

# Save energy, save money and stay warm: your guide to energy efficiency in tenements

## FACTSHEET 6

# Using your heating controls and saving energy on hot water

**This factsheet looks at how you can save energy and money on your heating and hot water.**

It covers:

- How to use your heating and hot water controls.
- Saving energy on hot water.
- Solar hot water panels.

Replacing or changing your heating system is covered in [Factsheet 5](#).



## Heating controls

### Gas central heating

If you have gas central heating, make sure you have the following controls and know how to use them. This can save you £80–£165 per year<sup>1</sup>.

- **Thermostatic Radiator Valves (TRVs)** (pictured, right): turn off radiators when they reach the desired temperature, preventing heat being wasted. This means you can have different rooms at different temperatures.



TRVs should be installed onto every radiator except one in your home. Putting TRVs onto four radiators will cost about £140–£170<sup>2</sup>. Turn TRVs to a higher setting in rooms that you use often or that need more heating and a lower setting in rooms you use less often or like cooler.

- **Room thermostat** (pictured, left): this is usually found on your hall or living room wall and turns off the heating when the room has reached your desired temperature. Set it to 18°C–21°C. If anyone in your home is elderly or suffering from a health condition you may wish to set it higher. Thermostats cost about £90–£135<sup>3</sup>.

- **Programmer or timer** (pictured, right): this allows you to set your heating system to turn on and off automatically on different days or at different times. Fitting one will cost about £130–£170<sup>4</sup>.



**FOR MORE INFORMATION** about using your gas central heating controls, watch this short video on the [Energy Saving Trust](#) website.

<sup>1</sup> Source: Energy Saving Trust (2015)

<sup>2, 3, 4</sup> Source: Centre for Sustainable Energy (2015) costs research



## Electric storage heaters

Electric storage heaters store heat during the night, which is released into the room during the day. The controls are fixed onto the heaters. To keep your bills low, make sure you know how to use them:

- The **input** control tells the heater how much heat to store during the night. This should be set before you go to bed based on the amount of heat you think you will need the following day.
- The **output** control (sometimes called the 'boost control') tells the heater how much heat to let out into the room during the day. Adjust this in the day if you need more or less heat. If you are out during the day, keep the output low until you return so the heat is kept in for as long as possible. If you turn the output control high, you may not have enough heat to last all day.



**FOR MORE INFORMATION** about using your electric storage heater controls, watch this short video on the [Energy Saving Trust](#) website.

**Make sure you know how to use the controls on your storage heaters.**



## Hot water controls

**You can save energy and money by knowing how to control your hot water system.**



### Electric immersion heater

You should have a cheaper overnight electricity tariff (sometimes called 'Economy 7' or 'Economy 10'). Make sure your immersion heater is set to come on during this overnight period – it will be much cheaper than heating it during the day. If you need to, use the 'boost' during the day but remember this will cost more.

### Hot water tank

If you have a standard boiler in a central heating system (not a 'combi' boiler), you will have a hot water tank (pictured, right). Set your hot water **programmer or timer** to come on a couple of hours before you need it and then turn off when hot water is no longer required. If you need extra hot water, use the 'boost'. If you have an electric immersion element as a back-up, only use this if your main heating system isn't working because it is more expensive.



Make sure your hot water tank has a **thermostat**. It costs £50–£80<sup>5</sup> to install and can save you around £25–£50 per year<sup>6</sup> by making sure you don't overheat hot water. Set it to 60°C to avoid illnesses such as legionella.

<sup>5</sup> Source: Range of costs taken from Changeworks (2015) costs research and Historic Scotland (2012) [Technical paper 16](#)

<sup>6</sup> Source: Calculations based on DECC and Cambridge Architectural Research (2012) [How much energy could be saved by making small changes to everyday household behaviours?](#)



# Saving energy on your hot water

## Pipe insulation

Your home has pipes that carry around hot water for your central heating and/or hot water system. These are hot – insulate them to save energy and avoid losing heat. It also prevents people from getting burnt if they touch the hot pipes.

Pipe insulation can be fitted as a DIY task (where you can access pipes) for around £20<sup>7</sup>, or by a heating engineer. To do DIY, buy pre-formed foam tubes which fit around pipes (pictured, right). Make sure the insulation is the right size to fit the pipes and stop heat leaking out. It could save up to £10 per year<sup>8</sup>.



## Hot water tank insulation

If you have a hot water tank (you won't if you have a combi boiler), insulate it to avoid losing heat. You can buy hot water tank insulation or a 'jacket' and fit it yourself. They cost about £15 from DIY stores<sup>9</sup>. Make sure the jacket is the correct size for the tank and that the whole tank (including the top) is covered without gaps.

Putting a jacket onto a hot water tank with no insulation can save you £115–£140 per year or £25–£35 per year if the tank already has some insulation<sup>10</sup>.

If you have a very old system, you might want to buy a new hot water tank. Modern hot water tanks are already insulated. They cost about £150–£250 to buy, not including the cost to fit them<sup>11</sup>.

You might also want to think about changing your heating system. Refer to [Factsheet 5](#).

## Waste water heat recovery

This device absorbs heat from 'waste' water (such as that from showers or baths) and re-uses the heat to heat clean water. The device is fitted in the waste pipes just below your sink, shower or bath plug hole. They can be quite expensive, around £1,000, and save £20–£30 per year<sup>12</sup>.

### ✓ TIPS!

- Have showers instead of baths and take shorter showers! Watch out for modern power showers – they use a lot more water.
- Fit an aerating shower head. This provides the same feel but uses less water.
- Fix leaks! A dripping tap can waste a lot of hot water.



7, 8, 9, 10 Source: Energy Saving Trust (2015)

11, 12 Source: Changeworks (2015) costs research





# Solar hot water panels

**You can reduce the cost of heating your water by installing solar hot water panels, also known as solar thermal panels. These use heat from the sun to heat water.**

## Costs and savings

A solar hot water system will save you around £65 – £75<sup>13</sup> per year on your energy bills if you currently heat your hot water by gas or electricity. You may also be eligible for the **Renewable Heat Incentive (RHI)**; a UK Government scheme that pays you for generating your own heat. Refer to [Factsheet 1](#).

Solar hot water systems typically cost between £3,000 and £5,000<sup>14</sup> possibly more in a tenement.

## Solar hot water panels on tenements

Because roof space is limited on tenements it may only be possible to install enough panels to provide hot water for one or two flats. It is easier and cheaper to serve top floor flats as less piping is required, although it is possible to serve lower flats. There may also be challenges in installing this onto a high building.

13, 14 Source: Energy Saving Trust (2015)



## What do I need to install solar hot water?

- **Hot water demand** – you will save most if you use a reasonable amount of hot water from your hot water tank, for example if you have children or run a lot of baths.
- **A compatible heating system** – you need a hot water tank, not a combination boiler. You will also need enough space for an additional or larger hot water tank.
- **A suitable roof**, with around 5m<sup>2</sup> of space, ideally south facing and strong enough to hold the weight of the panels.
- **Planning permission** if you live in a conservation area. You may need listed building consent if your building is listed and possibly a building warrant. In some areas solar hot water panels may not be permitted.
- **Permission from other owners** to install onto the roof since the roof is usually shared between owners in tenements. See [Factsheet 1](#) for information on communal measures.

**FOR MORE INFORMATION** go to the [Energy Saving Trust](#) website or see Changeworks guide, on solar hot water in traditional homes, [Renewable Heritage](#).



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