HOME ENERGY GUIDE

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Energy Management

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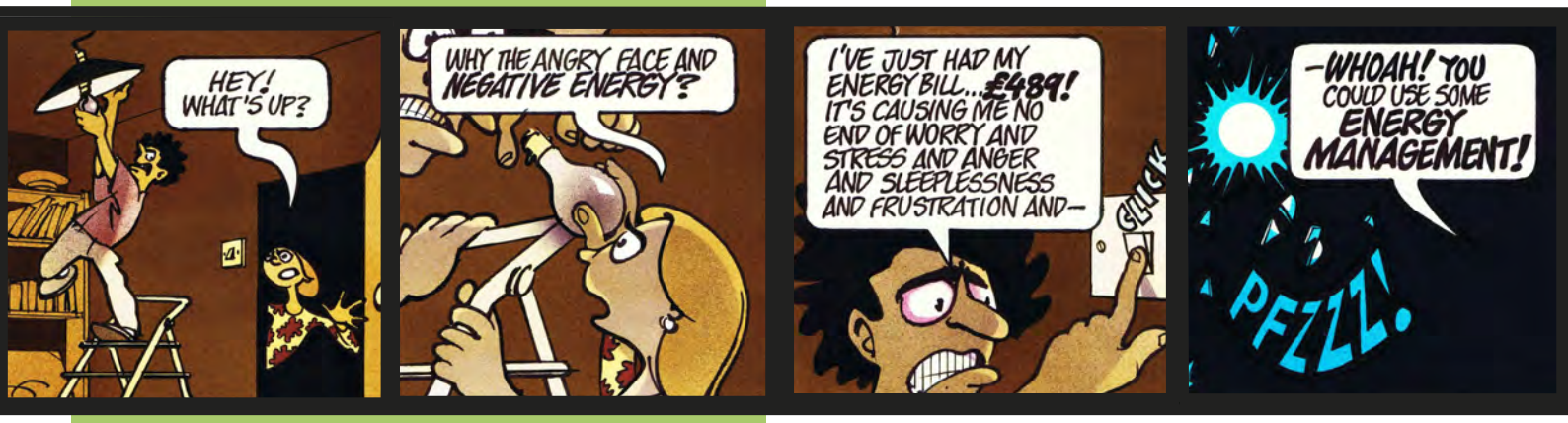
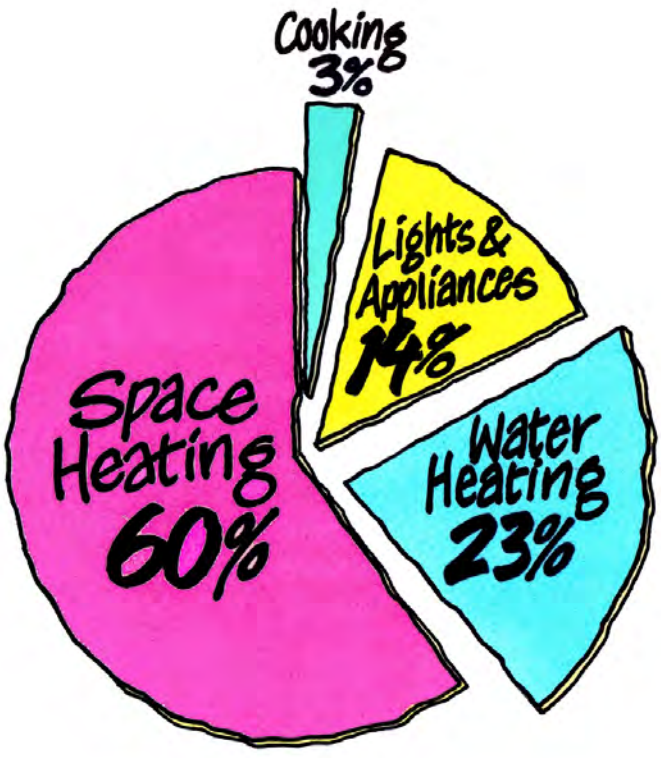


We use energy in our homes to provide many essential services such as heating, lighting and hot water.

In addition, cookers, fridges, home entertainment systems, computers and other household gadgets all mean our living spaces are filled with a wide range of energy consuming equipment.



Quantity of energy use by different activities at home

The chart below illustrates the typical quantities of energy used around the home according to the four main areas of activity.

Space and water heating accounts for the most of energy we use at home, and can amount to as much as 83% of our total energy use, depending on how well insulated our homes are, the efficiency of our appliances and of course how we use them!

Lighting and appliances are the second largest consumers of energy followed by cooking.

Reducing our overall energy use at home is important if we are to reduce the amount of money we spend on fuel.

Measuring energy use in the home

Electricity is measured in kilowatt-hours (kWh). This means an appliance has used 1000 watts for 1 hour, such as a 1000 watt (1kW) electric fire. 1 kWh is also the same as the *one unit* used on our electricity bill.

Gas is slightly different; the initial units are recorded as Cubic ft or Cubic meters before they are converted into kWh.

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Energy management

As a guide, the average household uses between 14,000 kWh – 26,000 kWh every year for gas and electricity combined. Naturally this depends on the size and type of home, the number of people and how appliances are used.

Finally the proportion of energy used from gas and electricity can be broken down and is typically around 30% electricity and 70% gas.

Heat loss from homes

When warm air escapes, it is automatically replaced by cold air from outside which requires heating up, and so we have a continual cycle. Heat is constantly on the move, flowing from hotter to cooler areas. As a result, on colder days we need to replace the heat that is continually escaping to ensure a constant and comfortable temperature.

The most common parts of our home where heat escapes are through walls, windows, roofs (fabric heat loss) and gaps in-between window frames, doors, floor seals or electrical and plumbing outlets (ventilation heat loss).

There are a number of measures we can take to ensure we retain as much heat as possible when and where we need it, which means keeping our energy use and fuel bills down.

- Using heavy curtains in winter and closing them at dusk minimises the heat lost through windows during winter months.
- Closing livingroom or bedroom doors ensures most of the heat is kept in the space you need it, as opposed to heating hallways .
- Radiators operate best when they have plenty of space for the heat to circulate into rooms. Placing furniture such as sofas or beds against or very close to radiators prevents any heat generated from circulating into the room. As a result rooms do not warm up, we feel colder and energy heating up radiators is wasted.
- Badly fitting doors, windows, loft hatches, draughty letter boxes or fire places are all major sources of heat loss.
- Wear warm clothes at home in winter.
- Open internal doors instead of windows to cool down a home in winter.
- Avoid air conditioning and fans.
- Open windows and draw curtains to keep cool in summer, especially on south facing windows.

Heating

An overriding factor influencing running costs and CO_2 emissions is the type of fuel used to generate heat in the home. Other important factors include:

- The efficiency of the heating system.
- Amount of heat required to maintain comfortable living temperatures due to levels of insulation.
- The presence of heating controls and how they are used.

See our **Heating leaflet** for information on some of the features of different heating systems.

Heating Systems

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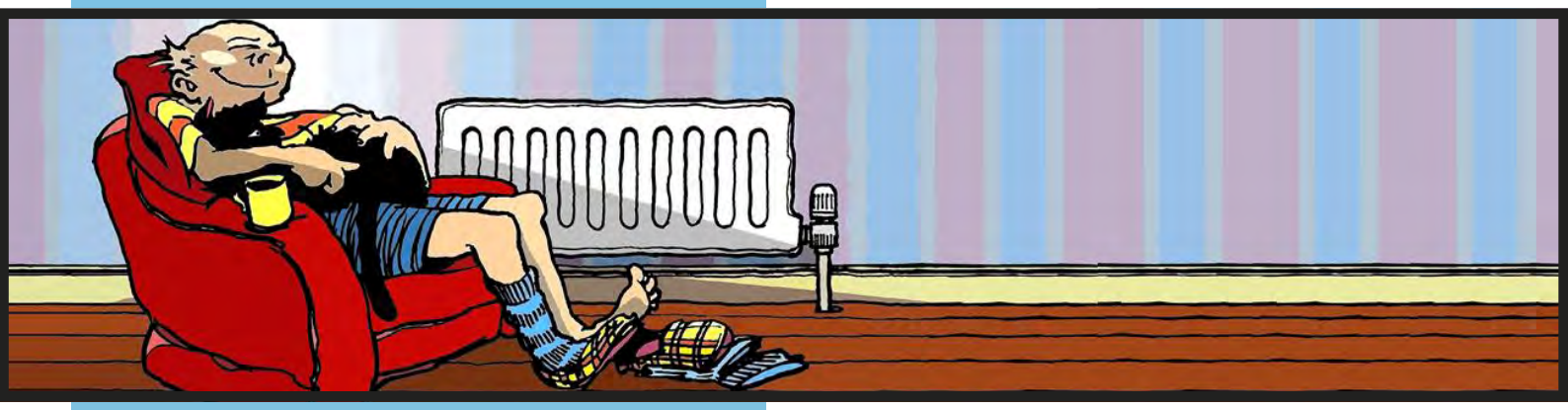

Heating

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1. The efficiency of the heating system
2. The amount of heat required to maintain comfortable living temperatures due to levels of insulation
3. The presence of heating controls and how they are used.

Here we summarise some of the main features of different heating systems.

Wet central heating systems with boilers and hot water tanks or combination boilers are amongst the most common types of heating systems, and tend to be the most cost effective to run.

Much depends on the type of fuel used - usually gas - and how modern the heating system is. They usually provide heat to traditional radiators or warm air heaters.

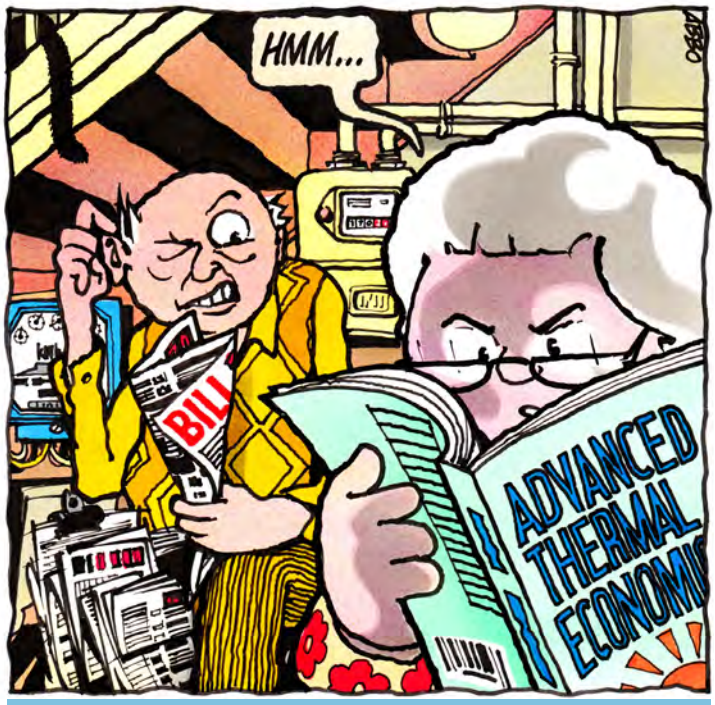
If you are replacing an old boiler, the new boiler should be A-rated, where 80% or more of the fuel used goes towards generating heat. Older boilers are typically 50% - 60% efficient or G rated. Replacing a G rated boiler with an A rated boiler can save up to £340 per year.

Electric storage heaters are expensive to run as electricity is the most expensive heating fuel. If you don't have a gas supply and are unable to change your electric heating then upgrade your heaters to high retention heaters with improved controls.

Individual and **portable room heaters** include gas flame-effect fires, open fires, electric fires, oil radiators, fan heaters or panel heaters. They all have very low levels of efficiency and are best used to provide background heat for short periods of time only. Halogen heaters and oil filled radiators are generally the cheapest to run.

Try to **avoid bottled gas** portable heaters**.** They have high running costs and present a high risk of condensation through the production of water vapour, and should be used in **emergencies only**.

Heating systems



Heating Controls

Our options for heating controls depend on the type of heating system we have, but in any case it is important to know how to operate the controls of our heating systems and have a good feel and understanding of how quickly your home heats up and loses heat.

Thermostatic radiator valves (TRVs) are fitted to individual radiators instead of hand valves and have a range of temperature settings signalling the valve to open or close automatically according to the desired temperature. The opening and closing of the valve adjusts water flow to the radiator.

As the thermostat reaches its set temperature, the valve controlls the amount of heat the radiator gives out. TRVs can be used to keep radiators on but at very low temperatures in individual rooms which need little or no heating.

Programmer or timer

The programmer tells the boiler what time of day to start and when to shut down. Ideally a good programmer will allow separate timing for heating and hot water, although this is necessary only where a hot water cylinder is present.

As a general rule, boilers should be set to come on 30 minutes before the first person gets up in the morning and to go off 30 minutes before the last person leaves home in the morning.

This also applies to coming home in the evening and before going to bed at night. In both cases the home will be warm when it needs to be. The amount of time you set the programmer for will depend on how quickly your home warms up.

Programmers can be easy to override in special circumstances, but it is important to switch back to using the programmer for managing regular heating patterns.

A **room thermostat** tells the boiler when the desired room temperature has been reached. In return the boiler stops firing, turning the boiler and eventually the heating pump off.

If your room or house is too hot, turn the thermostat down or open internal doors instead of opening windows as the heat generated stays inside your home.

Home Appliances

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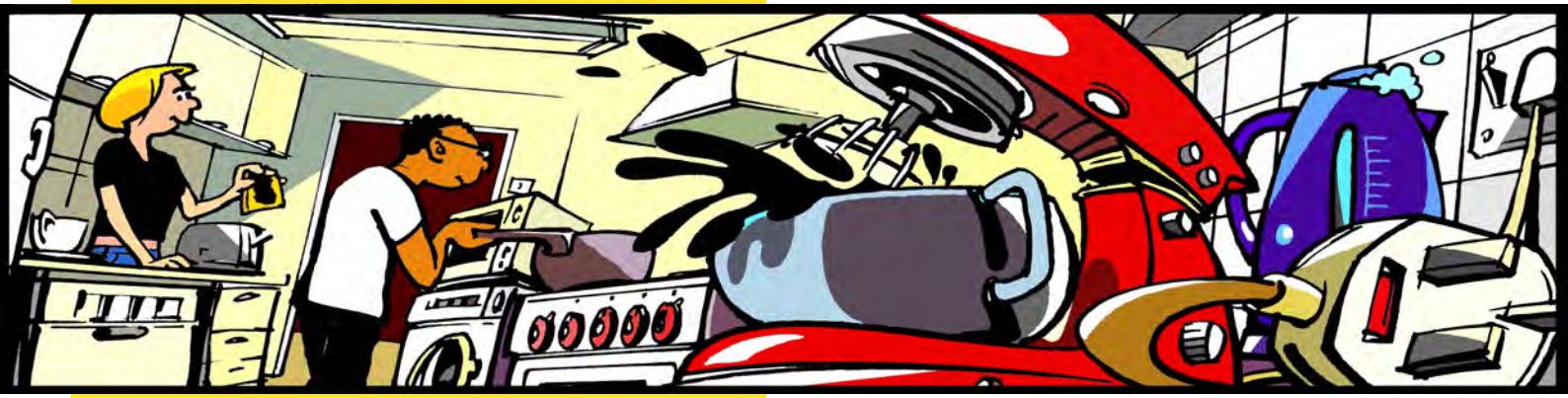
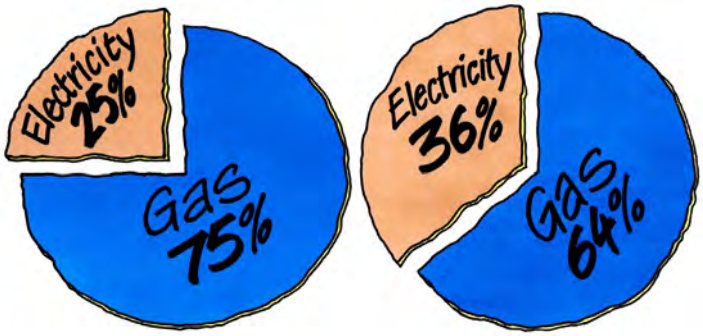


Home Appliances

As displayed in the pie chart below, on average, home electrical appliances make up a quarter of our home energy use.



Average home energy use **Average energy costs**

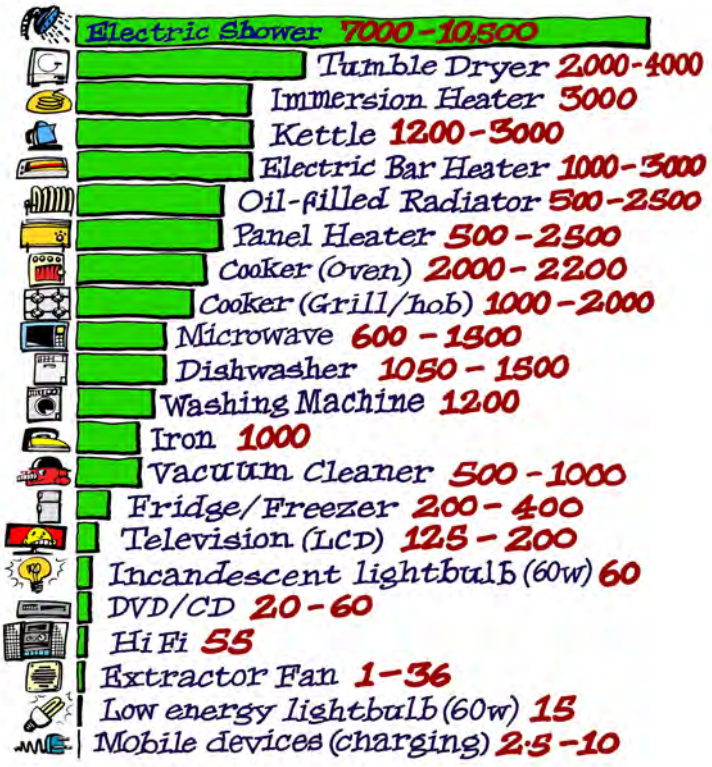
But importantly, as shown in the chart above, the running costs from electrical energy use is much higher in relation to the actual energy used. This fact adds to the importance of using home electrical appliances efficiently as well as heating.

Different appliances use different amounts of power and will be used differently from home to home. The table below provides a guide to the average amount of energy consumed from various appliances in watt-hours for every hour in use.

This type of information is useful when considering changes to make to reduce our energy use.

Energy Consumption

The obvious appliances are the large consumers, especially the tumble dryer and immersion heater, where large savings can be made in a short period.

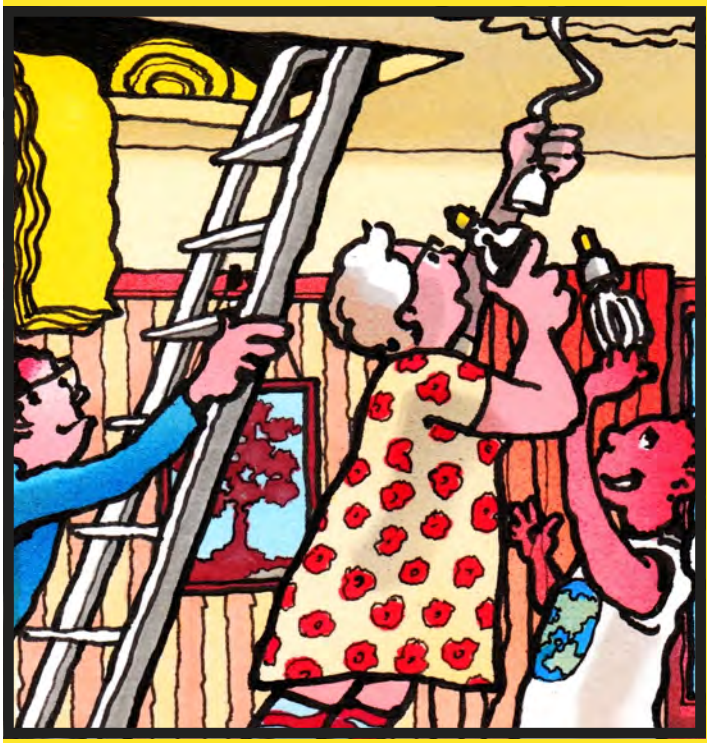


Energy consumption from different home appliances in **Watt-hours (1000 watt-hours = 1 kWh)**

Refrigerators and freezers consume over a quarter of all the electricity used in our homes, much more than any other household appliance.

- Your refrigerator should be of the right size for your needs.

Home Appliances



Lighting

Use natural light where possible, it's free!
Make sure you switch off lights when leaving the room and use low energy bulbs. The low energy bulbs last up to 10 times longer than standard bulbs, and are 75-80% more efficient. They can replace just about any type of traditional lamp.

Washing machines

Washing machines and dishwashers make up 14% and 7% of our average water use respectively.

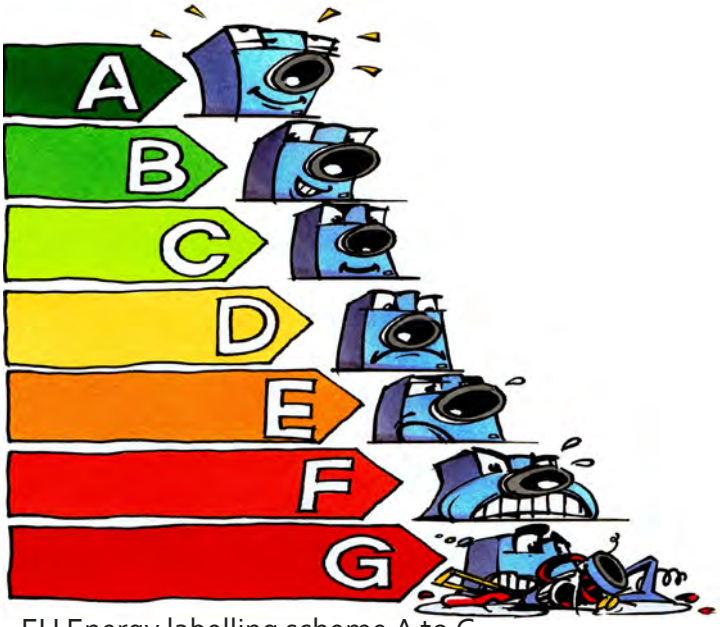
Heating water accounts for more than 80 percent of the energy used by dishwashers.
Try to have full loads and use the lower 30°C wash and economy setting where possible. **Tumble and spin dryers use a lot of energy!.** It's always best to dry clothes naturally, either inside or outside on a drying rack or line.

Energy labels are displayed on these products in shops and showrooms, allowing us to compare their efficiencies and to help make informed decisions about our purchases.

The energy labels show estimated fuel consumption based on standard test results, using an energy grading from A to G, where A is the most efficient, for cold appliances, A++ is the most efficient. An A-rated appliance will use about half as much electricity as a G-rated appliance.
A+ and A++ ratings for fridges and freezers were introduced in 2004 to highlight appliances which go beyond the highest standards expressed by the A rating.

These models can be anything from 25% to 60% more efficient than an A rated model.

In addition, in the UK we have the Government backed **energy efficiency recommended** logo which acts as a sign-post to appliances with very high levels of energy efficiency.



EU Energy labelling scheme A to G.

Energy bills

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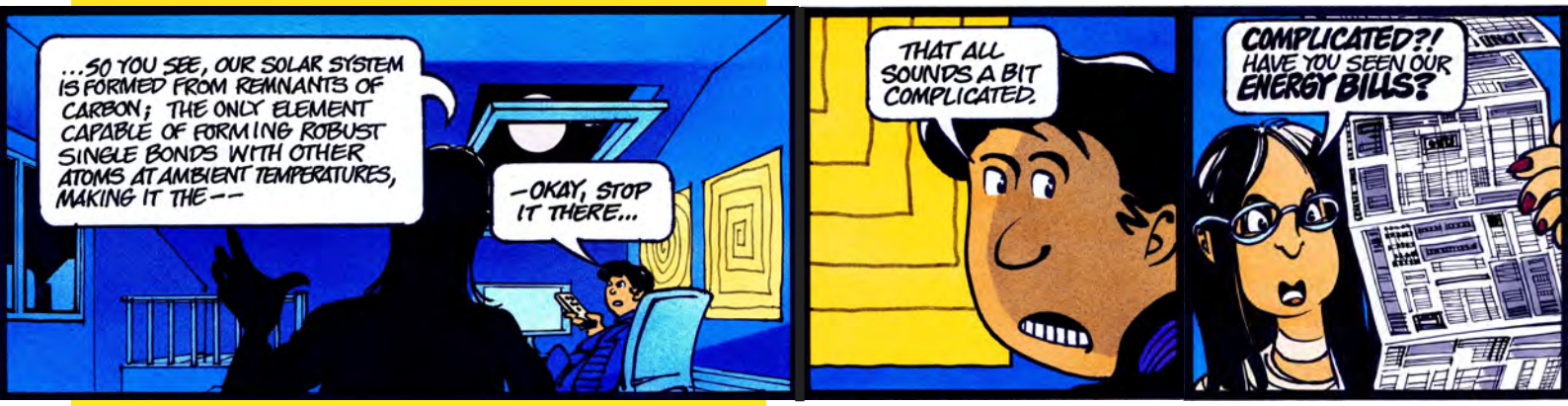

Energy bills

Energy bills can appear complicated but they need not be.

Most importantly, we need to understand how much we are using in units or kilowatt hours (kWh), and what we are being charged for by our suppliers.

Through understanding this, we can gain better control over the money we pay for gas and electricity and how much we are using.

Read your meters regularly

If your energy supplier estimates your bill it could cost you more, make it difficult to keep to your budget and put unnecessary strain on your finances!

By providing your supplier with regular meter readings and keeping a record of how much you have used, you will gain a much better understanding of your energy use and it will help you keep track of how much you are using.

Reading your meter regularly and sending a reading to your supplier every time you receive a bill will help you to keep on top of your payments and in control of your account. If you then receive a bill which is higher than expected, it's easy to spot, ensuring you only pay for what you have actually used!

On the other hand, you may find you have been billed for less than you actually used.

Stop ! While it maybe tempting to ignore this, don't. If you are regularly paying less than you should for the amount of energy you use, sooner or later your fuel company *will* read your meter and bill you for the amount owing and there goes your well planned budget out of the window...!

Once you have a good idea of how much energy you use on a monthly or quarterly basis, take the time to consider any significant changes you can make to your energy consumption.

Monitoring whether your energy use goes up or down can provide useful indicators as to whether the things you have done differently during a given period, are having an impact on your bills.

Energy consumption

Payment methods

Paying by regular monthly installments will help you to keep control of your bills.

Often, your suppler will offer discounts if you pay by direct debit and have online bills. If direct debit is not possible, check with your supplier to see if there are other cheaper ways of paying.

Dual fuel and direct debit payment methods are usually the cheapest.

Standard payment methods offered by suppliers include:

- Fixed or Variable
- Cash or Cheque
- Direct debit (quarterly or monthly)
- Standing order
- Budget scheme/cash plan - (payment card)
- Prepayment meter (card/key)
- Third Party deduction - Fuel direct (payment taken direct from DWP)

Understanding your energy bills

It is really worthwhile taking the time to understand your electricity and gas bills. Have a look at our example of a typical gas and electricity bill. It also includes a summary of some of the important and useful information you will find in a utility bill that you should be aware of.

Things to do:

1. Record - Give or take responsibility for keeping a record of how much energy is used in the home. This involves taking regular meter readings; monthly if you have an account or weekly if you pre-pay. It will help you and other members of your household to understand how energy is used in your home and identify ways to help manage and reduce energy use.
2. Check - Check your energy bills every time you receive one, and compare your suppliers readings with the ones that you have recorded yourself. If the suppliers readings are estimated, contact them and give them an actual meter reading so you are billed for what you have used.
3. Compare - Compare bills and readings with past bills. Compare cost as well as energy use. It will help you to identify trends in your energy use and price changes from you supplier.
4. Share! - Compare your bills with friends and neighbours, especially those living in similar properties. It presents a great opportunity to share information and tips if one households bills are lower than another and to discuss how to reduce energy use and costs.
5. Set Targets - Have a goal to achieve a certain level of energy use at the end of the week, month or year. If you use £20 per week or consume 300kWh per month on your electricity, set a target for maybe £19 per week or 280 kWh per month. The savings do add up!

EXAMPLE UTILITY BILL

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Electricity summary

(1) Electricity account: 0123456789

	(4) Last reading	(5) This reading	(6) Electricity units used	(7) Cost Split	Charges
Charges for Tariff - Standard Sign Online 14/ Month Direct Debit				**(2) Meter Number:** 01232456789	
	22/10/2015 37760	23/04/2016 38310	550 kWh	**(9) first 550 at 8.900p**	£48.95
	(8) Standing Charge (part period)	Actual		**(10) 183 days at 15.100p** per day	£27.63

Cost of Electricity used this period	£76.58
Dual fual discount	-£50.00
Subtotal (excluding VAT)	£26.58
VAT at 5% on 26.58	£1.33
Total Electricity Charges for this period	**£27.91**

(3) Your Supply Number

S	01	234	567
	89	1011 1213	141

Gas summary

Gas account: 0123456788

	Last reading	This reading	Gas units used	Cost Split	Charges
(11) Charges for Tariff - Gas Sign Online 14/ Month Direct Debit				Meter Number: 01232456788	
	22/10/2015 1792 **(12) Estimate**	08/12/2015 1856 Actual	64 (cubic meters) = 714 kWh		
	18/12/2015 1856 **(13) Actual**	21/04/2016 2139 Actual	283 (cubic meters) = 3159 kWh	First 3873 at 3.386p	£131.22
	Standing Charge (part period)			181 days at 15.100p per day	£27.33

Cost of Gas used this period	£158.55
(14) Dual Fual Discount	-£50.00
Subtotal (excluding VAT)	£108.55
VAT at 5% on 26.58	£5.43
Total Gas Charges for this period	**£113.98**

(3) 'M' Number	102345678
(15) Calorific Value	39.3
(16) Correction Factor	1.02264

Energy consumption

1. **Gas/ electricity account** – Number. Usually the first thing you're asked for when you contact your utility company. It's always good to have a copy of your most recent bill to hand
2. **Meter number** – Specific to your meter.
3. **Supply Number or (MPAN)** – Your meter point administration or reference number. Specific to your property.
4. **Last reading** – Refers to the reading taken just before your last bill was calculated.
5. **This reading** – Your current or latest meter reading.
6. **Units used** – The difference between "This Reading" and the "Last Reading", used to calculate the number of gas or electricity units used in the period.
7. **Cost Split** – Some energy suppliers will charge using different **'tiers'.** This means that you are charged a certain rate until you have used a certain amount of electricity or gas. Once you go over that amount you are charged a different (usually lower) rate.
8. **Standing charge** – A fixed (minimum) charge for delivering your utilities. Plans with a standing charge usually only have a single tier.
9. **First 550 at** – Number of units (Tier 1) you are charged at a specific rate.
10. **XXX days at** – number of days over a particular period where you are charged a fixed price per day making up your standing charge.
11. **Charges for tariff** – A charge for the type of tariff you have signed up to – useful if you are going online to find a cheaper energy supply.
12. **Estimated** – Stating that the reading used is **not an actual meter reading.**
13. **Actual or Customer reading** – Stating that the reading used is accurate, taken by either you or a meter reader.
14. **Dual fuel discount** – Discount for buying gas and electricity from the same supplier
15. **Calorific Value** – Term used to measure the quality of gas supplied to your property, and is measured in Mega Joules per meter cubed (MJ/m3). The higher the calorific value (CV) the greater the amount of heat you will get when it is burned.
16. **Correction factor** – a number used to take into account the temperature and pressure variations (and resulting change in quality) in the gas supplied to our homes.

Energy Solutions is a London based charity providing sustainable energy advice and practical assistance to households, schools and businesses across North West London.

Meter Reading

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Reading your meters

It's easy to get them confused! Electric cables can be seen coming in and out of an electricity meter while thicker pipes and hoses come out of gas meters.

Electricity

Electricity meters show how much power has been used, measured in kilowatt hours (kWh).

Older meters have five dials. To read this type of meter, start with the dial on the left. Note the number that the pointer has just gone past, then view the next dial. If a pointer is directly above a number, making it difficult to read, look at the dial to its right. If it shows a high number, then the pointer has not passed the digit that it is hovering above. If it shows a low number it has.

Other digital electricity meters look like car milometers. These are easier to read, and again, if a digit is ever in-between, look at the one to its right to work it out.

An electricity meter reading should always be five digits.

Gas

While electricity is measured in kWh, gas is measured in cubic metres or cubic feet. Gas bills are converted from cubic feet into kwh but they should explain on the bill how they've been converted from cubic feet.

To read the meter, start on the left and note the digit that the pointer has just passed. If the pointer is directly above a number, you can tell if it has passed it or not by referring to the next dial.

Newer digital gas meters , like the electricity meters are easier to read. A dial gas meter reading should always be four digits and a digital meter 5 digits.
Ignore the digits in red!

Economy 7

Economy 7 is a different tariff that means you pay a cheaper rate at night (about 1/3 of the cost) and a higher rate during the day. Economy 7 will generally only be most cost effective if you use electricity for your heating and hot water and you use more than 80% of your electricity at night e.g. electric storage heaters.

Economy 7 tariffs use a different type of electricity meter which records your day and night usage separately.

Meter Reading

Reading your meters (cont..)

Pre - payment Meters

If you pay for your gas and electricity by pre-payment meter then your supplier will have installed a digital pre-payment meter which involves paying for your gas and electricity upfront.

This is a bit like a pay as you go phone where you have to top a card with credit to get your gas and electricity.

The top-ups work in a variety of different ways. You could have a smartcard, token or key which you will need to take to a PayPoint or Payzone shop, or Post Office.
More recently, some suppliers are even offering online or phone top up. Ovo Energy and Utilita for example, offer pre-payment top up by text, app, phone or online.

Smart Meters

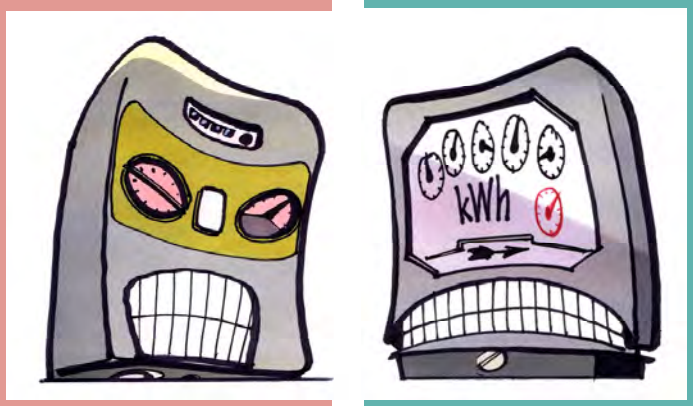
Smart meters' are modern gas and electricity meters designed to give you more information about your energy use and control over your bills.

Current government legislation requires energy suppliers to have replaced all gas and electricity meters with smart meters by 2020.

One of the advantages of using a smart meter is that the meter transmits the information directly to the supplier. Your energy bills will always be based on accurate information and not estimated usage.

If you have a prepayment meter then your supplier can provide you with a new pay-as you-go smart meter with new, additional ways to make payments although you can still use a card if you prefer.

All smart meters come with a **smart meter display unit**. This is a separate portable device with a display screen that you can put anywhere in your home. The display will help you monitor your gas and electricity usage and keep control of your bills.



Tariff Switching

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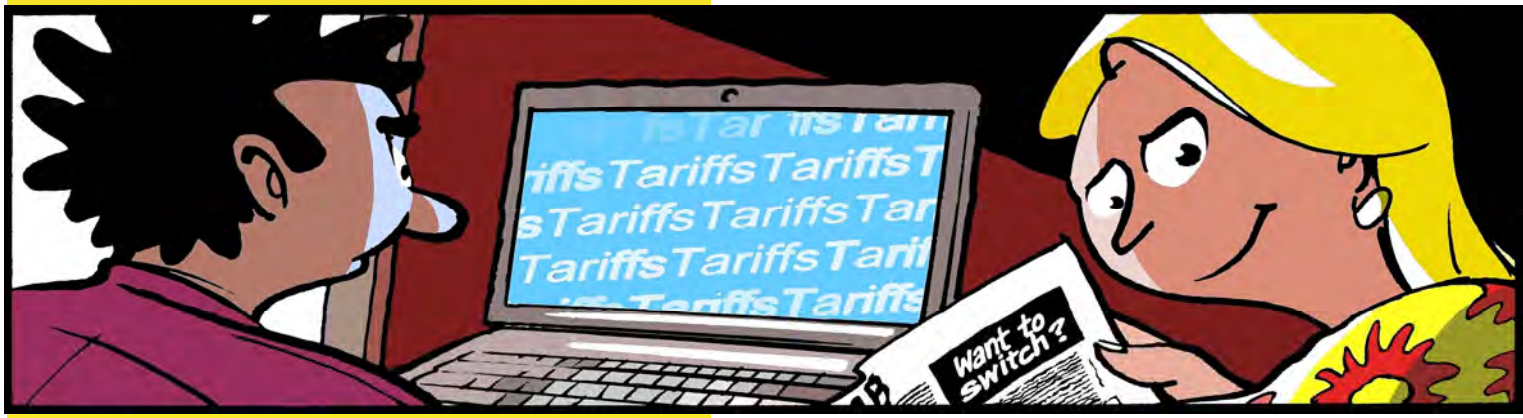

Are you on the best tariff?

Energy companies are obliged to give consumers the best advice about tariffs and payment plans so they know which tariffs are available and can choose the one that suit them best! Check your latest bills to see if you are on the best tariff!

Your supplier should also provide help if you are vulnerable or hard-up and need help accessing assistance in keeping your home warm at a price that is affordable.

Discounts

Energy companies prefer customers to pay a fixed amount each month and will offer discounts for doing this! If you are not currently paying by direct debit, it might be worth thinking about!

Suppliers also often offer discounts, about 10%, for having an online account and paperless bills.

Dual fuel

If you buy both your gas and electricity from the same supplier they will usually offer a dual fuel discount but check with your supplier first.

Meter readings

Every time you receive a bill check your meter as most bills are based on estimates! Provide your supplier with accurate meter readings, that way you stay on top of your bills and don't have to wait for a refund!

Switching

If you do decide you want to switch suppler you can use the following Ofgem accredited web sites to help get a better deal:

www.uswitch.co.uk / 0800 404 7908

www.money supermarket.com / 0845 345 1926

www.simplyswitch.com / 0800 0111935

Switching supplier should take 21 days, after a 14 day cooling off period, during which you can cancel your contract if you change your mind!

There are also **collective switching** initiatives or **energy clubs** which you can sign up for if you want a better deal for your gas and electricity. Once they reach their target they then go to the energy companies and negotiate a special deal, a kind of auction. A winner is then selected and you can then choose to sign up or not within a certain period.

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Budgeting

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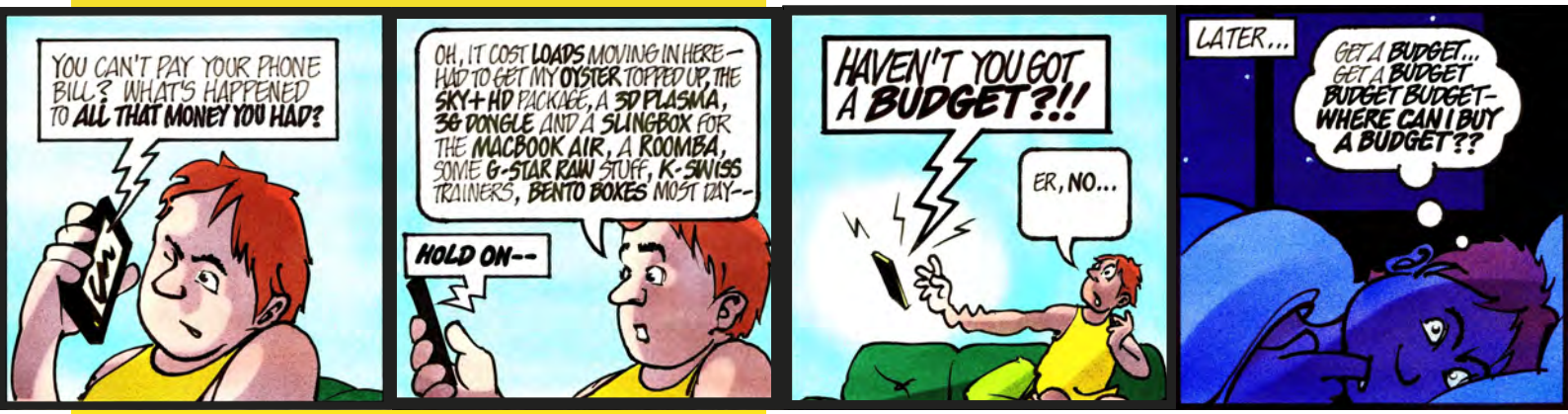

Budgeting

The best way to manage your money is to set a **budget.**

We all manage money differently.
Some people set a yearly budget, some half yearly, others quarterly, monthly or weekly.

Whatever method you use, the principle remains the same; to **balance your income against your spending!**

Setting a budget is easy, but sticking to it? That's the difficult part!

A good way to start is to list all your income and outgoings - **see our example budget**.

The example budget lists income and priority expenses (e.g. Council Tax, rent, water, gas and electricity). However, it is important to look at all the spending for your household whether you pay your bills weekly, monthly or yearly, to build up an exact figure of your outgoings.
Our example shows that this person has £51 left at the end of each week. Some of which they can put towards some important **savings.**

Example weekly Budget

Income	Amount
Salary/Wages	£250
Child Benefit	£33
Housing Benefit	£98
Council Tax Benefit	£21
Child Tax Credit	£0
Total Income	**£402**
Expenditure	**Amount**
Rent/Mortgage	£140
Council Tax	£26
Gas	£30
Electric	£20
Water	£10
Telephone/Mobile	£15
TV Licence	£3
Travel	£28
Food	£80
Total Expenditure	**£351**
Balance (Income - Expenditure)	**£51**

Budgeting

A budget can be created using nothing more complex than a notebook, an excel spreadsheet on a computer, a website or a budget application on your mobile phone. Use whatever is easier for you.

A great way to start is to use a weekly spending diary. Save all your receipts. This will give you a much more accurate picture of where your money goes.

Remember, try to work with what you have coming in each week or month. Avoid taking out loans or using credit cards which can be very expensive, and often have high interest rates.

Keep financial records of your bills.
This is very useful for identifying exactly how much is being spent on a particular item. A useful way of doing this is to keep your
paper bills in a folder, in date order so you can easily find different transactions. This can be a very useful reference for your budget.

Remember to plan for the future and set goals for items you may need. This will give you something to look forward to and keep you motivated when you are making sacrifices and working hard to improve your financial outlook.

Communication is vital. If you do fall into debt or you're worrying about your spending. Find someone you trust to talk to, maybe a family member, friend, or a professional advice agency. Preferably one that does not charge you for their services. Talk to them and let them know about your situation. Show them your budget and where you need help.

Discuss with your family how you can reduce bills or debts. Pay as you go with a monthly limit is a good option for children, to get them into the habit of staying within budget!

Talk to your provider. Ignoring bills will end up costing you more in the long run! The earlier you deal with a debt the easier it is to manage. If you do over spend then review your budget and make adjustments to make savings.

Always revisit and revise your budget on a regular basis. This will ensure that you are keeping on top of your spending, and to help you to find new ways to improve your finances.

Questions to ask yourself before spending

DO I NEED IT?	**WILL I USE IT?**
CAN I AFFORD IT?	**IS IT WORTH IT?**
HAVE YOU CHECKED PRICES ELSEWHERE?	
If the answer is "no" DON'T BUY IT!	

WATER

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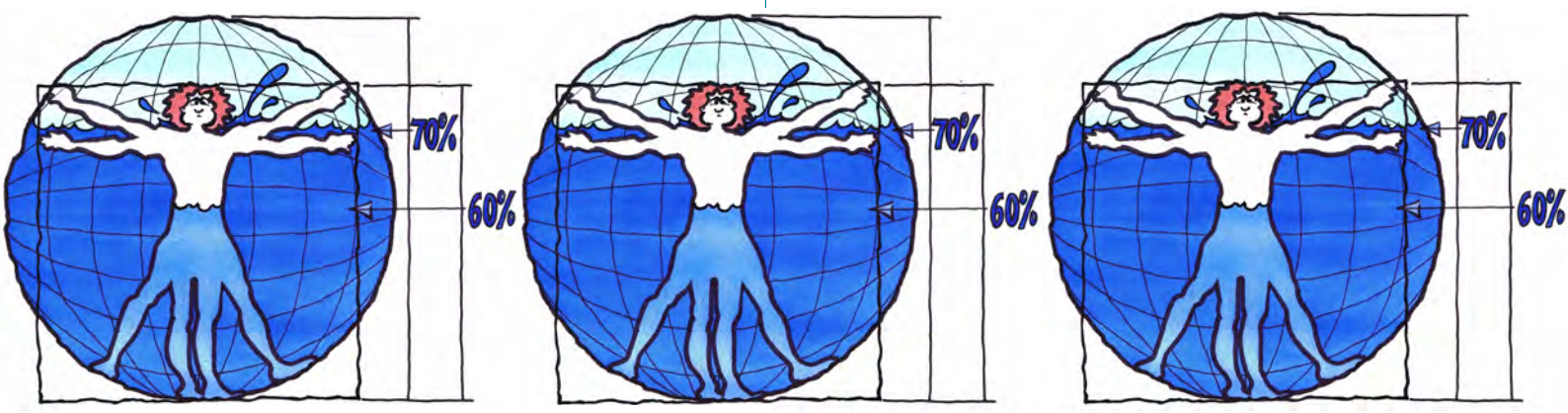

The average person in the UK uses 163 litres of water a day (that's a lot of water). But this can be reduced by using some simple water saving tips and devices.

By cutting our water consumption we can help make best use of this precious resource. We can also reduce the amount of energy required in its treatment and distribution, along with the associated CO2 emissions.

Water conservation can also save you money by reducing your water bills (if you're on a meter) and the cost of heating water in the kitchen or bathroom.

Most households will be able to find new ways to save water in the home. Many Households find fitting a water meter helpful, as it means their water bill reflects their actual usage and encourages people to use less. Choosing to switch to a water meter will usually your use by 6%.

How to save water and money

- If you prefer a bath then lower the water level and save up to 20 litres per bath!
- Installing an efficient showerhead or flow regulator can save up to £50 a year on energy bills and £45 on water meter bills.
- Old single-flush toilets use 9 litres a flush. Dual flush toilets average 5 litres. If you don't have a dual flush and your toilet was fitted before 2001 then request a free water saving device for your cistern from your water supplier

- Turn the tap off when brushing your teeth, washing or shaving. Leaving the tap running can waste up to 6 litres per minute!
- A shower timer (available from your water supplier) helps save water and money.
- Only use the washing machine if you have full load and use a low temperature wash.
- Only boil as much water in a kettle as you need.
- If you have a garden or outdoor space, you can **use a water butt** to collect and store rain water to use on indoor and outdoor plants.
- Fix leaks and drips. A single leaky loo can waste up to 400 litres of water per day – the equivalent of five full bathtubs costing up to £300 per year for metered customers! A dripping tap can also waste more than 60 litres of water per week!

To work out **how much water you use** and to calculate your water and energy savings, you can use the water and energy calculator on the Energy Saving Trust website: www.energysavingtrust.org.uk/domestic/water-energy-calculator

Energy Solutions NW (London) | Planet House | Birchen Grove | London NW9 8RY | Tel: 0800 169 5693
UK Company No: 3777588 www.energysolutions.org.uk Registered Charity No: 1086385

Water

Water use in the home

The main area we use water in the home is in the bathroom, followed by the kitchen and then the garden.

Water (and money) can be saved through a combination of a few simple changes in behaviour and through installing water saving devices.

Water use in the home

Hot Water

Hot water can account for a large percentage of our total energy use, especially in modern, well-insulated homes.

There are several ways in which hot water can be supplied. The most common are:

- Hot water cylinders heated by a boiler and/ or incorporating electric immersion heaters (using on or off-peak electricity)
- A combination boiler which directly heats the water.

If your cylinder is uninsulated, fit a hot water cylinder jacket which will insulate the tank, reduce heat loss and keep the water hotter for longer. This will reduce the amount of energy your immersion heater or boiler needs to reheat water saving around £40 per year!

A **cylinder thermostat** tells the boiler when the required temperature inside the hot water cylinder is reached. Without a cylinder thermostat, the boiler or immersion heater continuously heats the water in the cylinder to temperatures well above what is needed.

It is also better if the hot water is controlled separately from the central heating system through a programmer and timer, to prevent the boiler unnecessarily heating water in a cylinder when hot water is not needed.

Economy 7

Economy 7, is an electricity tariff that allows you to pay a cheaper price for your electricity at night (off peak) than during the day (on peak). As your hot water tank is heated using electricity, it is important therefore that the immersion heater heats the hot water during the cheap off peak period.

Heating the hot water during the on peak period is likely to prove very costly!

Set the timer on your hot water tank so that the immersion heater comes on during the night, even if you use the hot water during the day. Also check with your supplier as the off peak and on peak times vary between tariffs, regions and seasons.

Useful Resources

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Energy and Water

Centre for Sustainable Energy
https://www.cse.org.uk/advice
Useful energy saving advice for the home and community.

Energy Solutions
www.energysolutions.org.uk
Information and advice - ***including Grants,*** support and services covering a wide range of energy and fuel debt related issues with a particular focus on Brent and North West London.

Ofgem
https://www.ofgem.gov.uk/information-consumers
Information for consumers from Britain's energy regulator.

The Energy Saving Trust
www.est.gov.uk
A wealth of energy saving related information and useful tools and calculators.

Waterwise
www.waterwise.org.uk
Useful source for water saving advice

Which
https://switch.which.co.uk/
Useful energy/tariff comparison website by Which, the consumer organisation.

Budgeting

Credit Action
www.creditaction.org.uk
A national money education charity offering resources, tools and training to help everyone to improve their money management.

CCCS - The Consumer Credit Counselling Service
www.cccs.co.uk
Information and services for people in financial difficulty

Turn2us
www.turn2us.org.uk
A national charity that helps people in financial hardship to gain access to welfare benefits, charitable grants and support services.

Other

Citizens Advice Bureau (CAB)
https://www.citizensadvice.org.uk
A useful source of free independent and impartial advice.

Notes

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Energy Solutions is a London based charity providing sustainable energy advice and practical assistance to

Top 10 Tips

1. An uninsulated home loses a quarter of its heat through the roof. **Loft insulation** is a simple and effective way to reduce heating bills saving, approx. £150 per year!
2. Heat escapes from draughts around doors and windows. **Draught-proofing** windows & doors can save £25 to £35 a year on your energy bills
3. **Take control of your heating!** Having a room thermostat, programmers and thermostatic radiator valves installed can save approximately £80-£165 per year.
4. **Turning down your room thermostat** by just 1 degree can save you up to £85 per year!
5. **Turn lights off** when you're not using them. If you switch a light off for just a few seconds, you will save more energy than it takes for the light to start up again, regardless of the type of light. This can save you around £15 on your annual energy bills.
6. **Switch to low energy bulbs** such as **LEDs.** These can save you £55 per year or more over the lifetime of the bulb.
7. **Switch off your TV,** computers or other gear at the plug to avoid leaving them on standby. This includes laptops and mobile phones after they have been charged. This can save around £30 per year.
8. If your house has cavity walls look into having them filled with **cavity wall insulation.** This will cut your heating bills by around £135 a year and make your home more warm and comfortable.
9. **Wash wisely.** If possible, only use your washing machine, tumble dryer or dishwasher when you have a full load.
10. When buying new appliances, such as fridges, washing machines, TVs etc. look at the energy efficiency ratings and where possible **buy A –rated appliances!**

Energy Solutions is a London based charity providing sustainable energy advice and practical assistance to households, schools and businesses across North West London.

Illustrations by Jess Abbo