Heat your home for less

IN BRIEF

In this report we help you to:

- make your home more energy efficient
- save money on your heating bills
- make sure your home is properly insulated
- decide whether solar energy could be right for you.

Spiralling heating costs can be beaten – we show you how to reduce your bills

Our recent survey of gas and electricity customers (*Which?* October 2008, p40) found that over a quarter of you worry about being able to pay your bills. And with gas prices up by 30% and electricity by 14% since our survey took place, this figure is likely to rise.

Gas accounts for around two thirds of the average home's energy costs, so making improvements to your central and hot-water heating and insulation will make the biggest difference to your energy bills overall.

We asked Ben Howe, an expert from the independent Building Research Establishment (BRE), to look at a typical three-bedroomed house to see how its energy efficiency could be improved. Victoria Caffyn (who works for Which?) and David Lian, who moved into their 1930s semi in April this year, told us: 'All the windows have double glazing, but we're not sure about anything else that we could do to cut our gas bills.'

Our expert started by looking at the property's insulation, then the gas central heating and renewable options.

He recommended insulating the cavity walls and loft, turning the thermostat down and considering solar power.

Verdict: Victoria and David were impressed by the range of options available to them. 'We didn't realise that so much could be done,' David said. 'We'll certainly be looking to improve our insulation – particularly the walls and the roof. Solar water heating is something we never would have considered before, but with the availability of grants and the rising price of gas it's definitely something to bear in mind.'

HARNESS THE SUN

Solar power could reduce your reliance on gas

High gas and electricity may be here to stay, but thanks to renewable technologies such as solar power, you could significantly reduce your dependence on gas for heating and hot water.

It costs a lot at the beginning, but as the price of traditional fuels rises, the time taken to recoup an investment in solar power will come down.

A long-term investment

Our expert said that a house like Victoria and David's would be ideal for solar water heating. 'The property has a pitched south-facing roof with no shading from trees or surrounding buildings,' he explained.

'Solar water heating could easily provide 50% of their hot water all year round. They'd need to keep their boiler for central heating and to provide the rest of the hot water.'

The downside? Installing solar panels on the roof and adapting the existing plumbing (including a new hot water cylinder) would cost between £3,000 and £5,000. With savings estimated at about £90 a year, compared with the current price of gas, it could take many years for this to pay for itself.

However, the government Low Carbon Buildings Programme (see 'Grants and offers') provides grants of up to £400, which would reduce the cost of solar water heating substantially. If you use a more expensive fuel than gas for hot water, it'll take less time to recover the cost of installation – electricity users will save around £280 a year, liquid petroleum gas (LPG) users £250, and oil users £330, based on current prices.

For more about renewable energy systems, including biomass and ground-source heat pumps, see www.which.co.uk/homeheating.

PHOTOGRAPHY: SIMON WRIGHT, ALAMY

Modern heating

Victoria and David's 10-year-old boiler should last 'at least another 10 years, providing it is regularly serviced', according to our expert.

The house also had a good range of heating controls – including thermostatic radiator valves, a seven-day programmer, and a wall-mounted thermostat in the hall.

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'Modern heating controls will improve the efficiency of any boiler that's 10 years old or less – fitting them should cost around £200 and will save you about £80 a year.'

If you have heating controls, then it is important to use them properly. Our expert noticed that the thermostat in the hall was set too high at 25°C. 'A comfortable temperature for most people should be between 19°C and 20°C,' he said. 'For every extra degree, your heating costs will go up by around 8%, so turning the thermostat down

Grants and offers

Getting financial support

Financial support to fund energy-saving measures, such as insulation, is available from the government, energy suppliers and local authorities.

Disabled people and low-income households are eligible for government grants for heating and insulation improvements through the Warm Front scheme in England, the Home Energy Efficiency Scheme in Wales, the Warm Deal and Central Heating Programme in Scotland and the Warm Homes scheme in Northern Ireland. Contact the Energy Saving Trust for details (see 'Contacts').

Large energy suppliers in Great Britain also are obliged to provide support to households wishing to install energy-saving measures, and many local authorities provide energy-efficiency grants to residents (contact the Energy Saving Trust).

Grants for the installation of renewable technologies, such as solar water heating, are available through the government's Low Carbon Buildings Programme (LCBP). Before your application will be considered, you must ensure your property meets certain energy-efficiency standards. Planning permission may also be required.

To qualify for grants, installations must be carried out by an accredited installer. To find one, go to www.greenbookline.com or call 01923 664100.

Checklist

Money-saving tips

- **Insulation** Installing cavity wall and loft insulation could cut average energy bills by around £270 a year.
- **Heating controls** Modern heating controls improve the efficiency of your boiler and save you around £80 a year.
- **Thermostat** Keep your thermostat set at 19°C or 20°C – for every extra degree your bills will go up by around 8%.
- **Servicing** Have your boiler serviced regularly to prolong its life (see www.which.co.uk/boilerservicing.
- **Double glazing** Only consider double glazing if you have to replace windows anyway.
- **Solar power** Solar water heating could provide 50% of your annual hot water needs and cut your bills by around £230 a year.
- **Grants** You can check availability of grants by contacting the Energy Saving Trust and the Low Carbon Buildings Programme (LCBP).
- **Home energy check** Do the Energy Saving Trust's Home Energy Check to find out how much energy and money you can save. See www.energysavingtrust.org.uk or call 0800 512 012.
- **Switch** Visit www.switchwithwhich.co.uk to find a cheaper supplier.

Low-cost ways to improve your boiler's efficiency

five or six degrees could cut your bills by around a third.'

Replacing the boiler with a modern condensing unit would cost around £800 and, as such, should only be considered once you've installed proper insulation and heating controls – or if your boiler is nearing the end of its useful life. Compared with a conventional gas boiler – such as the one in Victoria and David's home – a condensing boiler would save you around £130 a year.

INSULATION

Proper insulation could save you thousands

Roof and walls

A poorly insulated house loses most of its heat through its walls (around 35%) and roof (a further 25%).

Victoria and David's home has cavity walls but they are not insulated. 'This is a simple job, costing around £500, and would cut annual bills by at least £120 – so it would pay for itself in roughly four years,' said our expert.

Improving the roof insulation can dramatically reduce bills, too. Fitting the recommended 300mm of loft insulation yourself would cost approximately £250, but would save you around £150 a year – giving a 'payback' time of under two years. Professional installation could cost up to £500. Grants can substantially reduce the cost – see 'Grants and offers'.

Taking advantage of grants, most households should be able to insulate their walls and roof for about £500 – and some will get it free of charge. This will cut your bills by around £270 a year.

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Windows

With only 10% of total heat escaping through a house's windows, our expert said that potential savings in this area are not as significant: 'You'll save around £110 a year if you double glaze all your windows, but if it costs, say, £8,000 to do it, it'll take more than 70 years to pay for itself.'

Which? online Green home

For more energy-saving tips, go to the interactive house on our website. Click on any room for advice – in the kitchen, for example, you're shown how to save water in a number of ways, such as making sure your dishwasher is used efficiently. See www.which.co.uk/greenhome for more.

Contacts

Energy Saving Trust
www.energysavingtrust.org.uk
0800512012

Low Carbon Buildings Programme
www.lowcarbonbuildings.org.uk
08009150990