

## Payback Beyond 1 Year

*On benefits, or pension credit? If so you might qualify for a grant to improve the warmth of your home. See <https://www.gov.uk/energyhelp>*

### 2 Year Payback

#### Lighting

Accounts for 20% of electricity bill in the average house (more if you use external security lighting). Fitting LED lights gives payback in 2 years.

### 2 Year Payback

#### Loft Insulation

About 25% of heat loss from a house is through the roof, if it has no loft insulation. The current recommended thickness for loft insulation is 270 mm (approximately 11 inches).

Going from nothing to 270 mm costs between £100 and £350. Payback is normally within 2 years. Carbon footprint reduction is around 720 kg per year.

Going from 100 mm existing insulation depth to 270 mm costs between £100 and £350. Payback is between 4 years (for DIY installation) to 14 years (for contractor installation).

Carbon footprint reduction is around 110 kg per year.

For more information see <http://www.energysavingtrust.org.uk/Insulation/Roof-and-loft-insulation>

### 3 – 4 years Payback

#### Cavity Wall Insulation (see below re solid wall construction houses)

About 40% of heat loss from a house is through the walls.

Energy Saving Trust data (<http://www.energysavingtrust.org.uk/Insulation/Cavity-wall-insulation>) suggests an annual saving on energy bill of around £140 (which seems low) and installation cost of £450 - £500 (this is without subsidy, and based on 3 bed semi detached house). The bigger your house, the shorter the payback time.

Cavity wall insulation will reduce your carbon footprint by around 550kg per year.

The EST link given above includes advice on finding a cavity wall insulation contractor.

#### Solid Wall Construction Houses – easy way to cut heating bill by up to 20%

Quick and cheap way to cut heating bill is to install radiator reflectors. (see our payback under a year sheet)

#### Solid Wall Construction Houses

There are two options on insulation of solid walls:

- internal wall insulation (which will reduce room dimension by about 3½" (9 cm))
- external wall insulation

Click on the link below for information including approximate costs and savings. Insulating walls this way will reduce your carbon footprint by about 1.8 tonnes per year (based on 3 bed semi)

<http://www.energysavingtrust.org.uk/Insulation/Solid-wall-insulation>

### 9-10 Year Payback

#### Solar PV

Calculate payback on your property at <http://www.energysavingtrust.org.uk/Generating-energy/Getting-money-back/Solar-Energy-Calculator>

## **10 years Payback**

### **Heating and Hot Water Programmer (not the same as the room thermostat)**

A good heating programmer can save 5-10% of gas bill.

A programmer will automatically switch your heating off when you're not at home, or when you can do without the heating, such as when you're in bed.

Programmers allow you to set 'on' and 'off' time periods. Most models will let you set the central heating and domestic hot water to go on and off at different times.

For EST (Energy Saving Trust) recommended brands and models see

<http://www.energysavingtrust.org.uk/Take-action/Find-Energy-Saving-Trust-Recommended-products>

## **10 Years Payback**

### **External Doors**

Around 5% of total heat loss from a house is through the external doors. UPVC doors are not necessarily the best performers.

Approx £50 per year saving from fitting well insulated doors. Payback around 10 years, depending on cost of door including fitting.

## **30 Years Plus**

### **Double Glazing**

Double glazing can make a house more saleable and it can reduce condensation, but its benefits for reducing heat loss are questionable, with return on the (large) investment being low (around 2.5%).

Replacing all single-glazed windows with B-rated double glazing could save you around £165 per year.

Chris Goodall in "How to Live a Low Carbon Life" says "Even the best double glazing leaves the typical window still losing more heat than the same area of uninsulated wall".

Our experience with thermal imaging supports this observation.

## **Chimneys**

If you have unused open chimneys consider blocking them off e.g. chimney balloon (making provision for a ventilation opening and a cowl on top of the chimney to avoid dampness). But don't forget to unblock the chimney before you next light it!

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