

Everything you ever wanted to know about controlling your heating (and more...)

The majority of your home's energy consumption goes into keeping you warm therefore it makes sense to ensure you are using your heating effectively. Although having a good standard of insulation is crucial, it is also very important to understand how to control your heating system properly.

Heating programmers

Heating controls come in many styles - mechanical timeswitches (*right*) are still often found on older systems, controlling heating or hot water on/off times with pins on a dial. Although these "do the job", they can only be set for the same timings every day, meaning there is no flexibility to have different timings for different days of the week, for example later starts at weekends. Mechanical timeswitches also need to be changed manually when the clocks go back and forward.



Modern digital programmers allow timings to be set down to the minute, and different on/off timings for weekdays and weekends, or even for individual days of the week.

More sophisticated controllers are now becoming available with 'optimised start' functions - these learn how long it takes your home to get up to temperature, and adjust the heating

start times dynamically. Some controllers even have outside temperature sensors which will start the heating earlier on colder mornings.

If you really want to push the boat out, with the right controller you can now even control your heating using your smartphone - great if you are away from home a lot.

Setting your heating times

Setting appropriate heating timings is a key part of reducing your energy consumption. Heating your property as normal when there is no-one at home will increase your heating bills significantly - this is where a more sophisticated programmer will pay for itself.

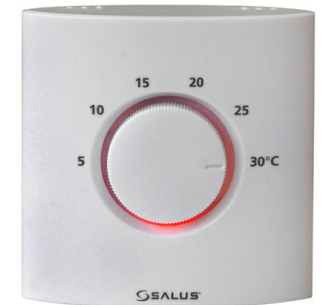
In typical cold weather, your home will take roughly half an hour to reach a comfortable temperature from when the heating comes on - therefore you should set your heating to come on half-an-hour before you get up, and half-an-hour before you come home in the evening.

Similarly, buildings take a while to cool down after the heating switches off - switching the heating off 30 minutes before bedtime and leaving for work will help you to achieve further savings without sacrificing comfort.

Setting your thermostat

Most heating systems are controlled by a central room thermostat - this is typically situated in the hall or somewhere else away from the direct influence of radiators or sunlight. The thermostat turns the heating on and off when the set-point temperature is reached.

Be smart about how you set your thermostat: you probably don't want to heat the entire house to 21degC - maybe just the living room - therefore it makes sense to have a lower setting on the thermostat (say 18degC). Instead control individual rooms with thermostatic radiator valves and use your gas fire or stove to provide extra heat when it is needed.



If you are going away for more than a day or two in the winter then rather than turn the heating off entirely, turn it down to the low teens - this will use a minimal amount of fuel and should prevent any damage to the building or its contents from severe cold.

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Setting thermostatic radiator valves (TRVs)

To get the best out of your central-heating system, all radiators (with the exception of the radiator in the same room as the room thermostat) should be fitted with TRVs. These devices control the flow of hot water through the radiator depending on the room temperature, and allow you to tailor rooms to different temperatures.



TRVs have a dial with numbers - the higher the number you set, the higher the temperature that the radiator operates to. With a bit of trial and error you should be able to work out which settings are appropriate for the various rooms in your home.

For example, you may not want your bedrooms and kitchens too hot, so you could set these TRVs to '2'. You will probably want your living room warmer, so in there you may set the TRV to '4'. In the bathroom you will almost certainly like it nice and toasty to get out of the shower, so you might want to select '5'.

Rather than turning the heat off entirely in spare rooms and other infrequently-used rooms, they should still be allowed a small amount of heat (set to '1') - this reduces the risk of condensation forming on cold surfaces whenever you open the door and let warm humid air in.

Leaving heating on all the time

One question we sometimes get asked is whether it is better to leave your heating on all day (even if you are not in), on the assumption that it uses more energy to stop and start a central heating system.

In fact, you will use significantly more energy by maintaining a set temperature all the time. The amount of energy you use is largely determined by the heat load, i.e. the heat lost through the building fabric and through ventilation losses.

The heat loss is roughly proportional to the difference between the outside and inside temperatures, therefore the larger the difference and the longer the time you maintain that difference, the greater the heat loss. Although it will of course take energy to get a building up to temperature, this will be outweighed by the savings from reducing the heating during any time when your home is unoccupied.

If you have a heating system such as a ground- or air-source heat pump, bear in mind these systems run at a lower temperature, and therefore run over a longer periods than conventional central heating, therefore they will need to be operated in a different manner.

Auxiliary heating

Some people ask whether it makes sense to heat individual rooms rather than the entire house. In short, when the weather isn't too cold or for relatively short periods (e.g. during the daytime) then yes.

Bear in mind, however, that portable electrical heaters are a lot more expensive to run and create much greater carbon emissions than gas central heating for each unit of heat they produce, so they should be used in moderation.

About Eastleigh Transition Network

Transition is a community-led response to pressures of climate change, fossil fuel depletion and increasingly, economic stagnation. Eastleigh Transition Network aims to support everyone living or working in the Borough of Eastleigh to plan for a 'transition' from our current total dependency on fossil fuels – to support our local economies and move towards a more viable and sustainable future. etnet.org.uk

About Expert Energy

Expert Energy are Romsey-based independent energy consultants providing energy-saving services to homes, businesses and other organisations. Services include energy surveys, thermal imaging and impartial advice on generating your own energy. expert-energy.co.uk