

**energy
saving
trust**

Qualitative research into domestic property owners' attitudes to net zero heating and energy efficiency standards

November 2023

Final report



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1. Executive summary

The Scottish Government commissioned Energy Saving Trust and Taylor McKenzie to undertake research to explore attitudes of homeowners in Scotland to the potential regulatory standards that may be implemented over 2025 – 2045, dependent on further consultation, for both zero emissions heating and energy efficiency in domestic properties. The qualitative research was conducted in two phases and this report outlines the findings from both phases of the work. A total of 20 focus groups were conducted with 120 homeowners from a range of socio-economic backgrounds, locations and housing types. The research explored participants' views on: (i) the concept of net zero, (ii) three proposed scenarios for introducing new regulations, (iii) the support needed to comply with any new regulations and (iv) the fairest way to introduce these regulations in a phased approach.

Overall, there were similar views on the topics discussed across all types of participants. Energy Saving Trust's analysis highlights two clear issues that need addressing for any regulations that come into force:

- **Clear communications to raise awareness.** More specifically, participants expressed a desire for more information on:
 - what net zero means and what the impact of not working towards being net zero is, both globally and to them personally
 - what the regulations are and when they come into force
 - what zero direct emissions heating is and how it works
 - what they personally need to do to meet the regulations
 - how they can go about making these changes and who can advise them on what to do
 - the economics of the required changes – how much it will cost to install, what the servicing costs are, what, if any, the cost savings will be and what financial support will be provided
- **Financial support.** There was an expectation that there will be financial support available to homeowners for any required changes. This was especially the case for those on low incomes, with some suggestions that financial support was means-tested to support the most vulnerable. Suggestions for financial support include grants, interest-free loans, equity loans and financial support tied into mortgage repayments.

Three scenarios of how potential new regulations could be introduced were presented to participants. The most salient views on these included:



Any home changing ownership would be required to meet a minimum energy efficiency standard and have a zero-emissions heating system installed – this was seen as unfair on the buyer as it will be an additional cost in buying a property which is already an expensive process. This was seen as especially unfair for first-time buyers and the financially vulnerable. Participants said that having to make the changes would not be achievable for many who are struggling

to afford to buy a property in the first place and so would not have any savings left over to pay for the required changes.



The regulations would set deadlines for property owners to carry out certain energy efficiency improvements (2033) and zero emissions heating system installations (2045) – this was seen as the fairest and most achievable scenario out of the three. It gives people time to prepare and know what they need to do.



The regulations would apply at the point of boiler breakdown – this was also seen as unfair due to having to do this in an emergency situation. Almost all participants said that if their heating system broke, they would need to replace it as soon as possible and they would not have the time to research a technology that they do not know much about let alone the time to raise additional funds over and above what they would have to spend on replacing like for like.

According to the participants, the Scottish Government should lead by example by upgrading council housing and public buildings first. Vulnerable groups eg low income, older adults etc. should be the last ones required to comply with the regulations, unless they are financially supported by the government to do so. Properties not falling into either of these two categories should comply in a phased approach, based on either a property's environmental impact or a homeowner's ability to pay.

2. Introduction and objectives

The Scottish Government published the Heat in Buildings Strategy in October 2021, setting out their vision for the future of heat in buildings in Scotland together with the actions they are taking in this sector to deliver their climate change commitments, maximise economic opportunities and ensure a just transition which includes addressing fuel poverty. The Strategy includes enhanced proposals for regulatory standards that will introduce energy performance standards for homes in Scotland, including targets for improved energy efficiency and zero emissions heating to come into force from 2025.

The Scottish Government's regulatory approach is still under development and consideration is being given to the relative merits of different trigger points. These standards will need to be developed in line with the principles set out by the Just Transition Commission¹ and be fair to all. The success of the Heat in Buildings Strategy will also be reliant on widespread understanding and accepting new regulatory interventions.

It is vital that the Scottish Government when introducing future policy, takes account of people's attitudes to installing zero direct emissions heating and energy efficiency measures in their homes and ensures that all potential barriers are identified and mitigated as appropriate. The aim of this qualitative research, undertaken by Energy Saving Trust and Taylor McKenzie, was to develop detailed insight into householders' attitudes toward these issues, helping shape appropriate policy and ensuring that the Scottish Government can successfully achieve the goals set out in the Heat in Buildings Strategy.

2.1. Aim of the research

The overarching aim of this research was to explore the attitudes of domestic property owners to the proposed regulatory standards for zero direct emissions heating and energy efficiency in domestic properties in Scotland. The research explored the attitudes of owners of different housing types and across a range of different sociodemographic groups, including geographic location, as well as gender, age, ethnicity, and socio-economic status.

The research addressed the following questions:

2.1.1. What are domestic property owners' views on the imposition of regulatory standards for both zero emissions heating and energy efficiency in domestic properties over the time period out to 2045?

- What are domestic property owners' views on net zero and the Scottish Government's aspiration to reach net zero by 2045?
- What appetite is there for early adoption of zero emissions heating and energy efficiency improvements?
- What are the steps that domestic property owners can take to prepare their homes to become energy efficient and switch to a zero-emissions heating system in the future?
- What are domestic property owners' views on specific potential models for standards and how would those apply across society?
- What barriers might domestic property owners face in meeting any standards set?

¹ [Just Transition Commission](#)

- What do domestic property owners believe may help them meet any standards, and who should provide this help?
- What level and type of information do domestic property owners require, and from whom, to instruct them on how to meet any standards?
- What are domestic property owners' views on ways to encourage compliance with any standards, particularly with respect to punitive action on the part of any enforcement authority?
- How do domestic property owners perceive the interrelationship between any standards and climate change, and to what extent does the role of standards in tackling climate change affect their attitudes towards it?
- What do domestic property owners feel would be the 'fairest' approach to implementing these regulations and who should be first to 'lead'/ start these changes?

3. Methodology

The research was conducted in two phases. This report outlines the results of both phase one and phase two.

3.1. Recruitment

The methodology was developed to collect qualitative data on participants' perspectives on the prospective legislation. Ten 90-minute focus groups were held between 28 June and 6 July 2022 in the first phase of the research and a further ten were held between 14 and 22 September 2022 in the second phase. In each phase, three focus groups were held in Glasgow, two in Edinburgh and five were held remotely through Teams. All twenty focus groups involved semi-structured discussions and were moderated by a Taylor McKenzie researcher. Each focus group consisted of between four and seven homeowners (typically six) from different demographic, geographic and house type categories:

- geographic location (urban, suburban, rural small town or village, remote rural)
- participants from a range of housing types (detached house, semi-detached, bungalow, tenement etc)
- participants from a range of ages of buildings including at least one property less than 10 years old and one 100 years or older
- age grouping: 18-45, 45-75, 18-75
- socio-economic status: ABC1, C2DE
- ethnic minority participants
- financially vulnerable participants
- participants with different accessibility needs
- properties that are off the gas grid

These participant categories helped secure representation from key types of owner-occupier households in Scotland. An effort was made in both phases to ensure that the more vulnerable categories of homeowners – for example, those likely to be disproportionately affected due to disability, economic status and age – were well-represented. It was also important to represent homeowners who may face unique challenges in improving energy efficiency, such as those living in multi-occupancy, older and listed buildings. During phase one, one of the groups focussed on landlords rather than owner-occupiers whereas in phase two, two groups focussed on first-time buyers, new buyers (those who bought a property in the last two years) and prospective buyers.

The composition of each focus group for both phases is included in Appendix C and D.

3.2. Data collection

The focus group content and discussion guides were developed by Energy Saving Trust and Taylor McKenzie in consultation with the Scottish Government. The discussion guides for phase one and phase two covered the following topics collectively:

- Participants' understanding and attitudes towards net zero.
- Participants' understanding and views on the journey they can take to prepare their homes to become energy efficient and switch to a zero-emissions heating system in the future.
- Participants' feedback on three scenarios where regulations could be brought in:
 - change of occupancy²
 - backstop dates³
 - boiler breakdown⁴

For each scenario, feedback was sought on the following:

- participants' views on the scenario
 - the scenario's overall fairness
 - ways in which the scenario might impact different people
 - support needed to help meet the regulations
 - the barriers and challenges hindering the implementation of the proposed scenarios
- Participants' reaction and opinions on the different potential phasing approaches to implement the proposed regulations.
 - Participants' suggestions on the support required to meet the proposed regulations.

Participants were encouraged to remain open to different ideas and allow their stances to fluctuate throughout the discussions. Their comments were not treated as 'right' or 'wrong' (other than the moderator offering technical corrections) but received neutrally by the research team. The focus of the discussion (and moderation) was overwhelmingly geared towards encouraging participants' free critique of the scenarios. This involved encouraging any disagreement or agreement with scenarios and with others in the room, followed by heavy stress on constructive feedback.

Copies of the discussion guides used in phases one and two are included in Appendix A and B.

3.2.1. Data capture and analysis

For both phase one and phase two, after the completion of focus groups, the following steps were taken to analyse the information collated:

- A transcription of each focus group was produced.
- Each moderator (there were three moderators in total) read through the transcripts of their own sessions to remind themselves of all the relevant discussions and compiled a list of the emerging themes.
- A data merger session was held between the three moderators and the Energy Saving Trust team to identify any similarities and differences in themes across the

² See [Section 4.2.1](#)

³ See [Section 4.2.2](#)

⁴ See [Section 4.2.3](#)

groups and between different types of participants. This allowed a list of the main themes resulting from the discussions to be compiled.

- The transcripts were reviewed again using the main themes as a framework for analysis to ensure all information was captured within the themes and to identify useful quotes for illustration of the themes.

4. Results

This section outlines the key findings from the twenty focus groups. The results have been broken down into four sections:

- **Awareness of, and attitudes towards, net zero** – the section presents the participants' views on:
 - Net zero concept
 - Heat pumps and alternative heating technologies
 - Homeowners' journey to net zero
- **Scenario specific learnings** – the section presents the participants' attitudes towards:
 - Scenario 1 – change of occupancy
 - Scenario 2 – backstop dates
 - Scenario 3 – Boiler breakdown
- **Phasing** – the section summarises the different potential phasing approaches to implement the proposed regulations.
- **Support needed** – the section outlines the support required to meet the proposed regulations.

Many views were unanimous among participants regardless of their income, property type and other demographic characteristics. Where there are differences, these are discussed within each section.

4.1. Awareness of, and attitudes toward net zero

4.1.1. Net zero concept

All participants within the focus groups had heard of the concept of net zero, as it is a term that they often hear in the media or mentioned by brands. However, many didn't understand precisely what it means for them at an individual level and how it can be reached in practice.

“Yeah, I'm aware of it, and I think I've got a rough understanding of what it means. Would probably struggle to describe it accurately, but I think I roughly know what it means” [Phase 2, Group 6, male, 18-45, Grampian, maisonette]

“How and when that's being implemented is a million-dollar question” (Answer to the moderator's question: “how do we feel about the government's [net zero] commitment by 2045?”) [Phase 1, Group 7, female, Highlands & Islands, semi-detached house]

Participants said that reaching net zero is an aspirational goal and there was a lot of positivity and goodwill in the focus groups around creating and meeting the net zero targets. Almost all understood that net zero is important to help combat climate change and again, almost all have accepted the fact that things do need to change to combat climate change and that legislation is important:

“I think it is a good thing that they are being that ambitious. [...] If it is going to cost more money- it is something that in the future I am willing to pay more towards

because it is the elongation of life on this planet. I think it is a positive thing, but we just need more info on how it is going to happen” [Phase 2, Group 4, female, 18-45, Edinburgh, in the process of getting a mortgage]

In addition, many were made more aware of net zero due to COP26 being held in Glasgow in 2021:

“I think obviously what is going on in the world- the long-term impact is going to be very severe in terms of the environment- so, I think it definitely enhanced my education last year when we had the conference in terms of the potential impact for our kids in the future- in terms of the impact it could have on from different aspects of our environment which can impact us in many ways. I think we do need to take it seriously as a society. So yeah, it is definitely high on the agenda now- more so than ever.” [Phase 1, Group 10, male, 46-75, landlord]

4.1.2. Concerns about how the targets will be achieved

Even though participants were generally positive towards tackling climate change and reaching net zero, there are concerns about how, and if, the targets will be achieved:

- There was **scepticism** and **mistrust** among the participants that targets are rarely achieved by the government and that the government is not leading by example, for example some social housing properties are still using expensive storage heaters. Participants had questions around how the net zero target will be any different to previous targets that the government did not meet or met late, and they said they need to be able to see real tangible action.

“I know people that are in social housing now that still have storage heaters, so it’s kind of like, I feel sorry for them, because ... you shouldn’t have the most expensive heating in social housing. So, I would want to know how much effort is going to be put into achieving net zero. Because that’s great, and it’s a great objective to have, but how feasible is it?” [Phase 2, Group 2, female, 18-45, Glasgow, flat]

“I don’t have a lot of faith really in what they say, they say a lot of things, and then that government changes, and it’s all that previous government’s fault. It’s been that way forever” [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

In addition, there was scepticism around how effective renewable energy is and if we can actually use the renewable energy produced in the UK to reduce the impact of climate change:

“I think there’s a lot of things that people have been told “yeah, go for this and this will be better” and the grid can’t even, companies are getting money paid to them switching off the wind turbines because the grid can’t handle it. So, it’s like, you know all this kind of stuff you’re thinking the infrastructure’s not there to absorb the energy that’s getting produced. And you know, they’re getting paid money to actually switch off the turbines” [Phase 1, Group 1, male, 46-75, Elderslie, bungalow]

- For participants, achieving net zero doesn’t feel like an individual problem, although most participants accepted that they must play some part in this. There was anxiety around how the net zero targets will impact people financially and there was a view that this should be tackled by the government, big businesses and industry, not individual homeowners who can’t afford to make changes. This attitude was particularly prevalent in the financially vulnerable groups, with many feeling that it shouldn’t be them that has to make changes, but it was a view widely shared by participants across different socioeconomic groups.

“You hear a lot of people speaking about it and they are putting a lot to individuals rather than going for industry and bigger corporations to stop what they are doing to stop putting things into the environment. It is fair enough - you need to target individuals as well - but to me you have got to deal with the bigger problem first which I think is industry - maybe transport - but definitely industry and larger corporations...” [Phase 1, Group 3, male, 46-75, Glasgow, flat]

- Questions were raised around how feasible meeting the net zero target is and what level of investment is required to make this happen, for example, changes to infrastructure, upheaval to properties and the feasibility of implementation across different properties e.g. flats.

“In Edinburgh, it is a lot of tenement flats and there are conservation areas - say you want to upgrade a building, but you are not allowed to put double glazing in, but it has got to be sash windows- which is just not going to benefit anyone. So, there are restrictions in place and regulations that restrict it. It is ambitious and there are other ways.... Maybe in suburbs, heat pumps can be put in houses, but I don't really know how tenement flats are going to do that” [Phase 2, Group 4, male, 18-45, Edinburgh, currently renting – planning to buy in the next 6 months]

- There was a strong desire from all groups to see tangible evidence of cost savings as well as contribution to net zero:

“All these wind turbines they're supposedly working off, but our energy bills are still crazy. Like unless we see it reflected in our bills then it's hard to see that is actually happening” [Phase 2, Group 3, male, 28-45, Renfrewshire, semi-detached house]

- Participants identified that education is key for people to understand why these changes are necessary and, for some participants, this education needs to start with young minds in schools:

“I'm a teacher of science in high school, and it would be good if the government would maybe provide us with more resources, you know, to do that. Furnish us with materials and information, things like that [...] like almost sort of a mandatory course. Like we do deliver something about global warming, climate change. I'm a chemist, so I obviously talk about global pollution and things like that. However, it's not a mandatory part of the course. And I think that that would be a good thing. Obviously, to get young people involved in it. It should be mandatory.” [Phase 2, Group 3, female, 46-75, Inverclyde, terraced house]

4.1.3. Heat pumps and alternative heating technologies

In order to gain an understanding of participants' views on some of the changes needed, they were asked whether they were aware of heat pumps and what they do. Overall, awareness and knowledge of heat pumps was minimal with most not knowing even the very basics, such as, what they are, what they do, what they look like, and where they go.

Where participants had some knowledge of heat pumps, there were concerns that they would not work in the Scottish climate, or in certain property types such as flats. Other participants said that what they had heard was mainly negative. Perceptions of heat pumps amongst participants included:

- ‘They have a high cost to install’. Most participants were unaware of the costs of installation and were shocked when told a ballpark figure (£9-11k). Currently, they feel that the technology is unaffordable for them:

“I think with that it all comes down to the cost. The cost is quite vast compared to a boiler to getting a heat source pump put in. The help that you get from the government and the programmes and that- they are not that much.” [Phase 1, Group 3, male, 46-75, Glasgow, detached house]

- ‘There was a need for additional work to be completed for the heat pump to work efficiently which adds further cost’. Participants were generally unaware that heat pumps cannot just be connected in place of their boiler:

“There's a lot of considerations you need to look at, even thinking about installing air source, the type of property, your insulation which is key to that if that technology is going to work, because if you're not sufficiently insulated it's not going to work for you, I'd heard all the horror stories as well, components failing, parts having to be replaced for thousands of pounds, for a relatively new system, lack of expertise, especially in the earlier years.” [Phase 1, Group 7, male, 18-45, Western Isle, detached house]

- ‘They are ineffective or less effective than conventional heating and hot water systems’. Participants had heard mixed reviews on how well heat pumps work. There was a concern that, if the technology is good and works, they would be hearing more about them being used. Participants expect to see all new builds installing them first and they need to see more information about how they work to give them confidence that they can actually heat their homes:

“My uncle's got one, a heat pump, he got the boiler taken out and got a heat pump, it's been a few months now, but it seems to be not generating enough or not in the terms that he wants. Slightly less than a boiler.” Steve [Phase 1, Group 4, male, 46-75, Edinburgh, semi-detached house]

Before participants could develop a more informed opinion on the regulations there were a series of clarifications they required about zero-emissions heating:

- how does it work?
- how much will it cost?
- how long will the new heating system last?
- will it be cheaper upfront?
- will it be cheaper in the long run?
- will I be able to get replacement parts/a repair done on this device?
- are there enough installers who are trained in these new systems? This was particularly a concern for those living in rural communities who already struggle with these things on ‘standard’ heating systems.

4.1.4. Homeowners’ journey to net zero

In the second phase of research, to provide some additional context, the participants were shown an illustration of some of the steps a homeowner can follow to prepare their homes to become energy efficient and switch to a zero-emissions heating system in the future.

The journey presented is the following:

Step 1: Increasing awareness of energy use/costs and understanding the need to take action towards achieving net zero, eg, smart meter installation, low carbon fuel usage, controlling /zoning heating, usage of more energy-efficient appliances.

Step 2: No/low cost/easy fix upgrades to reduce heat loss in the home, eg draught proofing, hot water cylinder insulation etc.

Step 3: More significant heating insulation measures, eg installation of double glazed windows, cavity wall insulation, roof and loft insulation etc.

Step 4: Renewable technologies, eg heat pump installation, solar panels installation.

The research showed that breaking down this complicated task into smaller, more manageable phases helps to raise awareness of what needs to be considered and informs those who are less knowledgeable or less proactive in making changes. Being able to plan and have a feeling of control over the process was comforting for most participants.

“It is scary, but I think it’s helpful. It informs people who are perhaps not aware, or for people who couldn’t give a monkey’s. People that have never heard of energy efficiency, there are people like that. So yes, you need to make people more aware” [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

For participants further down the journey, the earlier stages did not feel so scary or immediately onerous and costly. These participants said it is reassuring that they are further along the journey and have made many of these changes already. On the contrary, first-time buyers were generally at an early stage in the journey since either they cannot afford to make the changes, or they do not have a sufficient incentive as most said that they will not live in their current property for very long, so they will not see the return on any investment.

Even though the journey was positively perceived, it raised some questions and concerns:

- **Cost:** there was anxiety around the cost of investment in these new technologies and the role the government can play in supporting homeowners in their efforts.
- **Feasibility:** there was scepticism around renewable technologies in general with many homeowners questioning the feasibility of using these technologies in their everyday lives/homes: Do they really save you money? Does the huge investment really pay off?
- **Future-proofing:** homeowners were concerned about how relevant these technologies will be in the long run and how quickly they will become outdated or redundant: Is it really worth investing? When is the best time to invest to get the maximum pay off?

The participants were all seeking **reassurance and clear evidence** that will outline the benefits of moving through the stages and reaching stage 4. It was suggested that **case studies** can bring this journey to life, showcasing people in similar circumstances to the participants that have successfully reached later stages than them.

“Clear evidence that it works. What’s it going to do? Install it somewhere, run it for a year, and then see the bills, let’s see how that worked” [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

4.1.5. Differences by groups

Those more **active on this journey** or **that have already started taking more significant steps** were more aware of EPC ratings in general. Some spontaneously questioned whether there would be tax incentives for reaching a higher EPC rating.

Amongst the **older participants**, there was a general lack of knowledge and more skepticism around change and new technologies. Many said they feel too old to live through another round of cost and disruption and to make this significant investment in new technologies from their pensions.

“I suppose I could get solar panels, but I don’t think I’ve got enough life left in me to be doing that one” [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

The **financially vulnerable groups** emphasised how unequal it is that the more vulnerable homeowners like themselves have to take on the financial burden of moving through these stages. They said that they are asked to take on huge financial responsibility to reach higher stages of the journey whereas those in social housing or council properties are not⁵:

“It’s only fair if we’re all in it together. It’s not a great divide if, you’re a homeowner and you can afford it. Because a lot of homeowners can’t. I can’t afford that thing at the bottom no matter if I am a homeowner or not” [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

First-time/new buyers focused on the financial burden of those who have gone through the home buying journey recently or for the first time. These participants said that they are hesitant to invest in renewable technologies as the benefit is unclear and they don’t expect to live in their current property for a very long time.

“It’s like renewable technologies and you are going to have solar panels on your roof- how much is that actually going to save you a month? You know, with inflation and everything, just seeing what the actual impact on you and everybody else is...” [Phase 2, Group 4, female, 18-45, Edinburgh, in the process of getting a mortgage]

⁵ The research question did not explicitly cover what financial support is currently available so some participants might have minimal or no knowledge of existing support services.

4.2. Scenario specific learnings

Three possible scenarios of how new regulations could come into force were presented to each group:

- scenario 1 – change of occupancy
- scenario 2 – backstop dates
- scenario 3 – heating system breakdown

This section outlines the key points raised by participants when discussing the different scenarios.

4.2.1. Scenario 1 – change of occupancy



In the first scenario, any home changing ownership would be required to meet a minimum energy efficiency standard and have a zero-emissions heating system installed. This would mean that, when a home is sold, the buyer of the property would be required to carry out the necessary energy efficiency improvements and zero-emissions heating installation within two years of the property being sold.

The overall reaction to this scenario was fairly negative, with participants viewing it as unfair and difficult to achieve. There were three main points that participants mentioned for this scenario: fairness, timeframe and financing:

4.2.1.1. Fairness

The first reaction from participants was that **putting the onus on the buyer is unfair**. Many, particularly younger participants, said that the seller would be more likely to be able to afford to make the changes since they already own a property. Participants raised the question of whether there could be exemptions for certain types of people where this would have the biggest impact:

“Could you have exempt groups or – I think first time buyers should definitely be exempt from regulations like that but let's just say it could be means tested, there are people buying homes to rent out, I would have no difficulty....if people buying homes to rent out have to invest this kind of money... because they are going to be earning money from it anyway. And there are other people who are selling to buy an improved property but have the means to do it. So, I can see that there's opportunities to this as long as we take out the most vulnerable in the community.”
[Phase 1, Group 7, male, 46-75, Western Isle, detached croft house]

Even though there was a sense that buyers are being penalised in this scenario because the regulation raises the bar for property ownership, many recognised that putting the burden on the seller is challenging as well as people may be forced to sell for financial reasons.

Even though the scenario was mostly seen as unfair, there were participants that approached it from a positive point of view. They said that it is potentially a more ‘natural’ way of rolling out change since the updated properties become more valuable. Most also

recognise that this buying-selling scenario is cyclical and fair overall as buyers become sellers of the future.

“At the end of the day, it’s the seller that’s going to be a buyer anyway so it doesn’t matter what way, because they’re going to have to do it where they’re going. It will take years to revolve round so that everyone had got it done” [Phase 2, Group 2, female, 46-75, Glasgow, flat]

“I don’t know if it has to be set in stone. It could be either. It could be part of the negotiation of the sale- because somebody, you know, it could prompt people to buy a property because it had been done and because people had done it. It could be either” [Phase 2, Group 4, female, 46-75, Edinburgh, currently owning a flat and looking to buy a property with a garden in the next 6 months]

In addition, these participants assumed that the investment cost could be subsumed within the cost of (re)mortgage or within the Land and Buildings Transaction Tax. They also saw potential if the sellers offset the cost of investment by using an increased selling price – in this case, the scenario feels fair for the sellers too if they choose to invest in this technology.

“A zero-emissions heating installation, it would be like stamp duty really. You pay the stamp duty. You have to pay for the – if it’s not already installed. I guess” [Phase 2, Group 3, female, 46-75, Glasgow, terraced house]

Some participants commented that the regulations could be introduced based on the value of a property to be fair for everyone:

“The value of the property perhaps. So, like someone that pays a 100 grand mortgage to someone who pays a 400 grand mortgage – I’m not saying that everyone’s like – but if everybody could afford 400 thousand pound homes then we’d be in 400 thousand pound homes” [Phase 2, Group 3, male, 18-45, Renfrewshire, terraced house]

4.2.1.2. Timeframe

The scenario posed a **2-year timeframe** for buyers to undertake the work. This was considered difficult to achieve by many. As with the unfairness point, expecting financially vulnerable people and first-time buyers to have that money available within two years was considered highly unlikely as the purchase of the property would most likely take up all their savings.

“I think from my perspective my son would never have been able to squeeze any more money after he bought his house- absolutely not fair- he wouldn’t have been able to. He would have to continue to rent.” [Phase 1, Group 8, female, 46-75, Scottish borders, semi-detached house]

Another concern with the 2-year timeframe mentioned by those living in rural areas (Highlands and Islands) was that it might be difficult to get the work completed within two years. With shortages of workmen and parts on remote islands, some participants perceived it to be unfair to put a two-year timeframe on this. Five years was suggested as a better length of time (with a caveat that people buying properties to sell within five years would have these changes made before selling again).

4.2.1.3. Financing

Financing was an issue raised by all participants. Participants queried how they would be expected to afford to make these changes and what funding would be available to support them since there is a significant cost to bear after buying a property. Financing was an issue raised for all scenarios and so it is discussed in more detail in section 4.4.1, but specific quotes mentioned when talking about this scenario include:

“If the government would cover the whole thing, ‘this is what we are going to do, this is what we are going to do for homeowners to make their houses greener, we're going to give you an incentive of 75% of what you put in, and they you'll make up a small amount’. But it's never like that, it's always they put in the small amount, and we put in the big amount which again is not the fairest.” [Phase 1, Group 1, male, 46-75, Glasgow, flat]

Other participants suggested ways that could make it more achievable:

“It would work if there was some kind of consensus on it, like if it was part of the mortgage, I would be willing to pay as a responsibility as part of my mortgage if it was incentivised, because we all have to take some kind of responsibility.” [Phase 1, Group 1, female, 18-45, Glasgow, flat]

“What about an equity loan on the property? If it was on the buyer’s side, the buyer could take an equity loan from the government... there would be a massive waiting list if it (loans, cashback, vouchers etc) was to come into place, but if you took the equity loan then it would be simpler.” [Phase 1, Group 5, male, 18-45, Edinburgh, flat]

One issue linked to cost raised specifically for this scenario was the potential impact on the housing market. There was a mix of views with some anticipating a positive impact whilst others thought it would have a negative impact. One view was that people won't want to buy properties where the investment needed is too significant and this could lead to market stagnation and some homes falling into a state of disrepair or becoming unsellable. Participants said that this would push more people into new build properties which many thought were in short supply and could thereby impact the price of these homes. This was likened to having EPC certificates and those that have a poorer EPC rating being more difficult to sell:

“If you're selling a house, [you need a] Energy Performance Certificate, even selling the existing houses without all these new regulations, there is a hurdle. People are not buying and selling because it is a certificate showing [a rating]... so the buyer is saying why should I buy yours I'll buy hers. This will be totally disastrous.” [Phase 1, Group 1, male, 46-75, Glasgow, detached house]

On the contrary, those who thought it could have a positive impact on the market said that it could potentially bring down the cost of properties where investment is needed, thereby making it cheaper for buyers (notwithstanding the costs required to bring properties up to the required standard).

“I think it is quite good actually, because the property market now where people are going 10-15% over the asking price... I think it might maybe calm down the property market to stop people doing it so much... whether people would stop and take into account whether they were going to have to pay 9-11 grand on this new heat pump.

I think it'd actually be good to be honest with you because it'd stop property market values going sky high." [Phase 1, Group 5, male, 18-45, Edinburgh, flat]

4.2.1.4. Vulnerable groups

First-time buyers/potential buyers found this scenario to be very unfair and they were most vocally against it. They said the proposed regulation would impact many young people's ability to buy a property considering the significant investment that is needed after buying. These participants said that more information is required as to exactly how the regulation would work in practice and financial support/ additional borrowing and other guidance are expected to help first-time buyers/potential buyers in their effort to comply with the proposed regulation.

"Well I guess from my perspective- I am going to be a first-time buyer and thinking about the tax you have to pay and all that stuff you just have to have in your pocket and then thinking I am going to have to carry out all of these... Why isn't it the seller that has to do all of these?" [Phase 2, Group 4, female, 18-45, Edinburgh, in the process of getting a mortgage]

The first-time buyers/potential buyers particularly suggested that the seller should be the one responsible for making the changes to the property before selling. In this case, the context of who is selling and who is buying is considered important as well: is it a developer, a house builder, an individual?

"I think it just depends on every single context of who is buying and who is selling. Is it a massive landlord who is just buying tons of properties? How much do they have in the bank to do it compared to a first-time buyer? It is completely contextual" [Phase 2, Group 4, female, 18-45, Edinburgh, in the process of getting a mortgage]

On the other end of the property market, **older homeowners/pensioners** said that they would find it challenging to access loans or have savings in place to make the changes. Older homeowners who have already paid off their mortgages were also mentioned as a vulnerable group: "why is it fair they have this burden when they have spent a lifetime investing in their properties?".

"There's one, two, three older people here ...you're working on a pension. And you want to keep what you've got, if you've got any savings, not for stuff like that" [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

"People in their late 40's, early 50's wanting to downsize – they probably had a mortgage and paid it off – now they're either going to have to take on a new mortgage or hope that they've got enough equity to go onto this" [Phase 2, Group 2, female, 46-75, Glasgow, flat]

An area of fairness raised was how fair this scenario is for those living in **flats**. There was a concern that this would make it more expensive for flat owners and make the process more complex for them as well:

"It would have to be agreed through a meeting. I think if you'd want to be fair [you would have] to have a contract and an agreement, shared out between everybody but [that would take time] because you have to go through every individual household." [Phase 1, Group 1, male, 46-75, Glasgow, flat]

"How does it work in a flat? Do you have to ask someone to put it against their

building and then in their garden? How would that work I've got no idea." [Phase 1, Group 9, female 18-45, East Lothian, flat]

4.2.2. Scenario 2 – backstop dates



In this scenario, the regulations would set the following deadlines for property owners to carry out certain energy efficiency improvements and zero emissions heating system installations.

- a) By the end of 2033, all properties should meet a certain level of energy efficiency, including a good level of insulation and draught-proofing.
- b) By the end of 2045, all properties should be using a zero-emission heating system.

Overall, participants found this scenario to be the most equitable and fair as it gives homeowners the space and time to make the necessary changes. Participants said that it is a scenario that feels more ‘on their terms’ and within their control and sets a clear target to work towards.

“Sounds like plenty of time to plan and say how to get there. It sounds less threatening. It sounds less to an immediate change of ownership one [scenario 1]” [Phase 2, Group 7, male, 18-45, Highlands & Islands, semi-detached house]

The first point in this scenario (2033 - certain levels of energy efficiency must be met) was seen as more acceptable than scenario 1. Participants said it was more flexible and achievable as they would be more in control of when to make the changes and not forced to make them at a specific point, such as, following the purchase of a property. The timescale also felt comfortable for the majority of participants.

“I think this is better than the last one [scenario 1] because the onus is on the property owner, if he wants a better house or I don't know something. I think it should be their responsibility to make sure the house is energy efficient and ready and by those dates it could be doable.” [Phase 1, Group 2, female, 18-45, Glasgow, semi-detached house]

The second point (2045 – zero-emissions heating system) was divisive, with some participants reporting that 2045 is too far in the future and more action is needed before then, whilst others said that it is achievable and it gives plenty of time for change. Some of the older participants questioned whether it's worth them doing it and spending the money when they may not be living in the property by that point anyway.

“If it is a genuine crisis, it's far too far away and I would probably [say]..... it should just be more transformational.” [Phase 1, Group 7, male, 46-75, Western Isle, detached croft house]

“I think it is a bit of a while away- if you are maybe thinking I don't know if I am making it to 2045 you might think aye, I'm not going to bother myself.” [Phase 1, Group 5, male, 18-45, Edinburgh, maisonette]

The phased approach to this scenario was well received because it breaks down the targets and makes them more achievable and possible to plan and save for.

“It seems to be a lot more reasonable than the previous one! Maybe it is just the length of time sort of thing. But yeah, certain level of energy efficiency..., I think that

seems a lot fairer.” [Phase 1, Group 8, female, 46-75, Scottish borders, terraced house]

There were, however, questions and concerns about what might happen in practice:

1. **Will this drive up the costs of materials, for example, for insulation?**

Participants were concerned that having a date by which these improvements need to be done by everyone, will increase the costs of doing the work as installers, manufacturers and retailers will put up their prices to capitalise on demand.

2. **Will there be support available for those that cannot afford to make these changes?**

The overall cost of making the changes was seen as restrictive by many and there was an expectation that there would be financial support available for them to do so.

“The first part I don’t have a problem with at all- but 2045? The way prices are going up now... Later on in 2045 I just don’t see that, as the guy before said [those on low incomes] there is no way that they are going to be able to afford to take these things in. Even households with a lot of kids, pets- all that is quite expensive now already- so trying to buy something like that at a later stage as well is going to be a fair financial problem for you.” [Phase 1, Group 6, male, 46-75, Grampian, flat]

There were questions from participants about how regulations would be enforced but they didn’t have many views themselves on how enforcement should be done. Some reference was made to the fire alarm law change brought in in February 2022⁶. Every home in Scotland must now have interlinked fire alarms and, in some cases, home insurance is invalid if properties are not compliant.

“If somebody is in a house already, they’ve no intention to sell, then who is making sure that their home meets that criteria?” [Phase 1, Group 7, female, 46-75, Western Isle detached]

“...Or you have a fire, and your insurance doesn’t pay out, that’s a more realistic way [of ensuring compliance].” [Phase 1, Group 9, female, 18-45, East Lothian, flat]

Owners of old or listed buildings often thought that they had done as much as they could within their property and so said there would need to be exemptions for those properties that cannot do any more.

“I think just coming from an old tenement it is quite hard because how much can you change buildings- if you can’t change windows or you can’t do that...it feels challenging – the state of some of the tenements [would make it difficult and expensive to upgrade to what is required].” [Phase 1, Group 5, female, 18-45, Edinburgh, flat]

4.2.2.1. Vulnerable groups

Financially vulnerable: Most participants expect financially vulnerable groups to be protected/exempt or receive some kind of allowance eg single people/single occupancy;

⁶ <https://www.gov.scot/publications/fire-and-smoke-alarms-in-scottish-homes/>

those on universal credit etc. However, most participants believed that the vulnerable groups will be financially supported to achieve the targets.

4.2.3. Scenario 3 – Boiler breakdown



The third scenario is for the regulations to apply at the point of boiler breakdown. In this scenario, the regulations would state that, when an existing boiler breaks down beyond repair, the property owners would be required to replace it with a zero-emissions heating system, like an air source heat pump. They would not be permitted to install another gas boiler.

This was considered the most extreme scenario and the least fair option out of the three, as it forces homeowners to make a change outside their control at a point of crisis – many participants didn't like the idea of the government dictating what they can and can't do to their own property as well. Taking away the choice was seen as unfair in the event of an emergency replacement as new systems would not be at the forefront of their mind thereby adding additional stress to the situation. This concern was based on the following two issues⁷:

- **New technology:** there were concerns about the participants' lack of awareness of zero-emissions heating and having to install it when the participants felt that it is still untested. Trying to understand a new technology at a point where they just need to get a working heating system did not feel fair:

“What if you've got elderly in the house or people that are unwell, you know you need confidence that it's going to work and it's not going to break down. I mean I don't know much about it in a lot of respects.” [Phase 1, Group 9, female, 18-45, East Lothian, flat]

- **Cost:** they were critical of additional costs of both the installation and any associated works that need to be undertaken at the same time. This was likely to be exacerbated in this scenario as people may not have been able to plan and save for this happening if they were not expecting their heating system to break down.

“That has given me palpitations right now! I know that I am going to be in that situation. I have not much in savings, but I am going to have to go into that savings to take that, or I am going to have to go to my building society. I've paid my mortgage off. I'm going to have to go in and say “I'm now 70, but my boiler has knackered and I'm going to have to put one of these in... Can you give me however much it is to pay for that against my house?” [Phase 1, Group 3, female, 46-75, Paisley, semi-detached]

Participants also raised questions around 'what is the point of beyond repair' and commented that this may cause people to continue to use boilers that may not be safe. If many homeowners cannot afford the high replacement cost, there may end up being a black market for boilers where they are sold even though they shouldn't be:

⁷ These have been raised in the other scenarios, but participants said they would be exacerbated in what could be an emergency situation.

“The other risk to doing something like this is, let's be honest, gas boilers can be dangerous when they start to go wrong, I mean I had no idea mine was as damaged inside as it was until the guy came when he was changing our radiator in the kitchen. Now what's going to happen is people are not going to service their boilers because they are going to be petrified that somebody condemns [it]and then they are going to have to pay 15 grand or whatever it is to put a heat source pump in. Or they are going to get a backstreet boy to bodge it so that it keeps going and the risk to that with gas is really high.” [Phase 1, Group 9, female, 18-45, East Lothian, flat]

Most participants, regardless of their income background, believe that there will be a huge disruption to their property and overwhelming costs involved as instead of only replacing, they will have to buy brand new heating systems. Some also questioned the feasibility of making this happen as ‘it is not as simple as replacing a like-for-like boiler’ and mentioned that there will be limited ability to access if in flats.

“I don't know because I don't know how much heat-pumps cost, but I presume they are more expensive than a gas boiler – so I just thought that people who are already in a pretty bad situation you've got no heating or hot water because your boiler has gone- and then you maybe have only got just enough money to get that replaced, how are you going to stump up the extra cash to fit a heat pump when you have got no heating and hot water...” [Phase 2, Group 5, female, 18-45, Edinburgh, flat]

In addition, some participants mentioned that there will be no time to do research and assess costs at the point of breakdown which is both daunting and has the potential to increase total costs as there will be no fair assessment/comparison of options. It also raises questions about what else needs to happen in their property to allow new systems to function well e.g. insulation. Finally, most questioned how this will be enforced and monitored.

“I don't know how you would regulate it either. You could just pay a boiler guy cash to just fit a new boiler...” [Phase 2, Group 4, male, 18-45, Edinburgh, currently renting – planning to buy in the next 6 months]

4.2.3.1. Vulnerable groups

All participants were able to project the impact this scenario would have on more vulnerable groups such as younger families, low-income families, medically dependent etc.

Younger homeowners were more concerned about the financial impact, as most had never put in a new boiler and had limited understanding of this process. **Prospective buyers** found this more difficult to discuss as this is not something most of them had ever had to deal with and it was difficult for them to project how they thought this could impact them.

Financially vulnerable groups were the only ones that **saw this scenario as a viable option**. Changing their boiler is a significant outlay they have to plan for, sometimes years in advance, so this feels the least wasteful option when it is a change they will need to make anyway. The biggest concerns for this group are the feasibility and disruption caused in flats and how this might impact communal bills/factor bills in flats.

“I think scenario three, if it breaks down [the boiler] and you really have no other option than to do something, if there’s an incentive, I could argue that could help [...] Because we’re governed by the gas prices. And that’s where it comes in. I think maybe it would be worth splitting it, making the gas independent and the electricity independent. If that’s the case, then our electricity wouldn’t be as bad a cost as it is currently. We are governed by the gas at the minute. So that would be scenario three, providing it was more cost effective then it would be all right. You’ve got to do something anyway. I mean I would have done it no bother, I would have done the electric boiler. My friend’s got it, she put it in her flat because she has all electrics she thought it would be all right, but now her nails are down to the quick” [Phase 2, Group 2, female, 46-75, Glasgow, flat]

4.3. Phasing

In the second phase of research, we explored how the proposed regulations could be brought in through a phased approach rather than all households being required to comply at the same time. Participants were asked for their thoughts on what would be the fairest way of doing this and who should go first. It was a challenging topic causing a lot of debate in the groups with interesting insights around the 'fairest route' forward and who should be the 'first' to be enforced to change.

Two main barriers were identified that would need to be addressed before a fair phasing assessment could be made:

- An individual's ability to **access financial support** (government grants or loans).
 - Participants suggested that the more vulnerable groups should only be asked to 'go first' if they are financially supported to make these changes.
- The ability to **access expertise** (new technologies & technicians/engineers) to practically implement these changes.
 - Participants suggested that those living in flats cannot be asked to go first if there are practical issues/barriers to putting in heat pumps.

4.3.1. 'Going first'

'**Going first**' was perceived to be the riskiest/least desirable option for most homeowners because:

- It is currently **prohibitively expensive** compared to the current alternatives. Some participants asked if heat pumps will be cheaper over time: "when is the 'tipping point' when they become good value?".
- The **technology is new**: most know (or assume) there are teething problems with the new technology and that it will take time to test, optimise and adapt fully. Homeowners emphasised that they want to know if heat pumps will work effectively in properties like theirs.

Most felt the government should lead by example by '**going first**' in **council houses and public buildings** and providing the benchmark for others to achieve. There is a clear opportunity for the Scottish Government here to **build a case for why making the change is beneficial to homeowners**.

Participants also mentioned that alongside the government, the **new build properties** and **properties belonging to landlords** (rented accommodation) should lead the way:

- **New builds** should lead by example by having the most innovative specification installed. According to the participants: 'what is the point of building a new property if it is not up to the highest energy efficiency standards?'
- **Properties belonging to landlords** since regulations usually impact them first eg. fire alarms.

4.3.2. Who should go next?

The debate around 'who is it fair to follow the leaders' came down to two key elements:

- **Environmental impact:**

- **biggest ‘polluters’** causing the highest level of environmental damage should go next **or**
- **those who are furthest along the journey** eg new builds, higher EPC-rated homes should comply first given they are the **easiest wins**.
- **Resilience to pay** (the ability of a homeowner to afford to make the changes): participants mentioned that those who are financially able to make the changes should go next.

When individually assessing where they fit on the phasing scale, most participants assigned themselves to the middle of the scale – not the leaders/risk-takers but not necessarily the neediest or vulnerable.

4.3.3. ‘Going last’

Those in vulnerable circumstances eg low income, single-parent families, older adults etc. should be the last ones required to comply with the regulations. **However**, these groups could go first if they are financially supported by the government to do so because improving their EPC and having more efficient houses would benefit them the most.

Figure 1 shows the phasing approach discussed above:

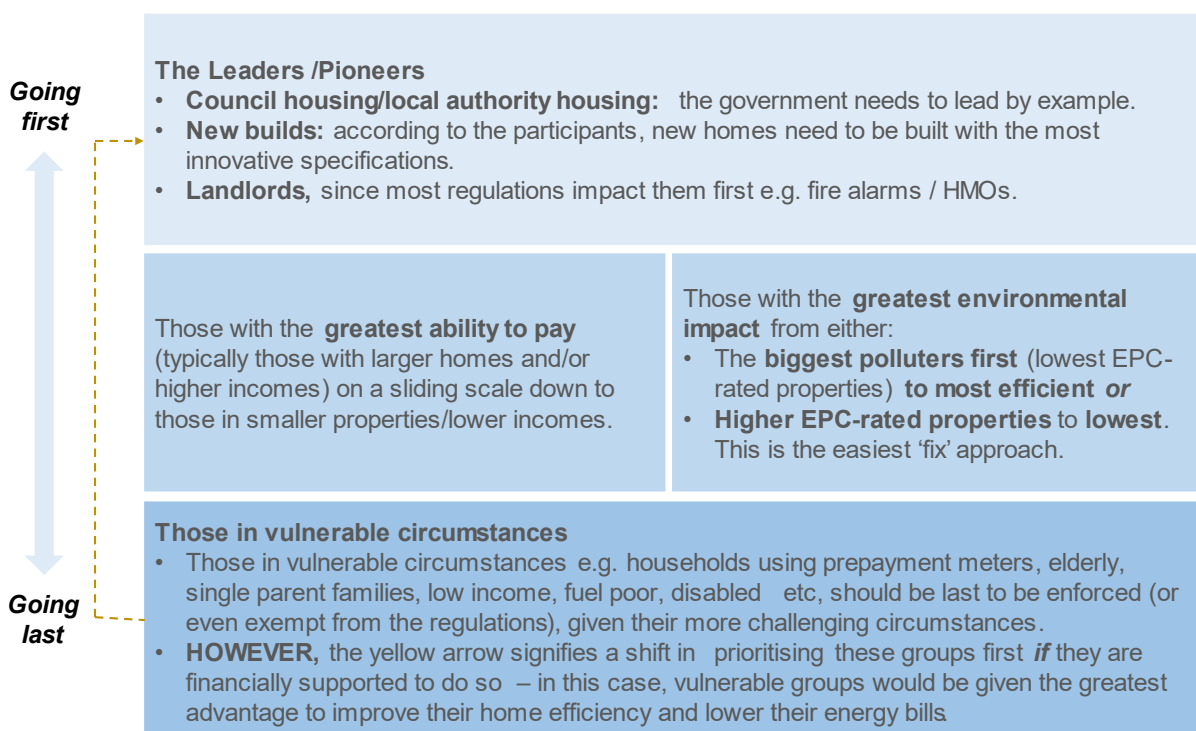


Figure 1: Overall phasing approach

4.3.4. Geography

Geography has a role to play in terms of how the phasing can be practically rolled out, but this was not a key criterion used to assess the level of fairness by the participants. The majority assumed that urban locations would be the easiest and most impactful to phase in first, with more rural /remote locations being the most challenging /having the lowest

impact to go last. Most assumed that phasing would be done strategically across different council areas.

The different phasing approaches created in each focus group of research phase 2 are presented in the Appendix.

4.4. Support needed

There is a wide range of factors that will influence Scottish households' ability to adapt to new policies and play a key role in the transition to net zero. They will need to understand the potential impact of climate change and why governments have declared a climate emergency. They will need to understand that it is vital to decarbonise domestic homes and understand and have confidence in the different technologies that will need to be installed to achieve this – a key part of this will be understanding the associated cost implications and impact on energy consumption. Finally, they will also need to understand the implications of the different policy and regulatory instruments that may be introduced.

In order to understand how to best help participants accept any new regulations, they were asked about the support they would need to help them with the various scenarios. The support required is consistent across all three scenarios and covers two main areas:

- **Funding/support for the cost of complying with regulations** – the cost of making any changes to their properties is a significant barrier to all, regardless of their current financial situation. The ongoing cost of living crisis has impacted most households in a very significant way. Energy plays a significant role in this crisis and there is uncertainty around whether this situation will improve. Participants feel that to achieve the requirements of the scenarios financial help is not only needed but also expected and should be prioritised. However, this is not enough:
- **Education and communication for all** – accessible information is needed for the entire retrofit process that the regulations call for. The need to change won't be accepted or understood unless they start to hear more about net zero, what it means for them and what they and others need to do much more widely. They are unlikely to look at this proactively themselves without it being more visible in their everyday lives. They are all looking for clear benefits and savings to encourage behaviour change and overcome the fear factor.

4.4.1. Funding/support for the cost of complying with regulations

One of the biggest concerns around how the targets will be met and how individually the participants will be able to meet the requirements is the cost. All participants wanted to know how this would be funded when they do not have the ability to fund these – there is an understanding that the cost will be very high. Participants perceived that grants and funding are currently declining rather than increasing. There were four main considerations around cost:

1. **Understanding what the costs are for complying with regulations** - participants said that there is a lot of misinformation and confusion surrounding the costs. In some groups, people mentioned numbers such as £20,000 for a new heating system. People do not know where these numbers are coming from, but they generally remember the higher costs they hear or read about. More education is needed to fill these gaps and reduce misinformation which can be harmful to the overall interest in the changes necessary for net zero.
2. Linked to understanding what the actual costs are, there was a concern that **deadlines could significantly increase the costs** of any new heating systems or energy efficiency work due to the increase in demand. Participants referred to new fire alarm rules and the impact that had on the cost of fire alarms.

“I was on amazon every day checking the prices [of fire alarms] and they were going up.” [Phase 1, Group 5, male, 18-45, Edinburgh, maisonette]

3. **Understanding what the (cost) benefit is to them** - a key question that needs to be addressed is whether switching to net zero technologies (particularly for heating the home) will cost them money or save them money - will this be cheaper than their current systems? The expectation is that changes will be expensive, and they will be out of pocket and the benefit to them is not clear. Those who are financially vulnerable are looking for reassurance on the practical implication of installing these new systems, mostly focused on the cost-value equation (running costs, cost of parts/maintenance, lifespan, impact on home insurance costs, disruption to existing infrastructure pipes or gardens etc).
4. **Ability to afford the changes** - participants were concerned about the financial implications of these changes. Everyone is currently feeling the effects of the cost of living crisis. There was a general sense that it's the wrong time/hard time to discuss this topic given the financial pressures on everyone and most feeling 'beaten down'. There was concern over how many (particularly the least well-off) will even be able to afford energy with the increasing prices. The idea of investing in net zero in the future was very challenging for many, and whilst this was felt most strongly by those considered to be financially vulnerable it was a concern for all regardless of affluence or life stage. Participants need reassurance that support will be available to those who need it. For those that had already made some changes, they mentioned having grants available made the changes more affordable and would help to save them money.

“Again, it is still putting it onto the homeowner. It wouldn't be so bad if mortgage companies for example are going to allow people to borrow more. For example, when I bought my house they were only doing 90% mortgages, but I think they are doing 100% mortgages now... Years ago they were doing 110% 120% mortgages and if you are buying a house and need to put in this heat source that is fine if you are getting a 110% mortgage and the extra money is being spent on putting in this new heating. But if you are only getting a 90% mortgage, you have then got to fork out probably more than your deposit to try and put in this heating source. I don't think that is fair for those who are trying to get on the ladder for a start. It will make it very difficult for the first-time homeowner.” [Phase 1, Group 6, female, 18-45, Grampian, flat]

“So, I kind of like the idea that as part of the mortgage- ok you lend against your income for the mortgage but maybe a ring-fenced element which is 0% and the lenders would have to agree to this- it's not a grant it would be an interest-free loan for the required changes over the term of the mortgage. If it is, say 30 grand, which is a hell of a lot- but over 20-25 years you are maybe thinking about maybe 3 figures a month- which is still a lot, but if they play that in a scenario which is okay- it is going to cost you £100 extra on your mortgage a month but having a fully insulated home will reduce your costs by £100 a month- again like our house is. It suddenly becomes not so daunting to people and makes sense.” [Phase 1, Group 8, male, 18-45, Scottish borders, detached house]

The pressures for **landlords** were similar to owner-occupiers in terms of cost but there was a difference in that they are looking for a return on their investment. Updating their properties allows them to charge a premium to their tenants and makes the property more attractive on the market but any investment needs to benefit them in the short to medium term as well (many are using their property to fund their retirement), otherwise they expect to have to sell.

“As the landlord, ultimately, we need a return on our investment and I think that is kind of critical in terms of whatever investments we do make, yes. And actually, all around you in terms of the media and in terms of the social consciousness of getting to net zero, I totally get that. I think for us –it would need to be cost-efficient for us to implement. I think the willingness is there, but it has to marry up with a return for us... If it is going to cost thousands of pounds as landlords, we will be reluctant to make that investment. If it is going to be something that we can get some grants for or something that we can implement over a period of time, that is something that we would naturally be more interested in.” [Phase 1, Group 10, male, 46-75, landlord]

There was concern among some landlords that older buildings might not be able to meet the regulations and so would need an exemption otherwise they would need to sell them if they were unable to rent them out:

“Well, I’d have to either find out if there is something that I can do to make it conform to the banding that I need to be in... but because it is an older property it might not be viable so therefore, I might just have to sell the property.” [Phase 1, Group 10, female, 46-75, landlord]

4.4.2. Information provision

The second overriding theme is the need to have good information and advice provision in place. There were three main areas of information and advice required:

- **What is net zero – why is it important for them and how it links to them personally?** Before people are willing to make changes, they need to comprehensively understand why it needs to be done. There needs to be a clear link with what impact it has on them. Many participants said that any impact from climate change was too distant and there were other priorities they felt were more important or that seemed to be more relevant to their lives. There was also an appetite to see what other countries, governments and businesses are doing, which will help them to understand the context and also to be able to see that the government isn’t just “picking on individuals”.

“The education as well behind it perhaps- you know like really start a big, massive focus on this and start getting everyone really knowledgeable about it- so by the time that comes you’ve got a whole generation who are really, really aware and behind the initiative and what needs to be done.” [Phase 1, Group 8, female, 46-75, Scottish borders, terraced house]

- **What are the regulations and what do they mean for them in terms of what they need to do?** Participants said that any regulations need to be promoted significantly in advance of enforcement. Regulations need to be very clear and specific about what they mean and how people can comply with them. A lot of the information people hear about focuses on why change needs to happen, but they

also require specifics on what changes to make. Any deadlines also need to be made very clear and easy to understand.

“There needs to be somebody to help homeowners with that, because if you're coming into the market, just becoming a grown-up for example and just buying your first house, where do you begin to figure out what a good level of insulation and what draught-proofing is if you've just got over the mortgage hurdle and things like that. There needs to be guidance and, you know, assistance in giving the information. It's all good and well putting these things into place saying you must do this by this time and you must do this but just crack on and do it without any help or support or advice so there needs to be advice readily available, not a dictatorship of you must do this and you must do that.” [Phase 1, Group 7, female, 18-45, Western Isles, semi-detached]

- **How does the technology work and will it work/is it suitable for them?**

Participants said that heat pumps are still a very new technology; they are not something that they have heard much about or that they ever see in practice. Participants mentioned that they would like to be able to see one working, be able to feel how warm a house can get with one and speak to people that have them so that they can really understand the technology better and what it is like to live with. Advice and support are needed to help the audience understand the benefits of the different systems – currently, awareness is low and very few are actively seeking information.

“...And evidence that it has been proven that they are working, we install them and we don't actually know if it works, so evidence-based stuff so we can see emissions have reduced greatly...this could be something that works in your home.” [Phase 1, Group 1, male, 18-45, Glasgow, flat]

The need for advice and information was very similar for landlords:

“I think that people are definitely aware of what it is now compared to a couple of years ago, but a lot of people are not aware of the 'how' – in terms of what to do about it and how to do it. I think whether it is government organisations or... I think there needs to be a lot more education to the masses in terms of what practical steps individuals can take to make an impact. At the moment, it is very sketchy I feel. I think people are aware of the CO₂ emissions, aware of net zero, aware of the impact it can have- but it is about the 'how' -what we as landlords can do to make our properties more efficient and what practical ways...Is there any sort of grants or support mechanisms? I think government and councils need to step in to offer a sort of mechanism to say this is available to do in terms of insulation or in terms of energy saving schemes for your property- it will cost you X instead of the thousands... If it is thousands- I will be honest- most people will be sceptical about making that investment because it is not going to add any value.” [Phase 1, Group 10, male, 46-75, landlord]

4.4.2.1. How advice should be provided

There was a debate about where the information for these changes should come from. Even though there was a lack of trust in the government due to previously failed targets, there was broad agreement that since any new legislation will be government-led, they

need to be the main source of information. It was also expected that there will be additional sources of information from independent, non-governmental organisations that feel more trusted by many, eg Martin Lewis-style support.

“[when talking about things she is doing to be more energy efficient] So, things that I’ve been doing energy-wise- I got a smart meter installed back in March, lowered the boiler temperature of the heating and the water to 50 degrees- so all those Martin Lewis money saving expert tips! [Phase 2, Group 4, female, 18-45, Edinburgh, in the process of getting a mortgage]

Participants were concerned about where they should go to obtain this information. They need to know who they can trust and where they can get impartial information from. When the time comes, they need someone they can trust to advise and support them on what upgrades or changes they should be making, eg what systems they should get for their property and what other changes they should personally make. They wouldn’t trust an installer as they feel that they would just want to get work out of them so impartial information specific to their circumstances is required.

“Somebody that’s not reading off an auto-cue and that’s actually answering your questions and that when you give them your scenario, your situation, it doesn’t throw them, and they say oh I don’t have an answer on my cards for that. Somebody who is trained in heating... and energy saving and I don’t believe you can get that kind of advice over the phone. People need to come and see and actually look and see what can be done and give you advice based on your personal circumstance because from all of our introductions, us alone are all different, and our housing situation is different, and then you put that in your own street and your own village, everybody’s situation is different....so you can’t possibly answer questions on a leaflet or from a video you know somebody needs to come and see.” [Phase 1, Group 7, female, 18-45, Western Isles, semi-detached]

Keeping information and advice simple and breaking it down into manageable steps was key for this audience and relieves anxiety for those who were older in the group or less confident in managing multiple sources of information. Any online support was suggested to be made as easy to use and interactive as possible, with people able to input their own scenarios to help provide personalised support for what they should be doing.

There was increased anxiety among those who are digitally excluded – they recognised that most things have shifted and that you can no longer ‘get someone on the end of a phone’ (their ideal) so most knew they have to ‘get on board’ so resort to ‘googling’ information.

“Somewhere that if you google it and don’t understand it that you can go and ask for advice...a phone line or even online someone that could email back to you and get back to you about it.” [Phase 1, Group 3, male, 46-75, Glasgow, detached house]

Many said that there is a need to have information more widely discussed eg in schools, through heating engineers, DIY stores and just making it part of everyday conversation.

“I think that you have to start at the bottom and not at the top. I think you have to change people’s perceptions of what it is. You need to start educating young rather than going after the older people who are set in their ways - you are not going to change them. You need to start educating young I think.” [Phase 1, Group 6, female, 18-45, Grampian, terraced house]

4.4.2.2. Vulnerable groups

Financially vulnerable groups wanted real-life studies and trials to demonstrate the evidence of new technologies working and saving money. They want to see real examples from people like them and streets and houses like theirs who have already successfully installed the new technologies.

“Educate them with studies. Why Mrs Smith is now getting that system and now we’re going to track her bills and now we’re going to show it to you” [Phase 2, Group 2, female, 46-75, Glasgow, detached house]

5. Conclusions

This section outlines the key findings against the research questions posed:

What are domestic property owners' views on the imposition of regulatory standards for both zero emissions heating and energy efficiency in domestic properties over the time period out to 2045?

- Whilst most participants agree that something needs to be done to reduce emissions and help Scotland reach net zero, there was a disconnect between agreeing with this and taking responsibility themselves to take action. **Many stated the cost of complying and not seeing a clear, personal financial benefit from upgrading their properties as the main barriers.**
- Whilst participants are not against the imposition of standards in domestic properties, they said that the government should be leading from the front as well as industry and big business. Participants said that their impact as individuals was much smaller in comparison to big businesses and the industry and that they want to see these organisations taking action too.
- In terms of timescales, 2045 was seen as distant. On one hand, participants wanted enough time to be able to prepare for any regulations but on the other hand, this timescale seems too far into the future to be considered important over other priorities in their lives.

What are domestic property owners' views on specific potential models for standards and how would those apply across society?

Overall, there was a positive sense that the proposed regulations will help towards achieving net zero, especially from those more environmentally driven. However, the feeling of enforcing change/imposing new laws around these scenarios feels daunting and scary for most, given the current economic/energy crisis, especially for the more financially vulnerable groups. The scenarios were described as fundamentally unfair because people are being 'forced' to make the changes rather than something that feels within their control. Some were sceptical of how these costs are going to be accounted for.

Having said that, many understand that change is necessary and evolutionary although the potential significant personal cost is the big barrier here.

Scenario 2 (backstop dates) was rated 'most fair' across most groups as it provides a manageable goal to work towards:

- Participants said that they can start thinking about this and potentially take steps towards achieving it as it feels less scary/dictating than other options. It resembles how other legislation has worked in the past ie fire alarms.
- Far-off deadlines feel less scary although this can lead to some complacency.

Scenario 1 and scenario 3 were seen more as secondary triggers that could be brought in at a later stage when natural compliance has dropped off and there is a need for more forceful measures to achieve the overall net zero targets.

- The change in ownership scenario was seen as unfair to the buyer as it will add to the cost of buying a property which is already an expensive investment often at the very limits of affordability. This was seen as especially unfair for first-time buyers

and the financially vulnerable. Participants said that having to make the changes within a couple of years would not be achievable for many who are struggling to afford to buy a property in the first place.

- The boiler breakdown was also seen as an unfair imposition in an emergency. All participants agreed that if their heating system broke they would need to replace it as soon as possible, without the time to research a technology that they do not know much about let alone the time to raise any additional funds.

What appetite is there for early adoption of zero emissions heating and energy efficiency improvements?

- Some participants have already made, or are planning to make, energy efficiency improvements or installed renewable technologies. Where this was the case, it had mainly been driven by a desire to be green but also by being able to make cost savings.
- In order for further adoption of zero emissions heating and energy efficiency improvement to occur all participants feel there needs to be clear financial benefits for them to take action.
- Some participants said that until they are made to do something they won't bother as it is not their priority.

What do domestic property owners believe may help them meet any standards, and who should provide this help?

There are two main areas that participants said would help them to meet any new standards:

- **clear advice on what they need to do through an engagement/awareness campaign.** There was a concern that all people and their homes are different and therefore there needs to be clear advice on what they should do to their individual homes, how they should do it and what reaching net zero means personally for them. It was felt that this advice needs to be provided by someone impartial and technically knowledgeable so that they know that they are being told what is best for their situation and what is needed to meet the standard as opposed to just being sold to by someone with a commercial interest.
- there was an expectation from all participants that there needs to be **ample and attractive financial support for them to be encouraged to make changes.** This includes suggestions of grants and interest-free loans through to equity loans and arrangements through mortgages.

Whilst not thoroughly covered within the focus groups, when discussing what participants currently do to help reduce energy consumption there was some mention of apps they use to monitor or control their usage. The use of smart technology is an area that some are interested in and there is therefore a possibility to link into this and make the changes required by the standards more aspirational.

What level and type of information do domestic property owners require, and from whom, to instruct them on how to meet any standards?

- Participants said they need information on a variety of different issues, from what the potential impact of climate change is and why governments have declared a climate emergency, through to what can be done to reduce the impact, what this

means for them personally/financially, what the regulations require of them and advice and support on how they can comply.

- Participants said that they would like this information to be provided by someone impartial and someone that really understands energy efficiency and zero emissions heating so that they are able to advise and answer questions appropriately.
- Information from homeowners that already have these technologies in place was seen as key for them to be able to see that they do work and can be effective for them.

Participants suggested that net zero and what it means should be seen and talked about in society more generally and that they should be able to see this in action so that it becomes more visible, eg zero-emissions heating in new builds, seeing new technologies in government buildings.

How do domestic property owners perceive the interrelationship between any standards and climate change, and to what extent does the role of standards in tackling climate change affect their attitudes towards it?

- Participants did see the link between any new standards and climate change, but the link isn't tangible enough for them. Most participants don't understand what will happen if it's not done and they don't see the impact or benefit to them personally.
- Some participants said there is too much of a gloomy outlook on climate change and a feeling that it is too late to do anything whilst others feel there needs to be more scaremongering to encourage people to take action.
- Participants said that the personal impact that they can have is very minimal when compared to big businesses, industry and other countries.
- Participants said that they would need to understand the impact and benefits more clearly before investing into these changes.

How should the proposed regulation be implemented in a phased approach and what is the fairest way of doing this?

- Most participants said that **the government should lead by example** by upgrading the council houses and public buildings first and providing the benchmark for others to achieve. Alongside the government, the new build properties and properties belonging to landlords (rented accommodation) should lead the way.
- There are two potential approaches for 'who should go next' based on either:
 - A property's **environmental impact**:
 - Biggest polluters causing the highest level of environmental damage or
 - those with the smallest environmental damage instead eg new builds, higher EPC-rated homes etc. given they are the easiest wins.
 - A homeowner's **resilience to pay** – some participants mentioned that those who are financially able to make the changes should go next instead.
- Vulnerable groups eg low income, single-parent families, older adults etc. should be the last ones required to comply with the regulations. *However*, these groups could go first if they are financially supported by the government to do so because improving their EPC and having more efficient houses would benefit them the most. Therefore, a fair phasing assessment can only be made considering a homeowner's

ability to access financial support as the more vulnerable groups should only be asked to 'go first' if they are financially supported by the government.

Which were the main differences across participants from various demographics?

Views on the imposition of regulatory standards were mostly similar across all demographics. There were, however, specific concerns raised around the difficulties that would be faced by:

- those on **low incomes** who would be most impacted, in terms of cost, by the need to make changes to their home to meet the regulations,
- those living in **flats** due to the complex nature of making changes to their property that could need to involve others in the building,
- those living in **older buildings** where it may not be possible, or where it would be even more expensive, to get the property up to the standard required,
- **first-time buyers/potential buyers**, as the proposed regulation would impact many young people's ability to buy a property considering the significant investment that is needed after buying. First-time/new buyers are hesitating to invest in new technologies and upgrade the energy efficiency performance of their properties as the benefit is unclear and they won't live in their current property forever.
- **older participants** as there was a general lack of knowledge and more scepticism around change and new technologies. Many feel too old to live through another round of cost/disruption and to make this significant investment in new technologies from their pensions.

Appendix A Phase 1 discussion guide

Red: script guide notes

1. Introduction (0 – 10 mins) [10 mins]

(Arrival, seating for face-to-face sessions)

Welcome and thank you for agreeing to participate. [housekeeping: WC, fire alarm and finishing time].

As we explained in the pre-task information we provided, we are working together with the Energy Saving Trust to undertake some research for the Scottish Government on homeowners' attitudes to net zero heating and energy efficiency standards.

Explain teams group/viewing facility set up - recorded, confidentiality, honest feedback, no right or wrong answers – interested in your personal opinion and what's really important to you as a homeowner.

To get the ball rolling we would like to have a round of introductions – please can you tell me your name, your circumstances at home, the type of property you currently own and the answer to the question we posed in the pre-task - if money **was** a barrier, would you want to do more to be 'green' and if so, why and what would you do?

2. Understanding the attitudes to Net Zero (10 mins - 30 mins) [20 mins]

[Provided in pre-group reading – for info only and not needed for reading unless anyone in the group was unable to do so prior to the group. The Scottish Government has set a target to achieve net zero by 2045. In October 2021 they published Scotland's Heat in Buildings Strategy which sets out the government's vision for the future of heat in buildings and the actions they are taking in the buildings sector to deliver Scotland's climate change commitments, maximise economic opportunities and ensure a just transition, including helping address fuel poverty.]

A vital way of combating climate change and achieving net zero is to make our homes more energy-efficient. For example, by installing insulation and double-glazing windows, we reduce heat loss which means less energy needs to be used. Additionally, after improving the energy efficiency levels of our homes, installing zero-emission heating systems is key to ensuring that our homes reach net zero. To take a significant step toward achieving net zero and combating climate change, the Scottish Government are looking at introducing new energy efficiency standards and zero-emission heating requirements for homes across Scotland.]

Prior to this session, we shared with you a video explaining what 'net zero' means and how we can get there.

1. Was net zero a concept you were familiar with before watching the video?
2. How do you feel about the government's commitment to net zero and in particular net zero buildings by 2045?
3. How involved/interested would you say you are in helping support these aims with things you can do in your life?

There are many ways to make a property more energy efficient.

4. What types of technologies or solutions/ideas have you heard of to reduce the emissions from your home? Have you used/installed any of these?

If no one spontaneously mentions low-emissions heating: Key to ensuring we reach net zero is installing zero-emission heating systems

5. Before today, had you ever heard of zero-emissions/carbon heating systems and if so, which ones? Can you tell us a bit about your understanding?

We will now show you a video that explains what an air source heat pump is and how it works.

What is an air source heat pump?

6. What are your thoughts about the technology explained in the video e.g. is it easy to understand how it works? How relevant is it for you/your home?

Scenarios introduction

As we discussed earlier, in order to deliver the net zero target, the Scottish Government is considering bringing in new regulations that require homeowners to improve the energy efficiency levels of their homes and replace their gas boilers or other fossil-fuel heating systems with zero emissions heating systems like heat pumps.

As part of the process of developing the new regulations, the Scottish Government is considering lots of different options. In the remainder of this session, we would like to hear your views on three of the different options that are being considered.

3. 1st scenario – change of occupancy (30 mins – 50 mins) [20 min]

In the first scenario, any home changing ownership would be required to meet a minimum energy efficiency standard and have a zero-emissions heating system installed. This would mean that, when a home is sold, the buyer of the property would be required to carry out the necessary energy efficiency improvements and zero-emissions heating installation within two years of the property being sold.

1. What are your views on this option? Does it sound fair?
 - Prompt: Do you think it is right that responsibility lies with the buyer, not the seller?
 - Prompt: What do you think about the two-year timescale for getting things done?
2. How would these regulations impact you personally?
 - Prompt: What do you think would be the biggest challenges for you in complying with these regulations?
3. What support would help you meet these regulations?
Prompt: Who would be best placed to provide this support?
4. Can you think of any ways in which the impact of these regulations might be different for people in different situations? Can you give any examples?
 - Prompts: elderly people, single-parent families, people living in rural areas, low-income households
5. Are there any other issues or concerns that we haven't yet discussed that this scenario raises for you?

4. 2nd scenario – backstop dates (50 mins – 1h 05mins) [15 min]

In the second scenario, the regulations would set the following deadlines for property owners to carry out certain energy efficiency improvements and zero-emissions heating system installations:

- a) By the end of 2033, all properties should meet a certain level of energy efficiency, including a good level of insulation and draught-proofing.
- b) By the end of 2045, all properties should be using a zero-emission heating system.
 1. What are your views on this as an option? Does it sound fair?
 2. How do you think it would impact you personally?
 - Prompt: What, if anything, do you think would be the biggest challenges for you in complying with these regulations?
 - Prompt: How realistic do these deadlines feel for you?
 3. What support would help you meet these deadlines?
 - Prompt: Who would be best placed to provide this support?
 4. Can you think of any ways in which the impact of these regulations might be different for people in different situations? Can you give any examples?
 - Prompts: elderly people, single-parent families, people living in rural areas, low-income households
 5. Are there any other issues or concerns that we haven't yet discussed that this scenario raises for you?

5. 3rd scenario – boiler breakdown (1h 05 mins– 1h 20 mins) [15 min]

The third and final potential option we'd like to discuss is for the regulations to apply at the point of boiler breakdown. In this scenario, the regulations would state that, when an existing boiler breaks down beyond repair, the property owner would be required to replace it with a zero-emissions heating system, like an air source heat pump. They would not be permitted to install another gas boiler

1. What are your views on this option? Does it sound fair?
2. How do you think it would impact you personally?
 - Prompt: What would you usually do when your heating system breaks down?
 - Prompt: What, if anything, do you think would be the biggest challenges for you in complying with these regulations?
3. What support would help you comply with these regulations?
 - Prompt: Who would be best placed to provide this support?
4. Can you think of any ways in which the impact of these regulations might be different for people in different situations? Can you give any examples?
 - Prompts: elderly people, single-parent families, people living in rural areas, low-income households
5. Are there any other issues or concerns that we haven't yet discussed that this scenario raises for you?

6. Wrap-up section (1h 20 mins – 1h 30 mins) [10 min]

1. How do you feel about everything that we've discussed here today?

Thank you and close

Appendix B Phase 2 discussion guide

Discussion Guide – Phase 2

1. Introduction (0 - 10 mins) (10 mins)

Welcome and thank you for agreeing to participate — [moderator introduction, housekeeping: WC, fire alarm and finishing time].

As we explained in the pre-task information, we are working with the Energy Saving Trust to undertake some research for the Scottish Government on homeowners' attitudes to net zero heating and energy efficiency standards.

This stage of research with homeowners consists of two phases; the first was completed in June/July 2022, and we are currently in the second phase. This phase aims to build on and challenge some of the themes developed in the first phase while exploring some new ideas with you.

Explain teams group/viewing facility set up - recorded, confidentiality, honest feedback, no right or wrong answers – interested in your personal opinion and what's really important to you as a homeowner.

Introductions: To get the ball rolling, we would like to have a round of introductions – please can you tell me your name, the type of property you currently own and perhaps one thing you've done or thought about doing to become more 'energy efficient' at home?

2. Net Zero & The Customer Journey (10 – 20 mins) (10 mins)

Objective: To explore homeowners' understanding of net zero and their willingness to play a role in meeting Scottish Government's net zero commitments. (option: to explore where homeowners feel they are on their personal journey to net zero and how manageable/feasible this journey feels).

Net Zero

Before this session, we shared with you a brief description of the Scottish Government's aims and two videos explaining what 'net zero' means, how we can get there and information about air source heat pumps as an example of this new technology.

7. Is net zero a concept you were familiar with before watching the video?
8. How do you feel about the **government's commitment** to net zero and in particular the ambition to reach EPC C in all houses by 2033 and to have zero direct emissions heating installed by 2045?
9. How involved/interested would you say you are in **personally helping to support these aims** with things you can do in your life? (e.g. adopting new technologies like air source heat pumps)
10. How realistic does this feel to you just now?

Customer Journey

In the previous phase of research, the homeowners we spoke to highlighted the need to understand the journey they can take to prepare their homes to become energy efficient and switch to a zero-emissions heating system in the future. Based on our conversations, this is an illustration of some of the steps they felt a homeowner could follow. These are not necessarily prescriptive/in specific rigid order – they are simply a summary of what other homeowners have told us.

Introduce stimulus on page 5 of the slide deck

1. How do you feel about having a 'journey' illustration? would this be helpful to break things down into different steps or stages? Why/why not?
2. Where are you on this journey at the moment?
3. What are your views on the suggested journey steps?

- Prompt: How feasible/manageable do you think this journey is for you? What are your biggest worries /concerns? What opportunities/benefits can you see in making these changes?

3. Introducing the scenarios (20 mins – 1h 05 mins) (45 mins)

Objective: To consolidate and build on learnings from phase 1. Scenarios to be presented together before discussing individually in order to understand spontaneous appeal and relative 'fairness' of each.

In order to deliver the net zero target, the Scottish Government is considering bringing in new regulations that require homeowners to improve the energy efficiency levels of their homes and replace their gas boilers or other fossil-fuel heating systems with zero emissions heating systems like heat pumps.

As part of the process of developing the new regulations, the Scottish Government is considering lots of different options. We would like to hear your views on three of the different options that are being considered. We would like to read you all 3 scenarios first before we discuss and debate these as a group.

Introduce 3 scenarios: stimulus on pages 6, 7 & 8 (order of presentation will be rotated across groups)

1. How do you feel about the scenarios overall?
 - option to ask participants to individually rank their 'best to worst' before discussing as a group
 - probe understanding & relative appeal
2. Which scenario do you feel would be the fairest approach? Why?

If consensus reached in the group start with the strongest scenario and discuss in more detail (if limited agreement rotate order for concept review across groups). For each scenario:

3. What are your views on this option? Does it sound fair?

- Scenario 1 Prompt: Do you think it is right that responsibility lies with the buyer, not the seller? Why?

4. Can you think of any ways in which the impact of these regulations might be different for people in different situations? Can you give any examples?

- Prompts: elderly people, single-parent families, people living in rural areas, low-income households

- Prompts (if not mentioned earlier): In which way do you think first-time buyers are affected by this regulation?

-Prompt: Which group of people is affected (positively or negatively) the most by this regulation in your opinion?

5. What other options could you think of to make the scenario presented fairer for everyone / for those in the most vulnerable circumstances?

-Prompt: Do you think there should be any grace periods for particular groups?

6. Are there any other scenarios or ways of phasing the introduction of the requirements you think could be considered or would be a 'fairer' option? Fairer for whom, and in what way?

4. Phased implementation (1h 05 mins – 1h 25 mins) (20 mins)

Objective: To explore homeowners' attitudes to implementation – what is the fairest approach to phasing and which criteria should be considered first?

The Scottish Government need to introduce these regulations 'in a phased and fair way'. There are many different approaches they could take and there isn't a correct way of doing this. In the remainder of this session, we would like to hear your views on the 'fairest' approach and where you think is the best starting point. Before we introduce some criteria to discuss and if there are different cohorts of the population who should be prioritised...

1. What do you feel would be the 'fairest' approach to implementing these regulations? Who do you feel should be first to 'lead'/ start these changes? (capture spontaneous thoughts - then use stimulus to prompt within a sorting task) (are there significant benefits/costs to certain groups of being asked to make the transition earlier or later in the process?)

Stimulus: introduce implementation criteria p9

2. How do you feel about these broad groupings as a starting point?

3. Are there any 'groups' missing?

Sorting Task: We would now like you to sort these 5 broad groupings on our axis – ‘first to last’....and probe around why they have made these decisions:

If consensus on broad category focus explore the detail within the group. E.g. if Geography is selected as the fairest then which groups within this should go first vs last?

4. Should any of these ‘groups’ be exempt or have special conditions attached?
5. In which category do you belong? What would be the impact of this arrangement on you personally?
6. Are there any groups of people that you feel should be supported further or exempt from these requirements? E.g. exemptions for first-time buyers

5. Wrap-up up section (1h 25 mins – 1h 30 mins) [5 mins]

2. Given everything we have discussed today, do you have any further ideas around how the Scottish Government can support /encourage people to make this transition?
3. What would be the best way to encourage you to adopt these new technologies?

(probe incentives, punitive measures, advisory?)

- Prompt: Seek initial views/feedback on the likely relevance of increased/ high financial support as the key determinant vs other factors. i.e. good to test out to what extent simply offering a high financial support intervention rate is enough to make people buy into the change required, or if this would still need to be supplemented by other significant non-financial mitigation measures.

Thank you and close

Appendix C Phase 1 focus group recruitment structure

Format / Venue	Quota
F2F Glasgow	Group 2 – Glasgow / 6x Urban / 1x Suburban / Financially Vulnerable / C2DE / 45-75 / inc 3 x BAME participants / inc 1 participant not connected to the gas grid / inc 1 participant with accessibility needs / 7 participants in total
	Group 3 – Glasgow / 5x Urban / 2x Rural/small town or village – BC1 / 45-75 / inc 2 x BAME participants / inc 2 participants not connected to the gas grid / inc 1 participant with accessibility needs / 7 participants in total
	Group 1 – Glasgow / 4x Urban / 2x Suburban / Digitally Excluded / 46-75 / C2BDE / inc 1 x BAME participant / inc 1 participant not connected to the gas grid / inc 2 participants with accessibility needs / 6 participants in total
F2F Edinburgh	Group 4 – Edinburgh / Urban / Suburban / C2D / 45-75 / inc 2 x BAME participants / inc 1 participant with accessibility needs / 4 participants in total
	Group 5 – Edinburgh / Urban / Suburban / BC1 / 18-45 / inc 1 x BAME participant / inc 1 participant not connected to the gas grid / 6 participants in total
Remote	Group 6 – Grampian / 4x Urban / 2x Suburban / Financially Vulnerable / C2DE / 18-45 / inc 1 x BAME participant / inc 1 participant not connected to the gas grid / inc 1 participant with accessibility needs / 6 participants in total
Remote	Group 7 – Highlands & Islands / Remote rural only / C2D / 18-75 / inc 1 x BAME participant / inc 3 participants not connected to the gas grid / inc 1 participant with accessibility needs / 7 participants in total
Remote	Group 9 – Central Scotland / 1x Urban / 3x Suburban / 1x Rural / C2D / 45-75 / inc 1 participant not connected to the gas grid / inc 2 participants with accessibility needs / 5 participants in total
Remote	Group 10 – All over Scotland / 2x urban/suburban; 2x rural small town/large village and 2x remote rural / Landlords / BC1 / 18-75 / inc 1 x BAME participant / inc 2 participants not connected to the gas grid / 6 participants in total
Remote	Group 8 – Borders / Rural small town/large village only / BC1 / 18-75 / inc 1 x BAME participant / inc 1 participant not connected to the gas grid / 6 participants in total

Appendix D Phase 2 focus group recruitment structure

Format / Venue	Quota
F2F - Glasgow The Glasgow View 107 Douglas Street G2 4EZ	Group 2 – Glasgow /6x Urban / Financially Vulnerable / C2DE / 45-75 / inc 1 x BAME participant / 6 participants in total
	Group 3 – Glasgow / 3x Urban or suburban / 3x Rural small town or village – BC1 / 45-75 / inc 1 x BAME participant / 6 participants in total
	Group 1 – Glasgow / 5x Urban / 1x Rural / Digitally Excluded / 46-75 / BC1C2 / inc 1 x BAME participant / 6 participants in total
Remote	Group 9 – Central Scotland / 6x Suburban /C2DE / 45-75 / inc 1 x BAME participant / inc 2 participants not connected to the gas grid / 6 participants in total
Remote	Group 10 – All over Scotland / 2x urban or suburban / 3x rural small town/large village / inc 1 participant not connected to the gas grid / 5 participants in total First Time Buyers/Those who bought in the last 2 years (new buyers) BC1 / 18-75 / inc 2 x BAME participants
F2F – Edinburgh Apex Grassmarket Hotel 31-35 Grassmarket EH1 2HS (Rome room)	Group 4 – Edinburgh / 5x Urban / 1x Suburban / BC1 / 18-75 / inc 1 x BAME participant / 6 participants in total Those in the process of moving/ Prospective movers/buyers
	Group 5 – Edinburgh / 2x Urban / 2x Suburban / BC1 / 18-45 / inc 1 x BAME participant / 4 participants in total
Remote	Group 8 – Borders – 5x Rural small town/large village/remote – BC1 – 18-75 – inc 1 participant with accessibility needs / inc 3 participants not connected to the gas grid / 5 participants in total
Remote	Group 6 – Grampian / 2x Urban / 1x Suburban / 3x Rural / Financially Vulnerable / C2DE / 18-45 / inc 1 x BAME participant / inc 1 participant not connected to the gas grid / 6 participants in total
Remote	Group 7 – Highlands & Islands – 2x Urban / 1x Suburban / 3x Remote rural only – C2D – 18-75 – / inc 1 x BAME participant / inc 5 participants not connected to the gas grid / 6 participants in total



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