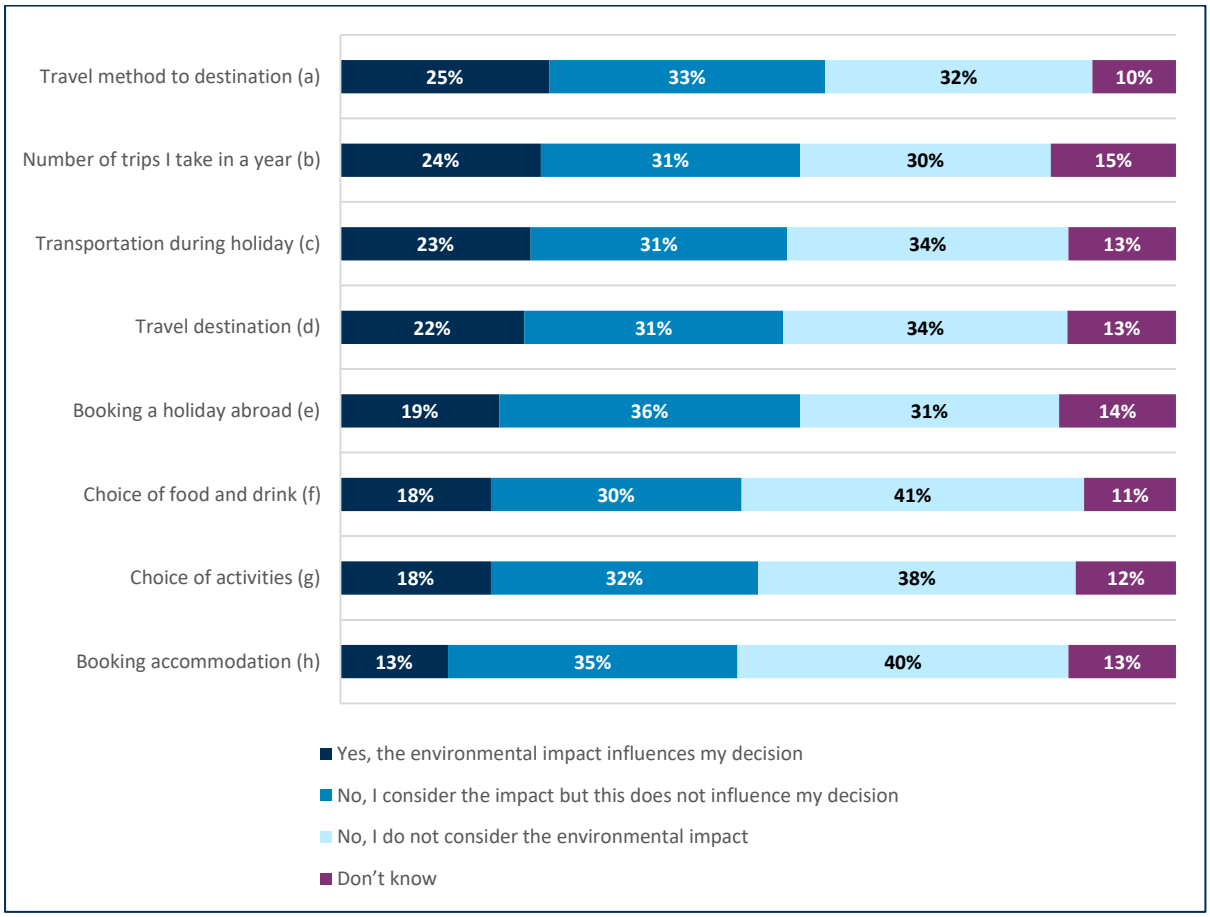
9.42. In terms of environmental concerns impacting the holiday choices of consumers, our pilot survey shows that only a minority of respondents appear to be influenced by the environmental impact of their holidays, as summarised in Figure 19.

9.43. Our pilot survey results indicate that a quarter (25%) of respondents stated they are influenced by the environmental impact of their travel method to destination, with similar proportions stating the same in relation to the number of trips taken in a year (24%), and transportation choices whilst on holiday (23%). Around a third of respondents consider the environmental impact of different aspects of a holiday, but this does not influence the decision: when booking a holiday aboard (36%), when booking accommodation (35%), and when selecting the travel method to the destination (33%). In comparison, 41% do not consider the environmental impact of their choice of food and drink, 40% do not think about it in relation to booking accommodation, and 38% do not consider the environment when selecting activities whilst on holiday.

9.44. In our pilot survey almost half of our respondents (49%) had not considered sustainability concerns in relation to their holiday destination and travel choices. Around a third (32%) had chosen to holiday in Scotland, rather than further afield, due to sustainability concerns, with around a quarter (24%) choosing to holiday in the UK rather than further afield for the same reason. Around one in ten had opted not to go on a short haul flight (11%) or not to go on holiday at all (11%) due to sustainability concerns.

Figure 19: A mixed picture emerges in relation to the environmental impact, including carbon emissions, influencing any aspect of holiday decision making.

Responses to the question: “Does the environmental impact, including any carbon emissions, influence any of the following aspects of your holiday?”



Weighted bases:
(a) 600; (b) 601; (c) 602; (d) 598; (e) 602; (f) 601; (g) 599; (h) 596

9.45. The reasons given by respondents for why sustainability concerns are not being considered in relation to holiday choices included: value for money being considered more important than sustainability concerns (44%), along with beliefs that holidays are to be enjoyed (44%), and a preference that respondents are not prepared to not go on holiday (28%). Around a quarter (24%) stated they have never thought about sustainability concerns in relation to holiday choices. Businesses and business travellers were considered to be more responsible for carbon footprints than individual consumers by 22% and 16% of respondents respectively.

9.46. Our pilot survey results confirm that engaging consumers on emissions from travel for leisure purposes is and remains a challenge. A (pre-pandemic) tourism strategy for Scotland places a focus on responsible tourism for a sustainable future (Scottish Tourism Alliance, 2023). The aim being to be reflective of the changing world in which we live, and to adopt a new approach in terms of how people live and work that puts communities, people, visitors, businesses, and the environment at the heart of decision making.

9.47. On aviation, the Scottish Government (2020a) has made a commitment to decarbonise scheduled flights within Scotland by 2040 and will work with the sector to encourage sustainable growth. However, it is clear that while Scotland’s natural capital is one of our

greatest assets and is central to our net zero future, tourism will need to be sustainable in the future and across numerous sectors. This will include so-called 'ecotourism', as well as being clearer about how our food and drink is grown, produced and consumed, how we move goods and people around the transportation system, and how essential services, such as energy and water, are supplied and used by us all.

9.48. Our pilot survey also presented respondents with a range of options that could help consumers reduce the carbon emissions from their holidays. The option perceived as most helpful was to lower the cost of sustainable options, followed by the companies being used for holidays taking steps to reduce their carbon impact, and more choice of sustainable options being made available. The options were perceived as least likely to help would be encouragement from influencers on media and social media, followed by encouragement from friends and family, and taking fewer but longer holidays.

9.49. Beyond decarbonising aviation and promoting greater use of public transport, the Scottish Government's updated Climate Change Plan has very little to say about holidays, however wider evidence has suggested choosing alternative ways of travelling could be one of the most effective ways of reducing the carbon footprint of travelling. Without doubt reducing the frequency and duration of flying may seem a daunting prospect that may lack widespread consumer support (Timperley, 2020). But there are benefits to be gained from lessening the impact of air travel if journeys by ground transport are made, which can in some instances be cheaper and faster than air travel for shorter distances once you take into account the time taken getting to the airport, checking in, security checks, and waiting for baggage to be returned. The challenge, however, will be taking consumers along with this viewpoint given the apparent low levels of consumer concern with sustainability when it comes to making holiday decisions, compared with similar concerns being more prevalent in relation to other issues and markets.

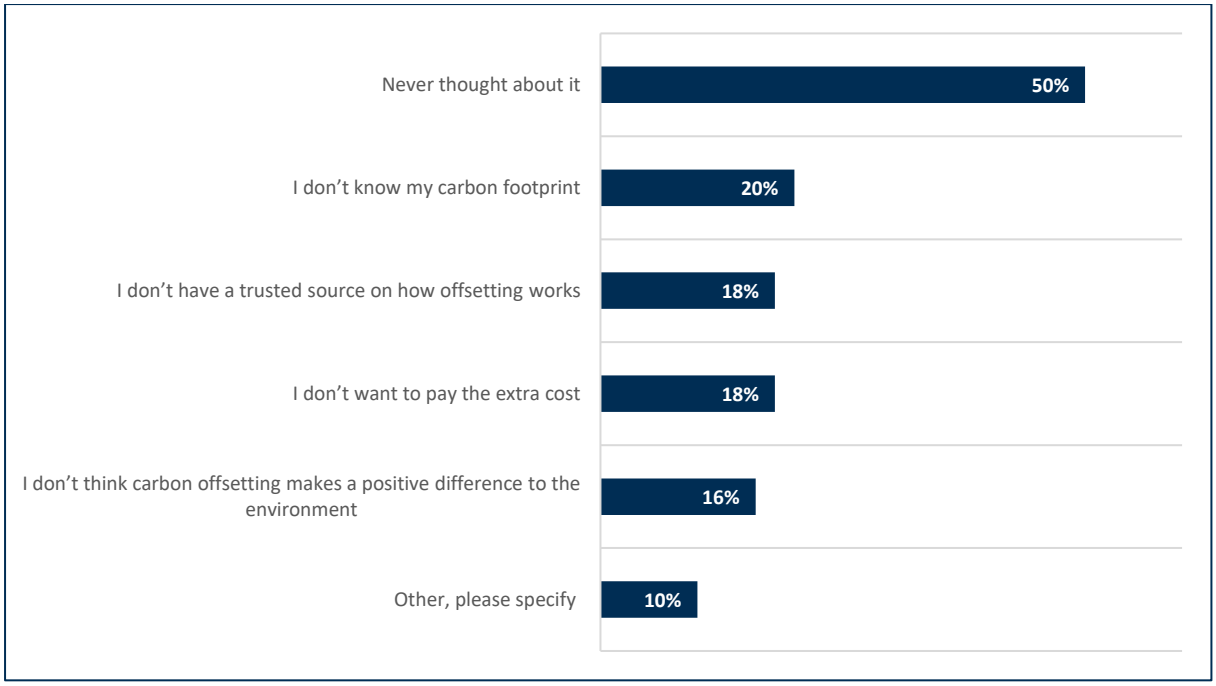
Most consumers in Scotland have never thought about carbon offsetting

9.50. Carbon offsetting has been defined as the means by which companies and individuals can cancel out the impact of some of their greenhouse gas emissions by investing in projects that reduce or store carbon. Examples include forest preservation and tree planting (Harvey, 2021). Most respondents (79%) in our pilot survey stated they had not paid for carbon offsetting for their recreation and leisure activities. For the minority that had paid for offsetting, the most common method was through an airline they had made a booking with (16%), with only 2% of respondents using a dedicated website to pay for carbon offsetting in relation to recreation and leisure.

9.51. The reasons given by those respondents who had not paid for carbon offsetting for their recreation or leisure are summarised in Figure 20.

Figure 20 – There is low consumer awareness and willingness to pay for carbon offsetting to offset environmentally damaging activities, such as emissions from flights.

Responses to the question: "Why have you not paid for carbon offsetting for your recreation and leisure?" Respondents could select all that apply.



Weighted base: 491

9.52. The results in Figure 20 show that half (50%) of our pilot survey respondents stated they had never thought about carbon offsetting, with not knowing about their carbon footprint (20%), not having a trusted source of information on how offsetting works (18%), and not wanting to pay the extra cost (18%) all highlighted. Finally, nearly a fifth (16%) of respondents stated a belief that carbon offsetting does not make a positive difference to the environment.

9.53. The CCC (2022) has pointed out that there is only limited aggregated data on demand for offsetting from individuals. The CCC's wider view about voluntary carbon credits, which is closely associated with offsetting, is that government needs to put in place stronger guidance, regulation and standards to ensure that voluntary carbon markets do not slow progress towards net zero or damage other priorities such as climate adaptation and biodiversity. Our results on offsetting appear to support the CCC position on this issue given that there appears to be high consumer willingness to favour products that have green credentials, but low consumer awareness and willingness to pay to offset environmentally damaging activities, such as emissions from flights.

Key insights on general consumer markets: household goods, transportation, food and drink, and recreation

9.54. Our pilot survey has begun to explore consumer views, lifestyles, attitudes, choices, and behaviours in the context of emissions reductions and adapting to the impacts of a changing climate. The areas we looked at included: household goods, transportation, parcel deliveries, food and drink, and recreation with a specific focus on holidays. These areas were looked at in our research because they are either relevant to Consumer Scotland's remit as the statutory consumer advocate in Scotland, or they have been identified as key areas where action by individuals and/or households will be required to tackle climate change.

9.55. The Scottish Government's position to date has been that achieving net zero will require collective working so that consumers are empowered to make informed choices that will allow them to contribute towards Scotland achieving our climate change targets as a national endeavour. Working together will also mean that the risks of consumer detriment are identified early on so that they can also be minimised or tackled, so that everyone is able to participate in the transition, with no one left behind.

9.56. However, our pilot surveys indicate that there is some way to go in the consumer transition to net zero. Sustainability and the wider environment only have a marginal influence currently on consumers attitudes that feeds through to behavioural changes. Having said that, consumers do report they are currently doing more familiar and easier to do behaviours, and less likely to claim to be doing those behaviours that are unfamiliar or perceived to be less convenient or more hassle. This highlights a significant challenge for government if consumers are not fully engaging with consumer behaviours and policy levers in this space, which will make achieving emissions targets more difficult.

10. Concluding discussion

10.1. Taken together our surveys provide evidence that while consumers in Scotland are concerned about climate change many report that they do not know what they need to be doing to help Scotland achieve net zero, or what they need to do to adapt to unavoidable climate change impacts.

10.2. Consumers look to governments, businesses and regulators to provide leadership and guidance and to come up with solutions for tackling climate change. As a consequence, many consumers do not currently see themselves as a central part of the narrative around a changing climate or the transition to net zero. The challenge will be how to reconcile many consumers feeling responsibility for emissions reductions is not theirs, but at the same time wanting to be part of the solution for tackling climate change. But there are limits to which areas of current lifestyles consumers are willing to change for sustainability reasons.

10.3. The barriers consumers report they face in relation to decarbonisation and the transition to net zero vary depending on the sector and/or the particular set of behaviours being asked about:

- **Energy:** For 'big ticket' items that are more expensive to purchase or install (such as zero emissions heating systems or purchasing electric vehicles) consumers perceive cost as the single biggest barrier. For the minority of people not already doing simple low cost measures (such as switching off lights or turning down thermostats) a view persists that these actions may be ineffective in reducing the environmental impact or can be viewed as inconvenient or too much hassle

- **Water:** The convenience and hassle factor emerged as a significant perceived barrier in relation to water efficiency behaviours, alongside consumers appearing to not know enough about specific issues, or perceptions persisting that certain behaviours might be ineffective in reducing the environmental impact. It should be noted that many of the interventions asked about in our survey resulted in "don't know" responses, indicating that there may be other reasons alongside the hassle factor also preventing action being taken

- **General consumer markets:** Across the other general consumer markets of interest to Consumer Scotland: household goods, transportation, parcel deliveries, food and drink, and recreation/holidays, our pilot survey results suggest that many of the behaviours and choices being presented to consumers can appear as optional or potentially lacking impact. The lack of reliable trustworthy information appears to make it difficult for many consumers to fully understand the issues and as a result make informed choices

10.4. It should be acknowledged that for many consumers, what are termed 'sustainable' behaviours can be viewed as either unaffordable or niche, so lacking widespread consumer appeal. This indicates more work needs to be done on making sure more sustainable alternatives are affordable and accessible. If these sustainable alternatives are to spread more widely among the whole population, more work needs to be done to promote them in a way that will help these alternatives to become the first choice for most of us. Only then

will they compete with the less sustainable, but more familiar, options that dominate currently. For many consumers there is resistance to changing habits and engrained behaviours, or doing anything that appears like a hassle or is inconvenient. This will be a persistent difficulty if net zero ambitions are to be achieved given the scale of the challenge and the significant costs attached with some technological options that are being put forward as part of the solution.

10.5. Our research also indicates that around one third of consumers already have high-levels of interest and engagement that follows through to behaviours, but for many others an 'intention-behaviour gap' may be causing inertia. The idea of a gap between people's intentions and their behaviour has been extensively researched in social and health psychological research and reflects a view that human intents are often not translated into action (Sutton, 2001). In other words, providing information and forming good intentions is not enough on its own to change behaviour. Instead, motivational processes like short-term desires, habits, and social norms often interfere. The idea that human behaviour is predicated on a deficit of information permeates much public policy. It is based on a view that it is knowledge and information that drives behaviour and that it's just about getting the message across to citizens (Kelly and Barker, 2016 cited in Papies et al, 2022).

10.6. Having accurate and reliable information may be a precondition for healthy engagement in consumer markets and government policies. However, where individuals need to change routine beliefs, attitudes or behaviours, a focus on choice by itself may underestimate the extent to which individuals' autonomous actions are constrained by infrastructures, institutions, conventions and, most significantly, access to resources (Welch, 2017). Indeed, the tendency in contemporary environmental policy making in the UK and elsewhere to focus on attitude, behaviour and choice may actually create "blind spots" that sustain particular forms of governance models that maintains the status quo, rather than leading to the social or technological change upon which so much government policy depends if it is to be a success (Shove, 2010).

10.7. All of this matters because to tackle climate change as a so-called 'wicked problem' (Incropera, 2015) will require consumer choices and behaviours being about more than just the provision of information. Of course, providing clear and easy to understand information is an important component in helping consumers understand the issues and from there form views, make decisions, and take action. But where those actions are constrained by dominant infrastructures, institutions, conventions and a lack of access to necessary resources, the extent to which consumers are free to make the right choices in the right way at the right time may be unavoidably constrained.

10.8. We should also acknowledge that where we see a potential attitudinal-behaviour gap this is perhaps a reflection of its presence as an observed fact of life. This doesn't in itself suggest that consumers are not serious about tackling climate change. But for the transition to be successful, our initial evidence suggests that consumers are going to need considerable help and support in not only understanding the issues but also making the changes expected and required of them in the years to come. As momentum in the transition to net zero gathers pace it will be necessary to monitor consumer engagement while accepting that attitudes and behaviours can and will likely evolve at different rates.

10.9. For these reasons, Consumer Scotland welcomes the Scottish Government's commitment to engaging the public in the climate emergency by developing a new engagement strategy that aims to take "a more holistic, systemic approach to public engagement with the aim of building a strong social mandate for the society-wide, long-term changes needed to transition Scotland to a net zero nation" (Scottish Government, 2021b: 15) and our evidence suggests more of the same will be required given the scale of the challenge before us.

10.10. This kind of approach builds on earlier efforts by government to encourage low carbon living in Scotland. In particular the ISM (Individual, Social, Material) tool was developed to help policymakers and practitioners consider the wide spectrum of factors that shape people's behaviours when designing and delivering policy to influence behaviour (Scottish Government, 2013). This and other behavioural science approaches are welcome when they recognise that whilst behaviour change at the individual and household level is going to be a key element of the transition to net zero, it will not be enough to simply try 'nudging' people towards one or two key low carbon behaviours.

10.11. It will need to also include changes to underlying social and cultural norms, so that sustainable options and behaviours become the default and part of the fabric of our entire society. Our research indicates that consumers want to be part of this journey. This means that they need access to appropriate information and support if they are to take advantage of new infrastructure and technology as it becomes available. As a result, consumer engagement with net zero will need to connect people with what is happening in the transition by appealing to people's values, identities, and concerns to facilitate a society-wide response to the climate emergency.

10.12. The scale of the challenge in achieving net zero is without doubt enormous and it will require fundamental shifts in the way we all live our lives. Some of the behavioural changes that can contribute to achieving net zero noted in this research are more personal or cultural. It is quite rightly up to the individual to decide for themselves if it is something they are willing and able to do. But many more of the changes that will be required are structural. It is here that broader regulatory and market structures could, and arguably should, be working together to make sustainable consumption not just an option, but the default or the norm. This will only be available, however, if the right policy, regulatory and market mechanisms are in place that will create an environment where the changes expected of consumers and businesses is realistic and feasible.

10.13. Finally, it is clear from our research and elsewhere that while most consumers in Scotland state they want to be part of the transition to net zero, for many they simply do not know where to start, perceive the costs as prohibitive, or are unclear about what their role should be. To be a success the transition will need to place consumers at its centre. But to be fully engaged and making the behavioural changes required, consumers will require reliable and trustworthy advice and information and, where required and appropriate, with financial support and routes to redress for when things go wrong. Only then will the technological and behavioural changes so many want to see emerge and diffuse at the scale required.

11. Next steps

11.1. The research outlined in this report is helping Consumer Scotland establish a baseline in our understanding of where consumers currently are at in terms of decarbonisation and the transition to net zero. Future iterations of our surveys will allow us track on an ongoing basis the extent to which consumers in Scotland are engaged in the transition to net zero so that we can recommend to government where policy gaps may exist or where support may need to be provided or enhanced.

11.2. To help complete the picture and further enhance our understanding, Consumer Scotland plans to commission follow up qualitative research that will explore our survey results further by examining in more detail consumers' motivations, values, and social norms and how these intersect with the real and perceived barriers consumers face. In doing so we will look to explore:

- what steps could be taken to help consumers overcome the barriers they face thereby enabling all consumers to fully participate in the transition to net zero and adapt to climate change in the sectors of interest to Consumer Scotland
- what the Scottish Government's public engagement activities will need to include if consumer interest and concern is to be translated into positive behaviour change
- the sorts of information and communications strategies that will resonate with consumers to support their behaviour change
- how to help build a strong and positive narrative around climate change that has consumers at its heart

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13. Appendices

Appendix A: Workstream 1 Questionnaire (Energy and Water)

1	ASK ALL Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months? Please include problems related to old age. • Yes, limited a lot • Yes, limited a little • No
2	ASK ALL Approximately what is your estimated annual household income before tax? If you would rather not say, then please just select that option. • Under £15,000 • £15,000-£29,999 • £30,000-£49,999 • £50,000-£74,999 • £75,000-£99,999 • £100,000+ • Don't know/rather not say
3	ASK ALL Does your household own or rent your accommodation? • Owns outright, • Owns with a mortgage or loan, • Part owns and part rents (shared ownership), • Rents from a private landlord, • Rents from a social landlord • Other arrangement
4	ASK ALL Is your household's accommodation… • A detached house or bungalow • A semi-detached house or bungalow • A terraced/end of terrace house or bungalow • A flat, maisonette or apartment (including four-in-a-block or conversion) • A room or rooms • A caravan, mobile home or houseboat • Some other kind of accommodation
5	ASK ALL When was the property that you live in built? • Post 1982 • 1965-1982 • 1945-1964 • 1919-1944 • Pre-1919 • Don't know

6	ASK ALL MULTIPLE RESPONSE QUESTION What types of insulation does the property you live in have? • Loft • Cavity wall • External wall • Internal wall • Doors • Double or triple window glazing • Insulated floors • Don't know
7	ASK ALL Do you have mains water, or do you manage your own water supply? Most people have mains water, but managing your own water supply may involve water being supplied from a stream, borehole or well. • Mains water • Own water supply • Don't know
8	ASK ALL Which energy company provides your electricity? • Scottish/British Gas (Centrica) • Co-op energy • EDF • E-ON • Scottish Power • SSE • Bulb • Octopus Energy Ltd • OVO • Shell Energy (formerly First Utility) • Utilita • Utility Warehouse • Other (please specify) • Prefer not to say • Don't know
9	ASK ALL Which energy company provides your gas? • Scottish/British Gas (Centrica) • Co-op energy • EDF • E-ON • Scottish Power • SSE • Bulb • Octopus Energy Ltd

	• OVO • Shell Energy (formerly First Utility) • Utilita • Utility Warehouse • Other (please specify) • Prefer not to say • Don't know • N/A
10	ASK ALL MULTIPLE RESPONSE To the best of your knowledge, which of these are used as energy sources in your home, for example, to provide heating or to power appliances? (Please exclude anything used outside of your home – for example fuel for vehicles) • Electricity • Natural gas (mains gas) • Bottled gas • Oil • Wood • Coal • Other (please specify) • Don't know
11	ASK ALL And to the best of your knowledge, how old is your home heating system? • Newly installed (under 2 years) • 2-5 years • 6-10 years • 11-15 years • 15+ years • Don't know
12	ASK ALL For each of these please tell us if you have in place or are looking to install RANDOMISE STATEMENTS - Gas heating - Electric heating - Gas for cooking - Electricity for cooking - Air source heat pump - Ground source heat pump *Yes I have in my home,* *No I do not have in my home but am looking to install,* *No I do not have in my home and I am not looking to install* *Don't know*
13	ASK ALL For each of these please tell us if you have in place or are looking to install RANDOMISE STATEMENTS

	- Solar PV panels - Solar thermal - Battery storage - Biomass boiler - District heating - Domestic wind turbine *Yes I have in my home,* *No I do not have in my home but am looking to install,* *No I do not have in my home and I am not looking to install* *Don't know*
14	ASK ALL To what extent do you agree or disagree with the following statement: I know what I need to do to help Scotland reach Net Zero by 2045. *SCALE: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree*
15	ASK ALL To what extent do you agree or disagree with the following statements: RANDOMISE • If I was asked to reduce my personal water use by around 5 litres a day, I'd know how to do this • If I was asked to reduce my personal energy use by 10%, I'd know how to do this. *SCALE: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree*
16	ASK ALL Do you receive any information about water in your home from the following sources? SELECT ALL THAT APPLY, RANDOMISE ORDER • Family and friends • Environmental non-governmental organisations • Public bodies, e.g., Scottish Environment Protection Agency • Scottish Government • UK Government • Local Authorities • Corporations/Businesses • Scientists • News media, e.g., TV and newspaper • Social media • Political leaders • Community leaders • Online influencers, celebrities, or media personalities • Other (please specify)

17	ASK ONLY FOR RESPONDENTS SELECTING OPTIONS TO Q16 And thinking about Q16 OPTION, to what extent do you trust them to give you accurate information about water use in your home. Please use a scale of 1 – 5, where 1 = do not trust at all and 5 = completely trust *SCALE: 1-5*
18	ASK ONLY FOR THOSE THEY USE (SELECTED AT Q11) And thinking about the Q16 OPTION, to what extent do you find each to be helpful in giving you information about water use in your home. Please use a scale of 1 – 5, where 1 = not at all helpful and 5 = very helpful *SCALE: 1-5*
19	ASK ALL Do you receive any information about energy use in your home from the following sources? SELECT ALL THAT APPLY, RANDOMISE ORDER • Family and friends • Environmental non-governmental organisations • Public bodies, e.g., Scottish Environment Protection Agency • Scottish Government • UK Government • Local Authorities • Corporations/Businesses • Scientists • News media, e.g., TV and newspaper • Social media • Political leaders • Community leaders • Online influencers, celebrities, or media personalities • Other (please specify)
20	ASK ONLY FOR RESPONDENTS SELECTING OPTIONS TO Q19 To what extent do you trust them to give you accurate information about energy use in your home. Please use a scale of 1 – 5, where 1 = do not trust at all and 5 = completely trust PULL THROUGH OPTIONS SELECTED Q19 • Family and friends • Environmental non-governmental organisations (or Non Government Organisations) • Public bodies, e.g., Scottish Environmental Protection Agency • Scottish Government • UK Government • Local Authorities • Corporations/Businesses • Scientists • News media, e.g., TV and newspaper • Social media • Political leaders • Community leaders

	• Online influencers, celebrities, or media personalities • Other (please specify) *SCALE: 1-5*
21	ASK ONLY FOR THOSE THEY USE (SELECTED AT Q19) And thinking about Q19 OPTION, to what extent do you find each to be helpful in giving you information about energy use in your home. Please use a scale of 1 – 5, where 1 = not at all helpful and 5 = very helpful *SCALE: 1-5*
22	ASK ALL Please rank the following in the order that you think they should take responsibility for reducing carbon emissions related to water and its supply, from 1 'most responsibility' to 7 'least responsibility'. RANDOMISE • The UK Government • The Scottish Government • Local authorities • Organisations which regulate the water industry (e.g., Water Industry Commission for Scotland, Drinking Water Quality Regulator, Scottish Environment Protection Agency) • Consumers • Businesses • Scottish Water *SCALE: 1-7*
23	ASK ALL Please rank the following in the order that you think they should take responsibility for reducing carbon emissions related to energy and its supply, from 1 'most responsibility' to 7 'least responsibility'. RANDOMISE • The UK Government • The Scottish Government • Local authorities • Organisations which regulate the energy industry (e.g., Ofgem) • Consumers • Businesses • Energy supply companies *SCALE: 1-7*
24	ASK ALL MULTIPLE RESPONSE Have you experienced any of the following in your local area? Please select all that apply. • Poor Air Quality • Water scarcity • Poor Water Quality • Flooding

	• Drought
25	ASK ALL To what extent do you think the following are connected to climate change? • Poor Air Quality • Water scarcity • Poor Water Quality • Flooding • Drought *SCALE: Very connected, somewhat connected, not very connected, not at all connected, DK, NA*
26	ASK ALL Thinking about water generally, to what extent do you agree or disagree with the following statement: • I'm concerned about how much water is used in my home *SCALE: Strongly agree, tend to agree, Neither agree nor disagree, tend to disagree, strongly disagree*
27	ASK ALL MULTIPLE RESPONSE Thinking about the water you use at home, in which of the following ways, if any, do you think that this affects the environment? Please select all that apply RANDOMISE ORDER • Water use at home reduces the amount of water in rivers, lakes and reservoirs • Water use at home can make droughts worse • Water use at home can produce carbon emissions/greenhouse gases • Water use at home can create pollution in natural environment • Water use at home increases energy costs by water companies to treat and pump waste water
28	ASK ALL Looking at the list below, what impact, if any, do you think each would have on the environment if more people did them? Please use a scale of 1-5 where 1 is 'No impact at all' and 5 is 'A very large impact' RANDOMISE ORDER • Fixing leaking taps • Reducing water usage further in dry seasons • Using cold water as much as possible • Avoiding pouring/rinsing chemical/medicines, fats, oils, and greases down the sink • Wiping/scraping cooking pans before washing to get as much fat/oil out as possible • Ensuring dishwashers and washing machines are full before running • Using a watering can in the garden, rather than a sprinkler or hose *SCALE: 1-5, DK*
29	ASK ALL

	Looking at the list below, what impact, if any, do you think each would have on the environment if more people did them? Please use a scale of 1-5 where 1 is 'No impact at all' and 5 is 'A very large impact' RANDOMISE ORDER • Shortening length of showers • Turning off the tap while brushing teeth, shaving, or washing face • Putting a bin in the bathroom for things that can't be flushed, like wet wipes, cotton buds, and sanitary products • Only flushing pee, paper, and poo that will dissolve in water *SCALE: 1-5, DK*
30	ASK ALL Please indicate which you already do and which you do not do currently? RANDOMISE ORDER • Shorten length of showers • Turn off the tap while brushing teeth, shaving, or washing face • Ensure dishwashers and washing machines are full before running • Fix leaking taps • Use a water can in the garden, rather than a sprinkler or hose • Reduce water usage further in dry seasons • Use cold water as much as possible • Put a bin in the bathroom for things that can't be flushed, like wet wipes, cotton buds, and sanitary products • Only flush pee, paper, and poo that will dissolve in water • Avoid pouring/rinsing chemical/medicines, fats, oils, and greases down the sink • Wipe/scrape cooking pans before washing to get as much fat/oil out as possible *SCALE: I already do this, I don't do this, NA, DK*
31	ALL RESPONDENTS SELECTING AT LEAST ONE OPTION OF 'I DON'T DO THIS' AT Q30 MULTIPLE RESPONSE What stops you from ANSWER OPTION Q30? Please select all that apply • Too expensive, • Too much hassle, • Don't know enough about this, • Ineffective in reducing environmental impact, • Not my responsibility, • N/A, • DK
32	ASK ALL Looking at the statements below, to what extent do you agree or disagree with each? • I would only reduce my personal water use if it saved me money • It rains so much where I live that there is no need for me to use less water

	• I expect my water company to deal with anything I want to pour down the sink or drain or flush down the toilet • I don't know how else to get rid of cooking fats and oils other than down the sink *SCALE: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree, NA*
33	ASK ALL Thinking about energy generally, to what extent do you agree or disagree with the following statement: • I'm concerned about how much energy is used in my home *SCALE: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree, DK*
34	ASK ALL To what extent do you agree or disagree with the following statement? In comparison to gas, renewable energy technologies are… RANDOMISE • More expensive to install • Cheaper to run • Better at heating home • More reliable to use • Better in reducing carbon emissions *SCALE: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree, DK*
35	ASK ALL Looking at the list below, what impact, if any, do you think each would have on the environment if more people did them? Please use a scale of 1-5 where 1 is 'No impact at all' and 5 is 'A very large impact' RANDOMISE ORDER • Switching to a hybrid or electric vehicle when you replace your current vehicle • Installing a renewable energy technology in the home • Saving energy at home (e.g. switching off lights, turning down a heating thermostat) • Saving energy at home by improving home's energy performance (e.g.., better insultation, replacing doors/windows, installing underfloor heating) • Installing new home heating systems that produce fewer greenhouse gases (e.g., efficient electric heating) • Installing heat pumps *SCALE: 1-5, DK*
36	ASK ALL Looking at the same list, some people already do some of these things while others do not. Please indicate which you already do and which you do not do currently?

	• Drive a hybrid or electric vehicle • Have renewable energy technology in the home • Save energy at home (e.g., by switching off lights, turning down a heating thermostat) • Save energy at home by improving home's energy performance (e.g. better insultation, replacing doors/windows, installing underfloor heating) • Have new home heating systems that produce fewer greenhouse gases (e.g., efficient electric heating) • Have a heat pump *SCALE: I already do this, I don't do this, DK*
37	ASK ALL WHO HAVE RENEWABLE TECHNOLOGY IN HOME (I already do this q36) Looking at the list below, which of these factors, if any, influenced your decision to install/have a renewable energy technology in the home?' RANDOMISE ORDER • I received funding • Concern with climate change • Lowering energy costs • Increasing energy efficiency • Personal responsibility to tackle climate change
38	IF ANSWERED I don't do this for Q36 option 1 'Drive a hybrid or electric vehicle' How likely is it that you will switch to/buy a hybrid or electric vehicle in the next 5 years? *SCALE: Very likely, Somewhat likely, Somewhat unlikely, Very unlikely, DK*
39	IF ANSWERED I don't do this for Q36 option 5 'have new home heating systems that produce fewer greenhouse gases (e.g. heat pump) How likely is it that you will install a new home heating system in the next 5 years? *Scale: Very likely, Somewhat likely, Somewhat unlikely, Very unlikely*
40	ASK IF SELECTED 'I don't do this' FOR Q36 MULTIPLE RESPONSE Why do you not Q36 Option? Please select all that apply *Too expensive,* *Too much hassle,* *Don't know enough about this,* *Ineffective in reducing environmental impact,* *Not my responsibility,* *N/A,* *DK*
41	ASK ALL

	Having taken this survey, what, if anything, might you now consider or do differently at home in terms of your water use and energy use? • I think I will do some things differently • I don't think I would do anything differently, because I am already doing what I can • I don't think I would do anything differently, because I don't think I need to • Don't know

Appendix B: Workstream 2 Pilot Questionnaire (General consumer markets)

1	Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months? Please include problems related to old age. • Yes, limited a lot • Yes, limited a little • No
2	Approximately what is your estimated annual household income before tax? If you would rather not say, then please just select that option. • Under £15,000 • £15,000-£29,999 • £30,000-£49,999 • £50,000-£74,999 • £75,000-£99,999 • £100,000+ • Don't know/rather not say
3	Does your household own or rent your accommodation? • Owns outright, • Owns with a mortgage or loan, • Part owns and part rents (shared ownership), • Rents from a private landlord, • Rents from a social landlord • Other arrangement
4	How concerned, if at all, are you about current climate change, sometimes referred to as 'global warming'? SCALE: Very concerned, fairly concerned, not very concerned, not at all concerned, I don't know, prefer not to say
5	To what extent do you agree or disagree with the following statement: I know what I need to do to help Scotland reach Net Zero by 2045. SCALE: Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree
6	To what extent do you agree or disagree with the following statements: • The purchasing decisions I make just now are influenced by concerns for the environment, • I consider the environmental impact more than other people, • I will consider the environmental impact of purchases I make in the future

	Scale: Strongly agree, tend to agree, neither/nor, tend to disagree, strongly disagree, DK
7	Please rank the following in the order that you think they should take responsibility for reducing carbon emissions from 1 'most responsibility' to 6 'least responsibility'. RANDOMISE • The UK Government • The Scottish Government • Local authorities • Organisations which regulate sectors • Consumers • Businesses *SCALE: 1-6*
8	To what extent do you agree or disagree with the following statements? • Products should be made so that they are easy to repair and their components can be re-used • Products which can't be repaired or recycled should be banned • Products which can't be repaired or recycled should be taxed more than those that can be • There should be more promotion of repair and re-use services, as well as recycling services • Companies that sell products should be responsible for taking them back for recycling or disposal at end of product life • I have avoided purchasing a product in the last three months because of its negative environmental impact SCALE Strongly agree; somewhat agree; neither agree nor disagree; somewhat disagree; strongly disagree; DK
9	Some people do some of these things on environmental grounds while others do not. Please indicate which you already do and which you do not do currently: • Leasing and borrowing rather than buying • Choosing whether to buy based upon the environmental impact of a product's materials • Buying second hand rather than new goods • Not buying products packaged in non-recyclable plastics • Choosing products with reusable and recyclable packaging • Repairing goods when they are worn or broken SCALE: I already do this, I don't do this, NA, DK

10	What do you think would help you reduce the carbon emissions from any household items you buy? from 1 'most helpful' to 8 'least helpful'. RANDOMISE • Lower cost of products which have lower environmental impact • More choice of products with lower environmental impact • Clear information on the benefits to the environment • Clear labelling so I can compare product choices • Encouragement from friends and family • Encouragement from influencers on media and social media • Opportunities to try different products before buying • Brands I like already improving their products and packaging Rank 1-8
11	What actions do you take to reduce emissions from your online orders, where 1 is 'never' and 5 is 'for every order made'? • Choosing a later delivery date to ensure my item is delivered in a more environmentally friendly way, • Choosing a delivery day/time when I am in to avoid redelivery, • Ordering from retailers that use recyclable packaging, • Choosing retailers that use compostable packaging, • Getting items delivered to a parcel locker, • Getting items delivered to a local shop/post office, • Booking delivery for the same day if I'm getting multiple items delivered, • Opting for environmentally friendly parcel operators, if available • Reducing the number of returns I make
12	When you last bought one of these items, what was your main reason? • A piece of clothing • A piece of furniture • Electronic device • A home appliance • Bicycle Replacing another item that was broken Replacing another item that was out of fashion Adding to my belongings Other, please specify Not applicable
13	The last time any of these items broke or became damaged, what did you do? • A piece of clothing

	• A piece of furniture • Electronic device • A home appliance • Bicycle Repaired it Gave it to someone else Disposed of it at home with my general waste Recycled it using my local authority collection service Took it my local authority's recycling centre Other, please specify Not applicable OTHER FIELD
14	Do sustainability concerns, including carbon emissions, influence your choice of clothes you buy? • My clothing choices are always influenced by sustainable choices, • My clothing choices are sometimes influenced by sustainable choices, • I consider the sustainability of the clothes I buy but this does not influence my purchasing, • I do not consider the sustainability of the clothes I buy
15	Looking at the list below, some people already do some of these things while others do not. Please indicate which you already do and which you do not do currently: • joining car clubs or formal car sharing schemes • taking part in fuel efficient driver training courses • using cycle hire schemes • active travel such as walking, wheeling or cycling • using public transport rather than car • stop taking flights for work • stop taking flights for leisure • reducing car mileage • use local services, (for example doctors, schools and shops) within walking distance from homes • working or volunteering from home SCALE: I already do this, I don't do this, NA, DK
16	Looking at the list below about food and drink, please indicate which you already do and which you do not do currently: • Choosing locally grown fruit and vegetables • Reducing the amount of meat consumed

	• Switching from meat to meat substitutes (or other vegetarian options) • Reducing dairy consumption • Switching from dairy to dairy substitutes • Selecting food that's in season • Buying from local businesses • Choosing drinks that are manufactured and packaged in Scotland • Eat a vegetarian diet • Eat a vegan diet SCALE: I already do this, I don't do this, NA, DK
17	What stops you from ANSWER OPTION FROM Q16? Please select all that apply MULTIPLE RESPONSE • Too expensive • Too much hassle • Don't know enough about this • Doesn't appeal to me • Ineffective in reducing environmental impact • Not my responsibility • Other, please specify OTHER FIELD
18	What do you think would help you reduce the carbon emissions from the food and drink you consume? from 1 'most helpful' to 8 'least helpful'. RANDOMISE • Lower cost of products with lower environmental impact • More choice of products with lower environmental impact • Clear information on the benefits to the environment • Clear labelling on products • Encouragement from friends and family • Encouragement from influencers on media and social media • Opportunities to try different products before buying • Brands I like already improving their products and packaging RANK 1-8
19	Have you ever paid for carbon offsetting for your recreation and leisure? Please select all that apply MULTIPLE RESPONSE • Yes, through an airline I've made a booking with

	• Yes, through a dedicated website • No
20	19. Have you ever paid for carbon offsetting for your recreation and leisure? Please select all that apply MULTIPLE RESPONSE • Yes, through an airline I've made a booking with • Yes, through a dedicated website • No
21	Why not? Please select all that apply MULTIPLE RESPONSE • I don't want to pay the extra cost • I don't know my carbon footprint • I don't have a trusted source on how offsetting works • I don't think carbon offsetting makes a positive difference to the environment • Never thought about it • Other, please specify OTHER FIELD
22	Does the environmental impact, including any carbon emissions, influence any of the following aspects of your holiday? • Booking a holiday abroad • Number of trips I take in a year • Travel destination • Travel method to destination e.g. plane, train, car • Transportation during holiday e.g. plane, train, car • Booking accommodation • Choice of activities • Choice of food and drink SCALE: Yes, the environmental impact influences my decision No, I consider the impact but this does not influence my decision No, I do not consider the environmental impact Don't know
23	Have sustainability concerns led you to any of the following? Please select all that apply MULTIPLE RESPONSE • not to go on holiday at all

	• not to go on a long-haul flight • not to go on a short-haul flight • holiday in Scotland rather than further afield • holiday in the UK rather than further afield • holiday in Europe rather than further afield • No, not considered it
24	Why not? Please select all that apply MULTIPLE RESPONSE • Companies are more responsible for carbon footprint than me • Business travellers are more responsible for carbon footprint than me • Holidays are to be enjoyed • I focus on other considerations such as value for money • I am not prepared to not go on holiday • Never thought about it
25	What do you think would help you reduce the carbon emissions from your holidays? from 1 'most helpful' to 8 'least helpful'. RANDOMISE • Lower cost of sustainable options • More choice of sustainable options • Clear pre-booking information on the environmental impact of choices • Encouragement from friends and family • Encouragement from influencers on media and social media • Companies I use for holidays taking steps to reduce their carbon impact • Quality standards and regulation by national tourism bodies • Taking fewer but longer holidays RANK 1-8
26	Having taken this survey, what, if anything, might you now consider or do differently in terms of…. • Household purchases, • Food and drink, • Transport, • Recreation, SCALE: I think I will do some things differently, I don't think I would do anything differently, because I am already doing what I can, I don't think I would do anything differently, because I don't think I need to, Don't know

Consumer Scotland

Luchd-Cleachdaidh Alba

Consumer Scotland is the statutory body for consumers in Scotland. Established on 1 April 2022 under the Consumer (Scotland) Act 2020, Consumer Scotland is independent from the Scottish Government and accountable to the Scottish Parliament.

Consumer Scotland uses data, research and analysis to inform its work on the key issues facing consumers in Scotland, working constructively with businesses; consumer, regulatory and enforcement bodies; the public sector; and government at Scottish, UK and local level to ensure that consumer rights and interests are at the heart of markets, services and policy development.