

Ipsos MORI



# The Big Energy Shift

Report from Citizens' Forums

30 June 2009



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# Summary

## *What is the potential for behaviour change?*

### 2.1 Overall attitudes

This research reveals **huge potential for people to change their energy behaviour**. The majority of people across the Forums were **overwhelmingly positive** about improving the energy efficiency of their homes and about the low carbon and renewable energy technologies in principle. They would like to see change and are impressed and shocked by the scale of the problem.

Householders want to maintain their **quality of life** with a secure supply of affordable energy. To capture people's positive mood for change, the Big Energy Shift needs to offer people the prospect of a win-win situation where they can have their hot showers and cut their carbon emissions.

However, despite individual goodwill, the findings also show that individuals will not necessarily be the instigators of change. They will need to be **'nudged' along by the Government and other principal stakeholders**.

Householders feel that 'business as usual' or tinkering with existing frameworks will not deliver change, and that business, homeowners and Government all need to play their parts. But they also assert that the mechanisms in business or government are not yet in place to allow them to make changes, either individually or collectively.

So, they look to Government to take the lead, and are ready for some **bold steps**.

### 2.2 A need for an overarching narrative from Government

To take advantage of public goodwill, the Government needs to focus on four steps:

1. Explain why we need the shift in clear, simple language which shows how wider world issues are impacting on the daily lives of UK citizens
2. Set out concrete goals for society (including Government, businesses and individual households) with timelines for delivering measures on the ground, and be seen to be supporting and enforcing these goals
3. Provide information and advice to the public on how they can participate to achieve these goals, with bespoke advice to those looking to invest in new energy technologies
4. Ensure that systems are in place to help people with the financial burden of investing in new energy technologies

The first step should be to explain clearly to people the issues at hand and their relevance to the general public.

## 2.3 The context for the shift

Housing type, income level, lifestage, urban or rural setting all make a difference to people's likelihood to adopt new technologies. When designing interventions, detailed analysis of what appeals to different segments will be necessary.

## 2.4 Models of behaviour change and innovation diffusion can help

Individuals at different stages on the journey need different kinds of help and advice.

Individuals with particular temperaments, especially leading edge types, can be used to become exemplars and help diffuse innovations to the mainstream.

Some key points at which Government could intervene are:

- **Buying house:** Explain to buyers the benefits of buying energy-efficient homes
- **Redecorating:** Many measures can be done one room at a time, to spread costs
- **Replacing boiler or heating system:** This often involves changing pipes and radiators, so thermostat controls can be added
- **Renovations / extensions:** Ensure new buildings are energy efficient, and improve existing buildings at the same time
- **Selling house:** Demonstrate how new technologies could add value at sale

## ***Attitudes to the Technologies***

### 3.1 Appeal and Barriers

Overall, this research suggests that the Government can help promote specific technologies and help design funding options which create a 'nudge' towards takeup. The aim is to 'normalise' technologies, allow consumers to create a different cost-benefit analysis for themselves and overcome barriers.

The most **appealing aspects** of any new technologies are:-

- **Low upfront cost** or subsidized by grants
- **Easy to maintain**, well established reputable firms offering installation and maintenance
- **Cause minimum disruption** to people's lives on installation and usage
- **Add value to the house and payback** as soon as possible
- **Replace existing technology** without needing too much adaptation

Key **barriers** to takeup are:-

- **Upfront costs** and concerns over payback time and value for money
- Which often masks an equally important concern; **risk** of taking up new untried technology
- Plus worries about **disruption** to the aesthetics of the house and everyday life, both in installation and living with the new technology.

### 3.2 Individual Technologies

Therefore our **RECOMMENDATIONS to encourage mass takeup** –

- **Reduce upfront costs** to the householder wherever possible
- Increase perceptions of **immediate win**, and **long term value** for money through the way that pricing and payments are designed
- **'Normalise'** the technologies through exemplars and open homes so that they are seen as familiar
- Develop the market so that **aesthetically mainstream** products, rather than only leading-edge designs, are on offer.

### 3.3 Community Technologies

Community solutions can work, and the public will respond to the same incentives as for individual technology takeup. Additionally, there is a need for **external organisation, support and help** for the communities concerned.

## ***Financing the Big Energy Shift***

In Chapter 4 we first give an overview of the ideas which participants felt would be most successful in making the Shift happen.

### 4.1 How to make it work – the big ideas:-

- **Legislation** - to help Government demonstrate the seriousness of the problem, and to enforce change within the timescale
- **Fair targets** and **timescales** to be set
- **National and local** Government involvement, especially at a community level (also see section 3.3 on community solutions)
- Most importantly, grants and loans schemes to make costs upfront **as low as possible for individuals**
- All potential products and involvement designed to **nudge people towards action**, rather than leaving them to make consumer choices in an immature market
- **Government must ‘walk the talk’** in installing new systems in public buildings

We set out detailed findings on funding options in sections **4.2 Individual Funding Options;** and **4.3 Community Funding Options.**

In the light of these we have made some **recommendations** on potential Government interventions. These are recommendations arising purely from the public dialogue, and of course will need to be balanced with other stakeholders’ concerns.

- **Organise exemplars, targets and administer funding at a local level through local government organisations.**
  - Tailor exemplar and show homes to properties broadly characteristic of area to maximise relevance to local homeowners
  - Ensure local public buildings, such as schools, libraries, community centres are exemplars
- **Incentivise early adopters to install low-carbon technologies at household scale by helping cover the upfront cost**
  - Consider supplying all homes with smart meters free of charge
  - Provide home energy audits offering tailored individual advice for a small charge (below £100)
  - Grants, with value determined on sliding scale from low-cost, low-fuss insulation and metering technologies up to more advanced micro-generation technologies (up to around 75% for advanced technologies).
  - Consider supporting a relatively limited choice of packages for each area, appropriate to the housing stock, so householders are not baffled by the pressure of choice.
  - Where the payback time is long, careful communication will be needed to explain the benefit of the option and why it is a win-win situation.

- **Introduce legislation – offers double benefit of a symbolic function to communicate the gravity of the issue, as well ensuring all properties comply with minimum standards.**
  - Provide sufficient lead-in time (e.g. 5 years)
  - Base requirements on specific measures to be incorporated into all households rather than expecting all homes to reach same overall efficiency grading
  - Make minimum standards a requirement for selling a property
- **Direct financial support to those in most inefficient homes, with funds channelled to those on lowest incomes.**

## *Communications*

At Event 4, we created 3 ‘worlds’ which expressed different ways the Government could develop its narrative. Some elements of each world resonated with participants.

### 5.1 From World One:

- Urgency of communication on a ‘big story’
- Government communication on a mass scale to demonstrate national leadership. Community options are felt to be more likely to work if in context of national movement.
- Relaxing planning rules for energy-efficient building (though an appreciation that there are many different interests to consider which would make this a complex challenge).

### 5.2 From World Two:

- Education and information disseminated through society
- Policies which help a new market to grow attractive, affordable technology packages
- Making it easy for people to get involved – small grants and loans to get them started
- Grants and loans which reward people who want to make an effort

### 5.3 From World Three:

- Public estates leading the way and setting themselves binding targets on energy efficiency
- National network of advice centres with tailored, specific advice for individual properties.
- Government does not ‘name and shame’ itself, it nudges the moral framework into existence rather than tries to create it explicitly.

### 5.4 The ideal world

Overleaf, we map out the ideal policy narrative and trajectory.



## MAKING THE BIG ENERGY SHIFT HAPPEN – RECOMMENDATIONS FOR GOVERNMENT INTERVENTION

### Phase One

#### CLEAR NARRATIVE ACROSS CENTRAL GOVERNMENT

- **Rationale** for the Shift; how wider issues impact on UK life; link any ‘scary’ information clearly to the story of what can be done
- **Forward thinking**, and positive tone, this is Government taking on this challenge
- **‘SMART’ goals** to deliver local solutions – concrete and specific, with deadlines. **Individuals, business and government** must play their parts
- **Future sanctions** – timeline towards legislation. Outline now to give people plenty of warning

**SYMBOLIC GESTURE:** Free **smart meters** for all households

### Phase Two

#### NATIONAL TO LOCAL AREA DELIVERY

- Outline local area targets within national goals
- Plan of action for local area
- Home energy audits (ideally under £100)
- Pilot innovative approaches

#### LOCAL EXEMPLARS

- Identify small number of ‘leading edge’ consumers
- Ring-fence some grant and loan funds for them, ideally high proportion of upfront cost
- They provide local, realistic, mainstream-design family homes

#### MASS TAKE UP OF SIMPLEST SOLUTIONS

Smaller proportion of upfront costs of insulation as grant or loan

#### GROW THE MARKET

Assist businesses with the design of technology ‘bundles’ which are appealing to consumers:-

- Low upfront cost
- Immediate benefit to householder, not having to wait for payback
- Aesthetically pleasing
- Non-disruptive installation
- Reliable maintenance systems

#### PUBLIC ESTATES LEAD THE WAY

- Exemplar schools and hospitals with large scale microgeneration
- District heating in local authority estates
- Subsidies for business to take part.

### Phase Three

#### LEGISLATION (after 5-10 years?)

- Phased introduction of legislation that covers homes, businesses and public buildings
- Public realm: “a court case which makes an example of a business for not turning off the lights”

# 1. Background

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## 1.1 Introduction

Between January and March 2009 a series of nine citizen forums were held across England, Wales and Northern Ireland to seek people's views on government's plans for a big shift in the way people's houses and communities are insulated, heated and powered.



Around 250 people were involved, meeting on three occasions, within their neighbourhoods. During this time they spoke to a range of experts, interviewed their neighbours and visited exemplars to see relevant technologies like solar panels and wind turbines. A final day long event was held in London where representatives from each area met with policy makers and external stakeholders to discuss their thoughts and findings.

This report presents the findings of Ipsos MORI's research into the attitudes and behaviours of the householders and the communities they represent.

The project was commissioned and supported by the Department of Energy and Climate Change, the Northern Ireland Executive and Welsh Assembly Government, and supported by Sciencewise. Sciencewise is funded by the Department for Innovation, Universities & Skills (DIUS) and aims to help policy makers use public dialogue to inform policy decisions in science and technology. This dialogue has been independently evaluated.

## 1.2 Background

The UK cannot go on using energy as it has done in the past. The UK needs a secure energy supply. As we become reliant on imports of oil and gas, our energy will increasingly be sourced from places where the supply is unstable. Closely related to the issue of energy security is the need for affordable energy. In 2006, some 3.5 million households were in fuel poverty, an increase of 1 million since 2005. This rise has been caused by increases in consumer energy prices. A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain an adequate level of warmth. As countries around the world use more energy, the prices of fossil fuels have been increasing.

Climate change threatens the stability of the world's climate, economy and population. More than two thirds of the world's carbon dioxide emissions come from the way we produce and use energy. So we need to use cleaner energy if we are to tackle climate change – that means using energy more efficiently and increasing our use of low carbon and renewable energy sources for electricity, heating and transport.

The UK has introduced the world's first long term legally binding framework to tackle climate change and is aiming for an 80 per cent reduction in greenhouse gas emissions by 2050, compared to 1990 levels. Meeting a target of this scale will mean virtually eliminating emissions from our homes. To help us get there, we plan to increase our energy from renewable energy sources (like wind and solar energy) to 15% by 2020.

In the light of all this, the Government is seeking information on how best to push forward a **Big Energy Shift** – a sea change in attitudes, behaviours, technology usage in principle and practice which will lead to the UK achieving its goals.

Up to 27% of emissions in the UK come from households, which means that in addition to action required from businesses and the public sector, individual householders will need to make material changes to their lifestyles and properties.

This means householders are key stakeholders, whose attitudes and behaviours must be taken into account in order for the Shift to work effectively.

The project was commissioned in order to establish an in-depth, deliberative dialogue with householders across England, Northern Ireland, and Wales; to understand how people approach the issue of energy as individuals and householders, within the larger context of their views on what communities and the country as a whole should do.

The citizen dialogue sits in the context of three strands of work; dialogue with businesses and with the public sector also took place in Spring 2009. The findings from this dialogue,

along with findings from the other two strands, will feed into the Government's plans for tackling energy and climate change in the summer of 2009.

## 1.3 Objectives and Methodology

### ***The participants***

Ipsos MORI spoke to 30 homeowners recruited in each of the nine neighbourhoods. We spoke to people from three neighbourhoods each in England, Wales and Northern Ireland. In each of these countries, we spoke to people living in urban, rural and "off gas grid" locations. We made sure to recruit people living within a few streets of one another, but did not recruit members of the same families or friends. Both male and female participants, from a range of ethnic backgrounds and age groups, were involved, as well as a mix of household types (families, people who live on their own, and so on). Also involved were people who live in different kinds of houses – flats to detached houses, large to small homes, and old to new build properties. Across the project as a whole, a range of people from all these different groups were represented, with flexible quotas to ensure that all groups were represented across the project as a whole (see ***The benefits of a local public dialogue*** below in this section).

### ***The objective***

To establish the bases on which the public would be prepared to take up energy savings, renewable and low carbon measures. To do this we:-

- Educated the public about the future challenges in Britain's energy use - the need for Britain to effect a 'Big Energy Shift', in domestic energy saving and generation.
- Tested options for potential interventions.
- Assessed the triggers for behaviour change in domestic energy options:-

*What makes individuals shift from no action, to action?*

*What makes individuals shift from piecemeal to household action?*

*What makes householders shift from household action to community level or collective action?*

*What makes people get involved in mass action, at a national or cultural level?*

## The research events

Each forum went through a series of three events.

**Event 1:** Full day event in the local area. Discussion about new low carbon and renewable technologies and energy efficiency ideas. Participants discussed which technologies or measures will work best for their houses and neighbourhoods.

**Event 2:** A 'disaggregated' event where different participants carried out different tasks. Some participants showed us how they use energy in their homes, these interviews were filmed. Some participants visited low carbon exemplars, others interviewed neighbours (peer interviewing) and some completed an energy diary reflecting on their homes and behaviour.

**Event 3:** Full day event in the local area. Discussion of the different options for supporting the Big Energy Shift. Participants discussed their opinions on the best course of action at the individual, community, regional and national level, the possible role of the Government and the underlying principles and values of the approach that the Government needs to adopt.

**Event 4:** Three participants from each of the nine areas, attended a **final event in London**, to discuss their recommendations with an equal number of stakeholders and policy makers.

The screenshot shows the 'big ENERGY SHIFT' logo on the left. Below it is a navigation menu with links: Homepage, Who we are, Experts, Discussion, and Contact us. There is a 'Sign up for updates' form with fields for 'name' and 'email address', and a 'send >' button. Below the form is a 'Poll' section with the text: 'To get secure, affordable and clean energy to your homes and buildings we need a big shift in the way we use energy. How do you think Government should achieve this?'. The main content area is titled 'Who's taking part?' and includes a 'Cymraeg?' button. It contains two sections: 'The role of the experts' and 'The technical experts'. The 'The role of the experts' section states: 'To help the local residents discuss and think about the issues, a range of experts are helping with any questions people have about low carbon energy sources.' The 'The technical experts' section states: 'These experts know a lot about the different technologies we will be looking at. They will offer scientific knowledge, also their own view points and personal insights. Although the experts may not necessarily agree with each other on what actions should be taken, they will be able to tell us about what's possible when thinking about how to use these new technologies.' Below these sections is a list of expert profiles with photos and names: Luke Myers, Andy McCrea, Bakr Bahaj, David Linsley-Hood, Patrick James, Patrick Waterfield, and Stuart Labrum.

## The role of experts and policymakers

In order to help participants understand the different technologies shown, **technical experts** took part at **Event 1**. They came from a range of academic backgrounds and their role was to give their views on the state of different technologies and their potential in different circumstances.

At **Event 3**, **policymakers** from DECC and other bodies were

available to discuss funding options and policy questions.

All of these stakeholders were briefed on the project and given guidelines for best engagement in a citizen dialogue before attending.

### ***The website, [www.bigenergyshift.org.uk](http://www.bigenergyshift.org.uk)***

The research events were supported by a website which was built and added to during the project. The website contained a discussion forum where questions arising from each Event were posted on the morning after the event. Apart from at the events, participants interacted with the energy experts and policy makers on the Big Energy Shift website, posing questions on technologies and government policies. Additionally, participants could see filmed interviews and exemplar visits from other areas. The website also contained links to sources of information about energy and sustainability.

The screenshot displays the Big Energy Shift website interface. On the left is a navigation menu with links for Homepage, Who we are, Experts, Discussion, and Contact us. Below the menu is a sign-up form for updates with fields for name and email address, and a 'send >' button. A poll question is visible: 'To get secure, affordable and clean energy to your homes and buildings we need a big shift in the way we use energy. How do you think Government should achieve this?'. The main content area features a post titled '250 people, 9 communities... big decisions' with a sub-headline 'In Spring 2009, 250 people from nine communities across the UK (from Lisburn to Harrow, Exeter to Cockfield) started meeting and talking about changing the way we insulate, heat and power our homes and communities.' Below this is a video player showing a man in a suit speaking. To the right of the video is a 'Discussions' section titled 'What do you think?' containing several user comments, such as 'hi all that's very interesting. we have ...' by peter way, 'this is interesting as i am planing to do ...' by peter way, 'There are no new technologies, there is a ...' by Bernard Clayson, and 'The worst thing about nuclear power is ...' by Bob Irving.

### ***The benefits of a locally based public dialogue***

This approach allows for in-depth and considered opinions to be shared by members of the public. The aim of deliberative research is to gradually give people information about a complex topic, so that by debating with each other, and guided by facilitators, they are able to come to a more informed view on policy questions. This means that a wide range of exercises were used throughout this project, all of them to throw light on the subject from different angles and present different points of view. Deliberative research does not seek to provide one totally 'unbiased' set of arguments to debate; rather it seeks to provide a

balanced view of a subject through different media, bolstering this with real-time discussion with experts of different opinions. To this end, the exercises used at the Events included:

- Discussion of new technologies in small and large groups, using pictures, ballpark figures, and case studies
- Trade off exercises where participants are asked to make hypothetical choices of technologies
- Tasks between the events, including site visits, filmed in-home interviews, peer interviews and energy diaries
- Paired exercises noting the pros and cons of funding options, plus small and large group discussion sessions
- Exploring mocked up headlines, imagery and concepts for policy ideas in the context of 'future scenarios'.

Key to deliberative research is that while it reflects the views of communities, it is not a research method involving a representative sample of members of the public and does not give statistically valid findings. The analysis in this report reflects the balance of views across the discussion, while the verbatim comments we have included give a snapshot of the kinds of views expressed by individuals, when different topics were discussed.



## **2. What is the potential for behaviour change?**

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**“We have to do this; we are all responsible”**  
Harrow, England, Event 3

### SUMMARY and RECOMMENDATIONS

#### 2.1 Overall attitudes

This research reveals **huge potential for people to change their energy behaviour**. The majority of people across the Forums were **overwhelmingly positive** about improving the energy efficiency of their homes and about the micro-generation technologies in principle. They would like to see change and are impressed and shocked by the scale of the problem.

Householders want to maintain their **quality of life** with a secure supply of affordable energy. To capture people's positive mood for change, the Big Energy Shift needs to offer people the prospect of a win-win situation where they can have their hot showers and cut their carbon emissions.

However, despite individual goodwill, the findings also show that individuals will not necessarily be the instigators of change. They will need to be **‘nudged’ along by the Government and other principal stakeholders**.

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To take advantage of public goodwill, the Government needs to focus on four steps:

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4. Ensure that systems are in place to help people with the financial burden of investing in new energy technologies

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## SUMMARY and RECOMMENDATIONS

### 2.3 The context for the shift

Housing type, income level, lifestage, urban or rural setting all make a difference to people's likelihood to adopt new technologies. When designing intervention, detailed analysis of what appeals to different segments will be necessary.

### 2.4 Models of behaviour change and innovation diffusion can help

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Individuals with particular temperaments, especially leading edge types, can be used to become exemplars and help diffuse innovations to the mainstream.

Some key points at which Government could intervene are:

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- **Renovations / extensions:** Ensure new buildings are energy efficient, and improve existing buildings at the same time
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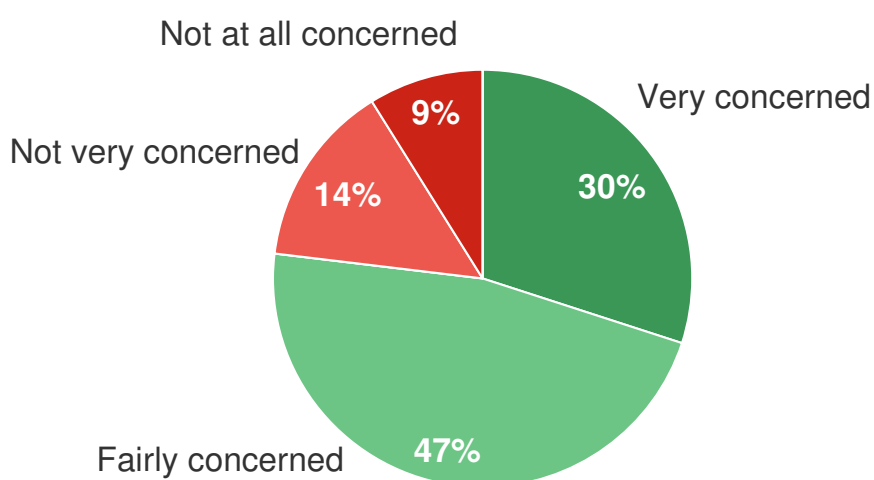
## 2.1 Overall attitudes to the Shift

### *Overwhelmingly positive, in principle*

Across all the Forums, spontaneous views are in line with other recent energy research. There is general awareness of environmental issues and broad concern about climate change (albeit with a few exceptions). As the graph below shows, a majority of the public are concerned about climate change.

### Headline concern about climate change

*Q. How concerned, if at all, are you about climate change?*



Base: 1,039 GB adults aged 15+, interviewed f-2-f and in home, 23-29 May 2008

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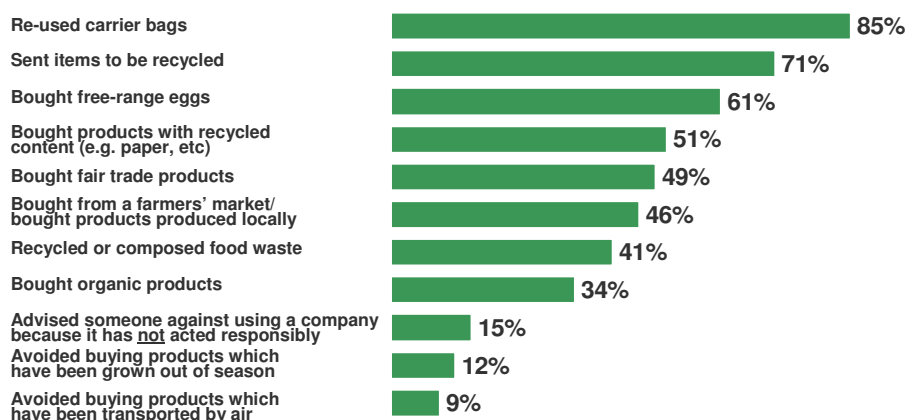
The reasons for this positivity, across the Big Energy Shift forums, are varied and include both those who want to save the world and those who want to save their money (two groups, it should be said, who are not mutually exclusive).

Existing 'green' behaviours typically include recycling, bag reuse and a few home energy efficiency measures (loft insulation, double glazing and low energy light bulbs the most frequent). While not all of these activities are strictly part of the Big Energy Shift, it is encouraging that the public are keen to be seen to do their bit and many have already changed their behaviour. Again, these findings support other research conducted by Ipsos MORI as the graph below illustrates.

**“In the last five years people have done a lot – filling the kettle halfway, changing lightbulbs, but there’s more still to be done”**  
Cardiff, Wales, Event 1

## Environmentally-friendly behaviour

Q Can you tell me which of the things from the following list, if any, you have done in the last 12 months?



Base: All adults 16 – 64 (1,000), May 2008  
Ipsos MORI



The public do not see different aspects of 'green' policy as separate issues, but as parts of an overarching effort to live more sustainably. This underlines the need for an overarching story from Government, and the need for policy to be seen to be coherent across different areas – of which more in section 2.2 below.

At the events, householders were excited when we showed them the new technologies; considering them technologies of the future and, in general terms, a "no brainer". They enjoyed the chance to speak with the technology experts and asked them some very detailed questions about their own houses and the potential for installing new kit. They see benefits to themselves in terms of cost savings and home improvement, and to wider society in terms of benefits to the environment.

**"I wonder if we could produce our own energy – it feels like we are far down the pecking order for supply of oil and gas, so it would be good to be self-sufficient"**

Lisburn, NI, Event 1

### ***The Good Life – self-sufficiency as an appealing idea?***

Some also see potential for wider social benefits such as community cohesion and local self-sufficiency, if community energy measures are successfully introduced.

Only a minority at the moment are inspired by the idea of total self-sufficiency from the grid, though this position may grow in popularity and may be an appealing 'hook' to inspire consumers in future when the renewables market is more mature.

### ***Saving the planet and saving money***

Householders are impressed and shocked by information on the scale and urgency of the environmental problem. However, though participants acknowledge the need for us all to take action immediately against CO<sub>2</sub>, this is not enough to push people to change their behaviour immediately, on an individual level.

When it comes to considering and taking up low carbon household technologies, it is individual financial concerns which seem most likely to spur people to attitudinal and behaviour change. In response to the first presentation in Event 1, on the reasons for the Big Energy Shift, the concepts of *securing supply of energy* and *protecting consumers from rising fuel prices* hit home in the most salient way.

**“Every time the bills come through the door I have heart failure, they’ve gone up so much”**

Exeter, England, Event 1

**“It’s no use talking to us about CO<sub>2</sub> emissions and expecting us to change our behaviour instantly, or a tonne of carbon, what does that even look like?! I want to know what’s going to happen around here”.**

Cookstown, Northern Ireland, Event 1

So while people are generally keen to save the planet, their greatest priority is to save money. If the two objectives can be seen as running in tandem, all the better,

To this end, messages about energy security are as important as those about climate change (if not more so, as work conducted by Ipsos MORI elsewhere has found that some parts of the public are beginning to accept climate change as something of a ‘fait accompli’, an inevitability to match death and taxes).

## 2.2 A need for an overarching narrative from Government

### ***'Big story' seen to be missing***

There are currently various bodies perceived to be talking about energy (charities, non-governmental bodies, energy companies, the media) – but this is seen as rather piecemeal, and citizens in every Forum asked - what is the Government's line on all this?

Householders feel that currently, the Government's 'big story' is missing; the story on how measures will be delivered in their area, who will participate, and how it will be enforced.

### ***Householders want to know the what, who and when***

A story about delivery on the ground would help citizens to believe that the problem is genuinely urgent. There is a sense that "if government is really serious about this, it will sort

**“Eventually the Government has got to say – We think this is the best way forward. We as individuals can't make that decision, as we don't know what it is. They have to do more, like the smoking ban. People won't like it, but they'll get used to it.”**

Exeter, England, Event 3

it”.

In the absence of a **wider contextual story or timeline**, householders feel it is hard for them to weigh up the costs and benefits of making their own individual decisions about energy, as we asked them to do in the Forums.

As well as a clear steer on the urgency of the problem, householders also ask for the Government to explain **what can actually be done, and who should do it**. They suggest clear targets set on energy and climate change so that everyone can understand and play their part in achieving the Shift.

To our participants, a big story from government will provide **vital context** for other initiatives. Some of the individual and community options discussed at Event 3 only really

**“There has to be legislation but also enforcement. Incentives to upgrade a property when you buy a home. Younger people are more likely to take up new technologies than older people”**

Cockfield, England, Event 3

make sense to participants if they assume a context of an overarching plan from government; this overarching message helps people to notice, understand and believe in local initiatives, which otherwise might be

ignored or treated with scepticism. A narrative from government is therefore a prerequisite for enabling any of the individual initiatives to work on the ground.

In terms of enforcement, householders talk about **legislation** but this is partly because they can not see any other way to ensure that changes are actually made, within the timeframe necessary. In every Forum, participants assert that forcing compliance, eventually, will be necessary (more on this in Chapter 4 on funding the Shift). They also want legislation as a symbolic action from government, to demonstrate that everyone needs to tackle the problem. It should be remembered that everyone taking part in the events were homeowners, and they are keen to see the 'burden' of the Big Energy shared with businesses, the Government and non-homeowners. For instance, if householders are asked to use less energy and adopt low carbon measures, public estates should also do so and be seen to be doing so, for example ensuring the council turns off council office lights at night. Participants are adamant that there is no excuse for wasting energy from the very people calling for change, and want government to make sure this didn't happen.

There is also a lack of trust in **energy companies** and a need to understand how they fit into the Big Shift. Participants want government to require energy companies to educate, inform and help change behaviour ("force them to put energy information on our bills" for instance).

**"We need to increase capacity to build and fuel new technology. If there are only 3 biomass fuel suppliers in the UK, we need more installers."**

Llanddaniel, Wales, Event 3

Participants also ask the Government to intervene in business and ensure that the **market in new technologies** actually grows.

Householders also point out that the Shift is a complex issue which will involve the interaction of lots of different kinds of bodies, businesses and individuals. They believe

central government is best placed to **make all legislation coherent** and to smooth the way for change. In all the rural locations of our research, some of which were conservation areas, a key example was brought up and discussed at length - that current planning laws can sometimes prove a barrier to those wanting to install new energy solutions.

**"They should enforce laws stating that you cannot get permission to build something if it isn't energy efficient."**

Cookstown, NI, Event 3

A further role for government is seen to be helping individuals and communities to grow their confidence in taking action. It is apparent that a major barrier to people investing in new technologies is that people generally lack the knowledge and understanding about how best



to insulate, heat and power their home, and they require advice on how to do this before having the confidence to proceed.

Related to this is the worry that in the move to upgrade their homes, people will be victims to mis-selling by disreputable suppliers, particularly as very few people have any experience of building these types of technologies.

Finally, all discussions about energy technologies tend to come down to purchasers having to make a financial investment in the hope that they will make long-term savings. (More detail on this in Chapter 3 on responses to technologies). Some participants have already taken this step, and find that they are already saving money. These savings are not, however, a done deal as saving often depends on other factors (such as whether or not they have adequate insulation) and it is important that people are aware of all the factors before making their decision.

**“We need people on the ground to help us. How can you change if you don’t know what to change to?”**  
Cardiff, Wales, Event 1

**“It’s not just about money, it’s helping people know what they could do. You could have shopping centre talks.”**  
Harrow, England, Event 1

**“We need knowledge and faith in the technologies. If someone like Dave, the expert here today, came to our village and educated people it would make a difference and give us more confidence.”**  
Llanddaniel, Wales, Event 1

### Do you know how your car works?

Participants often compared buying new technologies to buying a new car. Though most drivers do not fully understand how cars work, they feel informed enough to make a purchase and they can take their car to the garage if it is faulty.

They are confident because they have seen a vast number of cars on the road, have access to a world of advice, anecdotal and expert, written and word-of-mouth. They are confident that the technology is tried and tested. This confidence does not yet exist with regards to new energy technologies, and so people constantly asked how they work and want lots of detail.

However, we suggest it would be wrong to conclude from this that homeowners will need to know every technical detail of any new technology they buy. Instead, we suggest this reflects their desire for **open homes, exemplars, and other evidence** that the technologies have been tried and tested – confidence *that* it works, not knowledge of *how* it works.



**“We should insist to government that they require these specifications and must meet the costs with more than 50% grant”** Irvinestown, NI, Event 1

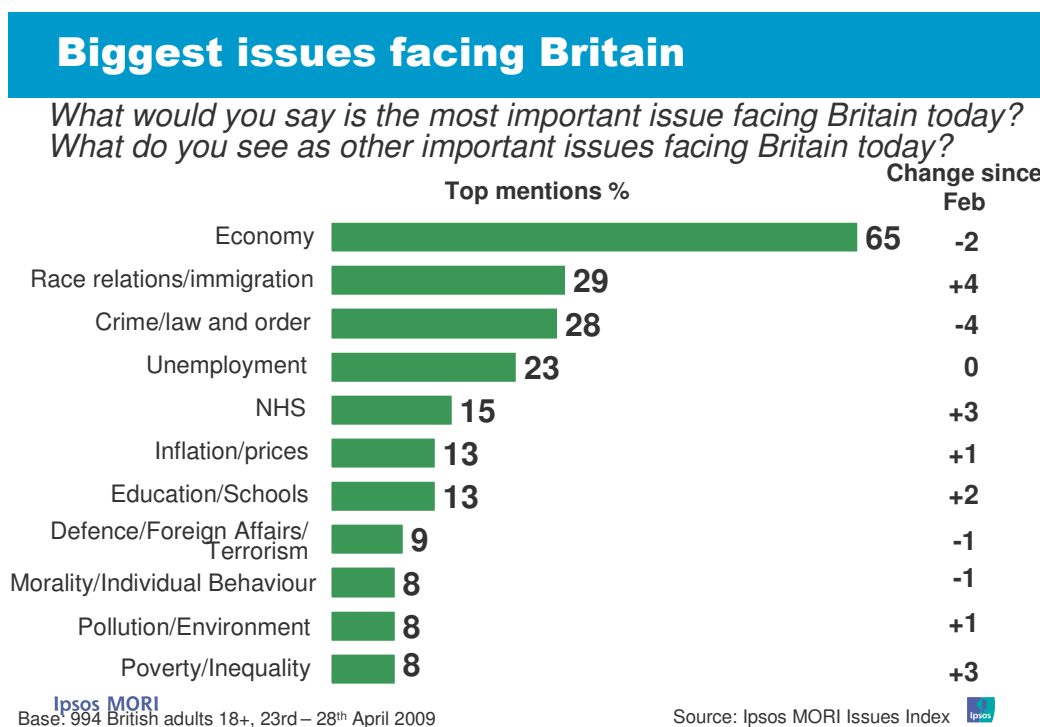
There were widespread calls at the events for the Government to **cover the cost** (at least in part) of people investing in these technologies.

The Government may, however, find more advantage in offering cheaper “quick win” options for free (such as smart meters and insulation) as these can be offered to nearly all households, while some technologies are not suitable for all types of home.

## 2.3 The context for the Shift

### *Common to all – the economic blues*

The Big Energy Shift events took place against a very specific economic background. Participants were worried about recession, falling house prices and the lack of easy credit. The prominence of economic concerns is clear from Ipsos MORI’s Issues Index shown below<sup>1</sup>.



In Event 3, for example, the option of tying a loan to your home invited criticism, as people are concerned that this would provide yet another barrier to the difficult job of selling their homes in a housing market slump. The idea of councils underwriting individual debts, when public spending on local services is due to be cut back, also causes concern. Allied to this is a lack of trust that either the Government, or the private sector, would actually deliver a fair and equitable system.

**“It’s about priorities. Just cut back on the royal family!”**  
Cardiff, Wales, Event 1

There were, for, example, comments made about the use of public money for the conflicts in Iraq and Afghanistan, or the ‘bailing out’ of the banks. These are comments we often hear in deliberative research where public finance is an issue, and to some extent they reflect people’s frustration at being unable to finance ‘everything for

<sup>1</sup> Please note this is a spontaneous question with people’s answers amalgamated into broad categories of similar responses. Climate change is included within ‘pollution/environment’.

nothing' – these views do provide the context in which the Government will have to communicate.

In addition, at the time of writing, the leading political story is news of MPs' expense claims for, among other things, home improvements. Given that the Big Energy Shift will in future include difficult decisions about how far public money can be used to improve private housing, such coverage is very unhelpful in encouraging people to place their trust in initiatives led by politicians. It is important therefore that the Government is seen to act in a clear, fair and consistent manner which does not create examples of disparity that could damage public support for the Big Energy Shift.

### ***Our homes are our castles...***

A theme across all the research is that householders strongly want control over what happens in their own homes. They are reluctant to have their home life altered or interfered with. There is evidence (from the events, site visits, peer interviews and particularly the filmed home interviews) that people have chosen not to use energy efficiency measures (such as internal wall insulation) as it would alter the 'traditional' look of their homes.

**“I might want the money to go to one place, you'd want it to go to another. We could do it democratically with a majority vote, but I still need to get what I want in my house when I'm paying for it.”**

**Exeter, England, Event 3**

There were concerns during some of the site visits that retro-fitting some technologies would spoil the comfort of their home (e.g. the use of underfloor heating might prevent you having carpets, or create a dry, uncomfortable heat). This need to be 'in charge' of their home energy process, what is going into or out of the home, is also apparent when participants discuss community solutions. They want any relationship between them and a supplier to be one that they can control; for instance their current contract arrangements with suppliers. They find it hard to imagine how 'taking community decisions' might work in practice.

## Rural and urban differences

**“Only 10% of people in Cockfield have gas, gas is a dead end. I’d rather see a wind turbine than a pylon”**

Cockfield, England, Event 1

One of the biggest factors shaping people's opinions on the Big Energy Shift is whether or not they live in a town. Those living in off grid rural communities, such as Cockfield and Llanddaniel, have to bulk buy their

gas/oil and have it delivered by tanker.

This causes numerous headaches, including not being able to afford buying in bulk, irregular delivery times and even cases of theft from their domestic tanks.

These participants are very aware of their home energy usage and are keen on anything that will end their reliance on tanker deliveries.

**“When they bring in those big turbines they have to close the small country roads and disrupt everything.”**

Cardiff, Wales, Event 3

Hamlets and small villages are less densely populated than urban areas, which means participants see them as less suitable for shared energy schemes such as district heating. Conversely, participants point out that ‘community spirit’ is stronger in these places, where there are stronger community bonds - and so there might be more goodwill towards the idea of community schemes in rural areas.

On the other hand, those living in rural areas are closer to the open spaces on which wind farms will be built and so tend to debate the positive and negative aspects of their construction more heatedly. Participants in urban areas are dismissive about concerns about the impact of wind farms, as they do not feel personally affected. Rural participants did, however, feel threatened by the impact of wind farms, and will generally only support them if they feel that they will directly benefit from their construction (e.g. from cheaper energy).

The UK housing stock is so diverse that there is a need for very targeted information about what is possible in each home. Across rural and urban areas, those in rural areas are more likely to find themselves living in old, draughty houses which they struggle to keep warm in winter. This means they are keen to insulate their homes but find that their options are limited by aspects of their homes, such as solid stone walls or traditional fireplaces. There are additional barriers such as planning restrictions on altering old properties, so they feel limited as to the changes they can make.

There is higher churn in the housing market in urban locations. Urban participants tend to assume they will not be staying in houses long, so express a different 'cost-benefit analysis' from those living in rural areas, when considering investing in their homes.

### ***Income makes a difference***

There is a clear difference between participants who feel they have enough disposable income to consider buying new technologies (for example the group in Harrow), and those who feel pressured financially and cannot even consider upfront costs (for example some in Lisburn and Cardiff). Those on higher incomes like the idea of solutions which increase the appeal of their houses, even if upfront costs are involved. They are, however, reluctant to invest in anything that might detract from the traditional features or 'kerb appeal' of their homes; and they also have a lack of trust in builders.

**“I could have an interest free loan maybe [to get these technologies], but I’m just surviving at the moment, I’m not going to make any more payments each month.”**

**Cardiff, Wales, Event 3**

In contrast, those on lower incomes tend to have less trust in energy companies, probably because the rise in energy bills has had a bigger impact on their household expenditure, and this lack of money means they feel unable to consider upfront investment in new energy technologies.

### ***Lifestage***

People's lifestage has a big impact on their willingness and capacity to make changes to their homes. Some younger homeowners are keen to modernise their homes and reduce their carbon footprint by investing in new technologies, but lack the capital to do so. In comparison, some older people have the capital but not the inclination.

#### **CASE STUDY: Peter**

One interesting exception was a retired gentleman who had invested extensively in insulation and solar panels for his cottage as a means to cut fuel costs. Even in his advanced years, he expected to see a payback on his investment and the alterations had not greatly affected the traditional feel of his home.

It is clear from the differing circumstances of those living in urban or rural areas that one size fits all policies will not achieve fairness, and that initiatives should take into account the factors affecting individual households. Furthermore, while younger people are more inclined to make investments, older people seem better placed to afford them having already paid off

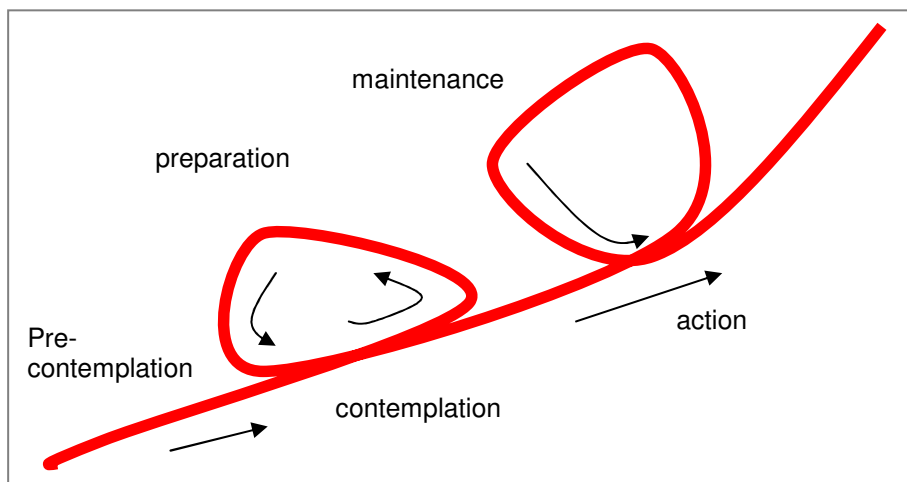
their mortgages. There should therefore be a detailed analysis of what appeals to different segments of the UK homeownership population.

## 2.4 Models of behaviour change and innovation diffusion can help

### ***The stages of behaviour change***

Prochaska's model of behaviour change<sup>2</sup> explains the stages which exist on any journey of change.

It may be worth using a model such as this to identify individuals, groups and communities who sit at different points on the journey towards the Big Energy Shift. In all cases, people will need time and help to progress to the next stage of change. Participants at the events reflected a broad range of opinion and experience regarding energy measures; and to some extent, the dialogue process itself took people along this journey. It was clear that as people come to different stages of awareness and action, they need different forms of support and advice.



*Prochaska's model of behaviour change*

**Precontemplation:** At this stage, people need their *lack of readiness to be validated*. We heard from many people who simply wanted to be more aware of their energy use and make basic improvements to their homes. Providing with them with small-scale measures such as smart meters or loft insulation will help them get started. At this stage, Prochaska's model tells us it is important to *personalise the risk* – make people feel that larger energy issues will have an effect on their lives.

<sup>2</sup> Prochaska JO, Velicer WF. *The transtheoretical model of health behavior change*. Am J Health Promot 1997

**CASE STUDY: Cathy**

At the beginning of Event 1, Cathy told us that in her opinion, there was too much fuss made about global warming, you could never trust people to tell you the truth and anyway she wouldn't mind if the climate became warmer. She did not believe that fuel bills would necessarily rise in future and said she would rather spend money on things that were important to her now, than save against potential rising costs. However, her attention was caught by the idea of smart meters or free council loft insulation.

**Contemplation:** At this stage, people are considering the pros and cons of change and will feel ambivalent about whether they want to change. It will be important to make the positive *outcome* of change clear.

**Preparation:** This stage is about testing the water, and solving problems; such as what, how, when, how much, what will be the knock-on effects on my life? At this stage social support is vital, so this is where local, realistic exemplars with word-of-mouth advice can be most useful. People at this stage of the journey need to be reassured that they have the social skills for the change (can you manage contractors, where can you find advice and information?) It is important to reassure them that small steps will still enable them to reach their goals.

**CASE STUDY: Carrie**

Carrie likes the convenience of home comforts such as running hot showers, and thinks the most important appliance she has is her washing machine as it saves a great deal of time and effort. Carrie is already trying to save energy and tries to wash clothes at night, uses low energy bulbs and turns off plugs and lights when they're not being used.

Carrie thinks her current appliances are inefficient, and she doesn't have enough loft insulation. She would like to know more about new energy efficient appliances but the ones she has seen all seem really expensive, and she is unsure whether they would really be worth the money in terms of savings. She has looked into loft insulation but fears it might be disruptive to install. She would benefit from advice and support around the benefits of change.



**Action, Maintenance and going on to further action:** By these stages, some level of direct Government support is desirable as people’s interest in the new technologies has been aroused but they may now be facing barriers to actually investing in them. With this in mind, suitable candidates could be incentivised to become exemplars of the new energy technologies by offering the candidates advice and financial support.

#### **CASE STUDY: Jeff**

Jeff has lived off-grid for many years, and has solar panels too, he’s “known about them since the Seventies!” He would like to do more, for example use hydroelectric power from a nearby stream, but is frustrated by council regulations and planning permission issues.

Jeff is someone who could be a ‘rural exemplar’ – but is finding it hard to go on and make more changes without financial support and advice.

### ***The diffusion of innovation***

Trickle-down theories of marketing assert that early adopters act as exemplars to the mainstream when new technologies are diffusing through society. In this research we saw evidence of a minority of early adopter types who could be incentivised to take up new technologies.

**“Trail blazers are really important, getting the technology out into the community, it needs to become more of a social norm that people can get involved in.”** Lisburn, NI, Event 3

#### **CASE STUDY: Barry**

Barry lives on his own in a three-bedroom semi-detached house owned by his family.

He feels he lacks the funds to save energy at present and thinks that more in-depth information and assistance for people with disabilities, such as himself, might enable him to make some changes.

Barry is interested in the idea of solar panels for electricity due to the potential monetary and CO<sub>2</sub> savings, as he feels that once they are installed they are maintenance free. He also likes the idea of selling surplus electricity back to the grid, but would need financial help.

He would like to be involved in a programme where different houses in the village demonstrate different energy savings appliances over a period of a few years to show people how they work.

If a **strong community**, that is to say a community with a strong identity, has enough opinion leaders and leading edge adopters, then they may be able to come together to co-operate on low carbon zones or community-owned generation projects, although this citizen dialogue suggests that some level of external independent supervision would be required.

### IN SUMMARY...

**Mainstream adopters:** start them off with easily installed measures such as smart meters and insulation

**Leading-edge adopters:** Ready to move onto larger scale measures, but cost is a barrier, so advice, help, grants and loans could tip them into change

**Opinion leaders:** Incentivise enthusiastic people to become exemplars to their communities (NB should be ordinary people, not living in 'designer' homes).

**'Strong' communities:** Low carbon zones or community-owned generation could work well if properly supervised.

### ***When is the right moment to intervene?***

Some participants mentioned that they have made energy efficiency improvements to their homes as part of other changes, such as extensions, and several mentioned that they would think about making improvement when they next redecorate.

**“My thoughts at the end of the first day are these. If I had to redesign my home, I would make sure to have underfloor heating by using a ground source heat pump. I would also install double glazed windows, loft insulation, and maybe solar panels, and a kill switch to knock off items that are left on and shouldn't be on when the home is unoccupied. All these energy saving products would add value to my home. And take years off my carbon footprint. But I would need a grant to help with the extra costs!”**

**Irvinestown, NI, Event 1**

With this in mind, five key intervention points are identified for when homeowners can tie energy efficiency improvements to their home in with other activities. This also reflects the need to get the building trade on-side, who will be the 'gatekeepers' for many of these occasions and opportunities.

## THE BEST TIME TO INTERVENE

**Buying house:** Explain to buyers the benefits of buying energy-efficient homes

**Redecorating:** Many measures can be done one room at a time, to spread costs

**Replacing boiler or heating system:** This often involves changing pipes and radiators, so thermostat controls can be added

**Renovations / extensions:** Ensure new buildings are energy efficient, and improve existing buildings at the same time

**Selling house:** Demonstrate how new technologies could add value at sale.

# **3. Attitudes to the Technologies**

## 3. Attitudes to the Technologies

### SUMMARY and RECOMMENDATIONS

#### 3.1 Appeal and Barriers

The most **appealing aspects** of any new technologies are:-

- Low upfront cost or subsidized by grants
- Easy to maintain, well established reputable firms offering installation and maintenance
- Cause minimum disruption to people's lives on installation and usage
- Add value to the house and payback as soon as possible
- Replace existing technology without needing too much adaptation

Key **barriers** to take up are:-

- Upfront costs and concerns over payback time and value for money
- Which often masks an equally important concern; risk of taking up new untried technology.
- Plus worries about disruption to the aesthetics of the house and everyday life, both in installation and living with the new technology.

#### 3.2 Individual Technologies

Therefore our **RECOMMENDATIONS to encourage mass take up** –

- Reduce **upfront costs** to the householder wherever possible
- Increase perceptions of **immediate win**, and **long term value for money** through the way that pricing and payments are designed
- **'Normalise'** the technologies through exemplars and open homes so that they are seen as familiar
- Develop the market so that **aesthetically mainstream** products, rather than only leading-edge designs, are on offer.

#### 3.3 Community Technologies

Community solutions can work, and the public will respond to the same incentives as for individual technology take up. Additionally, there is a need for external organisation, support and help for the communities concerned.

### Event 1 – introducing people to the technologies

- At Event 1 we showed participants a wide range of insulation products, microgeneration products, and community-level generation schemes:-
  - o Picture and description of technology
  - o Very ballpark and relative cost indications
  - o Details of how installation might work.
- We debated the appealing / less appealing aspects in the context of the local area and the national scene
- Experts were on hand to answer questions about the technical aspects.

## 3.1 Appeal and barriers

### *Familiarity breeds favourability*

Some basic factors affect the willingness of individuals to adopt new technologies. While fundamentally it is often an issue of cost other factors also influence the decision-making process. The technologies which most appeal are those with perceived low upfront costs, and high value for money. The most 'normal and familiar' technologies also appeal - some technologies are seen as intuitive, normal and offering additional benefits. These include:

- **double glazing** in terms of crime prevention, reduced noise and improved aesthetics; (see p46)
- **loft insulation** as non-disruptive and very familiar (see p41)
- **solar panels** as the 'tried and tested' face of microgeneration. (see p51)

Other insulation and microgeneration ideas are seen as more challenging. The barriers include; perception of high upfront cost; risk of not recouping the cost; disruption; and aesthetics. Overcoming these barriers for mass takeup will involve reducing upfront costs and increasing perceptions of value for money; along with normalising the technologies so they are seen as more familiar and fears are allayed.

There is no particular barrier to new technologies being used on a community-wide scale, in fact, participants often saw community solutions as taking away some of the risk, as the technologies might be maintained by private contractors rather than individuals from the community (see 3.3 below, p54, for the fuller discussion of this).

### ***Money, money, money – cost is the first barrier***

**Upfront cost** emerges as a primary factor. Firstly, and in line with basic economic theory on discounting rates, householders dislike high upfront costs with long payback. Pushing some groups on their ‘thresholds of price acceptability’, a general rule was that anything too far above £1,000 was considered prohibitive. Low income households some of which are already struggling with regular and existing payments, can’t imagine being able to afford anything that increases their financial outgoings significantly.

**Actual payback** is viewed with much scepticism, with some homeowners dubious they would achieve the advertised savings. Given the likelihood of rising prices in future, a message of “your bills won’t go up as much as they might do if you don’t install this” is understandably less palatable than a guarantee that “your bills will go down”. The more concrete the evidence for payback and savings the more convincing the case for uptake of that specific technology.

**Value addition** to house is also a major factor. The prospect of saving money and adding value to the house is seen as a strong motivation. However, adopting certain technologies that are not familiar, or require a high level of maintenance is seen as reducing the real estate value of the house hence becoming a barrier.

However, these findings should not be interpreted to suggest that people simply do not have enough disposable income to invest. When encountering innovation, research participants often cite cost as a barrier for any new innovation. Unwillingness to spend money can often be simply the way that people express the other barriers, described below, such as risk or fear of disruption. When pressed, participants for the most part admitted that these new technologies would simply not be a priority for their disposable income.

**“If I had £1,000 – I’d go on holiday!”**

**Cardiff, Wales, Event 1**

Therefore, pricing will have to be communicated in terms of a ‘win-win situation’ with immediate, as well as long-term benefits.

### ***Technology related barriers***

**Risk of the new:** many homeowners are concerned that some of the energy generating technologies are relatively untried and hence a potential risk. Several pointed out that, as with all specialist systems maintenance and repair costs will be high. Others noted that they would be “guinea pigs” for the first generation technology while others would stand to benefit later on from cheaper and more reliable versions. This makes many reticent to pay the

upfront costs, while others are suspicious of claims about annual savings and payback periods.

**Familiarity with technology:** Many are keen to hear whether these systems are already in operation (in the UK or Europe) and whether they have been fully evaluated. Connected with these concerns about risk householders needed to understand how all the propositions would work *in relation to their own home*. Technologies that are better established feel tried and tested, and while people do not necessarily know how the technology works they believe they know enough to make a good decision.

### ***Does this fit into my life?***

**Disruption:** Anything that can minimise installation disruption, such as a package of technologies that help homeowners to undertake several improvements all at once, is welcomed. However, homeowners often talked about *disruption*, when really they were worrying about *risk*. Individuals feel unable to predict other disruptions or breakages which might occur along with installing any new kit. Many participants sited the memories of having boilers installed, which had affected the central heating in unpredictable ways. They can easily imagine these technologies could have similar unintended consequences.

**Maintenance:** While households living off the gas grid are used to investing time and effort in keeping their houses warm, householders who have relied on the grid felt that some of the generation technologies required constant maintenance, and this did not fit into the way they lived their lives.

### ***Does it look good?***

Householders also make *non-financial* assessments of costs and benefits which are equally important to them. When discussing value for money, several stated that if they had the spare money, they would invest in other home improvements such as a new kitchen, bathroom or garden patio, instead of energy saving measures. Other technologies are perceived to offer aesthetic benefits as well as adding value to the house or reducing bills. In some cases, energy saving propositions were seen as *detracting* from the appeal of the home such as the loss of space with internal solid wall insulation, or external solid wall insulation covering attractive bricks. During some exemplar visits, participants were put off by the style of décor in the properties. They were not sure whether energy saving measures dictated the style of décor, or whether it just reflected the taste of the occupants.

**“It looks like a Spanish holiday home...very cold, not a family home”**  
Site visit to BRE Innovation Park, Harrow, England

**“The aesthetics of it were a problem... She was an architect, she wanted it to look like this. It would have more impact to show a family living in it”**

Event 3, Cardiff, Wales (discussing Passivhaus visit)



There was a universal call for demonstrations of retrofit properties to look very similar to mainstream homes of today. Reassuring householders that microgeneration and energy efficiency measures do not mean a significant compromise on the style or liveability of your home overcomes people's initial reticence.

**“These centres need to be realistic, there’s a centre in Belfast that’s way too expensive and it’s being used as office space rather than as a home”**  
Stakeholder, Event 4

**“Making these show homes relevant to the average Joe is important”**  
Public, Event 4

Later at Event 4, the reconvened session, participants also underlined the importance of organising exemplars which were ordinary family homes.

### Energy “Myths” may need to be addressed

Across the research there were some prevailing preconceptions or in some cases misinformation about energy. It may be that communicators on new technologies and methods of finance will have to find ways of reassuring people about energy: or make the technology offer so appealing that these are no longer an issue.

- ? **“I always keep the doors open to let the heat get round”**. Should we be keeping heat in, moving it through the house, or keeping cold out? The way people imagine heat makes a difference to how they think of insulation.
- ? **“Nuclear is a renewable fuel”** – Misconceptions about how nuclear energy works.
- ? **“Wind farms are noisy”** – Much press coverage has confused the issue on wind farms
- ? **“How can you take the energy out of the water, but leave the water in the stream?”** - Little knowledge of basics of energy conversion, so renewable energy can be confusing.
- ? **“We don’t get much sun in Wales, so some global warming might be nice!”** - Little understanding of the potential effects of climate change.

The next section looks in detail at each technology.

## 3.2 Household level technologies

### *Meter based technologies*

# Real time electricity display



#### APPEAL

- Very low cost, hence also low risk
- Increase awareness of energy use – an easy first step on the journey
- Encourages responsible energy use
- Helps monitor the efficiency of appliances

#### BARRIERS

- Perception of misuse of data by energy companies by increasing tariffs during peak hours
- Potential savings made by consumers may be lost to commercially aggressive energy companies (mostly as consumers don't understand the principles on which tariffs are worked out)

**“I’m very sore on my teenage son about him leaving everything on all the time. I’d take him to that meter and say ‘here, you see how much this is costing?!’**

*Irvinestown, Northern Ireland, Diary*

**“We should have these, all of us should have these already, the energy companies should be providing us with these anyways...we shouldn’t have to fork out for them”**

*Exeter, England, Event 1*

**“Why can’t we have those now? I don’t see why we haven’t got these things already”**

*Llanidloes, Wales, Event 1*

#### OUR RECOMMENDATION

Widespread popularity, a simple, sensible idea for most people. Can encourage people to examine their behaviour, and help in making a start on energy efficiency.

# Smart meters



## APPEAL

- Provides accurate billing
- Increased awareness of energy use
- Participants felt they could decide on how to use costly appliances e.g. by moving usage to cheaper times of the day.

## BARRIERS

- A limited version of smart meters would not encourage greater awareness of energy consumption.
- Concerns that energy companies would use data to exploit consumers efforts and that tariffs could change if more detailed household-by-household information was provided

**“See the energy companies are just going to take that information and change the goalposts on us. If everyone starts using more energy at night they’re just going to up the price of the nighttime energy and you’re just back where you started”**

Cockfield, England, Event 1

**“It could be like your phone bill, all itemised and telling you where you’re spending the most, what you’re doing. They could use graphs, and make it easy for people to understand for themselves”**

Irvinestown, NI, Diary

**“How would they tell you about how you’re using electricity in your bill?”**

Llandaniel, Wales, Event 1

## OUR RECOMMENDATIONS

Has some appeal as it would lead to accurate billing. Seen as a less appealing version of RTDs. Ideally consumers are able to access information on energy patterns and can make changes to their lifestyle. Energy companies could potentially offer resources and insight to encourage this. Billing information could change and work alongside the smart meter to facilitate efficiency drives.

**Insulation based technologies**

**Heating controls**



**APPEAL**

- Simple, familiar, low risk
- An easy first step on the journey
- About simple consumer behaviour change (easier to understand than some more high tech options)
- Enables people to make adjustments to heating of different rooms, enabling customers to zone their house
- Making savings by reducing heat loss in the less used areas of their home

**BARRIERS**

- Can seem overly banal, and everyday. As a result they can easily be overlooked. Many homes claim to already have them (even though some don't).
- For those that don't, some fears that installation will be fiddly, costly, complex.
- Seen as more about comfort and warmth than wider environmental issues

**“I tend to have the kitchen on one because that’s a pretty warm room anyway. But my bedroom that’s on warmer because I like it hotter”**

Exeter, England, depth interview

**“People wouldn’t have the 20 quid upfront to bother about something like this, and then you’ve got the cost of the plumber!”**

Llanddaniel, Wales, Event 1

**“It’s a lot of hassle to get someone in just to do that”**

Harrow, England, Event 1

**OUR RECOMMENDATIONS**

Clearly has a role but is widely considered too everyday for most people to take notice of and engage with. Ultimately not seen as making a particularly worthwhile contribution. More likely to employ plumber to fit them as part of wider repairs or installation of new radiators. Potential for energy companies to offer these as standard or provide them as part of a package or bundle?

# Loft Insulation



## APPEAL

- Familiar, tried and tested benefit, cost savings are clear
- Simple to install as DIY project
- Minimal disruption compared to other insulation options
- Tangible and measurable impacts on household efficiency and warmth

## BARRIERS

- Complacency among those who have inadequate insulation
- Hassle of clearing the attic space to fit the insulation.
- Effort required to buy the materials and install them
- Some worries about how this fits with other DIY projects e.g. loft conversion.

**“Everyone has it, I don’t think of it as new technology”**

Harrow, England, Event 1

**“I’m not sure what the right thickness for my loft is”**

Harrow, England, Event 1

**“It takes very little time and I know it’s very effective. It’s made a big difference”**

Cockfield, England, Event 1

## OUR RECOMMENDATIONS

Householders are very familiar already with the concept of loft insulation so there is no conceptual barrier to overcome with this technology. Readily available cheap materials with simple instructions for installation would allow this to be rolled out more widely with minimal resistance from householders.

Advertising in DIY centres – such as B&Q – with clear, simple information on the process of installation would be welcomed. Participants also suggested wide rollout of discounted materials to encourage take-up – for instance removing VAT. Free delivery of these materials by the local council could be an effective way of overcoming any inertia among householders unwilling to make the effort to source and purchase this themselves.

# Cavity Wall Insulation



## APPEAL

- Less disruption than external or internal wall insulation
- Installation takes less than two hours
- Familiar technology, hence not perceived to be a large or risky step for a householder to take.
- Considered a potential asset at point of sale of property

## BARRIERS

- Lack of knowledge among householders about the age or structure of their property and the existence of cavity walls
- Lack of understanding around the points of heat loss in a property (i.e. how can heat get out through the walls if I live in a terrace?)
- Concerns around condensation and damp as a consequence of insulation

**“I don’t know whether I have these gaps in my walls or not. I would like someone to come and tell me”**

Exeter, England, Event 1

**“Very recently we have had cavity wall insulation and have noticed a significant difference in the warmth of those rooms”**  
Llandaniel, Wales, site visit

**“The cavity was there originally to keep the house dry. How can they block the cavity and keep the same air flow?”**

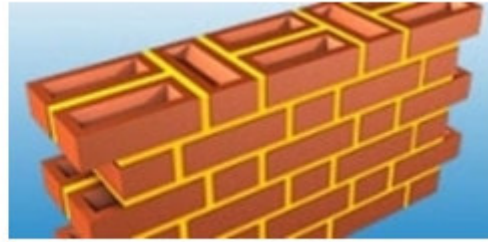
Exeter, England, Event 1

## OUR RECOMMENDATIONS

Householders are generally favourable towards cavity wall insulation and those with suitable properties are likely to consider installing it if they are made aware of the short installation time required and the minimal level of disruption.

Participants suggested that a phone call from the local council would help prompt installation; to advise householders that cavity wall insulation would be appropriate for their property and giving information around suitable suppliers. An exemplar house in the local area where cavity wall insulation has been installed would also be of benefit; residents asked for something tangible as a comparison so that they could feel for themselves the impact on the retention of heat within the property.

# External Insulation



## APPEAL

- Very limited appeal
- For detached properties and for those who had physically seen this work in practice, it felt like a more appealing solution

## BARRIERS

- High upfront cost is felt to be immediately prohibitive especially when comparing external with other insulation costs directly
- Long return period on the investment
- Desire to preserve the external aesthetics of properties
- The potentially poor aesthetics of solid wall insulation could detract from the property value

**“If you live along a terrace, you’d be encroaching on their space.”**

Harrow, England, Event 1

**“I find this very interesting as it would save a lot of energy and money but how would you find the right people to carry out these jobs?”**

Exeter, England, Event 1

**“It would really depend what it looked like.”**

Cardiff, Wales, peer interview

## OUR RECOMMENDATIONS

Householders are reluctant to make a large financial sacrifice for something they consider as detracting from both the aesthetics and value of their property; there is a need for more education here.

Participants suggested advertising cost saving benefits of solid wall insulation through concrete information around improvements to energy efficiency and how that translates to lower utility bills.

Exemplar houses with external solid wall insulation so that householders can see the visual impact it has on a property would be beneficial. If the exemplar houses were able to have external insulation in keeping with the style and character of the property this would help calm residents’ fears around aesthetics.

# Internal Insulation



## APPEAL

- No need for planning permission
- Could take place alongside relatively simple decorating jobs

## BARRIERS

- Installation is perceived as being highly disruptive (especially as felt to affect décor)
- Fear of disreputable suppliers damaging the property - low level of trust in builders
- Concern around a considerable loss of room space
- Desire to preserve the internal aesthetics of properties
- Concerns around condensation and damp are a deterrent.

**“The power sockets and light switches would have to be moved and the rooms would be slightly smaller”**

Cardiff, Wales, Diary

**“This would quite significantly reduce the size of any room, I wouldn’t like that at all.”**

Exeter, England, Event 1

**“For older properties like my own where the walls are only brick walls and room on the inside is limited do not want to add bulky insulation, it would be nice if there was a difference, slim-line version of insulation available which can be added to the inside of walls.”**

Llanidloes, Wales, site visit

## OUR RECOMMENDATIONS

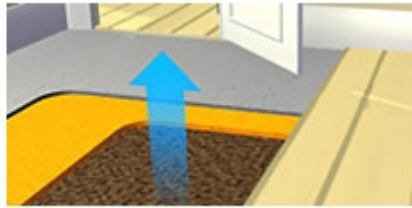
Internal wall insulation is perceived to be too disruptive to install at any time other than a major decoration of a property; there is a need for more education.

Participants suggested advertising cost saving benefits of internal wall insulation through concrete information around improvements to energy efficiency and how that translates to lower utility bills.

Residents also suggested seeing exemplar houses with internal wall insulation so that householders can see the visual impact it has on a room as well as on the size of the space.



## Underfloor Insulation



### APPEAL

- Some householders conflate underfloor insulation with underfloor heating and became very much in favour. This is not correct, but provides learning on the great appeal of 'win-win solutions' - insulation which also adds to aesthetics and status of a property.
- Has connotations of creating a comfortable, warm home.
- Simple installation as a DIY project
- No need for planning permission.
- Good return for initial investment.

### BARRIERS

- Concerns around damage to existing floor tiles/boards/carpets if these need to be taken up to lay the insulation.
- Confusion around the actual process of installing underfloor insulation. Homeowners are uncertain whether the whole floor needs to be removed to lay the insulation
- Concerns around condensation and damp due to removal of air circulation.

**"I don't want to cause any disruption to the folks who live downstairs from my flat"**

Harrow, England, Event 1

**"Yeah, you take the floor up, but does it ever go back down again properly? No!"**

Harrow, England, Event 1

**"With underfloor insulation the mess and disruption would worry me and the length of time it would take to install and also the cost as it's not that cheap"**

Cardiff, Wales, peer interview

**"Could you burn your feet on it, what if it gets too hot?"**

Cockfield, England, Event 1

### OUR RECOMMENDATIONS

Underfloor insulation would be considered by most householders when they re-carpet or replace their current flooring, however people are unlikely to take this step at any other time. There is some need for education just to get the idea 'on the radar' as most participants tended to forget about this type of insulation in everyday life.

# Double Glazing



## APPEAL

- The most popular and familiar type of insulation. Seen as a visible, exterior asset to the home, adding status and value.
- Improves the warmth and soundproofing of the home in a tangible way; e.g. by eliminating cold air currents which can be immediately felt.
- For the majority, a must-have and one of the few types of home energy improvements felt to justify substantial outlay.

## BARRIERS

- Many homes already have them
- They are quite everyday and can be overlooked as impactful
- Some experience of poor quality installation and workmanship can be off-putting
- Some kinds of windows can lose aesthetic appeal if double glazed
- Despite perceptions of value for money still a substantial cash outlay

**“The council came and did the whole estate a few years ago...It used to be terrible in here, it was blowing a gale. They really did make a massive difference to this room”**  
Lisburn, Northern Ireland, Depth Interview

**“I have sash windows, and you can’t double glaze them”**  
Harrow, England, Event 1

**“We’re already paying 120 quid for council tax. I’m not sure we should be paying any more.”**  
Harrow, England, Diary

## OUR RECOMMENDATIONS

Double glazing is familiar, appealing, and highly attractive. Whilst cost can be prohibitive, some homeowners have taken advantage of subsidised schemes. High costs can be prohibitive. However, a subsidised scheme including installation would likely encourage uptake as has already happened for many homeowners. Due to the high appeal of double glazing, communicating the benefits of installation should prove an easier task than with other technologies.

**Micro-generation technologies**

# Biomass Boiler



**APPEAL**

- The technology uses fuel that is cheap and easily available
- Particularly appealing to those who already use wood burners in their homes, especially in rural areas
- Technology is already established and there are enough installers and skilled persons to repair units
- Not as expensive as some of the other heat generating units

**BARRIERS**

- Initial investment likely to be rather big
- Doubts about the “green” credentials and concerns about smoke
- Concerns about the availability of wood pellets and wood
- Concerns about the impact on forests and woodlands
- Time and labour intensive as the household has to arrange for the fuel
- Not seen as flexible as it cannot be instantly turned up or down
- Concerns about sustainability of the technology
- Houses, particularly in urban areas may not have adequate room for a unit

**“We are used to buying coal on a monthly basis anyway. This would be as difficult or as easy”**

Cockfield, England, Event 1

**“If everyone started using them, then wood would become really expensive”**

Llanidloes, Wales, Event 1

**“It sounds like I will have to invest a lot of time into it”**

Harrow, England, Depth interview

**OUR RECOMMENDATIONS**

Households may consider installing a biomass boiler if they are replacing their existing boiler. Households in rural areas, who may well have adequate space in their houses to install the unit are more likely to be open to the technology. People who already invest time and labour in generating heat in their houses, especially those who live off the gas grid, are likely to be more interested.

Participants suggest grants can be provided to those looking for replacement boilers, and more information can be provided to those who are shopping for new units.

# Micro CHP



## APPEAL

- The unit looks and feels like a replacement for a traditional boiler, hence does not disrupt space allocation within the house
- Produces both heat and electricity, hence seen as a technology with multiple benefits

## BARRIERS

- Lack of access to skilled people who can install the system and perform repairs when necessary
- Initial investment is likely to be rather big and beyond the reach of most individuals unless supplemented with a loan or a grant
- Doubts about the “green” credentials and the technology itself is not seen as being radical enough
- Requires the household to constantly maintain the unit as it requires fuel
- As the unit has to be constantly on, the technology is seen as wasteful and not efficient.

**“It feels too complicated. I want something that I can repair, and this just feels too new and complex”**

Cockfield, England, Event 1

**“If it’s not portable, and the next buyer of the house doesn’t want it, then it’s a complete waste”**

Harrow, England, Event 1

**“I don’t want to put my money in anything that’s still in a trial stage”**

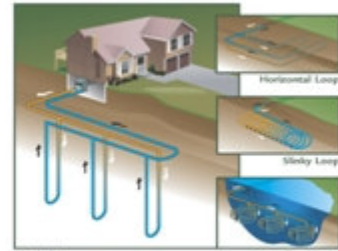
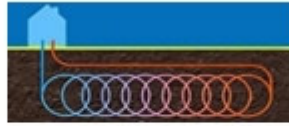
Event 1, Harrow, England

## OUR RECOMMENDATIONS

Households looking to be more energy efficient and produce their own heat and electricity, and looking to replace their current boilers.

Grants can be provided to those looking for replacement boilers, and more information can be provided to those who are shopping for new units. There may be a need for education to clarify what the benefits in terms of money and energy saving comparing the CHP to a gas combi boiler.

# Ground Source Heat Pump



## APPEAL

- The technology is rather new and has a 'wow' factor associated with it
- Uses a renewable and clean source of energy
- It is perceived as hidden, as the pipes cannot be seen, and hence does not pose an aesthetic challenge
- The technology works with existing heating systems in the house; hence there is no need to invest in new radiators etc
- The technology uses renewable energy, hence the costs of running it are likely to be low

## BARRIERS

- Lack of access to skilled people who can install the system and perform repairs when necessary
- As the technology is seen as rather new, doubts exist about its performance over longer periods of time
- Initial investment is likely to be rather big and beyond the reach of most individuals unless supplemented with a loan or a grant
- Urban areas lack land resources to be able to install the system
- Lack of knowledge leads to misconceptions about how the system works, and where the heat is actually sourced from.

**“I like the idea but I have no idea how it works. Will my neighbours agree?”**

Cockfield, England, Depth Interview

**“What if the underground pipe breaks, and the heat starts leaking under the garden?”**

Cockfield, England, Event 1

**“You would need a serious refurbishment wouldn't you? The cost of changing the system would be awful!”**

Harrow, England, Event 1

## OUR RECOMMENDATIONS

Ideally suited for new constructions as gardens don't have to be dug up and there is minimum disruption. It could be promoted as a response to a community's initiative to seek new sources of energy, particularly if they own land together. Households who have access to land, especially in rural areas may be open to the technology.

Has potential to create a real 'wow' factor and news around new technology installation.

# Air Source Heat Pump



## APPEAL

- Uses a renewable and clean source of energy
- The unit is small and doesn't disrupt the household
- While the technology is new to the UK, it is extensively used in other parts of the world, so is seen as a "tested" technology that can be trusted.

## BARRIERS

- Lack of access to skilled people who can install the system and perform repairs when necessary
- Initial investment is likely to be rather large and beyond the reach of most individuals unless supplemented with a loan or a grant
- Misconceptions about the technology including possible noise generated by the unit
- Lack of knowledge about how the technology works, i.e. how is the heat generated from cold air?
- People prefer a sole source of energy, and do not like the idea of combining various sources.
- Concerns about the aesthetics of the unit especially if the house is a character property
- The use of electricity to run the pump appears to reduce the "green" association with the technology

**"People move houses every six to seven years these days, I don't think they would want to make a big investment till they're sure it actually works, and adds value to the house"**

Harrow, England, Event 1

**"Is the air it uses clean? There is so much pollution these days"**

Cockfield, England, Event 1

**"Maybe it works only with small houses"**

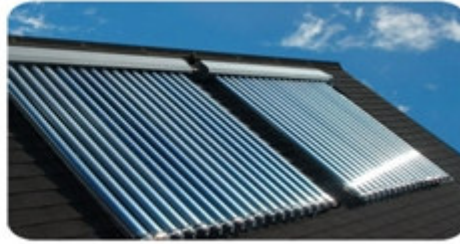
Cockfield, England, Site Visit

## OUR RECOMMENDATIONS

Families in detached and semi-detached homes and households who are looking to cut their energy bills may consider the air source heat pump. Grants to those building new properties were suggested by participants

Householders also suggested information based campaigns geared at people looking for replacing existing heating systems.

# Solar panels for hot water



## APPEAL

- Using a clean and sustainable source of energy
- Has a novelty factor as it visually establishes a house's attempt to generate its own energy
- Seen as aesthetically pleasing
- Established technology, hence high levels of confidence about adopting the technology
- Seen as a customizable solution, as households can choose the size and scale of the unit

## BARRIERS

- Initial investment is likely to be rather large and beyond the reach of most individuals unless supplemented with a loan or a grant
- Misconceptions about the technology such as suitability in winter with less daylight
- Preference for other technologies that are perceived as self-sufficient, instead of an approach that combines more than one technology

**“I think they look really nice, but my only issue is the upfront cost”**

Cockfield, England, Event 1

**“I want a technology that replaces everything”**

Cockfield, England, Event 1

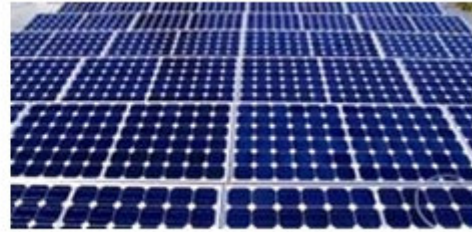
**“I don't get any sunlight. It is quite irrelevant in most urban places because you live in the shadow of buildings”**

Event 1, Harrow, England

## OUR RECOMMENDATIONS

Can be considered if individuals are keen to cut down carbon emissions and keen on adopting an established technology. Can be considered if the household wants to cut down energy costs over a long period of time. Households could benefit from information for those who are retiling roofs or renovating parts of their house.

# Solar panels for electricity



## APPEAL

- Using a clean and sustainable source of energy
- Has a novelty factor as it visually establishes a house's attempt to generate its own energy
- Established technology, hence high levels of confidence about adopting the technology

## BARRIERS

- Initial investment is likely to be rather big and beyond the reach of most individuals unless supplemented with a loan or a grant
- Technology appears to take a long period of time before it pays for itself
- Concerns that the performance of the units and costs savings may be exaggerated.
- Something of a leap of faith to believe UK weather could really provide

**“I don't think the UK gets enough sunlight for this to work”**

Cockfield, England, Depth Interview

**“I like the idea, but I don't have the space for it”**

Cockfield, England, Event 1,

**“It takes too long for it to pay for itself”**

Lisburn, England, Event 1

## OUR RECOMMENDATIONS

Households with adequate roof or wall space that gets direct sunlight to install units can consider it as a viable option. Additionally, they need to be willing to make a large upfront investment to cut down bills over a long period of time. A further incentive is available to households who are interested in selling the surplus to the grid and this was of interest to participants.



# Wind turbine



## APPEAL

- Using a clean and sustainable source of energy
- Split views – some found them aesthetically appealing, though for others, it was just the reverse.

## BARRIERS

- Planning permission is required in most areas before installation, and this dissuades households from considering the option
- The output from the wind turbine is highly dependent on location, and householders are not entirely sure who they can trust to provide an honest appraisal.
- There are concerns about the aesthetics of the wind turbine and the possibility of the amount of noise the unit might generate
- Wind energy is seen as being more suitable for a large scale undertaking rather than as a household level solution

**“I think they look ugly and are eyesores. Imagine one for every house!”**

Event 1, Harrow, England

**“You need planning permission, and that’s just complicated”**

Event 1, Cockfield, England

**“I’ve heard they are very noisy”**

Event 1, Cardiff, Wales

## OUR RECOMMENDATIONS

Can be considered if individuals are keen to produce their own electricity and interested in selling the surplus to the grid. Most potential as a community source of energy; participants were most positive about the idea of wind turbines when they envisaged them as providing energy for a defined local area. Even though this is not necessarily the case, there is a powerful draw in the idea of a community using ‘our’ wind energy to power ‘our’ houses - and feeling self-sufficient. (more on this in community solutions section).

### 3.3 Community level solutions

#### IN SUMMARY

Community solutions can work, and the public will respond to the same incentives as for individual technology takeup. Additionally, there is a need for external organisation, support and help for the communities concerned.



#### Where to find analysis of community technologies

In this section we deal with all issues around community technologies; attitudes to the technologies themselves, and the way systems might be funded, are interconnected.

On pages **58 to 61** we look in detail at the community **technology** options. We look at specific examples of community **funding** options in section **4.3, pp77-80**

#### ***Are we really a community?***

Initially, the idea of community solutions was rejected in most Forums. Householders believe it would take a great level of cohesiveness and cooperation in the community to be able to successfully implement a community solution. Some participants feel that they may leave the neighbourhood in future, which would make it less attractive to get involved in a community solution.

However, in later events and after further discussion, participants began to support the idea of community solutions. This change in opinion was particularly noticeable in urban locations, where houses tend to be relatively small and possibly lack the space for installing the micro generation units, so participants can see the sense in saving money together. The appeal of community solutions includes –

- The entire community is involved in the decision of picking the right technology and the right scale, hence **sharing knowledge and potentially spreading the risk**
- A chance to **buy into a ‘green lifestyle’** without having to do all the legwork
- Likely to be greater **economy of scale** in community level energy generation solutions – so value for money for individuals
- Coordinated community actions are capable of **far larger environmental impacts**

**“If someone just knocked on your door today to say we’re considering doing this and gave you the prices you would just say ‘on you go’”**  
Cookstown, NI, Event 1

- Community level solutions are likely to be maintained by **professionals** or run by private developers, hence householders do not have to assume responsibility for the maintenance of the energy generating unit
- Does not require householders to **change their lifestyle**, as energy is delivered to their doorstep
- The possibility of **selling energy back to the grid** is attractive, as it implies there might be indirect subsidies to the local area

Apart from in the most rural areas, there was some debate over what actually constituted a 'community'; and participants called for local government to define geographical areas and help people in the most cost-effective way. For example, the council could identify people who shared a terrace of houses built to the same specifications, or help a village on the banks of a river, or on a hill particularly well adapted for solar power. This was seen as a good way of creating and leveraging community, rather than leaving individuals to self-organise (which participants did not believe was likely to happen).

**“It’s hard to visualise what your community can do. Is it our big estate? Our small part of Cardiff? Cardiff itself? None of us even knew each other before coming here”**  
Cardiff, Wales, Event 3

### ***Government needs to take the first step***

Householders placed the responsibility to initiate community energy generation solutions squarely with Central Government, bringing in local authorities and energy companies to help delivery. Community-options are most appealing when collective action is **initiated, organised and facilitated by a Local Authority**, rather than by residents themselves.

**“I can’t see any way it can be done without professionals doing it, I don’t think it could be done by volunteers from the community”**  
Harrow, England, Event 3

If the onus is on the local community to take decisions around appropriate schemes and to organise the installation and maintenance of low carbon technologies, householders lose confidence in the scheme. In the majority of communities there is not an obvious lead to take forward a low carbon scheme and so they cannot imagine how this would work practically. There are also

concerns around the level of buy-in that would be achievable within a local area and worry over some householders ‘free-riding’ so that they benefit from community actions without contributing towards them.

Overall, householders prefer community schemes which allow households to **use renewable energy sources themselves** rather than investing in renewable energy to be used

elsewhere. The ideal solution would be for individuals to use the energy themselves – or to direct it to a local community building. Participants acknowledge, after learning about energy at Event 1, that it is most likely such schemes would direct energy straight to the National Grid which householders will then be using.

In all the forums, it was not enough for participants to hear that profits 'go to the community'; they identified a lot of potential arguments about where the profits should be spent in those circumstances and could not decide who would be the right people to make decisions.

Similar concerns were voiced about the idea of a low carbon zone. Whilst it was appealing to have different community targets, set appropriate to different areas, participants were not sure where their individual responsibility would lie for achieving those targets. What would be their financial responsibility, either as local taxpayers, national taxpayers or individual consumers? And what might the sanctions be for not achieving targets? Would these be fair on consumers?

This all underlines the need for any community solution to be designed so that an individual investor can get some personal return on his money; and for the organisers of such schemes to communicate very clearly how profits will be returned at community or individual level.

**Community Solutions**

**Wind farm**



**APPEAL**

- Using a clean and sustainable source of energy
- Seen as local energy

**BARRIERS**

- Some participants feel that wind farms are an “eyesore”, both in rural and urban areas
- Perception that wind farms are noisy
- Perception that wind farms could harm birds or local wildlife
- Fear of losing woodland if areas have to be cleared for wind farms
- Misconceptions about how they work with other technologies – if there is no wind is supply secure?

**“Could you rely on it 24 hours a day? It’s ok getting cheap electricity when it’s windy but not if you get nothing when it’s not”**  
Cardiff, Wales, Event 1

**“If you can get everyone to agree, this is the way to go”**  
Irvinestown, Northern Ireland, Event 1

**OUR RECOMMENDATIONS**

Exposure to wind farms in person rather than reading media reports may convince some communities about the idea. Communities need to be able to trust developers and an involving, consultative exercise needs to be undertaken at the local level to ascertain the needs of the community.

# Small Scale Hydro



## APPEAL

- Using a clean and sustainable source of energy
- Hydro power seen as being in abundant supply

## BARRIERS

- Fears of destroying local river ecosystems
- Fears of losing land near river
- Unsure if water flow is adequate to allow consistent production of energy through the year
- Misunderstandings of how hydro actually takes energy from water.

**“Llanddaniel is flat with no rivers.  
Would need to be in Snowdonia”**  
Llanddaniel, Wales, Event 1

**“Are we close enough to a  
water source to make it  
work?”**  
Cockfield, England, Event 1,

## OUR RECOMMENDATIONS

Exposure to small scale hydro schemes, and community level consultation to discuss suitability and viability of the solution, particularly the way it should be financed.

## Industrial Sized Heat Pump



## Community biomass boiler



Participants gave similar reasons, when discussing these two technologies, for their appeal or otherwise.

### APPEAL

- Does not require maintenance by the community
- Uses sustainable source of fuel
- Seen as more appropriate for schools, hospitals and shopping centres rather than as district heating

### BARRIERS

- As with individual biomass boilers / heat pumps, questions of space, maintenance, fuel availability, cost.
- Concerns about traffic bringing in biomass fuel if used in urban areas.
- Concerns about how individuals locally would 'hook up' with the scheme if used as district heating
- Concerns about reliability of untried technologies if used in e.g. a hospital where energy is important

**“Does everybody have to have pipes in their house. Then that’s like work on their house as well, plastering. Who’s going to pay for that?”**

Event 1, Cookstown, Northern Ireland

**“We need money to spend up front – why are councils not doing this?”**

Event 1, Llanddaniel, England

**“Biomass has been trialled 10 minutes away on a new housing estate – I don’t know if it’s been successful but I think not”**

Event 1, Llanddaniel, Wales

**“But then what do you run the pump by? If it is a large pump. Does it use another form of energy to run the pump?”**

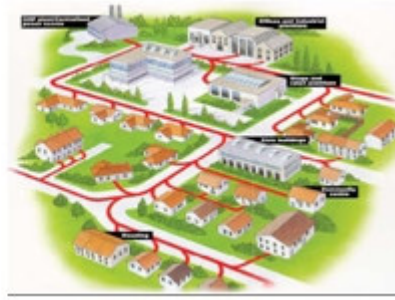
Event 1, Cardiff, Wales

### OUR RECOMMENDATIONS

The biomass boiler and heat pump are seen as appropriate to one building – a school, hospital or shopping centre. Government could install these as exemplars; though as the other strands of this research demonstrate (into business and the public estates), there may be a need to overcome barriers of ownership and maintenance of building stock.

From the public’s point of view, it is very much up to Government to ‘walk the talk’ here and solve these problems. Community-level systems for public buildings, paid for through taxation, are seen to be the way forward as it appears to the public that the Government would be taking the lead in installing these technologies.

# District level CHP plant



## APPEAL

- Does not require maintenance by the community
- A 'low hassle' way for individuals households to buy into the idea of sustainable energy
- Potential for individuals to feel part of a community, but still feel 'in charge' of their own household energy.

## BARRIERS

- Does not require maintenance by the community
- A 'low hassle' way for individuals households to buy into the idea of sustainable energy

**"I've seen this in Canada – a crematorium generated excess heat and kept the roads free from ice, heated houses etc"**  
Llanddaniel, Wales, Event 1

**"If it's there, I'd hook my house to it, but other than that what can I say?"**  
Cockfield, England, Event 1

**"It would have to be done by government – we wouldn't know where to start"**  
Cardiff, Wales, Event 1

**"Would it work for a low density area like ours?"**  
Cockfield, England, Event 1

## OUR RECOMMENDATIONS

Because this system is already in use in some other countries, there is potential to demonstrate the benefits to householders through case studies, which tends to allay householders' concerns. Participants in this research imagine that this would work best when set up by a private company and individual consumers would 'buy into' the benefits. So, assistance from the Government would ideally be helping such companies to develop offers to the consumer which are priced and designed to overcome barriers to adoption – i.e. low risk, low upfront cost.



# **4. Financing the Big Energy Shift**

## 4. Financing the Big Energy Shift

### SUMMARY and RECOMMENDATIONS

This chapter looks at responses to the funding options (**4.2, Individual Options, and 4.3, Community Options**), but first gives an overview of the ideas which participants felt would be most successful in making the Shift happen.

#### 4.1 How to make it work – the big ideas:-

- **Legislation** - to help Government demonstrate the seriousness of the problem, and to enforce change within the timescale
- **Fair targets and timescales** to be set
- **National and local** Government involvement, especially at a community level (also see section 3.3 on community solutions)
- Most importantly, **grants and loans schemes to make costs upfront as low as possible for individuals**
- All potential products and involvement designed to **nudge people towards action**, rather than leaving them to make consumer choices in an immature market
- Government must ‘walk the talk’ in installing new systems in public buildings

In the light of the detailed findings on funding options (**in 4.2, 4.3**), we have made some **recommendations** on potential Government interventions. These are recommendations arising purely from the public dialogue, and of course will need to be balanced with other stakeholders’ concerns.

- **Organise exemplars, targets and administer funding at a local level through local government organisations.**
  - Tailor exemplar and show homes to properties broadly characteristic of area to maximise relevance to local homeowners
  - Ensure local public buildings, such as schools, libraries, community centres are exemplars
- **Incentivise early adopters** to install low-carbon technologies at household scale by helping cover the upfront cost
  - Consider supplying all homes with **smart meters free of charge**
  - Provide **home energy audits** offering tailored individual advice for a small charge (below £100)
  - **Grants**, with value determined on sliding scale from low-cost, low-fuss insulation and metering technologies up to more advanced micro-generation technologies (up to around 75% for advanced technologies).
  - Consider supporting a **relatively limited choice of packages** for each area, appropriate to the housing stock, so householders are not baffled by the pressure of choice.
  - Where the payback time is long, **careful communication** will be needed to explain the benefit of the option and why it is a win-win situation.
- Introduce legislation – offers double benefit of a symbolic function to communicate the gravity of the issue, as well ensuring all properties comply with minimum standards.
  - Provide sufficient **lead-in time** (e.g. 5 years)
  - Base requirements on **specific measures** to be incorporated into all households rather than expecting all homes to reach same overall efficiency grading
  - Make **minimum standards a requirement** for selling a property
- Direct **financial support** to those in most inefficient homes, with funds channelled to those on lowest incomes.

### Event 3 – discussing potential funding options

- At Event 3 we showed participants a range of large ‘posters’ on which were concepts for different funding mechanisms for new technology adoption. Participants rotated around the posters in groups and discussed the pros and cons of each.
  - o Description of funding option
  - o Very ballpark and relative upfront costs, payback times
  - o Details of how funding might be obtained
- We debated the appealing / less appealing aspects in the context of the local area and the national scene
- Policy experts were on hand to discuss the options in more detail, ask and answer questions about householders’ perceptions.

#### 4.1 How to make it work – the big ideas

An overview of the ideas participants felt are most important in financing the Shift.

#### ***In every forum, a majority of participants called for legislation.***

Participants suggest that this would serve several functions.

**“You need to scare me with a big stick and enforce it”**

Irvinestown, NI,  
Event 3

- To enforce houses being brought up to a minimum standard of CO<sub>2</sub> emission by a set deadline; essential if any targets are to be achieved.
- To demonstrate that the Government is taking the issue seriously – having a ‘symbolic’ function.
- To help motivate individuals to take action, by raising general awareness that their own decisions on home energy are part of a bigger social programme.
- To link local activities to a national agenda, and enhance credibility of local initiatives.

Homeowners believe that all significant changes in individual consumer behaviour in recent years have needed **legislative backup** as well as social marketing communications and individual incentives (public health behaviour, road safety, the human rights agenda and so on). In situations like the *Big Energy Shift*, where an individual’s consumer instincts might conflict with society’s best long term interests, they believe Government should step in to make things happen within a timescale.

**HOWEVER** – The call for legislation was by no means a universally popular one and there were some participants opposed to it. Even those in favour of legislation felt that there should be associated conditions around timescales, incentives and funding. Participants are very

clear that the following conditions would help increase their support for legislation, and without these, they would not support legislation.

- A sufficient lead-in time for householders to meet the minimum standards;
- A fair distribution of financial assistance to help those on the lowest means, and/or those in the least efficient homes to meet the required standard; and
- Acknowledgement that a universal minimum standard will require more effort and expense for some properties – specifying particular measures that need to be put in place (e.g. loft insulation, underfloor insulation) is likely to be more popular therefore than requiring homes as a whole to reach a certain efficiency grading.

These conditions are explored in more detail below.

### ***Set fair targets and a fair timescale***

**“I think it’s dangerous to go too far down the ‘it is law’ route, too quickly, cos it’ll create a resentment towards the whole idea of energy saving”**

Cookstown, NI, Event 3

**“Legislation is the only solution, but it should be graduated”**

Llanidloes, Wales, Event 3

Because of the UK’s diverse housing stock, householders will need different solutions, with different associated costs. Targets and assistance should be carefully geared, so that similar levels of effort are required from everyone, rather than an unfair financial burden placed on some. The public acknowledge that this is a real challenge, as it takes in complex issues to do with means testing, benefit allocation, and setting the timeline for legislation.

**“A specific rating to your own house, and grants done sensibly”**

Harrow, England, Event 3

Because people will need time to get their houses in order (literally!), there will need to be a long lead time with a clear policy trajectory, with assistance and information coming long before legislation.

### ***Give local and national bodies a clear role in the story***

Where we discussed the energy challenge and the importance of changing our heating and powering structures on a *national* level, participants through all the forums became enthused.

But when it came to imagining specific payment Options in everyday life, many of the Options seemed to work more on an *individual* level, or under the auspices of *local* government, and this seemed far away from the idea of a national push on green energy and insulation. Imagery around the Big Energy Shift often harked back to wartime ideas of

everyone pulling together against a common enemy; and participants asked for a shared idea that they could ‘get behind’ and join in with. They needed to understand how the activities of local government or business fitted in with this big national idea (see discussion of the Worlds in chapter 5 presented through the reconvened event for more on this.) Currently, local government activity is not automatically seen as connected to national policy objectives.

When participants do imagine a national shared idea, they understand the role of local government in delivery, much more clearly. Then, local government is seen as more trustworthy and able to deliver. In the absence of a national context, householders tend to think of local government as, potentially, serving its own ends and running inefficiently and unfairly (giving incentives and benefits to the wrong people, for instance).

Each area will have different energy resources and housing stock, so local targets and roll-out of technologies were suggested, organised by local authorities who were perceived to know the area best and have the resource to lead on this. Despite some voices expressing lack of trust in the capability and efficiency of local authorities, the majority of participants see their involvement as vital. In the current economic climate, householders are also more willing to accept financial loans and incentives from government sources rather than through the banking system.

Participants suggested that word of mouth is very important when it comes to change in the home, and seeing real life examples was one of the most compelling incentives for individuals to take up new ideas. Therefore, local programmes of exemplars were called for.

### ***Help us with the upfront costs***

Having said all this, the biggest barriers to individual adoption remain the fear of risk, and the upfront cost, causing a cost-benefit analysis which simply does not add up for most householders at the moment. Householders accept that society as a whole may need to bear the costs of change, so believe that **Government should take the lead on upfront costs, persuading and incentivising individuals with plentiful grants and loans, and recouping the money through general taxation.** Legislation could then be introduced later to penalise individuals whose homes did not meet required standards.

Homeowners suggest that grants of more than 50%, or even 80%, of upfront costs could be necessary to get over some barriers, especially for some of the more advanced

**“If you simply haven’t got £5,000, you can’t, however you would like to”**  
Lisburn, NI, Event 1

generation technologies or some of the more disruptive insulation options.

Why are they so focused on reducing upfront costs?

- The technologies are perceived to be risky, aesthetically challenging, and not guaranteeing a rate of return, so householders do not want to bear all the risk, when they see the benefit to be as much to society as a whole as it is to the individual.
- For participants on lower incomes, the sums of money required upfront are simply not available and they fear loans.
- For many technologies the payback time is felt to be too long - anything might happen, and the individual might lose out in the end.

Grants are more appealing than loans for participants on lower incomes, as in current housing market conditions they can no longer rely on the appreciation of their house value to make them money, and so many are not prepared to take out loans against property equity.

**“Government can’t do anything without our help, but if they want our help they have to help us financially. We need grants, Anglesey is an economically deprived area and paying back gradually through bills is the only way we can do it”**  
 Llanddaniel, Wales, Event 1

Grant and loan schemes are generally seen as impenetrable and complex. There may therefore be scope for a ‘simple and symbolic’ financial gesture, driven from the centre, not means-tested, to show that Government is keen to get everyone on board and give them the responsibility to start making decisions (e.g. giving smart meters to everyone in the country).

Householders are also concerned that early adopters are financially penalised, if the price of new technology drops in years to come. Some also fear that the technology may become outdated or defunct as new innovations are developed, leaving those with early installations without the support systems and replacement parts they will need. These are both felt to be serious barriers to adoption, especially given that house value, and personal savings, are seen as less stable resources to draw upon now than they were. Some participants, therefore, suggested that additional financial incentives for early adopters might be worth considering, and would communicate that the Government is prepared to share some of the risk.

For options where a local council establishes a scheme (e.g. second charge scheme see p72) residents recognise council tax bills will need to increase, and many homeowners are reluctant to foot the bill so that a few properties can benefit from the loan. There is a

widespread belief that loans and their repayment should be agreed and administered on an individual scale, rather than asking a whole area to cover the cost for the benefit of a few.

When it comes to loans to cover upfront costs, some welcome the repayment of a loan staying with the property, as this delays the cost for the individual (Second Charge, p72). However the communication of the loan issue will need to be handled sensitively. Concerns around affecting the value of a property in the current housing market make householders nervous about passing their debt onto the buyer. Aside from the potential impact on housing sales, homeowners are also nervous about accruing debt and would feel more comfortable paying this off sooner rather than later.

***Choice is an over-rated concept, instead nudge people towards action.***

'Choice architecture' is a relatively new concept<sup>3</sup>. It refers to a process of social marketing where the market is tailored so that the most obvious, salient choices available to consumers are also the ones which would lead them towards the social marketer's desired outcome. This is referred to as 'nudging' people towards desired behaviours. It does not take away people's

**"The word 'push' is like forcing people to take action, it's as if we haven't got a choice. But then we don't really have a choice, it's just about making people think they've got a choice!"**

**Harrow, England, Event 3**

right to choose, but instead takes advantage of natural consumer inertia; the fact that most of us choose the default setting, or easiest option, on many of our purchases. Those in favour of choice architecture argue that since there is always a 'default' or easiest option in any decision process, it is both possible and ethical to design the choice process so that choosing the default leads to a 'social good'.

**"I just wouldn't know what was the best one for me, and I haven't got the time to find out about them all"**

**Cardiff, Wales, Event 3**

While participants in this research do not specifically refer to nudging or choice architecture, they do talk a lot about the difficulty of choosing; and that in this context, they would rather have an informed or guided choice than a wide consumer choice.

Overall the public are very fearful of their ability to make good consumer choices in this area, as the technologies are so unfamiliar and they find it hard to weigh up the risks, costs and benefits. Because of this, options which suggested giving people free choices to invest in different technologies, but without stressing guidance around the most appropriate solutions for their property-type and situation, were generally treated with some suspicion and concern.

Although some choice can be attractive (e.g. choosing how to spend a second charge loan, see p 72) this does need to be accompanied by detailed information and advice. This is why enthusiastic frontline staff and independent, tailored advice to the individual household are seen as key drivers to help people take up new technologies.

<sup>3</sup> The theory, called Libertarian Paternalism is most fully expounded in [NUDGE: Improving Decisions About Health, Wealth, and Happiness](#). Thaler and Sunstein (2008). The theory begs some questions, for example who should decide which default options are socially or individually the worthiest? However it is a useful theory to consider in the light of participants' comments during this dialogue on the Big Energy Shift.



Householders also point out that in the short term, less environmentally friendly options are likely to seem cheaper, less risky and more aesthetically appealing to individuals, and it is unfair to ask individuals to overcome their natural leanings towards those options without any help. They would like Government to help ‘nudge’ these currently appealing options out of existence.

**“When you go to buy an appliance, why don’t they just sell A and B fridges, why bother selling the E and F ones?”**

Exeter, England, Event 3

On a related note, they also point out that the market for new technologies is relatively immature, so consumer choice will not necessarily prompt takeup quickly until new solutions evolve to meet consumer needs. They questioned whether the market would evolve quickly enough to make the Big Shift happen in the timescale which has been set.

They would be happier for area-based solutions to be rolled out and given limited, but reliable choices, appropriate to their housing, with accredited fitting and maintenance.

### ***Government must walk the walk, as well as talking the talk***

Government must lead the way in installing insulation and micro-generation in public buildings such as schools, hospitals and shopping centres, especially if legislation is on the horizon. This would provide much needed exemplars of the technologies in practice, demonstrating how they actually work and helping to normalise the technologies. There is also a symbolic role, as with legislation, demonstrating that Government takes the problem seriously and is cutting out waste everywhere.

**“You need large scale schemes of new technology government examples.”**

Llanidloes, Wales, Event 3

**“I work in the school and they have the heating on full blast and the windows open all the time – what a waste, gallons and gallons. It’s madness, but human nature, if you’re not paying for it yourself you stick the heating on.”**

Cookstown, NI, Event 1

## 4.2 Individual Options

### 1. I sort myself out, with some financial help

I wanted some new technology...I could go to my energy supply company, local authority or a local retailer.

I ended up choosing between 3 things...

Solar electricity: £9,375 (18-20m<sup>2</sup> south facing), to save £250 each year on bills

Plus, I can get more cash by selling energy back to the energy company!

Ground heat pump: £6,000 - £12,000 , to save £300 - £700 each year on bills

Plus, I get cash

External solid wall insulation: £5,600 , to save £438 each year on bills (Payback time, 11 years)

Plus, I get an upfront subsidy of £600

They did a survey, gave me a quote, and then came to install my new kit.



#### Who will go for this?

Motivated, resourceful homeowners with capital to invest in their home, people willing to take risk with new technologies – “early adopters”.

#### Who won't go for this?

Lower income householders without capital available upfront. People who are not resourceful in seeking out the necessary information/advice needed.

#### RECOMMENDATIONS

Government helps commercial providers offer reduced price packages for early adopters to incentivise those taking first steps in installing new technologies.

Make information packs available to householders in local libraries/community centres/schools with lists of possible suppliers to contact and the rough costs and savings to be made.

#### APPEAL

- ✘ Individuals have control over which technologies to invest in and the level of investment
- ✘ Familiar option – requires little explanation, risk involved is easily understood.
- ✘ No reliance on commitment from others in community, can be taken up totally independently therefore easier to implement

#### BARRIERS

- ✘ Relies on motivation of individual therefore unlikely to contribute to widespread uptake
- ✘ No incentive for early adopters who take on untested technologies at maximum
- ✘ The level of financial support for upfront costs is unclear – could limit this option to those with capital
- ✘ Lacks guidance for householders to determine most suitable technologies

**“All this has made me realise how difficult it is to decide what to do. I was astounded at the amount of information available on the internet, there’s so much there and yet no strong leadership saying what is right for you, the way it should be going for you”**

Cardiff, Wales, Event 3,

**“I like the phrase sort yourself out something empowering about it I think”**

Cardiff, Wales, Event 3

## 2. Pay as you save scheme

I joined a 'pay as you save' scheme chose and bought a technology for my home from the scheme.



The scheme was offered to me by my bank, energy supplier, retailer, or local authority.



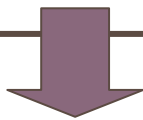
They sent a certified installer, identified the best kit for me and THEY paid the cost upfront. I pay in installments charged on my energy bill.

Insulation package **£6,000** (solid wall insulation, under floor heating, more efficient glazing).

Over 20 years my savings offset the repayment, after this it is mine.

OR: I pay a bit more but it is mine quicker

When I sell my home, the repayments remain with the house.



### Who will go for this?

Householders planning to stay in their homes for a while & those who see the loan as a relatively small amount.

### Who won't go for this?

Lower income, less financially confident householders & those expecting to move around over the next few years.

### RECOMMENDATIONS

Government helps commercial providers offer attractive packages so that the loan idea doesn't seem so onerous (stressing relatively small sums of money vs. benefits).

Local 'bundles' of technology options designed to appeal and work with the housing stock in an area.

Providers clearly communicate how installation increases desirability of a property (c.f. loft conversions which involve outlay, but add value at sale)

### APPEAL

- ✓ Individuals control choice of technology
- ✓ Individual directly feels benefits – as the technology is installed immediately
- ✓ Advice given on most appropriate technology and householders are able to have confidence in credentials of installer
- ✓ Cost spread over time with no upfront outlay from householders
- ✓ Elegant, easy solution which makes sense
- ✓ The Government or other bodies bear initial cost of new and untried technologies –showing they are focused on making the shift happen

### BARRIERS

- ✗ Long pay back period problematic given untested technology- '20 years' causes instant negative reactions
- ✗ Repayment staying with property may be turn-off for potential buyer – worry in current housing market so some householders would rather pay it off quicker
- ✗ Uncertainty around where money is borrowed from and the agenda of the lenders – particular distrust in energy companies
- ✗ Uncertain where to attain guidance
- ✗ Reluctant to be tied down to one energy supplier.

**“Good because you get upfront financial help, and for a lot of people it is just this initial hurdle which stops them, so a grant would help. And it feels most natural – to be saving money from the minute you start paying off the loan”**  
Cookstown, Northern Ireland, Event 3

**“If the house comes with a debt, it would put people off”**  
Cardiff, Wales, Event 3,

### 3. My council offers me a 'second charge' scheme

My council pays for the installation of a technology and ties the payback of the money to the property.



I get up to £10,000. There's a set up charge of £300. I don't pay anything unless I move home, at which point I pay back the council. There's no interest on the loan.

To access the council funding I have to install some basic insulation measures myself

With the money I got, I started thinking about...

Solar electricity system?

Ground or air source heat pump system?



Full wood pellet boiler installation?

NB: Not explored in NI

### APPEAL

- ✓ Involvement of local council – householders more receptive to government loans than bank loans despite concerns around capability and efficiency of LAs
- ✓ Financial help – through interest-free loan and no upfront cost
- ✓ Individual choice to determine spending of loan – allows technology to be tailored to both property and lifestyle
- ✓ Requirement for basic insulation is logical
- ✓ Repayment at point of sale of property delays cost to individual without interfering with ease of selling property

### BARRIERS

- ✗ Unfamiliar payment option – some nervousness around accruing debt
- ✗ Concerns around ramifications of poor decisions around type of technology to install
- ✗ Concerns around stability of value of technology with fears of developing negative equity – either through widespread take-up reducing price or technology becoming defunct
- ✗ Council tax increase – reluctance to fund loan schemes for few who benefit
- ✗ Concern over how practical this is for widespread take-up – how could local councils fund it, if everyone did it?

### Who will go for this?

Householders interested in testing new technologies but without the capital to invest instantly themselves; people who think the technologies could increase the value of their home at point of sale.

### Who won't go for this?

People lacking trust in local authorities or sceptical that technologies will hold value.

### RECOMMENDATIONS

Market this scheme at early adopters or exemplars.

Local 'bundles' of technology options could be offered, designed to appeal and work with the housing stock in an area.

Providers clearly communicate how installation increases desirability of a property (c.f. loft conversions which involve outlay, but add value at sale).

**“This is a good idea – but if it gets old I'd rather have paid it off early. If the equipment breaks down what do you do?”**

Event 3, Harrow, England

## 4. Join the Home Energy Club!



I join a home energy club so we can cut our energy bills together

The Club is sponsored by my employer, school, church, Women's Institute, local college or is set up among friends & relatives.

We meet regularly. I can join an online community to compare best practice with others.



WeightWatchers

A local Home Energy Advisor gives us tips and information, and volunteer advisors help us out too.

We try out simple behaviour changes together and discover this can save money on bills.

We get bulk discounts of 20% e.g. draught proofing £160 with discount. Save £30 each year. Pay back 5 years.

### APPEAL

- ✓ Opportunity to increase knowledge about technologies – if club has access to expert advice
- ✓ Opportunity to learn how to save money through energy efficiency
- ✓ Opportunity to ask property-specific questions
- ✓ Best suited to a drop-in session format, online for some, rather than regular meeting
- ✓ Most appropriate to be held in local civic building – town hall, school, community centre

### BARRIERS

- ✗ Regular meetings would lose momentum and purpose
- ✗ Meetings may be hijacked by particularly vocal residents
- ✗ Difficult to imagine who in the community would lead this and drive it forward.

### Who will go for this?

People already involved in community-level organisations/clubs, some feeling that this would be attended more by women than men. Householders keen to discuss energy efficiency with others in similar properties.

### Who won't go for this?

People looking for expert advice as well as the knowledge of other householders similar to themselves.

### RECOMMENDATIONS

Hold regular drop-in sessions in a local civic building which residents can attend as and when they are looking for advice – a trouble-shooting session. There needs to be some expert attendance so that householders feel they can receive specific and tailored advice for their property. This could be an exemplar who has already tried and tested technologies - this would also remove the difficulty of finding someone within the community willing to set up a club and generate regular attendance.

**“I would come along to that if you knew you were going to get something out of it – if there were experts like we've had here today that could explain things to you, put them in layman's terms.”**

Irvinestown, Northern Ireland, Event 3,

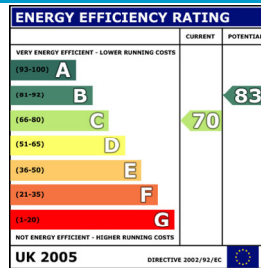
**“A club might work between people in similar houses, they would have the same needs, like when you share a builder with someone who has had the same extension done that you want”**

Harrow, England, Event 3,

## 5. Minimum standards for all by law

By law all homes have to meet certain energy performance rating e.g. E rating - before they can be sold.

The law won't come into force for some years and during that time the government will provide financial support to upgrade your home.



What kinds of support?

?  
?  
?

For example, subsidies...

Loft insulation: £500 Subsidy £250 Save £205 Pay back – 1 year

Cavity wall: £500 Subsidy £250 Save £160 Pay back – 2 years

Or I can use the pay as you save scheme (Option 2)



And I get subsidised heat controls and real time display

I don't need to worry. When I sell my house, my Energy Performance Certificate shows that my home has a high energy performance and meets the law.



### APPEAL

- ✓ Introducing minimum standards would ensure widespread home improvements – given suitable lead time (5-10 years)
- ✓ Legislation could have important symbolic value in communicating severity of issue and encourage collective action
- ✓ All homes developed to a similar standard within a similar time frame
- ✓ Householders would only need to make improvements to one property as movers would come to a property already meeting required standard

### BARRIERS

- ✗ Resentment towards criminalising those who do not improve the efficiency of their homes
- ✗ Will be unpopular unless sufficient lead time is given (5-10 years desirable)
- ✗ Universal standard may not be suitable, or fair, given range of property type – minimum standard will be harder, and more costly for some to achieve than others.

#### Who will go for this?

People recognising severity of issue and challenge involved in meeting targets.

#### Who won't go for this?

People living in properties which will be expensive and time-consuming to get to minimum standard – this may particularly apply to rural communities living in older properties, or older people in less up-to-date homes.

#### RECOMMENDATIONS

This option could generate substantial public support if sufficient lead-time is given to meet required standard – somewhere between 5 and 10 years appropriate, and if sufficient support is available – both financially and in terms of information.

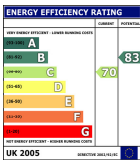
**“If this issue is so important then the government would do something serious about it”**  
Exeter, England, Event 3

**“Sure people might kick up a fuss about it at the start but it's for everyone's good and you've got to do it”**  
Llanidloes, Wales, Event 3

**“But some people can't afford to buy a cooker”**  
Llandaniel, Wales, Event 3

## 6. Whole House and my hand held

I contacted a registered Home Energy Advisor who came and audited my whole house



The advice was independent, outlining the suite of technologies best suited for my home. They told me how to minimise disruption and who the best installers are.

I could do everything at once or fit it in with improvements I was planning

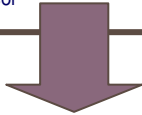
I went for...

Heat pump, solar electricity and solid wall insulation: **£20,000** Save: £1150 a year on energy bills. Pay back £20 years. Audit £99 (unsubsidised the audit would cost £300)



I got subsidised heat controls and real time display

I got ongoing support from the Advisor



### Who will go for this?

All homeowners interested in improving the energy efficiency of their home whether to save costs, or on environmental grounds; people with capital available to make improvements to their home.

### Who won't go for this?

People without the capital to make home improvements and unwilling to take out a loan. People sceptical about the impartial nature of the advice or with little knowledge of the types of technologies which may be offered. Some may be reluctant if they see the audit as a potential sales pitch.

### RECOMMENDATIONS

Set up an accredited and regulated body of home energy advisors to ensure trust from homeowners. If possible, participants suggest subsidising costs from central government so that audits can be priced below £100 to encourage take up. Ensure advisors provide a range of options to householders – both in terms of cost and level of disruption/effort involved in the installation to ensure there is an element of consumer choice.

### APPEAL

- ✓ Effective way of overcoming the barriers created by a lack of knowledge and awareness around the most appropriate technologies for a particular property
- ✓ Ongoing support – developing relationship
- ✓ Independent, accredited, regulated advice desirable
- ✓ Best if whole range of options discussed to provide householder with element of choice – from low-cost, minimal hassle to most sophisticated options

### BARRIERS

- ✗ Cost incurred – audit should be free-of-charge (max. cost £100) – could lessen impact of cost by charging for audit but reducing cost of technology bought from same supplier
- ✗ Concerns around rigour of advice and professionalism

**“Sure it sounds like a good way of them putting the kit in but how do people like us pay for it? There’s no mention of where the money’s going to come from.”**

Irvinestown, NI, Event 3,

**“I like the sound of having an independent body to oversee these changes”**

Harrow, England, Event 3,

## 4.3 Community Options

### 7. Our community sorts itself out



In my community we all invested in a co-operative scheme. We share the costs of installation and energy supply; or we can get a bank loan or a grant.

We can add more money in by issuing shares, or setting up partnerships



We might set up a commercial wind farm

We might go for Solar Panels for the community centre roof



The electricity goes to a public building & the the grid rather than to our homes

E.g. Energy4All, commercial wind farm: shares start at £250 with a 25 year commitment and 8-10% annual return

Torrshydro: shares cost £250, supplies local supermarket co-op and the grid, income to residents of £24,000 used to develop new hydro projects

#### APPEAL

- ✓ Possibility of generating employment in the area
- ✓ Profit for community by selling excess electricity to the National Grid
- ✓ Community-scale action will have greater environmental impact than action at individual household level

#### BARRIERS

- ✗ Concept of community is difficult – seldom is a community body already established to lead project or decide on spending of profit
- ✗ Concerns around free-riding – 100% buy-in deemed impossible
- ✗ No direct benefit for individual, as energy supplies community building rather than individual homes and profit generated at community level – leads to reluctance to buy-in as paying for someone else's energy as well as paying own bills
- ✗ Considerable effort involved for community
- ✗ Issuing shares is not a familiar concept in relation to paying for energy – leads to concern
- ✗ Concerns about making poor choices in terms of technology which may prove poor investment for community.

#### Who will go for this?

Close-knit communities with a large proportion of engaged, environmentally-conscious householders. Communities where there is already a suitable body of residents, or clear leader, in place to progress and manage this scheme.

#### Who won't go for this?

Many urban residents who find it difficult to define the boundaries of their communities and who are often not already in community organisations.

#### RECOMMENDATIONS

Lift responsibility from the community and place it with the local authority. Despite desire for choice, communities express need for strong leadership.

Advertise successful examples of communities establishing their own schemes to encourage people that it is possible.

**“Would we get help setting this up? We would need that – we wouldn't know where to start!”**  
Harrow, England, Event 3

**“No gains first hand, only gains for the population”**  
Event 3, Exeter, England, Event 3



## 8. My community signs up for local green energy

My energy company, local authority and a local community group have all formed a green energy company.

They selected my area -

Based on an audit – yes, it's commercially viable

And enough people locally expressed an interest



Costs: none Saving: none  
I am receiving a renewable/low carbon source of energy

Biomass boiler for 200 homes or flats

Medium wind turbines which also power businesses and schools locally

PLUS - Energy efficiency measures in my home or street

Biomass or gas CHP district heating scheme

I am tied into the contract, so that the energy company can rely on steady income to pay back their investment

The energy company are responsible for operation and maintenance (and they must be up to the accredited standard)

### APPEAL

- ✓ Scheme initiated and maintained by someone else rather than the onus being placed on the community
- ✓ No upfront cost to householders and no responsibility for maintenance
- ✓ Householders use a renewable energy supply for same cost as traditional supply
- ✓ Security of energy supply is appealing

### BARRIERS

- ✗ Sufficient numbers of householders need to buy into scheme to make it viable
- ✗ Tied to one energy supplier – concerns over whether rates would be competitive and not being able to shop around for best deal
- ✗ No cost saving for individual householder

### Who will go for this?

All homeowners interested in renewable energy but without the enthusiasm, or capital, to install this themselves at a household level.

### Who won't go for this?

Householders reluctant to tie themselves into a contract.

### RECOMMENDATIONS

Build a financial incentive into the renewable energy scheme to maximise take-up – this might be in the form of energy bill rebate.

Contracts will be more appealing if they can offer protection from price increases, through a fixed bill for say 2 years; this will balance the potential concerns about tie-in.

Appeal may be higher if any profits generated are returned to the community.

**“There would need to be a guarantee that they would lock the prices at a certain point, cap it”**

Cookstown, Northern Ireland, Event 3

**“What’s the benefit to you? What’s the point? You get nothing from it”**

Cardiff, Wales, Event 3

## 9. Our community allocates benefits from the local wind farm

I was invited by a developer to discuss the potential for a wind farm in the area which is subject to planning approval. I helped to decide how a fund from the developer should be allocated.



The electricity that's generated goes directly to the grid rather than to our homes

Cost: none Save: none. I helped to allocate an annual community fund of £10,000 - £40,000 per year (5-10 wind turbines), regardless of the developer's profits.



### Who will go for this?

Many householders interested in having say in the development of the local area and with an interest in renewable energy.

### Who won't go for this?

People who do not trust motivations of developer.

### RECOMMENDATIONS

Ensure developer scheme has backing of local government and involves an independent advisor to maximise trust from local community.

Ensure transparency of profits from scheme and give the community an agreed percentage of this rather than flat rate.

Element of competition could be introduced by inviting a number of developers to bid – this will help dispel fears of monopoly from local community.

**“The local fat cats would get the money, people like us would never see it”**

Event 3, Irvinestown, Northern Ireland

### APPEAL

- ✓ Responsibility for initiating and maintaining scheme with developer rather than onus being placed on community
- ✓ No cost to householder
- ✓ Opportunity to be involved in development decisions affecting local area and community
- ✓ Involved in integrating a renewable energy source into local area
- ✓ Potential for local job creation due to demand for ongoing maintenance
- ✓ Community receive income stream to spend locally

### BARRIERS

- ✗ No direct benefit to householders, either financially or in terms of receiving a renewable energy supply
- ✗ Cynicism around motives of developer – community profit interpreted by many as a form of bribe with scepticism around delivery of funds to community. Private developers appear to be the cause of mistrust here.
- ✗ Some householders reluctant to have wind farm situated in close proximity to their property, either due to aesthetics or property value concerns
- ✗ No consensus on the fairest way to distribute profits; householders foresee arguments and suggest that the system needs a better design.

**“You don't want to look out on an eyesore and it might have an effect on the market”**  
Cardiff, Wales, Event 3

**“Why do we need developers to do this? Why can't this go back to the Government?”**  
Harrow, England, Event 3

## 10. Join in the Low Carbon Zone

The local authority is working with citizen and community groups, schools and businesses to rapidly introduce green energy to homes and building, coordinating investment and funding.

The local authority commissions an audit of opportunities in the area -

Small – household size e.g. solar panels and insulation

Large - wind turbines which power businesses and schools locally

Medium size – e.g. community biomass boilers



I can meet with the local Development Officer and discuss plans



Smart meters and heat controls are brought to our homes street by street

I join a home energy club and we install kit in our homes together. There's an award to the club that saves most.

Community benefits from wind farm £10-40,000.

Some homes receive green energy supplies.

Energy clubs slash home bills and some people opt for whole house treatment

### How far with homeowners support this?

All participants suggested that area based targets would be a good way to link national goals with local policies, locally available products, and to give a narrative to lie behind any local incentives (or, later, any sanctions) which would be necessary to meet the target.

### RECOMMENDATIONS

Careful consideration of how a local area is defined; what targets are set; and how the local area, and the people in it, can be encouraged to meet its target.

If there is simply the 'opportunity' to join in the low carbon zone – this feels to householders like a rather limited solution, (much like Option 1 which is just consumer choice, and will move things too slowly).

A LAA could be charged with lowering carbon emissions in its area, and the public would accept this. However grants and loans on a national level will need to be deployed fairly to avoid the burden falling on one area much more than another.

### APPEAL

- ✓ Lower energy bills due to smart meters and household-level technologies
- ✓ Provision of advice through audit ensures appropriate technologies are installed and enables co-ordination of actions so that environmental impact is far more widespread than through piecemeal adoption of technology at household scale
- ✓ Responsibility for scheme rests with Local Authority rather than local community
- ✓ Allows flexibility in terms of scale of technologies adopted – adaptable to all scales and mixes benefits to community with benefits to individual
- ✓ Universal take-up across community is not a pre-requisite – allows choice in participation with is likely to encourage active and enthusiastic engagement

### BARRIERS

- ✗ Challenging for communities to come to consensus around appropriate technology to invest in, and who should fund
- ✗ Some lack of trust, and scepticism, in capability of local government to coordinate such a scheme – concerns around efficiency etc
- ✗ Concerns over 'postcode lottery' – if my area is a low carbon zone, will I be made to invest more in my home than someone in the borough next door?
- ✗ Some uncertainty around whether householders would be willing to invest time in participating in such a scheme (beyond simply taking up options suggested by the council)

**“This is quite easy to engage with I can see the attraction”**  
Harrow, England, Event 3,

# 5. Communications

## 5. Communications

### Event 4 – Reconvening to discuss communications, the ‘big story’ and the most important elements of policy

At Event 4 we brought together participants from across the 9 forums as well as a range of stakeholders and policymakers from both Government and external organisations. The purpose of the day was to collate the views from across the forums and allow stakeholders and the public to debate how the ideas which had been generated could work in real life.

We used three ‘worlds’ to stimulate discussion in Event 4, the reconvened session with householders, stakeholders, and policymakers. The idea of these worlds was to imagine the future after the shift has happened, and identify which elements and policies would be most likely to make change a reality. We built these three ‘worlds’ on the basis of learnings from Events 1-3, to explore hypotheses further.

- **World One:** Participants told us the Government needs to be ‘taking it seriously’, so World One describes one way the Government could do this.
- **World Two:** It was also clear that participants value the aesthetics of their homes, so World Two shows a cultural context around the Shift where consumer choice has become important
- **World Three:** Participants suggested a cultural shift to a moral framework around wasting energy, where business and Government might also be held to account.

The worlds were evoked through handouts and mockup newspaper headlines. This stimulus provided both supporting and critical media coverage of the Government’s approach to the *Big Energy Shift* within these worlds. Examples of these are provided at the start of each of the following sections discussing reactions to each of the worlds.

### SUMMARY

The ideal policy narrative and trajectory would contain elements from all three worlds.

#### 5.1 From World One:

- Urgency of communication on a ‘big story’
- Government communication on a mass scale to demonstrate national leadership. Though solutions may be local, people wanted to feel they were taking part in something of national importance. Community options are felt to be more likely to work if in context of national movement.
- Relaxing planning rules for energy-efficient building (though an appreciation that there are many different interests to consider which would make this a complex challenge).

#### 5.2 From World Two:

- Education and information disseminated through society
- Policies which help a new market to grow attractive, affordable technology packages
- Making it easy for people to get involved – small grants and loans to get them started
- Grants and loans which reward people who want to make an effort

#### 5.3 From World Three:

- Public estates leading the way and setting themselves binding targets on energy efficiency
- National network of advice centres with tailored, specific advice for individual properties.
- Government does not ‘name and shame’ itself, it nudges the moral framework into existence rather than tries to create it explicitly.

#### 5.4 The ideal world

The final page in this report maps out the ideal policy narrative and trajectory.

## 5.1 WORLD ONE – “Combating the threat”

**Big ENERGY SHIFT**

**WORLD ONE: Combating the Threat**

sciencewise

Government forces the pace of reform  
Britain's energy crisis

**green wardens are coming to your area**

**"TAKE ACTION NOW" WARNS ENERGY MINISTER**  
Advice centres and smart meters for all

**BRITONS**

**JOIN YOUR COUNTRY'S ARMY!**  
GOD SAVE THE KING

**BBC NEWS** **Energy now a national security issue**  
Brown unveils tough legislation as Government responds to crisis

### SUMMARY

- ✓ A sense of urgency suggests that action needs to happen now and that it cannot be put off or ignored.
- ✓ The high stakes atmosphere surrounding the campaign suggests a big problem that needs to be addressed by strong leadership from government.
- ✓ Society-wide campaign encourages feelings of togetherness and collective effort. Mass movements are felt to be more likely to be effective than small, disparate efforts, and community options are felt to be more likely to work in this world.
- ✓ Relaxing planning rules is appealing, especially in urban areas, but participants appreciate there are many interests in play and it might be difficult.
- ✗ Not fully explaining the reasons behind the change can alienate people. It is important to get them onside by explaining things clearly.
- ✗ Strong leadership from government can be seen as intimidating by some people, finding it overly pressurising and negative.
- ✗ Even though this is a national problem, people still see the opportunity to get a grant as an individual issue: they feel that while those most in need, or those with the least efficient homes, should get grants, there should also be an option for rewarding people who make the most effort.

### ***Appealing aspects of World One***

The sense of urgency is appealing to participants as it reflects the importance of the issue, as they have come to understand it. Many, including those in favour of legislation, also like the notion that time has run out for people to make changes of their own accord, and that the Government needs to nudge, or even push, people into action

Some younger participants think that this world would appeal more to the older generations, as they might be more receptive to the authoritarian stance from the government, and because the imagery evoked the Second World War.

In general, people like the sense of ‘togetherness’ this world evokes; the idea that everyone would be doing it, the so-called “war time” spirit which also has resonance with better community cohesion, leading people to feel that community options might be more likely to work if this tone was taken.

This ‘unified spirit’ of this world suggests that everybody is in the same boat and responsible for tackling the issue. That everyone has to act across society is seen as a fair and just way of undertaking the Big Energy Shift. Collective efforts are also seen as more effective than those of individuals or on smaller scales.



### ***Less appealing aspects of World One***

**“Way too much of a turn off, people will feel a sense of despair as opposed to feeling strongly that they want to do it.”**  
Stakeholder, Event 4

**“It’s shock tactic more than information.”**  
Public, Event 4

Many find World One extremely negative and feel that scare tactics employed are not helpful in persuading people to take action. In fact, emphasising the massive scale of the challenge could well leave individuals feeling powerless. Above all, participants are concerned that World One lacks sufficient information to help citizens understand the cause of the crisis and therefore the rationale behind serious government intervention is not fully justified.

World One is associated with compulsion, legislation, threats, and pressure that many people find off putting and dislike such a heavy-handed approach from the Government. These tactics could detract from the core message.



**“You do need a strong hand from the government, but security alerts are not a good idea unless it’s really needed... people need to feel a sense that the crisis is real, not just put on or propaganda.”**

**Stakeholder, Event 4**

There is some debate around how grants or loans should be allocated. This reveals that though this World suggests a mass initiative, the issue of grants still feels very personal – will I get a grant, or not? If my neighbour gets one, is this fair? Targeting the ‘worst offenders’ in terms of energy efficiency is generally well received. Many participants wish to add some form of means testing so that those in very badly insulated homes who are also on the lowest incomes would get fullest support in making changes.

However, others feel that assistance should be available to everybody, not just the ‘worst offenders’. Those who are pro-active about their energy consumption should not be penalised for doing the right thing from an earlier stage.

Whilst in general people support the idea of relaxing planning rules to accommodate the Big Energy Shift, some voice concerns that they could spoil areas of rural countryside and lower the number of tourists visiting these areas. However, relaxed planning rules are well regarded where there is a wider range of solutions to accommodate both urban and rural settings.



## 5.2 WORLD TWO – “Inspiring homes of the future”

**Low carbon homes beat the housing slump**  
If your home meets the minimum standards it will sell quickly, finds Sam Jones

**ideal home show**  
100 years of inspiration

**eco chic wedding & home show**

**biome** LIVE THE GREEN **BiomeLifestyle Top Ten**

**Handkerchief glass vase**  
Price - £62  
Points earned

**Organic double roll-up bed**  
Price - £100  
Points earned - was 695

**TOO LITTLE TOO LATE?**  
Government relies on focus groups while the oil runs dry

### Summary

- ✓ People see the need to educate and inform society about the need for the Big Energy Shift as a crucial first step in the campaign.
- ✓ Educating the young is considered a useful way of helping to disseminate messages around the Big Energy Shift. Schools could play an important role in raising awareness.
- ✓ People like the idea of the Government setting the right example and leading the Big Energy Shift through its ‘own’ public buildings. It is seen as an ‘easy win’ for Government.
- ✓ Tapping into the popular trend for home improvement and property value, reflected in TV makeover programmes, is seen as a good way to get the issue on people’s minds.
- ✗ People think that widespread change would be less likely if behaviour change was optional
- ✗ There is concern that without the contractual structure that legislation brings the Big Energy Shift could be abandoned by a future government.
- ✗ People are concerned about the lack of clarity around the role of energy companies in this scenario. Many consider struggle to see the interest energy companies could take in encouraging people to reduce consumption.
- ✗ The media would be likely to talk more about popular trends and fashion, rather than fully conveying the scale of the challenge and the importance of mass action.

### ***Appealing aspects of World Two***

People warm to the tone of World Two, describing it as inspirational, aspirational, and encouraging. There is also general consensus that the tactics of educating and increasing awareness is a more effective measure than the 'scare tactics' of World One. Educating people on the security of supply is an important first step for people, justifying the need for the Big Energy Shift.

**“Your home decorations types, people who like IKEA or furniture are going to be really getting into it. It’s a combination of trendy decoration and a trendy issue, consumer environmentalism.”**  
Stakeholder, Event 4

Educating the young is seen as important in terms of spreading awareness of the need for the Big Energy Shift. Children could then spread the message about energy saving and generation to parents/households efficiently in a similar way that children lobby their parents to stop smoking. Participants therefore consider it important to take action via schools and include them in awareness raising campaigns.



The idea of the Government setting an example is also liked. Again people appreciate policy that seems to be treating people fairly and evenly across society. Making public buildings energy efficient was seen as an easy win for the Government to achieve and would also influence the wider community.

Generating awareness by tapping into people’s interest in home improvement was seen as a really sensible and innovative approach. It works with people, with a fashion, rather than confronting them, many in the group agree that putting an aesthetic spin on energy efficiency and generation in the home is one way of getting the less-inclined to adopt ‘green measures’ in their homes. Small grants and loans could also get people started in making small changes, so their confidence would grow.

People could easily imagine the media helping to create a buzz around the Big Energy Shift and this would have a positive influence on homeowners. Participants consider TV programmes such as *Grand Designs* as having a part to play.

## ***Less appealing aspects of World Two***

There are concerns that the change which is required might not happen if you leave it up to people to initiate the change themselves. There is also a feeling that this approach would be too soft to rally every one and bring about the desired changes. Without universal standards, or a level of enforcement, change could be sporadic and disparate. There would be unequal efforts and uneven outcomes. Some people could save money but that change might not be far reaching enough to have the kind of environmental impact needed.

Another worry is that this sort of campaign would be easily abandoned if there was a change of government. People saw having legislation as reassuring them that the Big Energy Shift is a long-term movement rather than a short-term fad. This in turn would affect others' motivation, and create an unequal housing market.

The efforts of energy suppliers are not made clear in this scenario. People think that energy suppliers need to be brought in the process as they have no interest in helping people reducing their consumption.

Householders do not feel that there was enough government input in this world, and that change was not being led by government. Many feel that this world would be too slow to adapt and that changes would not happen comprehensively enough.

**“The positive approach, positive messages, soft approach and consumer focus all sound really good, but you absolutely need hard facts behind it. Otherwise there will be no movement on this, nothing at all will come of it”**

**Stakeholder, Event 4**

There is some scepticism around the motivations for World Two and the emphasis it places on consumerism. Some people see this as 'buying our way out of trouble' rather than addressing the underlying causal problems. It could seem slightly contradictory to some participants to buy new produces in an effort to become more energy efficient and less wasteful.

### 5.3 WORLD THREE – “Waste is Wrong”



#### SUMMARY

- ✓ Effectiveness of an anti-social campaign has precedence e.g. drink-driving, smoking in public places and recycling.
- ✓ The Government being held to account for the energy efficiency of public estate will send a powerful signal to householders and remove any excuse for inaction based on the current perceived gap between Government policy and Government action.
- ✓ Advice centres will provide essential guidance to homeowners. Ideally this advice needs to be tailored and specific to make it relevant to both properties and lifestyles.
- ✗ Blame culture mentality is not proactive or solutions-focused. Emphasis is on alienating wasteful individuals rather than supporting collective action – need people to look at their own behaviour, rather than be critical of others.
- ✗ Homeowners call for strong Government lead on action around energy efficiency but here the role of Government is unclear with the atmosphere primarily generated by the public.
- ✗ League tables will be impossible to create fairly and validly given diversity of building types. Their purpose is also questioned.
- ✗ Inappropriate for Government to ‘name and shame’ – plus promotes feeling of individual guilt rather than shared sense of responsibility.

### ***Appealing aspects of World Three***

For some householders, making energy inefficiency an anti-social activity could be a powerful way to encourage large-scale action towards the Big Energy Shift. Householders tend to come to this assessment of World Three by making analogies to other effective social marketing campaigns which have had a discernible impact on people's behaviour. Examples of such campaigns which have led to a shift in social norms include drink-driving, smoking inside public spaces and recycling.

**“They need to make leaving the lights on as antisocial as drink driving or not wearing seatbelts”**

Public, Event 4

**“It's like recycling, you drive down your street and think “oh it's good everyone is doing it” Then you look at your neighbour and think “oh you're not”. It is quite noticeable the people who aren't doing it”**

Public, Event 4

For some householders, this World is thought to be a powerful atmosphere in which to ensure large-scale action around energy efficiency and generation as it promotes a 'keeping up with the Jones' attitude. Some members of the public believe singling out, or 'othering' wasteful homeowners will be a sufficient deterrent.

Focus on public estates is vital if responsibility is to be placed on private homes.

The vast majority of householders approve of legislation and targets being applied to both private homes as well as public estates. The Government leading by example through improving the energy efficiency of its own buildings would send a powerful signal to the public about the necessity of taking action. Currently, contradictions between Government policy and Government action can be used as an excuse for householders to deny any responsibility placed on them. Some in Event 4 suggested that action on public estates should even precede any requirement for private homeowners to make low-carbon improvements.

**“You need everyone singing from the same hymn sheet. No one likes being told what to do, That's why I think the public building thing should be pushed even more than minimum standards, because they should lead by example, they are the ones leading this country”**

Public, Event 4



Advice centres will provide essential opportunities for education and awareness raising. Throughout the forums for the Big Energy Shift householders have stressed the need for information and advice to be made readily available to people considering making low-carbon improvements to their homes. A national network of advice centres is therefore unsurprisingly a very appealing aspect of World Three. Most important is the provision of tailored and specific advice to homeowners which can alert them to the most appropriate technologies for their property and to fit their lifestyle. The role of education and awareness-raising is felt to be a vital pre-requisite to legislative requirements placed on homeowners.

### ***Less appealing aspects of World Three***

Despite some positive aspects of World Three, the ‘blame culture’ atmosphere it creates is not deemed appropriate by all participants, and in fact a majority are quite concerned by the mood it suggests. Overall, homeowners and stakeholders feel that the mood is far too negative. Rather than engendering a sense of collective responsibility and action, World Three is felt to lay the blame for energy inefficiency elsewhere instead of encouraging everyone to look at our their own behaviour.

**“It should be about public responsibility rather than it being anti-social, it should take the other side of the coin and do something positive if we can”**  
Public, Event 4

Some householders also express scepticism about the effectiveness of relying on ‘guilt’ as a motivator for action around energy efficiency and generation. Some householders are concerned that this may not actually lead to change – grants and incentives, better ‘carrots and sticks’ are required.

**“There are a lot of people with no social conscience though who will basically ignore all this and do nothing”**  
Public, Event 4

Some uncertainty is expressed in relation to World Three about the role for Government in creating this atmosphere. It has been clear throughout the Big Energy Shift forums that the public demand a clear and strong lead from

Government however this is felt to be lacking in World Three with the public playing a far larger role in creating and maintaining the mood.



## 5.4 The ideal world? Towards a policy narrative and trajectory

### *The policy trajectory*

Both public and stakeholders agreed that the future world they want to see would include the positive elements from Worlds One, Two and Three, as summarised in the sections above - woven together into a coherent story by Government and other communications.

The ideal world was therefore constructed to have the following stages.

- **Educate and inform people about the need for the Big Energy Shift** – this will engage people and help them to recognise the necessity of Government intervention. In order to raise awareness, participants see a strong role for the media to contribute to an engaging story about the Shift; so it will be important to get journalists on side with the aim of the project. The Shift should focus on the tangible benefits (particularly financial ones) of energy efficiency and generation to individuals (e.g. potentially lower fuel bills) with the wider environmental benefits of taking action being depicted as a wider benefit to society. Key to this is telling the story around resource depletion and security of supply in an engaging way, with a forward thinking and positive tone.

**“We need to know what we’re working towards. Is it energy security or less CO<sub>2</sub> or what?”**

Public, Event 4

- **SMART goals for the country.** Given the rather ‘intangible’ nature of climate change and the unpredictability of energy price fluctuations, the Government needs to establish a strong argument for urgent action. This should not, however, be alarmist.
- **Emphasise that everyone (individuals, businesses and the Government included) have a part to play, and that no action is too insignificant** – it is easy for people to feel that their contribution is insignificant and therefore not worth the extra effort. It was common, for example, for participants in Event 1 and 3 to say that the benefits of the UK reducing its carbon footprint would be undone by the industrialisation of less developed countries such as India and China. Emphasising energy security will help this by shifting the focus away from the actions of the wider world onto those of the UK population.

**“People need to feel involved, individuals need to understand their role in all this change”**

Stakeholder, Event 4



- **Symbolic gesture, such as introducing smart meters as soon as possible** – by enabling consumers to have a greater idea of the amount of energy they are using, and more importantly, the amount that they are wasting, will encourage people to use less energy. It will also enable more targeted energy tariffs that encourage the use of energy at off-peak times.
- **Offer independent and informed advice to people looking to make improvements to their homes** – many of the energy technologies presented to participants at Event 1 are new to the UK public and so they will need help when making informed choices. There is also a fear this situation will attract unscrupulous suppliers who will take advantage of naïve consumers to sell them unsuitable equipment (e.g. solar panels for north facing roofs). Such a situation would lead to negative press coverage and discourage people from investing in new technologies. The clear message from the events is that for the Big Energy Shift to succeed in encouraging people to adopt new energy technologies, independent advice needs to be offered to people which is relevant to their own particular home. Ideally, this would be provided by the Government as it is felt that they are only a credible source in this instance for impartial advice. This could be provided by local advice centres which are able to advise people with reference to their own homes.
- **Grants and loans** balanced to ensure that the ‘worst offending’ properties are dealt with, but also that people who want to make an effort are rewarded. Local exemplars also should be rewarded. Other aspects such as relaxed planning rules locally may also play a part.
- **Public estates leading the way in efficiency** – this shows the Government setting the right example and gives people an opportunity to see the new technologies in action. As in World 3, the public estate would also be bound by targets and goals around energy efficiency and wasting energy would be seen as anti-social.
- **Ensure that there is an adequate supply of new energy technologies to meet the anticipated level of need** – A frequent comment from across the events concerns the lack of suppliers able to provide and/or install new technologies, or indeed the lack of fuel (e.g. wood pellets) to power them. The Government needs to ensure that there

**“I would want it from the Government, that’s the only source that I would trust in the end. I don’t trust energy companies and I don’t really think anyone else would have the credibility”**  
Public, Event 4

is the supply to feed the demand from consumers, otherwise people's enthusiasm for them will dissipate.

- **Introduce phased legislation to ensure minimum standards.** Communicating about this upfront, to get the public ready for change. Then, a phased introduction to cover both the public and private realm. This is important in ensuring that those making the effort to change their behaviour do not feel that their impact is being undone by the wasteful behaviour of others. It is also important that this legislation is phased so as to allow people time to upgrade their homes to the necessary standard, and these standards should take into account the characteristics of housing stock in different parts of the country. Participants at Event 4 also underline, more clearly than at the other events, the importance of measurable, tangible actions which lead to measurable, tangible goals. For example, one suggestion made by a participant is below:-

**“In order to cut household emissions by 20% by 2015 we need all properties to have loft and underfloor insulation by 2012 at point of sale.”**

**Public, Event 4**

### ***What should be avoided?***

Public and stakeholders were clear that there were two areas which should be avoided:-

- Scaring people with the challenge, without giving them a simple and effective call to action (i.e. what they can personally do). If we expect them to do too much, on their own, without the market infrastructure to help them, they will become resentful and feel helpless.
- Leaving the market to grow on its own, as then people would not take up new solutions – this also feels like the Government abdicating responsibility for change.

There was also much debate in Event 4 on the subtleties of Government communications. What can Government actually do to create a cultural shift of mood? Some aspects of World Three, such as a cultural disapproval of waste, were seen as ultimately good outcomes and participants agreed that if such a ‘mood’ prevailed in the country, it would help the Shift happen. However, participants pointed out that there are limited ‘levers’ that Government can pull which will *ensure* that this mood will occur. Some suggested that this cultural feeling would only really occur as a *useful by-product* of some of the other Government policies.

As a crude example, eco-homes may become fashionable if the Government helps businesses offer attractive packages to homeowners; but if Government runs a campaign directly expressing how fashionable eco-homes are, this might well prove counter productive as Government may not have the credibility for such claims. Overall, our participants felt that while government policy can *create the conditions* for a change in national mood, it may be counter productive for government to communicate specifically on changing a mood.

Overleaf is a **summary** of all the Ideal World suggestions in the form of a model, bringing in all our conclusions from this research, of how government interventions might work.

## MAKING THE BIG ENERGY SHIFT HAPPEN – RECOMMENDATIONS FOR GOVERNMENT INTERVENTION

### Phase One

#### CLEAR NARRATIVE ACROSS CENTRAL GOVERNMENT

- **Rationale** for the Shift; how wider issues impact on UK life; link any ‘scary’ information clearly to the story of what can be done
- **Forward thinking**, and positive tone, this is Government taking on this challenge
- **‘SMART’ goals** to deliver local solutions – concrete and specific, with deadlines. **Individuals, business and government** must play their parts
- **Future sanctions** – timeline towards legislation. Outline now to give people plenty of warning

**SYMBOLIC GESTURE:** Free **smart meters** for all households

### Phase Two

#### NATIONAL TO LOCAL AREA DELIVERY

- Outline local area targets within national goals
- Plan of action for local area
- Home energy audits (ideally under £100)
- Pilot innovative approaches

#### LOCAL EXEMPLARS

- Identify small number of ‘leading edge’ consumers
- Ring-fence some grant and loan funds for them, ideally high proportion of upfront cost
- They provide local, realistic, mainstream-design family homes

#### MASS TAKE UP OF SIMPLEST SOLUTIONS

Smaller proportion of upfront costs of insulation as grant or loan

#### GROW THE MARKET

Assist businesses with the design of technology ‘bundles’ which are appealing to consumers:-

- Low upfront cost
- Immediate benefit to householder, not having to wait for payback
- Aesthetically pleasing
- Non-disruptive installation
- Reliable maintenance systems

#### PUBLIC ESTATES LEAD THE WAY

- Exemplar schools and hospitals with large scale microgeneration
- District heating in local authority estates
- Subsidies for business to take part.

### Phase Three

#### LEGISLATION (after 5-10 years?)

- Phased introduction of legislation that covers homes, businesses and public buildings
- Public realm: “a court case which makes an example of a business for not turning off the lights”

