

# Appliances for greener kitchens



## WORDS

*Sarah Robertson*

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**OUR KITCHENS HOUSE SOME OF THE MOST** used appliances in the home – think refrigerator, dishwasher, and cooking equipment – so it’s worth giving thought to how to minimise their impact without detracting from their purpose. Efficiency ratings are important but there are other things to consider. Here, some sustainability experts discuss some key items to think about when purchasing kitchen appliances.

### FIT FOR PURPOSE AND APPROPRIATELY SIZED

Think about what size appliance you need to suit your requirements and lifestyle. “You may not need a large dishwasher if you are a retired couple in a small home (and you’re not keen on cooking or entertaining). A smaller dishwasher may be more efficient (and useable) in this situation,” says Danielle King. “Don’t forget to check for ‘eco’ cycles that enable short wash programs,” she adds. ATA technical editor Lance Turner also recommends reading product reviews before you buy, such as at [www.productreview.com.au](http://www.productreview.com.au)

### OPT FOR THE MOST EFFICIENT MODEL YOU CAN

Read the Energy Ratings label on the appliance or look it up on the federal government’s website at [www.energyrating.gov.au](http://www.energyrating.gov.au)

Give some thought to how often the appliance is on. If it’s a refrigerator it’s always on so you’ll want the most energy efficient model you can afford. Refrigerators can cost anywhere from \$80 a year to over \$900 a year to run, so choose carefully.

### CONSIDER COOKING EQUIPMENT

#### COOKTOPS

Unfortunately there is currently no energy rating system for cookers and there is debate about which type of cooker is the most efficient – gas or electric.

The most environmentally responsible options are an electric induction cooktop running on 100 per cent GreenPower, or a wood oven that uses sustainably harvested timber as its fuel source, says ATA policy manager Damien Moyse. If you’re not on 100 per cent GreenPower, gas has generally been thought to have lower greenhouse intensity than fossil fuel-based electricity from the grid. However there are increasing doubts about the stated emissions factors associated with natural gas – particularly when fugitive emissions from the gas supply chain are taken into consideration. Historically gas has been a relatively economical option, however Damien notes this is likely to change over the next decade as domestic gas prices rise to meet international market price points.

From an efficiency point of view, induction cooktops win hands-down. Sustainability expert Peter Reefman of Energised Homes says that gas is generally only 20–30 per cent efficient, because most of the heat does not absorb into the cooking pan/dish, while induction is generally 80–90 per cent efficient as the cooking pan or dish becomes the actual heating mechanism. Beyond Zero Emissions state that induction cooktops use less than half the energy of a gas cooker.

#### OVENS

Fan forced ovens are around 30 per cent more effective than conventional units, explains Danielle. “Look for ovens with high levels of insulation and triple-glazed windows for safety. Bench top convection ovens are very efficient for cooking. They use two-thirds of the power and cook in half the time, there’s also no pre-heating required.”

#### RANGEHOODS

Rangehoods should be externally vented, be self-closing, have easily cleanable filters and provide a good air-extraction rate.

## QUALITY

Quality is important as it can relate to the longevity of the appliance. “Looking for quality appliances minimises having to replace an appliance regularly, saving money and reducing waste in the longer term,” say Danielle. “There are several mainstream brands available these days that have good warranties, have ‘eco’ cycles and some manufacturers are now mindful of creating products that have a lighter environmental footprint during the manufacturing process.” Lance adds that quality can sometimes be difficult to determine as price is no longer necessarily a key indicator. “Many lower cost appliances last as long as very expensive ones and so are much better value,” he says. “User experience is usually a good indicator of quality, reading reviews etc., especially those of people who have owned the device for several years.” 5

Image: Rhiannon Slatter



## Oven efficiency

**Words** Alan Pears

Oven energy efficiency is affected by clock and electronic standby features, how well the oven is insulated and the cookware you use, as it takes longer to heat up a large dish.

Gas ovens and microwaves generally have the lowest emissions and running costs, although solar power, GreenPower, improved design and smart user behaviour may be changing this towards electric options. ‘Cool touch’ ovens tend to be better insulated, as they limit the temperature of the surfaces through insulation. Electric frypans and other benchtop cookers can also be more efficient than conventional ovens but unfortunately there is very little information available on the energy use of cooking equipment.

Glass doors or windows in oven doors should be at least double-glazed with a ‘low-e’ (heat reflecting) coating: this cuts heat loss through the glass by about two-thirds.

When using an oven, the first 10 minutes or so of heating up a well-insulated oven will use as much energy as the oven will use over the next hour, so cooking a few things at once is a good energy saver. Fan-forced ovens can also run at lower temperatures as the air movement improves heat transfer to the food.

Finally, defrosting food before cooking it in the oven cuts cooking time and reduces health risks by.

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## Should I upgrade my fridge?

**Words** Peter Allan

If your current fridge is getting old but is still working fine – should you upgrade it to a new, more energy efficient one?

A recent study [how recent is this now? Is it still correct to say this?] has found that over the past 12 years the average fridge has improved in energy efficiency by 67 per cent. Over ten years this could amount to \$500 to \$800 in saved running costs. However, we also need to consider the emissions impact and embodied energy of the goods we purchase.

The lifecycle environmental impact of items that use energy – fridges, cars and heaters – are usually greater for their operation than manufacture and disposal. As a result, if there has been a significant improvement in operating efficiency, recycling and replacement will probably win out over retention.

Also, if the fridge is more than ten years old, as a general rule of thumb you’ll achieve a better carbon outcome by recycling it rather than sending it off to be used by someone else.

[Ed note: See our products section on p89 for comments on fridge recycling schemes. See *Sanctuary 17* for Peter Allans’ complete explanation on whether to upgrade your fridge.]

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