



# **Driving Installation of Energy Efficiency Measures: Customer Research Findings**

**Final Report**



Prepared by:

Accent  
Chiswick Gate  
598-608 Chiswick High Road  
London  
W4 5RT

Prepared for:

Citizens Advice  
3rd Floor, 200 Aldersgate  
Aldersgate Street  
London  
EC1A 4HD

---

Contact: Peter Broad  
Email: [peter.broad@citizensadvice.org.uk](mailto:peter.broad@citizensadvice.org.uk)



Registered in London No. 2231083  
Accent Marketing & Research Limited  
Registered Address: 30 City Road, London, EC1Y 2AB

# CONTENTS

Executive Summary.....	i
1. INTRODUCTION.....	1
1.1 Background.....	1
1.2 Research objectives.....	1
1.3 Structure of report.....	1
2. METHODOLOGY.....	2
2.1 Research mode.....	2
2.2 Sampling structure and quotas.....	3
3. FINDINGS.....	4
3.1 Introduction.....	4
3.2 Attitudes towards home energy.....	4
3.3 Attitudes towards home energy efficiency and the environment.....	5
3.4 Awareness of and attitudes towards home energy efficiency measures.....	6
3.5 Attitudes to investing in home energy efficiency measures.....	9
3.6 How attitudes to energy efficiency measures are segmented.....	13
3.7 Evaluation of specific home energy efficiency measures.....	14
3.7.1. Loft insulation.....	14
3.7.2. Double glazing.....	15
3.7.3. Condensing boiler.....	16
3.7.4. Solar panels.....	16
3.7.5. Smart heating controls.....	17
3.7.6. Draught proofing.....	18
3.7.7. Cavity wall insulation.....	18
3.7.8. Solid wall insulation.....	19
3.7.9. Air / ground source heat pump.....	20
3.7.10. Under floor insulation.....	20
3.8 Incentive evaluation.....	21
3.8.1. Pay as you save loan.....	22
3.8.2. Low cost loan.....	23
3.8.3. Grants or financial incentives.....	23
3.8.4. Variable stamp duty.....	24
3.8.5. Council tax reduction / increase.....	25
3.8.6. Additional tax / penalty.....	27
3.8.7. Summary: energy efficiency incentives.....	27
3.8.8. Finding trusted trades people and providers.....	31

3.8.9. Administering the home energy efficiency initiative.....	32
4. CONCLUSIONS AND RECOMMENDATIONS.....	34

Appendix A:	Research Methodology
Appendix B:	Discussion Guide
Appendix C:	Pre-Task and Show Material
Appendix D:	Desk Research Report
Appendix E:	Pre-task results
Appendix F:	Telephone reflector interviews

## **Executive Summary**

### **Background**

This research sought to establish what would work best and what would not work well in the design of incentives to encourage consumers to install energy efficiency measures. The aim was to establish principles for the design of effective, long-term, sustainable drivers of consumer action on energy efficiency.

The research consisted of a literature review and focus group based workshops with consumers.

The literature review identified householder attitudes towards energy efficiency measures and towards policies or incentives to encourage these measures. These were challenged in the consumer research. The review identified three themes affecting energy saving behaviour: barriers, motivations and trust & confidence. The key barriers to uptake were found to be cost, hassle, housing tenure and lack of awareness. The main motivations are comfort, savings & value and marketing messages. Trust and confidence in energy saving measures are affected by advisors and intermediaries, family and friends, government and the third sector as well as tradespeople. There is also a need for continuity and certainty in the effect of any energy saving measures. The findings are set out in full in Appendix C.

Insights from the consumer research were extremely consistent across the sample and correspond with the findings from the literature review.

The methodology provided robust and insightful research findings, ensuring a good mix of individual and group based tasks to avoid the risk of groupthink or over-claim. As a result, participants were open, honest and candid throughout in their assessment of home energy efficiency measures and incentive ideas.

### **Findings**

#### **Attitudes to home energy efficiency**

Energy efficiency measures are not a primary consideration for many homeowners who place decorative improvements and other refurbishments as their priority. The core need for homeowners is to have a safe, warm, attractive home environment that would be a refuge from the pressures and strains of everyday life. Decorative improvements are also felt to offer a more tangible benefit and add value to the property, representing a sound investment, a 'good' decision.

In contrast, many feel that energy efficiency measures lack a tangible benefit, often being hidden from view, unless there is a specific problem with heat in the home which results in a noticeable level of discomfort. In addition, few feel that energy efficiency measures add value to the home in the same way that decorative or other enhancements do.

### **Awareness of home energy efficiency measures**

Awareness and understanding of energy efficiency measures is very mixed and few participants feel they have a clear understanding either of what they could do to their home, or what the benefit would be in terms of energy saving, or improved comfort.

Loft insulation is the most common frame of reference for home energy efficiency measures, almost a shorthand for the subject. While double-glazing is equally familiar, few consider it an energy efficiency measure. The triggers to investing are enhancing the look and value of the property and improving security and maintenance.

### **Barriers to engaging with energy efficiency measures**

While many were aware that energy efficiency measures could potentially save them money on energy costs in the long term, few understand what they could benefit from and many are doubtful that the savings would ever match their initial investment.

There are also perceptions that energy efficiency measures would be expensive and that it would take a long time to recover the cost. This is a concern to older homeowners who doubt they would live to enjoy the benefit and for younger homeowners who feel they would be likely to move home before benefitting from the investment. Younger homeowners also feel the upfront cost would be a significant barrier, due to other financial pressures and priorities, or simply the lack of money to consider such an investment.

Few homeowners make the connection between the consumption of energy in heating their home and the wider impact on the environment. Some also feel that the use of energy to heat their home is a matter of personal choice and between them and the energy company.

It is also evident that many accommodate the cost of energy in their household outgoings and therefore potential cost savings have a limited impact, unless it could be proved that the savings would cancel out the cost of the measures within a short time period.

As a result, comfort and affordability are the main considerations about energy usage at home. Market norms prevail with many consumers expressing the view that because they pay for the heating, it is up to them what they do with it. It is their personal choice whether or not to minimise energy use through efficiency measures.

### **Incentivising home energy efficiency measures**

Individual incentives are not considered effective, but rather work in combination, and as part of a narrative to challenge attitudes to energy efficiency measures.

The optimal approach would comprise four stages that run over a period of time:

1. **Assessment:** a professional assessment of the property, with clear numerical data to support recommendations. It would be administered by a not-for-profit organisation and supported by case studies or comparable examples. These would

assure homeowners that they would see a return on their investment and feel the benefit of comfort or increased warmth

2. **Enablement:** 'pay as you save' or low cost loans so that households would be able to meet the upfront cost of measures, and align this with the anticipated return on investment in the form of energy saving
3. **Reward:** in addition to reduced energy costs, a reduction in Council Tax or some form of rebate for installing measures is considered to provide an extra incentive and initial impact
4. **Penalty:** an additional tax or increase in Council Tax if recommended measures are not undertaken, on a sliding scale similar to road tax, but linked to ability to pay and the type of property.

While few like the idea of incurring a penalty or additional taxation, many concur that this is very likely to be the only incentive that would prompt action and create sufficient impact to bring home energy efficiency to their attention. This is made more acceptable by the step-based approach, set out above, that gives consumers a fair opportunity to avoid a penalty.

It is also considered essential that any penalty is connected to measures that have been recommended following an assessment by an independent expert, backed by a not for profit organisation. Many are also anxious that the measures must be reasonable, affordable and tailored to the age and type of property.

Many are concerned about how any incentive with a penalty aspect would affect those who are less able to fund energy efficiency measures, or whether it would simply reward those who are more affluent. Younger homeowners feel they already have significant financial pressures and that yet another would present a real challenge and feel very unfair.

While comparisons are drawn with other incentives, including vehicle tax and the 5p carrier bag charge, which have changed attitudes and behaviour in other sectors, some feel this would be a very different proposition. A home is considered to be a private space that owners have worked hard to acquire, and any interference or regulation around energy efficiency measures would be crossing a line and challenging the basic tenets of personal choice and freedom.

Many also feel that any incentive would need be tailored to the age of the property. It would need to take account of what is realistically achievable in terms of energy efficiency. This would be to avoid an unfair comparison between a new build home, with all the latest measures and an older or period property that would have obvious limitations or require a larger investment to retrofit these.

### **Communication and education**

Many feel that education, communication and a coherent narrative would be just as important as the incentives themselves. This would be to provide a clear rationale for energy efficiency improvements and establish their individual and wider social benefits.

It is also felt that communicating the end point of the policy upfront would be essential, both to motivate people to make energy efficiency improvements, but also to be seen as fair and transparent and avoid a public backlash. In other words, spelling out from the beginning that if homeowners don't take up the incentives and make recommended changes, in the longer term they will lose out financially.

A financial penalty is also felt to re-frame the issue as something Government are taking seriously and that individual households and consumers should also consider more of a priority.

### **Delivering the initiative**

The whole subject of home energy efficiency has been devalued and undermined by the sales and marketing practices of providers. Many have been inundated with sales calls and literature in the past, making false claims or over-claiming about grants and incentives. Over time these have turned people off the subject completely and left them wary of any communication messages.

There is a strong perception that energy providers and private businesses will only exploit new energy efficiency measures for profit and at the expense of the homeowner.

Trust in Government is also mixed in this context, in part due to the inconsistency of policies and incentives in the past and a perception that Government take a short-term view based on their term in power.

Therefore, many consider the ideal would be for a not for profit organisation, or range of organisations, to administer and communicate the policy.

Citizens Advice is spontaneously suggested as a possible provider, having the trust and confidence of participants, as well as the reach and the professionalism to deliver such an initiative, or do so alongside other similar not for profit organisations.

# **1. INTRODUCTION**

## **1.1 Background**

Citizens Advice represents consumers across essential regulated markets. Citizens Advice is the statutory body responsible for representing consumers' interests in the energy sector.

It uses evidence and expert analysis to put consumer interests at the heart of policy-making and market behaviour. It tackles issues that matter to consumers, working with people and a range of different organisations to champion creative solutions that make a difference to consumers' lives.

Citizens Advice want to draw on both existing and new research to establish principles of success and failure, based on consumer insight, for policies to encourage consumers to install energy efficiency measures in their homes.

The project provides evidence – based upon real consumer attitudes and behaviour – to inform Citizens Advice's advocacy on DECC's energy efficiency policies, particularly the successor to the Green Deal and related incentive schemes. It seeks to help deliver policies which reflect consumer needs and wants, the consumer uptake of energy efficiency measures and value for money for bill and tax-payers.

## **1.2 Research objectives**

The overarching research objectives are to explore:

1. what would work best and what does not work well in the design of incentives to encourage consumers to install energy efficiency measures, and for what reasons.
2. principles for the design of effective, long-term, sustainable drivers of consumer action on energy efficiency.

## **1.3 Structure of report**

Chapter 2 sets out the methodology used to conduct the research. Chapter 3 describes the findings and the conclusions and recommendations are in Chapter 4. The appendices contain supporting materials and reports referred to in the main section of this report, namely the topic guides, stimulus material, the desk research report, the pre-task results and telephone reflector interviews.



## **2. METHODOLOGY**

### **2.1 Research mode**

Existing research was synthesised from a literature review. This informed the focus of primary research which was conducted through a qualitative approach, using extended pre-tasked workshops and follow up reflector depth interviews with consumers.

While the small sample of participants means the qualitative findings cannot be regarded as statistically robust, the requirements of the research made this a suitable approach. The rationale for these techniques is explained in detail later in this section.

The qualitative research with consumers explored issues identified in the desk research where further insight on consumer attitudes was required, either to test lessons from the desk research or fill in gaps in understanding.

The three stage qualitative approach was adopted for a number of reasons. The topic of the research is one where research is highly susceptible to response bias which needs to be avoided. This includes but is not be restricted to:

- virtuous response bias: where consumers exaggerate their likelihood of behaving in a way they may anticipate as virtuous
- framing: where a conversation is focused on energy efficiency consumers may give energy efficiency more prominence, relative to other issues, than they would in their day-to-day decision-making

A suitable approach for conducting the research is one where consumer preferences are revealed through choices, behaviours and responses in a scenario, rather than relying on consumers stated preferences.

The research was therefore conducted through structured participatory workshops with consumers, involving scenario work, game-playing and trade-off exercises. These were carefully managed and controlled to avoid leading consumers, while producing meaningful findings. This enables the capture of individual responses as well as exploiting the discursive, dynamic and creative environment of the workshop group discussion that inspires participants to express opinions in a more vivid, natural and realistic way.

There were six two-hour workshops structured to examine the research topics from the perspective of different lifestyles and property types. These are known to influence attitudes towards energy efficiency and potential initiatives to encourage greater efficiency in the use of energy.

All participants were asked to undertake a pre-workshop task to orientate themselves to the topics being discussed in the workshops. There were twelve telephone reflector

depth interviews. These sought additional views on the research topics from participants following on from their experience of the workshop.

## **2.2 Sampling structure and quotas**

The six workshops were structured to provide a range of lifestyle experiences and housing conditions.

These were:

- location: Urban, suburban and rural
- age of participants: 18 to 44, 45 and over
- housing type: terraced, semi detached and detached
- wall type: solid walls and cavity walls.

In addition, all properties had to be built before 1993 and occupants had to be homeowners and not in receipt of income related benefits. Those with both loft and cavity wall insulation were not eligible for the research. This was to focus the research on an audience which is likely to be a key target of the types of government-sponsored energy efficiency initiatives considered in this research.

## 3. FINDINGS

### 3.1 Introduction

#### Attitudes towards their home

Consumers express a strong emotional connection to their home, feeling this is their safe place and refuge from the stresses and strains of everyday life.

Many consumers undertake improvements to their home over time, and even those who feel they would like to make changes but could not afford to express a pride in ownership and a desire to remain living in their current home.

Improving the appearance of the property and aesthetic improvements are the main motivators among homeowners to undertake changes or spend money on their home.

*'If I was going to spend on my house, I would want something I could see.'*

Older, Suburban, Cavity wall

*'Windows are nicer, because they can enhance the appearance of your house, whereas with loft insulation and cavity wall you can't see anything. I would rather spend the money on nice cushions to make my home look warm and cosy.'*

Younger, Rural, Solid wall house

There are few differences in attitudes and behaviour between the different types of property homeowners inhabited, although some of those living in more rural areas and/or in older properties consider the cold to be more of an issue affecting levels of comfort. However, in spite of these concerns, many remain living in their property and it is evident that there is an element of inertia in either dealing with issues or moving home, or in some cases, just getting used to them and preferring the status quo.

*'You don't want to spoil the features of the house and you just get used to living with it. We had fireplaces, felt like part of the character of the place.'*

Older, Urban, Solid wall terrace

### 3.2 Attitudes towards home energy

Many homeowners feel that they pay for the heat that they want and need. They feel that this is a free choice, unconnected with anything beyond the financial transaction between them and their energy provider.

As a result, personal comfort and affordability are the main considerations about energy usage at home. Market norms prevail, with many consumers expressing the view that because they pay for the heating it is entirely up to them what they do with it. It is their personal choice whether or not to minimise energy use through efficiency measures.

*'You want your home to be comfortable, it's the place you spend a fair amount of time.'*

Older, Urban, Solid wall terrace

*'When you have had a stressful day, you want to come through the door and for it to feel warm and lovely.'*

Older, Urban, Solid wall terrace

In terms of cost and affordability, many find their heating bills are manageable. While a substantial household expense, homeowners have accommodated this cost. It has become an accepted norm, resulting in limited motivation to make reductions via energy efficiency measures. Few homeowners actively look for low cost energy tariffs or have changed suppliers in recent years.

Many consumers acknowledge that their homes are not as energy efficient, or well insulated as they could be, and that money and energy could very likely be saved by investing in measures. While in many areas a financial loss, such as this, is seen as a powerful motivator for behaviour change, it is evident that in this context, the potential overspend on energy is not experienced by consumers as a loss, but rather accepted as the cost of keeping their home warm.

### **3.3 Attitudes towards home energy efficiency and the environment**

Very few homeowners make the connection between the consumption of energy in heating their home and the wider impact on the environment. The use of energy to heat their home does not readily link to pollution or climate change. It is clear that in contrast to awareness of emissions relating to cars, this is not yet seen as a social norm or a factor in decision-making.

Some are dismissive of these considerations, or do not recognise any personal responsibility in this respect, citing the futility of individuals in the UK making small energy efficiency changes, in the context of countries such as such as China emitting increasing amounts of pollution. Many feel that in this context, homeowners in the UK can have little influence or individual responsibility in reducing their home energy consumption.

*'I just don't see how we can make a difference, when you look at all these big countries not doing anything.'*

Younger, Urban, Solid wall terrace

*'The difference you can make in your house is tiny, compared to countries like China, who are pumping out God knows what, it just feels a bit pointless, so my solution is just to not think about it.'*

Younger, Suburban, Cavity wall

Many also feel that issues pertaining to the environment are more the responsibility of Central Government and that if home energy efficiency is a factor, measures should be funded or financially incentivised by Government.

Some question the true intention of the Government and whether they are really interested in homeowners fitting energy efficiency measures in order to save the environment, or whether this is purely in order to meet arbitrary targets, further undermining a sense of individual responsibility.

Some are also cynical about the attitude of Government in this context, perceiving that climate change considerations no longer appeared to be a priority, thereby casting doubt on the seriousness of the issue as a whole.

Overall, few consumers feel that environmental or climate change considerations should be a factor in their decision whether or not to take up home energy efficiency measures.

*'We all aim to have a more environmentally friendly home. I would say it's important, but it does depend on the cost.'*

Older, Urban, Solid wall terrace

*'Maybe if money was a struggle I would feel differently and I'm not that socially conscious, so the whole climate change thing, I am a bit selfish to be honest.'*

Younger, Suburban, Cavity wall

### **3.4 Awareness of and attitudes towards home energy efficiency measures**

Awareness of energy efficiency measures is very mixed. There is high awareness and uptake of the most commonly used measures, such as loft insulation and double glazing, but low awareness or uptake of many of the others.

Many view home energy efficiency as a boring and confusing subject, about which they lack interest or engagement. This is the starting point for many homeowners and presents a significant challenge for policies that drive behaviour change.

*'I feel quite indifferent about it. I know a bit about it, but I'm not fussed about knowing more. I would have other priorities to spend my money on.'*

Younger, Urban, Solid wall terrace

*'I understand the basics, the obvious things like double glazing we have done and I feel quite happy I have got a condensing boiler, but other things aren't a priority financially.'*

Younger, Urban, Solid wall terrace

*Re. replacing a boiler: 'You have to do your homework, you have to sit down and go through it all and I'm not that interested. I just want to know how much it costs and get on with it.'*

Older, Urban, Solid wall terrace

### Emotional associations with home energy efficiency

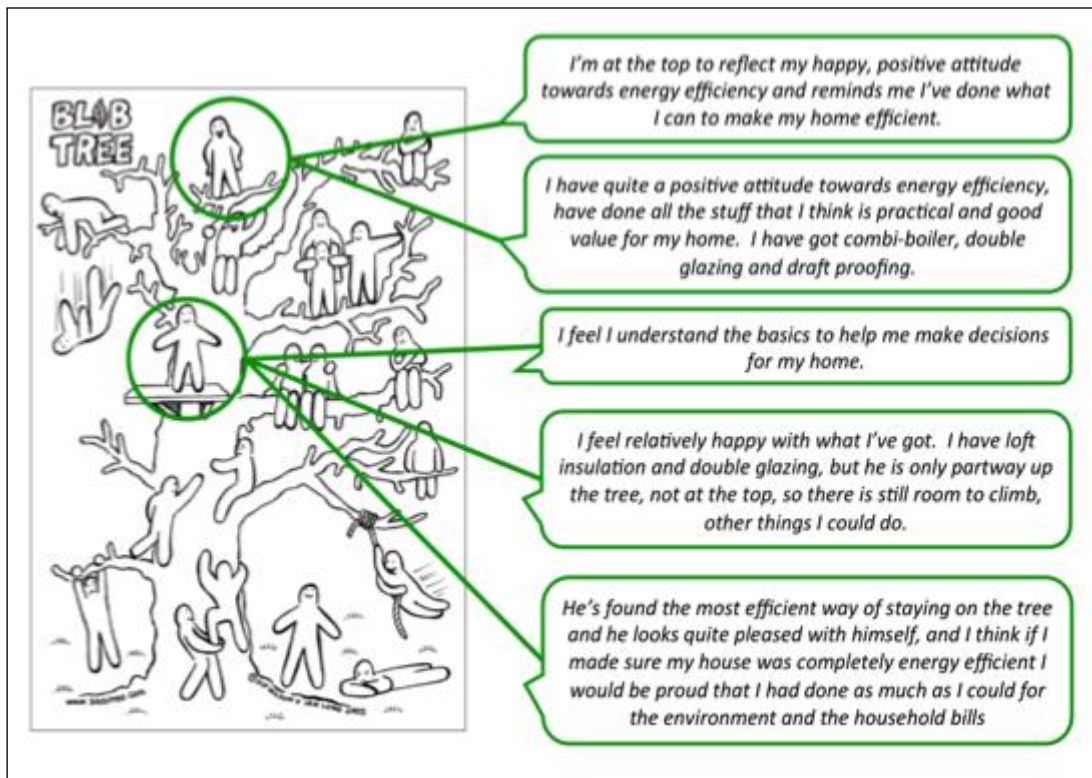
Early in the session, homeowners were given a diagram called 'The Blob Tree'. This illustrated a number of characters on or around a tree, each of which can suggest a feeling or an emotion, according to individual interpretation.

Homeowners were asked to circle the character that best represented how they felt when they thought about the subject of home energy efficiency. The results of this task have been divided into three sections: positive, neutral and negative feelings.

Those who express more positive feelings about the subject of home energy efficiency tend to feel that they understand the basics and have applied these measures to their home. However, it is worth noting that once the full range of possible measures is shared, many of these homeowners revise their position and reflect that they know or understand less than they initially thought.

These views are evenly spread between these three groups and are summarised with the following representative verbatim quotes.

### Positive associations



**BLOB TREE**

*I'm at the top to reflect my happy, positive attitude towards energy efficiency and reminds me I've done what I can to make my home efficient.*

*I have quite a positive attitude towards energy efficiency, have done all the stuff that I think is practical and good value for my home. I have got combi-boiler, double glazing and draft proofing.*

*I feel I understand the basics to help me make decisions for my home.*

*I feel relatively happy with what I've got. I have loft insulation and double glazing, but he is only partway up the tree, not at the top, so there is still room to climb, other things I could do.*

*He's found the most efficient way of staying on the tree and he looks quite pleased with himself, and I think if I made sure my house was completely energy efficient I would be proud that I had done as much as I could for the environment and the household bills*



## Neutral associations

**BLAB TREE**

*Happy to think about it all, but not concerned or worried about it. It's an area I have looked into a bit, but not worried about it.*

*I don't understand energy efficiency things, I can see my loft insulation, but other bits I don't understand, and also how much money it will save me, so whether it is cost effective.*

*I'm not looking cross, but more like fed up and confused! I'm confused whether to go ahead and then there's difficulty trying to get hold of people to do the job. It's just annoying.*

*Standing on a ledge wondering what to do.*

*I'm happy with what I've got but know I could improve some more.*

*I have done so much, but now thinking 'What more can I do? Which way do I go?' I have got loft insulation, double glazed windows and the boiler.*

This group tends to reflect the level of indifference that prevails among homeowners and the lack of clarity around what they should do or how much they could benefit from energy efficiency measures.

## Negative associations

**BLAB TREE**

*I don't understand all aspects of energy efficiency and feel caught in a trap, falling. I don't trust salesmen.*

*I wouldn't have a clue where to start*

*Confused as to whether or not to go ahead. It's difficult to get hold of people to do a job.*

*A minefield of conflicting information.*

*You could spend a fortune and is it really recouping the money and the heat bills?*

*I don't always understand all the methods available. It's a bit technical, I'm not sure how much I lose and it's likely to be complicated and cause lots of disruption.*

This last group are representative of a cohort of homeowners who feel disaffected and conflicted by the subject, perceiving it to be confusing and opaque.

### **3.5 Attitudes to investing in home energy efficiency measures**

The findings emphasise the extent to which consumers want to minimise disruption to their home and feel confident about the potential cost savings that would result from making energy efficiency improvements.

Comments are extremely consistent and a representative selection includes:

*'If it wasn't too disruptive and I could see a significant cost benefit.'*

*'If the benefits are immediate and obvious when explained, it's affordable and didn't spoil the appearance of my home.'*

*'If I knew the initial outlay would lead to savings on household bills and better energy efficiency in the long run.'*

*'If it would help with the bills and improve the value of my property.'*

*'If I knew I was going to live there long enough to benefit.'*

Comments also emphasise the extent to which many feel this is an area that lacks clarity or transparency. It requires simple explanation and evidence to support the argument for installing energy efficiency measures.

Many struggle to understand why they should undertake energy efficiency measures. There is little sense that this is generally a good thing, or that cost savings are sufficient to make it worthwhile. The main driver is comfort, but as many feel they experience a good level of warmth and comfort in their home, few feel this is enough of an issue to drive change.

*'Do we need really need it? Unless you are told why it's beneficial, you're not necessarily going to bother doing it.'*

Younger, Suburban, Cavity wall

Many homeowners also feel they have other priorities and are very candid about their limited interest and lack of engagement in the subject of home energy efficiency.

*'I would rather be interested in a loan for a holiday than a boiler, because then I have got memories and something to look at.'*

Younger, Suburban, Cavity wall



Energy efficiency measures are considered more of a 'nice to have', but a secondary concern and not sufficient on their own merit to prompt a change in attitudes or behaviour.

### **Cost and return on investment**

While cost is an called-upon reason not to take up energy efficiency measures, there is also evidence that this is a genuine barrier for many homeowners. There is not only a perception that it would cost them significant amount money upfront, but also that they would not recoup this in energy saving or see it add value to the property.

*'When we bought our house, they had the rating, but we didn't pay any attention to it. It was all very cosmetic, what I went for.'*

Younger, Urban, Solid wall terrace

*'My priority is getting through the month financially, not spending money on something that will benefit me in 20 years' time.'*

Older, Rural, Solid wall house

Many homeowners struggle to look further than five years ahead and accordingly want to see energy efficiency measures pay for themselves within a five to seven year time period. Beyond this, the future is so hard to imagine or project, it almost becomes theoretical and too difficult for many to contemplate. Uncertainty about future plans or moving home are also mentioned as additional barriers to acting.

*'You don't know what life is going to predict from one year to another. You could lose your job, anything could happen.'*

Younger, Urban, Solid wall terrace

*'We looked into under-floor insulation and it was going to be about £2k and the savings were only £50 a year, so you're not going to do it in that case are you.'*

Older, Rural, Solid wall house

*'As you get older you don't want to spend more money on the house, we like going on holiday and eating out, we don't want to spend £2k on something that will take us 20 years to recover.'*

Older, Rural, Solid wall house

However, uncertainty about future plans being cited as a barrier to acting is in part a response to the general uncertainty around home energy efficiency and the cost or efficacy of measures. Not acting due to potentially moving home in future is also a simple and convincing reason not to take action.

### **Comfort**

Participants are more driven to act if they are uncomfortable, for example a specific draught or an especially cold room. There are contradictions in this though. Many consumers began with focus on comfort in the research session and pre-task activity,

but later the conversation shifted to a cost transaction: what does it cost vs what do I save.

These are very different thought processes: emotional vs rational. There is a perception that comfort alone is not enough to justify the expense of improved energy efficiency measures. Consequently, consumers default to the numbers to help support their decision-making.

There is also evidence that a degree of discomfort in the home quickly becomes normalised and homeowners just put up with it, or just get used to it, noticing these issues in others homes far more than in their own home.

*'If you are already comfortable, even though it's below the current building regulations, then you just live with it.'*

Older, Suburban, Cavity wall

### **Disruption**

Many confirm one of the findings from the desk research, that in the context of busy, demanding lives, few would consider instigating measures that would cause disruption to the home. Some comment that their home is a refuge from the stresses of modern life and to voluntarily disrupt this, they would need convincing that measures were worth it, both in terms of return on investment and increased comfort.

### **Finding reliable tradespeople**

Also highlighted in the desk research, the challenge in finding a reliable tradesperson represents a significant barrier to considering energy efficiency measures. In the South East especially, there is felt to be a real shortage of tradespeople. Many cite experiences of trying to arrange appointments or get quotes for building or decorative work, only to be let down and left waiting.

*'We have been trying to get builders to come round and they don't even turn up, because they have got so much work. If they do come round and it's a small job, they won't even get back to you with a quote.'*

Older, Urban, Solid wall terrace

*'In an ideal world, we would get financial help from the council and they would give us tradesmen we could trust, so if there is any comeback then we have got somewhere to go back to.'*

Younger, Urban, Solid wall terrace

There is also a belief that the area of energy efficiency has become a crowded and competitive market. Some providers are seen to be increasingly adopting a hard sell approach, or make spurious claims about costs, return on investment, grants or other financial incentives. This not only turns homeowners off the subject in general, it also means that many are wary of the claims made, whatever the source, and actively looked for 'the catch'.

*'They hassle you like crazy. It's all very pushy and it's quite hard to understand how much you need to pay, how quickly you will get your money back on it and whether it's actually worth doing. A lot of them mention government schemes, but it's hard to understand if you qualify or not.'*

Younger, Rural, Solid wall house

*'When people are talking about it you switch off, even if they are giving you genuine facts and figures, you just don't believe them.'*

Younger, Rural, Solid wall house

*'Even if it is for profit, you just want someone proper, like a family company, someone trustworthy that you have approached, not someone who is overselling and overpromising.'*

Younger, Rural, Solid wall house

### **Complexity and opacity**

While many cite cost as a reason not to take up energy efficiency measures, it could be argued that this is an easy reason not to act. In fact one of the main barriers is the complexity of the decisions that consumers are being asked to make, characterised by hard work, opacity, inconsistency and confusion.

*'It's really hard to get the right information. You want to do something simple and then it just opens up a catalogue of other things, whereas if you have a new build it seems that you can literally just do what you want.'*

Younger, Urban, Solid wall terrace

*'If it was made easier...but at the moment there is a lot of paperwork involved, a lot of inspection, think that is what so off-putting.'*

Younger, Urban, Solid wall terrace

*'If things are changing and you think in a couple of years you might sell, is it worth spending money now, because when you come to sell it that improvement might not mean anything because it's below the current building regulations.'*

Older, Suburban, Cavity wall

Throughout the workshops it is notable that homeowners do not compare the different energy efficiency measures discussed in terms of efficacy or cost. There is a need for simplicity and clarity of the narrative around how the measures work and the benefits to the homeowner. This supports findings from the desk research that simplicity will be central to the efficacy of incentives to drive a change in attitudes and behaviour.

*'It's about education. Now we know about the cars and emissions, we understand why a car with a bigger engine has higher car tax. In*

*another five or six years' time, once all the adverts about this have been thrown at us, we might know more about what we could save and what we could do.'*

Younger, Suburban, Cavity wall

### **Summary**

The research findings demonstrate that all these factors and considerations combine to create easily accessible and socially acceptable barriers to engaging with home energy efficiency measures.

Many find this a complex subject that lacks clarity and is missing a clear narrative to capture the benefits to homeowners, leaving them to vacillate between the most easily called-upon reasons not to act or engage with home energy efficiency.

### **3.6 How attitudes to energy efficiency measures are segmented**

There are some differences in attitudes and behaviour according to the age and life stage of participants:

#### **Homeowners aged 45+**

The older and 'empty nester' homeowners are more engaged and concerned with the concept of home energy efficiency and tend to focus on the benefits of increased comfort.

Cost is less of a concern and it is clear some in this age group have more disposable income, or fewer immediate financial pressures. This means they have a greater ability and preparedness to consider a large up-front investment, especially if a return on investment can be demonstrated.

As a result, this group is more open to hearing about the potential benefits of energy efficiency measures.

#### **Homeowners 25-45 years**

Younger and family lifestage homeowners are more financially stretched and tend to have numerous other priorities competing for their money.

*'I came from a new build with combi boiler, underfloor heating and all the mod cons and now I live in a much older, colder house and it's all a bit overwhelming. We have a lot going on at home with the business, pets and kids, and I know it would benefit me, but it's not a high priority at the moment.'*

Younger, Rural, Solid wall house

They are far more reticent about the idea of investing a lump sum in energy efficiency measures, or simply feel that such sums are not attainable.

The concept of spreading the cost does raise interest and appeal significantly, especially if it could be shown that the saving would cancel out the cost of the repayment. However, many are sceptical and feel they would need proof or some kind of guarantee, tailored to an assessment of their home.

## **3.7 Evaluation of specific home energy efficiency measures**

### **3.7.1. Loft insulation**

Loft insulation is the most common frame of reference for home energy efficiency, and the most familiar measure. Many feel it is simple to understand and cost effective, with clear benefits in making the home warmer and reducing heating bills.

The perceived efficacy of loft insulation is supported visually when, after a snowfall, the roofs of homes with it kept the snow, while those without it are clear, with the escaping heat melting the snow. Some consumers also recall powerful visual images used in advertising and the media showing a heat map of homes with and without loft insulation.

As a result, many feel loft insulation is a sensible measure to take and have either insulated their loft in the past, or feel that their loft is sufficiently insulated already.

However, there are a number of issues and concerns raised, many of which are also described in detail in the desk research:

- many feel the hassle factor is a significant barrier to insulating their loft and a home move or loft clearance tend to be the trigger. However, some consumers also mention taking up loft insulation offers in the past on the basis that loft clearance is part of the service
- some also lack awareness about whether they have loft insulation, or whether it is as effective or up to date as it could be
- there is some residual awareness in the groups of loft insulation being free in the past. This has an influence on perceptions of cost, with many ‘anchoring’ to the ‘free’ message, and continuing to expect loft insulation to be a cheap or subsidised option. However, this does not appear to impact preparedness to pay for the measure in future
- many comment that continually changing regulations on the depth of insulation raised concerns that measures taken now would be deemed insufficient in future. Consumers cite this as another reason not to act, or to ‘wait and see’.

Overall, many feel that while one of the most accessible, understandable, beneficial and affordable of the energy efficiency measures, they would still be put off by a combination of hassle and inconsistency of messages around what is sufficient.

*‘There was a local council incentive to put insulation in your loft recently, but we did have some insulation already so I just left it as it was.’*

Older, urban, solid wall terrace

*'Our loft was jam packed, so would have been too much to clear it out.'*

Older, Urban, Solid wall terrace

### **3.7.2. Double glazing**

Double glazing stands apart from other measures in that consumers viewed it more as a home improvement: a practical and aesthetic enhancement to the home for which energy efficiency is a positive side effect. Double-glazing is described as having numerous benefits: improving the look of the property; cutting down noise; improving security; being low maintenance; and cutting out draughts.

Many homeowners also consider double glazing to be a minimum requirement on all but the most architecturally significant period homes nowadays, and a basic requirement, to the extent that it has become an accepted norm.

Consumers could easily understand the benefit and efficacy of double-glazing. Many have first hand experience of this, having occupied properties without it and noticed the difference in condensation and drafts.

Some homeowners occupying older properties are concerned about the impact on a period property, but many feel the benefits outweigh concerns.

*'In any house where there is no double-glazing, you feel the cold straight away, so if you then do have double-glazing you instantly notice the house is warmer.'*

Older, Suburban, Cavity wall

The success of double-glazing is felt to be less about energy efficiency messages and more about the product itself. Many feel that the appearance, design and cost of double-glazing have continued to improve and progress, with numerous options to suit all tastes and property styles. Many also feel that double-glazing is a sensible investment that would add value and result in a return on investment when it comes to selling a property.

Overall, attitudes to double-glazing tend to support the findings in both the desk research and consumer workshops: that comfort and aesthetics as the main motivator to spending money on a home and a more powerful trigger than cost saving.

*'When you go to buy a new house, you automatically presume it will be double glazed, it's a given.'*

Older, Urban, Solid wall terrace

*'I don't even think people see them as an energy saving thing, they just see them as the window of choice.'*

Younger, Urban, Solid wall terrace

### 3.7.3. Condensing boiler

There is mixed awareness of condensing boilers, and few know how they would work, or how they would differ from an older boiler.

However, there is a high level of interest in the concept of newer technology being applied to boilers and heating systems in general, and an appreciation that these would be likely to result in lower heating costs.

The concept of recapturing the heat that standard boilers lose has a simple logic that appeals to many homeowners. The narrative works in this context because many could see the heat emitting from their current boiler in the form of steam on cold days.

However, as with other measures, homeowners feel they would need to understand the potential energy cost saving compared to a non-condensing boiler, and how this compares to the upfront cost of a condensing boiler. There is evidence from this and other areas, that many have a preparedness and desire to work out the equation, and convince themselves of the long term cost benefit.

Reactions to the approximate cost of a condensing boiler (£1,200 to £1,500) are positive and a surprise for many consumers, who then feel they would consider this measure, although only if their existing boiler needs replacing.

Overall, many feel open to being convinced of the cost benefit of installing a more efficient boiler as and when their existing boiler needs replacing.

*'It sounds like it's the future, the next innovation in improving your home boiler.'*

Older, Urban, Solid wall terrace

*'If it wasn't much more and you knew it would save you money in the long run, then it's common sense.'*

Younger, Rural, Solid wall house

### 3.7.4. Solar panels

Although none of the homeowners in the research have fitted solar panels themselves, this measure does have some interest and appeal among consumers who like the simple concept of generating their own energy from daylight.

However, many express concerns that amount to significant barriers to investing in solar panels:

- consumers, and especially those living in period properties, feel solar panels were ugly and would ruin the look of their property

- there is uncertainty about how cost effective solar panels would be in a country with limited sunlight, and few are aware they will still operate on even cloudy daylight
- there is concern that it would take too long to recover the high upfront cost in energy savings. Combined with uncertainty about long term plans, this is a significant barrier for homeowners
- there is also scepticism about the concept of selling excess energy back to the grid, or about whether solar panels would really deliver on the promises made by providers
- the perception of mixed messages in the media and changes in Government policy also undermines confidence in this measure
- there is a perception that the technology is advancing and it would continue to develop and improve, increase in efficacy and reduce in cost, and the time is not yet right to invest
- the high upfront cost of solar panels is also a major barrier, especially among the younger age groups who are experiencing other financial pressures and priorities, and could not see how they would raise this kind of money
- those in smaller, terraced properties feel there would be limited scope for solar panels, or that they would not be allowed to install them within a conservation area.

*'I am sometimes dubious about whether they really work. Do you really see a drop in your electricity bills?'*

Older, Urban, Solid wall terrace

*'We liked the idea of generating electricity and selling it back to the grid if you generate too much, but it all just sounded very expensive to do in the first place.'*

Younger, Suburban, Cavity wall

*'They interest me, because it's something that works, but I think the information around them is so confusing, the returns you get, the loans, the cost and the upkeep. You see quite a lot of people still having them though.'*

Younger, Rural, Solid wall house

### **3.7.5. Smart heating controls**

The concept of applying technical innovations to home heating has a logic that appeals to many homeowners. Smart heating controls are no exception and feel like a logical, affordable and effective 'quick win' if they could be applied to an existing heating system for a reasonable cost.



Many feel they have rooms or times of day where they would benefit from more control and being able to choose which rooms were heated. Many also feel they would benefit in terms of cost saving and comfort from the ability to control their heating system remotely.

*'You do sometimes tend to leave things on in a room you don't use, so if that was available and you knew how to use it then it would certainly help with energy efficiency.'*

Older, Rural, Solid wall house

Some have heard of the Hive system through media and advertising, and several have installed it in their home and experienced benefits in terms of comfort and convenience. This has led them to advocate the system. This has also become the benchmark for smart heating controls, and the £200 to £300 cost feels reasonable given the perceived benefits.

### **3.7.6. Draught proofing**

There is limited interest in the concept of draught proofing. Only those with severe draughts that affect their comfort at home have acted on this, and many feel that double-glazing has made it a thing of the past.

Draught proofing is not really thought of as an energy efficiency measure, more a comfort issue that could be easily dealt with using low cost draught excluders, or thick curtains. However, some commented following the discussion that there is possibly more they could do here.

Overall, few feel that draughts are a serious issue in their home, or that dealing with them would have a significant impact on their energy costs or consumption.

### **3.7.7. Cavity wall insulation**

Awareness of cavity wall insulation (CWI) is mixed, and it is evident that many are unclear about this method of house building, or whether it applies to their own home. However, the concept of filling this gap in order to retain heat in the building has a simple logic that makes sense to many homeowners. Also, the lack of disruption to the interior of the home adds to the appeal.

*'You are more likely to choose something that isn't going to disrupt your life.'*

Older, Urban, Solid wall terrace

*'I like that one, it makes sense, and it's easy. They drill holes from outside of your house, so there is no mess.'*

Younger, Rural, Solid wall house

Some homeowners have responded to home insulation offers or messages and enquired about cavity wall insulation. They were disappointed to discover it would not apply to them and their solid wall property.

A number of homeowners in Cardiff, who are living in cavity wall properties, have heard very negative messages in local media about CWI, and that it could result in damp being passed from outside the building, through the insulation, to create problems internally. This has put off those who have considered this measure, and as a result few feel they would consider it in future.

*'Loads of companies leapt on the bandwagon and don't do it correctly, they overfill it so there is no air, so if one company is accredited then you know they will do it right. When people touch your home, you have to know that they're not going to mess it up.'*

Younger, Suburban, Cavity wall

### **3.7.8. Solid wall insulation**

Awareness of solid wall insulation (SWI) is low among homeowners, both those with and without solid wall properties.

Few feel this measure would be a realistic option, and only for the most significant issues, for example a room with three external walls that is exceptionally cold, or a health risk to occupants. Even then, many feel SWI would need to tie in with planned redecoration.

The external SWI option has connotations of cladding and many reject the concept on the basis it would detract from the appearance of the property. Some also feel that solid wall is a specialised area that would require expert guidance before embarking on insulation measures.

*'Solid wall is a nightmare, because it's lime mortar in between the bricks, so then you have to pay a surveyor to come in, you end up spending money on advice that should be readily available if the government wants to get our carbon footprint down.'*

Younger, Urban, Solid wall terrace

Disruption and upheaval is a barrier to considering this measure, but once cost is revealed, this transcends other considerations to set opinion firmly against the measure. Both forms of SWI are rejected by consumers on the basis that the cost and disruption would not be worth any potential improvement in energy cost or comfort.

*'I look at that and think I would rather spend the money on family holidays.'*

Younger, Urban, Solid wall terrace

*'If you were having it done internally, you'd have to be in a position where you wanted your whole house decorated.'*

Older, Rural, Solid wall house

*'I would have to be desperate to do solid wall insulation at that cost.'*

Older, Rural, Solid wall house

### **3.7.9. Air / ground source heat pump**

While some have heard of this measure, few understand what an air or ground source heat pump is, or how it would work. As with solar panels, the concept of generating energy has appeal, but here it lacks logic and consumers feel they would need convincing such a process could really generate heat.

This measure is considered complex, hard to understand and for the ground source heat pump, impractical. Many consider it more of a 'Grand Designs' measure, or one for new build properties, and with limited potential as a retrospective measure.

*'Do they actually work? How do they collect heat from outside when it's minus 15 degrees?'*

Older, Urban, Solid wall terrace

*'If it (a new home) had one then it would be nice, but not something I am going to spend on.'*

Younger, Rural, Solid wall house

### **3.7.10. Underfloor insulation**

There is very little awareness of, or interest in, the concept of underfloor insulation. Even more than solid wall insulation, many feel this would be costly and disruptive, and inappropriate as a retrofit measure, due to the impact on existing floor coverings.

Even those with suspended floorboards at home feel they would be more likely to deal with the issue of draughts or cold floors by laying carpet or other decorative floor coverings.

Many struggle with the logic of this measure, with a perception that heat rises and would be lost through other parts of the home and limited awareness that cold or drafts come through the floor.

Few feel they would consider this option unless they were undertaking major renovations, including floor coverings. Even then, many feel that underfloor heating would be the most sensible use of funds as compared to underfloor insulation.

Homeowners feel they would need to be prompted with the idea and shown that significant energy saving could be achieved if they were to consider this measure.

*'To have all your floor taken up seems a hell of lot of work. How much heat do you really lose through your floor?'*

Older, Suburban, Cavity wall

*'If you have got underlay and carpet, isn't that sufficient? I have never felt that my feet are cold when I tread on carpet.'*

Older, Suburban, Cavity wall

### **3.8 Incentive evaluation**

Before being shown any incentive concepts, homeowners were encouraged in the sessions to consider their own ideas for incentives to prompt the take up or consideration of energy efficiency measures.

Suggestions from the participants tend to focus on two main areas, pre-empting incentive ideas they are later prompted to consider, including grants and/or a low cost loan to cover the upfront cost. Both focus on the reservations many have around the upfront cost of energy efficiency measures.

*'A 0% or low rate loan would be more tempting then, if you know you are going to be saving a certain amount every month on your bills anyway, because then you are offsetting one cost against the other, but you do need to know how much you are going to save and how long you'll be paying it back'*

Younger, Urban, Solid wall terrace

However, many also consider that this alone may not be sufficient to drive behaviour change, but rather a 'carrot and stick' approach would work better to create impact and prompt action among homeowners.

The term bonus-malus (Latin for good-bad) is used for arrangements which alternately reward (bonus) or penalise (malus). Some suggest a bonus-malus approach to council tax would be strong incentive to consider home energy efficiency measures. The penalty element creates an immediate sense of urgency and importance around the subject, where the reward element provides a sense of confirmation that consumers had done the right thing.

*'That would be an incentive if they said they would knock £100 or £200 off your council tax bill a year.'*

Older, Urban, Solid wall terrace

*'If they wanted you to do one of these new innovative things, then that might be something you could attach to your council tax, because they sound quite costly.'*

Older, Urban, Solid wall terrace

### 3.8.1. Pay-as-you-save loan

The Pay-as-you-save loan has immediate logic and appeal, due to the simple narrative about saving on energy costs an amount equal to the repayment cost of the loan.

*'It makes sense, because you are getting as much out as you put in, and you're not left with a bill, so you're not losing out financially.'*

Older, Rural, Solid wall house

*'I think it's a good idea, the word 'loan' can put people off, but the 0% is good, and it's added to your energy bill that you have to pay every month anyway, so it's not going to be a massive change or big scary thing.'*

Younger, Rural, Solid wall house

However, many are circumspect about whether they could really save enough on energy to cancel out the loan repayments and feel they would need very clear information to support this claim. Some suggest they would need some kind of guarantee of the cost saving, especially for a higher cost measure, such as a condensing boiler.

The concept of a loan that pays for itself feels like a 'no-brainer', especially among the younger age groups who all feel they would struggle to meet the up-front cost of energy efficiency measures.

However, some among the older age groups feel reluctant to take on a loan, having reached a stage in life when they have paid off their debts, or just being averse to using credit in any form. Similarly, those who feel they have a big mortgage or are just starting out, also feel reluctant to take on more debt.

The very term 'loan' tends to have negative connotations in this context and it could be that an alternative term would challenge some of the initial negativity, at least to the point where consumers hear the message about the loan being cancelled out by savings. The term 'investment' could counter some of the concerns raised around the term 'loan', and engender a stronger sense of achieving a return over time, or adding value to the home.

The concept is complicated by the issue of selling the property. Many feel reservations once they considered the reality of either being left with a loan on a property they didn't own, or having to convince a new buyer to take on a loan they have not chosen to take out themselves.

This links back into the belief that energy efficiency measures are not easy to sell on to a new owner and do not add value to a property.

The concept of passing on a loan with the property is new to many homeowners and one where they have no accessible frame of reference with which to assess the feasibility. As such, it is likely to be a barrier for many consumers.

*'I am quite old fashioned about debt, I don't do it if I can help it, and taking on someone else's wouldn't sit well with me.'*

Younger, Urban, Solid wall terrace

*'Could they not change the wording from 'loan'? It's just the connotations of the word 'loan', for me it implies debt attached to my name and that would affect my credit score.'*

Younger, Urban, Solid wall terrace

*'I don't look at it as a loan if it cancels each other out though.'*

Younger, Urban, Solid wall terrace

### **3.8.2. Low-cost loan**

As with the pay-as-you-save loan, the concept of a low-cost loan has appeal for all but those who expressed an aversion to debt and loans in principle.

This incentive idea is also considered simple and easy to understand, and as with pay-as-you-save, good value if it could be shown that it would result in long term savings on energy costs.

However, on its own, it is clear that a low-cost loan incentive would be unlikely to prompt homeowners to invest in energy efficiency measures unless homeowners are already planning to do so.

### **3.8.3. Grants or financial incentives**

Grants and other financial incentives feel familiar in this context and many are aware of measures such as loft insulation being offered free or heavily discounted in the past. This clearly has an influence on how consumers value these measures, having 'anchored' to the concept of 'free', especially those who have benefitted from this offer in the past.

However, there is an acceptance that these offers are no longer as widely available as they once were. They were seen as more appropriate for the most vulnerable or those least able to afford to pay for energy efficiency measures themselves.

Conceptually, grants and incentives appeal to homeowners. However, many feel that they would come with too much exclusion and they could waste time applying only to find out they don't qualify on a means-testing basis.

There is also a perception that grant and incentive claims have been devalued in this and other sectors, being used more as a marketing tool by providers than as a genuine financial incentive.

Overall, while consumers feel that any cost saving would be beneficial, the lack of credibility and transparency around grants, offers and discounts mean they would be unlikely to prompt action. However, if combined with other incentives, or made extremely clear, simple and applicable to all consumers with few restrictions, they would be more appealing.

*'If you are thinking about doing something, and there is an incentive, then that will push you to do it, whereas if there isn't an incentive it just remains as one of those things you always mean to do but never get round to.'*

Older, Urban, Solid wall terrace

*'They make it easy for you too. I got the literature about the loft insulation, got someone round, not something I would have initiated myself, but it was all very easy. Unfortunately, we didn't qualify though.'*

Older, Urban, Solid wall terrace

#### **3.8.4. Variable stamp duty**

The concept of a bonus-malus approach, rewarding those with more efficient home and penalising those with less efficient homes is not the most popular of the incentive concepts, but many homeowners feel these would be the most effective.

The application of a penalty mechanism is felt to have genuine impact. It provides an imperative to engage with the subject and to seriously consider home energy efficiency measures.

This is also the case when the concept is applied to a potential increase or decrease in stamp duty. Many dislike the tax and it is felt to be a considerable sum. The clear link to property provides a level of synergy with home energy efficiency.

However, because stamp duty only applies to those moving home, it is felt to be too arbitrary and therefore unfair as an energy efficiency incentive, not affecting those who for whatever reason don't move house.

*'It doesn't affect a huge number of people, but if I was selling then it's an incentive to sort it out before you sell it, but I'm not convinced that it will change a homeowner that isn't thinking about moving.'*

Younger, Rural, Solid wall house

It also added a layer of complexity to something that is already a complex and multi-layered: buying or selling a home. Very few feel it would be a consideration when buying a home, with other numerous practical or emotional factors governing decision-making and eclipsing energy efficiency.

Equally, few feel it would prompt an action if they were selling or planning to sell a home, feeling this is the wrong time to start investing in energy efficiency measures. Consequently, few sellers would be positively influenced.

The measure also feels as though it would potentially interfere with consumers' free choice: to move house; to sell their home successfully; to buy the home they want to live in. Several also mention that it would unfairly penalise those who choose to purchase older or run-down properties with a view to renovating them.

*'We bought our house to invest in, and we do dabble in that investment, so if we wanted to buy somewhere that needed a lot done to it, and because of that it had a massive stamp duty then we wouldn't go for it.'*

Younger, Urban, Solid wall terrace

The concept of recouping any additional stamp duty tax, if energy efficiency measures were applied to a property within 12 months of taking ownership, ameliorate some of the concerns. However, many feel this is too short a time period and that the other financial pressures associated with a house move would mean few would be in a position to prioritise energy efficiency measures at this stage.

Homeowners of older properties also feel they would be unfairly targeted by such a tax and that it would need to be tailored to the age of the property rather than simply taking the EPC measure into account.

*'I think it would make people do it, as much as I dislike it, because it would penalise all of us in our little terrace houses, but it would probably drive me to think "I am going to have to spend some money here that I don't have".'*

Younger, Urban, Solid wall terrace

Many also feel that stamp duty is 'framed' in their minds as part of the overall cost of moving and often hidden from view by being absorbed into a mortgage. It is seen, therefore, as a less tangible, visible or motivating means of incentivising behavioural change.

*'Property prices are so ridiculous anyway, so in the big scheme of things would it make any difference or would it just get lost in the overall cost?'*

Older, Rural, Solid wall house

### **3.8.5. Council tax reduction / increase**

In contrast to stamp duty, Council Tax is felt to be a far more motivating means of applying the bonus-malus concept, although not without its issues for consumers.

Council tax is considered to be a greater financial burden, being a regular and substantial household expense and therefore front of mind and tangible in nature. It is also seen to affect all homeowners at all times, irrespective of whether they move



house. Many stress that whatever the incentive, it needs to be fair and council tax is considered a better means of achieving this.

*'That is an immediate tangible benefit. As well as getting lower energy bills every month, you are having lower council tax bills.'*

Younger, Suburban, Cavity wall

As a result, both an increase in Council Tax for not applying energy efficiency measures and a decrease if they did so, are equally motivating. This incentive concept is felt to have the potential work in a similar way to road tax, putting energy efficiency more front of mind for homeowners and creating a stronger imperative to take action.

*'You can definitely see a strong benefit there, especially if you're not planning on moving.'*

Older, Urban, Solid wall terrace

*'I think also if you are selling you could say to people 'we pay a lower than average council tax because...'*

Older, Urban, Solid wall terrace

However, many also indicate that it would need to be a substantial proportion of their monthly council tax bill to motivate them to act. Many are aware of what they pay for council tax and cited amounts in the region of £110 to £130 per month. It is felt that a minimum of 10% variations would be required for this incentive to work.

Some consumers are concerned that there is little synergy between energy efficiency measures or incentives and council tax. Council tax is regarded as less of a tax and more of a payment for the services residents need and use, and making changes to it in this way would be inappropriate.

Some also express a concern that this would have a negative effect on local authority funding, especially if many residents take up energy saving measures. The fear is that local services, already under pressure and being cut back, would suffer further, potentially hitting the least well off. By contrast, the better off with the money to spend on energy efficiency measures would benefit financially.

*'Council tax is to fund a gap that the local authority has, and most of that money goes on social care. Someone having a more energy friendly house should probably not be paying less than someone who doesn't, if they are using more services, if their children are using more services. I can see it working, but I think there would be uproar.'*

Younger, Urban, Solid wall terrace

*'I think it favours people who can afford to have everything done, because they are the ones that then get a lower council tax, whereas the people that can't afford it, who could really do with a rebate, aren't getting it.'*

Younger, Rural, Solid wall house

### **3.8.6. Additional tax / penalty**

On its own, an additional tax feels punitive and another cost burden for homeowners who already feel financially stretched.

However, although it is not liked, many consumers are candid in their assertion that this form of incentive would be the most effective of all those discussed.

*'I think it would work, because incentives allow you to act or not act, but with this you have to act, you've got no choice. People only act when they are forced to.'*

Younger, Suburban, Cavity wall

*'I think it will take a huge change to get us moving, to get people to be a bit more careful with fuel. It's not going to be popular, but it will have to take something like this, in order to change people's mind-sets.'*

Younger, Rural, Solid wall house

There are concerns about how it would affect the least well off and many consider it would need to be means tested or operate on some kind of income threshold basis. Many also feel it would need to sit alongside a loan or a 'pay-as-you-save' option. This would be to give householders a fair opportunity of raising the funds to implement energy efficiency measures and avoid the charge.

### **3.8.7. Summary: energy efficiency incentives**

Changing consumer attitudes to home energy efficiency will be a significant challenge. The starting point for many is: *I can afford my heating bills and my home is warm and comfortable enough, so why should I spend my hard earned money on measures to improve energy efficiency.*

Few feel they have enough to gain from energy efficiency measures to prompt an action. Bonus incentives appear only to influence attitudes or nudge consumers if they are considering the measure anyway. For this reason it becomes clear that it will require a combination of incentives to deliver a change in attitudes and behaviour. These will need to work together to form a simple and compelling narrative:

- First, access to a professional or accredited assessment of the property and recommendations about the measures that could be undertaken, along with a clear indication of the potential cost saving or return on investment
- Second, a low cost loan or 'pay-as-you-save' scheme to help consumers meet the upfront cost, which can be a rational barrier to undertaking energy efficiency measures

- Third, a reward in the form of a tax rebate linked to the range of measures or scale of investment
- Fourth, a penalty in the form of an additional tax or increase over time in Council Tax if recommended measures are not undertaken.

While many are concerned about punitive measures, homeowners also feel that these would provide the most compelling reason to act. In the form of an additional tax this would also be more likely to tap into the cognitive biases, loss aversion, creating an impact beyond the value of the charge and representing a powerful motivator to change behaviour.

*'You have to facilitate it, people need access to funds. If that was the regime and they offered you an interest free loan, then fine.'*

Older, Rural, Solid wall house

*'You could put a time on it, so by 2020 all houses need to be up to this standard, and if you haven't by then you'll see your council tax bill go up.'*

Older, Rural, Solid wall house

*'If I were to be charged for not making my home more energy efficient, then I would definitely look into means of improving it, but low cost or interest free loans would be needed.'*

Older, Rural, Solid wall house

It would also re-frame the issue from something perceived to be a low priority for the Government, who in this instance set the tone for consumer opinion, to something far more serious that needs to be a concern for everyone.

Consistency will also be important. It is evident that consumers have interpreted the changing attitudes of Government on the subject of climate change as an indication that this is no longer a serious issue, or not one that residents in the UK need to be concerned about.

*'I looked at solar panels last year, but think interest in that is going down and down. The government talks about looking at energy, but they're not really interested, it comes down to the householders.'*

Older, Suburban, Cavity wall

*'They had this big thing around solar panels though, "you pay this much and then we give you money for any energy you don't use" and then a short time later they dropped what they give you down to next to nothing, so they have filled us with false promises.'*

Older, Rural, Solid wall terrace

The combination of incentives that inform, enable, reward and then penalise those who fail to act, also feels fair and reasonable for many. These would need to run over

a period of time – up to five years - in order to give homeowners a fair chance of implementing changes. However, making homeowners aware of the sliding scale of measures and the end point of an additional cost will be essential in creating impact and prompting action at an initial stage.

While it could be argued that the Green Deal already demonstrates that a loan based incentive would be ineffective, in this context it is the combination of other measures that would be central to the efficacy on the loan element. Furthermore, awareness and understanding of the Green Deal is extremely low and therefore not an accurate barometer for the ‘pay-as-you-save’ concept.

*‘I think you need to have a range of measures to appeal to a whole different bunch of people, and actually as well as cash, you do need a stick, because that is sometimes a powerful motivator for people to take action.’*

Older, Urban, Solid wall terrace

*‘I think if there was some sort of scheme that incentivised people at the outset, and then perhaps penalised them if they didn’t do what was made very easily available to them.’*

Older, Urban, Solid wall terrace

### **Creating a narrative**

Many are clear that the incentives alone will not be sufficient to drive change, and what has really been missing is a simple, clear, narrative about why homeowners should do these things.

Creating a simple frame of reference, or comparable example that consumers can easily relate to could be a powerful means of reframing the subject of home energy efficiency. The example that comes closest in the research is the current system of vehicle tax, whereby those with cars that have higher emissions pay the most and those with cars that have lower emissions pay the least, or nothing at all.

*‘I changed my car to have low tax and diesel, and it benefits me because I pay less in petrol and tax. I did it because I wanted to save money, and they need to sell this in the same way, make people aware that it does save you money. If you thought you could save £100 a month then you would do it.’*

Younger, Suburban, Cavity wall

While many comment that changing a car is very different from applying energy efficiency measures to a house, the principle of linking a tax to emissions has a simple logic that is now widely accepted. It is seen to influence behaviour and decision-making in terms of car purchasing. There is also evidence that some have gone to the trouble of calculating the additional cost of their current car with road tax and a new car with lower emissions.

*'I used to have a big old Saab gas guzzler, and then when all the emissions things changed my car tax was nearly £300 a year... we both sat down and worked it out, and it's had a really big impact.'*

Younger, Urban, Solid wall terrace

*'My other half sold his car last Christmas, and we only looked at new cars where the car tax was low.'*

Younger, Urban, Solid wall terrace

Furthermore, the fact that it is currently possible to avoid paying road tax altogether with the lowest emitting cars, means that any amount paid feels more like a loss and becomes another powerful motivator to consider lower CO2 as a factor when changing car.

Consumers do not see how their use of energy or waste of heat would impact anyone but themselves in the form of their energy bill. This would need to change through media and education and sit alongside the incentives in order to challenge perceptions and harness the power of social norms in driving behaviour change.

There is also a perception that if home energy efficiency is really about climate change and the Government meeting arbitrary targets, then Government should also meet all or part of the cost.

Currently, climate change is not considered to be the individual homeowner's responsibility. However, many did feel that a punitive measure would have an impact, begin to challenge this perception and re-frame home energy efficiency as an individual priority and part of a wider social responsibility.

*'My gut instinct would be that it's down to the property owner, but in terms of working towards the environment, then the government should be involved somewhere along the line.'*

Younger, Urban, Solid wall terrace

*'I think they should share the responsibility, because at the end of the day, they want to bring the greenhouse gases down and make us more efficient, so they need to give us a bit of a leg up.'*

Older, Suburban, Cavity wall

### **Affordability of energy efficiency measures**

There is a concern about what would happen with those who could not afford the expensive energy efficiency measures and if they would be left behind or penalised further. This concern is universal, being spontaneously raised by people from all different groups: older and younger; urban and rural; more and less affluent.

Consumers want to avoid the situation where only the well off can afford the energy efficiency measures and therefore be rewarded, while the least able to pay are penalised.

Homeowners want the measures to be means tested in some way in order that those with least money would get more support, possibly in the form of grants, or an exemption from a penalty or additional tax.

*'If you don't earn enough or you don't have a lot of spare money then you are going to get penalised and it's not your fault... It would incentivise you though.'*

Younger, Urban, Solid wall terrace

*'It will change people's behaviour, but it's not fair.'*

Younger, Urban, Solid wall terrace

However, some also feel that once the policy has been in place for a period of time, it would become the accepted norm, in the same way other penalty incentives have.

*'But then in 12 months time everyone would just accept it like they have the 5p bag thing.'*

Younger, Urban, Solid wall terrace

### **3.8.8. Finding trusted tradespeople and providers**

Many homeowners confirm findings from the desk research that finding reliable tradespeople would be a factor in their decision-making and a potential barrier to taking up energy efficiency measures.

In the South East, this is felt to be a particular issue, with a perceived shortage of tradespeople. There are also anecdotal examples of consumers finding that tradespeople are not interested in undertaking small scale projects.

Many feel that in addition to the incentives discussed in the research, the initiative would require an organisation to administer and organise it and become the trusted owner of reliable information. This would include a database of accredited providers and tradespeople. Ideally, these would include customer ratings, tapping into the desire for word of mouth recommendation, widely accepted as the most influential and reassuring means of selecting a provider.

*'Fed up and confused, that is what I feel like at times. Confused whether to go ahead and the difficulty in trying to get hold of people to do the job, trying to get appointments for when you're not at work, trying to get through to someone to speak to not just an answering machine, all just annoying.'*

Older, Urban, Solid wall terrace

### 3.8.9. Administering the home energy efficiency initiative

The concept of a not for profit organisation overseeing or administering the initiative is highly appealing, both to give it credibility and also to give consumers confidence in associated messages around home energy efficiency.

There is a clear preference to avoid energy providers or private business as consumers feel there would be every opportunity to turn the scheme into a moneymaking venture at the cost of the homeowner.

Few feel they would trust a Government body due to the lack of consistency of related policies in the past and a consequent lack of confidence among consumers.

*'It's muddled, every government has a muddled and confused energy policy.'*

Older, Rural, Solid wall house

*'There are lots of handouts for different people, and that includes businesses who get subsidies for energy efficiencies, and then they did that for us and so people rushed to do it, but it might have been a bit too generous, and so now they have had to go the other way, which makes it a disincentive. There is no joined up thinking, it's all about trying to get in the next election, it's weary. I am fed up with politicians telling you a load of crap or going back on what they promise.'*

Older, Rural, Solid wall house

Several participants in each session spontaneously commented that Citizens Advice would be good 'owner' of the initiative, having a strong reputation as a source of reliable, professional and specialised advice and with the coverage to manage deliver an initiative of this scale.

Having a physical presence with the opportunity for consumers to meet and discuss the issue also added confidence, in context of the complexity and confusion around the subject of home energy efficiency. For many, however, it would be enough that Citizens Advice provided a database of accredited assessors and suppliers.

Some also commented, however, that Citizens Advice are over-stretched already and questioned how they could accommodate further responsibilities.

Comments explaining why homeowners mentioned Citizens Advice included the following:

*'They have a range of subjects they cover.'*

Older, Urban, Solid wall terrace

*'They would have researched it, so you know that who they tell you to go to will be trustworthy.'*

Older, Urban, Solid wall terrace

*'I would trust them, because they are independent.'*

Younger, Urban, Solid wall terrace

*'They are well respected, they provide a good service for people who don't have access to lawyers and they are independent.'*

Older, Rural, Solid wall house

Some suggest that the local authority could play a role in delivering the initiative, having a good knowledge of the local area and representing a physical presence and a means of redress if anything should go wrong. Raising this as an issue demonstrates how wary many are about energy efficiency measures and providers.

*'Local authority, because they have got contact with everyone and they know the local community.'*

Younger, Urban, Solid wall terrace

*'You need someone that you can go to if anything goes wrong, you need that back-up.'*

Younger, Urban, Solid wall terrace

Other organisations mentioned included The Environment Agency, and Government or Government websites. Some feel this would be a logical starting point if they are independently researching energy efficiency incentives.

Several suggest energy providers may be well placed, commenting that this was more their expectation than their preference.

*'Are energy companies going to do that though? They are in the business of making money.'*

Older, Rural, Solid wall house



## **4. CONCLUSIONS AND RECOMMENDATIONS**

### **Home energy efficiency**

Home energy efficiency as a subject has little interest for consumers, nor is it a priority in the context of home improvements.

Many come to the subject either believing they already have the measures they need at home, or considering they don't need them in the context of a warm enough home and manageable energy costs.

While many feel aware of the basics of home energy efficiency measures, little is understood about many aspects, or what homeowners could or should do to improve energy efficiency.

Home energy efficiency is considered confusing and opaque, with many unsure about the efficacy or real return on investment of the measures.

The sector has been further undermined by the hard sales and marketing over-claims of some providers, leaving consumers wary of communications, no matter what the source.

It will therefore be important to simplify the subject and enable consumers to feel they can make a 'good' decision, quickly and easily, based on impartial and reliable evidence, tailored to their home.

A perception of inconsistent Government policy and constantly changing regulations and incentives has left many feeling cynical about their individual responsibility in reducing home energy.

Few relate home energy usage to the wider environment or climate change, or feel a social responsibility to take up energy efficiency measures. Some are protective of their right to do what they wish in their own home and use the energy they pay for as they choose.

Following the group discussions, the reflector interviews demonstrate that little has changed for consumers who have gone back to their everyday lives, where other priorities and concerns have eclipsed the subject.

Crucially, the subject of home energy efficiency is missing a narrative to support a clear, compelling rationale for homeowners to consider efficiency measures. Many feel this would be as important as the incentives themselves to establish the individual and wider social benefits of home energy efficiency.

### **Incentivising home energy efficiency measures**

Individual incentives are not considered sufficient to drive behaviour change. However, a combination of incentives is felt to provide a more persuasive narrative and rationale to act:

1. **Assessment:** a professional assessment of the property, with clear numerical data to support recommendations and administered by an independent or not-for-profit organisation. This would be supported by case studies or comparable examples that would assure homeowners that they would see a return on their investment and would feel the benefit of comfort or increased warmth
2. **Enablement:** 'pay-as-you-save' or low cost loans so that households would be able to meet the upfront cost of measures and align this with the anticipated return on investment in the form of energy saving
3. **Reward:** in addition to reduced energy costs, a reduction in Council Tax or some form of rebate for installing measures is considered to provide an extra incentive and initial impact
4. **Penalty:** an additional tax or increase in Council Tax if recommended measures are not undertaken, on a sliding scale similar to road tax, but linked to ability to pay and the type of property.

A tax rebate also has a greater impact than a reduction in energy bills that have been accommodated and normalised by homeowners.

The penalty element is considered key to creating an imperative and re-framing the subject as one that is being taken seriously by Government, but also should be taken seriously by homeowners. This element creates an impact and imperative that may be necessary to challenge the entrenched attitudes and inertia that prevails.

Many were critical of the Government in context of energy efficiency, suggesting that policy and incentives are inconsistent, leaving many consumers wondering who or what to believe.

While some reject the entire concept of a penalty, many feel then it would be acceptable and effective if certain conditions were met. This includes, clear sign-posting, sufficient time for homeowners to undertake reasonable measures to avoid it, tailoring to the age of the property and ability to pay. However, the loan element will be essential to accompany any penalty, in order to ensure the initiative is fair and enables those without access to sufficient funds to apply energy efficiency measures.

### **Delivering the initiative**

Many feel the ideal would be for an independent, not for profit organisation (or groups of organisations) to administer and communicate a new home energy efficiency policy.

Many would also like to see this entity hold a database of accredited providers and tools to help them assess their needs, or access to professional assessors free of charge.

Citizens Advice is spontaneously suggested as a possible provider, having the trust and confidence of participants, as well as the reach and the professionalism to deliver such an initiative, or do so alongside other similar not for profit organisations.

# **APPENDIX A**

## **Research Methodology**

# 1. METHODOLOGY

The research mode and the sampling structure are outlined in the main body of the report. This appendix sets out further details of the methodology.

## 1.1. Sampling structure and quotas

The workshop structure is set out in the table below.

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Town	Watford	Watford	Penarth (Cardiff)	Penarth (Cardiff)	Norwich	Norwich
Location	Urban	Urban	Suburban	Suburban	Rural	Rural
Property type	Solid wall terraced	Solid wall terraced	Cavity wall detached or semi detached	Cavity wall detached or semi detached	Solid wall detached or semi detached	Solid wall detached or semi detached
Participant age	45+	18-44	18-44	45+ with 50% aged 45 to 55	45+ 50% aged 45 to 55	18-44

The workshops dates were:

- Watford: Tuesday - 9th February 2016
- Penarth (Cardiff): Thursday - 11th February 2016
- Norwich: Tuesday - 23rd February 2016.

Following the initial workshop with participants aged 45 and over, a quota was added to ensure half of participants in the other over 45's groups were aged between 45 and 55 and half aged 56 or above.

Twelve reflector depth interviews were held the week after the workshops. These were structured to achieve a spread of attitude and experiences revealed in the workshops:

- 2 from each workshop
- 50% aged under 45 and 50% aged above 45
- 50% previously tried to be energy efficient, 50% had not tried
- 50% less inclined to be energy efficient in the future, 50% more inclined

## **1.2. Recruitment and incentives**

### **Recruitment**

Participants were recruited face to face. This was because participants from certain property types were required (eg detached, semi detached and terraced) and age (eg pre-1993). These were more readily identified in the field, rather than by telephone or web based recruitment methods.

In order to ensure that there was random selection within this approach, recruiters approached every 3<sup>rd</sup> property that appeared to be in scope based upon its apparent age and type. The exception to this was in the rural groups which were recruited from rural locations outside Norwich. In this case either every 2<sup>nd</sup> or every presumed in scope property was approached, dependent upon the scarcity of properties in the area.

### **Incentives**

Workshop participants were given up to £70 to thank them for their time, dependent upon the elements completed:

- £10 for completing the pre-task
- £50 for the extended workshop session
- £10 for a reflector interview.

## **1.3. Pre-workshop questionnaire**

Each participant completed a short questionnaire in the week prior to attending the workshop sessions. This was designed to explore general attitudes and behaviour in relation to energy efficiency and incentives in general.

Attitudinal questions were used to avoid prompting participants to over-claim their attitudes or beliefs around the subject. They 'disguised' the subject of energy efficiency by placing questions and statements in the context of other lifestyle choices and behaviour. This ensured that actual versus claimed behaviour was captured, participants were not asked complex questions 'cold', or relying solely on recall, reducing the risk of post-rationalised attitudes and behaviour in the groups

The high level findings from the pre-workshop questionnaire analysis have been included within the main body of the report, with more detailed findings included within Appendix D.

## **1.4. Workshop group discussions**

Consumer groups and workshops were felt to offer a number of distinct benefits above other approaches:

- more time with respondents enabled exploration of perceptions, opinions and behaviour in more depth
- the workshop approach allowed participants to come together to generate ideas or co-create their vision of an ideal customer journey or experience
- the researchers were able to share hypotheses with consumers, test reactions to proposition ideas and develop these further during each session, developing our thinking as the sessions progress
- participants worked together in smaller groups to develop their own responses to address higher level objectives, turning the research into strategy development and encouraging consumers to take ownership of the broader objective of incentivising behaviour change around energy efficiency measures

Each session lasted two hours and comprised an average of eight participants. This ensured a positive group dynamic could be maintained without the sessions becoming too unwieldy. It also enabled participants to split into smaller groups to develop ideas and evaluate incentives.

### **Projective and Enabling Techniques**

Because consumers are not always in touch with their own views on a subject, their reasons for decision-making, or their emotions about a subject, a range of enabling and projective techniques were used throughout the workshop sessions to help us unlock insight and meaning.

## **1.5. Reflector depths**

These short conversations are typically very revealing when used in this way. The participants have gone back into the real world and their everyday lives and they automatically reflect on what was discussed in the research. Sometimes, this reality means their views develop or change – what seemed important in the research environment may seem less so on reflection.

They also talk to partners and peers and recalling what they have said can be hugely revealing – an indication of the elements of the subject that really resonate.

Questions put to participants included:

- what they recalled from the sessions
- anything they had discussed with peers / partners or friends
- if their attitudes towards energy efficiency measures had changed or developed
- any actions they had subsequently taken

- which incentives they felt would have the greatest impact
- anything they think they would do differently next time they are faced with making a decision about energy efficiency measures.

### **1.6. Quality standard**

The research was undertaken in accordance with the market, opinion and social research international quality standard ISO 20252.



# **APPENDIX B**

## **Discussion Guide**

## CA Energy Efficiency Research Workshop Group Discussion Guide v6

### Over-arching research objectives are to explore:

- What would work best and what does not work well in the design of incentives to encourage consumers to install energy efficiency measures, and for what reasons.
- Principles for the design of effective, long-term, sustainable drivers of consumer action on energy efficiency, based on consumer insight.
- The findings will set out a series of principles which can be used to assess and prioritise a range of different possible incentives and policy approaches, including the stamp duty based incentive and council tax.

### 1. Introduction: moderator (5mins)

- Welcome to the session / Introduce self
- About the groups: purely market research, just want their honest views and opinions about some ideas for new products and services
  - o There are no wrong or right answers
  - o All views are valid – we are not looking for a consensus – if they hear something and have a different view, please tell us
- Housekeeping: facilities & refreshments
- Timing of the session: Two hours
- Confidentiality:
  - o Information is combined with others
  - o We are audio / video recording to save making notes
  - o From time to time we might want to capture short clips on video camera as well – these will be used purely for research purposes and to bring the research to life for those who can't be here, and will not be shared beyond the research team and the contractors, and not shared online or elsewhere

### 2. Introduction: participants (5mins)

- Name
- Occupation
- Household composition
- How they would describe their home / how long lived there / likes dislikes about the house itself / anything they would change

### 3. Energy Efficiency Evaluation (15 mins)

- What do you feel about Energy Efficiency measures for your home

**If necessary, share a short definition:** Measures here means permanent improvements to your home that will make it more energy efficient...

**Hand out a copy of the Blob Tree and ask:** Circle the character that best reflects how they feel when they think about '**Energy Efficiency for their home**' in relation to their own home, and write a few words about why this character and what it means to them.

- Discuss findings
  - o Where do they see themselves on the tree and why
  - o Is there anywhere they would like to be – what stops them
- What in particular makes them feel this way about Energy Efficiency for their home
- Is there anything that would make them feel differently

#### **Explore general attitudes:**

- Do they have any unmet needs in terms of knowledge or information
- Is there anything about what they hear in the media or from other sources that influences their views of Energy Efficiency for their home
- Have they ever considered undertaking energy efficiency measures
  - o Reasons why / why not
  - o Have they considered more than one measure
  - o How do they choose between them
- How do they feel about the decision whether or not to invest in energy efficiency measures
  - o How easy or difficult does it feel
  - o What would they need to know (write on flipchart)
  - o What else in life does this decision feel like
- If they could make one EE change or improvement to their home, what would it be - reasons

**Hand out self-completion task** designed to gauge levels of interest / engagement and ask each participant to indicate where they are on this scale

- Discuss reasons for rating
- How big a barrier to action do they think this might be

**Hand out sentence completion exercise:** 'I would invest in energy efficiency measures for my home if....' Ask participants to complete the sentence and then discuss what they have written in the group

- What are their main considerations
- What would they need to know to make this decision
- What are the barriers and triggers
- What, if anything could be done to address any barriers

#### 4. Energy Efficiency Measures (15 mins)

*[Card sort exercise: Lay out a range of Energy Efficiency measures on A4 cards (including sort explanation / visuals and ask respondents to sort them according to how they feel about each one, and focusing on those they are more / less confident about / interested in, and reasons why]*

- Discuss the measures
- What do they understand by each one
- Have they ever considered or taken up these measures
  - o Reasons why / why not
  - o Explore triggers / barriers for each one
  
- Which measures are the most / least motivating – reasons
- Which do they perceive to increase / decrease value of the home
- **Why do people undertake these measures – what are the perceived drivers**
- How could any potential barriers be overcome
- What else would they need to know
  
- **Have they ever seen or heard about incentives to take up these measures**
  - o Which can they recall
  - o How did they respond to these

**If necessary, prompt with possible barriers on sort cards** and ask participants to place them according to influence on decision-making (place in three groups: no influence; some influence; a big influence)

#### **Once placed, ask:**

- Which barriers do they think have the most influence – reasons
- How, if at all, could these be overcome
- Are there any incentives or ideas that would help address the barriers or sticking points
- **If cost raised:** can they think of any ways of addressing this
  - o Extent to which they work out the upfront cost vs. long term saving – if so, how do they do this
  - o In terms of cost, do they think long or short term
  - o What is the cost vs. benefit ratio
  - o OR is it more about upfront affordability
  - o How would they feel spreading the cost, e.g. pay as you save
- **If long term plans raised:** how do they feel about making improvements to a home they might sell
  - o Do they feel they are adding value to the property vs. paying for someone else to benefit
  - o Do they feel they should get some kind of rebate if they sell the house
  - o How would they feel if a loan for these measures was tied to the property and passed on to new owners
  - o To what extent does this issue result in procrastination / inaction

- **If trust / confidence raised:**
  - o Who do they trust in this context: private consultants / advisors; public sector / not for profit organisations; government; energy companies etc
  - o How important is WOM in this context
- **If continuity raised:**
  - o What are their perceptions of continuity in this context, in terms of cost or policy
  - o Extent to which mixed messages / changes in policy undermine decision-making

**Repeat the task for triggers / motivations. Once placed, ask:**

- How do these compare with the barriers
- Which, if any, address the main barriers raised
- What do they see as acceptable time period to save back the money spent

**Once completed, reveal an estimate of the cost for each measure and explore reactions**

- How does this influence perceptions
- Who do they consider responsible for paying for each measure
- Which measures would they now be most / least likely to consider

**5. General Incentive Evaluation (re-visit pre-task) (10 mins)**

- Which incentives have ever motivated them or influenced their behaviour in any way (list on flipchart)

***Introduce short definition of an incentive: 'an incentive is anything that motivates a person to do something'***

***Incentive card sort: Introduce general examples of incentives of different types (derived from desk research and from all sectors) on cards and ask respondents to arrange these according to those they consider most / least appealing***

- Discuss mapping
- What do they consider best / worst practice in terms of incentives
- Extent to which they work out the actual cost saving / value of incentives
- Any that they feel would or could apply to energy efficiency measures

**6. Energy Efficiency Incentive Evaluation (25 mins)**

- Have they ever seen or heard about incentives designed to encourage people to improve the energy efficiency of their home
  - o Probe: discuss those they recall
  - o How did they respond to them
  - o Anything they would change or improve

***Use flipchart: brainstorm any incentives they feel would encourage people like them to spend their own money on home energy efficiency measures***

**Introduce the incentives / principles / discussion points derived from the desk research and other sources, one at a time (observing strict rotation), for example:**

- low cost pay as you save loan schemes
- other low cost loan schemes
- grants or financial incentives
- property tax-based incentives
- variable stamp duty
- council tax rebate

**For each explore:**

- Reactions
- Likes / dislikes
- Extent to which this influences their thinking
- How the 'channel' for receiving the incentive compares to others (e.g. tax rebate vs. grant vs. pay as you save etc)
  
- **Draw out the different responses around rebates vs. penalties**
  - o **Probe: how do they feel about people's ability to pay for a penalty**
  
- **Explore why some taxes are different to each other**
  - o Probe: why do they accept differential rates for car tax
  - o How does this differ to their homes
  
- **Explore the practical realities of how they would and wouldn't react to different incentives**
  
- **Look out for contradictions made during the discussion:** benefits which were ranked highly, such as comfort, which sometimes appeared to be trumped by a monetary calculation and other times were not.

**Listen out for common contradictions and probe further as to why attitudes have changed, or what has made them state a different preference, for example:**

- **Liking measures with a clear payback, but not doing calculations of payback themselves.** Is this them just wanting trusted info, or an inconsistency in their thinking?
- **A liking for 0% loans – but the specific low cost option was not popular – probe further**
- **Who should pay/be responsible –**
  - o **Probe:** if it was an environmental saving, then should the government support – why?
  - o **In what circumstances is it appropriate for household to pay?**
  - o Here is would be useful to probe the **'Does it add value to your property?'**

### ***Explore specific issues:***

#### **Council tax**

- Do they know how much council tax they pay
  - o How **much discount would make them act.**

#### **Stamp duty**

- Explore house selling behaviours under stamp duty incentive
  - o Would it affect their behaviour – i.e. put them on / off a particular property
  - o **How people think this would influence them** when they sell their home
  - o **Is** thinking this far in advance even on their radar

#### **Loans:**

- What is the expectation around interest rate

#### **Grants:**

- How do they interpret these
- How credible do they seem
- Who are they for – people like them or someone else
- Extent to which they expect to be means tested
- Extent to which they can appear ‘too good to be true’

#### **To what extent does it affect the perceived value of a measure, if it had been subsidized or free in the past?**

- Probe: which measures
- For example, hearing about free loft insulation, does it make them less inclined to invest their own money / does it devalue loft insulation

#### **Tax rebate**

- Reactions to the different types of this incentive
- For example: one off benefit (stamp duty) vs. ongoing saving (council tax), and the relative size of each saving

#### ***Once all discussed, hand out self-completion ask participants to rate each incentive and explain rating.***

- Discuss ratings
- Which elements comprise best / worst practice
- Any incentives that they feel lend themselves to a particular measure or group of measures
  - o Which ones and reasons
- Do they prefer an incentive to link to a specific measure or grouped together within the EPC ‘umbrella’ (show image of EPC rating and example of incentive linked to a specific measure)
  - o Discuss reactions and preferences

## **7. Workshop task (20 mins)**

**Split the group into two sub-groups** and task them to build their own optimum incentive for either a group of measures or individual measures: how it would work; what they would say about it; how it would change attitudes and behaviour; which measures would it encourage people to take up.

**Moderator:** listen out for the discussion and debate participants have while completing this task, and values or priorities that emerge

**Once completed, ask each group in turn to present their poster / leaflet back to the other group**

- Discuss findings and reactions
- Which incentives do they consider most effective and why
- How would they describe the tone and language used to communicate the incentive
- Would what they have created persuade them – reasons why / why not

**Ask them to imagine this was Dragon's Den and they had the opportunity to invest in one of these incentives**

- Which would they choose and why
- How confident would they be about it being a success
- Is there anything that would stop them investing

## **8. Global Evaluation (10 mins)**

- What do they feel they have learned from the session
- How do they feel about energy efficiency measures per se
- Is there anything they have seen or heard that they feel would make them, or people they know, consider investing in energy efficiency measures for their home
- What advice would they give to a not for profit or government organization looking to develop an incentive to encourage people like them to invest in energy efficiency measures

**Vox Pops: ask each respondent in turn to sum up their views on video: how they feel about energy efficiency measures, and what they consider the best means of incentivizing people like them to install energy efficiency measures**

**Thank and close**



# **APPENDIX C**

## **Pre-Task and Show Material**



## Market Research Focus Groups Pre-Task

Thank you for agreeing to take part in this research. We want to reassure you it is purely market research – there are no right or wrong answers, we are just interested in your views and opinions on a number of topics.

Accent and Atticus are an independent market research agencies and we are conducting the research on behalf of a not for profit organisation, dedicated to providing information and advice to people in the UK. They are keen to understand the views of their consumers about a number of topics, including general lifestyle in your home.

As part of the research, and before we meet at the focus group, we would like you to complete the following questionnaire in as much detail as you can. Please don't worry if there are questions you can't answer, just do the best you can.

This will be a huge help for us – to understand your individual views and experiences – and it will also be the basis for our discussion in the focus group. You will be given £10 as a thank you for your time in completing this, in addition to the £50 we will give you as a thank you for attending the group discussion.

You can either print a completed hard copy with you to the focus group or complete an electronic copy if you were sent this by email and send it back to [matt@atticusresearch.co.uk](mailto:matt@atticusresearch.co.uk) <mailto:matt@atticusresearch.co.uk>  
<mailto:matt@atticusresearch.co.uk>

If you have any questions, please don't hesitate to contact Matt on 0781 339 8878 or at the aforementioned email address.

I look forward to hearing your views and meeting you at the focus group, where we explain more about the research and why we are conducting this study.

Kind regards

Matt

*Matt Dobbin*

*Researcher – Atticus Research Ltd, in co-operation with Accent*

**Your name:**

**The time, date and location of the focus group you are attending:**

**Part 1 – Your lifestyle**

**Q1a** Which of the following words best describe your lifestyle at the moment? Please **circle or highlight** the **three words that best** apply:

Relaxed	Busy	Stress-free	Expensive
Hectic	Happy	Comfortable	Laid back
Calm	Exhausting	Demanding	Fun
Stressful	Active	Tense	Quiet

**Q1b** And why did you choose these words?

**Part 2 – Your attitudes to incentives**

**Q2a** Do you currently have any loyalty cards or points based collections for any retailers, products or services, e.g. supermarkets, coffee shops, fuel providers, utilities providers & etc

Please write in all that you can recall collecting or signing up for, and a little about when, how and why you use these:

**Q2b** Can you think of anything scenarios where you have been **influenced to purchase a product or take up a service because of the incentive being offered by a retailer or service provider?** This could be anything at all, including vouchers, cashback or discounts.

Please write in all that you can recall collecting or signing up for, and a little about when and how you use these:

**Q2c** And which of the following have you ever been influenced by, in terms of your decision-making or behaviour in any way at all. **Tick or highlight** any that apply

- Store loyalty cards
- Coffee shop loyalty cards
- Offers and discounts for restaurants
- Cashback offers
- Bundles (where you save money by having more than one product or service with the same provider)
- Tax based incentives (for example, choosing a car with lower emissions in order to pay lower car tax)
- Social norms – things we do because many others do it, and it has become the accepted norm, for example, recycling rubbish
- Financial penalties – for example, the 5p charge for plastic bags
- Other (please write in):

**Q2d** An **incentive** is something that motivates an individual to perform an action. Thinking in general terms, and considering the examples suggested in the previous question, what types of incentives do you find tend to influence you the most? And why do you think that is?

### **Part 3 – Your home**

**Q3** Please consider the following statements and **indicate whether you agree, disagree or don't know.**

Please indicate your decision writing an 'x' or in the boxes below

	Agree	Disagree	Don't know
a) There's not much money left at the end of each month for extra expenses			
b) I am always looking at ways of improving my home			
c) I am more interested in making my home look and feel more comfortable, than investing in the things you can't see, like insulation			
d) Spending money on my home is not a priority for me, there are other more important things for me just now			
e) I would rather spend money on going out and holidays than on improvements to my home just now			
e) My home is very important to me and making it comfortable is a real priority			

### **Part 4 – Home Energy Efficiency**

**Q4a** What do you understand by the term 'Energy Efficiency' in relation to your home? What do you think this might refer to?

**Q4b** Which of the following energy efficiency measures **do you have already in your home?** Please tick or highlight any that apply, and write in any that are not listed:

- Loft insulation
- Cavity wall insulation
- Solid wall insulation
- Draft proofing
- Under-floor insulation
- Double glazed windows
- Condensing boiler
- Efficient heating system
- Solar panels
- Heat pump
- Wind turbine
- Other - please write in:

**Q4c** Which of the following energy efficiency measures **did you install yourself, or pay to be installed, at your home?** Please tick or highlight any that apply, and write in any that are not listed:

- Loft insulation
- Cavity wall insulation
- Solid wall insulation
- Draft proofing
- Under-floor insulation
- Double glazed windows
- Condensing boiler
- Efficient heating system
- Solar panels
- Heat pump
- Wind turbine
- Other - please write in:

**Q4d** Which of the following energy efficiency measures **have you ever considered but not yet installed at your home?** Please tick or highlight any that apply, and write in any that are not listed:

- Loft insulation
- Cavity wall insulation
- Solid wall insulation
- Draft proofing
- Under-floor insulation
- Double glazed windows
- Condensing boiler
- Efficient heating system
- Solar panels
- Heat pump
- Wind turbine
- Other - please write in:

**Q4e** Which of the following energy efficiency measures **would you not install at your home?** Please tick or highlight any that apply, and your reasons for feeling this way:

- Loft insulation
  
- Cavity wall insulation
  
- Solid wall insulation
  
- Draft proofing
  
- Under-floor insulation
  
- Double glazed windows
  
- Condensing boiler
  
- Efficient heating system
  
- Other - please write in:



**Q6a** Thinking about the home energy efficiency measures described here, what would happen if you **did invest** in these for your home?

**Q6b** What would happen if you **did not invest** in these home efficiency measures?

**Q6c** And **what stops you** investing in these home efficiency measures?

**Q6d** If you wanted to incentivise someone such as yourself to invest their own money in improvements to make their home more energy efficient, how would you do this? What kind of incentive would be most effective?

For the purposes of this part of the questionnaire, the term 'Home Energy Efficiency' means *permanent improvements to your home, to make it more energy efficient, including:*

- *Loft insulation*
- *Cavity wall insulation*
- *Solid wall insulation*
- *Draft proofing*
- *Under-floor insulation*
- *Double glazed windows*
- *Condensing boiler*
- *Efficient heating system*

**Q7** Please consider the following statements and indicate whether you

agree, disagree or don't know by putting an 'x' or highlighting in the box below and over the page.

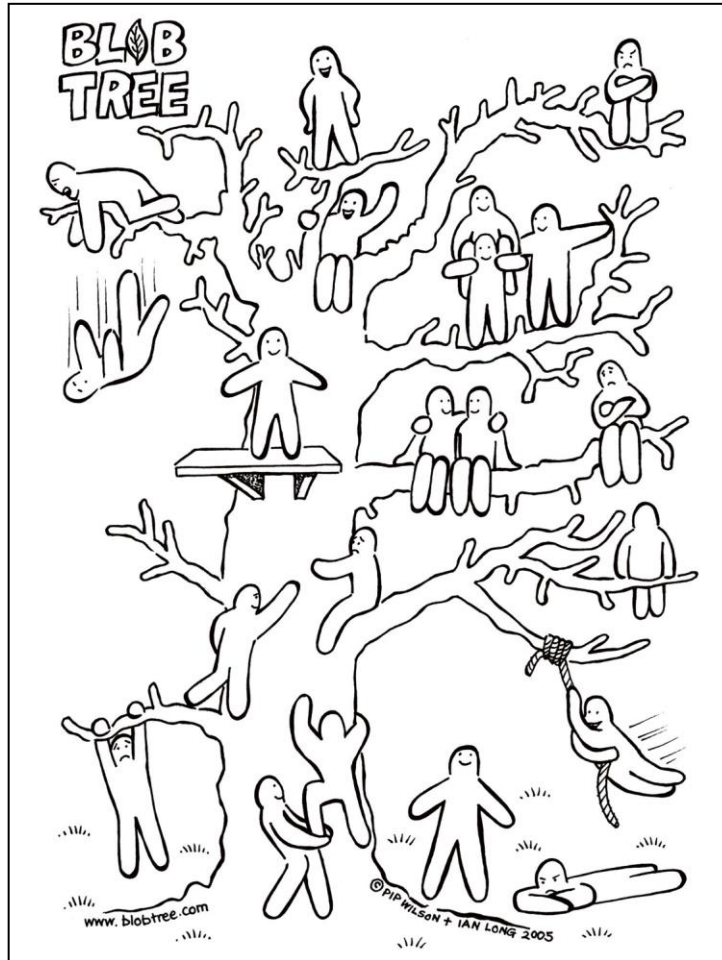
	Agree	Disagree	Don't know
a) I think there are real savings to be made improving the energy efficiency of my home			
b) I am not really sure what I could or should do to improve the energy efficiency of my home			
c) Anything to do with improving my home's energy efficiency will be expensive			
d) If I knew what I could do and how much I would save, I would be more likely to invest in energy efficiency measures for my home			
e) There are confusing messages in the media about energy efficiency for people's homes			
f) I know there is more I could do to make my home more energy efficient, but it's not a priority right now			
g) I am worried that making my home more energy efficient will cost me more than I will save in the long run			
h) I think there are real benefits for me in improving the energy efficiency of my home			
i) I would be more inclined to make energy efficiency measures if I could borrow the money to do these at a low or 0% interest rate			

	Agree	Disagree	Don't know
j) My home being warmer is more important to me than saving money on heating bills.			
k) I think that free or subsidised offers for insulation and other energy efficiency measures might be lower quality compared to those you pay for yourself			
l) I would be more inclined to invest in home energy improvements if this meant I qualified for a tax rebate			
m) I would be happy to borrow the money to make my home more energy efficient if the repayments were affordable			
n) Having to spend my own money upfront puts me off investing in home energy improvements, even if there are long term savings to be made			
o) I knew more about what could be done to improve the energy efficiency of my home, I would give it more serious consideration			
p) I don't trust the energy companies or organisations who are involved in recommending energy efficiency measures			
q) I think it should be every homeowners priority to make their home as energy efficient as possible			
r) I had friends or relatives who had benefitted from making energy efficiency measures, I would be more likely to look into it myself			
s) I've seen offers for free or subsidised energy efficiency measures but I think these are too good to be true			

**Thank you for completing this pre-task. Please either email it to [matt@atticusresearch.co.uk](mailto:matt@atticusresearch.co.uk) or print it and bring it with you to the sessions. We look forward to seeing you then!**

Blob Tree

# Blob Tree



## Energy efficiency incentives summary

Please click on the first show card to view all

An **incentive** is something that motivates an individual to perform an action.

Many organisations: businesses, not for profit organisations and even governments might use an incentive to persuade us to take a particular action.

## Rating of energy efficiency incentive ideas

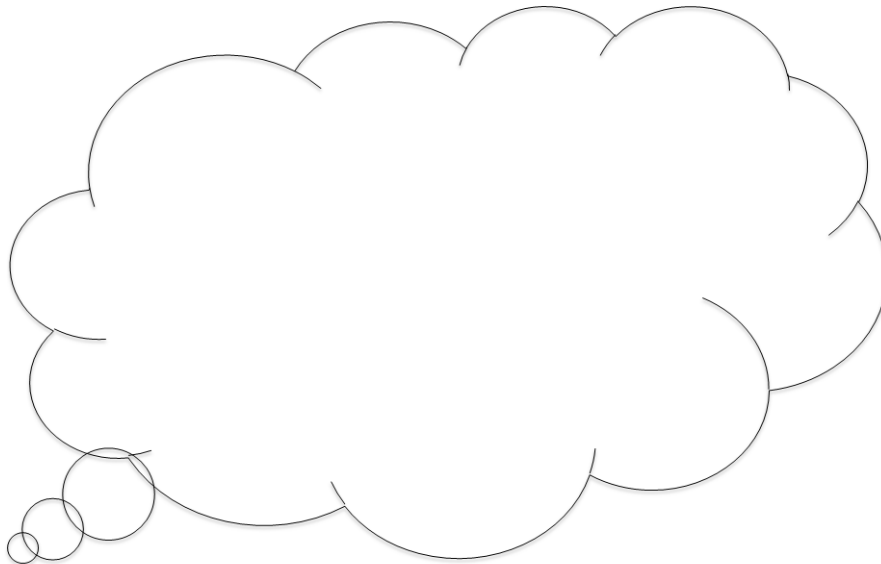
Please rate the incentive ideas according to whether you think they would influence your decision whether or not to make energy efficiency measures to your home, where 1 = not at all likely to influence and 5 = extremely likely to influence. Please circle the number that best applies and include a short explanation about why you have rated this way.

		1	2	3	4	5	
	Not at all likely to influence						Extremely likely to influence
Low cost pay as you save loan scheme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
							_____
A low cost loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
							_____
Variable stamp duty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
							_____
Council tax rebate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
							_____
An additional tax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
							_____
Grants or financial incentives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
							_____

## Sentence completion exercise

Please complete the following sentence in the thought bubble below. Feel free to write as many comments or endings to the sentence as you like.

***“I would invest in energy efficiency measures for my home if.....”***



## Energy efficiency measures

Please click on first show card to view all

### Loft Insulation



Loft Insulation can be fitted into your loft, attic or flat roof; the fitted wool material helps to prevent the movement of heated air escaping. Loft insulation is fitted between the joists on the loft floor, or roof insulation is located between tiles and the rafters. If you use your loft as a living space, roof insulation is an alternative.



**Sort card exercise: Barriers to taking up energy efficiency measures**

**Please click on the first show card to view all**

Cost

Hassle

Lack of interest

Other priorities

Disruption to home

Waiting in for  
tradesmen

Finding reliable  
tradesmen

**Sort card exercise: Triggers and motivations for energy efficiency**

**Please click on the first show card to view all**

Money saving

Comfort (warmer /  
more consistent  
warmth)

Health

Social Norms

Avoiding waste

Being 'Green'

Cutting carbon  
emissions

## Energy efficiency measures definition

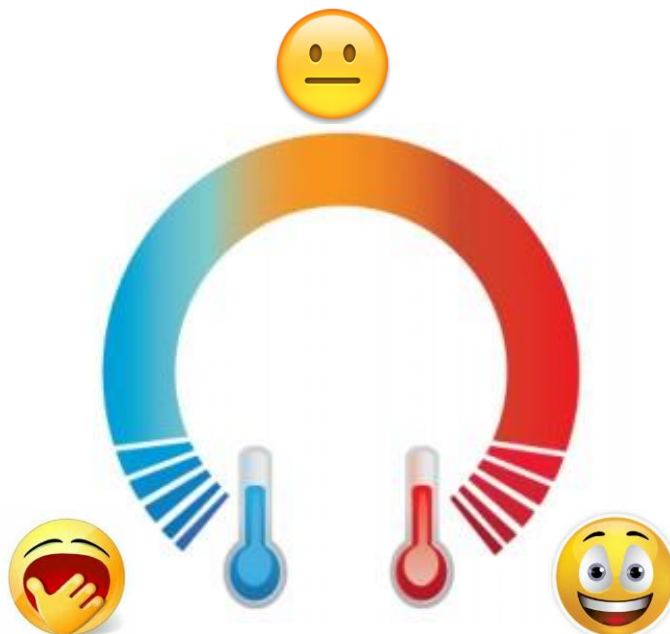
Measures here means permanent improvements to your home that will make it more energy efficient, including:

- Loft insulation
- Cavity wall insulation
- Solid wall insulation
- Draft proofing
- Under-floor insulation
- Double glazed windows
- Condensing boiler
- Efficient heating system

## Energy efficiency engagement rating

The diagram below represents interest or engagement – the red and the happy emoticon the most interested or engaged, and the blue and the yawning emoticon, the least engaged or interested.

Please write an X on the semi-circle according to how interested or engaged you feel about the subject of energy efficiency measures for your home.



## **Sort card exercise: general incentives**

Store loyalty cards

Coffee shop loyalty cards

Offers and discounts for restaurants

Cashback offers

Bundles (save money by having more than one product / service with the same provider)

Tax based incentives (for example, choosing a car with lower emissions in order to pay lower car tax)

Social norms – things we do because many others do them, e.g. recycling rubbish

Financial penalties – for example, the 5p charge for plastic bags

**Detailed energy efficiency measures**

**Please click on the first show card to view all**

EE Incentive materials for  
workshop task

## Energy efficiency incentives sort cards

Please click on the first show card to view all

### **Vehicle Excise Duty (aka Road Tax)**

Using emissions to calculate cost, from £0 in Band A to £490 in Band

### **Cashback**

Companies give you a cash rebate on a purchase

### **Loyalty rewards**

Companies that give you points each time you make a purchase

## Energy efficiency incentives: grants, loans and taxes

Please click on the first show card to view all

### **Low cost pay as you save loan scheme**

A loan that is attached to your energy bill. If you moved property the loan could pass to the next resident.

The loan would cover measures where the expected energy they save would be larger than the cost of the loan repayments.

You would have an assessment to recommend these measures. The interest could be 0% or between 0% and 1%.



# **APPENDIX D**

## **Desk Research Report**



## Literature Review

### Desk Research to Inform Consumer Research

February 2016

Prepared by:

Delta-ee & Accent

Prepared for:

Citizens Advice  
3<sup>rd</sup> Floor North  
200 Aldersgate  
London  
EC1A 4HD

---

Contact: Miranda Mayes  
E-mail: [miranda.mayes@accent-mr.com](mailto:miranda.mayes@accent-mr.com)  
Tel: 0131 220 2550

Contact: Peter Broad

File name: 2964rep01\_v3.docx



Registered in London No. 2231083  
Accent Marketing & Research Limited  
Registered Address: 30 City Road, London, EC1Y 2AB

## CONTENTS

1.	INTRODUCTION.....	1
1.1	Background .....	1
1.2	Research objectives.....	1
1.3	Method.....	1
2.	FINDINGS.....	3
2.1	Introduction .....	3
2.2	Themes in the Literature.....	3
2.3	Policy Specific Themes .....	10
3.	Principles for consumer research .....	13
3.1	Landscape Map .....	13
1.	Findings from the pre-task.....	1
1.1	Background .....	1
1.2	Nature of the sample .....	1
1.3	Attitudes to their home .....	2
1.4	Awareness of and attitudes towards energy efficiency measures.....	3
1.5	Uptake of energy efficiency measures.....	6
1.6	Attitudes towards incentives in general .....	6
1.	Findings from the Tele-depth Reflectors.....	1
1.1	Background to the reflector interviews .....	1
1.2	Summary of the reflector research findings .....	1

Appendix C1: References

# 1. INTRODUCTION

## 1.1 Background

This report concludes a desk review of existing literature on consumer (householder) attitudes towards energy efficiency measures and towards policies or incentives to encourage those measures. The desk research has identified themes and principles in the existing literature on householder attitudes to energy efficiency incentives; these themes and principles will be challenged in primary focus group research that will follow.

## 1.2 Research objectives

The whole project will provide the evidence – based upon real consumer attitudes and behaviour – to inform Citizens Advice’s advocacy on DECC’s energy efficiency policies, particularly the successor to the Green Deal and related incentive schemes. It will enable Citizens Advice (and other organisations) to advocate policies that reflect consumer needs and wants, enabling a wider uptake of energy efficiency measures, as well as value for money for bill- and tax-payers.

This desk review identifies themes and principles that emerge from the existing literature. These include aspects of **householder motivations** (to install, or not install, energy efficiency measures), **barriers** to installation, and some discussion of consumer **trust and confidence** in relation to efficiency measures and to organisations promoting those measures.

Many of the papers reviewed analyse particular **policy options** such as grants, loans or tax rebates. Behavioural aspects of these analyses have also been presented in the Findings section. This desk research report does not present explicit policy suggestions or critiques.

## 1.3 Method

The subject of energy efficiency scheme design has been analysed in many studies – from policy makers, policy influencers, academia and others – in the UK and internationally. We have analysed a selection of these reports, focussing on those *published most recently* and those focussing *on consumer reactions* to schemes. The review deals primarily with building fabric energy efficiency interventions (such as insulation, glazing and draft-proofing) but also considers other consumer decisions relating to home energy use (such as the upgrade of heating systems or light bulbs). Reference is made to work on related consumer decisions, such as white-goods purchase or installation of solar panels.

Most literature reviewed is published by public sector or third-sector organisations, for a mixed audience. Academic papers have been referenced in only a few cases

(although many reports that have been reviewed draw heavily on academic research). In the bibliography (see Appendix C1), literature that has been reviewed in depth is marked in bold. (Other papers have been reviewed less intensively, or referenced via primary sources.) All literature reviewed refers primarily to the situation in the UK (including, separately, England and Scotland), although many papers refer to learnings from elsewhere.

The desk research is not meant to be an exhaustive study of all previous work in the field; rather it has been completed to provide an overview and in order to develop themes and principles that can be explored and challenged in the focus group sessions to follow. This literature review was undertaken between 15 December 2015 and 15 January 2016 and should be read in conjunction with the Final Report on *Driving Installation of Energy Efficiency Measures* published in March 2016.

## 2. FINDINGS

### 2.1 Introduction

This chapter presents themes and principles that have been extracted from referenced papers and suggests how these themes could be relevant for energy efficiency incentive design. A final section presents themes and principles more specifically related to policy measures: **grants, loans** (including **pay-as-you-save** schemes) and **tax rebates**.

The following chapter presents a conceptual map of the themes and principles, attempting to draw out some of the connections (and contradictions) that could be explored in the focus group sessions to follow.

### 2.2 Themes in the Literature

#### Introduction

Three overarching themes have been identified:

- **Barriers** to the installation of energy efficiency measures in homes
- **Motivations** of householders for installing energy efficiency measures. Principles from research on **marketing** of energy efficiency incentives has been presented here
- **Trust and Confidence**: generally issues about *lack of* trust and confidence impacting negatively on householder decisions about energy efficiency

Each of these is discussed in turn. Ideas or concepts that could be challenged or tested by focus group research are presented in italics.

#### Barriers

##### Cost

All of the literature reviewed recognises difficulties with the *cost* of energy efficiency measures as the fundamental reason why energy efficiency options have not been taken up in many homes. In cases where the benefit-cost ratio of a measure is clearly positive (such as loft insulation that will pay back in 3-4 years<sup>1</sup>), the issue is *up-front cost* and *affordability*.

Energy efficiency incentives such as grants and pay-as-you-save schemes aim to deal directly with the issue of up-front costs. The literature alludes to aspects of consumers' *willingness to pay*<sup>2</sup> for different measures (see below, 'Motivations') and also their

---

<sup>1</sup> Dowson et al, 2012. Table 3. (3-4 years is the estimated payback if zero loft insulation is present beforehand)

<sup>2</sup> Gilchrist & Craig for ClimateXChange, 2014

implied preference for *short-term benefit rather than longer-term benefit*<sup>3</sup>. There are questions about how the cost barrier to energy efficiency installations interacts with other barriers: several writers critique policy-makers for assuming that householders will always take *economically* rational decisions in terms of payback period or return on investment<sup>4</sup>. (This is a particular critique of the Green Deal's pay-as-you-save concept.) The concept of a *favourable exchange* which includes non-financial barriers/incentives and takes into account the preference for short term gain (or *avoidance of loss*), is proposed as an alternative framework<sup>5</sup>.

There is some evidence that *access to financial support schemes* can challenge assumptions about the costs of measures and act as an impetus for the uptake of home energy efficiency measures (beyond the actual quantum of support.)<sup>6</sup>

### **Hassle**

All research recognises *disruption to everyday use of the home, or hassle*, as a major barrier to uptake. It is the *perception of hassle* that is important. Much of the literature notes that uptake of the less disruptive retrofit options – cavity wall filling or insulation of empty lofts – has been fairly high over the past 10 years<sup>7</sup>. This has left a problem of *hard to treat homes*<sup>8</sup>.

Specific aspects of hassle are identified around *finding trusted tradesmen* (see below, Trust and Confidence) and details like *waiting in for tradesmen*. Waiting in for 3<sup>rd</sup> party energy assessors is also identified as a specific problem for incentive programmes that include an assessment phase<sup>9</sup>.

Some hassle factors are particular to specific energy efficiency measures. Many authors acknowledge that solid wall insulation or underfloor insulation are particularly disruptive. The concept of *Trigger Points* recognises that these major refurbishments are much more likely to be acceptable to householders at particular times<sup>10</sup>, such as:

- moving to a new home
- undertaking renovations or refurbishments in existing home
- replacing failing infrastructure (such as central heating systems, or windows)

This is backed up by evidence that people are generally not prepared to move out of their home for energy efficiency refurbishment unless there are health issues arising from energy loss or damp<sup>11</sup>.

---

<sup>3</sup> Consumer Focus 2012, and Policy Exchange reference to implied high discount rates amongst householders (personal communications with Policy Exchange 2015).

<sup>4</sup> Ricardo-AEA for ClimateXChange, 2015.

<sup>5</sup> Consumer Focus 2012

<sup>6</sup> Gilchrist & Craig for ClimateXChange, 2014. Quoting EST 2010 and others.

<sup>7</sup> Dowson et al 2012

<sup>8</sup> DCLA 2014

<sup>9</sup> DECC 2014a

<sup>10</sup> EST 2011, Gilchrist & Craig for ClimateXChange 2014, and others

<sup>11</sup> Project CALEBRE / Loughborough University 2013.

The loss of storage space in lofts is another disruption that has received attention, as well as the need to clear lofts before insulation can be fitted. An example of *hand-holding* by agencies promoting installation of loft insulation is *loft clearing services* that have been offered alongside loft insulation grants<sup>12</sup>.

There is reference in the literature to a very strong attachment of householders – perceived by some analysts as ‘irrational’ – to particular aspects of their homes, particularly period features. This creates an attitude-derived barrier to replacement of single-glazed windows to go with a practical barrier in the form of Listed Building status of many old houses. Project Calebre (2013) identified ‘a range of social and emotional barriers that can cause inertia or even halt energy efficiency refurbishment projects for many years’, and ClimateXChange (Gilchrist & Craig 2014) identifies *aesthetic concerns* as a barrier to external wall insulation. Some literature recognises a related tendency for many homeowners to consider their *home as their castle*: ‘emotions can run high when homeowners are faced with the idea of being *compelled* to make energy efficiency improvements’<sup>13</sup>.

### Tenure

A lot of research has looked at the energy performance of buildings under different tenures. There is general agreement that the performance of social housing is above average (driven primarily by quality standards specifically for social housing such as the Scottish Housing Quality Standard and aided by programmes targeted specifically at energy poverty.) Other research identifies a ‘*split incentive*’ in private rented properties as a barrier: the property owner has to pay for the energy efficiency measure but the tenant benefits from the energy bill savings.<sup>14</sup> Studies that do look into this suggest that renters are not prepared to pay significantly more rent for houses with retrofit energy efficiency measures installed.

Most research into householder attitudes has focussed on privately owned properties owned by the resident. Homes with shared infrastructure – flats – are recognised as ‘hard to treat’, partly because many flats are rented but also because inhabitants will have conflicting views on *who will benefit from shared payments*. (Lower floor inhabitants refuse to pay for loft insulation, for example.)<sup>15</sup>

Some of the research into trigger points, as well as other research, has identified *uncertainty about how long a family will stay in a property* as a barrier to more expensive (or longer payback period) energy efficiency measures. Pay-as-you-save incentives like the Green Deal have sometimes been tied to the property, not the individual, in order to pass on some of the cost if a household moves, but that has created perception problems about *tied-loans reducing the value of a property*<sup>16</sup>.

---

<sup>12</sup> DECC 2013, in Gilchrist & Craig for ClimateXChange 2014

<sup>13</sup> Gilchrist & Craig for ClimateXChange 2014

<sup>14</sup> Gilchrist & Craig for ClimateXChange 2014, quoting numerous others (p 13)

<sup>15</sup> Ibid

<sup>16</sup> DECC 2014a



### **Lack of awareness**

An obvious barrier to installation of energy efficiency measures is a lack of awareness of those measures. DECC undertakes regular large-scale surveys of public attitudes to climate change and energy issues which show that householders' awareness of loft and cavity wall insulation and double glazing is high (10% or fewer have not thought of it or heard of it). Awareness of solid wall or underfloor insulation is lower (around 40% have not thought about it or heard of it)<sup>17</sup>. ClimateXChange (2014, p6) points out that lack of awareness and familiarity is also an indirect barrier to deployment of measures: 'Some research indicates that people hold more positive attitudes towards measures they are more familiar with'.

Even where households do understand the options there is uncertainty about how measures will interact. (This is not surprising, as experts are not certain themselves (Project Calebre 2013)). Uncertainty about how measures will interact is just one reason why *householders often do not trust the energy and money savings predicted by energy efficiency assessors*.<sup>18</sup> (See later: Trust.)

Some sources also identify lack of householder *knowledge about existing insulation* as a barrier<sup>19</sup>. Lack of basic knowledge about the existing loft insulation in accessible lofts demonstrates that insulation is a low priority for some householders, with some apparently believing their homes are well insulated when they are in fact well below current standards<sup>20</sup>. Discovering whether a cavity wall is or is not insulated is a more practical problem.

Much literature on public attitudes to energy efficiency schemes laments the *lack of knowledge of support mechanisms for energy efficiency improvement*. ClimateXChange (2014) reports that 'a survey commissioned by Citizens Advice Service 2011 showed that around 1/3 of people in Great Britain do not know that support for installing insulation is available'. (This was at a time when grant supported or subsidised insulation was available to all households via the CERT scheme.) Literature assessing historic incentive schemes has also highlighted the importance of *continuity* – allowing householders time to become comfortable with a mechanism – and has repeatedly suggested that *complexity of policies* is a bad thing<sup>21</sup>.

## **Motivations**

### **Comfort**

'Our findings indicated that people's motivation to carry out refurbishments was not so much to save energy but rather the desire to improve comfort and the need to repair' (Project Calebre 2013, Note 5). Project Calebre was a multi-disciplinary research programme into household energy efficiency, and included social-science research into

---

<sup>17</sup> DECC 2014b, in Gilchrist & Craig for ClimateXChange 2014

<sup>18</sup> Policy Exchange, personal communications 2015

<sup>19</sup> Dowson & Poole 2012, referencing UKGBC 2008

<sup>20</sup> Ibid

<sup>21</sup> Multiple references in Ricardo-AEA for ClimateXChange, 2015

householder motivations for retrofitting energy efficiency measures (or for choosing not to). One of the core findings was that people are not motivated primarily by financial (or carbon) savings, but by the desire for comfort. (In the UK this is usually associated with *warmth, but also lack of damp*<sup>22</sup>). They also confirmed the suggestion in much trigger point literature that energy efficiency measures usually take place *when another refurbishment is happening* – identified in Calebre as either structural repairs or redecorations.

### Savings and value

Other literature tends to assume that *savings on energy bills* are the primary motivation for householders wanting to undertake energy efficiency measures. Most recognise, though, that motivations are complex and that desire for *value for money* (ie reasonable warmth per pound spent) might be a better description of motivations than the desire to save money. Much of the literature implies, while not stating explicitly, that householders like getting something back from government and will consider taking up a free government offer just because it is free.

The well documented '*rebound effect*' could be evidence of this desire for value, rather than savings per se<sup>23</sup>. This effect, also described as '*comfort take-back*', is when households react to better thermal efficiency of their house by increasing the heating time or thermostat setting, leading to increased comfort but **not** necessarily reduced bills<sup>24</sup>. Indoor warmth has become cheaper – better *value for money* – so householders are prepared to pay for more of it.

Much literature refers to the 'payback period' for efficiency measures<sup>25</sup>. Surprisingly little reference is made to what payback might motivate householders to overcome the barriers (and inertia) preventing retrofit. ClimateXChange (Gilchrist & Craig 2014) do refer to earlier work from Consumer Focus suggesting *0-5 years is preferred and up to 15 years is acceptable*<sup>26</sup>.

Other motivations for householders to undertake energy efficiency measures are *health issues* (or perception of health issues), particularly related to *damp*, and the desire to *reduce greenhouse gas emissions*. Most literature suggests that the desire to reduce GHG emissions is low down the priority list for householders.

---

<sup>22</sup> Shove 2003

<sup>23</sup> ie Consumer Focus 2012

<sup>24</sup> Or at least bills that are not reduced as much as expected. This phenomenon is clearly relevant to pay-as-you save schemes, as recognised in Policy Exchange 2015, Ricardo AEA for CXC 2014, and Gilchrist & Craig 2014 among others. Dowson et al (2012) quote DECC figures in which 75% of participants to a post-retrofit survey agreed their homes felt warmer and were easier to heat, but just 25% said they had seen a decrease in heating bills and 11% had seen an increase. (The authors appear sceptical of DECC's suggestion that rising energy prices are the explanation.)

<sup>25</sup> Dowson et al (2012) suggest periods ranging from 3 years for loft insulation (where none was previously present) through to 30 years for raised timber floor insulation. The payback period on replacement of single glazed windows with low-e double glazing is very high at 90+ years. Table 3.

<sup>26</sup> Laine 2011

Project Calebre (2013) makes the link between energy efficiency decisions and decisions on other aspects of house refurbishment, particularly re-painting (inside and outside) or re-roofing. The desire to improve the appearance of the home, while not directly related to energy efficiency measures, is associated in householders' minds with energy efficiency improvements. (Although other Calebre literature identifies particular issues with external wall insulation changing the external appearance of the home; a particular issue where period features are valued.<sup>27</sup>)

Some literature alludes indirectly to *social expectations and norms regarding warmth and appearance* of homes<sup>28</sup>. The implication is that householders are more likely to insulate and refurbish their homes if they perceive that friends and neighbours may look down on them if they do not.

### **Marketing themes**

Much of the consumer research on attitudes to energy efficiency has looked specifically at householder awareness of schemes and particularly attitudes to advertising campaigns<sup>29</sup>. Principles that emerge from this work include the principle that '*you are wasting*' (avoiding immediate loss) is considered a more effective message than '*you will save money*' (future savings)<sup>30</sup> and evidence that '*people hold more positive attitudes towards measures [such as loft insulation] they are more familiar with*'<sup>31</sup>. Consumer Focus (2012) also introduces the idea that energy efficiency measures are intangible to the householder and therefore hard to value: there is a suggestion that policy schemes *providing something tangible* (such as a carbon monoxide detector) alongside retrofit measures may '*overcome inertia*'<sup>32</sup>. *Targeting* of messages towards particular households (using proxies such as council tax bands) is also identified as something that can lead to increased take up<sup>33</sup>.

### **Trust and confidence**

*Trust*, or lack of it, is a core theme in nearly all literature on householder attitudes to energy efficiency retrofit. Some relationships requiring trust that stand out include:

- the need for trusted *advisors and intermediaries*<sup>34</sup>. Green Deal research, for example, recognises the importance of trust in the assessors. There is a tension between literature suggesting advisors and intermediaries need to be *independent and expert* and other suggestions that *householders will trust family and friends*

---

<sup>27</sup> Various reports in Loveday and Vavodaria 2013, particularly Note 5

<sup>28</sup> Gilchrist & Craig for ClimateXChange 2014. P15

<sup>29</sup> ie DECC 2014, Ricardo AEA for ClimateXChange 2014.

<sup>30</sup> Consumer Focus 2012

<sup>31</sup> *ibid*

<sup>32</sup> Consumer Focus 2012 p 29

<sup>33</sup> Consumer Focus 2012 p 20

<sup>34</sup> ie. Ricardo AEA for ClimateXChange 2015, Gilchrist & Craig for ClimateXChange 2014

*rather than 'experts'*.<sup>35</sup> Consumer Focus identifies health and social care professionals, and voluntary and community sector organisations, as intermediaries likely to engender trust<sup>36</sup>

- research suggests that *family and friends and third sector organisations, are trusted*, while government and energy companies *are not* trusted. Consumer Focus (2012) suggests in its analysis of policy incentives that local government is sometimes more trusted than central government (p31) and that Local Authority branding is useful for differentiating government-supported offers from commercial offers (p33)
- the need for *trusted tradesmen* is mentioned in much of the literature, and the failure to allow householders to use known or personally recommended tradesmen has been identified as a problem with energy efficiency support mechanisms<sup>37</sup>. Project Calebre social research recognised that: 'few householders would accept unknown professionals' and identified an inclination towards 'the same [*known*] professionals used for a variety of jobs, in preference to lesser known specialists'<sup>38</sup>. The programme also identified a strong desire by many householders to *do energy efficiency improvements themselves*
- Policy Exchange (2015) alludes to wider distrust within the policy environment as a whole, and particularly to distrust of Government and energy companies: '*All this has led to... a "circle of distrust" concerning energy. Consumers distrust energy companies and politicians in equal measure. Politicians distrust the energy industry and their level of distrust is growing. Politicians don't even trust other politicians to implement sensible energy policies*'<sup>39</sup>.

### **Continuity and certainty**

A final theme that emerges from several reports is the need for *continuity* and *certainty*. Continuity refers primarily to continuity of *energy efficiency messages* and of *support policy*. Certainty – considered in all cases a good thing – has several aspects:

- certainty and trust that an energy efficiency measure will lead to savings as predicted<sup>40</sup>
- uncertainty and distrust about Government statistics (for example how many retrofits have taken place<sup>41</sup>) and motives (EST 2010 suggests many householders 'believe [governments] have hidden or mixed motives')

---

<sup>35</sup> EST 2010, quoted in Gilchrist & Craig for ClimateXChange 2014. DECC 2014a refers to focus group research showing preferences for both 'known local tradesmen to undertake home improvements', but also 'qualified independent assessors'.

<sup>36</sup> Consumer Focus 2012, p41

<sup>37</sup> Alluded to in Ricardo AEA for ClimateXChange 2015

<sup>38</sup> Loveday and Vavodaria 2013

<sup>39</sup> Policy Exchange 2015 p8

<sup>40</sup> Policy Exchange, personal communications 2015

- confidence that a policy or support measure will continue into the future. Numerous authors stress the importance of policy continuity and problems with the stop-start nature of previous schemes, especially as trigger point literature suggests many householders will not consider refurbishments in a small time-frame<sup>42</sup>.

## 2.3 Policy Specific Themes

Much of the literature reviewed refers to policies designed to encourage energy efficiency refurbishment, including comparative analyses and attempts to identify success factors (ie Ricardo AEA for ClimateXChange). It is also fairly common for policies to be followed by policy analyses, measuring the success of a policy against theoretically objective measures such as cost per tonne of carbon saved or number of initial contacts that go on to undertake refurbishments<sup>43</sup>. Attitudinal principles are generally alluded to in these reports, rather than used to directly explain success or failure. Some of the principles identified in the papers reviewed are suggested below.

**Loans.** Several references suggest that loans need to be *zero or low interest*. It is suggested in some sources that some of the difference is in *perception of value*, rather than the actual size of the loan repayment or the payback period, although any research to confirm this has not been reviewed. There are examples from Germany and France where uptake of energy efficiency measures has increased significantly when interest rates on pay-as-you save loan schemes have been cut<sup>44</sup>. Other work has suggested that many householders are reluctant to take on debt (however low the interest rate) and that some would *prefer to pay for measures outright* once they have become comfortable with the measure proposed.<sup>45</sup>

**Grants.** While grants are clearly considered a good thing from point of view of the recipient, various authors have identified possible consumer-reaction problems to grant schemes. There is a danger that *subsidy can undermine the perception of value*; that an offer may be *'too good to be true'* or assumptions from householders that *'there must be a catch'*<sup>46</sup>. Consumer Focus (2012) suggest: 'The notion of "Free" can be problematic as it suggests eligibility criteria and low value' (p6).

**Tax Rebates.** There is some consensus in the literature reviewed that providing a financial incentive via a tax rebate (rather than a loan or grant) seems to be attractive to householders and make them more likely to undertake renovations. The suggestion is that the incentive effect goes beyond the simple financial logic, with householders

---

<sup>41</sup> DECC 2014a

<sup>42</sup> See Ricardo AEA for ClimateXChange 2015 for various examples.

<sup>43</sup> See <https://www.gov.uk/government/collections/green-deal-and-eco-evaluation> for examples

<sup>44</sup> UKGBC 2013, Ricardo AEA for ClimateXChange 2015, etc.

<sup>45</sup> Gilchrist & Craig for ClimateXChange 2014 references evidence from Orkney and Fife. Also UKGBC 2014.

<sup>46</sup> Consumer Focus 2012, and others

*more keen to reduce a tax bill than an energy bill*<sup>47</sup>. The UK Green Building Council has looked in detail at retrofit support options in the UK (2013) and concludes that linking household energy efficiency to council tax or stamp duty rebates could have very significant impact, because of the number of households reached and consumer engagement impact. It notes that 'The example of vehicle excise duty goes to show that taxes do not necessarily need to change by much in order to generate very significant changes in a market' (p21). ClimateXChange (2015) notes that tax-based mechanisms tend to work well over long periods of time and are less subject to budget fluctuations than grants and loans, although it is not clear whether this is due to consumer engagement implications or simply because of wider political or budgetary factors<sup>48</sup>. (See above: Continuity and certainty.)

**On bill finance.** On the other hand, the research that mentions on-bill finance, or pay-as-you-save schemes that are promoted via energy suppliers (including the Green Deal), suggests these are less effective relative to the simple financial logic. (In other words that they are not attractive, even if the effective interest rates are relatively low.) . Numerous reasons for this are suggested, including over-complexity and distrust of energy suppliers. Examples from the UK (see below) and Oregon are put forward as evidence that on-bill finance is not considered attractive by householders.<sup>49</sup>

### **The Green Deal – complicated on-bill finance**

The Green Deal was a UK Government policy to support domestic energy efficiency retrofit, through an initial assessment process and the option of on-bill financing. The scheme was discontinued in 2015 after low uptake having, according to many, 'failed to deliver its objectives'<sup>50</sup>.

Focus Group research (DECC 2014a) was undertaken as part of a wider assessment programme to understand public perceptions of the Green Deal, particularly amongst those who have not yet had an assessment. Awareness of the Green Deal scheme was generally fairly high, but participants 'felt that it was complicated to follow and understand'. There were also major concerns about loans being tied to the house (and impacting on house value) and observation that the interest rate was no lower than some commercial rates. The Green Deal Cashback (a grant element of the scheme) was particularly badly understood, with the grant element both adding to the confusion ('it's all very confusing, where does cashback come into this?') and creating distrust ('the cashback bit instantly makes me feel distrustful'.) – although other participants valued the grant element and agreed it would have made them more likely to take up a refurbishment option.

**Policy and Process simplicity.** All the papers reviewed agree that *simplicity* is important, both of messaging (including what support is available) and of the process

---

<sup>47</sup> ie Consumer Focus 2012 p 14, Laine 2011 in Gilchrist & Craig for ClimateXChange 2014, UKGBC 2013

<sup>48</sup> Ricardo AEA for ClimateXChange 2015.

<sup>49</sup> Ricardo AEA for ClimateXChange 2015. Note that the Oregon example, which began in 2009, had previously been put forward as a successful measure and appears to have been used partly as a model for the UK's Green Deal. DECC 2014 identifies evidence in favour and against this conclusion (that on-bill financing is relatively unattractive to householders).

<sup>50</sup> [https://en.wikipedia.org/wiki/The\\_Green\\_Deal](https://en.wikipedia.org/wiki/The_Green_Deal)

of accessing support. ClimateXChange (2015) identifies '*clarity and simplicity*' as a critical success factor in policy support for energy efficiency<sup>51</sup>.

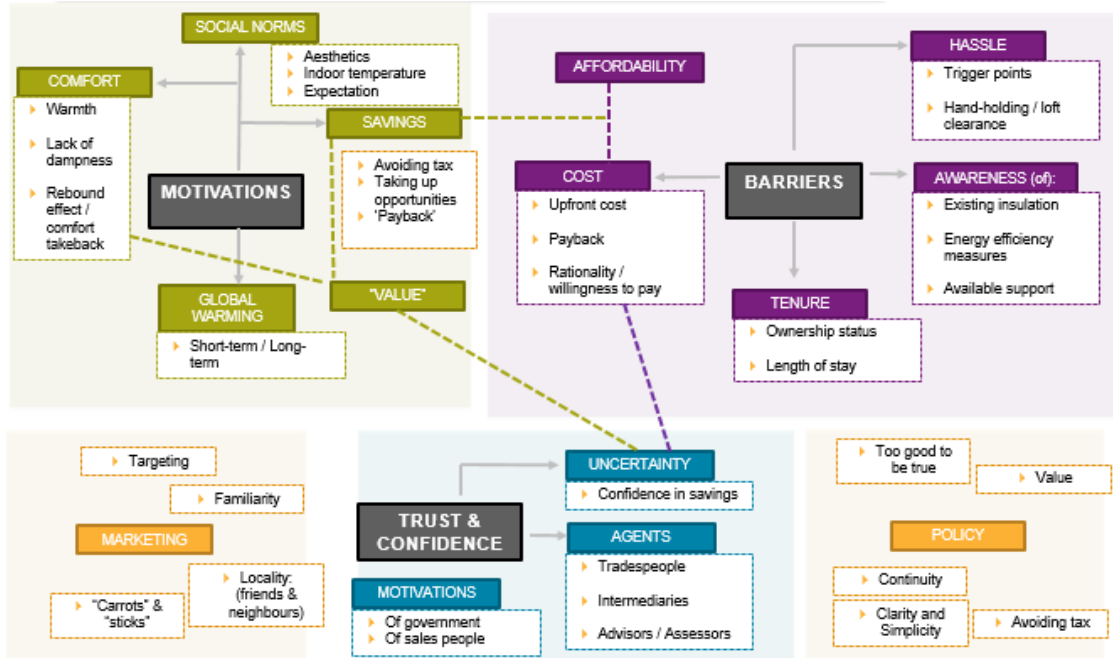
---

<sup>51</sup> Ricardo AEA for ClimateXChange 2015

### 3. PRINCIPLES FOR CONSUMER RESEARCH

#### 3.1 Landscape Map

The themes and principles identified in the previous section are connected in complicated ways, which is one of the reasons why literature on household behaviour often seems inconclusive. The image below attempts to summarise the findings of this desk study graphically, pulling out some of the connections between the barriers, motivations and requirements for trust and confidence.





# **APPENDIX C1**

## **References**

**Consumer Focus 2012: 'What's in it for me? Using the benefits of energy efficiency to overcome the barriers'**

Department for Communities and Local Government (DCLA) 2014: 'English Housing Survey. Energy Efficiency of English Housing 2012'.

**Department for Energy & Climate Change (DECC) 2014a: 'DECC Green Deal Qualitative Research'**.

Department for Energy & Climate Change (DECC) 2014b: 'DECC Public Attitudes Tracker – Wave 8: Summary of key findings'.

Department for Energy & Climate Change (DECC) 2013: 'Removing the hassle factor associated with loft insulation: results of a behavioural trial'.

Department for Energy & Climate Change (DECC) 2011: 'Evaluation of the community energy saving programme' by CAG Consultants, Ipsos Mori and BRE.

**Dowson, M, Poole, A, Harrison, D, and Gideon, S 2012: 'Domestic UK Retrofit Challenge: drivers, barriers and incentives leading into the Green Deal'. *Energy Policy* 50, pp 294-305**

Energy Saving Trust (EST) 2010: 'At home with energy: a selection of insights into domestic energy use in Scotland'.

Energy Saving Trust (EST) 2011: 'Trigger points: a convenient truth'.

**Gilchrist, K and Craig, T, for ClimateXChange 2014: 'Home energy efficiency – review of evidence on attitudes and behaviours'**.

Laine, L 2011: 'Green deal or no deal: Building customer confidence in energy efficiency services'.

**Loveday, DL and Vadodaria, K (Eds) 2013: 'Project CALEBRE: Consumer Appealing Low Energy technologies for Building Retrofitting. A summary of the project and its findings'. Loughborough University.**

**Policy Exchange 2015: 'The Customer is Always Right – Putting consumers back at the heart of UK Energy Policy'**

**Ricardo AEA for ClimateXChange 2014: 'A Comparative Review of Housing Energy Efficiency Interventions. Main Final Report'**

Shove, Elizabeth (2003): 'Comfort, Cleanliness and Convenience: The Social Organization of Normality (New Technologies / New Cultures)'. Berg, London

**United Kingdom Green Building Council (UKGBC) 2013: 'UKGBC Retrofit Incentives Task Group. Retrofit Incentives: boosting the take up of energy efficiency measures in domestic properties'**

United Kingdom Green Building Council (UKGBC) 2008: 'Low carbon existing homes report, supported by energy efficient partnership for homes, sustainable development commission and technology strategy board'.

# **APPENDIX E**

## **Pre-task results**

# 1. FINDINGS FROM THE PRE-TASK

## 1.1 Background

As part of our multi-strand approach, we tasked participants to complete a pre-task prior to the focus groups. This was designed to cover a number of areas, including:

- attitudes towards their home
- general awareness, attitudes and behaviour in relation to incentives
- incentives that have influenced consumers
- reactions to energy efficiency measures.

The pre-task enabled the researcher to ‘warm-up’ respondents to gain the maximum from them in the time available in the group discussions and also helped the researcher better understand the decisions and influencers around energy efficiency that take place at a ‘subconscious’ level. It also used carefully crafted attitudinal questions to avoid prompting participants to over claim their attitudes or beliefs around the subject. The subject of energy efficiency was ‘disguised’ by placing questions and statements in the context of other lifestyle choices and behaviour. This ensured the research was able to capture actual vs claimed behaviour.

## 1.2 Nature of the sample

To better understand attitudes towards energy efficiency measures, participants were split into four groups, two younger (under 45), and two that were older (above 45). Although it was clear that these groups were at different life stages and had different priorities, they did share some characteristics.

Participants were tasked to choose three words out of a set list that best described their lifestyle at the moment. 76% of participants selected ‘Busy’ as one of their choices, suggesting they have other priorities over energy efficiency, generally linking with their family and working life. Although other words such as ‘stressful’, ‘exhausting’ and ‘hectic’ were also popular, over 50% said they were ‘happy’ with their current lifestyle.



All groups have been combined to create this Wordle featuring the most commonly picked words.

### 1.3 Attitudes to their home

Participants were presented with some statements based around their attitude towards investing money into their home and asked them to mark them with agree / disagree / don't know. The results from each age group listed below:

#### Older Participants

	Agree	Disagree	Don't know
a) There's not much money left at the end of each month for extra expenses	22	5	3
b) I am always looking at ways of improving my home	19	7	4
c) I am more interested in making my home look and feel more comfortable, than investing in the things you can't see, like insulation	7	14	9
d) Spending money on my home is not a priority for me, there are other more important things for me just now	11	14	5
e) I would rather spend money on going out and holidays than on improvements to my home just now	3	22	5
e) My home is very important to me and making it comfortable is a real priority	25	2	3

#### Younger Participants

	Agree	Disagree	Don't know
a) There's not much money left at the end of each month for extra expenses	22	6	
b) I am always looking at ways of improving my home	22	1	5
c) I am more interested in making my home look and feel more comfortable, than investing in the things you can't see, like insulation	14	10	4
d) Spending money on my home is not a priority for me, there are other more important things for me just now	11	14	3
e) I would rather spend money on going out and holidays than on improvements to my home just now	8	13	7
e) My home is very important to me and making it comfortable is a real priority	24	2	2

Across both age groups, many homeowners feel that money is tight, but they are all still open to making home improvements, prioritising comfort. However, it is also clear that many balance this out with other expenditure, with the older homeowners in particular prioritising holidays over home improvements.

## **1.4 Awareness of and attitudes towards energy efficiency measures**

Awareness of energy efficiency as a concept is high with many understanding the need to ensure their home is as efficient as possible. However, reactions also demonstrate that this is not enough to persuade homeowners to invest in potentially expensive energy efficiency measures. Instead, many mention practical ways to save energy by ensuring the heating is only on when someone is in the house, using low energy bulbs or turning off plug sockets when not in use for example.

For homeowners who mention specific energy efficiency measures, these tend to focus on those that receive the most publicity, including loft insulation, solar panels or new boilers. While many comment that they understood the need for energy efficiency measures if they want to make their home as efficient, some have taken a calculated decision that these are not necessary or not a priority.

Although many are confident that they were taking 'some' additional steps to become efficient, it is equally important to feel happy in their home. For example, for one homeowner this involves fitting a second external door to reduce the draft, saving energy, but primarily improving the level of comfort.

### **Using the principles of NLP to unlock meaning**

At a general level, the principles of Neuro-linguistic programming can help unlock the true beliefs and attitudes around the subject of energy efficiency measures.

Using words is an imperfect way of communicating. Words mean different things to different people, and from "Deep Structure" (specific thoughts) to "Surface Structure" (spoken words), they can generalise, distort and delete key information. There are a series of 'magic' questions to explore the meaning of language in this context:

### **The magic questions used in the pre-task with homeowners were:**

*'What would happen if you did take up energy efficiency measures?*

*'What would happen if you didn't?' – these recover the effects or outcomes.*

*'What stops you?' – this recovers the barriers;*

*'Says who?' – this recovers the source of the belief.*

This exercise unlocked some fascinating insights into the deeper human psychology, and the potential triggers and barriers to researching or selecting energy efficiency measures.

### ***What would happen if you did...?***

Homeowners name numerous benefits, including:

- More cost effective / spending less on heating and therefore enabling them to spend more on other things
- A warmer or more cosy home
- Doing their 'bit' for the environment.

- Some mentioned a possible increase in the value of my home.

***What would happen if you didn't...?***

When thinking about what would happen if they didn't invest, reactions are very consistent?

- That their heating bills will remain high or increase over time
- That their house is not as warm as it could be, or would remain cold

***And what stops you?***

Many are able to perceive the negative effects of not investing in energy efficiency measures, however, cost remains the most common barrier to investing in measures. For older homeowners this is mentioned by 66% of participants, rising to 85% of the younger participants in the sample.

However, for some it is less about cost per se and more about the high upfront cost associated with many energy efficiency measures.

This supports the findings from the workshop sessions and desk research, that enabling low monthly payments could help overcome the cost barrier.

Some express a concern that low cost loans could work while living in the property, but it would be natural to move home as they progress through life. Therefore, some feel energy efficiency measures are not appropriate until they settle into their long-term home.

However, this barrier could be overcome with the 'pay as you save' concept that would see the loan stay with the property.

*"I cannot see my current home being the family's long term home, therefore I cannot see any benefit of investing money at this point."*

## Energy Efficiency Statements

Homeowners were also shown a range of attitudinal statements focussed more around attitudes to investing money into energy efficiency measures and asked to indicate whether they agreed or disagreed with these. Reactions were extremely consistent and illustrated in the following table:

	Agree	Disagree	Don't know
I think there are real savings to be made improving the energy efficiency of my home	43	6	4
I am not really sure what I could or should do to improve the energy efficiency of my home	21	28	8
Anything to do with improving my home's energy efficiency will be expensive	39	5	12
If I knew what I could do and how much I would save, I would be more likely to invest in energy efficiency measures for my home	36	9	12
There are confusing messages in the media about energy efficiency for people's homes	33	9	15
I know there is more I could do to make my home more energy efficient, but it's not a priority right now	40	9	7
I am worried that making my home more energy efficient will cost me more than I will save in the long run	22	18	17
I think there are real benefits for me in improving the energy efficiency of my home	37	1	15
I would be more inclined to make energy efficiency measures if I could borrow the money to do these at a low or 0% interest rate	30	17	11
My home being warmer is more important to me than saving money on heating bills.	24	21	11
I think that free or subsidised offers for insulation and other energy efficiency measures might be lower quality compared to those you pay for yourself	10	27	20
I would be more inclined to invest in home energy improvements if this meant I qualified for a tax rebate	36	10	11
I would be happy to borrow the money to make my home more energy efficient if the repayments were affordable	19	30	8
Having to spend my own money up front puts me off investing in home energy improvements, even if there are long term savings to be made	33	17	7
I knew more about what could be done to improve the energy efficiency of my home, I would give it more serious consideration	30	15	11
I don't trust the energy companies or organisations who are involved in recommending energy efficiency measures	19	12	25
I think it should be every homeowners priority to make their home as energy efficient as possible	16	26	14
I had friends or relatives who had benefitted from making energy efficiency measures, I would be more likely to look into it myself	28	13	15
I've seen offers for free or subsidised energy efficiency measures but I think these are too good to be true	26	15	15

The findings support both the desk research and findings from the workshop sessions. They show that many homeowners perceive opportunities to save money but are unsure what to do and whether they will achieve the return on the investment. They also support the view that this subject has been undermined by poor practice or marketing over-claim and left consumers wary of messages and more confident with word of mouth examples and recommendations.



## 1.5 Uptake of energy efficiency measures

Homeowners were asked to indicate the measures they already have, have installed themselves, have ever considered, or would not consider in future. The findings are again consistent and are illustrated in the following table:

Measures	Already Have	Installed themselves	Ever considered	Would not consider
Double Glazing	55	32	2	0
Loft Insulation	49	33	7	0
Efficient Heating System	28	14	9	1
Condensing Boiler	23	14	4	3
Draft Proofing	18	13	11	2
Cavity Wall Insulation	3	1	15	5
Under Floor Insulation	4	3	12	22
Heat Pump	1	0	2	0
Solid Wall Insulation	6	1	8	11
Solar Panels	0	0	25	2
Wind Turbine	0	0	3	1

As expected, double glazing and loft insulation have very high uptake, followed by heating systems and condensing boilers. Under floor and solid wall insulation are the least popular and it may be that those who claimed to have it are confused about this measure. Although none have solar panels, interest is high and many are open to this and other measures.

## 1.6 Attitudes towards incentives in general

Factor	Mentions
Store loyalty cards	41
Coffee shop loyalty cards	22
Offers and discounts for restaurants	33
Cashback offers	24
Bundles	20
Tax based incentives	20
Social norms	32
Financial penalties	33

Homeowners were also asked to share their attitudes towards incentives in other sectors. Overall use of retail loyalty cards is very high and homeowners indicate they like being rewarded for their loyalty.

*'It incentivises me to visit them frequently and remain loyal to them.'*

The majority of loyalty cards utilised were for big brands including Starbucks, Nando's, Waitrose, Ikea and John Lewis,

but all were used to work towards small, but achievable incentives.

*'It's a nice gesture, a free cup of coffee and a cake'.*

The Tesco Clubcard triumphed with 40 using it amongst the sample, equating to 67% of the research sample. It is praised for the flexibility to either use points for shopping, or could build them up and work towards a wide range of days out. Nectar, Morrison's and Boots Loyalty Card are popular and well liked for the ability to build up points quickly.

Comments suggest that an incentive is only useful if it is needed.

*'I'm not someone who gets easily influenced by incentives. If we want or need something we'll save for it if necessary. If there is an incentive connected then it's a bonus.'*

Homeowners were tasked to indicate the factors that have affected their decision-making or behaviour in some way in the past, for example store loyalty cards, cash-back, bundles, discounts etc. These are all popular, and many feel they have affected their decisions at some point.

Some also mention subscribing to Sky in recent months in order to benefit from incentives and deals including 12 months half price, a free TV, a multi-screen deal and a free £100 M&S voucher, leading many to feel they were getting an excellent deal.

Financial penalties are also frequently mentioned, including the 5p carrier bag tax, considered a huge trigger driving behaviour change.

Social norms (for example recycling rubbish) are also frequently mentioned, with some expressing a need to feel they were 'doing their bit' for the environment.

However for many it is more about 'saving the pennies' and anything to help make their money go that little bit further is well received.

# **APPENDIX F**

## **Telephone reflector interviews**

# **1. FINDINGS FROM THE TELE-DEPTH REFLECTORS**

## **1.1 Background to the reflector interviews**

A proportion of participants were re-contacted within a week of the workshop sessions and asked a number of questions.

These short conversations are typically very revealing. The participants have gone back into the real world and their everyday lives and they automatically reflect on what was discussed in the research. Sometimes, this reality means their views develop or change – what seemed important in the research environment may seem less so on reflection.

They also talk to partners and peers and recalling what they have said can be hugely revealing – an indication of the elements of the subject that really resonate.

Questions put to participants included:

- what they recalled from the sessions
- anything they had discussed with peers / partners or friends
- if their attitudes towards energy efficiency measures had changed or developed
- any actions they had subsequently taken
- which incentives they felt would have the greatest impact
- anything they think they would do differently next time they are faced with making a decision about energy efficiency measures.

## **1.2 Summary of the reflector research findings**

Reactions to the subject of home energy efficiency are consistent during the views many homeowners have expressed during the workshop sessions and pre-task exercise.

Many comment that they have gone away from the research with good intentions: to look into home energy efficiency measures; explore which they already have at home; think about any measures that they might benefit from. However, once back in the real world and the context of their busy lives, energy efficiency has gone back to the bottom of the priority.

Some also mention that the research makes them think about their home's energy efficiency, with one commenting that he needs to make his loft insulation thicker. However, after getting home and looking in the loft, he concludes that is a 'job for another day'. This reiterates the finding from the desk research and workshop sessions that people do not want to invest time into these measures unless they really have to and are easily put off by the 'hassle factor'.

A very few homeowners are motivated to undertake minor DIY changes at home. One went away from the research and purchased draught excluders to place around the house. Another purchased some window blinds to help reduce the amount of heat lost out of the windows. These consumers comment that they have been motivated to

act, having identified the potential to save money and increase their comfort at home, with some low cost and relatively 'quick win' measures.

Many remain unsure that one particular incentive could work and instead feel a range of incentives would be more effective. However, many continue to stress that whatever the range of incentives, they need to be fair for everyone and not overly punitive.

*"I think a range of approaches works, but maybe needs to be a little more carrot than stick."*

Although some remain reluctant to admit it, many continue to assert that a penalty would be most likely to make them act.

One homeowner commented that they didn't leave the research session '*rushing to the shops to fill the walls*', because they already feel they were doing enough, but that if a penalty were introduced, they would definitely look at taking out other, more extensive measures.

However, several homeowners are against the idea of a penalty following the research sessions. One commented that it is wrong to penalise people and '*make you feel irresponsible*' for not taking out energy efficiency measures, feeling they have already done a great deal to reduce their carbon footprint and therefore should not be forced to take out other measures.

Some feel the cost of many measures are just too high, especially in context of their current family lifestage. These homeowners feel that none of the incentives would persuade them to take out energy efficiency measures.

Even those who, on reflection, do not feel cost was a barrier, still conclude that they are '*fine as we are*' so do not need to spend more money unnecessarily. These homeowners feel the main incentive to consider additional measures would be if they were affected by cold and discomfort.

### **Summary**

The findings from the reflector interviews reinforce those from the desk research and workshop sessions. Once back in the real world, the interest generated in the subject of home energy efficiency quickly recedes and homeowners revert to the non-decision, citing a lack of clear rationale for acting and practical barriers including cost and the hassle factor. However, attitudes to the incentive ideas remain consistent and many conclude that in light of the barriers to taking action, a penalty of some kind, as long as it was made fair for all consumer types, would be the only real motivation to act.