

keep warm & save money

introduction

Dear Homeowner

This guide has been written for homeowners living in Brighton and Hove.

It will help you to save money on your fuel bills, make your home more comfortable to live in, and save energy.

The good news is that as a home-owning resident, you're in the best position to take advantage of both free grants and subsidies and long-term savings from improvements to your property.

You'll find out simple things you can do to make your home more energy efficient and about the schemes and grants that may allow you to improve your home for free. We'll explain the Green Deal, a Government scheme that helps households pay for energy efficiency improvements in the home through lower energy bills.

We'll show you many of the free and simple changes you can make in your home to save money on your heating and electricity bills. And you'll find a guide for measures that cost more but save more money in the long term and could even earn you money.

You'll find an energy-saving checklist and poster at the back of the guide, which you can use to check off energy-saving actions as you do them.



This is an impartial guide, created by the Brighton Peace and Environment Centre, a local educational charity.

We have also written a guide for tenants and one for landlords, which you can find on our website www.bpec.org or you can request a copy from the centre at 39-41 Surrey Street, Brighton, BN1 3PB.

keep warm & save money

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Saving money on energy bills

Many older properties in Brighton and Hove were built without energy efficiency in mind – which in the past didn't affect people so much. But with energy costs likely to keep rising every year, it's worth investing some time now to think about how energy efficient your home is. Why not reduce your bills now and reduce the effect of future energy bill increases?

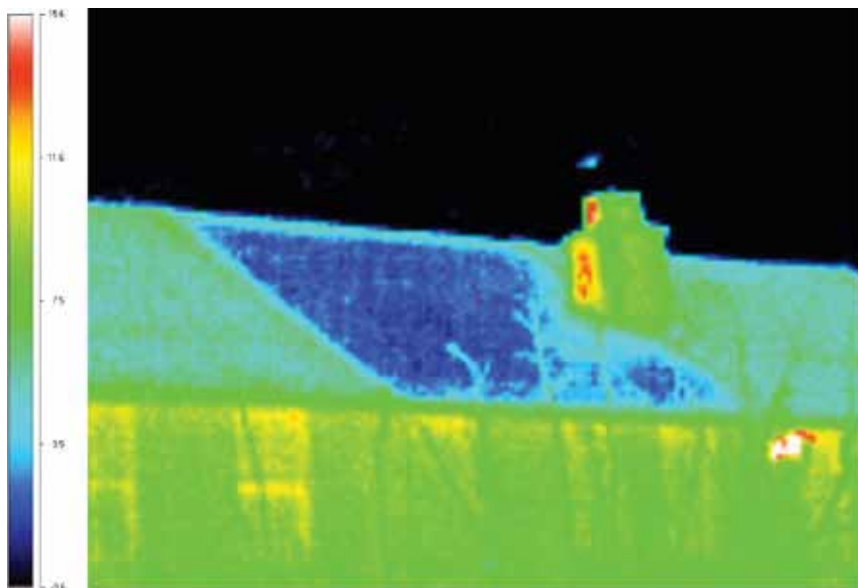
The way you use your home will have a big impact on the cost of your energy bills. There are many simple, low-cost or free things you can do immediately to start reducing your bills.

With almost half of Britain's homes not properly insulated, householders could cut energy bills by up to £300 a year by reducing heat loss from windows, floors, walls and roofs.

Making your home warmer and more comfortable

By making changes that reduce the amount of energy used and heat lost, you can make your home warmer in winter and cooler in summer; a more comfortable place to live.

The picture below (taken with a heat-sensing camera where darker blues are lower temperatures) shows the effect of loft insulation. The insulated roof of the middle house is keeping more heat in compared to the houses either side.



Improving your home's energy performance rating by increasing your energy efficiency should now improve its value

Increasing the value of your property

Improving your home's energy efficiency can also increase the value of your property, and make it more attractive to a future buyer.

grants and subsidies

There are a number of grants and schemes to help householders pay for energy efficiency measures.

Warm Homes scheme

Brighton & Hove residents can have free cavity wall and loft insulation installed to help keep their homes warmer. Brighton & Hove City Council is now offering free home insulation to homeowners and private tenants, with no personal eligibility restrictions. For more information, telephone Brighton & Hove Warm Homes on **0800 048 0727**.

Brighton & Hove City Council is offering FREE cavity wall and loft insulation

Brighton & Hove Energy Action Partnership

This scheme is for owner-occupiers or tenants. Brighton and Hove residents can take advantage of grants to have their heating upgraded, as well as solar panels installed and insulation fitted.

For more information, telephone Brighton & Hove Energy Action Partnership on **0800 107 4100**.

Other Schemes

There are also other schemes available providing full grants or discounts for people of various age groups, income levels and housing types.

Check the Brighton Peace and Environment Centre website **www.bpec.org** for information and links to local companies who can offer to install insulation for free.

See the Energy Saving Trust website or call them for free (see page 14), independent advice on grants or discounts you might be eligible for.

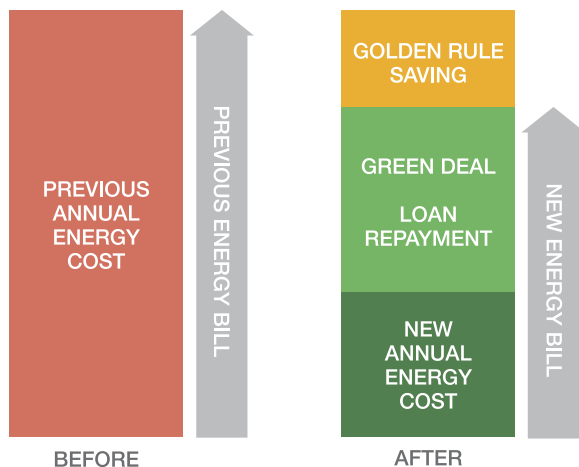
You can also contact the Home Energy Efficiency Officer at Brighton & Hove City Council to discuss a range of energy saving subjects, including grants and discount schemes, on **01273 293144** or by emailing **energyefficiency@brighton-hove.gov.uk**

green deal

The Green Deal is a new nationwide Government scheme starting in 2012 that will help you to improve the energy efficiency of your home without adding to your existing household expenditure.

Essentially, the scheme will provide a loan to pay for the installation of energy efficiency improvements. The 'Golden Rule' states that the repayments on the loan must be less than or equal to the savings on the fuel bill, meaning the bill payer will be better off.

If you are worried about paying your energy bills, call the Home Heat helpline on **0800 33 66 99** for free advice and help



Through Energy Company Obligation funding, the scheme will also help the most vulnerable and help provide major measures, such as solid wall insulation, in homes that need more work than Green Deal finance alone can stretch to.

What happens if I move home?

If you move home, the loan stays attached to the house. The next owner or tenant will continue to repay the loan from the savings on their energy bills.

Government Subsidies

There are measures available that generate electricity or heat such as solar photovoltaic panels, solar water heaters, biomass boilers and heat pumps.

These can be eligible for government subsidies:

The Feed-In Tariff – pays you for the electricity you generate

Renewable Heat Incentive – pays you for the heat you generate

Contact the Energy Savings Trust for more information (see page 14).

energy-saving: no-cost changes

There are many ways to cut your energy bills that don't cost anything. By just making a few changes, you can reduce your bills and make your home warmer.

Doing things differently

Changing your behaviour at home (e.g. only boiling the amount of water you need in the kettle) can make a big difference to reducing your energy bills. Make yourself and your home more energy efficient!

Measure your energy use

Using an energy meter can help you identify how much you are spending on electricity, and help you identify which electricity savings measures could be best for you. You can borrow one free of charge from any of the Brighton and Hove libraries.

Install energy saving measures yourself

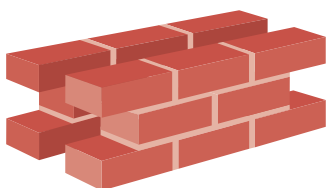
There are a number of low cost measures that will reduce your energy bills (the next section covers these).

Cavity wall and loft insulation

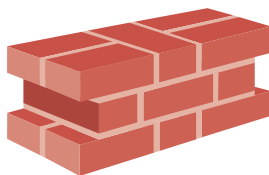
Brighton & Hove Council's Warm Homes scheme is currently offering free cavity wall and loft insulation for homes in Brighton and Hove (see page 2)

Cavity wall and loft insulation also helps to keep the house warm in winter, cool in summer and can reduce condensation inside a house.

How to tell if you have cavity walls: if your brickwork pattern is regular like the left hand picture below you are likely to have a cavity wall. If an alternating pattern like the right you are likely to have solid walls.



CAVITY WALL



SOLID WALL

For walls where you cannot see the brickwork, if the wall is more than 260mm thick and the property was built after the 1920s then it probably has a cavity that can be filled.

Cavity wall insulation and roof insulation are offered free under the Warm Homes scheme (see page 2)

If you're unsure whether your walls have cavities, are already filled or whether you need loft insulation, the Warm Homes scheme will arrange a free, no obligation survey to see if your home is suitable

how much can I save?

The energy-saving piggy bank below shows you how a few minor changes can add up to significant savings.



Savings from simple changes, such as turning off appliances at the wall, rather than leaving them on standby, can soon add up

Rating	Energy saving measure	Estimated annual saving
Gold	Loft insulation	Up to £175
Gold	Cavity wall insulation	Up to £135
Gold	Turn down thermostat by 1C	£55
Gold	Use an energy monitor	5%*
Silver	Turn off appliances at the wall	£35
Silver	Halve the use of your tumble dryer	£27
Bronze	Fill kettle with just the water you need	Saving varies
Bronze	Switch off your computer and monitor	£28
Bronze	Close your curtains at dusk	£20
Bronze	Fill your dishwasher	£7
Bronze	Defrost your freezer regularly	£10
Bronze	Wash full loads of laundry	£10

See the back of the guide for a self-assessment checklist of energy saving changes in the home to help you save money on your energy bills

Source: Energy Savings Trust and independent calculations

*5% saving on electricity bills

At the end of the guide you'll find an energy saving checklist with hints and ideas for free and simple changes in the home that will help cut your energy bills. Why not put this on your fridge as a reminder to keep making those changes.

energy-saving: lower-cost changes

Radiator Reflectors

Much of the heat that comes out of our radiators simply goes into heating the walls behind them. Radiator reflectors are placed behind the radiator, and then reflect the heat back into the room.

Suitable for all properties with central heating

Using energy efficient bulbs for lighting

Low energy light bulbs (CFLs) can reduce the energy you spend on lighting by 80% and can last up to 12 years.

Suitable for all properties

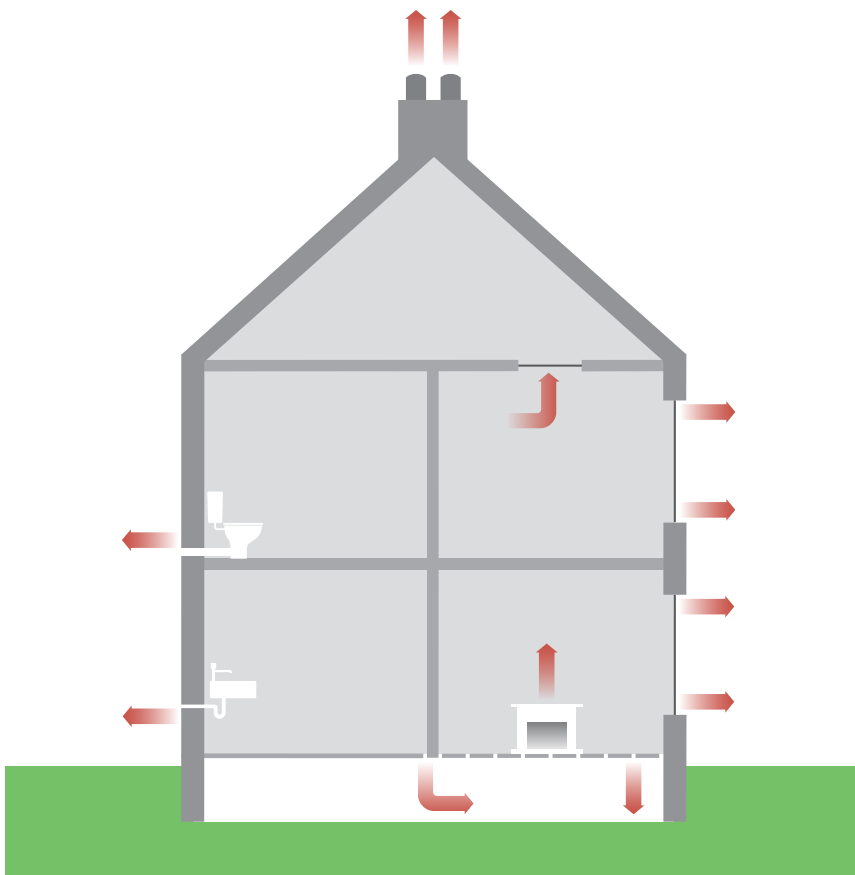
LED downlights are now also more widely available and whilst more expensive initially, these cost less to use as they use less energy 10% of the power that halogen downlights use and last several times longer.

Draught-proofing

Draught proofing is one of the easiest, cheapest and most efficient ways of saving money and energy. You may notice that some rooms or areas in your home feel colder than others. There are many small gaps and cracks that could be letting cold air in and letting your heat escape. The diagram below shows where draughts can occur in a typical home.

Suitable for all properties

Draught proofing measures include: brushes and strips for windows and doors; filling gaps in floor and skirting boards; covering floors with rugs or carpets; fitting a chimney balloon



You can test for draughts by wetting your hand and moving it around areas where there might be leaks. If your hand feels cool then there's a leak.

energy-saving: lower-cost changes

Film secondary glazing

The lowest cost option is a transparent plastic film that fixes with double-sided sticky tape to the window frame, and is shrunk to fit with the hot air from a hairdryer.

Suitable for all properties

Pipe insulation and hot water tank jacket

Insulating water pipes and tanks reduces the amount of heat escaping, so you spend less on heating water up and the water stays hotter for longer.

Suitable for all properties with hot water systems

Heating controls

Having heating controls installed on your heating system gives you more control over when your heating goes on and off. Room and radiator thermostats allow you to control the temperature in each room.

Suitable for all properties with central heating

Turning radiators off in rooms you are not using reduces wasted energy and heating bills

Water efficient taps and showers

New water-efficient showerheads can produce water flows that feel stronger than they actually are – making them an easy way to save water and energy. You can buy easy to install flow devices which fix onto the taps.

Suitable for all properties

energy-saving: costs and savings overview

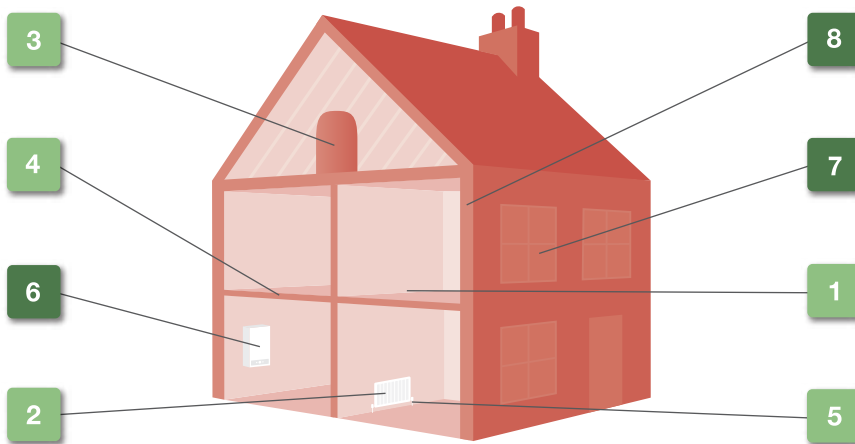
There are two main ways in which we can save energy in our homes:

stop heat escaping

make systems, such as boilers or radiators, work better

In the table below, you can see just how much each of these energy saving technologies could save. Some of these measures are easier and cheaper to install than others.

Understanding where heat is lost in the property can help you decide where to insulate – see the energy saving poster at the end of the guide



Rating	Energy efficient measure	Estimated cost of installation	Estimated annual saving	
Lower cost	Install pipe insulation	£10	£15	
Lower cost	Fill gaps between floor and skirting boards	£20	£25	1
Lower cost	Radiator reflectors	£5-£30	£5-£25	2
Lower cost	Hot water jacket	£15	£40	3
Lower cost	Timber floor insulation	£100	£60	4
Lower cost	Low energy lighting	£5 per bulb	£3*	
Lower cost	Draught proofing	Costs vary	£55	
Lower cost	Thermostatic radiator valves	£56**	Varies	5
Higher cost	Replace appliances with A+ rated models	Costs vary	£48	
Higher cost	Replace boiler with energy efficient model	£2,300 approx	£105-£300	6
Higher cost	Double glazing	£5,000 approx	£165	7
Higher cost	Internal solid wall insulation	£5,500-£8,500	£445	
Higher cost	External solid wall insulation	£9,400-£13,000	£465	8

Source: Energy Savings Trust

*£55 over the lifetime of each bulb

**Costs for the whole property

energy-saving: higher-cost changes

Condensing boiler

Boilers account for around 60% of what you spend in a year on energy bills, so an efficient boiler makes a big difference. You can find advice about choosing the right boiler for your home through the Energy Saving Trust (see page 14).

Suitable for all properties

If your boiler is more than 10 years old, replacing it with a gas-condensing model can save up to 32% of your heating energy

Replace appliances with A+ or A++ rated models

There are now many energy efficient products on the market, from kettles to TVs or fridges. Look for those with the Energy Saving Trust recommended logo (see right).

Suitable for all properties



Solid external wall insulation

More heat is lost through solid walls than cavity walls. External wall insulation can be applied to the whole house. Once the insulation is fixed, the wall is then finished to look as you want it to. It can also increase the life of your walls by protecting the brickwork and help to prevent some kinds of damp. Wall insulation will help make your home feel warmer in winter and cooler in summer.

Suitable for houses

Internal wall insulation

The benefit of internal wall insulation is that it can be fitted on a room-by-room basis. This makes it easy to incorporate into another decorating job and is much cheaper than external wall insulation but will very slightly reduce your floor area. Wall insulation will help make your home feel warmer in winter and cooler in summer.

Suitable for all properties

energy-saving: higher-cost changes

Double and secondary glazing

Double-glazing can cut heat loss by half and will cut draughts, condensation and outside noise, making your home more comfortable to live in.

Double-glazing may not be possible if you live in a listed building or conservation area. There are a number of types of secondary glazing options available at a lower cost than double glazing.

Original or conservation grade windows can be refurbished with improved glazing and draught proofing.

Visit the Energy Saving Trust website for more information (contact details on page 14).

Suitable for all properties
(but check with council if
in a conservation area)

Thermally insulated external doors

Like any other part of the home, doors can be insulated and draught-proofed to prevent heat from escaping, and can be cost effective if you are thinking of replacing a door.

Suitable for all properties

Floor insulation

Heat loss and draughts can occur between floor timbers and around the edges of the floor. Insulation can be fitted underneath floorboards or if you have a solid floor, insulated floorboards can be laid on top of your existing floor, slightly raising the floor level. This can make your floor feel warmer and more comfortable to walk on.

Suitable for houses,
ground-floor flats or flats
above empty spaces

Installing insulation improves the ability of your building to hold warmth in and so changes the way the walls and floors breathe. Always use a reputable installer who can offer you a 25 year guarantee

energy-generating technologies

Renewable technologies make use of natural sources of energy such as sunlight or heat from the earth, and can help to save or even earn us money. You can find out more information on each of these through the Energy Saving Trust (contact details on page 14)

Always ensure your system is designed and installed by reputable companies. Installers and components must be part of the Microgeneration Certification Scheme (see logo right).

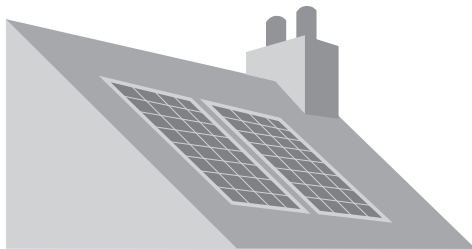


Solar photovoltaic panels [solar electricity]

Eligible for the **Feed-In Tariff (FIT)** scheme (see page 3)

Solar photovoltaic (PV) panels produce electricity from sunlight and will even produce electricity on cloudy days. You are paid for the electricity you generate (Feed in Tariff) and during the day you can make use of this free electricity.

Any electricity not used during the day is then fed into the grid, which you will then be paid for (export tariff).



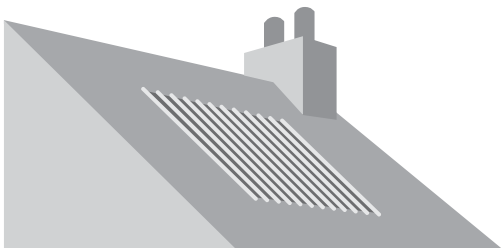
Suitable for properties with flat roofs or roofs facing SE, S or SW

Some companies will put solar panels on your roof for free (sometimes referred to as 'rent a roof space' schemes). In return the householder gets free or discounted electricity for the next 25 years, but the company takes the FIT payments. Renting your roof is an option if you can't afford the upfront investment and you are using electricity during the day

Solar thermal panels [solar water heating]

Due to be eligible for for the **Renewable Heat Incentive (RHI)** from late 2012 (see page 3).

Solar hot water systems collect the heat in sunlight. These connect to a hot-water storage tank and usually work alongside a conventional water heater. For residents not using electricity during the day using roof space to generate hot water kept warm in a tank may be a better use of roof space to save energy costs.



Suitable for properties with flat roofs or roofs facing SE, S or SW

energy-generating technologies

Air source heat pump

May be eligible for the **Renewable Heat Incentive** (see page 3).

An air source heat pump works like the ground source heat pump, but absorbs heat from the outside air, even when the temperature is as low as -15°C.

Installations may be subject to noise restrictions – check with the Council.

Suitable for all properties

Ground source heat pump

Eligible for the **Renewable Heat Incentive**.

Ground source heat pumps use pipes buried in the garden to extract heat from the ground that is used to heat your home.

Suitable for all homes with a garden

Biomass boiler or wood-fuelled heating system.

Eligible for the **Renewable Heat Incentive**

A biomass boiler burns wood pellets or chips and is an automated system, a log burner requires daily fueling. Wood fuel is often cheaper than other heating systems and pellets and chips can be sourced from waste streams. A biomass system can provide warmth for a single room, or power the central heating and hot water for a whole property.

Installations may be subject to air quality management areas check with the Council.

Suitable for properties with storage space

Wind Technology

Wind technologies are improving all the time. It's important to get detailed advice from independent advisors before considering an installation as location is critical to the performance of the system.

what else can I do?

There are a number of other ways you can cut your household costs, and make a positive impact on your city. Here are some suggestions.

Reading your meter

Energy bills based on estimated readings could mean you pay for more energy than you use. Reading your gas and electricity meters regularly allows you to only pay for the energy you use.

Compare energy suppliers

Comparing different prices and offers from energy companies can help you find a cheaper tariff.

Reduce waste

Buy food that has less packaging (it is possible), and only buy the food you need, reducing wasted food and the cost of your shopping.

The average British family throws away £50 worth of food each month

Fit a water meter

Your water company will install this for free and you may save money (depending on how many people live in your house and how much water you use). Contact your water company for more information (see page 14).

Cycle, walk or use public transport more

While the car is sometimes essential, there may be journeys you can take leaving it at home. Cycling and walking more will help improve your health and air quality in the city.

Buying seasonal locally sourced/grown food

This supports local farmers and means less energy has been used to get food from the field to you compared to food produced abroad.

Consider buying fairly traded products

This ensures that producers in developing countries get a fair price for their products and better working conditions.

Form a buyers' club

This way you, your neighbours and your community can negotiate discounts on energy saving measures by buying in bulk from suppliers. Contact Brighton Energy Co-operative for more information (see page 14).

useful contacts

Brighton Peace and Environment Centre

We work with people on peace, conflict, and environmental sustainability
www.bpec.org • 01273 766610

Brighton & Hove Citizens Advice Bureau

www.citizensadvice.org.uk/brightonhovecab.html • 0845 120 3710

Brighton Energy Co-operative

Organisation helping people invest in local green energy schemes.
www.brightonenergy.org.uk

Brighton & Hove 10:10

Work with individuals, communities and businesses to deliver projects that achieve measurable carbon reductions.
www.brightonandhove1010.org

Brighton & Hove City Council

01273 290000 • www.brighton-hove.gov.uk

Private Sector Housing Team: 01273 293156

Warm Homes: 0800 048 0727

Brighton & Hove Energy Action Partnership: 0800 107 4100

Brighton Housing Trust

www.bht.org.uk • 01273 645 400

Energy Saving Trust

www.energysavingtrust.org.uk • 0800 512 012

HMRC

www.hmrc.gov.uk

Low Carbon Trust

Low Carbon Trust is a not-for-profit organisation that sets up, manages and promotes environmental projects
www.lowcarbon.co.uk • 07974 122770

The Green Building Partnership

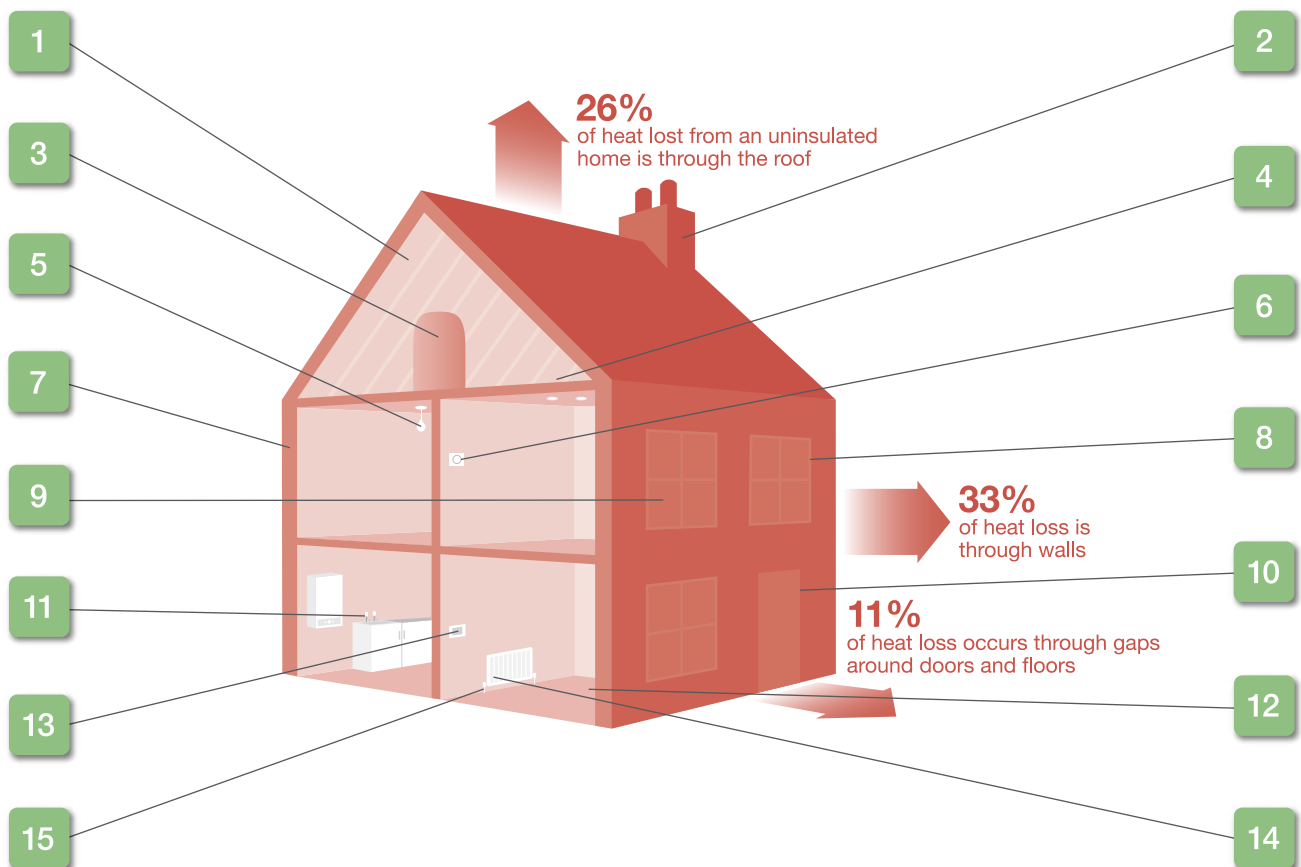
Co-operative of eco-refurbishment specialists based in Brighton and Hove
www.greenbuildingpartnership.co.uk • 07974 122770,

Southern Water

www.southernwater.co.uk • 0845 278 0845

energy efficiency: no or low-cost actions

The easiest actions to take are the cheapest and in some cases have the greatest impact

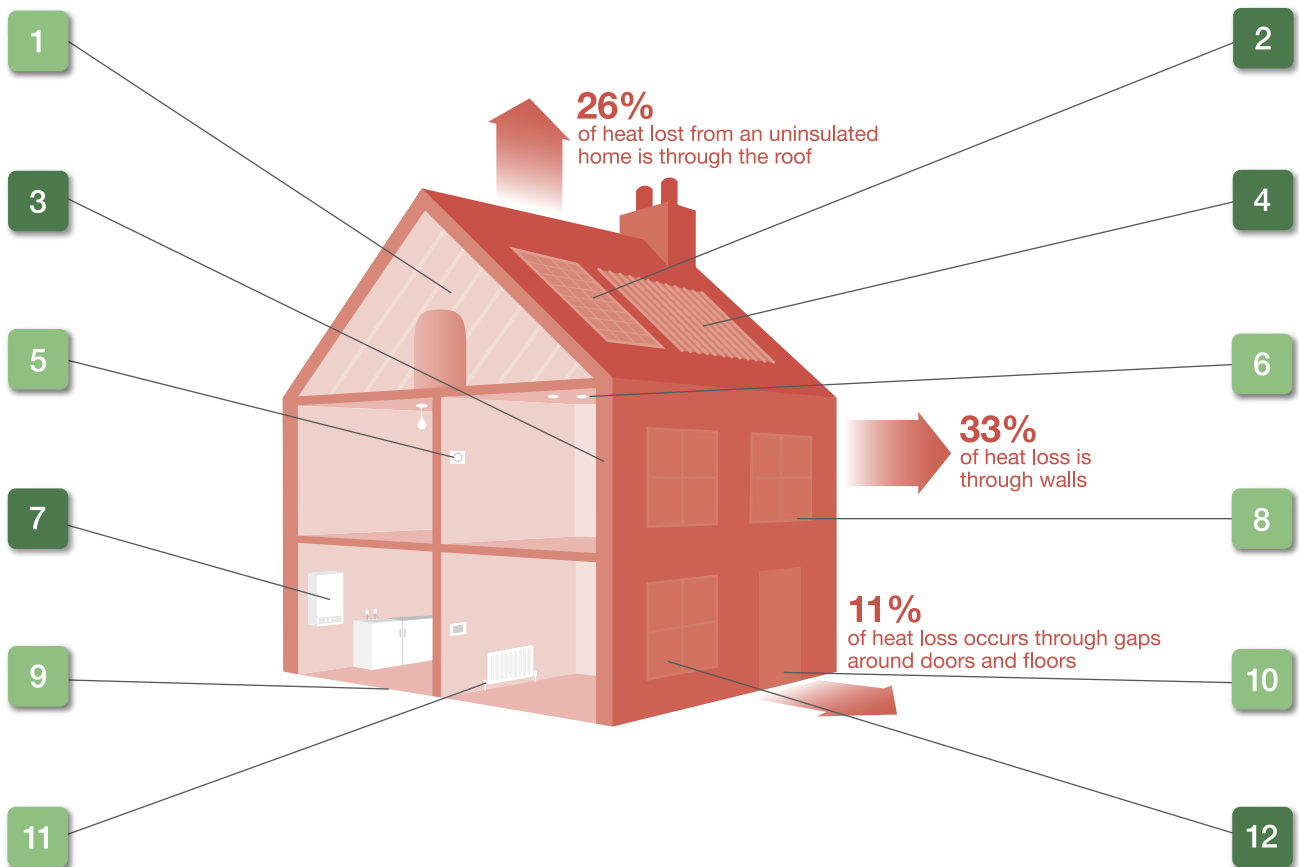


DONE?

- 1 Install free loft insulation if you currently have less than 60mm
- 2 Fit a chimney balloon
- 3 Use a hot water cylinder jacket
- 4 Insulate loft hatch with draught strip
- 5 Change lights to low energy bulbs (CFLs)
- 6 Turn down thermostat by 1 degree
- 7 Install free cavity wall insulation
- 8 Insulate and draught proof windows with film
- 9 Use thicker/lined curtains
- 10 Draught proof doors and letterbox with draught strip
- 11 Fit aerators to hot taps and showers (not electric showers)
- 12 Draught proof floor using thick rugs or sealant in between timber floor gaps
- 13 Use an energy meter
- 14 Fit reflectors to radiators
- 15 Insulate pipework

energy efficiency: medium and higher cost

Make the easier changes first, this will mean your home needs less energy to run than before and allows you to choose the most appropriate technology



- Medium cost: £100-£500
- Higher cost: £500-£several thousand

DONE?

- 1 Top up loft insulation to 270mm
- 2 Install photovoltaic panels
- 3 Install solid wall insulation (internal or external)
- 4 Install solar hot water generation
- 5 Install a heating thermostat where there is none
- 6 Change downlights from halogen to LED
- 7 Replace old boiler with energy efficient version or air source heat pump
- 8 Fit secondary glazing
- 9 Insulate timber floors
- 10 Upgrade external doors to modern well insulated versions
- 11 Install Thermostatic Radiator Valves to radiators
- 12 Install double (or triple) glazing

home energy saving checklist

The actions below will cost you nothing and save you money

	I DO THIS ALREADY	DATE I WILL DO THIS BY	NOT WILLING TO DO THIS
GENERAL HEATING			
The heating is between 18 and 21 degrees*			
The heating is set to come on when the home is occupied			
A thick duvet or blanket is used on beds so heating is not on during the night			
Curtains are closed at night to reduce draughts and heat loss through the windows			
Internal doors are closed to cut down on draughts and keep heat in rooms			
ELECTRICITY USE			
Equipment is not left on standby			
Lights are turned off when rooms are not in use			
RADIATORS			
There is no furniture in front of the radiator blocking the heat to the room			
Where present, use Thermostatic Radiator Valves (TRVs) to ensure rooms are not overly heated when the room is not in use			
LAUNDRY AND DISHWASHING			
The washing machine is regularly used at 30°C			
The washing machine /dishwasher is run full or the half load setting used			

*For every one degree the thermostat is lowered it saves around 10% on the heating bill, a reduction of one degree is not usually noticed.

home energy saving checklist

The actions below will cost you nothing and save you money

	I DO THIS ALREADY	DATE I WILL DO THIS BY	NOT WILLING TO DO THIS
WATER HEATING, SHOWERS AND BATHS			
The hot water is set to 60°C			
A greater number of non-power showers than baths are taken			
Taps are not left dripping (a dripping tap can lose as much water as a bath a week)			
If present – the immersion is only switched on when required			
Length of showers is reduced			
KITCHEN APPLIANCES			
The fridge is set between 3°C and 5°C			
The freezer is set between -15°C and -18°C			
The fridge and freezer are frost free ensuring they run efficiently			
The coils on the back are well ventilated and vacuumed now and then			
COOKING			
Hot food is left to cool before putting in the fridge			
Where feasible saucepans are not left cooking without lids			
The kettle is only boiled with sufficient water			