RAF067/2324

Green home finance consumer typologies and barriers

Technical appendix

Verian (2025)

Views expressed in this report are from the relevant research agencies, based on data collected from research participants and other evidence, and not necessarily those of the UK government.

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6. Appendix

6.1 Scoping workshop

Potential characteristics to use for consumer typologies

At the outset of the research, DESNZ and Verian teams held a scoping workshop to discuss potential characteristics for the consumer typologies, and to identify topic areas to explore further in the research. Multiple segmentations have been developed to help group and distinguish different consumers in the context of environmental policies and engagement. These segmentations use a broad range of different characteristics, which can be demographic (e.g. age, location); attitudinal (e.g. attitudes towards climate change); and behavioural (e.g. energy consumption). Some segmentations also use property characteristics, such as type of home and energy efficiency rating, which are likely to be highly relevant in this context.

Out of 10 potentially relevant segmentations, DESNZ and Verian selected six (detailed at the end of this document) with the highest relevance to this green finance scheme. In this scoping workshop, we reviewed how the segmentations use different characteristics, and prioritised which characteristics are likely to be most relevant to understand the different personas within the eligible population for this scheme.

Characteristics from the six segmentations were grouped into four broad categories in the workshop. Additional characteristics also emerged in the workshop (italicized in the table below).

Category	Potential characteristics
Demographics and financial characteristics	Gender Age Life stage Household composition Long-term health conditions and disabilities Level of savings Household income Socio-economic grade (SEG) Employment status Level of household debt Single or dual income households

Property characteristics	Size of property EPC band Property age (built before 1900, 1900-1930, after 1930) High or low heat loss property Main heating source On or off mains gas grid Social housing Households with pre-payment meters Tenure: leasehold or freehold Agency for making changes (e.g. listed buildings, conservation areas) Detached homes versus semi-detached/ terraced/blocks of flats
Energy behaviours	Smart meter users Level of electricity consumption (kWh/year) Level of gas consumption (kWh/year) Claimed willingness to improve energy efficiency Claimed willingness to reduce energy consumption Claimed willingness to install insulation products at home Claimed willingness to install low carbon heating Claimed willingness to install domestic micro-generation Main heating source On or off mains gas grid Fixed or variable energy supply tariffs Energy supplier switchers Relative daytime/evening energy consumption
Attitudes and knowledge	Level of concern about climate change Level of optimism in ability to tackle climate change through personal actions Level of knowledge about carbon footprints Interest in energy innovations: smart metering, micro-generation Optimism about affording luxuries Optimism about affording essentials Attitudes to different types of finance products Knowing other people (neighbours, friends, family) who have installed energy efficiency products

Mapping potential segmentation characteristics

After reviewing and categorising the relevant segmentations, workshop attendees conducted a mapping exercise to prioritise characteristics for this scheme. Characteristics were considered with two key questions:

- How likely is each characteristic to be relevant for this scheme?
- How feasible will each characteristic be to use (i.e., is data available, and can this practically be used for shaping policy development and/or targeting communications about the scheme to relevant groups)?

Each characteristic was placed on two axes using an interactive Mural board. This exercise indicated several characteristics likely to be 'ideal' to use for consumer groups. These characteristics were both expected to be relevant, and to use for targeting policy and communications:

- Some demographic characteristics: age, gender, life stage, long-term health conditions and disabilities were all allocated to this group.
- Financial measures: optimism about affording luxuries, optimism about affording essentials, and attitude to debt were all allocated to this group.
- 'A combination of household income and further attitudinal financial measures (optimism; attitude to debt and other finance products) were felt to be important to include in the sample of the primary research. Workshop attendees agreed that both feel important to include, as just using income as a proxy may miss nuance about households' attitudes to finances.
- Attitudes to climate change: level of concern about climate change and level of optimism in ability to tackle climate change through personal actions were both allocated to this group.
- Property characteristics: property age, EPC band, and high/low heat loss properties were also allocated to this group. Attendees felt that these could be grouped together, with EPC band used as a proxy measure for the other characteristics.
- Social proof: while not discussed in any of the six segmentations, workshop attendees also felt that knowing other people (neighbours, friends, family) who have installed energy efficiency products is also highly likely to be relevant. While there are potential challenges targeting this characteristic, potential options such as a referral mechanism for scheme users could be considered.

The mapping exercise also indicated a group of characteristics that may be worthwhile to consider further but may be less relevant and/or difficult to use for targeting:

- Energy usage: level of energy consumption (gas and electricity) and size of property were seen as highly relevant, but with practical difficulties for targeting. Attendees suggested that number of bedrooms could be used as a proxy measure instead of these characteristics.

- Claimed willingness to upgrade the home: willingness to improve energy efficiency, reduce energy consumption, install insulation products at home, install low carbon heating and/or install domestic micro-generation were also seen as relevant characteristics but with some challenges for targeting.
- Level of knowledge about carbon footprints and offsetting was also placed in this group, as potentially relevant but with practical difficulties for targeting.

Finally, the mapping exercise also indicated a group of characteristics which can be discounted as less relevant and impractical for targeting. These were:

- Socio-economic grade
- Several energy behaviour characteristics: energy supplier switchers, fixed or variable tariffs, and relative daytime versus evening energy consumption
- Households on pre-payment meters and in social housing were also considered less relevant for this research, as other energy efficiency schemes currently exist to support households with these characteristics.

Segmentation

- BritainThinks' cost-of-living diaries typologies[1]
- Defra's segmentation for pro-environmental behaviours[2]
- Ipsos Essentials' environmental citizen groups[3]
- Ofgem's energy consumer archetypes[4]
- DESNZ internal energy efficiency typology[5]
- Zhang et al eight energy consumer archetypes[6]

[1] Templer, M. & Morrison, E. (2022). BritainThinks: The cost-of-living diaries. https://britainthinks.com/wp-content/uploads/2022/04/Cost-of-living-diaries_Policy-makers-and-third-sector-report_FINAL.pdf
[2] Department for Environment, Food & Rural Affairs (2008, January). A framework for pro-environmental behaviours: Annexes. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69278/pb13574-behaviours-annexes-080110.pdf
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[3] Ipsos (2021). Ipsos Essentials FAQ: A guide for subscribers. https://www.ipsos.com/sites/default/files/2022-01/Essentials%20FAQ%20-%20A%20Guide%20for%20Clients%20H2%202021.pdf
[4] Bridgeman, T. (2020, March 12). Ofgem energy consumer archetypes: Final report. https://www.ofgem.gov.uk/sites/default/files/docs/2020/05/ofgem_energy_consumer_archetypes_-_final_report_0.pdf
[5] Unpublished.
[6] Zhang, T., Siebers, P., & Aickelin, U. (2012). A three-dimensional model of residential energy consumer archetypes for local energy policy design in the UK. Energy Policy, 47, 102-110. https://www.sciencedirect.com/science/article/pii/S0301421512003278

6.2 Sample

Full sample achieved

Phase 1 sample

<table>
<tr><th>n. = 35</th><th>Country</th><th colspan="2">Quota Characteristics</th></tr>
<tr><td>Owner occupiers
(n=20 total)</td><td>England – mix of North and South
Scotland
Wales</td><td rowspan="2">Mix of mortgages vs owning outright
Mix of renovation plans
Mix of optimism levels about affording essentials vs luxuries
Mix of attitudes towards debt
Mix of attitudes towards climate change
Including some with a long-term health condition</td><td rowspan="2">All decision makers on making changes to their properties
Mix of property type and age
Mix of property EPC ratings
Mix of on and off-gas grid properties (min 3 to have off-grid properties)
Mix of property values</td></tr>
<tr><td>Landlords
(n=10 total)</td><td>England – mix of North and South
Scotland</td></tr>
<tr><td>Installers
(n=5 total)</td><td>England – no other quotas for location</td><td colspan="2">Representing companies installing a range of different types of home decarbonisation measures
All customer-facing at least 60% of the time
All helping customers make decisions about which measures to install and installing the measures
Some installing heat pumps</td></tr>
</table>

Phase 2 sample

<table>
<tr><th>Typology</th><th>Country</th><th>Quota Characteristics</th></tr>
<tr><td>High Willingness, High Ability (n=7 total)</td><td rowspan="5">England – mix of North and South

Scotland

Wales</td><td rowspan="5">All to be decision makers on making changes to their property
Mix of those with mortgages vs those who own outright (aiming for even split)
Mix of property type and age
Mix of property EPC ratings
Mix of property values
Min 5 to have friends or family who have installed energy efficiency measures
Mix of attitudes towards climate change
Mix of age, gender, and location in the UK
Mix of household compositions
Mix of income levels
Min 6 to be from ethnic minority backgrounds
Min 5 to have one or more long-term health conditions</td></tr>
<tr><td>High Willingness, Low Ability (n=6 total)</td></tr>
<tr><td>Low Willingness, High Ability (n=7 total)</td></tr>
<tr><td>Low Willingness, Low Ability

(n=5 total)</td></tr>
<tr><td>Landlords (mix of amateur and professional)

(n=7 total)</td><td rowspan="2">All to be decision makers on making changes to their properties
Mix of property type and age
Mix of property EPC ratings
Mix of heating types
Mix of property values
Mix of tenant income
Mix of rental yield
Mix of 1, 2-4, 5-7 properties
Mix of sole trader & LLCs</td></tr>
</table>

Relevant screener questions (typologies)

Q6. Attitudes to finance

On a scale of 1-5, with 1 being not at all optimistic and 5 being very optimistic, how optimistic do you feel about your ability to afford to buy everyday essentials over the course of the next year?

Low ability to make repayments: MUST CODE 1-3

High ability to make repayments: MUST CODE 4-5

On a scale of 1-5, with 1 being not at all optimistic and 5 being very optimistic, how optimistic do you feel about your ability to afford luxury purchases over the course of the next year?

Please record:	

Low ability to make repayments: MUST CODE 1-3

High ability to make repayments: MUST CODE 4-5

On a scale of 1-5, with 1 being very uncomfortable and 5 being very comfortable, how do you feel about using finance options such as loans or credit to make improvements to your home?

Please record:	

Low willingness to take on debt: MUST CODE 1-3

High willingness to take on debt: MUST CODE 4-5

6.3 Research materials

Discussion guides

Owner occupier interview guide

Introduction **(2 mins)**

Aim: Introduce the research, set the tone and provide clarity on what is expected of the participant.

Moderator introduces the session, research aims, any questions

Introduce moderator and Verian – independent social research agency.

About the client: Verian has been commissioned by the Department for Energy Security and Net Zero (DESNZ) to understand the attitudes of homeowners – both owner occupiers and landlords – on potential green finance options for making homes more energy efficient.

Aim of interview: We are talking with owner-occupiers, landlords and installers who would be potential recipients of the green financing, or installers of improvements paid for with this financing. This is to help us understand all three groups' perceptions of the proposal, to help the government better understand what would drive engagement and what barriers might be encountered.

How their information will be used: Your views are really helpful for understanding how to ensure the potential scheme would be effective, if it becomes policy. Your contribution will be completely anonymous and all personal information will be stored and deleted by Verian in compliance with GDPR regulations and the Data Protection act of 2018.

Ethical considerations: Research is voluntary – you have the right to withdraw at any time, or to move onto the next question.

Reassurances: No right or wrong answers – we are especially interested in your honest views on the proposal.

Duration: 60 minutes.

Any questions/concerns?

Audio recording Ask permission to audio record for analysis purposes; acknowledge consent once recording has started.

Participant introduction (8 mins)

Aim: Establish the participant's context and understand the property/properties to be discussed.

Participant introduction

Please could you tell me a bit about yourself: name, do for a living, day-to-day routine, who they live with

Let's start by talking about your property if landlord / home if owner occupier,

Can you talk me through your house…

Probe around urban/rural, size, date it was built, how it's heated

…imagine you're walking from room to room…

Probe around number and size of rooms establish number of bedrooms

If landlord with multiple properties ask them to focus on one or two

If owner occupier:

How long have you lived there?

Can you give me a sense of how much time you and others in the household spend at home?

Probe if they use all rooms, whether they work from home, their working/shift patterns, time spent together versus in separate rooms, whether they often have guests over, etc

If landlord:

How long have you lived in/owned the property?

How many occupants are in the property?

How often do tenants change?

Do you have any sense of how much time they spend in the property?

Check if they know anything about work from home, if the tenants enjoy spending time in the property etc if landlord does not know, reassure that this is fine.

How often do you visit/send someone round?

Probe around experiences on visits

Reflections on their home/property

And can you tell me a bit about how you feel when you think about your home/the property?

Probe around emotional associations/aspirations

And can you tell me a bit about how long you expect to live there/own this property? Probe around long/short term – home for life, an investment etc

How do these perceptions shape decisions you make about your home/property?

And have you made any home improvements recently/have any improvements planned in the near future?

(Do not probe for energy efficiency or heating changes at this point, but if raised spontaneously, explore)

Are there any you'd like to do but aren't planning on doing soon? – probe around barriers.

If landlord, how regularly do you have the opportunity to make improvements?

Probe around if having tenants in property affects the scale of improvements that are feasible.

Energy efficiency **(10 mins)**

Aim: Establish participant's awareness, attitudes and actions around energy usage and energy efficiency in their home.

Spontaneous discussion of energy efficiency

If I use the phrase, energy efficiency, what are the first things that pop into your head?

Probe spontaneous thoughts/associations.

What perception, if any, do you have of how much energy if owner occupier you use in your home/if landlord is used in your property?

Probe around different sources and uses, gas, electricity, heating, outlets, try and bring focus round to heating.

For owner occupier And when you're using energy probe around behaviours…

To what extent are you happy with how much you use?

And with how much you spend?

Is there any tension between your use and the cost?

If landlord, what sense do you have of how much energy your tenants use or how energy efficient the property is?

Is there anything you/your tenants are currently doing to try to reduce energy consumption?

If so, probe around what they are doing and what motivated them to do this – focus on behaviours.

If not raised spontaneously: Are they aware of MEES (minimum energy efficiency standards)?

Are they aware of plans to strengthen MEES in the coming years? Note responses to refer to in later sections, if green finance would be used to pay for upgrades to MEES.

Possible energy efficiency improvements

If you had to come up with a list of energy efficiency improvements for someone else to make to their home/property, what do you think the key ones would be?

Why do you think people would be interested in making those improvements?

And do you know if any of those are suitable for your property/home?

Would you be interested in making those improvements for the same reasons other people might?

Discuss any improvements not mentioned spontaneously – ensure participant is clear on full range of energy efficiency improvements:

- *Replacing windows and doors*
- *Installing secondary glazing*
- *Using energy efficient lighting*
- *Insulating your loft or walls*
- *Adding draught proofing*
- *Upgrading your heating (such as replacing a gas boiler with a heat pump)*
- *Generating renewable energy from sources such as wind or solar power*

Home upgrade past experience/plans

Have you made any recent upgrades to improve your energy efficiency?

If so, can you talk me through why you chose to do that?

Can you walk me through what the process of getting that work done was like?

And have you seen any improvements as a result? Probe around details of why or why not.

Do you have any further home energy efficiency improvements planned/ plans for these?

Probe around why those improvements.

And are there things that make you less sure you want to make these improvements?

Probe around finances (only if raised spontaneously), aesthetic considerations, ability to get workers, time required.

Financing energy efficiency (20 minutes)

Aim: Establish participant's attitudes to green financing of home improvements.

Spontaneous discussion of financing home improvements

When you have made/plan to make improvements to your home/property, how have you funded this/plan to fund this?

For example, did they use a loan or grant scheme?

If no: Did you consider one? What were the perceived downsides/advantages, if any?

If yes: How did you choose the finance product used? How did you find the overall experience, any regrets?

What are your thoughts on using a financial product to fund future energy efficiency improvements (such as taking out a loan, applying for a grant etc)?

Explore immediate thoughts first, then probe in potential downsides and advantages

Probe around social/cultural influences for attitudes.

If landlord: Would you fund improvements differently if you were working on your own home – why?

If you were to use a financial product like a loan or mortgage, in an ideal world how would you like it to work?

Probe around what they like to see when normally taking out loans or credit cards, e.g., guarantees, repayment timeframes, interest rates, credit scores etc.

What would you want the loan/finance to cover? Explore: just the cost of installation, versus a higher amount to cover e.g. any decorative work required after installation; installation only vs ongoing maintenance.

If landlord, do you think you would want different things if you were to use financial products to improve your own home as opposed to one of your rental units?

Are there kinds of financial products that you would particularly like to see for financing home improvements?

And products you don't think should be on offer?

Responses to green finance ideas

I'm now going to talk you through some financing options that could be used to pay for home energy efficiency improvements in future.

Moderator to show stimulus slides 3-8, rotating order across interviews.

After each slide:

What are your first thoughts on this idea? Explore immediate reactions

What, if anything, is appealing about this? Is this something you would consider?

What, if anything, is off-putting or concerning to you?

What kind of person do you think this would be aimed at?

What questions do you have about how this would work?

Explore: what further information would they want to see, where would they want/expect to find this information?

After all slides have been shown:

Which, if any, are most appealing to you and why?

How might you use the one(s) that are most appealing? (Explore which kinds of home upgrades might be relevant)

Barriers and drivers to using finance to improve energy efficiency (10 minutes)

Aim: Establish participant's perceptions of what the advantages of and barriers to green financing of home improvements are.

Drivers

Are there kinds of financial products that you see as more relevant for financing home improvements – why is this?

If landlord, are there any financial products that are specifically relevant to improving your rental units?

Can you think of any potential advantages to there being financial products like these on offer?

Do any of the schemes we've just spoken about strike you as having particular advantages – if so, can you explain what you're thinking?

Probe around the advantages named and any not mentioned

If landlord, do you think any of the advantages you've mentioned would also apply if you were using the financial products to improve your own home?

Barriers

Can you talk me through any potential problems that people might encounter with these kinds of schemes that you can think of?

Keep the conversation about financing in general and then see if there are particular schemes brought up, probing as appropriate

Would any of these challenges affect you – if so, which ones and why?

If landlord, do you think any of the advantages you've mentioned would also apply if you were using the financial products to improve your own home?

Can you think of anything the government could do to help overcome these problems?

Is there anything that the companies providing the financial products could do to help overcome these problems?

Do you think there is a role for tradespeople and installers in overcoming these problems – if so, what is this?

Information and messaging requirements (8 minutes)

Aim: Establish participant's perceptions of information needs for making the decision to engage with green financing of home improvements.

Previous experience of finance information

Think back to the last time you took out a financial product of any kind, what kind of information did you look for?

Is there anything that is particularly relevant to highlight for financial products related to your home/property?

If landlord, probe around differences between financial products for home versus rental units.

How did you find or receive this information?

Finance information for energy efficiency improvements

Thinking specifically about financing options for energy efficiency improvements, what do you think would be the key pieces of information you would want to know?

And who do you think would be most important to hear this information from?

Start spontaneous, then probe around government, banks/lenders, installers, any third parties.

Through which channels/via what information formats would it be most useful to hear about different options?

Final thoughts / wrap up (2 minutes)

Aim: To conclude the conversation and make any final comments.

Final thoughts, anything important to consider we haven't discussed.

Explain incentive arrangements.

Thank participant and close the session.

Installer interview discussion guide

Participant introduction

Please tell me a bit about:

Yourself - your name, what you do for a living, how long you've worked in this area

The company you work for – size, where the company operates, what kind of work you mainly do

Energy efficiency upgrades (10 mins)

Aim: understand the typical kinds of energy efficiency the participant installs/works with, their customers, any previous engagement with government schemes/grants

Energy efficiency installations

Which energy efficiency technologies do you install or work with?

Explore: what they themselves install vs the wider company offers

Can you tell me a bit about working with these technologies?

In a moment I'd like to go through some of example installations with you, but before that – what kind of customers do you typically work with?

Explore: profile of customers (e.g. variety of age, income, etc), mindset of customers – what tends to be their motivation?

What kinds of homes and other buildings do you typically work with?

Explore: residential vs other purposes, age of buildings, smaller vs larger homes.

What challenges do you have installing efficiency measures in these types of buildings?

Experience with government schemes/grants

How do customers typically pay for the installations?

Spontaneous first, then explore: from savings/cash; private finance, government schemes/grants

How does this vary in your experience: which types of customer/types of installation use these different options?

Timings: when is the payment usually made? Can customers make down payments, and if so, how are they determined?

Do you currently have/have you had much experience installing energy efficiency measures paid for by government schemes?

Examples if needed: Boiler Upgrade Scheme; Green Deal; Home Upgrade Grant; ECO scheme; Great British Insulation Scheme (GBIS); Green Homes Grant Voucher Scheme

What kinds of homes, customers have used these?

How did using this scheme/grant work in practice?

Note any references to: companies' and installers' role in the process, accessing funds, any challenges mentioned spontaneously.

Decision making journeys (25 minutes)

Aim: understand the consumer journey for installations, challenges and barriers to take-up of measures, what they think is important for this scheme to include to overcome challenges both for consumers and installers.

Typical installation examples

Please could you talk me through two/three 'typical' installations that you've completed, ideally quite recently. I'd like to know from the first point of contact through to the end of installation.

For each example, explore:

Initial contact / requests for quote:

What do initial requests look like?

How much of an idea did the consumer have of what they wanted beforehand? (Were their expectations of what was possible and what the potential benefits could be realistic?)

What were their motivations, what triggered them to look for energy efficiency improvements?

(If known) how much was availability of government grants/schemes a factor in this?

Quotes, options:

What range of different options were discussed / quoted for?

How does the installer help the customer make these decisions?

Are there any barriers or challenges at this point?

Why did the customer choose whichever option they went for? What were the key factors in their decision?

Payment:

Explore any finance schemes (gov or private) used: what was the role, was this paid directly to the installers' company or via the customer, any challenges accessing these, any other issues

Installation

Post-installation guarantees, warranty, maintenance

Throughout this process, what's your role in giving advice and guidance?

Once participant has talked through 2-3 examples, explore differences between the journeys – ensure the reasons behind differences are understood.

Dropouts and misconceptions

We've talked about some customers who have gone through with installations – now can you tell me about some potential customers who don't go through with installations?

What tends to put these potential customers off?

Spontaneous first then probe around: cost, level of disruption to the home, lead times / availability of installers

What else prevents potential customers taking up these measures?

Where do you see gaps between customer expectations and the reality of energy efficiency measures? Where are they most surprised?

How much does this come down to affordability? Explore – consumers struggling to finance measures, access grants/loans?

Is there any information that potential customers struggle to find about energy efficiency?

What do you think could be done to address this? Explore spontaneously first, then probe on what government could do, what installers could do, anyone else? ator

Barriers and drivers to using finance to improve energy efficiency (15 minutes)

Aim: Establish participant's perceptions of what the advantages of and barriers to green financing of home improvements are, understand the role of installers in supporting/directing consumer choice.

Installers' role in choosing finance options

If not mentioned already: Does your company/has your company offered financing options (i.e. instalment plans) for customers to install energy efficiency measures?

If so, how did this work?

How often is it utilised by customers?

If not, do they/have they arranged finance via a third party to install energy efficiency measures?

If so, how did this work?

What, if any, information do you give customers on the different finance options?

Explore: is this 'formalised' (e.g. providing customers with specific information) or less formal, e.g. just directing them to find out about more information

What warnings/watchouts do you give customers about financing energy efficiency measures? Are there risks you point out which they might not otherwise be aware of?

Experience with different finance options

Recap previous references to Government schemes for energy efficiency measures:

What was your experience, working with these schemes?

What were the advantages or benefits?

Were there any challenges for you / your company?

Were there any challenges for the customer?

What, in your experience, could be improved about this scheme/could have been done better?

Ask questions above for other finance schemes/products which the installer has experience with:

Personal loans to customers

Point of sale finance

Green mortgages

Equity release loans

Green savings accounts

Property linked finance, any others

If installers have tried marketing different finance options: In your experience, how have customers reacted to different cost structuring options?

For example, do customers prefer an interest rate subsidy which is recouped by a higher installation price?

Is there an interest rate level above which there is significant cost drop off?

Are there any other barriers or challenges to installing energy efficiency measures which we haven't mentioned yet?

When designing this scheme to finance energy efficiency measures, what (else) should the government consider?

Final thoughts / wrap up

Aim: To conclude the conversation and make any final comments.

Final thoughts, anything important to consider we haven't discussed.

Explain incentive arrangements.

Thank participant and close the session.

Phase 2: Focus group discussion guide

Introductions **(10 mins)**

Aim: Introduce the research, set the tone, and provide clarity on what is expected of the participant.

Moderator introduces the session, research aims, any questions

Introduce moderator and Verian – independent social research agency.

About the client: Verian has been commissioned by the Department for Energy Security and Net Zero (DESNZ) to understand the attitudes of homeowners – both owner occupiers and landlords – on potential green finance options for making homes more energy efficient.

Aim of group: We are talking with owner-occupiers and landlords who would be potential recipients of the green financing. This is to help us understand perceptions of the proposal, to help the government better understand what would drive engagement and what barriers might be encountered.

How their information will be used: Your views are helpful for understanding how to ensure the potential scheme would be effective if it becomes policy. Your contribution will be completely anonymous and all personal information will be stored and deleted by Verian in compliance with GDPR regulations and the Data Protection Act of 2018.

Ethical considerations: Research is voluntary – you have the right to withdraw at any time, or to move onto the next question.

Reassurances: No right or wrong answers – we are especially interested in your honest views on the proposal.

Duration: 90 minutes.

Any questions/concerns?

House rules

Please make sure you are in a quiet room, with minimal distractions

Please imagine that we are in the room together, close any other windows on your PC / put down your phone and be present at the discussion for the duration of the session

There are no right or wrong answers and no rules to the discussion – just please be open and contribute your honest views

We only have a limited amount of time so if I move the conversation on at any point that is just to ensure that we stay on topic and can finish on time

Any questions?

Audio recording Ask permission to audio record for analysis purposes; acknowledge consent once recording has started.

Participant introduction

Please could you tell me a bit about yourself: name, do for a living, who they live with and something you're looking forward to.

Let us start by talking about your property if landlord / home if owner occupier,

If owner occupier:

How long have you lived there?

Can you give me a sense of how much time you and others in the household spend at home?

If landlord:

How long have you lived in/owned the property?

How many occupants are in the property?

Energy efficiency (10 mins)

Aim: Establish participants' awareness, attitudes and actions around energy usage and energy efficiency in their home.

Spontaneous discussion of energy efficiency

What perception, if any, do you have of how energy-efficient your home is?

Is there anything you are currently doing to try to reduce energy consumption?

If landlord, what sense do you have of how much energy your tenants use or how energy efficient the property is?

Is there anything you/your tenants are currently doing to try to reduce energy consumption?

If so, probe around what they are doing and what motivated them to do this – focus on behaviours.

Possible energy efficiency and clean heat improvements

Probe around improving EPC certification – is this seen as a benefit?

Do you know of any energy efficiency or environmentally friendly heating improvements that are suitable for your property/home?

Clarify if needed: by environmentally friendly heating, we mean heat which doesn't use a fossil fuel source, such as a heat pump (rather than a gas boiler)

Would you be interested in making those improvements,– why?

Show stimulus slide 1: list of green home improvements measures

Ensure participants understand the full range of energy efficiency and clean heat improvements covered by 'green home improvements':

- *Replacing windows and doors*
- *Installing secondary glazing*
- *Using energy efficient lighting*
- *Insulating your loft or walls*
- *Adding draught proofing*
- *Upgrading your heating (such as replacing a gas boiler with a heat pump)*
- *Generating renewable energy from sources such as wind or solar power*

Home upgrade past experience/plans

Have you made any recent upgrades to improve your energy efficiency or making your heating more environmentally friendly?

Note any mentions of improvements as a result of upgrades

Does anyone have any further home energy efficiency improvements planned/ plans for these?

Financing energy efficiency (10 minutes)

Aim: Establish participants' attitudes to green financing of home improvements.

Spontaneous discussion of financing home improvements

When you have made/plan to make improvements to your home/property, how have you funded this/plan to fund this?

Moderator to listen out for and probe around spontaneously raised advantages and barriers

What are your thoughts on using a financial product to fund future energy improvements (such as taking out a loan, adding additional funding to mortgage, etc)?

Explore immediate thoughts first, then probe in potential downsides and advantages

Probe around social/cultural influences for attitudes

If landlord: Would you fund improvements differently if you were working on your own home – why?

Response to finance options (50 minutes)

Aim: Establish participant's attitudes to green financing of home improvements.

Approx. timings: 10 minutes per option, 10 minutes to compare and rank when all shown

Responses to green finance ideas

We're now going to talk through some financing options that could be used to pay for home energy efficiency improvements in future.

Show stimulus slide 2: overview of 4x finance ideas

We'll be talking about each of these ideas in more detail

Moderator to show stimulus for each product, rotating order across interviews.

Detail for each option:

Product overview

Scenario with potential terms, example cost

For each product:

Show product overview slide (PART A):

What are your first thoughts on this idea? Explore immediate reactions

What, if anything, is appealing about this? Is this something you would consider?

What, if anything, is off-putting or concerning to you?

How would you expect this to work in practice?

How would you like this to work ideally? Explore any differences

Show scenario slides (PART B) potential terms, example cost slide

For all products:

First thoughts on terms, example costs

How appealing this is

Are there any factors they can think of that might increase the appeal (e.g. cashback; rewards and perks through partners)

How relevant to their own planned improvements, referring to improvements discussed in earlier sections

How these differ from expectations

What kind of upgrade they think this would/would not be suitable for

Any potential barriers

What further information they would want to see

Questions for specific products:

Unsecured loan (Solar PV & insulation scenario)	Explore 10 year vs 15 year repayments – how do participants feel about monthly savings being closer to repayments vs higher figure repaid overall? How important are direct savings on energy bills versus other improvements (comfort in home, increased property value, environmental benefits)?
Heat as a Service (Heat Pump, loft and cavity insulation, solar PV)	Do people have any concerns/reservations about not actually owning the heating/low-carbon technologies? Is this a concern and, if so, what kinds of design features do they think might mitigate that concern? Note for moderator – at the end of contract, customer would need to arrange a new contract or buy a heating system. What kind of monthly savings would participants want to see for this to be an appealing option? How appealing is a more 'comprehensive' model, which also includes energy costs in the subscription fee? Would this need to be lower than the previous energy bill?
Secured green borrowing (Heat Pump, loft and cavity insulation, solar PV)	If the product is 5 years at 0% and then the same rate as the rest of the mortgage (fixed or SVR), how does this affect the appeal?
Point of sale finance (cavity wall and floor insulation)	Can add additional probes here if needed

After all ideas have been shown:

Show stimulus slide 2: overview of 4x finance ideas

Quickly recap ideas we've seen

Which, if any, are most appealing to you and why?

Ensure all participants have seen given a preference, using the chat function if necessary

Explore rationale

How might you use the one(s) that are most appealing? (Explore which kinds of home upgrades might be relevant)

If landlord, are there any financial products that are specifically relevant to improving your rental units?

Are there specific aspects of these products which are particularly important?

Probe around interest rates, repayment, risk, convenience,

How important are direct savings on energy bills versus other improvements (comfort in home, increased property value, environmental benefits)?

Probe: do participants expect to recoup the entire cost of the loan or just some of it? How essential is it for measures to pay entirely for themselves?

Probe specifically on increased property values, if and how this changes the calculation about upgrades needing to pay for themselves

Drivers and barriers

Can you think of any potential advantages to there being financial products like these on offer?

Do any of the schemes we've just spoken about strike you as having particular advantages – if so, can you explain what you're thinking?

Probe around the advantages named and any not mentioned

If landlord, do you think any of the advantages you've mentioned would also apply if you were using the financial products to improve your own home?

Can you talk me through any potential problems people might encounter with these schemes that you can think of?

Keep the conversation about financing in general and then see if there are particular schemes brought up, probing as appropriate

Would any of these challenges affect you – if so, which ones and why?

If landlord, do you think any of the advantages you've mentioned would also apply if you were using the financial products to improve your own home?

Is there anything that you feel we've not shown you, that you would like to be available?

Presenting Green Finance (13 minutes)

Aim: Establish participants' perceptions of information needs for making the decision to engage with green financing of home improvements and feelings about the different roles and responsibilities.

Previous experience of finance information

Think back to the last time you took out a financial product of any kind, what kind of information did you look for?

Is there anything that is particularly relevant to highlight for financial products related to your home/property?

If landlord, probe around differences between financial products for home versus rental units.

How would consumers prefer to learn about green finance products?

How did you find or receive this information?

Finance information for energy efficiency improvements

Thinking specifically about financing options for energy efficiency improvements or environmentally friendly heating, we're now going to talk about your ideal customer journey.

What do you think would be the most useful way you could find out about these options?

Do they think there is anything about their circumstances that would make this different for other people?

What do you think would be the key pieces of information you would want to know?

And who do you think would be most important to hear this information from?

Start spontaneous, then probe around government, banks/lenders, installers, any third parties.

Through which channels/via what information formats would it be most useful to hear about different options?

What do you think should have occurred before you start repayments?

Probe around repayment support/penalties

What do you want other people to do:

What role do you think the government has in helping customers on this journey?

Probe around delivering advice, regulating installers/providers

How 'directly' involved would they like government to be in arranging green finance options

Explore local vs national government if raised spontaneously

What role do you think the banks or financial institutions have in helping customers on this journey?

Probe around delivering products, delivering advice, repayment

What role do you think the installers or energy companies have in helping customers on this journey?

Probe around delivering products, delivering advice, repayment

Would you prefer to be able to choose from any certified installer, or would you prefer an approved list provided by the Government?

Final thoughts / wrap up (2 minutes)

Aim: To conclude the conversation and make any final comments.

Final thoughts, anything important to consider we haven't discussed.

Explain incentive arrangements.

Thank participants and close the session.

Stimulus materials

Stimulus materials shown at phase 1

Information was presented on PowerPoint slides with visuals to assist

Slide 1:

"Green Savings Account

Savings accounts which offer additional benefits to savers who commit to use the funds for green home improvements in the future.

These additional benefits could be:

Improved interest rates

An additional bonus paid when the account is used to purchase energy efficiency measures.”

Slide 2:

“Retrofit salary sacrifice

A workplace benefit where employees can allocate a portion of their salary over a longer period toward green home improvements.

Employees can reduce how much of their income is taxed, while unlocking funding for energy-efficient upgrades.

This model is inspired by similar salary sacrifice schemes for electric cars, bicycles and pensions.”

Side 3:

“Secured Green Lending

A loan or line of credit from a bank to fund green home improvements.

This requires collateral which the bank can claim if the borrower fails to repay the loan.

These tend to be for large amounts, and because the applicant puts up collateral, they tend to have lower interest rates.

Examples include:

Green mortgage bonuses, reducing mortgage rates as energy efficiency is improved

Secured green borrowing on top of an existing mortgage

Equity lines of credit (a second mortgage with a flexible line of credit)

Green equity release loans (loans for those without mortgages, typically paid by estate after their lifetime). “

Side 4:

“Unsecured Green Lending

A loan, line of credit, or credit card from a bank to fund green home improvements.

Approved after a credit check, based on an applicant's credit score and income.

Unsecured lending would tend to have a higher rate of interest than secured lending, as the applicant does not put up collateral.

Examples include:

Personal loans.

Point of sale finance (financing offered at the moment of purchase).

Loans with Title Restriction (loan tied to property which cannot be sold without lender's permission until debt is settled).

Revolving lines of credit to be drawn upon as needed, to fund improvements over time

Credit cards: special-purpose low or 0% interest cards to fund green upgrades"

Slide 5:

"Property Linked Finance

A model where financing is tied to the property, instead of the individual. This is done using a land charge, allowing the property to be sold with any outstanding repayment being done by the new owners.

This approach eases the burden on homeowners making green home improvements, as they are only responsible for repaying the loan while they own the property, encouraging long-term investment in energy-saving measures.

Alternatively, the repayment of the loan is part of the monthly energy bill, with the loan amount based on anticipated energy savings.

This means homeowners gradually pay for the cost of the upgrades through bill savings, and any outstanding debt transfers to subsequent bill payers when the property is sold."

Slide 6:

"Heat as a Service

A subscription service that provides heating to customers for a monthly fee, similar to other utilities.

The provider offers installation of insulation and heating technology like radiators, and provides maintenance for a monthly subscription fee, eliminating upfront costs for homeowners.

This approach allows homeowners to make energy-saving improvements to the home, such as heat pumps or solar panels, without large initial expenses. Homeowners then don't have to worry about maintenance and repair costs.

The provider owns the technology and covers the installation and management costs. This mean all energy and technology costs come in a single, predictable fee, agreed in advance."

Stimulus materials shown in phase 2

Information was presented on PowerPoint slides with visuals to assist. These scenarios served as illustrative examples only, designed to enable participants to better relate and understand the different green finance options that could be on offer and to see feasible terms and conditions. These scenarios do not reflect government policy.

Slide 1:

"'Green home improvements' can include:

Replacing windows and doors

Installing secondary glazing

Using energy efficient lighting

Insulating your loft or walls

Adding draught proofing

Upgrading your heating (like replacing a gas boiler with a heat pump)

Generating renewable energy from sources such as wind or solar power"

Slide 2:

"In this section we will talk about a range of individuals in different scenarios.

Each person is considering an option to finance green upgrades.

Imagine they're broadly similar to you in terms of their life circumstances, financial situation, and the type of home they live in! "

Slide 3:

“Overview – 4x ideas

Personal green loans, Heat as a service, Secured green borrowing, Point of sale finance “

Slide 4:

“Personal green loans

These loans are issued based on the borrower's credit history and income.

‘Personal’ green loans means they are not secured against collateral (like the home).

They can be used to fund energy-efficient appliances, insulation, or renewable energy installations.

Through a government-backed partnership with lenders – lower interest rates than a commercial loan.”

Slide 5:

“Sam is considering taking out a loan to fund solar panels and loft insulation

She’s had a range of quotes from installers, and landed on one costing £8,500 for everything.

A government-backed loan scheme is available with:

A 3% interest rate

Up to 15 years repayment period (Sam ideally wants to pay it off in 10 years). “

Slide 6:

“What Sam could repay

10 year repayment

£9,849.20 total repaid

£82.08 a month

Roughly £38 a month saved on energy bills

15 year repayment

£10,565.90 total repaid

£58.70 a month

Roughly £38 a month saved on energy bills”

Slide 7:

“Point of Sale Finance

This is finance offered at the moment of purchase.

Retailers or service providers partner with lenders to provide low-interest or deferred-payment options directly at the point of sale.

They can be used to fund green home improvements like solar panels or heat pumps.

Through a government-backed partnership with lenders, offering lower interest rates than commercially available loans.

Slide 8:

“Jane is thinking about using Point of Sale finance to cover the cost of improving her insulation

She’s had a range of quotes from installers, and her cheapest offer is £3,800 for everything.

To help cover this cost she is offered Point of Sale (POS) finance from the installer, through a Government-backed scheme. She is offered:

A 5% interest rate

Up to 5 years repayment period.”

Slide 9:

“What Jane could repay:

Commercially available scheme

5 year repayment period

7% interest rate

£4,514.67 total repaid

£75.24 a month

Roughly £11.58 a month saved on energy bills

Potential Government Scheme

5 year repayment period

5% interest rate

£4,302.64 total repaid

£71.71 a month

Roughly £11.58 a month saved on energy bills "

Slide 10:

"Secured green borrowing

Secured green borrowing is typically offered on top of an existing mortgage.

It allows homeowners to borrow additional funds at reduced rates to spend on green home improvements (e.g. insulation, solar panels, a heat pump).

All of the additional borrowing must be spent on green home improvements, from any certified installer."

Slide 11:

"Robert is considering having a Heat Pump installed, along with new cavity wall insulation, new loft insulation, and rooftop solar panels

He's received a range of quotes from installers, and landed on one costing £18,700 for everything.

With the Boiler Upgrade Scheme (BUS) he can get a voucher for £7,500, leaving £11,200 to pay.

He has 10 years left on his mortgage. His mortgage provider offers Secured green borrowing at:

A five year 0% fixed interest rate followed by a 2% rate"

Slide 12:

“What Robert could repay

£11,200 borrowed (after the £7.5k heat pump subsidy)

5 years at 0%, 5 years at 2%

£11,489.33 total repaid

5 years at £93.33 a month, 5 years at £98.16 a month

Roughly £18.08 a month on energy bills saved from the heat pump and insulation (not including savings from solar panels)”

Slide 13:

“Heat as a Service

A provider installs a product/technology (e.g. a heat pump) and offers maintenance services for a monthly subscription fee from the homeowner.

The provider retains ownership of the technology throughout the length of the subscription contract meaning there are no upfront costs for the homeowner.

The subscription contract can transfer to a new owner if the property is sold.”

Slide 14:

“Henry wants to get a heat pump and solar installed and is assessing his payment options

The Heat-as-a-Service option offers a comprehensive energy package for consumers at £0 upfront cost.

A supplier offers him a package for 15 years with:

Supply, installation, maintenance, monitoring and optimisation of a low carbon heating system.

Rooftop solar panels and a battery to store energy”

Slide 15:

“What Henry could repay

Repayment term: 15 years

Cost per month: £142

Total paid: £25,600

Under this model, Henry would still need to hold a separate energy supply contract (i.e. the cost of energy would not be covered within the fixed monthly fee).

He would be likely to make significant savings on energy bills due to the low-carbon tech and battery."

Slide 16:

"Sam Personal loan

Solar panels and loft insulation

£8,500

Jane

Point of Sale finance

Upgrading insulation

£3,800

Robert

Green mortgage

Heat pump, cavity wall and loft insulation, solar

£11,200

Henry

Heat-as-a-service

Heat pump, solar panels, battery to store energy

£25,600"

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