
Top 10 Tips for Saving Energy

With the cost of heating your home going through the roof, our expert heating engineers have listed the top 10 tips for you to reduce energy wastage and save costs.

Cost of crude oil was under \$25/barrel in September 2003. By mid 2008 the price reached \$140/ barrel. With unreliable sources of oil and gas (Middle East, Russia, Venezuela), it is expected that the price of these commodities will remain volatile for the foreseeable future. During 2006, the average British Gas customer has been

paying over £1,000 for their energy bills, and the increasing dependency on Russian gas (due to dwindling North Sea output), is further destabilising the gas market. Furthermore, gas is becoming the key fuel for electricity generation, in 1990 gas accounted for just 1 per cent of our electricity generation. That figure has risen to 40 per cent by 2007.

Such is the increase in the cost of energy that the pressure on households is unprecedented to restrain their energy consumption and reduce their costs. Add to this freak weather patterns which further put pressure on the energy supply and the picture is very expensive for the individual household as well as for commercial customers.

Recent research by the Energy Savings Trust has revealed that the UK public is the most energy inefficient in the EU. Five thousand people were interviewed in the UK, Germany, Spain, Italy and France about their habits and energy consumption. The researchers found out that the Germans top the list of energy efficiency, with the British being last. The British interviewees were three times more likely to leave mobile phone chargers on, and twice as likely to keep systems on 'standby' than the Germans. Furthermore, the Brits were four times as likely to leave the lights on even if no one is in the room. Following the Germans, the Spanish were the most efficient energy users, followed by the French and the Italians. An average person in the UK has a carbon footprint that was calculated to approximately 9.3 tonnes of carbon dioxide per annum. Climate change scientists calculated that this amount has to drop by 80% to stop climate change.



At Heating Central we have compiled a list of simple steps anybody can follow to substantially reduce their energy costs as well as their carbon footprint. Not only is the financial benefit worth it, but also doing good for the environment today will benefit us and future generations.

The following top 10 tips will help you reduce you carbon footprint as well as save around £250 on your electricity and heating bills on average per annum.

1. Install a High Efficiency Boiler



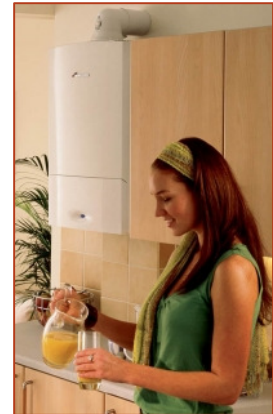
All heating engineers have been instructed that all new boilers installed in England and Wales from April 2005 must be of high efficiency (condensing or combination boilers), which are up to 35% more efficient than traditional boilers and will substantially reduce your energy used for water heating.

If your boiler is over 10 years old, you might want to consult your plumber or heating engineer about installing a new boiler. The cost savings on energy bills will pay off the cost of the new boiler quickly and you will benefit from future savings, as new boilers have life span of at least 15 years.

How Much Will I Save?

Modern condensing boilers are highly efficient with A rating on SEDBUK (Seasonal Efficiency of Domestic Boilers in the UK) converting 90% of the burned fuel into useable energy for heating. This is compared to around 60% for an old boiler.

Since most of the domestic carbon dioxide (CO₂) emission originates from the boiler (around 60% on average), installing an efficient condensing boiler is of the essence. When properly installed by a professional plumber or heating engineer, a quality condensing boiler will reduce your household's CO₂ emission by approximately 800Kg per annum. The financial savings of a high efficiency condensing boiler are considerable at around £100-120 per year on your heating bills. You can save even more on your heating bills by installing heating controls (such as room thermostat, programmer, cylinder thermostat, thermostat radiator valves). Professional plumbers and heating engineers can install such heating controls that will reduce your heating bills by a further £100 per year and will reduce your CO₂ emissions by an additional 800Kg.



Installing a high efficiency condensing boiler is a major step in reducing energy wastage. Many plumbers realise the situation and highlight that if every household in the UK installed a condensing boiler, the carbon dioxide emissions would be reduced by approximately 13 million tonnes per annum. The energy saved could effectively provide heating for almost all the households in Scotland and Wales for a year!

Who Should I Contact?

Any reputable Corgi registered heating engineer should be able to advise on the right energy efficient boiler to meet your needs. There are various sources to find a good local Corgi registered engineer, with many now using the internet to search for local plumbers or heating engineers.

2. Insulate Wall Cavities



Filling the cavity in your wall is an excellent way to achieve not only savings on your heating bills but also significantly improve the in-house climate by spreading the domestic heating more evenly.

Research shows that close to 1/3 of the heat loss from an un-insulated house escapes through the walls. By insulating your walls you could save on average around £90 on your heating bills every year. Estimates put the total savings on heating that could be achieved if the entire United Kingdom installed cavity wall insulation at around £700 million per year.

Installing cavity wall insulation will reduce your heating bills by about 15%, as well as reduce the stress on your boiler (further increasing the boiler's life). Around 800,000 households have installed cavity wall insulation between 2002-2005, which is estimated to have saved 400,000 tonnes of carbon dioxide greenhouse gasses.

Cavity walls were mostly built after the 1920s as a way to combat damp conditions. The outer wall is made of two layers of bricks with a small air cavity in between. As such, un-insulated homes effectively spend a large chunk of their heating bills for heating the environment outside, increasing their heating bills and putting extra strain on the boiler.



Modern cavity wall insulation materials are highly effective at halting the escape of inner heating, thus creating a more pleasant and even heat spread around the home. In addition, the insulation material will help reduce condensation on the walls and ceilings and actually reduce the build up of excess heat during the summer, making the home more pleasant during hot summer months.

How Much Will I Save?

Around 1/3 of the heating energy loss of an un-insulated home escapes through the walls. Installing insulation in your cavity walls cost around £500. With average annual savings of around £90 per year, the payback period is around 5 years. In addition, you will reduce your carbon dioxide emissions by around 750Kg per year. Cavity wall insulation is a simple procedure which takes around two hours (for a typical three bedroom semi detached) and is done by professional installers using specific tools to inject the insulation material from the outside wall.

Who Should I Contact?

Cavity wall insulation is a well developed sector with many service providers covering the entire country. The National insulation association is a good place to start in order to learn about the service and find out about a local member that can provide the service.

www.nationalinsulationassociation.org.uk

3. Insulate your Loft



It is estimated that around 15% of the loss of your heating escapes through an un-insulated roof. Insulating your loft is a simple task that can be even done as a DIY activity, and can make a big difference to your heating bills. Loft insulation blankets are laid on top of the ceiling (effectively the loft's floor), and trap the heat inside your home.

The Insulation material is laid on the floor of the loft, between the joists, and then can be covered by floor boards over the joists for ease of access and usability of the loft. Protective clothing, gloves and masks must be used during the installation. Insulation should not be placed under the cold water tank in the loft if such exists to feed the vented heating system and boiler.

How Much Will I Save?

It is recommended to install insulation of no less than 270mm depth. Such insulation will save around £110 per annum on your domestic heating bills, and cut around 1 tonne of carbon dioxide emissions per annum. Professional installation of loft insulation is estimated at around £500. However, if you choose to install it yourself as a DIY task, the costs drop to around £250. The payback period for loft insulation depend on whether it was installed by a professional installer in which case the payback period would be around 4 years or by the home owner, in case the payback is 2 years.

Who Should I Contact?

Loft insulation is normally undertaken by cavity wall insulation companies. It is recommended to visit the website The National insulation association to learn more about the service and find out about a local member that can provide the service.

www.nationalinsulationassociation.org.uk

4. Reduce Draughts and Wasted Heat



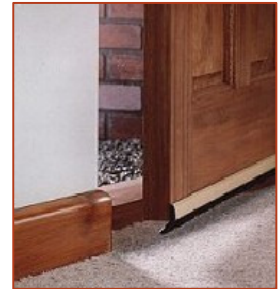
Draughts are the cause of 20% of heat loss in a typical home. By filling gaps and reducing the amount of cold air penetrating into the home, you can reduce the heat loss, reduce the heating bills and increase the life expectancy of your boiler.

Installing draught proofing materials is a simple DIY task, with the majority of the sealant materials having self-adhesive side. Fitting brushes to doors and letterboxes is also relatively simple and effective benefits are substantial.

How Much Will I Save?

Make sure you buy quality proofing materials (available at most DIY stores), which will ensure good heat retention and longer life. Draught proofing materials should be compliant with standard BS7386.

Buying and installing the proofing materials yourself will cost approximately £90. The savings on heating bills are estimated at around £20 per year and reduction in carbon dioxide emissions is around 140Kg annually.



If you choose to install the draught proofing materials yourself it is important to notice the following points:

- It is essential to retain adequate ventilation, especially if you have gas fires, solid fuel fires or a boiler with an open flue.
- It is important to have good ventilation in kitchens and bathrooms. If there is a condensation problem, consider putting in an extractor fan.
- Trickle vents are a good system to provide background ventilation and avoiding the need to open the window when cooking, or drying clothes.
- It is important to have the chimney swept on a regular basis and check air bricks for blockages.

Who Should I Contact?

Proofing materials can be purchased easily in all major DIY chains, and installing them is a simple DIY task.

5. Install Energy Saving Light Bulbs



Energy saving light bulbs are an excellent way of reducing your energy bill and helping the environment. They use up to 80% less electricity than traditional incandescent bulbs, yet manage to generate the amount of light. In the last few years the design and manufacturing of energy saving light bulbs has caught up with the traditional light bulbs and now it is possible to get the energy savings bulbs in various shapes and designs to fit any design requirement. More recent designs have solved the problem of 'cold' light normally associated with the energy saving bulbs. New bulbs utilise 'soft tone' technology to emit a warm glow that is much more pleasant than the old 'cold' light.

How Much Will I Save?

Savings depend broadly on the amount of time you put your lights on, but in simple terms a single energy saving light bulb will save around £7 and 26Kg carbon dioxide per annum. Such light bulb will last around 10 times longer than a traditional bulb, thus saving about £60 before it requires replacing.

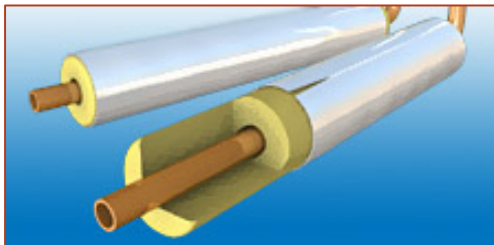
If you fit energy saving light bulbs throughout your entire home, you will be saving around £600 over the lifetime of the bulbs even when taking into account the higher cost of these bulbs. With an average cost of an energy saving light bulb being around £3, the cost recovery is achieved within one year due to the savings.

Who Should I Contact?

Energy saving light bulbs can be purchased easily in all major DIY chains, and installing them is a simple DIY task.

6. Insulate Hot Water Tanks and Pipes

Many hot water cylinders in the UK are poorly insulated, which can be good for dry and warm



towels in the airing cupboard but is very bad for your water heating bills and your overworked boiler. It is very easy and simple to insulate your hot water cylinder, and can save you around £20 per year.

By fitting a 'jacket' that is approved by British Standard around your hot water cylinder, you will reduce heat loss from your cylinder by over 75%. If you already have a jacket around your cylinder, check that it is at least 75mm thick, and if it not, it would be worth getting a new thick jacket.

How Much Will I Save?

By putting a thick 80mm jacket around your cylinder, you will be saving around £20 per year. Since the cost of a jacket is around £12, you will cover your costs within about 6 months.

An additional £10 will be enough to purchase pipe insulation material, to wrap around hot water pipes. The annual savings from reduced loss of energy is around £10, which means cost recovery of around one year.

In terms of carbon dioxide emissions – you will reduce your emissions level by approximately 150Kg and 60Kg of CO₂ by insulating your hot water cylinder and your hot water pipes respectively.



Who Should I Contact?

Tank and pipe insulation materials can be purchased easily in all major DIY chains, and installing them is a simple DIY task.

7. Install Double Glazing



Double glazing is a tried and tested solution for reducing heat loss, with millions of households already benefiting from it. It is estimated that double glazing will cut your heating bill by around £90 per year. Analysis of heat loss shows that around 20% of the heat is lost through single glazed windows, and poorly insulated window frames. Double glazing reduces this substantially as well as reducing noise from the outside and condensation problems.

By creating an insulation barrier by trapping air between two panes of glass, double glazing retains the heat inside the house, and diminishes the volume of noise. An additional level of heat retention can be achieved by drawing the curtains at dusk to ensure that heating energy does not escape through the windows at night.

How Much Will I Save?

Installing double glazing will reduce your annual average energy bill by approximately £90 and subsequently reduce your carbon dioxide emissions by about 740Kg per annum.

Who Should I Contact?

The Glass and Glazing Federation (GGF) is the trade association for all those who make, supply or fit flat glass, such as windows, film or plastics. Their website can advise on the most appropriate way to find a reliable and accountable installer of double glazing in your area.

<http://www.ggf.co.uk/>

8. Reduce the Temperature



Most houses in the UK are using a central heating system powered by a boiler (gas, oil etc.). For most houses the temperature setting is controlled by a room thermostat which determines how much to run the boiler to reach the right ambience temperature. By reducing the preset on your room thermostat by 1c degree, which would make a barely noticeable difference to the ambient temperature, you could save approximately 10% of your heating bills and reduce the wear and tear of the boiler.

Similarly, you should ask yourself whether the hot water coming out of your hot water cylinder is at the right temperature or maybe it is too hot. You could save energy by ensuring that the temperature inside the hot water cylinder is set to be not more than 60c.

9. Energy Saving Recommendation Endorsement



When planning to purchase a new appliance, whether it is a new boiler, new fridge freezer or a new light bulb, always ensure you check if it is approved and endorsed by the energy savings logo.

Energy savings recommended appliances are the most efficient in their category and could save you a substantial amount of money in energy related costs.

10. Use your Common Sense

By applying some simple common sense, you can make a major improvement to your heating output and reduce the energy costs and CO2 emissions.

Here are some straight forward steps which should become your second nature to ensure you save energy and reduce the risk of climate change:

- Turn off the lights when you leave the room.
- Shut down appliances not in use. Do not leave them on 'Standby' and avoid charging appliances if un-necessary.
- When making a cup of tea, make sure you only boil the amount of water you intend to drink.
- Use the 'half-load' function in your laundry machine and your tumble dryer when they are not full.
- Fix dripping tap. A dripping hot water tap will waste energy un-necessarily, as the boiler tries to replace the leaking water, thus working harder.



Heating Central, funded by the UK's leading plumbing and heating companies, is a free service to the public, offering free guidance and help with boiler replacements, central heating installations and high efficiency heating solutions.

All network members are fully certified and highly experienced corgi plumbers. Heating Central listens carefully to customer feedback and continually reviews the performance of the plumbers and their eligibility to remain on the network.

For more information please contact Tal Potishman on 0845 6801 681 or visit www.heatingcentral.com