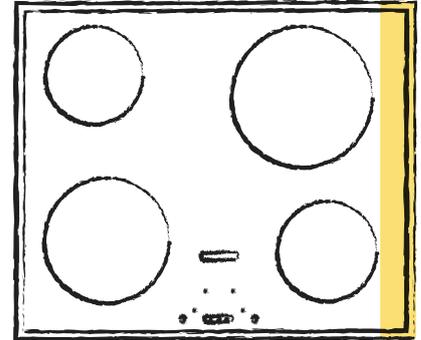


FACT SHEET

Cooktops



Snapshot

Emissions Saved	Moderate
Lifetime	13 - 15 years
Average upfront cost (before rebates)	\$600 - \$5,000 (plus installation)
Potential bill savings (without solar)*	\$280 over 15 years (\$20/year in 2024)
Rebates available	Yes (ACT, VIC)
Difficulty of installation	High (unless portable)
Electrical upgrade required	Often (unless portable)
Installers	Electrician (+ plumber if disconnecting gas)

Assumptions: Average cooktop energy use from the Residential Baseline Study 2021, adjusted to performance of different stove top types. 2024 energy and stove top prices. 15 year appliance lifetime. Excludes gas fixed/supply costs which would increase electrification savings. Energy prices for forward years are estimated with the historic real inflation rate of each energy type from the associated consumer price index category.

Introduction

Energy for stove top cooking makes up approximately 6% of appliance energy use in the average Australian household, and is one of the three main appliances that uses gas in a home (alongside water heaters and space heaters). While it's the smallest of the three gas users, it has the most direct impact on our health. Electric induction cooktops are more efficient, safer, cleaner and faster than cooking with gas or an electric resistance cooktop, which is why even renowned professional chefs are making the switch to induction.

Induction cooktops

Electric induction cooktops use a different heating technology to traditional electric or gas cooktops, using electromagnetic energy that directly targets the pot or pan.

Why choose an induction cooktop?



They use less energy - Induction cooktops allow 90% of heat to reach food, as opposed to 65-70% for electric resistive cooktops, and even less for gas cooktops.



They're cheaper to run - Due to their efficiency, induction cooktops are the cheapest to use.



They're faster - The efficiency and power of an induction cooktop means that food can be rapidly heated.



They're healthier - Research shows gas cooktops and heaters can be a major source of indoor air pollution that impacts the human body including the lungs. Unlike gas cooktops, induction cooktops don't release harmful gases such as formaldehyde, acrolein, particulate matter, nitrogen dioxide (NO₂), carbon monoxide (CO) which impact respiratory health, especially for children and individuals with asthma, allergies, or other respiratory conditions.



They're better for our climate - More than half of Australian households cook with gas, a polluting fossil fuel, so by switching to an induction cooktop, and ideally pair it with renewable energy, is the safest for our environment.



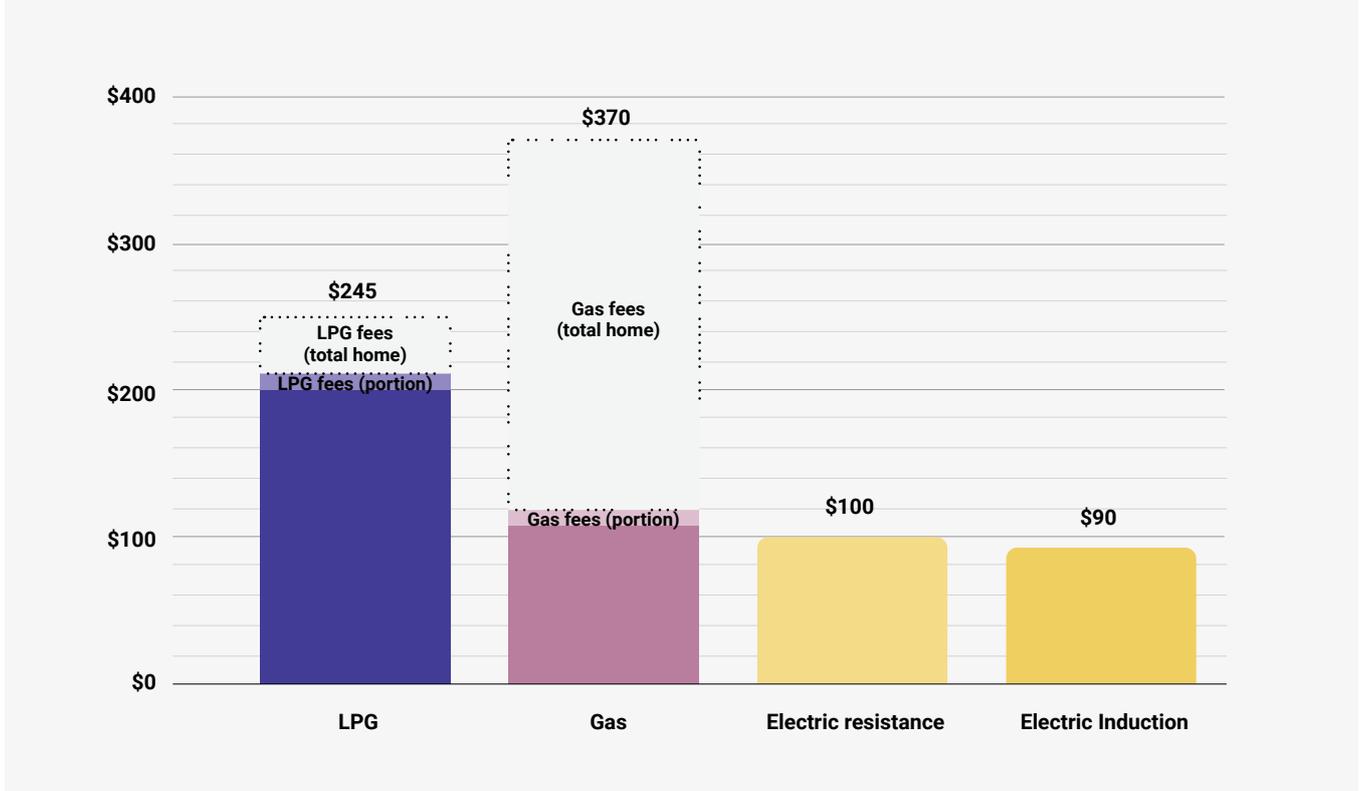
They're easier to clean - The smooth, flat surface is easy to clean since spills don't burn onto the cooktop, and it's simple to wipe down.

¹ <https://www.rewiringaustralia.org/report/castles-and-cars-discussion-paper>

² <https://asthma.org.au/triggers/gas-appliances/>

RUNNING COSTS: COOKTOPS

Yearly bill comparison (2024 prices), average Australian energy use and pricing



Sources: Rewiring Australia analysis. Residential Baseline Study 2021, induction cooktop efficiency 0.79, resistance cooktop 0.71, gas/LPG cooktop 0.30. Electricity \$0.33kWh, gas \$0.14/kWh, LPG \$0.29/kWh, wood \$0.13/kWh.

What to consider

An induction cooktop is the most efficient cooking option. Resistance electric cooktops are healthier and cleaner than gas cooking, however do not have the same efficiency benefits of an induction cooktop. In deciding how to upgrade your cooking, you may want to consider the following:



Types

There are two types of induction cooktops:

- Portable cooktops that don't require installation and can sit on a benchtop and plugged into a powerpoint. These are cheaper and (as the name suggests) portable.
- Installed cooktops, which need to be completed by a qualified electrician. An electrician will advise you on any electrical upgrading you may need, especially if converting from a gas cooktop.



Size

If installing an induction cooktop consider the size of the new cooktop as ideally it is the same size as your current cooktop otherwise you may need to amend your benchtop.



Compatible cookware

Induction cooktops work with cookware which have a ferrous base. This includes cast iron, steel, some enamelled steel, and most (but not all) stainless steel cookware. Glass, aluminium and copper generally do not work, unless fused with an iron core.



Electrical needs

An electrician may install an additional circuit from your switchboard as induction cooktops typically require 20A, 32A, or even 42A cables to accommodate their power demands. For most homes, it is unlikely you will need three-phase connection, but be sure to check with an electrician before purchasing a cooktop.

Getting It Installed

Research.

Visit appliance stores and work out which induction cooktop you want to purchase taking note of dimensions and power. Also research if you need to replace any of your cookware.

1



Electrical Advice.

Engage an electrician for advice on what additional circuits may need to be installed, if your switchboard needs upgrading and to receive quotes.

2



Gas removal.

If you're replacing a gas cooktop, a plumber will need to come and disconnect the gas and remove the old cooktop.

3



Install.

Your preferred electrician will make the electrical upgrades and install your new cooktop!

4



Government Assistance

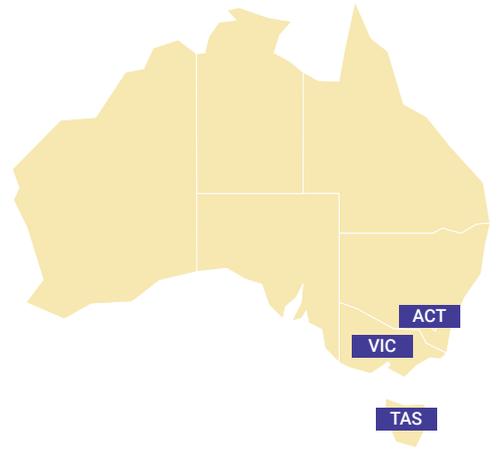
National Under the federal government's Household Energy Upgrades Fund you may be eligible to apply for a loan with discounted finance to afford the installation of appliances.

ACT **Home Energy Support Program**, households in the ACT can access up to 50% off the total installed price.

TAS Interest-free loans are available under the **Energy Savers Loan Scheme**

VIC **Victorian Energy Upgrades** (VEU) offers around \$140 off induction cooktops for eligible properties

Rebates current as of September 2024. Check energy.gov.au for latest updates.



Renters

Renters make up a third of Australian households, and are left behind on reaping the full benefits of electric efficient homes. Rewiring Australia, and other organisations, are advocating for better renters rights to rectify this, such as minimum rental standards and mandatory energy disclosure. Whether you're a renter or not, write to your MP and demand the same.



In the meantime, a portable induction cooktop is a great option for renters. A portable induction cooktop sits on your kitchen bench and plugs into your existing power points; no electrical upgrades or installation is required. A portable induction cooktop can be moved from house to house, is relatively cheap (less than \$100), and just as energy efficient as installed cooktops. They're typically limited to one or two elements, however, and have less power than an installed induction cooktop, but many happy tenants have simply popped a portable induction cooktop or two over their existing gas elements. Easy!

Other Cooking Items

No need to stop indoors, but why not electrify your sausage sizzle too? Electric BBQs are increasingly commonplace and can ensure no more topping up a gas bottle.

FAQ



What if I leave the burner on after cooking?

One of the benefits of induction, is the cooktop surface only heats when a pan is present so after you've finished cooking and removed the pots and pans, no heat will be generated making it safer than gas or traditional electric cooktops.

Do I need three-phase power for induction cooktops?

For most houses, single phased power is sufficient. But check with an electrician before purchasing an induction cooktop to check if any electrical upgrades are required.

How does the temperature control compare to cooking with gas?

Renowned chefs like Neil Perry have made the switch to induction because of its precise temperature control. Because induction cooktop directly heat the cooking surface and not the surrounding space (like gas), cooking temperature can be very precisely controlled.

Can I use an induction cooktop if I have a pacemaker?

It is best to check with the specific appliance details and a healthcare professional. Induction cooktops generate electromagnetic fields (EMF) which can affect a pacemaker if you get too close. The British Heart Foundation recommends "Keep a distance of at least 60cm (2ft) between the stovetop and your pacemaker. Most people should be able to use an induction cooktop if they follow these precautions.

What finance options are available?

Besides government rebates, there are private finance options available that may help you afford the upfront cost. Please note we do not endorse any of these options, and suggest you always consult a financial advisor. Here are some current options available:

- **No Interest Loan Scheme**, a federal government program administered by Good Shepherd for low income households
- Green loan finance offers from lenders such as **Brighte, Plenti, CommBank, Bank Australia**.

Useful Resources



- **Choice**
How to buy a great induction cooktop
www.choice.com.au/home-and-living/kitchen/cooktops/buying-guides/induction-cooktops

- **One step off the grid**
Does the switch to an induction cooktop mean expensive electric wiring upgrades
onestepoffthegrid.com.au/does-the-switch-to-an-induction-cooktop-mean-expensive-electric-wiring-upgrades/

- **British Heart Foundation**
Can I use an induction hob if I have a pacemaker?
www.bhf.org.uk/information-support/heart-matters-magazine/medical/ask-the-experts/induction-hobs-and-pacemakers



About Rewiring Australia

Rewiring Australia is a non-profit, independent, non-partisan organisation dedicated to representing the people, households and communities in the energy system.

rewiringaustralia.org

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