

## Written evidence submitted by Energy SavingTrust (GIB 24)

### 1. Summary

- *The use of new financial mechanisms could be instrumental in bringing about a step change in the level of investment in this sector.*
- *Barriers to basic measures of loft insulation and cavity wall insulation are awareness, motivation, and affordability. Low awareness suggests an important role for information and advice provision.*
- *Bill savings from energy efficiency or renewables are typically heavily discounted by consumers. People apply short time frames, 3 to 5 years. Even with grant support, high upfront costs are likely to remain a significant barrier, particularly for lower income households.*
- *Proactive provision of information can help overcome the hassle involved in seeking out advice. Intensive local activity can help motivate residents to get involved. Local authorities, community groups, third sector organisations and charities are typically highly trusted, so their involvement in local schemes can help increase consumer appetite and buy-in.*
- *Levels of interest attached to loans and the source of finance will have a significant impact on the attractiveness of finance packages. Many consumers do not believe they should be exposed to commercial levels of interest when borrowing money to undertake such work.*
- *It could be financially viable to deliver emissions reductions of 30% by 2020 against a 2013 baseline at 6% cost of capital, with 10% of the value passed to the resident. Lower costs of capital or higher energy price inflation would allow a proportion of the benefits to be passed on to the occupier through lower energy bills, for example with 3% cost of capital it would be possible to pass 20% of the value to the resident.*

## **2. Barriers preventing greater take up of energy efficiency measures**

2.1 The Energy Saving Trust has conducted research<sup>1</sup> into barriers to the uptake of basic energy efficiency measures; we did this by surveying households that have not taken up basic measures of loft insulation or cavity wall insulation. The barriers fall into three categories:

*Awareness* – residents claim they don't know about taking the measures, or don't know how to take them. 15% say they have never thought of installing cavity wall or loft insulation.<sup>2</sup>

*Motivational* – they have not taken the measures because they consider it a hassle, or they are 'putting it off'.

*Affordability* – installing loft or cavity wall insulation is considered to be too expensive or the payback period too long.

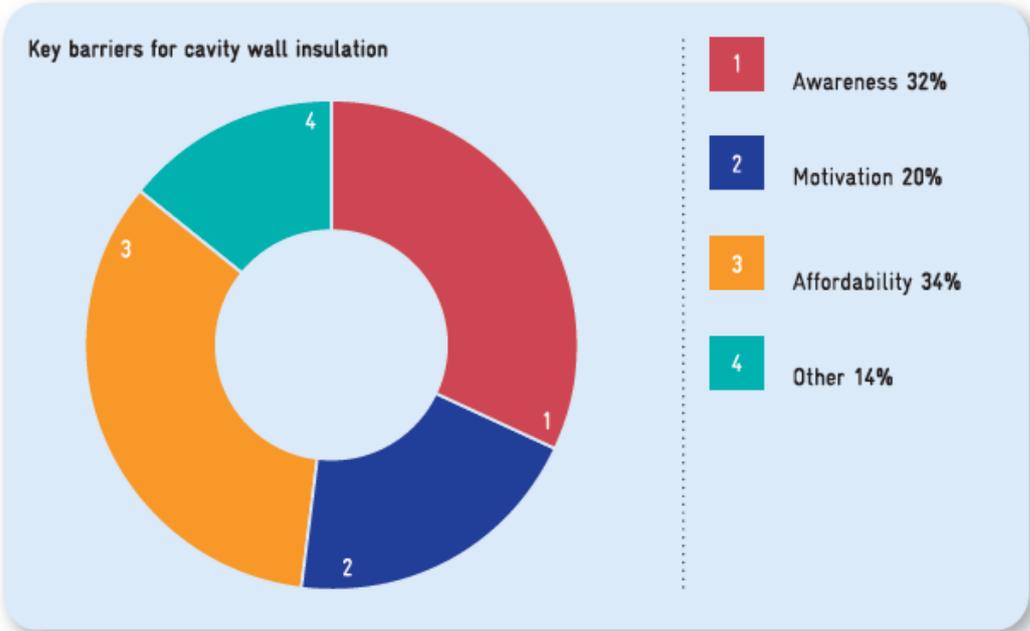
2.2 Once informed of the true costs, benefits, the speed, and simplicity of the process, people are often pleasantly surprised. Low awareness of insulation suggests an important role for information and advice provision.

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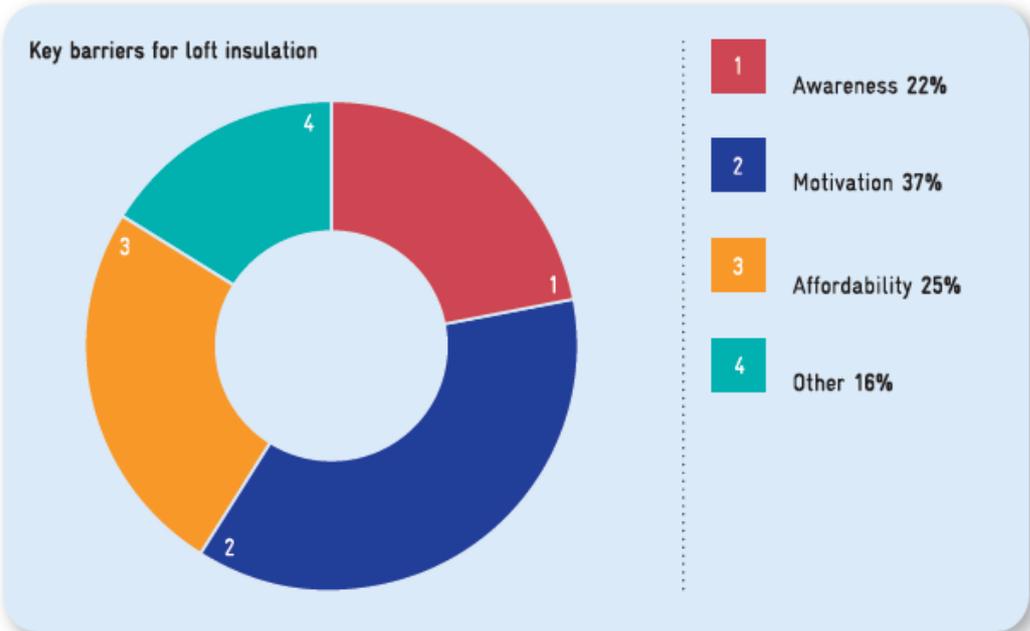
<sup>1</sup> Energy Saving Trust, At Home With Energy: a selection of insights into domestic energy use across the UK, July 2010

<sup>2</sup> Energy Saving Trust, At Home With Energy: a selection of insights into domestic energy use across the UK, July 2010

**Figure 1: Key barriers for cavity wall insulation**



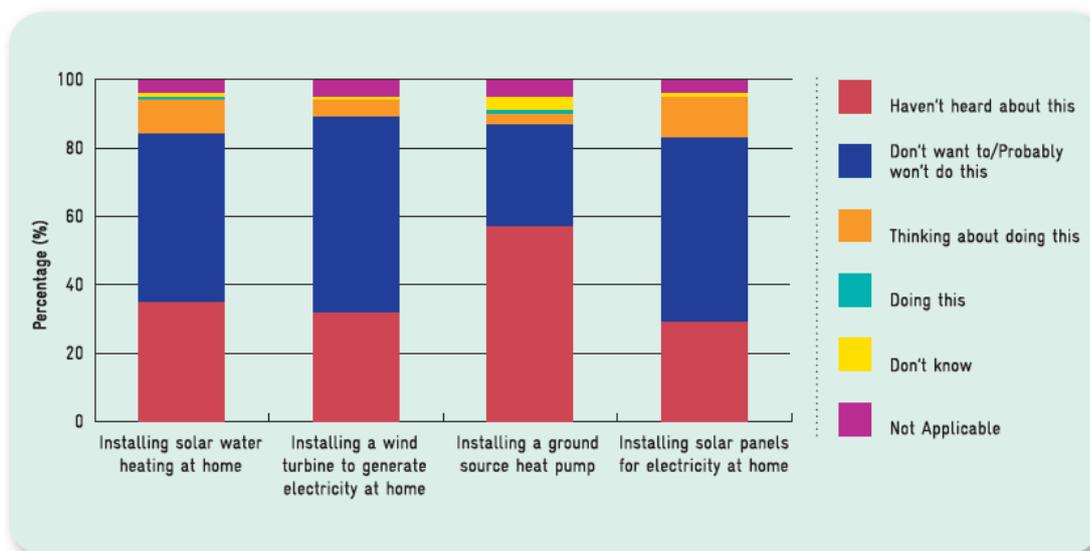
**Figure 2: key barriers for loft insulation**



2.3 The greatest challenges relate to the take-up of high cost measures which are least familiar to consumers, such as microgeneration technologies and solid wall insulation. Solid wall insulation faces particular challenges due to consumer concerns over visible impacts and the disruption during installation. Initiatives that provide access to finance may help make such schemes affordable and more attractive, but the terms of such schemes will be important.

2.4 The Climate Change Committee estimates that 2.3 million homes will need to have solid wall insulation fitted by 2022 to meet climate change targets. On a linear trajectory that suggests 210,000 installations per year between 2011 and 2022. At present it is estimated that there are only 16,000 to 23,000 solid wall insulation refurbishments undertaken per year, with the majority of these, over 65%, being external wall insulation. The vast majority of these jobs are in social housing.

**Figure 3: Awareness of microgeneration technologies**



2.5 Although solid wall insulation has a similar cost to a number of microgeneration technologies, the challenges are very different. 42% haven't heard of or thought about solid wall insulation.<sup>3</sup>

2.6 The top four barriers to external wall insulation are: 'appearance of house'; 'too expensive'; 'changes the character of my home'; 'physical disruption to install'. The top barriers to internal wall insulation are: 'physical disruption'; 'having to redecorate'; 'too expensive'; and 'hidden costs'.<sup>4</sup>

2.7 The understanding of microgeneration technologies is low. Very few have heard of heat pumps. 48% of people would like to know the suitability of their home for renewable energy.<sup>5</sup> There is a clear demand for information and advice on microgeneration, people report being confused over the amount of information available and not knowing where to start or who to trust.

2.8 Bill savings from energy efficiency or renewables are typically heavily discounted by consumers. People apply short time frames up to 5 years and often only up to 3 years.

<sup>3</sup> Energy Saving Trust, At Home With Energy: a selection of insights into domestic energy use across the UK, July 2010

<sup>4</sup> Energy Saving Trust, At Home With Energy: a selection of insights into domestic energy use across the UK, July 2010

<sup>5</sup> Energy Saving Trust, Attitude Tracker, 2010

Willingness to pay is related to socio-economic circumstances. Our experience of managing the Low Carbon Buildings Programme suggests that, even with grant support, high upfront costs are likely to remain a significant barrier, particularly for lower income households. 71% of households who received the grant were from social groups ABC1 (and over 45 years old).<sup>6</sup>

2.9 Both microgeneration and solid wall insulation cost thousands of pounds, however stated willingness to pay does not match up to this. Among socioeconomic groups A and B stated willingness to pay is on average £1127, C1 and C2 state £899, and D and E £795.

**Figure 4: Willingness to pay**



**3. Measures needed for the UK to improve domestic energy efficiency**

3.1 Proactive provision of information can help overcome the hassle involved in seeking out advice. This can help deliver take-up among the sizeable proportion of people who are open to measures but not sufficiently motivated to act on their own and to investigate options. Intensive local activity can help motivate residents to get involved, by tapping into an area’s sense of community and making the process of having measures installed feel more normal and attractive. 25% of people say they would be more likely to install energy efficiency measures if their friends and neighbours were doing it.<sup>7</sup>

3.2 Local authorities, community groups, third sector organisations and charities are typically highly trusted, so their involvement in local schemes can help increase consumer appetite and buy in.

<sup>6</sup> Energy Saving Trust, At Home With Energy: a selection of insights into domestic energy use across the UK, July 2010  
<sup>7</sup> Energy Saving Trust, At Home With Energy: a selection of insights into domestic energy use across the UK, July 2010

### **Area based scheme case study**

Sheffield City Council is running an area based insulation scheme offering cavity wall, loft and water tank insulation. Energy advisors go door-to-door in priority areas to sign up householders to the scheme where they are referred on for installations to be installed. The energy advisor visit helps increase appetite for measures and removes much of the hassle from the perspective of the householder.

Funding from CERT (Carbon Emissions Reduction Target) was supplemented with funds from the council to enable measures to be offered free and the scheme to cover additional costs of scaffolding where necessary. A free loft clearance is also offered. Of those contacted 71% have actively participated, 16% have had cavity wall or loft insulation installed, with an additional 5% in the pipeline.

3.3 It is important that ways are found to incentivise the take up of energy efficiency measures, including solid wall insulation. Levels of interest attached to loans and the source of the finance will have a significant impact on the attractiveness of finance packages. Many consumers do not believe they should be exposed to commercial levels of interest when borrowing money to undertake such work.

3.4 Trigger points -The best time to undertake significant improvements to the efficiency of the home is when other work is already planned or underway.

## **4. Current and future financing options open to consumers to fund energy efficiency measures**

4.1 The Feed in Tariff (FIT) is projected to support the uptake of 750,000 domestic scale installations (predominantly solar photovoltaics). The impact assessment for the proposed Renewable Heat Incentive (RHI) estimated that it would deliver 1.7 million installations by 2020.

4.2 The Carbon Emissions Reduction Target (CERT) is a statutory obligation on electricity and gas suppliers to reduce CO<sub>2</sub> emissions from homes in Britain. CERT commenced in April 2008 and December 2012, and focuses on the installation of cavity wall and loft insulation. The Community Energy Saving Programme (CESP) requires gas and electricity suppliers and electricity generators to deliver energy saving measures to domestic consumers in specific low income areas of Great Britain between October 2009 and December 2012. As all the finance for CERT and CESP is provided by energy suppliers (recovered through customer bills) under statutory obligation this funding will not be affected by the economic downturn.

4.3 Warm Front is a government funded fuel poverty programme that improves energy efficiency of the homes of the fuel poor. Grants are available for a package of insulation and heating improvements up to £3000 (or £6000 where oil, low carbon or renewable technologies are recommended). The scheme runs until March 2011. As yet there is no clarity on what happens after this date.

4.4 Scotland Home Insulation Scheme is funded by the Scottish Government. Cavity wall and loft insulation is offered at a special price or free of charge to certain eligible households. Households are targeted as part of an area-wide, door-to-door approach.

4.5 Energy saving materials receive reduced rate VAT if professionally installed. If installed in a new house there will be no VAT at all.<sup>8</sup>

4.6 The Boiler Scrappage Scheme has been very successful with many householders interested in upgrading their old G rated boilers for a new A rated boiler. The scheme has now closed and all vouchers have been allocated. In total, 133,976 vouchers were allocated under the scheme. 118,249 boilers have been installed, based on the number of claims to date.<sup>9</sup>

4.7 Our research shows that there is a preference for short rather than long term loans (five compared with 10 years). There is a distrust of 25 year loans as it was stated that they 'can't predict energy bills' or determine saving cost effectiveness for such a long period of time. 37.7% of those surveyed, who claimed that they would invest in a package of energy efficiency measures in the near future, favoured an interest free loan from the Local Authority as a means of financing those measures.<sup>10</sup>

4.8 We have recently completed research into financing options for low carbon retrofit of homes.<sup>11</sup> The study demonstrates how it could be financially viable to deliver emissions reductions of 30% by 2020, against a 2013 baseline. This would be through a comprehensive refurbishment package that includes various energy efficiency measures such as double glazing and heating controls, and selected low carbon technologies such as heat pumps and solar PV. The study examines the value of low carbon housing refurbishment by comparing the capital cost of different levels of intervention against the potential to generate energy savings and revenue from the renewable energy financial support mechanisms.

4.9 The use of new financial mechanisms could be instrumental in bringing about a step change in the level of investment in this sector. The modelling showed great potential for financially viable investments in low carbon refurbishment.

4.11 Across the British housing stock, at 6% cost of capital it could be financially viable to deliver emission reductions of 30% by 2020, 50% by 2030 and 80% by 2050 against a 2013 baseline, with 10% of the value passed to the resident.<sup>12</sup> Note, this is dependent on grid decarbonisation taking place according to DECC's projections. It also assumes there is no limit to the number of projects that can be supported by FIT and RHI. Modelling is based on RHI rates used in the Government's RHI consultation and are indicative only.<sup>13</sup> However, it is encouraging as the reductions are broadly in line with the UK's targets under the Climate Change Act. The opportunities would be enhanced by a lower cost of capital or higher energy price inflation, which would allow a greater proportion of the benefits to be passed on to the home occupier through lower energy bills. For example, at 3% cost of capital it would

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<sup>8</sup> <http://www.hmrc.gov.uk/vat/sectors/consumers/energy-saving.htm>

<sup>9</sup> [http://www.energysavingtrust.org.uk/Home-improvements-and-products/Heating-and-hot-water/node\\_422772](http://www.energysavingtrust.org.uk/Home-improvements-and-products/Heating-and-hot-water/node_422772)

<sup>10</sup> Energy Saving Trust, Green Finance Uptake research, January 2009

<sup>11</sup> Energy Efficiency Partnership for Homes and Energy Saving Trust, New Finance Mechanisms for Housing – stage 2, soon to be published.

<sup>12</sup> Energy Efficiency partnership for Homes and Energy Saving Trust, New Finance Mechanisms for Housing – stage 2, soon to be published.

<sup>13</sup> DECC, Consultation on Renewable Heat Incentive, February 2010

be possible for around 20% of the value to pass to the resident.<sup>14</sup> The modelling has shown that long contract lengths are important - typically 25 years – in order for the investor to generate maximum return on their investment.

4.12 Pre-capitalising part of the Renewable Heat Incentive tariff to help cover the high up-front cost that investing in renewables represents could make purchase of renewable heat technologies more attractive. This could be combined with a smaller ongoing subsidy to satisfy the Government's intention to ensure the equipment is maintained and used. Such an approach would ensure that the costs of the scheme are kept down whilst still generating the same amount of renewable heat.

4.13 Further research<sup>15</sup> we have completed looks at how a 7 million homes programme of large scale eco-refurbishment across Britain might be financed over the next ten years. The model we present is only one approach to long term financing. We believe it is worth trialling and we are working with local authorities to do so.

4.14 This financing and delivery model is based on current legislation but uses mechanisms – such as Pay as You Save – which will be central to the government's planned Green Deal. Our report<sup>16</sup> suggests that the eco-refurbishment financing programme could be considered in two phases. Phase one signs up householders and deploys the measures and then runs the programme until cash flows are stable. This would be based on a finance mechanism set up by the Local Authority known as a Special Purpose Vehicle. The SPV would consist of a project finance layer using non-recourse debt from private sector banks and a buffer capital layer probably from local authorities to provide some protection to the banks, financed from the Public Works Loan Board. Phase two then packages these cash flows into a refinancing programme that enables capital to be redeployed to bring on more householders. In essence, phase two is the long-term target financing state and phase one provides bridging finance to get there. The fund will enable house owners to have access to low cost finance for an energy efficiency programme supported by additional income through rental payments from the hosting of renewable energy systems where appropriate.

*15 October 2010*

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<sup>14</sup> Energy Efficiency partnership for Homes and Energy Saving Trust, New Finance Mechanisms for Housing – stage 2, soon to be published.

<sup>15</sup> Energy Saving Trust, An Approach to Financing Household Eco-refurbishment in the UK, forthcoming

<sup>16</sup> Energy Saving Trust, An Approach to Financing Household Eco-refurbishment in the UK, forthcoming