



# Greener Best Buys

We hail the greenest appliances and technology that we've tested – and reveal the energy guzzlers



**43%**

less energy used by 42" LCD TVs than 42" plasma TVs on average

**£15**

how much you'd save a year by switching to 30°C washes on some washing machines

**5,088**

the litres of water you'd save if you used an eco dishwasher program every day for six years

**T**he UK now uses more than double the electricity on appliances and lighting that it used in 1970, as a result of the growing population and a boom in affordable electronics.

Some manufacturers are using new technologies to try to limit the impact their goods have on the environment. For example, we've just tested 16 TVs that were launched this spring, and some of them were the most energy efficient we've ever seen.

In this feature, we highlight some of the greenest Best Buys, in terms of energy and water use, that we've tested and show the differences that they can make to your energy bills. These appliances combine excellent performance with great energy-saving credentials.

## Time to replace appliances?

The main environmental impact generally occurs when using, rather than manufacturing, a product. But there's also an environmental cost in disposing of old appliances, so determining the 'tipping point' at which it's environmen-

tally best to replace a working appliance with a more efficient new one isn't easy.

Trading in very old, inefficient appliances for newer models could save you money. The website [www.t2c.org.uk](http://www.t2c.org.uk) estimates that replacing a 10-year-old fridge-freezer with an efficient model would save 253kWh of energy a year – the equivalent of leaving a low-energy lightbulb on all day, for 752 days.

## Recycling and disposal

Under the WEEE Directive, shops must help customers recycle most old electricals – including items like washing machines, TVs and fridge-freezers – either through paying towards an electricals recycling facility at a council site, or offering a service themselves.

When you're shopping, ask whether the store will take away old items when delivering your new goods, or if you can bring unwanted small electricals to the store for recycling.

Alternatively, contact your council to find your nearest appliance recycling site or to arrange the collection of your old

goods. Some councils offer free collection; others charge up to £30. Or if your appliance still works, use a community recycling scheme such as [www.freecycle.org](http://www.freecycle.org) to offer it to someone else.

## New plans for energy labelling

Under an EU scheme, air conditioners, cookers and white goods are all given an energy-efficiency rating, from A to G. This has encouraged shoppers to buy A-rated products and has helped to raise efficiency standards.

In a recent survey, 91% of Which? members said the scheme was easy to understand. But it's due to change. Fridges and freezers that have previously been better than A-rated – A++ for example – may be labelled as A-40%, meaning they're 40% more efficient than A.

We think the EU scheme can be used as a guide. However, we've found that products don't always live up to their ratings, so we always carry out our own energy and water-use tests on appliances, as well as reliability surveys, to ensure you get a clearer picture.

**WHICH.CO.UK**  
Find out which boilers are most efficient and get simple tips on cutting your heating bills at [www.which.co.uk/boilers](http://www.which.co.uk/boilers)

## Washing machines

**Which? tests energy and water use across cottons and synthetics programs, reflecting the way you use your washing machine.**

**This gives us realistic data on running costs.**

The EU energy-labelling scheme can help you choose a greener washing machine, but be aware that its washing machine labelling test is based only on a 60°C cotton cycle.

### How can I be greener with mine?

**Switch to 30°C** Our cleaning ratings are based on tests using 40°C programs. However, in tests of 30°C programs using Best Buy detergents designed for low temperatures, cleaning results were good and we used an average of 40% less electricity per wash. Washing at 30°C, instead of 40°C, can save you around £9 a year on average. For more on detergents, see p57.

### Where can I find out more?

Find advice on cool washes at [www.which.co.uk/washingat30](http://www.which.co.uk/washingat30) and a video guide to using your machine more efficiently at [www.which.co.uk/greenerwashing](http://www.which.co.uk/greenerwashing).



which?  
**BEST BUY**

**Greener Best Buy**  
**71% Zanussi ZWF16581**  
£410

This Best Buy gets your clothes really clean. It uses Jetsystem+ technology, which adjusts the water and energy use according to the amount of washing in each load. The ratings below are based on washes using the Jetsystem+ option.

Energy use ★★★★★ Water use ★★★★★  
★★★★★ Energy label A Drum size 7kg



which?  
**BEST BUY**

**Greener Best Buy**  
**74% Miele W562 Prestige Plus**  
£649

The Miele W562's cotton program gets clothes spotless and gave excellent results in our tests on energy and water efficiency. The easy-care program isn't as impressive, which prevents it from getting five stars for overall energy and water use.

Energy use ★★★★★ Water use ★★★★★  
Energy label A Drum size 6kg



**Energy guzzler**  
**52% Hoover HNL662** £319  
Although this Hoover has an A energy label, we discovered high energy and water consumption on the easy-care program in our tests, and cleaning wasn't that impressive. Hoover gets a below-average rating in our reliability index. We think there are far greener options.

Energy use ★★★ Water use ★★★  
Energy label A Drum size 6kg

### How water use varies: Which? tests on easy-care programs (following machine instructions)

#### Annual water use in litres (washing twice a week)

**Maytag** MAF9602AES £724

2,683

**Bosch** WAE32464GB Exxcel £470

3,837

**Beko** WMXD760S £347

6,677

## Tumble dryers

**72% of Which? members own a tumble dryer. Although more efficient A-rated models are coming on to the market, most use a lot of energy and are only C-rated.**

You could switch to a gas tumble dryer. They cost nearly a third less to run than traditional electric tumble dryers (see graph below) but you may need to pay for installation.

### How can I be greener with mine?

**Wash wisely** Use a high spin speed on your washing machine to minimise excess water.

**Fill it up** Dry the maximum load every time.

**Maintain it** Cleaning the lint filter every time you use the machine prevents blockages that stop hot air from circulating freely.

### Where can I find out more?

There's a wealth of expert advice on choosing tumble dryers and using them efficiently at [Which.co.uk](http://Which.co.uk). Watch our video and top tips at [www.which.co.uk/tumbledrying](http://www.which.co.uk/tumbledrying) and search reviews of 107 machines for the greenest appliances at [www.which.co.uk/tumble-dryers](http://www.which.co.uk/tumble-dryers).



which?  
**BEST BUY**

**Greener Best Buy**  
**73% Siemens WT46W560GB** £849 (Condenser)

As an A-rated machine, this Siemens will use about half of the energy of a B-rated machine. Its cotton drying times are about average for a machine of this size and it dries synthetics more quickly than other models.

Running costs ★★★★★ Capacity 7kg Energy label A



which?  
**BEST BUY**

**Greener Best Buy**  
**71% White Knight ECO 43A** £280 (Gas vented)

With this model, drying is controlled by a timer and is impressive for cottons and synthetics. It takes 117 minutes to dry a full load of cottons, and it uses gas heat for the drum, so it costs less to run than an electric dryer.

Running costs ★★★★★ Capacity 7kg Energy label n/a



**Energy guzzler**  
**40% Indesit ISL70C** £218 (Condenser)

This Indesit has such a poor condenser that we don't recommend it. It's an inexpensive model, but running costs make it less efficient in the long term. Drying time on the synthetics program is longer than average.

Running costs ★★ Capacity 7kg Energy label C

### Comparative costs of using a typical gas tumble dryer and a typical electric model

#### 7kg capacity tumble dryer

Gas

£38

Electric

£95

#### Annual running cost (dryer used three to four times a week)

which?  
**MONEY SAVER**

## Fridge-freezers

**Cooling appliances are the biggest energy guzzlers in the home after central heating. We're focusing on fridge-freezers, as they're the most popular type of appliance.**

Few fridge-freezers are rated below A, but our tests show significant variations in their energy use. We provide running costs so you can see the real impact an appliance may have on energy bills. You should also consider an appliance's running costs against its capacity.

### How can I be greener with mine?

**Stock wisely** Fill your freezer, as this reduces the amount of air to be cooled, but don't overstock your fridge, as it'll need to work harder to maintain the right temperature.

**Cool it** Allow food to cool before freezing, as this stops the freezer from getting too warm.

**Monitor temperature** Check your freezer's temperature: it shouldn't be cooler than -18°C.

### Where can I find out more?

For more information on choosing and using fridge-freezers, and reviews of 102 models visit [www.which.co.uk/fridge-freezers](http://www.which.co.uk/fridge-freezers).



**Greener Best Buy**  
**79% Miele KFN12923** £678

**Freestanding** This frost-free Miele scores highly in all our tests, and cools and freezes fresh food quickly. Its fridge capacity is larger than average. Although running costs of £45 may not seem like good value, they are excellent given the overall size of the appliance.

Capacity 346 litres Running costs £45  
Cost per litre 13p Energy label A



**Worth considering**  
**59% Indesit BAAN12** £264  
**Freestanding** This A+ rated fridge-freezer isn't a Best Buy: it doesn't cool or freeze food as quickly as better models and isn't frost-free. But its low running costs are difficult to beat and at around £264 it's good value. Indesit fridge-freezers are rated as average in our reliability index.

Capacity 227 litres Running costs £26  
Cost per litre 11p Energy label A+



**Energy guzzler**  
**43% Frigidmaster MTRF140** £159  
This compact fridge-freezer seems like a bargain, but we found it wasn't energy-efficient. We also found that it didn't always reach the temperatures recommended by the Food Standards Agency. For its size, its annual running costs of £36 are high.

Capacity 99 litres Running costs £36  
Cost per litre 36p Energy label A

**Annual running costs of typical American-style, fridge-freezers. These are notorious for high energy costs, but size isn't a reliable guide to energy use**

	Purchase price	Running cost over six years
LG GWL227 (465-litre capacity)	£850	£540
Electrolux ERL6296KK1 (439-litre capacity)		£937 £282

## Dishwashers

**Buying an appliance to wash your dirty pots may seem like a backwards step if you're trying to be greener, but dishwashers can use less water than washing by hand.**

Using special eco programs, some dishwashers use as little as 12 litres of water to wash a full load of 97 items. That's just a bit more than a typical washing-up bowl. These programs generally use less energy, too, even though the cycle often lasts longer.

### How can I be greener with mine?

**Fill it up** Filling the dishwasher is better than washing fewer items on a half-load program.

**Load carefully** Don't put bulky items at the front of the machine – this can prevent water from circulating properly.

### Where can I find out more?

We have test results and reviews of 123 dishwashers at [www.which.co.uk/dishwashers](http://www.which.co.uk/dishwashers). For a video guide and more information on how to be greener when using your dishwasher, see [www.which.co.uk/dishwashervideo](http://www.which.co.uk/dishwashervideo).



**Greener Best Buy**  
**73% Bosch SMS69L09GB Logixx** £568

This full-sized freestanding dishwasher is a great choice for families. If you cram in a full load of 147 items and wash with the eco program, it uses only 11 litres of water. It's very quiet and easy to use.

Energy use ★★★★★ Water used on energy-save program 11 litres Place settings 14 Energy label A



**Greener Best Buy**  
**70% Bosch SRS55C02GB Classixx** £340

If you have limited space, choose a slimline Best Buy. This Bosch cleans well, but its eco program uses less water and energy than other models.

Energy use ★★★★★ Water used on energy-save program 13 litres Place settings 9 Energy label A



**Energy guzzler**  
**54% De Dietrich DQH740J** £780

This built-in dishwasher washes quickly and quietly. But we found its water use is far higher than on other machines, despite the presence of sensors to calculate the best conditions for each wash and its A energy rating.

Energy use ★★ Water used on energy-save program 21 litres Place settings 12 Energy label A

**Annual energy costs of typical main and eco dishwasher programs (used daily). All of our running costs are estimates based on current electricity prices**

	Main program	Eco program
Best energy costs	£44.16	£33.84
Worst energy costs	£82.27	£68.46



## Televisions

The trend for huge TVs has an environmental cost – the bigger the screen, the more power it uses. Plasma TVs are the worst offenders, using far more energy than LCD equivalents.

LED TVs like the new Samsung UE40B7020 (right) tend to use even less power. Instead of using traditional backlight lamps to illuminate the screen, they use hundreds of smaller, more energy-efficient light-emitting diodes.

Many new TVs also have 'ambient light sensors', which adjust the brightness of the screen according to how dark the room is. The sensors can dramatically reduce power consumption, as the graph, right, shows.

### How can I be greener with mine?

**Avoid standby** If your TV has a power-hungry quick-start standby mode, disable it. Switch it off at the socket or unplug it when not in use.

### Where can I find out more?

For more information, see [www.which.co.uk/tvbasics](http://www.which.co.uk/tvbasics), our interactive guide at [www.which.co.uk/hdtvguide](http://www.which.co.uk/hdtvguide) and the expert video at [www.which.co.uk/lcdvideo](http://www.which.co.uk/lcdvideo).



which? **BEST BUY**

**Greener Best Buy**  
**75% Panasonic TX-L32X10**  
£550 (LCD TV)

Panasonic delivers its usual mix of excellent picture quality and user-friendly functionality with this 32-inch TV. Power use is below average, and the light sensor lops off almost 20 watts more in low light conditions.

Power use (watts) On 86.3 Standby 0.3  
Light sensor 67.5 Eco mode 73.5  
Power rating ★★★★★



**Worth considering**  
**63% Samsung UE40B7020**  
£1,600 (LED TV)

This ultra-slim, 40-inch TV has a beautiful, vibrant picture, but its poor sound quality means it's not a Best Buy. As for energy efficiency, it's just set the new standard. It uses less power than any 40-inch LCD TV we've tested.

Power use (watts) On 90.3 Standby 0.1  
Light sensor n/a Eco mode 72.6  
Power rating ★★★★★



**Energy guzzler**  
**43% LG 32PG6000**  
£449 (Plasma TV)

It has Energy Star logos on its box and manual, but we found this LG uses almost 140 watts when switched on. This is very high for a 32-inch TV – most LCD TVs of this size use 100 watts. Power use in standby is low, however.

Power use (watts) On 139.6  
Standby 0.8 Light sensor n/a  
Power rating ★★

### Power consumption of 32-inch TVs in normal use and when using the ambient light sensor

	Normal use (watts)	Using light sensor in low light conditions (watts)	% energy saved
LG 32LG6000-ZA	87	40	54
Sharp LC-32X20E	118	59	50

## Recording TV

The digital revolution means that a typical household may have several recording and receiving boxes plugged into the TV, as well as a home-cinema system.

As a whole, we've seen few energy-saving features in this field, apart from occasional auto-power-off functions, which switch your appliance into standby if it's been idle for a time.

### How can I be greener with mine?

**Personalise your setup** Switch set-top boxes and DVD players off at the socket or unplug them when not in use. You may want to leave your PVR or DVD recorder on standby to retain your recording schedule. Many products have power-saving modes – Humax PVRs can be set to power down to standby at certain times, for example. Turn these modes on to minimise energy use.

### Where can I find out more?

For more information about power use, see our product reviews of DVD recorders, PVRs and set-top boxes at [www.which.co.uk/tv](http://www.which.co.uk/tv).

**Greener Best Buy**  
**73% Panasonic DMR-EZ28** £180 (DVD recorder)

This Best Buy DVD recorder from Panasonic is easy to use and delivers good sound and picture quality. It's not too power hungry and has an eco mode that reduces its energy consumption even further.

Power use (watts) On 17.6 Standby 12 Eco mode 1.4

which? **BEST BUY**



**Greener Best Buy**  
**75% Humax PVR-9150T** £129 (PVR)

With this Humax PVR you can record up to 100 hours of TV and record more than one programme while watching something else. In low-standby-power mode it uses just 1.1 watts.

Power use (watts) On 18.1 Standby 3.2 Eco mode 1.1

which? **BEST BUY**



**Energy guzzler**  
**57% Techwood TW160DRA08** £130 (DVD recorder and PVR)

The TW160DRA08 is cheap for a DVD recorder/PVR, but we think its power use is a real letdown by today's standards, so buying one is a false economy.

Power use (watts) On 31.1 Standby 18.1 Eco mode n/a



### Annual costs of leaving an energy-efficient DVD recorder and a less efficient model on standby. The LG DRT389H would cost just 69p a year

	Annual cost of DVD recorder left on standby for 19 hours a day
LG DRT389H	£0.69
Techwood TW160DRA08	£15.67

which? **MONEY SAVER**