

# Warm Homes, Greener Homes:

A Strategy for Household  
Energy Management





## Foreword

People know that by saving energy they can also save substantial sums from their energy bills – as well as saving the planet. They just need a little bit of help to get started.

Government backed plans have already helped install energy saving measures in 7.5 million homes since 2002. But there is the potential to do much more, helping more people make more significant savings; and at the same time creating a new industry in home energy management.

So this Strategy sets out how we plan to support anyone – whether a homeowner or a tenant – who wants to do more to save energy in their home or generate their own clean energy.

This Strategy will deliver our commitment to cut carbon emissions from homes by 29% by 2020. By 2015, we want to help every household install loft and cavity wall insulation where it is practical. By 2020, up to 7 million homes will have more substantial improvements such as solid wall insulation or renewable energy generating technologies, while millions more will benefit from access to advice, information and finance. By 2030, householders in every home, in every street should benefit from measures to improve energy efficiency in their homes. Throughout this period there will be a particular focus on vulnerable households who often stand to benefit the most from improvements in energy efficiency.

We know that the cost of improvements is one of the biggest barriers to change. We are introducing a 'pay as you save' approach to financing upgrades, so that people can benefit from lower fuel bills without upfront costs. Energy companies will be obliged to support householders in energy saving – including free upgrades for vulnerable households and subsidised upgrades for many others.

We also know that people want more information about the options open to them. So the Strategy sets out plans for new sources of advice and new standards for installers and the products they use. People who want to improve the energy efficiency of their homes can be confident in the work carried out.

We are also setting out a new strategic role for local authorities. Those that respond to the challenge will be able to lead, drive and co-ordinate local action – and energy companies will be obliged to work with them in this effort. This recognises local authorities' important existing responsibilities for cutting carbon emissions and their unique abilities to bring the right people together, making it easier for individual householders.

And to ensure that those who don't own their home aren't excluded, the Strategy sets out plans to raise the standards of energy efficiency in the private rented sector, and introduces a new Warm Homes standard for people in social housing, complementing the Decent Homes standard.

This Strategy will have significant economic benefits. The rapid expansion of the home energy efficiency industry will sustain up to 65 000 jobs by 2020 in fields ranging from construction work to science and technology.

The most cost-effective way to save carbon emissions is to avoid needing to burn fossil fuels to generate energy in the first place. This Strategy sets out how we will achieve that. It will also create jobs, contributing to the economic recovery; promote social justice, reducing fuel poverty and save people money.



Ed Miliband

A handwritten signature of Ed Miliband in black ink, written in a cursive style.



John Denham

A handwritten signature of John Denham in black ink, written in a cursive style.



John Healey

A handwritten signature of John Healey in black ink, written in a cursive style.

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## Executive Summary

This document sets out the Government's Strategy to help people make their homes more comfortable in cold weather, reduce energy use and save money, and make greater use of small scale renewable and low carbon sources of energy.

These are important benefits for individuals, but they also pay wider dividends:

- Reducing the carbon emissions associated with energy use in our homes. At the moment, these represent around a quarter of all UK emissions. The Low Carbon Transition Plan, published in 2009, set out an aim of cutting emissions from fossil fuels in homes by 29% by 2020;
- Reducing our demand for fossil fuels, which will improve our energy security, at a time when we increasingly rely on imported supplies; and
- Generating jobs, in the manufacture and installation of insulation, and in the manufacture, installation and servicing of renewable and low carbon sources of energy.

## The vision for 2020: a new era of energy management

Our ambition is that by 2020:

- every home where it is practical will have loft and cavity wall insulation – an ambition we intend to deliver on by 2015;
- every home in Britain will have a smart meter and display to help them better manage their use of energy;
- up to 7 million households will have had an eco-upgrade which would include advanced measures such as solid wall insulation or heat pumps alongside smart meters and more basic measures;
- people living in rented accommodation will enjoy higher levels of energy efficiency as landlords – private and social – take action to improve the fabric of properties;
- there will be wider take up of district heating in urban areas, such as in blocks of flats, in new build and social housing, and in commercial and public sector buildings; and
- there will be a core of up to 65,000 people employed in the new industry of energy efficiency, and potentially several times more down supply chains. Jobs will include installing and manufacturing energy saving measures or providing home energy advice.

## The challenge

Since 2002, Government policy to improve home energy efficiency has delivered significant results. By placing a legal obligation on energy companies to improve energy saving in people's homes, the Carbon Emission Reduction Target (CERT) and its predecessors have given 7.5 million homes full or part subsidised energy saving measures. This has delivered an average saving on bills of £45 a year.

However, our continuing ambition and higher carbon reduction targets for 2020 mean that the rate of installation will have to increase. This will involve new challenges:

- as take up of basic measures rises, we will need new ways of finding and helping householders who have not yet acted on energy efficiency measures like loft and cavity wall insulation;
- eco-upgrades such as solid wall insulation and heat pumps will involve significantly higher upfront capital costs than more basic measures, and a longer payback period; and
- community scale infrastructure such as district heating networks using combined heat and power will require specific support, for example through the planning system, to promote market confidence and growth.

With the CERT scheme due to expire at the end of 2012, now is the right time to set out the policy to meet these new challenges. Our strategy has four main elements:

- **New community partnerships and an enhanced role for local authorities**, including a requirement on energy companies to consult with local authorities to deliver local area-based programmes; and support for district heating;
- **Universal standards for the rented sector**, including a new Warm Homes standard and proposals for regulation of the rented sector;
- **Invest to save**, including replacing the existing CERT mechanism with a new energy company obligation, and legislation to enable pay as you save financing that would provide people with eco-upgrades without upfront costs; and
- **Support for consumers**, including plans for a universal advice service and new standards for installation.

## Community partnerships and an enhanced role for local authorities

Experience from CERT and the pilot Community Energy Saving Programme (CESP) shows that some of the most rapid and effective progress in installing insulation and other home energy measures can be made when energy companies partner with local authorities and third sector organisations. Area-based programmes allow marketing to be carried out in the community by trusted organisations, measures like solid wall insulation to be installed more cost effectively for several homes at a time, and district heating schemes to be established.

This Strategy builds on what we have learnt and sets out a central role for local authorities and community partnerships for example with third sector organisations.

Energy companies will have a new obligation from 2013, following CERT, to help householders save energy. They will be required to consult with local authorities on partnerships to deliver against that obligation. Where a local authority has a Local Carbon Framework covering household energy efficiency, companies will be obliged to agree with the local authority that their plans are in line with this framework before acting. Some local authorities may provide their own incentives, such as council tax rebates. Our ambition in the longer term is that all authorities will take on responsibility for saving carbon from energy use in the homes in their area.

Alongside local authorities, private and third sector organisations including housing associations and social enterprises may often be well placed to make refurbishment attractive to householders, and our policy is designed to provide the conditions for a range of providers to get involved in community partnerships.

We are also supporting the development of district heating. Modern systems are reliable and provide as much control over energy use as conventional boilers. They can also be significantly more efficient. But putting them in place typically requires significant local co-ordination. To support the roll-out of district heating, we are putting in place an enabling framework of policy and financial support. This will include:

- Establishing a **Heat Market Forum** to advise Government on how to protect the interests of consumers, and to develop a Code of Conduct for Heat Networks;
- Clarifying the **role of local authorities** in driving deployment of district heating and will consult on specific provisions through a revised Planning Policy Statement on Climate Change shortly;
- Supporting development of a consistent national evidence base through a **new National Heat Map**.

## Universal standards for the rented sector

Rented accommodation presents a particular challenge. This is because the landlord typically faces the costs of improving a property, while the benefits in terms of lower bills and greater comfort are enjoyed by the occupant.

We said last year that we intended that social housing would continue to show leadership in its environmental performance. There is a real opportunity to use social housing to stimulate the development of the industry needed to make the change described above. As a result, we are now announcing that we will develop a **new “Warm Homes” standard for social housing**, to supplement the Decent Homes standard. This would cover both insulation and connection where feasible to low carbon district heating or renewable heating. Because social landlords will be able to offer economies of scale and synergies with other work, in practice we expect that social landlords will benefit from support under the new energy company obligation. To provide the confidence to plan the work needed in bulk, we intend all social tenants or those living in blocks with a social landlord freeholder will benefit from priority group treatment under the new energy company obligation at least to the end of 2015.

We intend to develop the detailed standard working with others during this year, and to work with the Tenant Services Authority (TSA) to ensure that landlords plan how they would achieve it by 2020 contingent on the necessary support and funding. We will then confirm a requirement to achieve the standard when we confirm details of the future energy company obligation.

We will also work with the private rented sector to improve the marketing to private landlords of the help they can already get, and develop Pay As You Save approaches that work for rented property. In addition, given the split incentives of landlord and tenant, we will consult on how to formulate **regulation** so that the installation of loft and cavity wall insulation where feasible would be a condition of renting out a property from a date in the future, at the earliest 2015. Over the years before any such requirement, there will be a concerted effort by the Government, working with the sector, to ensure that landlords understand the help that is available to them, both as a result of the energy company obligation and the tax regime.

## Invest to save

As a result of installing more significant measures like solid wall insulation, the average household can save £380 a year on their energy bills. The challenge is that an eco-upgrade for a standard family home could cost an average of around £10,000. Clearly, even when people are keen to install these measures, finance can be a major barrier to getting it done.

Our Strategy identifies two new sources of funding to help make sure that most households have access to support that can leave them with no or minimal upfront costs.

Both sources of funding will be available to fund home improvements in a range of tenure types and housing types.

## A new obligation on energy companies

The first source of funding builds on the success of the existing CERT and CESP schemes. Like them, it will oblige energy companies to save a fixed amount of carbon. Penalties for failing to comply will be strong – for example fines of up to 10% of global turnover. We expect this mechanism to deliver around two thirds of the finance required. We will plan for there to be no additional impact on fuel bills.

To deliver on this obligation, energy companies will invest in energy saving, including loft and cavity wall insulation and eco-upgrades. Because, particularly in the early days of the solid wall insulation industry, this funding will be used most cost effectively in large blocks of housing, we expect it to be particularly focused on social housing though it will also be available to provide support more widely.

The new obligation will come into effect when CERT expires at the end of 2012. It will differ from CERT in three key ways. First, as discussed above, it will require energy companies to work with local authorities. Second, it will have more specificity about target groups, including vulnerable households on low incomes, to whom we expect energy companies to provide particular support. As a result over three million vulnerable households could<sup>1</sup> receive fully subsidised installations of both standard insulation measures and also eco-upgrades. Third, it will be more transparent than CERT – energy companies will need to provide much greater clarity about how much they spend, on what and in which parts of the country to help the Regulator oversee the process and better understand the costs.

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<sup>1</sup> This is dependent on the total number of eco-upgrades and assumes a priority group of similar percentage to CERT. This will be subject to a consultation.

## Pay As You Save

The second sort of finance takes advantage of the fact that people who have an eco-upgrade can benefit from significantly reduced bills or, if they install renewable heat technologies, from a guaranteed revenue stream. The plan is to ensure that people can use a share of the money they save on bills, or the revenue from small scale renewables, to cover the cost of the eco-upgrade.

Green Finance itself would come from the private sector, as banks and others provide funding for the eco-upgrade, secured against future savings on bills. Clearly, this will not be appropriate for all people but the aim is for many householders to be able to access such funding and so avoid paying up front for their eco-upgrade. Instead they would pay as they save, with some surplus left over each month so they also benefit from reduced bills.

Being a new initiative, this Pay As You Save model will take time to gain the confidence of households. The tendency for home owners to move on average every twelve years, which is not enough time for the bill reductions to cover the upgrade costs, may also impact on the rate of take up of the model. The solution to these problems is to allow the cost of the upgrade to be attached to the home, not the homeowner. We propose to introduce new legislation to make this possible. This legal innovation will allow energy companies, banks and others to lend money against the home secured against a permanent reduction in energy bills relative to energy cost rises. Homeowners who want to install measures will have access to a pot of finance that can leave them with no upfront costs.

Alongside these measures we are also working with the Royal Institution of Chartered Surveyors, with a view to ensuring that energy performance of homes starts to be better reflected in its market value. They are developing recommendations for both Government and property professionals to achieve this.

## Consumer support

Homes are as individual as the people who live in them. Trying to understand the best form of energy saving measures and the support available for them can already be confusing particularly with new forms of insulation and micro-generation technologies becoming available.

People are concerned that they may not make the right decision about the work they get done, and may not have confidence in those offering to install or sell them measures. In response, we will improve both consumer access to information and standards in industry.

We will set up a new free and universally available advice service to help people understand the potential impact of measures and compare different offers. This will be supported by providing access to more tailored advice through Home Energy Advice packages which we expect will often be subsidised as part of the new energy company obligation.

We will introduce a new certification system that will include standards both for people who provide advice about what measures are suitable for a home and for installers themselves. There will be a new quality assurance mark, new accreditation frameworks for installers and new consumer protection schemes, building on existing schemes where possible. The energy efficiency industry has a shared interest in ensuring high levels of public confidence.

We are working with industry to improve technical understanding of the most appropriate combinations of measures in different circumstances. This includes the Building Research Establishment's (BRE) 'Rethink Refurb' project, and the funding of demonstrator homes across the country, so that people can see the potential of an energy efficient home.

## Phasing

This Strategy spans the period to 2020. In the first part of the decade (through to 2015) there will be two priorities. The first is to complete the installation of standard energy saving measures such as loft and cavity wall insulation in all homes where it is practical to do so. This will happen initially under the existing CERT scheme as extended to 2012, with the Strategy set out in this document coming into effect at the start of 2013. The second aim is to kick-start the installation of more ambitious eco-upgrades, with social housing providing particular leadership to stimulate the industry and reduce costs. Many of the people living in social housing are also on the lowest incomes. This will allow us to develop the supply chain for measures such as solid wall insulation. During the period, we will also see local authorities developing plans to support installation of district heating measures in the most economic and feasible communities.

From 2015 we expect an accelerated roll out of more significant measures such as solid wall insulation and heat pumps. By this point, we expect more developed supply chains, a more developed Pay As You Save finance market and the embedding of partnerships with local authorities. This will ensure that the capacity exists to install the measures at the scale needed and should reduce the costs of doing so. District heating developers will also be looking to expand their networks to balance heat loads across mixed use properties, installing increasingly renewable generating plant.

## What this means for consumers

This Strategy sets out a new path for home energy saving in Britain. It builds on what has been achieved so far and sets out a vision of a country where families across Britain have far better advice and access to either subsidised or zero-up-front-cost energy efficiency measures, including up to 7 million eco-upgrades.

A householder will be able to find free advice as to how they might upgrade the energy efficiency of their home. They will be directed, through a single web portal or phonenumber, towards a range of sources of funding including Pay As You Save funding and funding provided by energy companies.

Local authorities will work with people in their areas to help them make the changes they want to make to their homes and there will be a new set of standards for workmanship to ensure that installations are to a high standard.

People will be able to cut their energy bills, live in warmer more comfortable homes and contribute to the fight against climate change.

## What this means for jobs

This Strategy creates huge opportunities for British jobs and businesses. We estimate that the measures set out in this Strategy could lead to up to 65,000 people being employed in the installation and manufacture of home energy insulation and micro-generation. In recognition of the growing market which Government policies are creating, energy companies have recently

announced plans for thousands of new jobs to support the roll-out of smart meters and to supply and install insulation and micro-generation technologies. But the benefits will extend more widely than this, in the supply chains, finance, advice and other services required to implement these plans.

Given the scale of the programme and the relatively under-developed nature of some sectors, the Government will be working with the industry over the next year to support workforce training and help.

# Part I – A new era in Household Energy Management

## This Chapter sets out:

- **A new approach towards household energy management involving a significant step change in our ambition and scale of delivery.**
- **The core aims of the Strategy, to deliver on two commitments:**
  - **complete the installation of cavity wall and loft insulation for every home where practical to do so by 2015;**
  - **install eco-upgrades – which go beyond standard insulation measures to include solid wall insulation and/or micro-renewable energy generation – in up to 7 million homes by 2020. To achieve this in practice, we project that our capacity to deliver more significant insulation will need to develop fast, getting close to its steady state around or shortly after 2015.**

1. Domestic energy efficiency is good for fuel bills, good for the fight against climate change and good for our national energy security. That is why, in the Low Carbon Transition Plan, the Government sets out our ambition to reduce emissions<sup>3</sup> from households by 29% by 2020 consistent with our carbon budgets set under the Climate Change Act. That equates to 24 Mt CO<sub>2</sub>e of annual emissions that have to be eliminated. On current trends, current policy will address 20 of the 24 Mt CO<sub>2</sub>e.
2. This Strategy sets out how we plan to achieve the remaining 4 Mt CO<sub>2</sub>e of emissions reductions and deliver on our 29% target. It sets out a new policy framework for the period after the current energy company obligation, the Carbon Emissions Reduction Target (CERT) regime, expires at the end of 2012 through to the mid-point of the next carbon budget period in 2020.
3. The Strategy is informed by contributions to the consultation which ran from February until May 2009<sup>4</sup>. We had over 300 responses to the consultation from a wide mix of stakeholders including from the private, public and not-for-profit sectors, and we are grateful to all those who took the time to respond. Following the consultation we continued to work with stakeholders to develop proposals and we had very useful input on issues ranging from

<sup>3</sup> From the non-traded sector under EU-ETS

<sup>4</sup> DECC, 2009, [http://hes.decc.gov.uk/view\\_results](http://hes.decc.gov.uk/view_results)

the role of local authorities to the standards needed for the industry. A summary of the consultation responses, along with the initial Government response, and the responses in full can be found on the DECC website<sup>5</sup>.

4. The Strategy sets out a single framework for policy, covering all aspects of domestic energy efficiency across all tenure types. It ties together a range of different policy areas ranging from standards in the social housing sector through to the development and regulation of new financial products. This will allow us to put in place a unified offer that provides the support and advice householders need.
5. The Strategy focuses mainly on reducing emissions from heating our homes, which primarily means our use of gas. Total emissions from electricity are already capped under the European Union Emissions Trading Scheme (EU ETS). However, we are also working to increase the energy efficiency of domestic appliances, and this is described in more detail in Part IV.



6. Specifically, this Strategy is designed to deliver on two commitments – both of which require change on an unprecedented scale. We are committed to:
  - **completing the installation of cavity wall and loft insulation for every home** in the country where it is practical to do so by 2015. Over 7 million homes since 2002 have had these measures. Completing the process of change is expected to deliver 0.5 Mt CO<sub>2</sub>e of annual carbon savings;
  - **the installation of up to 7 million eco-upgrades**, which go beyond standard insulation measures to include solid wall insulation and/or micro-renewable energy generation by 2020. So far, there is minimal activity in this area, so we are starting from a much lower base in terms of the technology and public understanding. However, this area provides much greater potential for carbon savings. We expect to deliver 3.5 Mt CO<sub>2</sub>e of annual carbon savings by 2020 through more significant insulation measures as part of such eco-upgrades giving a total saving of 4 Mt CO<sub>2</sub>e. We are also working up a more cautious case that will set out what more could be achieved, going beyond 4 Mt CO<sub>2</sub>e, so that we are prepared if more stretching goals are required in coming years. Even the less cautious case would represent a huge effort. The nature of the energy company obligation means the only target in this area is for carbon saved through approved measures. However, to provide a sense of scale, we project that to meet 3.5 Mt CO<sub>2</sub>e may require the installation of solid wall insulation in as many as 2.3 million homes.

<sup>5</sup> DECC, 2009, [http://hes.decc.gov.uk/view\\_results](http://hes.decc.gov.uk/view_results)

## What is an eco-upgrade?

One of the objectives for this Strategy is to ensure the installation of up to 7 million eco-upgrades in households across Great Britain by 2020. By an eco-upgrade we mean the installation of a set of measures that goes significantly beyond basic insulation to include the installation of smart meters and either solid wall insulation or, alternatively, the installation of loft and cavity wall insulation alongside a form of renewable energy generation.

Alongside these measures home owners may well wish to install other home energy improvements, subject to the need to obtain planning permission where appropriate, so where possible the advice services described in this Strategy will help provide advice that goes beyond insulation and eco-upgrades.



## What is solid wall insulation?

While most homes built since 1930s have been built with cavity walls, buildings before that date were generally built with solid walls. As a result there is no gap in which standard insulation materials can be inserted. They are, therefore, much harder to insulate.



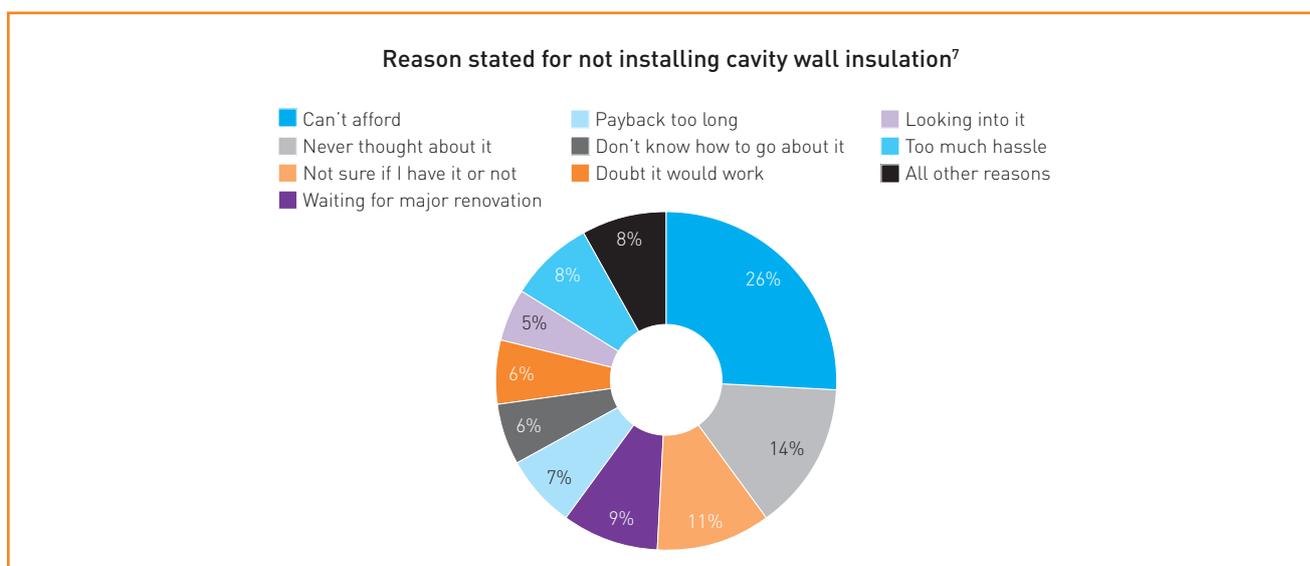
The developing technology of solid wall insulation addresses this problem by allowing people to prevent more of their heat 'leaking' through the walls. This is a relatively new process in the UK, so at the moment the supply chain is limited and the costs are higher than they would be for a more mature technology. One of the aims of this Strategy is to help bring those barriers down by speeding its development in the UK.

## What is domestic scale renewable energy generation?

Our definition of an eco-upgrade involves a household for such properties and possibly renewable energy when this is done or installing a small scale renewable energy generation technology alongside loft and cavity wall insulation.

Small scale renewables include technologies like air source heat pumps, ground source heat pumps and solar thermal.

7. Both commitments above have the potential to deliver significant savings to consumers on their energy bills. The average saving on installation of loft and cavity wall insulation under the existing CERT scheme is in excess of £145 a year<sup>6</sup>. The saving from eco-upgrades is expected to be larger. Solid wall insulation tends to deliver larger savings than loft and cavity wall insulation because solid wall homes tend to be older and more poorly insulated in the first place. Installation of renewable micro-electricity generation will earn a return on investment of 5-8% a year as a result of the new Feed In Tarrifs (FITs) regime which comes in to place from 1st April 2010 and we are also consulting on a similar scheme that would cover renewable heat.
8. However, both standard insulation and to an even greater extent eco-upgrades face significant barriers. The following chart shows the barriers people say hold them back. Consumer enthusiasm for action is being limited by the fact that installing significant energy efficiency measures can seem a significant hassle, particularly if, for example people need to empty out a loft before it can be insulated. This issue is exacerbated by concerns around upfront cost. Despite significant longer term benefits in terms of energy bills, loft and cavity wall insulation tends to cost up to £300, the cost of solid wall insulation can average at £8-10,000 and renewable generation can sometimes cost more.



9. For eco-upgrades there are further specific challenges.
- The technologies are relatively new in the UK which means that the supply chain is not yet ready to deliver on a large scale.
  - There are also challenges of co-ordination, particularly for solid wall insulation. There is already some difference in the cost effectiveness of installing loft insulation on an individual home basis as opposed to on a street by street or cluster of homes basis, and that difference is even greater for solid wall insulation. It is far more cost-effective to install solid wall insulation for groups of adjacent homes simultaneously than for individuals to choose to do it on single homes.
10. Further, as we make progress towards installing loft and cavity insulation in all homes, where it is practical, the outstanding homes will inevitably be harder to identify and may be harder to treat.

<sup>6</sup> Range between £145-265 depending on starting state of the loft and assuming 15% comfort taking.

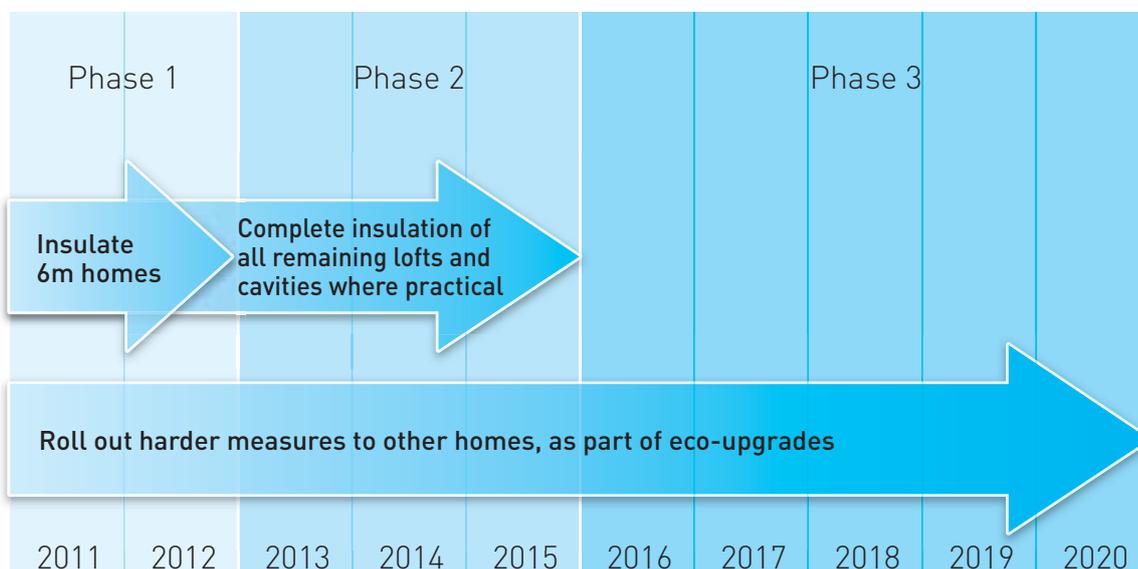
<sup>7</sup> Public Attitudes and Behaviours Towards the Environment – tracker survey 2009

[www.defra.gov.uk/evidence/statistics/environment/pubatt/download/report-attitudes-behaviours2009.pdf](http://www.defra.gov.uk/evidence/statistics/environment/pubatt/download/report-attitudes-behaviours2009.pdf)

11. These challenges require a new and different approach to promoting sufficient take-up. This Strategy sets out that new approach.
12. This Strategy proposes a range of significant new policies to achieve this step change. It includes plans for:
  - a new obligation on energy companies to provide practical and financial support for people who want to improve the energy performance of their homes, including specific support for vulnerable households on low incomes;
  - a new model for delivering home energy improvements that gives local authorities a vital and expanded role;
  - legislation to enable a new 'Pay As You Save' financing mechanism to allow householders to take out Green Loans to install eco-upgrades with no upfront costs;
  - regulation of the rental sector including a new Warm Homes standard for the social rented sector and plans for consultation on regulation to improve protection for tenants and raise the bar on energy efficiency for private landlords;
  - a universal advice service to help people make informed decisions about their homes;
  - standards for the supply side of the energy efficiency industry; and
  - work to recognise energy efficiency in the value of homes.

## Phasing Delivery

13. There are three key delivery phases up to 2020. Over these phases, we will see further roll-out and ultimately completion of the standard insulation measures and significant ramping up of installation of substantial eco-upgrades. The Government has already decided to extend CERT to the end of 2012 in a way which is more focused on core insulation measures to ensure that we meet our 6 million homes target. From 2013 to 2020 we will place a new form of obligation on energy companies.

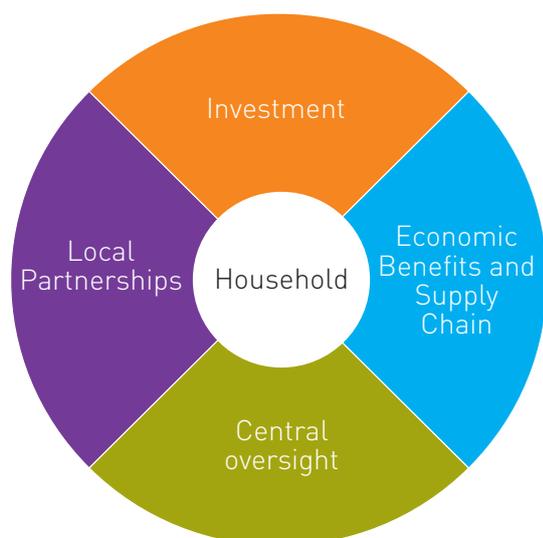


14. Funding for change across the period from 2013 to 2020 will come from the new obligation on energy companies, but we also expect to see new green finance options increasingly available to households especially after legislating to allow for the Pay As You Save approach. The period between the end of 2012 and 2020 can be usefully seen in two phases: first, a period up to 2015 in which we will complete the standard insulation measures – loft and cavity walls – in all homes where practical while we rapidly increase our capacity to deliver more significant measures, such as solid wall insulation; and second, a period in the latter part of the decade in which we continue or even increase the pace of solid wall insulation and of new heating devices such as heat pumps with increasing support from PAYS mechanisms.
15. Fuller detail on phasing is provided in supporting document “Household emissions: the scale of the challenge”.

## The Underpinning Policy Framework

16. This policy framework has four core elements – each of which is a focus for a section of this document:
17. Local Partnerships for Delivery: a new role for local authorities
- Investing in Greener Homes: the new energy company obligation and PAYS
  - Central Oversight and Coordination, including advice and standards
  - Securing the Economic Benefits and Developing the Supply Chain.

### Delivery Framework



18. This Strategy covers Great Britain, although we recognise that in some areas the specific arrangements for delivery will vary in England, Scotland and Wales. These issues are discussed more fully in the introduction to the supporting documents.

## **Part II – Local Partnerships for Delivery: a new role for local authorities**

**This Chapter sets out:**

- **a new model for local delivery of household energy efficiency measures through partnerships between energy companies, local authorities and other local organisations;**
- **a new framework for universal standards for the rented sector to set the right direction to landlords, enabling them to plan for the future; and ensure tenants are able to enjoy a home that is both efficient and cheaper to run.**

### **Section 1 – The new model**

1. By 2012, we will have insulated 6 million homes but the scale of the challenge going forward means we need a new approach to delivery. This approach needs to build on the successes of the existing system, but find new ways to tackle the barriers that are specific to eco-upgrades and the completion of loft and cavity wall insulation across the country.

### **A new role for local authorities**

2. We propose a new partnership approach to delivery with local authorities playing a key role in coordinating action at a local level and ensuring it reflects the specific needs of their area in terms of household types, building fabric, tenure types and other factors.
3. This approach builds on what we have learnt from innovative steps under the existing CERT scheme and the new Community Energy Saving Programme (CESP) where much successful delivery on the ground is often not the result of the action of one party alone, but is the fruit of a partnership approach with local organisations, in particular local authorities and third sector bodies working together with the energy companies in a community approach. Examples of this approach under the current CERT scheme are set out below.

## Braintree – British Gas Partnership

*Braintree District Council and British Gas established a public-private partnership in 2004, offering Braintree homeowners cavity wall and loft insulation at competitive prices. The council have circulated promotional in leaflets to all households in the district alongside their council tax bills, with British Gas funding a £110 rebate for residents that take advantage of the offer.*



*The council tax rebate option has proved very popular, with 1200 installations completed in Braintree so far and high reported rates of customer satisfaction. 78% of customers that have benefited report that they would not have had the work done if the Council Tax rebate was not on offer. Braintree Council have also used this opportunity to promote funding available under the Warm Front scheme. This model of local partnership has proved so successful it is now available in more than 60 local authorities.*

*Research carried out by Element Energy for The Energy Saving Trust in November 2009 (“Energy Efficiency Measures, Willingness to Pay – Final Report”) confirmed the attractiveness of council tax rebates as opposed to other forms of subsidy.*

4. Recently, CESP has begun to test further the partnership approach in relation to home energy management:
  - CESP, introduced last year, is an ambitious programme to build on the underlying CERT approach but focus the activity of the obligated energy companies into partnerships with local authorities and other local bodies.
  - The Low Carbon Communities Challenge, launched by DECC on 28 September 2009, is a two-year programme to provide financial and advisory support to 22 ‘test-bed’ communities in England, Wales and Northern Ireland, seeking to help communities that are cutting their carbon emissions. The Challenge will allow the carbon saving experiences of communities that take part to be shared publicly, to inform not only Government’s wider delivery plans on home energy management, but also other communities and members of the public wanting to take action on climate change.

## Kirklees Council and Scottish Power – A partnership case study

*Kirklees Council and Scottish Power have joined forces to provide an area-by-area approach to installing home insulation measures. Both contribute an equal share of £10 million each.*



All households across the district have been visited by trained assessors. Where additional insulation is required they arrange for a contractor to install mineral-fibre insulation in lofts and cavity walls at no cost to the homeowner. 24% of the local population have already benefited from energy efficiency measures, which means some 36,000 lofts insulated and 17,000 cavity walls filled. This amounts to 33,000 tonnes CO<sub>2</sub>e being saved each year.

This coordinated approach to delivering a low carbon Kirklees has benefited the community in a number of additional ways including:

- the creation of 129 local jobs;
- reduced fuel poverty and £7.8 million fuel bill savings per year;
- increased awareness and uptake of state benefit support by eligible residents;
- distribution of carbon monoxide detectors and 22,500 referrals for fire safety checks.

5. The success of energy saving programmes that involve local authorities as a core partner reflects a number of advantages that they bring, for example:

- they have good knowledge of their local housing stock, giving them a head start in targeting some of the poorest quality houses;
- they are a trusted presence in the community, and have active communication mechanisms with householders in their area, making them well-placed to deliver tailored advice to their communities;
- they have good knowledge of, and links to, third sector and other community and regional bodies active in the area;

- they control or direct a number of existing interventions with householders, and could help target measures towards those households that need them most;
  - they can play a key role either as social landlords for large numbers of households in their area, or in facilitating links with other social landlords.
6. We will provide local authorities with the opportunities they need to play a leading role in improving energy efficiency through the design of a new energy company obligation.
  7. We will create, legislating as necessary, an obligation for energy companies to work with local authorities. Where a local authority has a Local Carbon Framework, energy companies will be obliged to agree their plans to improve domestic energy efficiency in the area with the local authority. In other areas, the requirement will be to consult with local authorities before acting.

## Local Carbon Frameworks

The Government recently announced it would be piloting Local Carbon Frameworks. Local Carbon Frameworks build on the current national indicators on carbon but are intended to provide a spur for local authorities to go beyond national targets and delivery plans. In its Local Carbon Framework, the local authority would be expected to set itself stretching targets to reduce carbon emissions in its area, a trajectory for achieving these targets, and a delivery plan, including how the local authority would work with its partners to achieve its targets. In return, we are considering what further freedoms and flexibilities could be made available to help local authorities deliver their plans. That will include the opportunity to develop and lead a local investment plan for energy efficiency measures under the approach set out in this document. Nine local authorities and groups of authorities are working with us to pilot the approach. It is our vision that, in the longer term, all authorities will take on responsibility for saving carbon from energy use in the homes in their area.

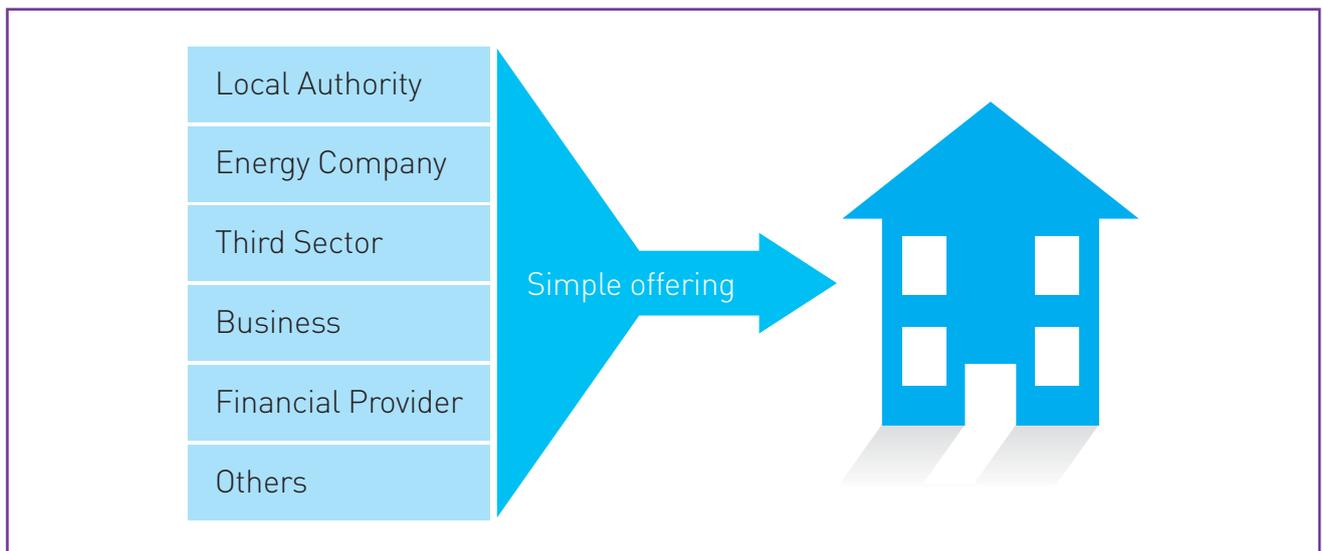
8. This is a powerful lever because energy companies will be required to help households save carbon as a condition of their obligation. This new obligation will come into effect when the current CERT extension expires at the end of 2012 and run through to 2020 at least.
9. The precise details of the obligation will be consulted on separately after the publication of this Strategy, but in outline:
  - the obligation will focus on improvements in insulation in the home;
  - each company will have a specific target for carbon savings. In total, they will be scaled to achieve a combined saving of at least 4MT CO<sub>2</sub>e per annum by 2020 profiled to support a smooth increase in capacity to deliver significant insulation measures to 2015, and then achieve even more carbon savings over the period to 2020;
  - failure by an energy company to deliver its share of those savings will result in significant sanctions, including potentially fines of up to 10% of global earnings;
  - there will be strong requirements for energy companies to be transparent about the amount they spend on energy saving, where they spend it geographically and the sorts of measures they install as well as the carbon savings achieved. The details of this

transparency arrangement will need to be worked out and new powers taken where necessary;

- there will be a clear priority group identified for particular support from energy companies. This is discussed in greater detail later in this section; and
- there will be a requirement to work with local authorities, as described above.

**10.** Our expectation is that the relationship between energy companies and local authorities will go beyond the minimum legal requirements. This is because local partnership will not just be an obligation on energy companies, it will also be in their interest. Working with local partners will enable them to deliver more cost-effective energy saving.

**11.** The precise nature of partnership activity could vary widely. In some cases, the local authority may play the leading role in the partnership – which could be a sub-set of an existing local strategic partnership, for example. In others, the local authority will be an active partner, providing some resource and personnel, and perhaps integrating energy efficiency activity with other neighbourhood renewal and infrastructure programmes on which it leads. In other cases, the energy company will take the lead and the role of the local authority may be essentially to provide information – although other local business partners as well as third sector organisations, may of course play a more active role. Partnerships could work across several local authorities, building on multi-area agreements or city region plans where it is appropriate to do so.



**12.** Partners will be free to develop detailed agreements between themselves. To aid that process a range of partnership agreement templates will be developed. This will ensure that the partners have a menu of options and specimen contracts on which they can draw in determining their own working agreements.

**13.** Effective local partnerships will often not just involve a bilateral relationship between energy companies and local authorities. The third sector often have established trusted relationships and local networks which can help to strengthen the capacity of a partnership to engage with a local community and support people to save energy and cut their energy bills.

**14.** The Ministerial Third Sector Task Force on Climate Change is due to report shortly setting out a roadmap for greater third sector involvement in climate change policies, including

on ensuring they are able to play an effective role in local partnerships and local carbon frameworks. The report will also include a commitment for government to work jointly with the third sector, to develop a sector-led programme of work to influence people's behaviour on the use of energy in the home and see beyond the difficulties which retrofitting can present. This will build on the lessons from piloting work being carried out for CLG by the Groundwork Federation to establish which techniques are effective at influencing people's behaviour on the use of energy in the home – this is described in more detail in the supporting document "Partnerships to deliver in different housing tenures".

- 15.** The Government announced in December 2009 that energy companies would be responsible for the supply and installation of smart meters by the end of 2020. In principle the installation of smart meters in a home should provide a good platform for focusing the attention of the householders on their energy usage, and for them to consider the benefits of installing other measures in their home. Smart meters will come with an in-home display but open up the way for seeing energy use via different media, such as mobile phones.



- 16.** There is a business incentive for energy companies to deliver the carbon savings they are obliged to provide at least cost. As a result, local authorities in areas where there is a significant stock of housing that can be treated and where the local authority and other partners can offer a high degree of support will be more attractive partners to the energy companies than those where the local authority is coming at things from a standing start. This will benefit local authorities who are more proactive in trying to reduce their emissions and help their residents with energy bills.
- 17.** Those local authorities leading the way will be best placed to share best practice with other local authorities (for example, through the oversight arrangements described in part IV), paving the way for future delivery in every local authority area.
- 18.** To provide further support for local authorities we plan to improve the data they have relating to household energy usage at a detailed local level within their area. This will build on pilots conducted last year in around 10% of local authority areas where energy companies agreed to make available household gas and electricity consumption data for small areas within local authority boundaries. This will be rolled out to local authorities across England and

Wales, beginning with data on 2008 gas and electricity consumption. Over time, this will provide all local authorities with information on changes in energy usage at a detailed local level, putting them in a better position to plan and implement strategies for improving energy efficiency.

19. The Government will also be supporting the creation of a network of demonstrator homes, lived in by ordinary families, which have been retrofitted with energy efficiency measures and can periodically be viewed by the public. These will be a valuable tool to demonstrate the benefits of such measures and inspire people to make similar changes to their own homes.
20. Given the scale of the programme not all areas will be covered by partnerships from the start, but we will look to encourage partnerships to develop so that over time there should be some form of partnership between the companies and virtually every local authority in the country, including gradually more intensive, deeper partnerships which can form the platform for the delivery of eco-upgrades.

## Ensuring fairness of approach

### Geographical fairness

21. Some areas of the country face particular challenges in taking forward energy efficiency action, even where the willingness and commitment exists. For example, rural areas, by the nature of their dispersed housing stock, may be less straightforward to treat than urban areas (where large areas of similar housing can often be tackled in one project).
22. Many rural areas are already taking advantage of opportunities to make low-carbon refurbishments in their areas; and it is likely that the new renewable heat incentive (to be introduced in April 2011) will play an important role, in principle providing funding to anyone across the country, but ensuring that households in rural communities that are off the gas grid will have a greater level of incentive to replace heating systems that use coal, oil and electricity as the fuel source.
23. It is crucial that the new obligation does not unfairly neglect households in any given area. In making detailed proposals, we will therefore consider how to encourage a fair regional spread of activity, for example by incentivising companies to:
  - work across the different nations of Great Britain, and across a variety of different regions within them; and
  - work across a variety of different types of area – rural, towns, cities etc.
24. We will need to ensure that in focusing on a local partnership approach we do not somehow preclude individual householders from taking the initiative themselves and receiving support for, say, insulating their own homes proactively. We would, therefore, envisage that the future energy company obligation would, for example, retain the flexibility to include national subsidy schemes for DIY insulation materials.

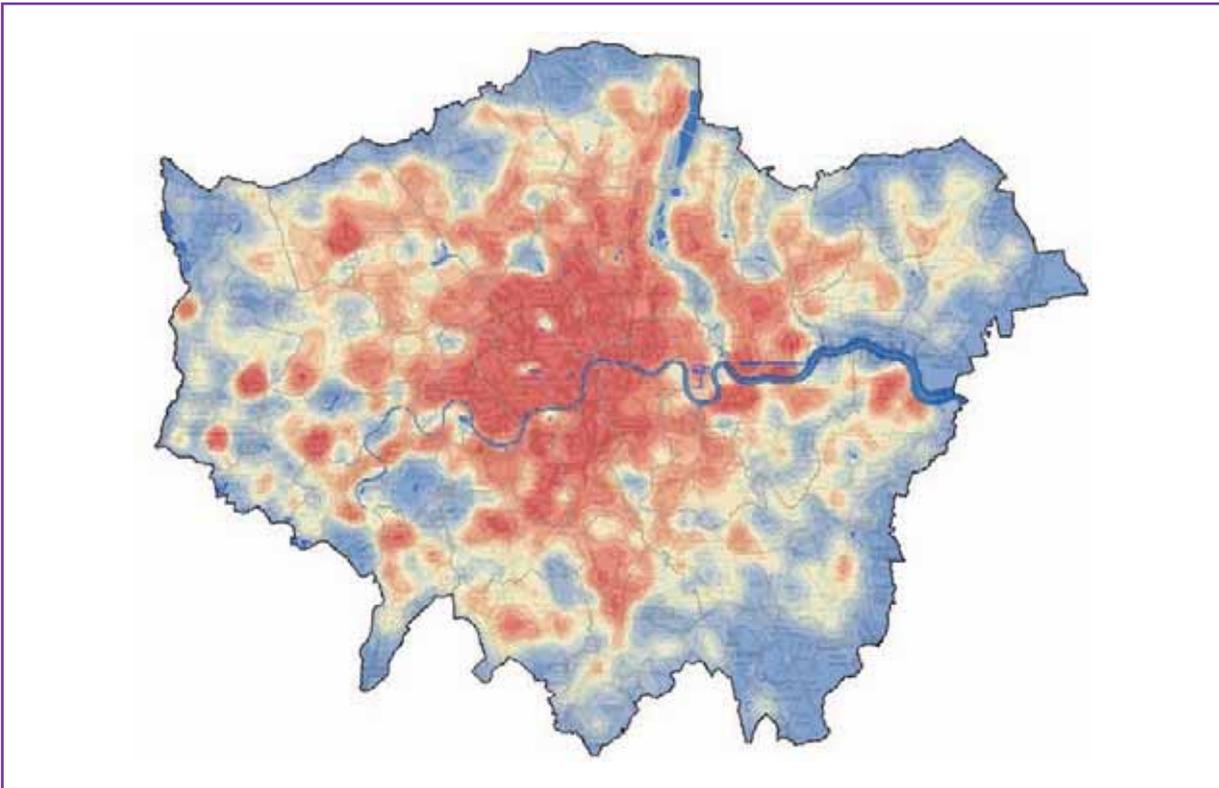
### Poorer households

25. People in fuel poverty face particular challenges in paying their fuel bills, and difficulties with paying for the upfront costs of insulation and other measures that could help them reduce the costs of heating their homes. Providing support for less well off households and, in

particular, households in fuel poverty is therefore a particular priority. The new energy company obligation will be specifically targeted at measures to improve the energy performance of social housing and providing subsidised measures for more of the most vulnerable and lower income households living in private sector housing.

## Developing district heating

26. District heating is another clear example of the benefits local partnerships can bring. It has the potential to deliver significant carbon savings and lower bills. In Aberdeen, one such scheme won an award for reducing the bills of many fuel poor consumers by 50%. However, there are major collective action difficulties in getting district heating projects up and running. Individuals cannot choose to have district heating alone; there has to be action taken across a locality.
27. The Government wishes to see district heating networks coming forward in those communities where it is an economic option and beneficial to do so. We have provided financial support through the £25 million we are investing in schemes in England and the devolved administrations this year, with a further £5 million for England next year. We are strengthening expectations on suitable local authorities to develop local partnerships that drive deployment of low carbon and renewable options such as heat networks in their areas. The development of new Local Carbon Frameworks will support this change, including by encouraging local authorities to take an overview of their area's comprehensive energy needs.
28. A supporting paper to this Strategy sets out a new enabling framework for district heating and cooling in more detail. The enabling framework includes a number of actions to create long term certainty and confidence for customers, businesses and local authorities. In particular, we will be **convening a Heat Market Forum** made up of participants with appropriate expertise and experience to guide internal regulation of the market and advise Government. Initially, the Forum will be an advisory body, but in view of the importance of protecting consumers and developers, will have a specific responsibility to develop and disseminate a **Code of Conduct for the Heat Networks**.
29. As part of providing a consistent basis from which all local authorities could be expected to develop long term strategic energy plans, we are announcing the Government's intention to commission a **new National Heat Map** (similar to one produced for London) by the end of the year. Recognising the number and complexity of issues associated with developing heat networks, we will also be delivering on a commitment in the Low Carbon Transition Plan to set up an **online Community Energy Information Hub. The Hub will be operational from April 2010 and as part of** a "How to..." guide for local authorities seeking to develop heat networks, will include **newly updated technical standards** for heat networks, advice and support on the use of the National Heat Map, and guidance on issues such as raising finance and forming Energy Service Companies (ESCOs).



London Heat Map – © PointX. All rights reserved. Licence number 10034829. © Crown copyright. All rights reserved (LA100032379) (2010). Maps created by the Centre for Sustainable Energy

30. The enabling framework acknowledges the impact that e.g. hospitals and social housing might have on heat networks, and recognises that long term commitments to connect the public sector estate can have a positive effect on the risk of investing in heat infrastructure. We are therefore announcing our intention to consider a **commitment that public sector properties connect to heat networks where one exists or is planned**, where it is feasible and economic to do so, and where the planned heat source for the network is consistent with our short and long term climate change targets.
31. Existing policy mechanisms are already driving deployment of heat networks. The enabling framework aligns district heating policy with these existing mechanisms, in particular, with a potential uplift for district heating under the Renewable Heat Incentive and with a clearer set of expectations being developed under an updated Planning Policy Statement on Climate Change, which will be published shortly.
32. We will also integrate our policies for new and existing buildings. Our policy is to increase the performance of new buildings until they reach zero carbon standards. This involves using off-site solutions to deal with any carbon not mitigated through energy efficiency and on-site renewable energy. We are now working on practical delivery mechanisms which: work for all types of building developer, large or small; operate in a way that doesn't prevent new buildings being used while off-site solutions are put in place; and minimise administrative burdens. To reduce overall costs and promote the right solutions for areas, we also want these mechanisms to support investment in larger schemes, such as investment in district heating schemes, which typically offer better value carbon savings. Decisions on how to meet these aims will be taken by the Summer.

## Section 2 – Universal Standards for the Rented Sector

- 33.** There will be opportunities for all householders to improve their energy efficiency over the next decade. Most British householders own their property and this Strategy will allow them to make informed choices affecting their homes. But tenants often have little or no control over how well their homes are insulated, and we must ensure that this does not mean they suffer unfairly from poor conditions. We believe all tenants should have this assurance. There is a case for stronger standards in rented housing.
- 34.** Social housing has the potential to make a big contribution in both reducing carbon emissions from homes and in developing the supply chain necessary to deliver carbon reductions more widely. Social housing is often in large purpose built apartment blocks, or on large estates where social tenants remain the majority tenure. Both situations offer the potential for energy companies to support carbon reduction measures at scale. In addition, landlords can adopt a long-term approach to housing asset management and provide a single point of contact for energy companies, at least in the first instance. Through this approach they should be able to offer attractive, cost-effective opportunities to energy companies to support measures to reduce emissions, including eco-upgrades which can be carried out at the same time as other planned works. They may also be able to help identify dwellings where there is the opportunity to install loft and cavity wall insulation. We therefore expect registered social landlords to play an important role in local partnerships.



- 35.** To unlock this potential we will introduce a new Warm Homes standard. The new standard will cover:
- the building fabric (including standard insulation measures and harder fabric measures where they make sense); and
  - heating systems, particularly connection to low carbon district heating or renewable heat.
- 36.** More details on the Warm Homes standard are given in the supporting documents.
- 37.** The structure of the new energy company obligation will provide a significant incentive for energy companies to seek to upgrade social housing. Social housing is often in large blocks constructed out of similar materials. Because of this, we expect that in practice social landlords will benefit from support under the new energy company obligation. To provide additional confidence to landlords to plan work across the stock to realise these savings, we intend to indicate that all social tenants or those living in blocks where a social landlord is the freeholder will benefit from priority group treatment, at least to the end of 2015.

- 38.** We will take the opportunity to encourage social landlords to install renewable electricity generation. In developing the detailed standard, we will consider the case to include other work to prepare homes for climate change, subject to the availability of other sources of funding.
- 39.** Our ambition and policy intention is for social housing to achieve the Warm Homes standard by 2020. We recognise however that firm dates cannot be set until the future energy company obligation is further developed. As a result, we will take the following steps:
- develop the detailed standard;
  - work with the Tenants Services Authority (TSA) and Homes and Communities Agency (HCA) to ensure that social landlords develop plans to deliver the standard by 2020, subject to the availability of support for carbon saving measures under the new energy company obligation; and
  - we will seek views on confirming achievement of the Warm Homes standard by 2020 as a regulatory aim alongside consultation on shape of the post-2012 energy company obligation.
  - The new Warm Homes standard will help to raise the energy efficiency of social housing from around SAP 59 to at least 70, radically reduce emission, and make a real impact to reduce energy bills for tenants. It will also enable industry to develop the capacity to roll out these technologies across the residential sector more widely, and make a significant contribution to job creation over the period.
- 40.** In addition to helping tenants, the focus on social housing will provide a wider benefit: it will stimulate the supply chain. By guaranteeing demand for solid wall installations it will provide the stimulus for companies to develop their skills, improve their processes and in time – through competition – bring down the costs of wider roll out.
- 41.** There will also be likely benefits to residents in areas close to social housing that is treated. For example, local partnerships led by local authorities and social landlords could identify and target dwellings with potential for the basic measures, across all tenures, with social sector stock providing the critical mass that will be attractive to energy companies, and will drive down costs for other local residents.
- 42.** The private rented sector (PRS) is now, on average, as efficient as the owner-occupied sector, with an average SAP rating of 49. In England, this sector makes up 14% of the housing stock, and accommodates 17% of the fuel poor.<sup>8</sup> However, the sector still has the largest proportion of lowest (G) rated properties of all tenures (7.8%, compared to 3.8% in owner-occupation) and a high proportion of non-decent housing (44%, compared to 32% in owner-occupation).
- 43.** Policies to date have not always been as effective in this tenure as in other types of housing, due to a number of significant barriers that lessen their reach and effectiveness:
- *Communication and targeting:* landlords are hard to find and identify, and few proactively seek advice (less than 2% of calls to the Energy Saving Trust (EST) are made by landlords). Support is already available under CERT and the Landlords Energy Saving Allowance (LESA), but it is clear that there is scope for much greater take-up.

<sup>8</sup> <http://www.communities.gov.uk/documents/statistics/pdf/1479789.pdf>

- *Split incentives*: landlords are often unable or unwilling to invest in energy improvements to their properties, when the immediate financial benefits are realised by tenants in the form of reduced energy bills.
- *Property age and cost of refurbishment*: 41% of PRS properties were built pre-1919, a significantly higher proportion than in other tenures. A high proportion of F and G rated PRS properties require major renovation, such as replacement of electrical heating with gas central heating, at significant cost.
- *Attitudes to energy efficiency*: The stated level of concern for energy efficiency remains low in both landlords and tenants. There is growing concern that many tenants are not being presented with Energy Performance Certificate (EPC) information at the appropriate juncture (i.e. at the viewing stage).

- 44.** We will therefore work with landlord representative organisations in the social and private rented sectors to improve marketing and support to landlords. Where landlords in the private rented sector are able to provide co-ordinated offers to energy companies in a way that reduces expected costs of delivery, Government will consider how to reflect that in the design of the new energy company obligation.
- 45.** We intend to consult on how to formulate regulation so that the installation of standard insulation measures (loft and cavity insulation), where feasible would be a condition of renting out a property from a date in the future. This step will need to fit with existing milestones for installation and provide for a good preparatory lead time, coming into effect at earliest in 2015. Options could include using the proposed Landlords' Register as a means to help local authorities better target their enforcement activities particularly by identifying where the rented property is in their areas and linking that with information on energy efficiency. This is accompanied by a continuing commitment to financial support to landlords to achieve the work – through the energy company obligation and the Landlords' Energy Saving Allowance.
- 46.** We will ensure that the approach operates in line with the efficient functioning of the rental market and wider property markets.

## Part III – Investing in Greener Homes

### This Chapter sets out new funding to support:

- **The delivery of a major roll-out of insulation. The new energy company obligation will provide subsidy to assist with the costs of installing insulation measures, including 100% subsidy for those least able to pay.**
- **A new finance route to support household eco-upgrades. Innovative new Green Finance will enable people to install any eco-upgrades at zero up front cost and repay over time with savings on energy bills or revenue streams.**

1. While better energy efficiency can deliver savings to consumers, there are also upfront costs. These costs become higher for the more extensive eco-upgrades. The average cost for solid wall insulation, for example, is around £8,000.
2. Eco-upgrades involve installing standard insulation, smart meters, solid wall insulation and/or micro-generation. Our initial plans and cost estimates for micro-generation (RHI, FITs) and smart meters are detailed in other recent documents.
3. Our initial estimate is that the total cost of delivering on our ambitions for standard and solid wall insulation to 2020 is £18.6 billion<sup>9</sup>. The costs fall over the period 2013-2020. There is a relatively even spread over the period.
4. This Strategy sets out how we plan to ensure this level of investment is in place for a significant roll-out of insulation. Take-up of measures will reflect householder preferences, but our investment approach must reflect the need to encourage and support demand from some and allow for those who cannot afford to take action.
5. The finance for this roll-out will come from two main routes, which will work in combination. They are summarised below and explained further in this section:
  1. The new energy company obligation. We expect this to provide approximately **two-thirds of the overall financing**. The final nature of this obligation will be set out for consultation following the publication of this Strategy;

<sup>9</sup> This initial estimate is based on a range of costs and will be subject to further analysis under this Strategy

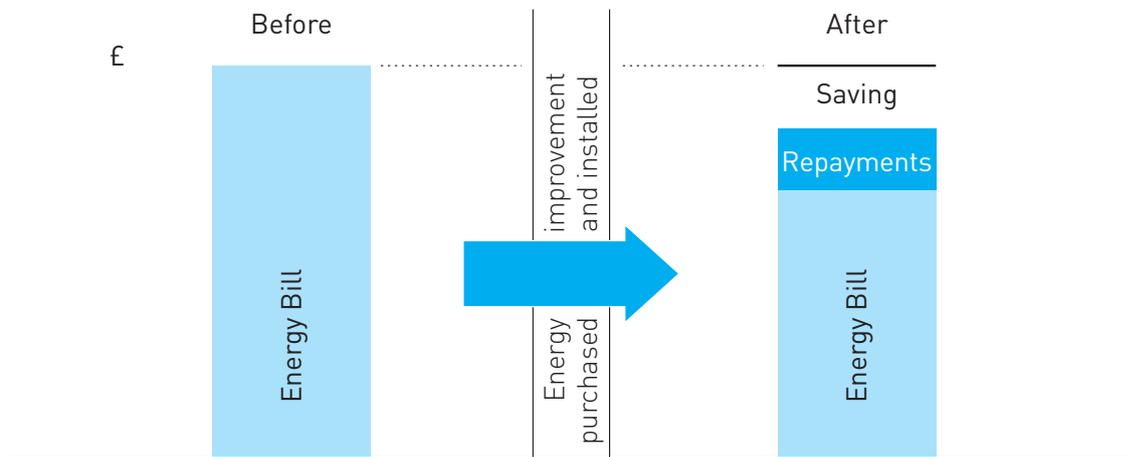
- II. A new form of 'Green Finance' based on a Pay as You Save model. We expect this to provide approximately **a third of the financing for major insulation** (and support upfront payments for any energy saving eco-upgrade with pay-back through energy savings or micro-generation revenue).

## Investment: The New Energy Company Obligation

6. The new energy company obligation will require energy companies to deliver carbon savings of up to 4Mt CO<sub>2</sub>e per year in 2020 through insulation measures with standard insulation through to 2015 and more extensive insulation in support of up to 7 million eco-upgrades by 2020. Because this investment is being used to install energy saving measures which will allow people to heat their homes using less energy, for those households which receive measures, the net impact on bills will be strongly negative.
7. Costs on bills can also be driven down through a more transparent obligation and hard push on efficiency, economies of scale and innovation across the supply side. We will plan for there to be no additional impact on fuel bills.

## Green Finance: allowing people to pay as they save

8. A new source of finance will come via the private sector and be particularly focused on eco-upgrades, for more extensive measures such as solid wall insulation or heat pumps.
9. Typically under CERT the consumer has contributed around a third of the costs of standard installations. However, as we move to more significant installations such as eco upgrades, householder contributions are only realistic for the minority who have access to sufficient upfront capital and are willing to invest it in this way.
10. We will develop a new Green Finance approach. This will address the relatively high upfront costs of eco-upgrades by making a particular virtue of the significant bill savings they can produce or, if a renewable heat technology is installed, the revenue stream that would come through the Feed-in-Tariff or Renewable Heat Incentive schemes.
11. The principle behind this approach is simple. Instead of paying for the eco-upgrade upfront, householders will be able to 'pay as they save'. The term of the finance will be such that householders will be able to cover the cost of the installation out of bill savings, and usually with a further monthly surplus as well. We call this approach Pay As You Save (PAYS).



12. The finance itself would come from the private sector, as banks and others provide funding for the eco-upgrade, secured against future savings on bills. Clearly this will not be appropriate for all people but the aim is for most householders to be able to access such funding and so avoid paying up front for their eco-upgrade.
13. At the moment, an important barrier to this PAYS model is that homeowners move on average about every twelve years, more often in many parts of the country. That is generally not enough time for the bill reductions to cover the upfront costs.
14. The solution to this problem, is to allow the cost of the upgrade to be attached to the home, not the homeowner. Householders would then only be responsible for the repayments while benefitting from the measures. From our discussions with stakeholders in developing this Strategy we anticipate this will also encourage more favourable repayment terms (longer term and lower interest) as PAYS would be secured against the property.
15. It will require new, primary legislation to enable Green Finance for energy efficiency installation to attach to the property. After further consultation, and working with the FSA and OFT, we will design a user-friendly PAYS mechanism which offers flexibility in terms of the operation of the housing market as well as providing the necessary assurance to lenders. We will then introduce enabling legislation in the next Parliament to take this forward.
16. The details of the legislation will be consulted on, with an impact assessment published alongside the consultation.

## Piloting PAYS

In December 2009 the Government launched the Home Energy Pay As You Save (PAYS) pilots. The pilots have a budget of £4 million and will run until April 2011. These pilots are testing consumer interest in PAYS, which offers householders capital to meet the upfront costs of installing energy efficiency and renewable energy measures to existing homes. Householders then repay this finance through installments that are lower than their energy bill savings.



Property in Sunderland of the type which might be included in the pilot

The pilots are being run in 5 areas in England by a variety of partners: Birmingham City Council, British Gas (in Sussex and Surrey), B&Q UK (working with Sutton Council), Gentoo (in Sunderland) and Stroud District Council.

17. The PAYS finance approach is new and innovative. We will look to develop the precise design with industry stakeholders. We will review the best potential mechanisms to stimulate lending from financial institutions for energy efficiency from 2012, with a view to having a significant new market operating by 2015.
18. To support consumers in understanding how different funds can combine to support upgrades to their property we intend to develop a new web-portal, akin to those which give options for home insurance.

## Reflecting energy efficiency in the value of homes

19. A key issue influencing homeowner motivation to invest in home energy improvements, and which could help to promote the widespread take-up of PAYS, is the extent to which such investments are reflected in property values. Clearly, energy efficiency is no replacement for a good location, being an appropriate size, the building being in good condition and all the other factors that influence buyers, however, it can play a role in influencing the value of a property.

20. An efficient home is cheaper to run, but we are not yet seeing this being reflected in house-buyer demand or in property prices. A price differential between energy efficient and inefficient homes, coupled with the added prospects of lower fuel bills, would offer homeowners greater incentive to invest in energy efficiency measures.
21. To this end, the Royal Institution of Chartered Surveyors (RICS) will develop recommendations for both Government and property professionals so that the energy performance of a property starts to be better reflected in its market value. This work will progress throughout 2010 with a view to establishing a clear correlation between a building's energy performance and its market value.

## Other investment routes

22. As indicated in the 2009 Pre-Budget Report, we will consider enabling local authorities to borrow against income streams from the new Feed-in-Tariffs or Renewable Heat Incentive so as to support investment in renewable energy projects in a community. We are aware that several local authorities are exploring public-private partnerships to finance and deliver energy services and renewables and we will work to spread the best practice to other areas. We will also encourage local authorities to access funding sources such as the European Regional Development Fund (ERDF) for local community based projects in domestic energy efficiency.

## Part IV – Supporting Consumers

**This Chapter sets out a number of central functions that will provide consumers with greater reassurance around the services they receive and the products they install, including:**

- **High quality and accredited advice services – both through free and universally available advice by telephone and internet and more tailored advice provided by accredited Home Energy Advisers**
- **Accreditation and standards for installers and products – so consumers know who and what they can rely on to provide the best solution for their home**

1. Homes are as individual as the people who live in them. Trying to understand what the right thing to do in a home and what support is available can already be confusing. The situation could become more complicated with the introduction of the new support for renewable electricity and heat, and greater use of solid wall insulation.
2. People rightly are concerned that they make the right decision about the work they get done, employing reliable trades-people and using the right materials.
3. In response, we will improve both:
  - consumer access to information to help ensure the new system is easy to navigate; and
  - standards in the industry to ensure people can trust the quality of installations.



## Section 1. Improving consumer access to information



4. There is a clear role for independent and authoritative advice, of the sort that Government or clearly Government-backed sources can best provide.

### Generic advice

5. Government will therefore ensure that all consumers have access to independent, high quality generic advice through national delivery of a **web and telephone-based advice service**. This advice service will need to build on the type of work being done by the Energy Saving Trust (EST) in providing a comprehensive and straightforward offer to consumers.



1. How-to guides (energy saving tips, user generated info)
2. Customer feedback
3. Tailored advice
4. Compare offers (finance, installation, additional services)
5. Book appointments online
6. See how you compare (what users with similar homes have been doing, compared to the national average)
7. View your home on your local heat map
8. Latest news

6. This universal advice service will focus on getting people to the next stage of action open to them and will cover:
- simple advice for consumers on how to understand the current energy performance of their home and what opportunities there are to improve it further, for example, how to determine whether it has cavity walls, and whether they have been filled;
  - advice on the standard options for improving the efficiency of the home;
  - advice on how to reduce energy use by making changes to behaviour;
  - eligibility for subsidies, and where to go to get them;
  - what alternative financing packages are available;
  - where to go for more tailored advice; and
  - advice on consumer rights as they relate to financing, home energy performance and the Code of Conduct for Networks.
7. We want to ensure this advice is of the highest quality possible and can be trusted by consumers. All telephone advisers will therefore be qualified to a minimum standard. This will be a City and Guilds 6176, or qualifications being developed that fully reflect units 1-5 of the National Occupational Standard (NOS) for Home Energy Advisers.
8. We intend to start to develop services capable of meeting these demands, following this Strategy and through to 2013. We will need to consider further how this national provision is best organised and can work best in conjunction with local partnerships. We will continue to work with stakeholders, such as Age UK, Which? and Consumer Focus as thinking develops over the course of the year.



## Making the most of existing standards

### Improving Energy Performance Certificates

9. Energy Performance Certificates (EPCs) provide information on the energy performance of a dwelling. They are required whenever a property is sold, constructed or rented out. Approximately 4 million EPCs for existing dwellings and 0.3 million EPCs for newly constructed dwellings having been lodged on the EPC Register since August 2007. They provide an assessment of a dwelling's energy efficiency, and an indication of those steps that could be taken to improve its performance. EPCs will continue to be an important tool in identifying potential improvements in a property. Where a property receives an F or G rating EST contact the occupier to offer information about measures that could be made to improve the energy efficiency in line with current legislation.



10. We want to encourage the take-up of energy efficiency recommendations in EPCs. To do this EPCs need to be as interactive and user friendly as possible so people engage with them and can see the effect of making energy efficiency improvements.
11. By the **end of 2010, we will launch a web-based tool that breaks down the information behind an EPC**. This tool will be free to use and allow people who have an EPC to go online and access their household data. They will then be able to model a package of energy efficiency improvements from small changes, such as draught proofing, to larger measures, such as installing a new boiler. The tool will calculate in real time the effect any combination of improvements would have on reducing carbon emissions and fuel bills in their property.
12. Seeing the immediate effect of even small and low cost improvements could encourage take up of the recommendations and help us to meet the goal of reducing carbon emissions and lowering household fuel bills.
13. We are publishing a consultation paper setting out proposals for extending the scope of EPCs and Display Energy Certificates (DECs), and making better use of EPC data. The consultation paper will invite views on the following:
  - making better use of EPC data by extending and managing access to EPC data held on the England and Wales domestic and non-domestic EPC Registers;
  - enabling local authorities to use EPC data for a wider range of purposes;
  - requiring EPCs for houses in multiple occupation (HMOs) when rooms in such buildings are rented out and for homes used for short-term holiday lets;
  - requiring advertisements for all buildings to show the EPC rating;
  - extending the use of DECs to commercial buildings. This would be achieved by legislation at a suitable opportunity. In the meantime we will enable the display of DECs on a voluntary basis;
  - making lodging of air conditioning reports on the England and Wales non-domestic EPC Registers mandatory; and
  - clarifying the point at which an EPC is needed in the process of selling or letting buildings.

## The structure and location of central oversight

14. We will need to do further work to establish how central oversight will be structured and organised including the read across with EU law on technical standards. Some functions by their nature might sit better in an arms-length body with a degree of independence. At the same time, we recognise that it is likely that those individuals and bodies who will be customers for many of these services will find it less confusing if they are generally gathered together in one place. Many of the functions will also naturally link together, and siting them together could produce economies of scale and other benefits.

## Government backed tailored advice

15. Awareness raising, and basic advice on financial benefits of the sort that can be delivered through the web or over the phone. This will often be enough to encourage householders to take advantage of standard measures, for example loft and cavity wall insulation, which will

readily pay for themselves. However, more detailed bespoke advice, reflecting a consumer's particular property and lifestyle, will generally be needed if many people are to take up more significant eco-upgrades, such as solid wall insulation or microgeneration – which will be needed to reach the 2020 carbon target.

- 16.** This second kind of advice is more tailored to individual consumers and homes, and will involve a Home Energy Adviser visiting the property to conduct an audit of the energy needs and usage of that household. Advisers would give advice both on possible changes to the fabric of the building, possibilities for microgeneration and on behavioural changes the householder could make to reduce energy consumption. We see this level of advice as being an important driver of eco-upgrade activity, helping the consumer understand and welcome a potentially major installation to their home and changes to their behaviour. Advice would also cover the wider measures such as double glazing and heating controls.



- 17.** We recognise that there are existing survey products available. The EPC has been developed as the nationally recognised certificate of the energy efficiency of homes and is mandatory on the sale or rent of all dwellings. We outline above our intention to improve and build on the content of EPCs, including making them more user friendly for the consumer. Therefore, where an up to date EPC is in place, we expect it would form the basis for the advisers' survey. We will consult further on the detailed proposals for the HEA package later this year, including the use of EPCs.
- 18.** Consultation last year strongly supported the idea that the best home energy advice package will include both a survey element (that will complement and build on existing mechanisms such as EPCs) and tailored, one-to-one advice to the householder. As a result, Home Energy Advice packages (HEAs) have already been developed, containing both these elements. They

are now included as qualifying measures under CERT and CESP. We will learn from this activity in developing a revised specification for future advice packages. We want to ensure that these provide an effective platform for householders to consider and adopt major changes to their home.

- 19.** The skill-set needed to deliver an HEA requires both a strong element of factual knowledge of building fabric and potential energy efficiency and heating measures, and the ability to engage effectively with householders on an interpersonal level in discussing their energy usage.
- 20.** Recent changes to National Occupational Standards (NOS), with the development of units one to five of the NOS for Home and Community Energy Advisers, provide good evidence of these skills. We therefore propose to use qualifications that fully reflect this standard as the passport to conducting all HEAs in future.

## Understanding and engaging consumers

- 21.** The advice and information services described in this section are important but we need to go beyond this to:
  - stimulate demand for retrofit of energy efficiency measures from householders;
  - ensure that people use new technologies, e.g. smart meters in the right ways; and
  - facilitate a general change in how people use energy in their homes.
- 22.** It may also become necessary to consider the need for action on behaviour change and consumer attitudes in relation to district heating, as deployment grows and increasing numbers of consumers (including in existing properties) are connected to networks.
- 23.** We will work across Government and with business and the third sector and local authorities to ensure that we:
  - make the best use of existing initiatives and information sources that can influence behaviour change;
  - build a detailed evidence base on how to effectively engage households and communities in carbon reducing behaviours and the tangible impacts this will achieve; and
  - use the roll out of smart meters as an opportunity to engage with householders on the energy performance of their home.
- 24.** This is described in more detail in supporting paper V.

## Opportunities to advise – ‘trigger points’

- 25.** There are many opportunities to provide householders with information and offer advice to coincide with other events or activities relating to homes (‘trigger points’). When people move into a new home they will see their EPC and often have the chance, as part of early changes they make to their home and with a clear loft, to address energy efficiency issues. There is also potential for trades people to advise when they go to homes to undertake plumbing or building work, for example. As part of developing our advice services we must recognise the contribution of those already meeting householders. An activity that will reach to every home by the end of 2020 is the roll-out of smart meters.
- 26.** There are significant opportunities for advice created by the national roll-out of smart meters to all homes in the country. The point where a smart meter is fitted offers an ideal opportunity to deliver face to face in-home advice on how the meter and accompanying display can be used effectively, and to signpost other more extensive forms of advice and measures that are available. We will consider these linkages further as detailed plans for the smart meters delivery programme develop.

### Encouraging energy efficiency through employee engagement



Advice on energy efficiency can and should come from a variety of sources.

One important source may be a person’s employer. Playing this role could be beneficial to employers as it can strengthen their relationship with employees by providing them with a way to improve their homes and save money on their energy bills.

We are currently working with the social enterprise group Behaviour Change to run a pilot for an ‘Employee Insulation Engagement Plan’. This pilot will examine the potential for companies to mobilise their employees to insulate their homes. The project is designed to generate lessons which will shape best practice for future national employee engagement drives.

Employer partners for the pilot are HSBC, Sainsbury’s, Accenture and Aviva. These businesses will use a range of staff communication and incentives to encourage employees to act.

We have also been working closely with the CERT obligated energy companies to ensure that employees of the participating companies have access to the most competitive insulation offers available. Additional project partners include the Energy Saving Trust and the National Insulation Association who will help manage and deliver insulation work.

The pilot will commence in mid March 2010, running until the end of May 2010. Following this we will review outcomes and draw best practice which can be applied more widely later in the year.

## Accreditation of non-Government backed advice services

- 27.** Government-backed schemes will be those funded by Government and those achieving a standard that qualifies them to show a logo of an approved provider. Much advice will still be delivered outside Government-backed schemes, and it is right that consumers should be able to access advice from a variety of sources. However, it will be important that, whatever the source of the advice, consumers can be confident that it meets certain quality standards that they can understand to what extent the advice is independent, and where it is tied to a particular product or service provider. We propose to work towards a single accreditation framework that can encompass both HEAs under future Government-backed schemes, and the other sources of advice provision that exist. This framework will need to be flexible – perhaps on a modular, menu basis – to encompass the different levels of advice that are provided by different organisations in different circumstances.
- 28.** Information and advice will often be provided to the consumer by product manufacturers and service providers. Formal accreditation under the advice framework may not be appropriate for those providing information on behalf of commercial providers. However, it will be in everyone’s interests that the consumer should have confidence in the basic standards they can expect to meet across the energy efficiency information and advice landscape. We will therefore develop a code of practice, to underpin all consumer contacts by any organisation, which chooses to adopt it. This would, for example, make clear to consumers where a provider of information or advice is independent, or where they are tied; dictate that energy or money savings claims were only made in line with independently endorsed evidence; and ensure that staff would have received a minimum level of training.
- 29.** Adherence to the code of practice would constitute membership of a “professional code” which could bring with it various potential benefits for example, access to communal information resources, listing on central websites, and use of a quality mark that would encourage consumer recognition and trust.

## Section 2. Accreditation and standards for installers and products

- 30.** Alongside accreditation for people who provide advice on home energy saving, we will provide a system of standards for the people who install measures and the products they use. This is important because before deciding to undertake major work householders will rightly want assurance that any changes they make at home are safe, appropriate and represent good value for money.



## Accreditation of installers

- 31.** There will be a new accreditation framework that will offer consumers confidence in the quality of workmanship they receive when measures are installed. Minimum quality standards and consumer protection schemes will form key parts of this:
- **Minimum standards** for skills and quality of workmanship for installers will be designed to protect consumers and to support carbon saving (by ensuring that insulation, for example, is properly installed so as to achieve the intended efficiency savings). We aim to build on the best of the accreditation schemes that exist across the industry, fill any gaps and harmonise the quality standards. The installer accreditation scheme will include on-site checking of quality. We will work with industry and consumer representatives to develop this.
  - Appropriate **consumer protection** should be available for specific measures against the risk of damage to property as a result of energy efficiency work. The Cavity Insulation Guarantee Agency is an example of an established scheme currently operating in the market.
  - The new **energy company obligation** will only reward accredited installations.

## Accreditation of products

- 32.** Going forward, we will often be dealing with relatively novel and sophisticated technologies, of which consumers will not yet have much experience. Some measures that will reduce carbon significantly in our housing stock can also be somewhat disruptive to install (for example, solid wall insulation). This amplifies the need for high quality standards for the products themselves.
- 33.** In administering the current CERT and CESP schemes, Ofgem issues guidance on matters such as the minimum qualifying standards for energy efficiency products. Equivalent guidance will be needed under future arrangements to ensure – whether through testing or other methods – that accredited products can demonstrate that they will deliver the required carbon savings.
- 34.** To ensure that we understand which are the most effective products and measures, we are developing a number of green homes projects. These will support research and development by testing and exemplifying new products and techniques, and motivating consumers to take action by opening up the homes, which will be lived in by ordinary families, to the public so they can see the benefits. These will help build a comparable evidence base across different technologies and types of home, as well as educate and motivate consumers. The lessons from these projects can then be used to provide guidance and training to all parts of the supply chain and, by working through Retrofit Consortium, help to scale up delivery, as described in more detail in the supporting documents.

## A network of Green Show Homes

We are working with a number of partners who have existing projects to test different energy efficiency retrofit combinations in a variety of different homes and situations. These include:

- 1) **Building Research Establishment** – Government is announcing £3.5 million to support the “**Rethink Refurb**” project to retrofit 3 Victorian Houses to achieve up to an 80% reduction in emissions and, taking the lessons from these, to work with partners on retrofitting a further 74 exemplar homes. These homes will be used to train builders on how to replicate this across the country, and will be open to the public for at least two months prior to occupancy.
- 2) **Technology Strategy Board (TSB)** – The Government established the TSB to promote innovation through investment in programmes and projects, spreading knowledge and understanding policy. Through them, we are supporting the **Retrofit For The Future** scheme, a large scale demonstrator project to stimulate supply chains at a regional level.
- 3) **Homes and Communities Agency** – Government is providing £6 million in funding to run a **Renewable Construction Demonstration Programme** to retrofit social housing with new renewable products that could in the future become mass market.

The lessons from these projects can be used to provide guidance and training to all parts of the supply chain by working through the **Retrofit Consortium** of large scale public and private sector procurement organisations, which will encourage both the production and scaling up of new technologies and services for lower cost than at present, and investment by employers in skills and the trialling new training and qualifications. This is described in more detail in the supporting papers.

## Electrical products

35. For electrical products, the Government’s Sustainable Consumption and Production programme aims to increase the energy efficiency of products through a range of policies particularly including:
  - Setting minimum energy efficiency, as well as energy labelling standards, across the European Single Market.
  - Developing and implementing voluntary initiatives with manufacturers and retailers to improve the efficiency of their products.
  - Strengthening and widening enforcement of agreed standards and labels by ensuring that effective testing of products is done to ensure a level playing-field across all manufacturers and retailers.
  - Working internationally for harmonised standards and to influence the development of internationally-agreed testing procedures.

- 36.** Indicative analysis suggests that the implementation of minimum and labelling standards for forthcoming products to be agreed in Europe (e.g. heating systems, air conditioners, computers, and laptops, commercial refrigeration and transformers) could generate net benefits of approximately £22 billion between now and 2030.
- 37.** Relevant departments will work with Defra on developing this further. Future key areas include:
- Continuing to develop further voluntary initiatives and awareness raising with UK retailers and manufacturers.
  - Strengthening enforcement of product standards by consulting on new administrative penalties.
  - Continue to negotiate strongly in Europe for further minimum and labelling standards for future energy using products.
- 38.** There are a number of existing structures enabling the sharing of information and best practice between local authorities and communities, which we do not want to duplicate or cut across. We therefore intend to provide a central coordination and oversight function that will:
- provide a **best-practice forum**, where representatives from one area can talk to and learn from others;
  - help generate **common** resources, and act as a “library” of best-practice tools generated in one area, which may be applicable and useful in others; and
  - gather, and possibly commission, **research** of common interest.

## Part V – Securing the Economic Benefits and Developing the Supply Chains

### This Chapter:

- sets out the additional benefits that will be gained outside of the home, for UK industry, through the creation of additional jobs and an enhanced supply chain for energy performance measures

1. This Strategy will not just benefit the people who make use of subsidies and Green Loans to upgrade their homes. It will also have wider benefits:
  - The advanced energy saving and renewable energy generation technology industry will benefit from the development of the supply chain that will be stimulated by this Strategy. This will improve availability and drive down costs
  - People looking for work or a new career will be able to benefit from up to 65,000 core jobs and potentially several times more in wider sectors and down supply chains

### Driving down costs and boosting the supply chain



2. We anticipate rapid growth in the supply chains of key measures to deliver on our target. Our national targets provide an indication of the size of the market that the Government sees as

necessary. The policies and phased delivery approach announced in this Strategy should give business more certainty about future demand and thus provide an incentive for the supply industries, such as the construction sector, to invest whilst leaving the market open to innovation and allowing the most cost effective solutions to come through.

3. As the supply chain develops, we expect unit costs to fall, making it more cost-effective for individuals and local partnerships to invest in energy efficiency measures.
4. To increase the rate at which delivery becomes more efficient we will support programmes designed to learn and disseminate best practice from around the country.
5. Lastly, Government recognises its potential to use its buying power to stimulate the market. Central Government is a large direct procurer of building materials for its estates and is also in a position to work with others in a similar position in order to drive up standards and reduce costs. We are setting up a **retrofit consortium** of the biggest property owners to work with the supply chain to bring the most effective products to market at scale and for lower cost.

## Economic benefits

6. There will be up to 65,000 people employed in installing measures to make this Strategy a reality, and potentially several times more in wider sectors and down supply chains. The skills needed will span a wide range from trade to professional skills. Many workers will need to apply their existing skills in new situations, for example for traditional plumbers to learn to install heat pumps. New businesses will enter to take up opportunities and other businesses will expand or diversify.
7. Many sectors will contribute to supporting householders over this period of significant change, these include:
  - advice services;
  - finance;
  - large scale project management;
  - solid wall installation; and
  - micro-generation installation.
8. To ensure people can make the most of these opportunities we will provide grant funding and develop new national occupational standards, as well as a Skills Strategy for the household energy management sector with the Energy Efficiency Partnership for Homes, a partnership that provides cross-sector co-operation between all key energy efficiency supply chain stakeholders.
9. There will be a particular focus on people seeking work. Government will work with Groundwork UK to help the workless to access job opportunities through training, education and apprenticeships. This will enable extra capacity, training up new people in this industry in anticipation of increased demand.

## Groundwork and Home Energy Efficiency

*Groundwork is currently the biggest single deliverer of the Government's Future Jobs Fund programme, a £1 billion initiative to provide temporary work to unemployed young people and other disadvantaged groups who may be further affected by the impacts of recession.*

*Between October 2009 and September 2011 Groundwork is looking to employ more than 6,000 people through the fund for up to six months. Groundwork's role is to provide these employees with the training, support and work experience they need to find permanent employment in the labour market.*

*Through this initiative Groundwork is working with DECC, DWP and CLG to help gear up the supply chains of energy efficiency products for the post 2012 landscape by employing and managing teams of installers directly on community jobs around the country but more importantly by working with the likes of British Gas, The Building Research Establishment and The Mark Group to train up the next generation of installers through apprenticeships and work placement opportunities.*

10. As well as using the Retrofit Consortium of large scale public and private sector organisations, such as British Gas and The Mark Group, to drive down costs, we will use it to encourage investment by employers in skills and the trialling of new training and qualifications.

The supporting papers that accompany this document can be found on the DECC website.



