

**energy**  
saving  
trust

  
**infact**

**Savings and statistics bulletin**  
**2022 – 2023**



[energysavingtrust.org.uk](https://energysavingtrust.org.uk)



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# Conditions of use

This document is designed for use by clients of Energy Saving Trust's Infact Savings and Statistics Bulletin.

Savings and statistics within this document can be quoted on any public facing communications such as websites, leaflets, social media, or within internal training and reference documents, provided:

- Energy Saving Trust is referenced as the source.
- The figures are not used to insinuate any endorsement of a particular product.
- The appropriate caveat is used to accompany the statement (see right).

This document is for use by the client company only. It is not to be circulated externally either to customers, third party contractors or partners.

## Caveats

Based on a typical three-bedroom semi-detached gas heated house, with an 88% efficient gas boiler and average gas tariff of 7.37p/kWh and electricity tariff of 28.34p/kWh.

Emission savings include all scopes and greenhouse gases expressed as carbon dioxide equivalent.

Correct as of Apr 2022.



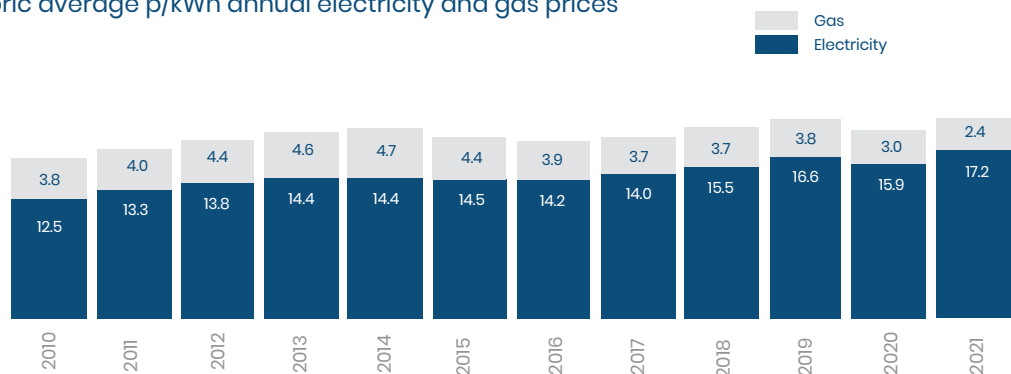
# General facts and figures

## Energy bills

Most households across the UK have their gas and electricity bill set by Ofgem's price cap. For typical usage, this is around £2,027 a year; that's £1,044 for electricity and £983 for gas, including standing charges and VAT<sup>1</sup>.

Bills have risen by approximately 54% with the increase in the April 2022 price cap.

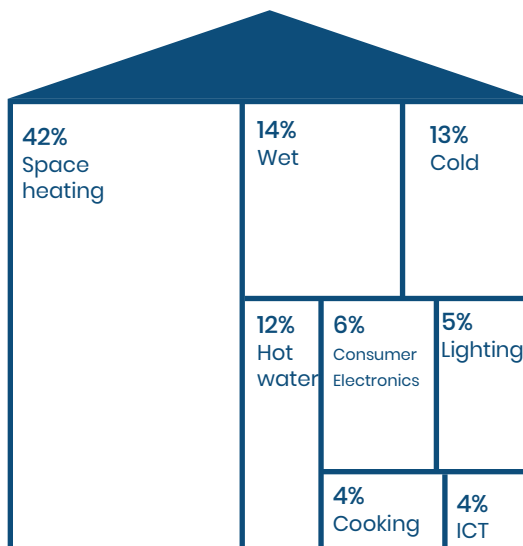
Historic average p/kWh annual electricity and gas prices



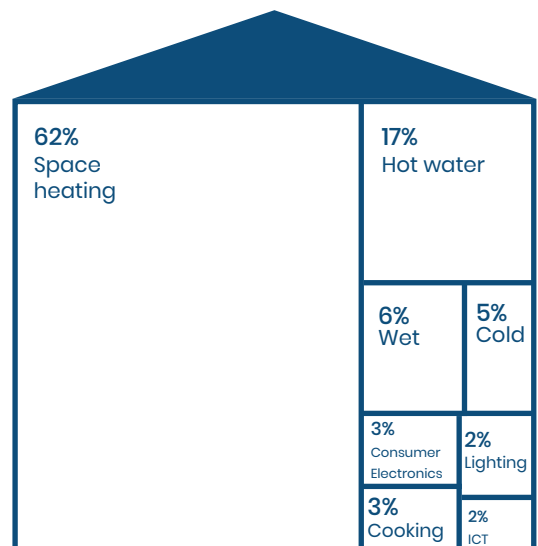
## Energy consumption

Although space heating and hot water heating accounts for nearly 80% of the energy consumed in an average household, it only makes up 54% of the average household energy bill. This is because electricity is nearly four times more expensive than gas per unit.

Average household energy bill split



Average household energy consumption split

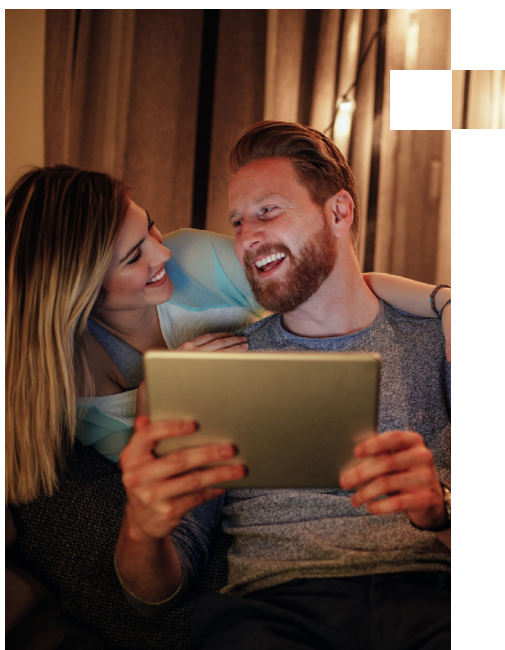


<sup>1</sup> Based on BEIS Quarterly energy price Q4 (October - December) 2021 - (published 31 March 2022)

# General facts and figures

## Energy efficiency activity

- At the end of 2021, 16.8 million homes in Great Britain (66% of total homes with lofts) have at least 125mm of loft insulation.
- It is estimated that around 7.9 million homes do not have at least 125mm of loft insulation. Around 30% of these uninsulated lofts may be difficult or very costly to insulate, including flat roofs, or poor accessibility, but the other 70% require easy to treat loft insulation.
- The recommended depth of insulation for mineral wool is 270mm<sup>2</sup>.
- There are 14.5 million homes with cavity wall insulation in Great Britain. Of the approximate 5.2 million homes without cavity wall insulation, 3.8 million are easy to treat standard cavities and 1.3 million are hard to treat<sup>2</sup>.
- There are around 794,000 insulated solid wall homes, that's around 9% of homes with solid walls. It may not be possible to insulate all solid wall properties, however, between December 2020 and December 2021, there was a 2.8% increase in homes with solid wall insulation, all of which are assumed to be through retrofit<sup>2</sup>.



## Fuel poverty

In 2020, there were an estimated 3.16 million households classed as fuel poor in England (that's 13.2% of all households). This means they are categorised as having a combination of low income and high energy costs<sup>3</sup>.

## Smart meters

By end of 2021, almost 22 million domestic smart meters for gas and electricity are operating in Great Britain.

## Water meters

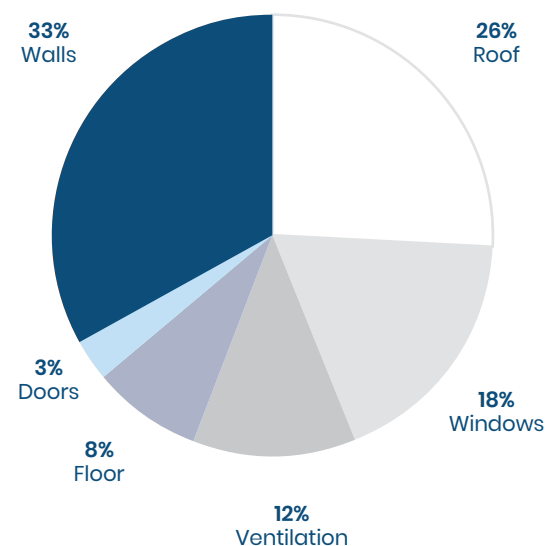
Approximately 16.4 million households in England and Wales have a water meter, that's 63% of homes in England and Wales. Very few homes in Scotland and Northern Ireland have water meters<sup>4</sup>.

## Heat loss

This pie chart shows where heat is lost in a typical uninsulated home.

Insulation does not stop heat loss completely; it reduces the rate at which heat is lost.

Typical heat loss rates for an uninsulated three bedroom gas heated semi-detached home



<sup>2</sup> Source from BEIS' Household Energy Efficiency detailed release: Great Britain Data to December 2021

<sup>3</sup> Source from BEIS' Annual Fuel Poverty Statistics in England 2022

<sup>4</sup> Source from Water company direct email



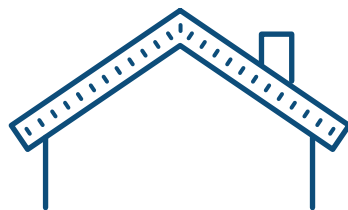
# Insulation

## Roof

- The majority of homes have some loft insulation but many don't have the recommended minimum depth of 270mm.
- Topping up your loft insulation from 120mm to 270mm could save around £25 and 55kg of carbon dioxide a year.
- If a home has no loft insulation, installing 270mm of new insulation could save up to £255 and 600kg of carbon dioxide a year.
- Topping up your loft insulation from 120mm to 270mm and installing cavity wall insulation could save you up to £310 and 725kg of carbon dioxide a year.
- Insulating your room in roof could save you £245 and 570kg of carbon dioxide a year<sup>5</sup>.

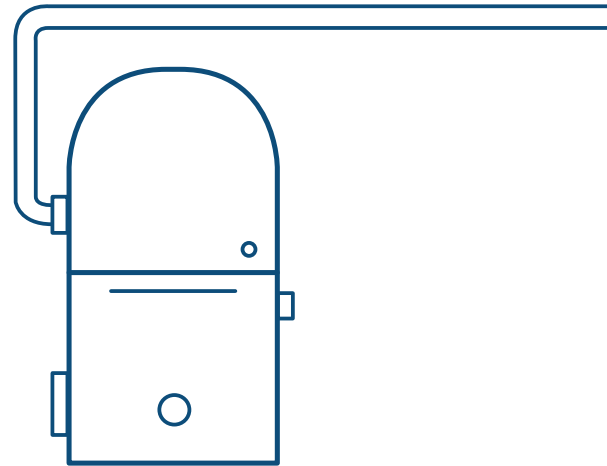
## Walls

- There are 14.5 million homes with cavity wall insulation (70% of homes with cavity walls), and 5.2 million homes without cavity wall insulation<sup>6</sup>.
- Cavity wall insulation could save up to £285 and 670 kg of carbon dioxide a year.
- Only 9% of the 8.5 million homes with solid walls have had solid wall insulation<sup>6</sup>.
- External or internal solid wall insulation can save around £390 and 910kg of carbon dioxide a year.



# 600kg

Installing 270mm of new insulation could save up to £255 and 600kg of carbon dioxide a year.



# £155

Insulating a hot water cylinder with an 80mm jacket could save up to £155 and 510kg of carbon dioxide a year.

## Floor

- The vast majority of UK homes could benefit from an insulated floor. Around 8% of heat is lost through the floor in an uninsulated home.
- Solid floor or suspended floor insulation could save around £75 and 180kg of carbon dioxide a year.

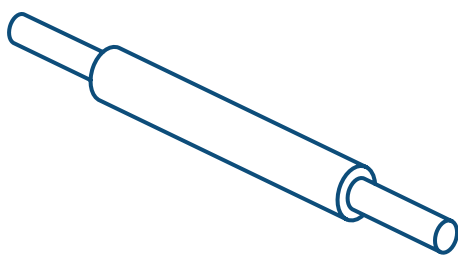
## Hot water cylinders

- Nearly all UK hot water cylinders have some insulation, however those with a hot water tank jacket less than 25mm could benefit from top up insulation.
- Insulating an uninsulated hot water cylinder with an 80mm jacket could save around £155 and 510kg of carbon dioxide a year.
- Topping up your hot water cylinder insulation from a 25mm to an 80mm jacket could save around £35 and 115kg of carbon dioxide a year.

<sup>5</sup> Based on a gas semi-detached house with an existing uninsulated room-in-roof with a dormer window, using rigid insulation boards between the rafters and around the dormer window walls and roof section. The dormer window remains unchanged.

<sup>6</sup> Source from BEIS' Household Energy Efficiency detailed release: Great Britain Data to December 2021

# Insulation



## 19kg

Insulating pipes that are exposed within your house could save you around £6 and up to 19kg of carbon dioxide a year.

### Pipework

- Insulating exposed hot water pipes can reduce the time it takes for your taps to run hot. It can also help to reduce your energy use.
- DIY insulating foam pipe jackets can be bought and cut to size to fit most pipes around your home for around £1.75 per metre.
- Insulating pipes that are exposed within your house could save you around £6 and 19kg of carbon dioxide a year.

### Draught proofing: chimney, doors and windows

- If a fire place is not used then it can cause a lot of draughts, insulating your chimney will make your home feel warmer.
- A chimney draught excluder can save around £65 and 155kg of carbon dioxide year.
- Draught-proofing windows and doors can save around £45 and 105kg of carbon dioxide a year.

### Windows

- Double and triple glazing reduce the rate of heat loss in a home, however triple glazing also reduces the amount of heat you gain from the sun. Try installing triple glazing on the north side of your home and double glazing on the south side.
- Installing A++ rated double glazing in an entirely single-glazed home could save around £175 and 410kg of carbon dioxide a year.
- Installing A-rated double glazing in an entirely single-glazed home could save around £145 and from around 335kg of carbon dioxide a year.
- Secondary glazing is a fitted pane of glass fixed to the inside framing of the window. It's useful for homes that can't replace windows due to planning restraints.
- Installing secondary glazing in an entirely single glazed home could save around £130 and 300kg of carbon dioxide a year.



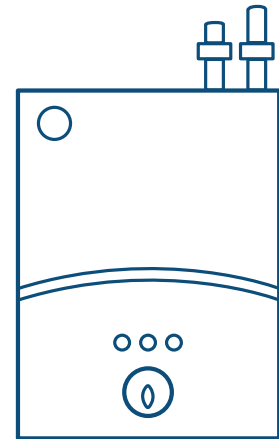
## £175

Installing A++ rated double glazing could save around £175 a year.

# Heating savings<sup>7</sup>

## Boilers and controls

- Room thermostats allow households to set and maintain the temperature at home. A programmer sets the heating to turn on and off at certain times of the day to suit household lifestyles. Thermostatic radiator valves (TRVs) let households control the temperature of each radiator.
- Replacing an old D-rated boiler with some controls with an A-rated boiler with a full set of heating controls could save around £215 and 590kg of carbon dioxide a year<sup>8</sup>.
- Installing and using a full set of heating controls could save around £130 and 310kg of carbon dioxide a year<sup>9</sup>.



# £370

Replacing an old D-rated boiler with an A-rated boiler could save around £370 a year.



# 310kg

A full set of heating controls could save around £130 and 310kg of carbon dioxide a year.

## Electric storage heaters

- Upgrading old electric storage heaters to modern slimline storage heaters with select controls could save around £245 on annual energy bills, reducing emissions by 310kg of carbon dioxide a year.
- Upgrading old electric storage heaters to new high heat retention storage heaters could save up to £490 and 620kg of carbon dioxide a year.

## Radiator panels

- Installing reflective radiator panels in a house with uninsulated solid walls could save around £25 and 80kg of carbon dioxide every year<sup>10</sup>.

<sup>7</sup> Based on a typical gas-heated three bedroom semi-detached home with gas tariff of 7.37p/kWh and electricity tariff of 28.34p/kWh. Correct as of April 2022. Storage heater savings based on an electrically heated 3 bedroom semi-detached home with an Economy 7 off-peak tariff of 16.68p/kWh.

<sup>8</sup> Based on an efficiency improvement from 66% to 89% for a gas boiler, assumes original boiler has a programmer and room thermostat.

<sup>9</sup> A full set of heating controls includes a programmer, thermostatic radiator valves and a room thermostat. This saving assumes the heating system previously had no controls and after installation all new controls are fully used and correctly set.

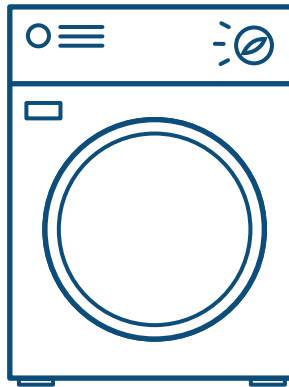
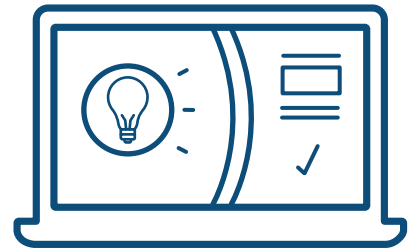
<sup>10</sup> Based on installation behind radiators on uninsulated external walls. Only recommended for uninsulated solid walled or uninsulated cavity walled properties.



# Energy efficient behaviour<sup>11</sup>

## Smart meters and energy monitors

- A smart meter's in home display can help to identify how much energy is used at different times of the day. This can help households identify energy that is wasted.
- Over 22 million domestic smart meters for gas and electricity are being used in Great Britain.



# 57%

Washing at 30 degrees uses around 57% less electricity than washing at higher temperatures.

## Washing and drying

- Setting your washing machine to wash at 30 degrees rather than higher temperatures will save around £14 a year on energy bills and around 11kg of carbon dioxide.
- Setting your washing machine to wash at 30 degrees uses around 57% less electricity than washing at higher temperatures<sup>12</sup>.
- If all households in the UK switched from higher temperature washes down to 30 degrees, together we could save around £410 million on electricity bills in a year.
- You can save on average £60 a year on your electricity bill, and 45kg of CO<sub>2</sub> in emissions, by line drying clothes instead of using a tumble drying during the summer.
- Only filling the kettle up with as much water as you need could save around £11 in energy bills a year.



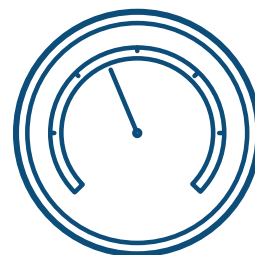
<sup>11</sup> Savings are based on a gas tariff of 7.37p/kWh and electricity tariff of 28.34p/kWh. Correct as of Apr 2022.

<sup>12</sup> Based on the average energy use at different temperatures from lab testing of 55 washing machine models. Energy use was monitored on an empty load.

# Energy efficient behaviour

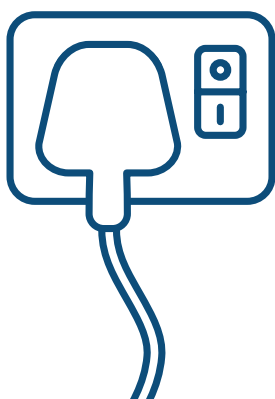
## Thermostat

- A room thermostat switches a home's heating system on and off according to the set temperature. A common misconception is that turning the thermostat up will heat up a home quicker, but this will only heat the home to a higher temperature at the same rate. Insulation increases the speed a home heats up as less heat is being lost through the building.
- Turning your central heating thermostat down by 1 degree could save you £105 and 310kg of carbon dioxide every year<sup>13</sup>.



# £105

Turning your central heating thermostat down by one degree could save you £105 every year.



# £19

Turning off your lights when you don't need them could save you around £19 on your annual energy bills.

## Switch it off

- Avoiding standby and turning appliances off when you're not using them could save £55 and up to 45kg of carbon dioxide ever year<sup>14</sup>.
- If every household in the UK avoided standby and turned appliances off when not being used, together we could reduce energy bills by over £1.4billion every year, and save enough carbon dioxide emissions to fly from London Heathrow to Sydney over 300,000 times.
- Turning off your lights when you don't need them could save you around £19 on your annual energy bills, and avoid 16kg of carbon dioxide emissions a year.



<sup>13</sup> Based on turning down a room thermostat from 22 degrees to 21 degrees in the main living areas. Based on a typical 3 bedroom, semi-detached, gas heated home with a gas tariff of 7.37p/kWh

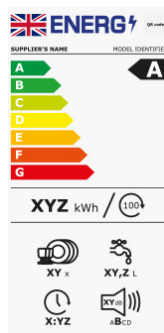
<sup>14</sup> This saving includes all appliances, consumer electronics, lights and chargers that have been left on standby mode or have been left on and not in use.

# Home appliances

## Cold appliances

Cold appliances now have a new A to G rating. Why not buy the highest rating you can find to lower energy bills and carbon dioxide emissions?

- Choosing an D-rated fridge freezer over an F model could save you around £570 and 465kg of carbon dioxide over the 17 year lifetime of the product.



More information on the new energy label ratings can be found on [energylabel.org.uk](https://energylabel.org.uk)

## Wet appliances

- Washing machine and dishwasher energy labels rate from A to G. Why not buy the highest rating you can find to lower energy bills and carbon dioxide emissions? Tumble dryers are rated between A+++ and G.
- When buying a new washing machine, choosing an A-rated washing machine over a D-rated one could save around £130 over its 11 year lifetime.
- Choosing an A-rated dishwasher over a E-rated one could save you around £295 over its 11 year lifetime.
- Choosing an A+++ tumble dryer over an A-rated one could save you around £640 over its 13 year lifetime.

# Home computing

- Choosing a laptop over a desktop and reducing standby could save up to £35 and 25kg of carbon dioxide every year.
- Avoiding standby by turning unused computer equipment off at the wall could save a typical home around £12 and 10kg of carbon dioxide every year<sup>16</sup>.



## TV's

- In general, smaller TVs use less energy. Choosing a 55" TV over a 65" TV could save £20 a year in running costs over the TV's lifetime.
- A new TV uses about 70 per cent less energy in standby mode than one bought before 2007.
- Choosing an F-rated TV over G-rated TV could save around £420 over the TV's lifetime<sup>17</sup>.



<sup>15</sup> Savings are based on an average electricity tariff of 28.34p/kWh. Correct as of Apr 2022.

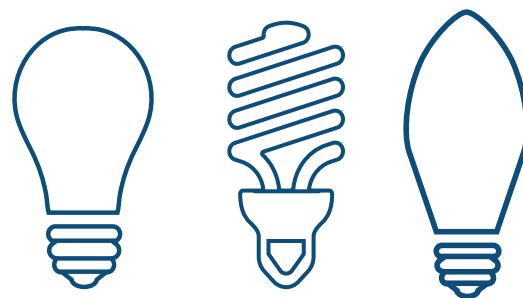
<sup>16</sup> This is included in the energy efficient behaviours 'Avoiding Standby/Leaving Devices On' savings.

<sup>17</sup> Assumes that the energy efficiency index (EEI) is 1.41 for G-rated TV, and 0.83 for F-rated TV, and that the TV is left on for 5.5 hours a day and standby for 2.1 hours per day. Lifetime of 11 years.

# Lighting

## Bulbs

- In a typical home, only 52% of light bulbs are energy saving. 46% are halogens and 2% are traditional incandescent light bulbs.
- LEDs are the most energy efficient bulbs you can buy, followed by CFLs (compact fluorescent lighting). Around 34% of bulbs in the typical home are LEDs, and 18% are CFLs.
- The UK Government has banned the sale of halogen light bulbs since September 2021. Currently, around 2 thirds of bulbs sold in Britain are LED lights, making a considerable impact in improving the energy efficiency of the country's homes. They last 5 times longer than halogen light bulbs and produce the same amount of light – but use up to 80% less power.
- A household still using an old fashioned 60W incandescent bulb in its lounge could save £6 a year by replacing it with an LED equivalent.
- Replacing a 50W halogen bulb with an LED will save around £140 over the bulb's lifetime, and that doesn't include the saving from reduced bulb replacement.
- In a typical home replacing all your light bulbs with LEDs will cut your lighting bill by around 50%, saving £55 a year and reducing carbon emissions by 45kg a year.



# 50%

Replacing all your light bulbs with LEDs could save around £55 a year on lighting bills.



<sup>19</sup> Savings are based on an average electricity tariff of 28.34p/kWh. Correct as of Apr 2022.

# Water

- Approximately 63% of households in England and Wales have a water meter. Very few homes in Scotland and Northern Ireland have water meters.
- The average household water and sewerage bill in Great Britain is around £420 per year. In England and Wales around £200 is the charge for water supplied and around £220 is the charge for sewerage.

## Showers

- A typical household could save around £55 off their yearly gas bills and £45 off their metered water and sewerage bills by replacing their inefficient shower head with a water efficient one, that's a total saving of £100 each year<sup>20</sup>.
- Spending one minute less every shower could save £35 off your energy bills each year, in a typical household. With a water meter this could save a further £30 off yearly water and sewerage bills<sup>21</sup>.
- If everybody in a typical household stuck to a 4 minute shower it could save around £115 on energy bills and around £100 on metered water and sewerage bills every year.



# £115

If everybody in a typical household stuck to a 4 minute shower, it could save around £115 on energy bills every year.

## Washing up

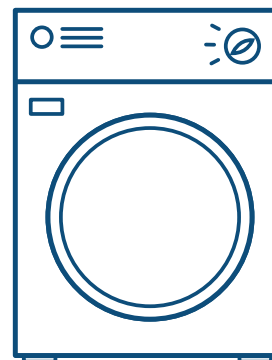
- Using a bowl to wash up rather than a running tap can save you money on your energy and water bills if you have a water meter. In fact you only need to run a typical tap for 95 seconds before you would have filled a washing up bowl<sup>22</sup>.

## Toilets

- Fitting a cistern displacement device in an old toilet, could save over 5,000 litres of water a year. That would save around £13 a year in metered sewerage and water bills.

## Washing machine

- Always try to fill your washing machine – combining less than full loads, and cutting back washing machine use by just 1 cycle per week could save a household £14 a year of energy, and a further £5 a year on metered water bills<sup>23</sup>.



# £14

Cutting back washing machine use by just one cycle per week could save a household £14 of energy and £5 on metered water bills every year.

<sup>20</sup> Assumes that a household replaces a 9.82 litre a minute shower head with a 7.7 litre a minute shower head.

<sup>21</sup> Based on a average shower flow rate of 9.82 litres a minute used 0.75 times per person per day in a 2.4 person household.

<sup>22</sup> Based on filling a 10 litre washing up bowl compared with a 12.65 litre/min kitchen tap at 50% of its full flow.

<sup>23</sup> Savings are based on an average electricity tariff of 28.34p/kWh. Correct as of Apr 2022.



# energy saving trust

## Business enquiries

Get in touch to find out more about our other business tools and services.



[business@est.org.uk](mailto:business@est.org.uk)



[energysavingtrust.org.uk](https://energysavingtrust.org.uk)

## Data & insights

- Home Analytics
- Portfolio energy analysis tool

## Consumer tools

- Energy Efficiency Advice App
- Home Energy Efficiency Tool

## Consumer insights

- Energy insight consultancy

## Advice and training

- Energy advice training
- Employee engagement

## Sustainability

- Sustainability strategy
- Carbon accounting
- Local energy planning

