

Clear investment. Pure energy.

GUIDE TO ENERGY EFFICIENCY AROUND THE HOME



Energy bills are a major household expense. Using energy more efficiently will help to cut the cost of your bills as well as helping the environment by reducing your carbon emissions.

Jersey Electricity wants to help you save energy by using your electrical appliances as efficiently as possible. By following the tips in this guide, you should be able to cut your bills and your carbon emissions.

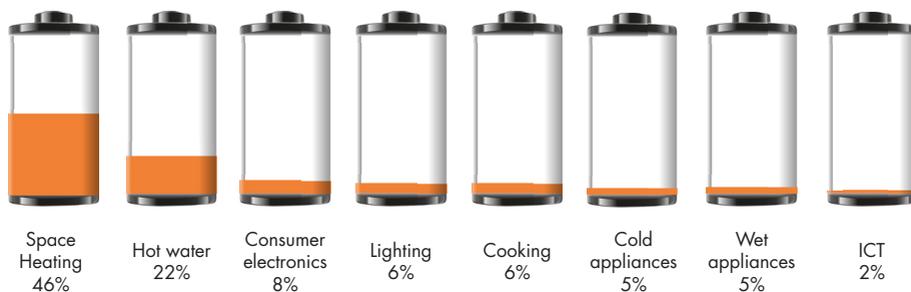
Calculating what you use

Your electricity consumption is measured in kiloWatt hours, or kWh for short, and this equates to one unit for billing purposes. Your household appliances are also rated in Watts or kiloWatts so you can calculate how much electricity each uses in a certain amount of time.

For example:

- A 1kW (1,000 Watts) appliance in use for one hour = 1kWh (one unit)
- A 3kW (3,000 Watts) appliance in use for one hour = 3kWh (three units)
- A 100W light bulb in use for 10 hours = 1kWh (one unit)

*Typical household electrical usage



*Source: UK Energy Saving Trust

Control your heat, control your bills

Around 70% of all energy consumed in the home goes on space heating and hot water production, so it is important to have an efficient heating system and be on the correct tariff.

If you have central heating, controls should ideally include a boiler thermostat, a timer or programmer, a room thermostat and thermostatic radiator valves (TRVs). Room thermostats should be set to the lowest comfortable temperature - typically between 18°C and 21°C. They need a free flow of air to sense the temperature, so they must not be blocked by curtains or furniture, or put near heat sources.

Thermostatic radiator valves (TRVs) on individual radiators enable you to have different temperatures in individual rooms. TRVs do not control the boiler. When the boiler is on, they control the flow of water through the individual radiators depending upon the room temperature. For example, they will turn a radiator off in a sunny room, or where there is another heat source. Set them to the level you want for the room; a lower setting uses less energy and so will save you money.

Three quarters of homes waste energy – and money – on heat lost through inadequate insulation. The UK's Energy Saving Trust estimates that 50% of heat in a typical home is lost through the roof and walls.

- Insulating your loft to a minimum depth of 270mm can reduce your heating bills by up to a third and cut your carbon emissions by approximately one tonne a year.
- Reducing your room temperature by 1°C could cut your heating bills by up to 10%. If you have

a programmer, set your heating and hot water to come on only when required, rather than all the time.

- Water doesn't need to be heated to a scalding temperature. Setting your immersion cylinder thermostat at around 60°C/140°F should be adequate for bathing and washing.
- Fitting an insulating 'jacket' around your cylinder will cut heat loss by over 75%, keep your water hotter for longer and reduce your energy bills.
- The average lifespan of a heating system is around 10-15 years. Replacing an old, inefficient boiler with a new efficient model, with the latest controls, can make a considerable difference to your heating bills.

Bright ideas to cut lighting costs

Traditional light bulbs (incandescent) are extremely inefficient. Only about 5% of the electricity they consume is converted into visible light.

Halogen light bulbs, mainly used in spotlights, are slightly more efficient but are often used in larger quantities, making rooms brighter than they need to be and more expensive to illuminate. Consider lower output bulbs.

Compact fluorescents (CFLs) use about 75-80% less electricity than traditional bulbs and can last up to 10 times longer. For example, you can replace a 40W standard bulb with a 7W-10W CFL, a 60W with 15W-18W, a 100W with a 20W-25W. But the most efficient bulbs are LEDs (Light Emitting Diodes). Though LEDs will cost more to buy originally they use a tenth of the electricity. For example, you can replace a 100W conventional bulb with a 10W LED, a 60W with a 6W, making them a tenth of the cost to run.

- Always turn lights out when leaving a room, regardless of how long for.
- Be conscious of how many lights you have on and whether they all need to be in use.
- Use appropriate lighting for what you are doing. For example, low background light while watching television and a bright, concentrated light for reading.
- Use a sensor and timer on external lights so they are only in use when they need to be.

Always check the label

Electrical appliances are being produced to be more energy efficient all the time. Replacing a fridge-freezer bought in 1995 with one of today's Energy Saving Recommended range, could save you up to £45 a year in electricity usage.

Today, all fridges, freezers, fridge-freezers, dishwashers, washing machines, tumble dryers, electric ovens, air conditioners and light bulbs are required to carry an Energy Efficiency Rating label.

These rate appliances on a scale of A (most energy efficient) to G (least energy efficient). Choose A-rated appliances whenever you can as these cost much less to run. Even more highly efficient appliances carry an A+ or A++ rating.

Cut the cost of cool

- Don't place your fridge or freezer next to the cooker or in direct sunlight but make sure air can circulate around the back.
- Don't leave the door open any longer than absolutely necessary by loading and unloading as quickly as you can.
- Don't put hot or still-warm food into your fridge. Always let it cool first.
- Use a thermometer to make sure you have your fridge and freezer at the correct temperature; too low and it will use more energy.
- Your fridge should be no more than 5°C. Your freezer temperature depends on its star rating: **** - 18°C or cooler, *** - 18°C, ** - 12°C, * - 6°C.
- Keep the coils at the back dust free, accumulated dust on condenser coils can increase energy consumption by up to 30%.

Recipes for cost effective cooking

- Don't overfill your kettle. Boil just as much as you

need but always make sure the element is covered.

- Use the correct size pan for the ring you are using.
- Using a steamer means you can cook several items on one ring.
- Use just enough water to cover vegetables and put a lid on the pan.
- Don't keep opening your oven door.
- Make toast in a toaster not under a grill.
- Use a microwave instead of a conventional oven when you can.



Don't stand by wasting money.

Don't leave your appliances on standby; turn them off when not in use. Chargers for appliances such as mobile phones, laptops and iPod chargers, still use energy to keep them powered down. Switching off and unplugging them can help save around £30 a year. Larger items, such as televisions, consume more power. Plus, you may not always remember to turn off every device that is linked to your TV or computer.

Modems, scanners, printers, DVD players etc can all be left running when you think you've switched them off. A "standby reduction" device will automatically turn these off when you switch off your TV or computer if these items are plugged into the specific "standby reduction" socket.



Appliances and their usage

Battery charger (12V) 30 hrs - 1 unit

Convector/Fan heater (2kW) 1 hr - 2 units

Conventional oven A week's meals for four - about 15 units

Cooker grill 1lb (0.4kg) of sausages - less than 0.5 unit

Cooker hob Breakfast for four - less than 0.5 unit

Cooker hood Over 10 hrs - 1 unit

Deep fryer Up to 3lb (1.4kg) of chips - 1 unit

Digital set-top box 24 hrs - 0.25 to 0.5 unit

Dishwasher (Cold fill) one full load - 2 to 3 units

DVD 24 hrs - 1 unit

Electric blanket

Single under blanket 1.5 hrs 7 days a week - 1 unit

Double under blanket 1.5 hrs 7 days a week - 1.5 units

Fan oven 48 meringues - about 1.25 units

Filter coffee maker 75 cups of coffee - 1 unit

Fluorescent strip light (40W) 20 hrs - 1 unit

Food mixer More than a cake a week a year - 1 unit

Freezer Upright One day - about 1 to 2 units

Fridge/freezer One day - about 2 units

Games console 8 hrs - 1 unit

Hair dryer (500W) 2hrs - 1 unit

Hair straighteners 1hr - 0.5 unit

Hot tub (3kW heater) pre-heating 6-8 hours - 18 units

Hot water Using a high performance factory insulated 210 litre cylinder, hot water for a family of four - 67 units per week. Typically, all of these units can be used on the heating tariff rates.

Instant water heater More than 13.5 litres - 1 unit

Iron 1 hr - 0.5 to 1 unit

Kettle 6 litres of boiling water - 1 unit

Lawnmower

Cylinder - 3 hrs - 1 unit

Rotary - 1 hr - 1 unit

Low energy light bulb (20W) 50 hrs - 1 unit

Microwave (800W) 1.25 hrs - 1 unit

Mobile phone/MP3 charger 100 charges - 1 unit

Oil-filled radiator (500W) 2 hrs warmth - 1 unit

Panel heater (1.5kW) 40 mins warmth - 1 unit

Power drill (500kW) 2 hrs operation - 1 unit

Radiant heater (3kW) 20 mins warmth - 1 unit

Refrigerator with freeze box 1 day - 1 unit

Shower (9kW) 5 mins, 7 days a week from 5.25 units

Slimline storage heaters

Use low cost off-peak electricity. Depending on the level of thermal insulation in the home, a 2.5 kW model uses an average of 45 to 75 units per week during the heating season. Larger models use proportionately more.

Slow cooker 8 hrs - 1 unit

Smoothie maker 100 smoothies - 1 unit

Steamer (350W) 1 hr - 0.35 unit

Stereo system 8 - 10 hrs - 1 unit

TVs

(28" widescreen) 12 hrs - 0.25 to 0.5 unit

(42" LCD) 6.5 hrs - 1 unit

Toaster 60 slices - 1 unit

Tumble dryer 3.6 - 5.4 kg load - 4 units

Under-tile heating matting (750W) 2 hrs - 1.5 units

Vacuum cleaner

Cylinder - every day for a week - 1 unit

Upright - 2 hrs - 1 unit

Video Recorder 12 hrs - 0.5 unit

Washing machine Weekly wash for four - 8 to 9 units



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