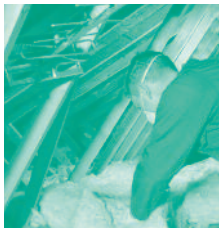
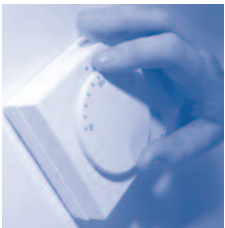




**Vale
of White Horse**

Vale **Energy** *Team*

Energy Advice Guide



Introduction

Vale **EnergyTeam**

Contents

Insulation	1-2
Heating & Controls	3-5
Appliances	6-7
Lighting	8
Condensation	9

The *Vale Energy Team* is a team of energy advisors set up by the *Vale of White Horse District Council*. The Council has a vision for the Vale to both protect and improve our environment and to provide high quality public services. The *Vale Energy Team* work towards this Vision by helping to reduce energy use and environmental pollution on a local level.

Our main aim is to save energy, and as a result save the environment and save money. The average UK household is responsible for approximately 6 tonnes of carbon dioxide every year. By making their home more energy efficient the average household could save around 2 tonnes of carbon dioxide a year.

The average household can **save at least £100 annually** off its fuel bills simply by using energy efficiently. You could save even more with basic home insulation works and improvements to your heating system.

We can help you work out:

- Which energy efficient improvements suit your budget and your home and help the environment
- How much these measures could cost and how much they could help you save on your fuel bills
- Whether you qualify for any grants or discount schemes for energy efficient improvements to your home
- How you can get highly efficient condensing boilers or solar water heating systems at discounted prices
- Which fuel supplier could give you the cheapest deal for your gas or electricity
- What kind of renewable energy systems you can consider and what discounts are available

The *Vale Energy Team* is based at the *Vale of White Horse Council* offices in Abingdon. For further information about saving energy please call us on

**Freephone
0800 592 865**

Email:

vet@whitehorsedc.gov.uk

Website:

www.whitehorsedc.gov.uk/energy



Insulation

Did you know that 60% of a household's heat is lost through loft spaces and walls?

By insulating these areas you can reduce your fuel bills and make your house much warmer.

Loft Insulation

This is one of the simplest and most cost-effective energy efficiency measures. If you install insulation to a depth of 270mm (10"), you can save approximately 25% of your heating costs. You may already have some loft insulation, however, if it was installed 10-15 years ago then you will probably have less than 2", it is well worth checking! Make sure you do the job properly or employ a qualified installer. Flat roofs can also be insulated, however it is a very costly job which needs to be done by a specialist.

Wall Insulation

Uninsulated walls can eat up to 35% of your heating. Houses tend to have either solid or cavity walls depending on when they were built. Most houses built after 1930 have cavity walls. Nowadays these cavities are being filled with insulation to help keep the heat inside the home.

Cavity wall insulation is the easiest form of wall insulation but has to be done by specialist contractors, who inject the insulation material into the walls from the outside. The process is fast and clean and takes less than a day. All **approved installers** issue a twenty year guarantee provided by the *Cavity Insulation Guarantee Agency*, and the materials they use should be either **BBA** or **BSI approved**.

In a house with no cavity walls, internal or external wall insulation are the next best options: Internal wall insulation is the cheapest way to insulate solid walls (i.e., walls with no cavity), and can be done by an experienced DIYer. It is most cost effective if you are redecorating. The main method is to fix thermal boards (plaster board with material attached) on timber battens infilled with insulation. There are also wallpaper type insulation materials available, please contact the **Vale Energy Team** for more information.

External wall insulation is much more expensive and should only really be considered if your walls need work doing to them anyway, e.g. re-pointing and re-rendering. It is a job for

Insulation

Insulation Grants and Discounts

There is a range of insulation grants and discounts available. Contact the Vale Energy Team for more information.

a specialist contractor. External insulation could also dramatically change the appearance of your house so you may need to get planning permission.

Draughtproofing

Gaps around ill fitting doors and windows, floorboards and skirting and wiring access points let in cold air and at the same time allow warm air to escape. Small gaps can be filled in with various sealants or fillers. Windows and doors however may need special preformed sealing strips.

Don't forget to draughtproof letterboxes and keyholes and if you have a porch, draughtproofing the inner and outer doors will help further.

Energy Certificates

The Home Information Pack is a set of documents providing important information about a property. The Pack will include an assessment of a building's energy efficiency including the levels of insulation present. The standard of insulation in your home will be a vital factor when you sell. The report will include other details relating to the energy efficiency of the home. These will include:

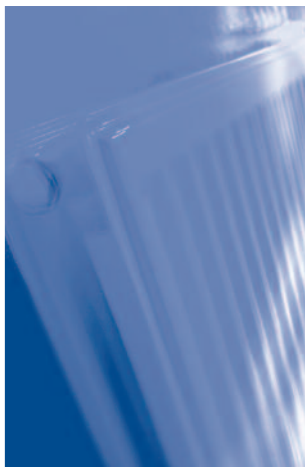
- Estimated annual consumption of electricity, gas, and other fuels based on current energy performance.
- Current levels of thermal insulation.
- Details of the type of heating system, its efficiency, and its controls.
- Details of recommended measures, such as cavity wall insulation or a new boiler, to improve energy efficiency, and raise the banding in the Energy Certificate.
- Details of the costs involved to achieve a higher banding.
- Details of annual savings achieved by carrying out recommended measures.

Heating & Controls

Tips for Radiators

Radiator shelves - fitted above radiators deflect heat into the middle of the room. Ordinary shelving can be used.

Radiator foil - Place reflective foil on the wall behind any radiators fixed to outside walls to prevent heat loss through these walls. They can be purchased in DIY stores.



Boilers

If your current boiler is over 12 years old it is likely to be only 65% efficient.

Condensing boilers are up to 95% efficient because they extract heat from the exhaust gases. They cost more than a conventional boiler, but this additional cost could be recouped in 3 to 4 years because of the high amount of savings you will make on your fuel bill. They are only available for gas, oil or LPG. You can compare boiler efficiencies at www.sedbuk.com. Building Regulations now stipulate in most cases all new and replacement boilers must be condensing boilers.

There are discounts available for condensing boilers, contact the **Vale Energy Team** for more information.

Space Heating

The cheapest form of heating is a wet central heating system run off a mains gas fired condensing boiler, it is also more efficient than most other forms of heating. Wall mounted gas room heaters provide instant heat, but are less efficient, they will also cause condensation problems.

Electric room heaters include fan heaters, electric fires, storage heaters and oil filled radiators. Unless you are using electricity from renewable sources, electricity is the most polluting energy source. Electricity is relatively expensive, however, its use produces no condensation and in most cases is quick and easy to use.

Hot Water

About 25% of your energy costs will be for heating water. Domestic hot water may be provided from a central heating boiler (indirectly) or directly from a separate heating system such as a combi or multipoint heater. For electric immersion heaters it is advisable to use off-peak or

Heating & Controls

Economy 7 electricity as it is much cheaper. A dual immersion heater allows you to have both an on-peak and off-peak heating facility.

Solar water heating captures the sun's energy to heat domestic water. Once installed, the running costs will be very low, cutting water heating bills by about 70%. Contact the **Vale Energy Team** for more information on this technology and grants.

Controls

Controls are important to ensure that you are getting heat where and when you need it. Installing full heating controls provides the biggest energy savings with the quickest payback. Using them sensibly will further reduce your bills.

Boiler thermostat

It is more efficient to have the boiler temperature set relatively high and the boiler operating for short periods of time.

Room thermostat

Recommended setting is 18 - 21°C but it should be set as low as is comfortable. A 1°C reduction in the setting could save up to 10% on your annual heating costs.

Timer programmer

We recommend a 7 day timer with separate on/off periods for weekdays and weekends, as well as separate hot water and heating. Water only needs to be heated in the early morning and early evening.

Cylinder thermostat

Recommended temperature is 60°C - 65°C.

Thermostatic radiator valves or TRV's

Control the temperature of individual radiators to prevent rooms becoming hotter than required. They enable you to only heat rooms that are being used and cost as little as £15.



Storage heater controls

The input charge controls the amount of electricity used to heat it up. It is best to set on a seasonal basis: medium for autumn/spring, high for winter. The output charge controls how much heat is let out - the higher the setting the quicker the heat will be released into the room.

Individual heaters

When buying electric fan heaters check that they have a thermostatic control on them to automatically switch off when the room reaches the required temperature.

Safety Tips

All gas appliances need fresh air to burn safely. If not, Carbon Monoxide can be produced. As it has no colour, smell or taste, it is difficult to detect. Ignoring these danger signs can be fatal:

- Stains around appliance
- Blueish colour flame on your fire
- Strange smell from the appliance when switched on

If anyone in your home has any of the following symptoms after using a gas appliance, stop using it immediately and go to the doctor:

- Sickness, diarrhoea or stomach ache
- Sudden dizziness on standing
- General tiredness

Ensure all appliances are checked regularly by a CORGI registered fitter. Landlords are required by law to have the appliance checked once a year. If you are over 60 you are entitled to a free gas safety check, call the Priority Services Register on **0845 9060708**.

You can install carbon monoxide detectors in your home which will alert you to dangerous levels of carbon monoxide. Detectors are relatively cheap and are available from most DIY and hardware shops.



Appliances

Running appliances accounts for about 20% of a household's energy bill.

The most expensive appliances to run are those that produce heat such as immersion heaters, electric cookers, irons, electric fan heaters, tumble driers and kettles. Appliances that are on continuously such as fridges and freezers also use a lot of electricity.

By law the EU Energy Label, which rates a product's energy efficiency, must be shown on all new refrigeration and laundry appliances, dishwashers, electric ovens and light bulbs.

Fridges and Freezers

Fridges and fridge freezers are required to carry labels giving their efficiency on a scale from A** (most efficient) to G (least efficient). The higher the letter the cheaper it will be to run. Here are some tips to help you use your fridge and freezer more efficiently.

- Leave adequate ventilation space at the back and top of your fridge or freezer and make sure it is kept fairly full (even if this is with empty boxes)
- Site your freezer in a cool place
- Replace damaged door seals
- Check the temperature inside using a fridge thermometer (fridges should be 0-4°C and freezers should be -18°C)

Top Tips for Appliances:

- Jug kettles are more energy efficient. When boiling a kettle, only fill it up with the amount of water actually needed
- Don't leave the TV, videos, stereos and computers on standby for long periods of time
- Only switch on electric towel rails when needed
- Try to buy the most energy efficient appliance you can afford
- Only use appliances like washing machines, tumble driers, dishwashers when you have a full load.

Safety Tips

Gas:

Don't block air holes in the oven with kitchen foil.

Ensure all appliances are checked regularly by a CORGI registered fitter.

Landlords are required by law to have appliances checked once a year.

If you are over 60 you are entitled to a free gas safety check, call the Priority Services Register on 0845 9060708.

Electricity:

Switch off your cooker at the wall when not in use and if your cooker appears to be heating when switched off, get it checked by an electrician immediately



- Defrost regularly - the more ice, the more electricity used
- Look for appliances with an automatic defrost function
- Avoid putting warm food directly into the fridge.

Cookers

Electric hobs

Cost about 18p an hour to run

Gas hobs

Cost about 6p an hour to run

Electric fan ovens

A fan circulates air therefore they heat up more evenly, have shorter warm-up times and use about 20% less energy than non-fan ovens.

Microwave ovens

Use 70 - 90% less electricity than a conventional oven.

Washing Machines

Washing machines and tumble dryers also have energy labels. Most of the energy used in washing and drying is used to heat the water or dry the clothes in the load - spinning doesn't use much energy by comparison.

When buying or using a new washing machine remember the following tips:

- Hot fill facility - allows you to fill with hot water from your heating system and so reduce the heating by the machine
- Economy button - reduces the temperature by one step eg, 90°C to 60°C
- Low temperature programmes - modern washing powders are effective at low temperatures
- Most half-load programmes don't really halve the amount of water and electricity used so it's better to wait till you have a full load
- Gas tumble driers are 60% more efficient to run but cost more to buy.

Low Energy Lighting (CFLs)



Main benefits of energy saving lightbulbs

- Last up to 12 times longer than ordinary bulbs
- Use less than a quarter of the amount of electricity as an ordinary bulb
- Each low energy light bulb saves up to £7 per year.

Where can I use energy saving lightbulbs?

- Almost anywhere!
- You will get the most benefit if you put them in areas where they will be used most, e.g., living rooms or halls
- They are excellent for security lighting, either outside or inside your home
- Most CFLs are compatible with timer switches, but it is always best to check before purchasing. However, most CFLs, with some exceptions:
 - Cannot be used with dimmer switches
 - Cannot be fitted to automatic presence detectors

What wattage do I need?

Use this table as a guide:

Ordinary Bulb	CFLs
40w	7w, 9w, 10w
60w	11w, 14w
75w	15w, 18w
100w	20w, 25w
150w (specialist shops only)	32w

The bulbs come in both bayonet and screw fittings, and in a full range of wattages and shapes

Low cost lighting tips to remember

- Switch off lights when they aren't needed – even if they are low energy lightbulbs
 - Make use of daylight - keep furniture away from windows
 - Decorate rooms with pale colours
 - Consider using CFLs for outside floodlighting
 - Use the lowest wattage bulb that gives the light you need
 - Fluorescent strip lights are cheaper to run than ordinary bulbs and they give the same light
 - 12 volt halogen lighting is more efficient than normal lighting, but not as good as energy saving bulbs
- Investigate using sunpipes. Call the Vale Energy Team for more information.



Condensation

If condensation is a persistent symptom in your house, particularly on wall surfaces, it could lead to a number of problems such as mould growth, wood and furnishing decay, as well as health problems.

Where does condensation come from? —————

Condensation occurs when warm moist air touches cold surfaces. In our day-to-day living we add to the moisture which is already in the air in the following ways:

- From steam produced from cooking, bathing, washing clothes and dishes
- From drying clothes indoors

Areas prone to condensation —————

- Cold rooms and corners
- Rooms, mainly kitchens and bathrooms, which do not have adequate ventilation
- Areas behind curtains and furniture which are placed against cold exterior walls preventing the air from circulating properly
- In wardrobes with little air circulation
- Single glazed windows
- Rooms where bottled gas or paraffin heaters are used without adequate ventilation.

How to avoid condensation —————

- Heat your home
- Provide adequate background heating to all rooms in the home
- Close doors to any unheated rooms to prevent warm moist air travelling into them.

Ventilate moisture-producing rooms like kitchens and bathrooms —————

- Opening windows
- Fitting trickle ventilators, or
- Fitting an extractor fan (ensure it has a 'humidistat' control)
- Closing the doors to moisture-generating rooms - draught-proofing these doors will help.

Produce less moisture —————

- By drying clothes outside whenever possible
- By ensuring bottled gas and paraffin heaters have adequate ventilation (because they give off moisture as a by-product of burning).

Insulate your home —————

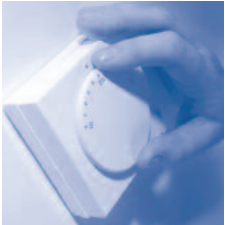
- Cavity wall and loft insulation
- Secondary or double glazing.

Dehumidifier

These machines should only really be used as a temporary solution to help dry out problem spots, as they are quite expensive to run and do not work well in very cold damp rooms.

Information in this leaflet:-

- Insulation
- Heating & Controls
- Appliances
- Low Energy Lighting
- Condensation



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Photos: The Energy Saving Trust

The **Vale Energy Team** is based at the *Vale of White Horse District Council*, and can offer advice on: ■ How to save money on energy bills ■ Grants and discount schemes ■ Tackling fuel poverty ■ Renewable energy.

Freephone 0800 592 865