

FACT SHEET

Gas in the Home is a Health Risk

Introduction

Far from the healthy, natural image that is promoted, the use of gas for cooking and heating carries significant health risks in homes and schools. Gas appliances such as stoves, heaters, and hot water systems create harmful indoor air pollution that ventilation can only reduce, not eliminate. Recent research shows that gas stoves leak methane—the climate impact of which is comparable to emissions from hundreds of thousands of cars—and that cooking with gas exposes people to pollutants that harm health.

-  Cooking generates nitrogen oxides and fine particulate matter, which increase respiratory risks, especially for children, whether your gas stove is being operated or not.
-  The release of methane (CH₄), carbon dioxide (CO₂), carbon monoxide (CO) and nitrogen dioxide (NO₂) into your home can make indoor air up to five times dirtier than outdoor air.
-  Exposure to high concentrations of CO can lead to headaches, nausea, confusion, tiredness, shortness of breath, memory problems, chest pain, loss of consciousness and sometimes death.
-  Carbon monoxide is colourless, odourless and tasteless, meaning that victims are unaware they are being exposed.
-  Cooking with gas has asthma risks comparable to second hand cigarette smoke. 12% of the burden of childhood asthma in Australia is due to indoor gas stoves. Children living in a home with a gas stove had a 42 per cent increased risk of having asthma symptoms.
-  Pre-schoolers who had grown up with gas appliances in the home were at higher risk of developing symptoms of attention deficit hyperactivity disorder (ADHD) and had a lower level of general cognitive functioning.

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

What to consider

Induction Cooktops



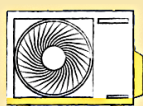
Induction cooktops allow 90% of heat to reach food, as opposed to 65- 70% for electric resistive cooktops, and even less for gas cooktops. Induction is cheaper to run, faster, easier to clean and better for our climate if paired with renewable energy.

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.

For renters, a portable induction cooktop sits on the kitchen bench and plugs into your existing power points; no electrical upgrade or installation is required. It can be moved from house to house, is relatively cheap, and just as energy efficient as installed cooktops. They are available with one to four elements, starting from around \$50.

However, they have less power than an installed induction cooktop, but many happy tenants have simply popped a portable induction cooktop over their existing gas elements. Easy!

Reverse Cycle Space Heating



Reverse cycle heating is 3 to 4 times more efficient than gas heaters, and 2 to 3 times more efficient than standard electric resistance heaters. So, they are cheaper to run and can save households around \$1,000 per year. If timed with rooftop solar production (for instance pre-heating a home during the day), running costs can be as low as \$140 a year.

Renters can consider a portable reverse cycle air conditioner or present information to the landlord as a case for a reverse cycle air conditioner e.g. the health impacts of gas appliances and the requirement that gas equipment should be serviced as outlined in the manufacturer's instructions or at least every two years by a licensed gas fitter. If the appliance is more than 10 years old, it should be serviced annually. (1.)

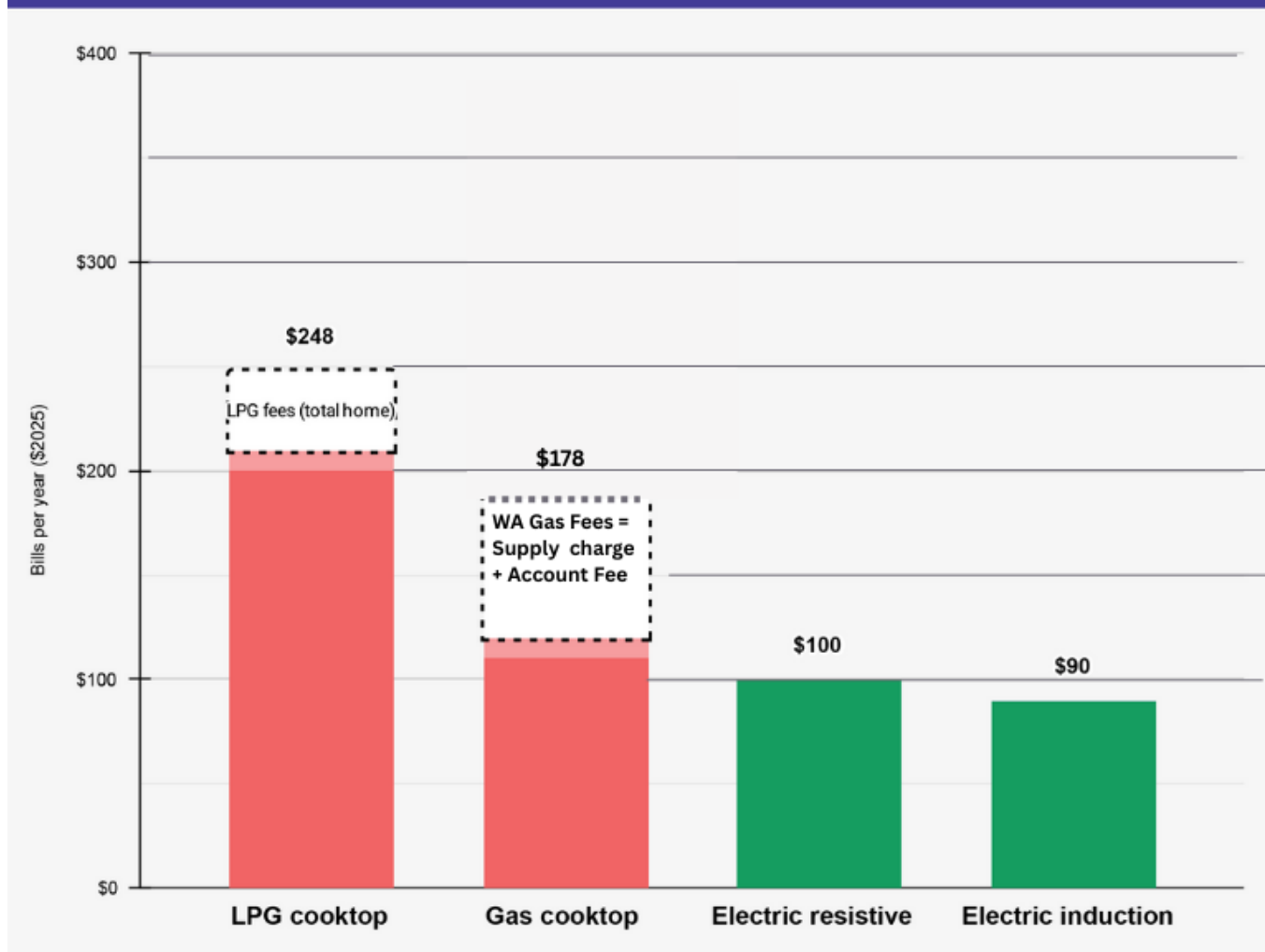
1. www.wa.gov.au/organisation/building-and-energy/gas-safety-home

How much do I save by having no gas supply charge?

Cooktop energy use is generally quite low in comparison to other household energy use. While electric cooking can save money on energy bills, a larger saving will often come from being able to disconnect from the gas network and avoid paying gas “connection” fees. E.g., with water heating and space heating, the savings from electrification over gas are large and clear, and the one remaining gas usage in the home then may be cooking, in which case electrifying the cooking will also save on all of the gas supply charge and accounting fees.

RUNNING COSTS: COOKTOPS

Yearly bill comparison (2025 prices), average Australian energy use and pricing



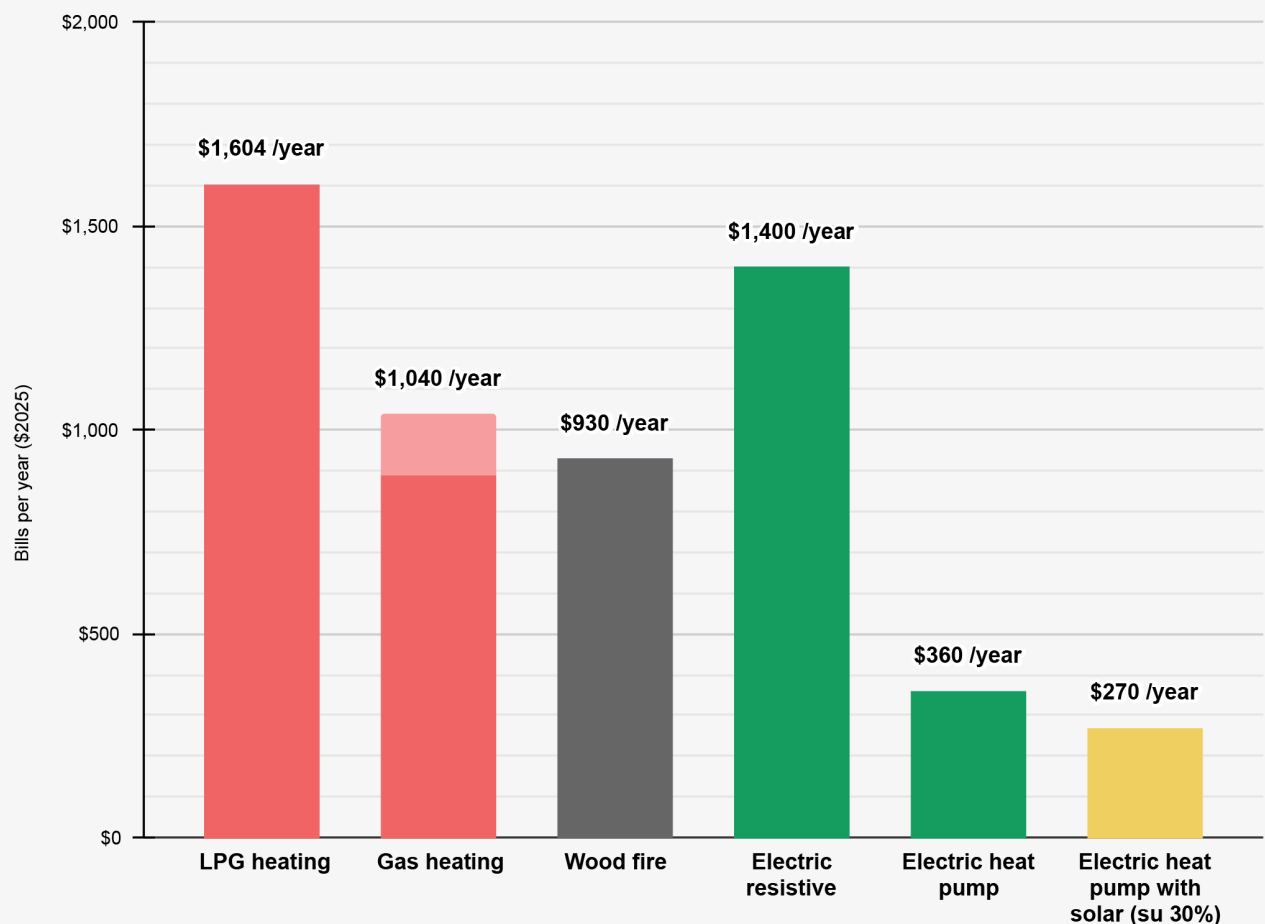
Sources: Rewiring Australia analysis. Residential Baseline Study 2021, induction cooktop efficiency 0.79, resistance cooktop 0.71, gas/LPG cooktop 0.30. Electricity \$0.32/kWh, gas \$0.15/kWh, LPG \$0.29/kWh.

How do I reduce the risk of gas in the household?

Ultimately, the best way to avoid the risk of gas appliances is to replace them with electric alternatives. Electric cooktops, electric hot water systems and reverse cycle air conditioners are clean, safe and efficient alternatives.

RUNNING COSTS: SPACE HEATERS

Yearly bill comparison (2025 prices), average Australian energy use and pricing



Sources: Rewiring Australia analysis. Residential Baseline Study 2021, heat pump COP 4.0, resistance 1.0, gas/LPG 0.8, wood fire 0.65. Electricity \$0.32/kWh, gas \$0.15/kWh, LPG \$0.29/kWh, Wood \$0.13/kWh. Solar \$814/kW financed at 5.5% over 30 years with replacement inverter. "su" is solar utilisation percentage.

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.au



Melville City Climate Action Network Inc.

is a grass-roots, non-profit, non-partisan, community organisation promoting actions to achieve reductions in greenhouse gas emissions.

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