

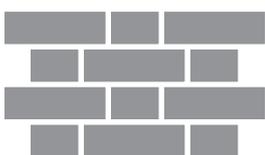
# Solid-wall insulation: options for older homes

Nearly half the warmth in some solid-walled houses escapes through the walls, so insulating solid walls can make a tremendous difference to the warmth and comfort of your home.

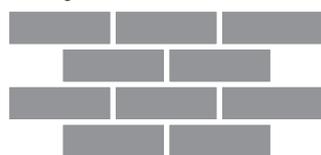
Solid walls can be insulated internally (from the inside) and externally (from the outside). Both are significant undertakings in terms of cost and disruption – and *external* solid-wall insulation is most definitely **not** a DIY task. However, both options can make your home warmer and more comfortable, and greatly reduce your heating bills at the same time.

If your home is made of brick, and the bricks have an alternating long-short-long pattern (below left), then the walls are likely to be solid. If you can see only the long edge of the bricks (below right), then the wall is almost certainly a cavity wall. For information about insulating cavity walls, see our other leaflet.

**Solid wall**



**Cavity wall**



Many solid-walled homes are off the national gas network and so are heated with oil or electricity. These are expensive fuels making home insulation especially important.

## How much money will I save?

<b>Installation cost (external)</b>	<b>£10,500–£14,500</b>
<b>Installation cost (internal)</b>	<b>£5,500–£8,500</b>
<b>Annual saving</b>	<b>£445–£475 approx</b>
<b>Annual CO<sub>2</sub> saving (both)</b>	<b>1.8 tonnes approx</b>

These are estimated figures based on a gas-heated, three-bed semi, and are for the **whole installation**. If you are using a more expensive heating fuel, e.g. oil, the savings will be higher, and if you are only insulating one or two walls (e.g. if your house is in a terrace) the installation costs will be lower



Solid-wall insulation can improve the warmth and thermal comfort of older homes in both urban and rural areas

## How does solid-wall insulation work?

Solid-wall insulation works by coating the walls with a layer of material that slows down the rate at which the heat passes through, keeping the warmth inside your home for longer.

There are two types of internal solid-wall insulation, both of which can be installed by a competent DIY-er or a professional.

- 1) The highest energy saving comes from **rigid insulation boards**. These come in varying thicknesses depending on price. The cheaper ones are thicker – up to 10cm – so you'll lose some floor space for each wall.
- 2) **Flexible insulation sheets** are cheaper. They come in rolls and are hung like wallpaper. These are thinner so take less space but they are not as efficient.

If you're thinking about **external solid-wall insulation**, you'll need a specialist installer trained by approved system designers. To find such an installer visit the website of the Insulated Render & Cladding Association (INCA) at [www.inca-ltd.org.uk](http://www.inca-ltd.org.uk). You can also contact manufacturers with INCA-approved solid-wall insulation solutions who have lists of installers for their systems.



"Solid-wall insulation can cut fuel bills by £445–£475 a year – and helps to combat climate change, too!"

# Tips for lower energy bills

Happy paying your gas and electricity supplier more money than you need to?

Thought not. Here are 15 ways to cut your bills ...

1) **Keep the oven door shut as much as possible;** every time you open it, nearly a quarter of the heat escapes.



2) **Give your clothes a day in the sun;** and give your tumble drier a break. Clothes dried in the fresh air feel great, and there are drying days in winter, too.

3) **Food in the oven cooks faster when the air inside flows freely,** so don't put foil on the racks.

4) **Don't leave your phone on charge all night.** It only needs three hours – and try not to leave the TV and other kit on stand-by.

5) **Be a friend to your freezer.** Defrost it regularly to help it run more efficiently.

6) **Catch 'em young.** Encourage your children to switch off electric toys and lights that they're not using. They'll soon get the hang of saving energy.



7) **Dodge the draught!**

Fit draught-excluders to your front door, letter box and key hole, and draw your curtains at dusk to keep the heat in.

8) **When boiling water, only fill the kettle with as much as you'll actually use** (but make sure you cover the metal element at the base).

9) **Buying a new TV, washing machine or dishwasher? Look out for the Energy Saving Trust 'recommended' logo,** and remember: the bigger the TV, the more energy it'll use.



10) **Dimmer is smarter.** Use your dimmer switches to reduce the amount of energy used to light your room.

11) **Wait until you have a full load before putting on a wash.** Two half-loads use more energy (and water) than one full load.



12) **Sleep tight.** Make sure all the lights are turned off when you go to bed, or use a low-wattage night light if you do need to leave one on.

13) **Turn your heating down by 1 degree.** You'll hardly notice the change in temperature, but it'll make a big difference to your heating bill.

14) **Put your fridge in a good spot.** Somewhere the air can circulate behind it, but not next to a cooker or radiator.

15) **New computer? Remember a laptop typically uses around 85% less energy than a new desktop PC.**



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The Centre for Sustainable Energy is a national charity (no 298740) that helps people change the way they think and act on energy.

CSE's Home Energy Team offers free advice on domestic energy use to householders in Bristol and Somerset (including the unitary authorities of North Somerset and Bath & North East Somerset).



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