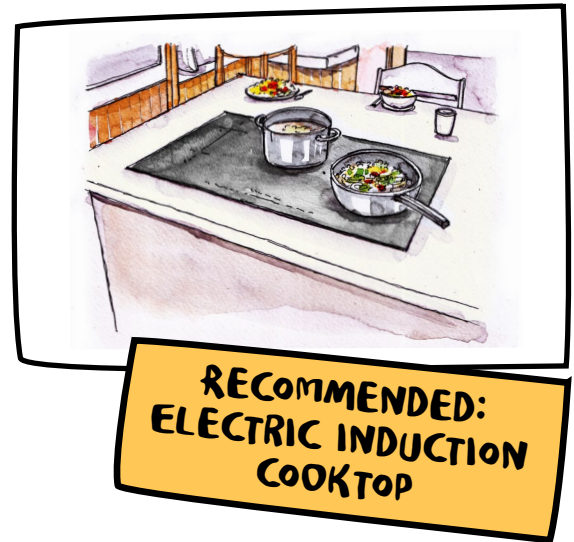




INTRODUCTION

Cooking is a relatively small use of energy in most homes, and most cooking (and refrigeration) is already electric in New Zealand. Cooking makes up around 5% of appliance energy use in the average New Zealand 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 because cooking with gas releases toxins into the air and one-in-eight childhood asthma cases have been linked to gas cooktops in the United States.

Electric induction cooktops are more efficient, safer, easier to clean and faster than cooking with gas or an electric resistance cooktop, which is why even renowned professional chefs are making the switch to induction.



BREAKDOWN

Average upfront cost	\$3,000 - \$5,000	excluding installation, varies depending on brand and features
Average annual costs	\$71	vs \$92 for gas and \$194 for LPG
Emissions Saved	Moderate	Around 2,000 kgs of carbon saved compared to gas or LPG
Lifetime	13 - 15 years	
Savings over 15 years	\$1,000	cheaper vs LPG gas stove
	- \$700	more expensive vs gas due to higher upfront cost
Rebates available	No	Many retailers offer low or no-interest periods for purchases of induction cooktops
Difficulty of installation	High	Unless portable
Electrical upgrade required	Yes	
Installers Required	Yes	Electrician (+ plumber if disconnecting gas)

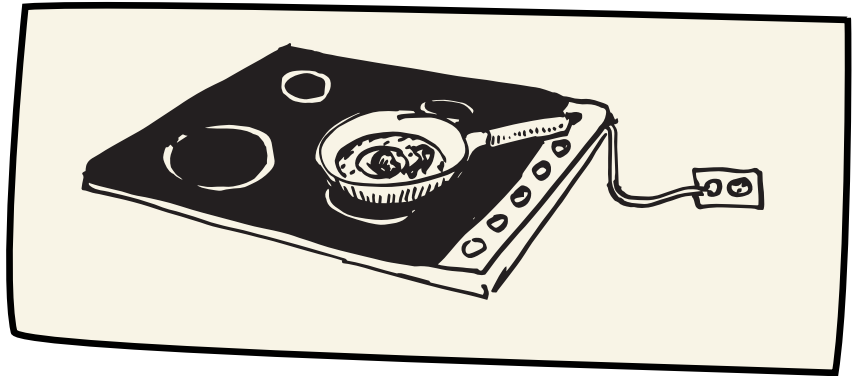


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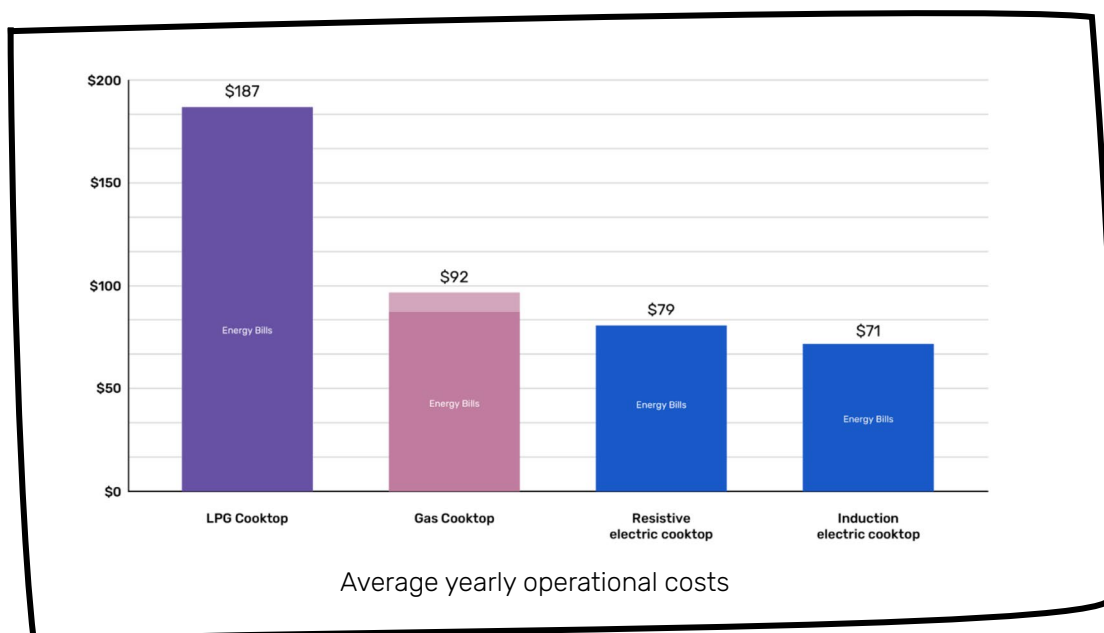
INDUCTION COOKTOPS

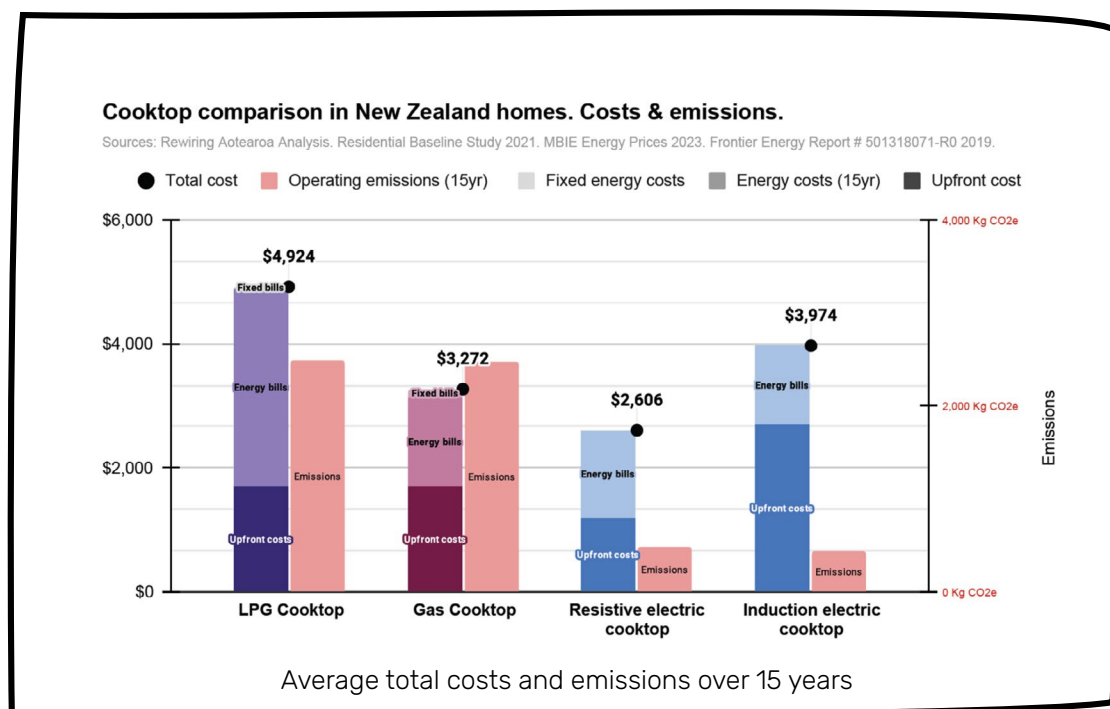
Electric induction cooktops use electromagnetic energy that directly targets the pot or pan so it's an entirely different type of heating technology to traditional electric or gas cooktops.



WHY CHOOSE AN INDUCTION COOKTOP?

- **They use less energy.** Induction cooktops allow 80-90% of heat to reach food, as opposed to 70-80% for electric resistive cooktops, and around 30% for gas cooktops.
- **They're cheaper to run.** Due to their efficiency, induction cooktops are the cheapest to use, but most of the savings will likely come from the ability to disconnect from gas if the cooktop is the last gas item in the home.
- **They're faster.** The efficiency and power of an induction cooktop means 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, particularly the lungs. Unlike gas cooktops, induction cooktops don't release harmful gases such as formaldehyde, acrolein, particulate matter, methane, nitrogen dioxide (NO₂) and carbon monoxide (CO). These impact respiratory health, especially for children and individuals with asthma, allergies, or other respiratory conditions.
- **They're better for our climate.** Around half of New Zealand households cook with polluting fossil gas, so switching to an induction cooktop and ideally pairing it with renewable energy can save up to 2000kgs of carbon emissions over 15 years.
- **They're easy to clean.** The smooth, flat surface is easy to clean since spills don't burn onto the cooktop, and it's much simpler to wipe down than a gas hob and all those annoying sticky outy bits.
- **They're safer.** While the metal on gas hobs gets extremely hot and can be dangerous for children (or careless adults), induction cooktops don't stay hot for long because they use magnets to directly heat pots and pans.





WHAT TO CONSIDER

- **Types:** There are two types of induction cooktops:
 - Portable cooktops that don't require installation and can sit on a benchtop and be 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 with 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.

RENTERS

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 are required. A portable induction cooktop can be moved from house to house, is relatively cheap (often around \$100-200), 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 as!

OUTDOOR COOKING

No need to stop indoors. Why not electrify your sausage sizzle.

GETTING IT INSTALLED

STEP 1

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.

STEP 2

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.

STEP 3

Gas removal

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

STEP 4

Install & Maintain

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

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?

Chefs like Pete Gawron, Michael Meredith and Des Harris have made the switch to induction because it directly heats the cooking surface and not the surrounding space (like gas). This means 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, 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 a hob if they follow these precautions.

What finance options are available?

Induction cooktops generally aren't eligible for green loans, but many appliance retailers offer long periods of no or low interest.

KEEN TO LEARN MORE? VISIT [REWIRING.NZ](https://rewiring.nz)

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