

IMPROVE INSULATION, SAVE ENERGY AND MONEY

With homes producing over a quarter of the UK's carbon emissions, the onus on reducing their carbon footprint has never been greater for householders.

The way a building is constructed, insulated, ventilated and the type of fuel used, all contribute to its carbon emissions and a worrying fact is that, for over half of all homes in the UK, a significant proportion of the money spent on energy is literally being thrown out of the window as a result of inadequate levels of insulation, with around 50% of the heat being lost through the roof and walls.

The National Insulation Association (NIA) is a not for profit organisation representing over 90% of the home insulation industry in the UK. As a membership organisation, it actively supports the Government's accelerated programme for insulation and its intention to raise awareness not only of the amount of heat lost through inadequate insulation, but also the amount of money that householders can save by having their home properly insulated.

At the NIA's annual conference in December 2009, the Under Secretary for the Department of Energy and Climate Change (DECC), David Kidney MP, announced the Government aims to insulate the lofts and cavity walls of every suitable home by 2015. He also stated that up to 7 million homes will have received more substantial 'whole house' changes, including solid wall insulation by 2020 and by 2030, a 29% reduction on 2008 household emissions.

Mr Kidney stated that: "We have set very ambitious targets to reduce CO₂ emissions in the UK and energy use in buildings, both homes and non-domestic, accounts for a very substantial part of this. Insulation is the crucial technology that will help reduce energy demand and reduce emissions."

He added: "This is not just about climate change, but insulation forms a pivotal part of our drive to improve the thermal performance of our housing stock and reduce household energy bills. With the average family spending over £1,000 a year on heating and powering their homes, insulation is a quick win with short pay back periods – and so is increasingly more important in these tough economic times."

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NATIONAL INSULATION
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Press information – for immediate release

The NIA states that there are currently 9 million cavity walls and 15 million lofts that require insulation. Research carried out by the Association also shows that over two thirds of people do not realise just how much heat is lost through uninsulated walls and roofs (50% of heat is lost through the roof and cavity walls and a shocking 45% through solid walls alone).

Neil Marshall, NIA Chief Executive, commented: “Meeting the targets may be challenging but they are achievable. What is needed is a co-ordinated delivery plan, adequate levels of funding, a dedicated insulation programme and a major government-backed awareness campaign.”

The cost of insulating the loft and cavity walls is relatively modest at around £500 including a subsidy under the Carbon Emissions Reduction Target programme and will save the average home around £265 per year in energy costs. Homes with solid walls cost slightly more to insulate, but the energy saving is significantly higher – around £550 per year (walls and loft).

So what types of insulation are available?

Solid Wall Insulation

The UK's housing stock is estimated at approximately 24.5 million dwellings and, of that, approximately 36% are non-cavity wall construction – solid brick, solid stone, pre-1944 timber frame and non-traditional (i.e. concrete construction). It is estimated that there are around 7 million properties with solid walls that need insulating.

Improving the thermal efficiency of solid wall properties is therefore an area which has massive potential for the future as there has been little work done to date. More and more individuals are now starting to recognise the advantages of insulating such homes and there are many cost-effective solutions available.

Solid walls can be insulated either externally or internally and either option will greatly increase comfort, while also reducing the running costs and the associated environmental impact.

For older properties in need of re-rendering or re-pointing (both of which are expensive procedures), external cladding is an alternative solution that will replace the need for this job as well as provide far better thermal performance.

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Internal insulation typically consists of either dry lining in the form of flexible thermal linings, laminated insulating plasterboard (known as thermal board) or built-up system using fibrous insulation such as mineral wool held in place using a studwork frame.

Cavity Wall Insulation

Cavity wall insulation is an inexpensive, easy-to-install process that sees the insulation material injected into the cavity between the inner and outer leaves of brickwork of the external wall of a property. There are a number of different insulating materials, but they all work in the same way to cut heat loss.

Cavity wall insulation work is carried out according to guidance laid down by the Cavity Insulation Guarantee Agency (CIGA) and workmanship and materials are covered by the independent 25 year CIGA Guarantee to provide homeowners with reassurance and peace of mind. See www.ciga.co.uk for details.

Loft Insulation

With as much as a third of heating costs escaping through the roof, loft insulation is a very effective way of reducing heating bills.

While most UK homes already have some degree of loft insulation installed, for the majority this is inadequate and should be topped up to today's standards of 270mm.

The NIA recommends that installing loft insulation should be carried out by professionally trained experienced NIA members - to avoid technical risks. For example, a high standard can only be achieved by insulating across the top of the ceiling joists as well as between them and including the loft hatch. Pipes and tanks also need to be insulated to avoid freezing and other key considerations include ventilation to avoid condensation and safety aspects of electrical wiring and fittings.

If everyone in the UK installed 270mm loft insulation, we could save around £520 million and nearly three million tonnes of CO₂ every year.

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Draught Proofing

One of the most inexpensive and instantly effective energy efficiency measures for a home – yet often overlooked – is draught proofing. In fact only a quarter of all dwellings in the UK are adequately draught proofed.

Regardless of weather conditions, expensive heat will leak through ill fitting doors, windows and any unsealed gaps in the property. There are several types of materials available to help prevent air leakage, which include: brushes, sealants and extruded strips of profiled foam and rubber. Good quality draught proofing materials will carry the **BS 7386:1997** approval mark and will not only prevent expensive heat loss and save energy, but will also increase comfort levels whilst guarding against ingress of bad weather leading to the damage of internal decoration. The NIA recommend that this is carried out by a professional approved installer to ensure the greatest benefits are achieved.

The Next Step:

A large proportion of householders are unsure if they have insulation measures already installed in their home or whether it reaches the recommended standards. NIA approved installers provide free home surveys and are experienced to recommend the most suitable and practical insulation options for each individual property. They also have access to information regarding grants and subsidies to help make the cost of insulating homes even more affordable and accessible to all. The NIA recommends contacting one of its installer members as they are not only trained to the highest standards but also governed by a strict Code of Professional Practice.

For more information about the NIA, including a list of members throughout the UK, visit the website at www.nationalinsulationassociation.org.uk

Notes for Editor:

- By installing Solid Wall insulation, savings of around £400 a year on heating bills can be made and reducing emissions by around two tonnes of carbon dioxide (CO₂) each year.
- By installing Cavity Wall insulation, savings of around £115 a year on heating bills can be made and reducing emissions by around 610kg of carbon dioxide (CO₂) each year.

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- By installing loft insulation savings, of around £150 a year on heating bills can be made reducing emissions by around 800kg of carbon dioxide (CO₂) each year.
- By installing draught proofing around doors and windows, savings of around £25 a year can be achieved on heating bills, reducing emissions by around 130kg of carbon dioxide (CO₂) each year.
- Whatever the insulation, installing adequate measures will result in a warmer home, reduce bills and save carbon.

