



Heating Systems And Controls

Footsteps Energy Champions

Heating Systems and Controls

Acknowledgement:

These cards are based Centre for Sustainable Energy and Energy Saving Trust resources and draw on John Newson (Balsall Heath One Planet) and Footstep' members experience



Footsteps

Faiths for a Low Carbon Future



Central
England
Quakers

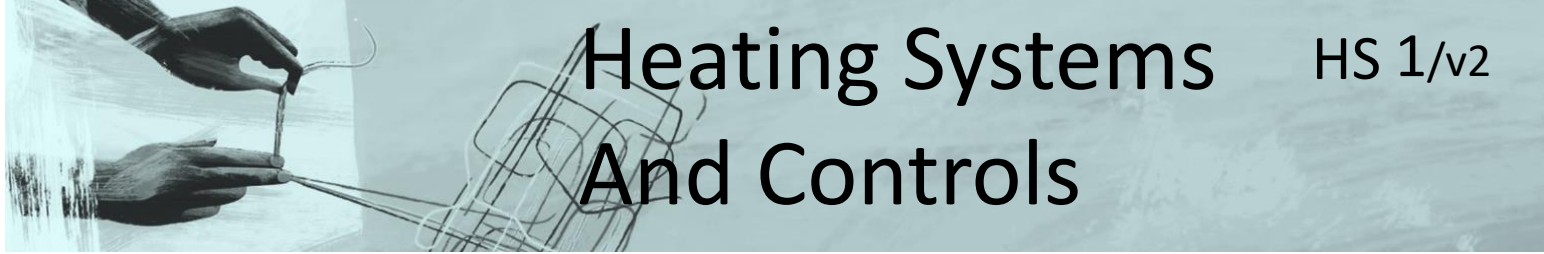
See www.footstepsenergychamps.org.uk/ for sources, acknowledgements and to download cards



SUGGESTIONS and TIPS

Using Footsteps
flash cards

- An **Important Aspect** of the Heating Systems and Controls topic area is described on the **front**
- The **Suggestions and Tips** on the **back** identify initial steps that can be taken
- If you have internet access, Footsteps recommends that you visit the **Energy Saving Trust, Citizens Advice Bureau, Centre for Sustainable Energy** for further information



Heating Systems And Controls

HS 1/v2

Efficiency of heating systems

Solid Fuel Fire

An open fire is only
20-40% efficient

Multi-fuel stoves
nowadays can be
80% efficient

Gas boilers

New gas boiler **90%**
15 year old boiler **70-
75%**

Old back boiler **under
70%**

Replacing back boiler
with new saves £200-
£250 year

Electric Heating

Electric heating is
generally **100%** efficient



SUGGESTIONS and TIPS

Efficiency of heating systems

- Gas has been the cheapest fuel, but electricity is more efficient and easier to control, so these effects may balance out over time
- Wood and coal are most polluting and you may not be able to keep withing the regulations
- Kilowatt hours are the common measure for energy delivered from any source
- Look at your current bill, for what you use & pay for

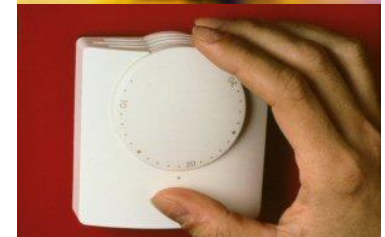


Heating Systems And Controls

HS 2/v2

Heating controls

- Timers and Programmers
- Room thermostats
- Boiler thermostats
- Thermostatic radiator valves (TRVs)
- Hot water tank thermostats
- Night Storage heater controls



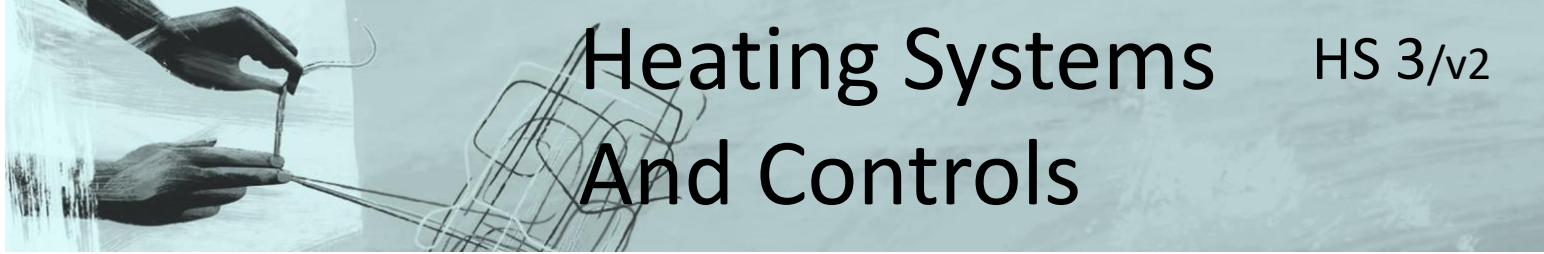


SUGGESTIONS and TIPS

Heating Controls

- Turn the radiator temperature to 60 C in a condensing boiler, or 65 with a hot water tank
 - Move room thermostat to the living room
 - Radiator valves set at 3 or less, never 5
 - Try lower temperatures. Aim for one warm “nest”.
 - Set the heating on using timer and programmer.
- Central heating controls video:

<https://www.youtube.com/watch?v=RKVQQxHuEPU>



Heating Systems And Controls

HS 3/v2

Heat the Human

You can heat the home less, and have the heating off for more days, if you heat the people

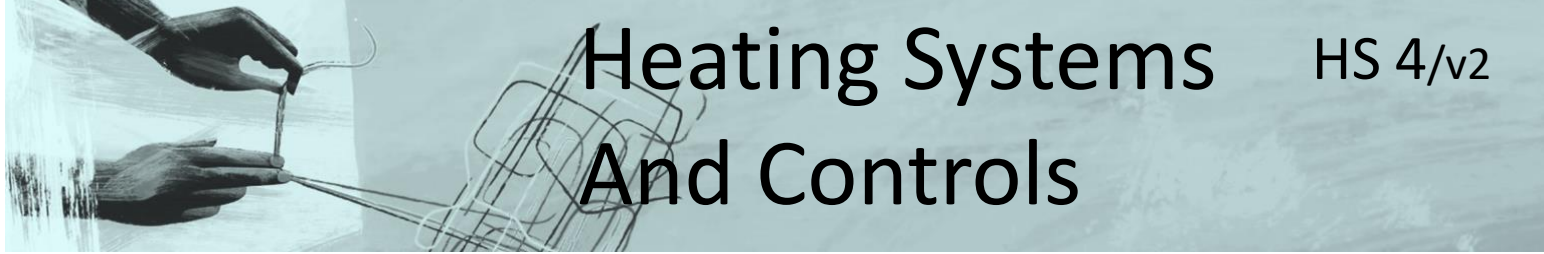
- more clothing
- blankets
- spot heaters where you sit
- have a single, warm room



SUGGESTIONS and TIPS

Heat the Human

- Wear layers of clothing indoors, including socks and slippers and a warm sweater
- Hot water bottle or electric blanket in the bed
- Electric throw
- Small electric heater, where you sit
- Heat the Human campaign
<https://www.moneysavingexpert.com/utilities/heat-the-human-not-the-home-save-energy/>



Heating Systems And Controls

HS 4/v2

Night storage heaters

- These take in cheaper night time electricity, to release when you need it as heat.
- Modern storage heaters are much improved, over old ones, and are easier to control





SUGGESTIONS and TIPS

Night storage controls

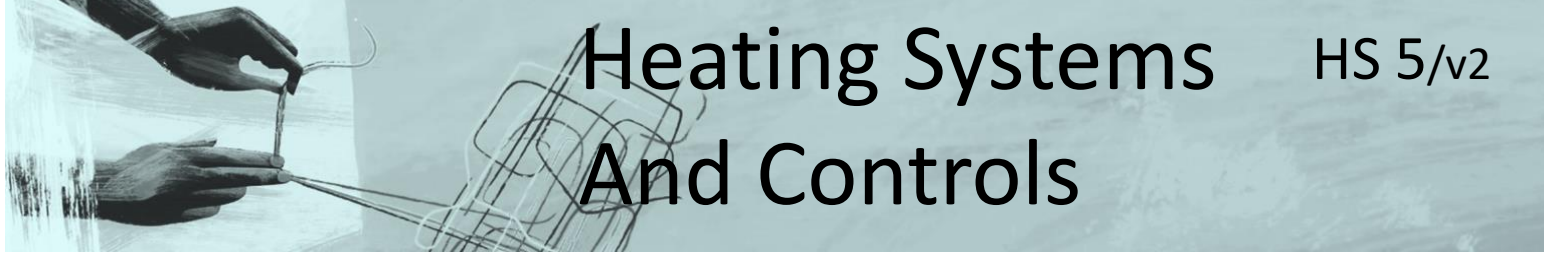
Input controls how much you store overnight – adjust daily for the weather

Output controls how much heat you release adjust throughout the day to keep room warm without overheating

Close output overnight or it will be very costly!!

Night storage heater controls on Youtube:

<https://www.youtube.com/watch?v=aEVHmy-71ak>



Heating Systems And Controls

HS 5/v2

Hot Water

- Saving on hot water saves both water and energy
- A water meter is free and means you only pay for what you use
- See what your water company Severn Trent offers to save water
- Hot water only needs to be 65 degrees and you may be able to turn it down in the boiler





SUGGESTIONS and TIPS

Hot Water

- Add jacket and lagging to hot water cylinder
- Mend any dripping hot taps
- Fit a low-flow shower head to save heat and water . Cut your time in the shower.
- Use the washing machine with a full load