

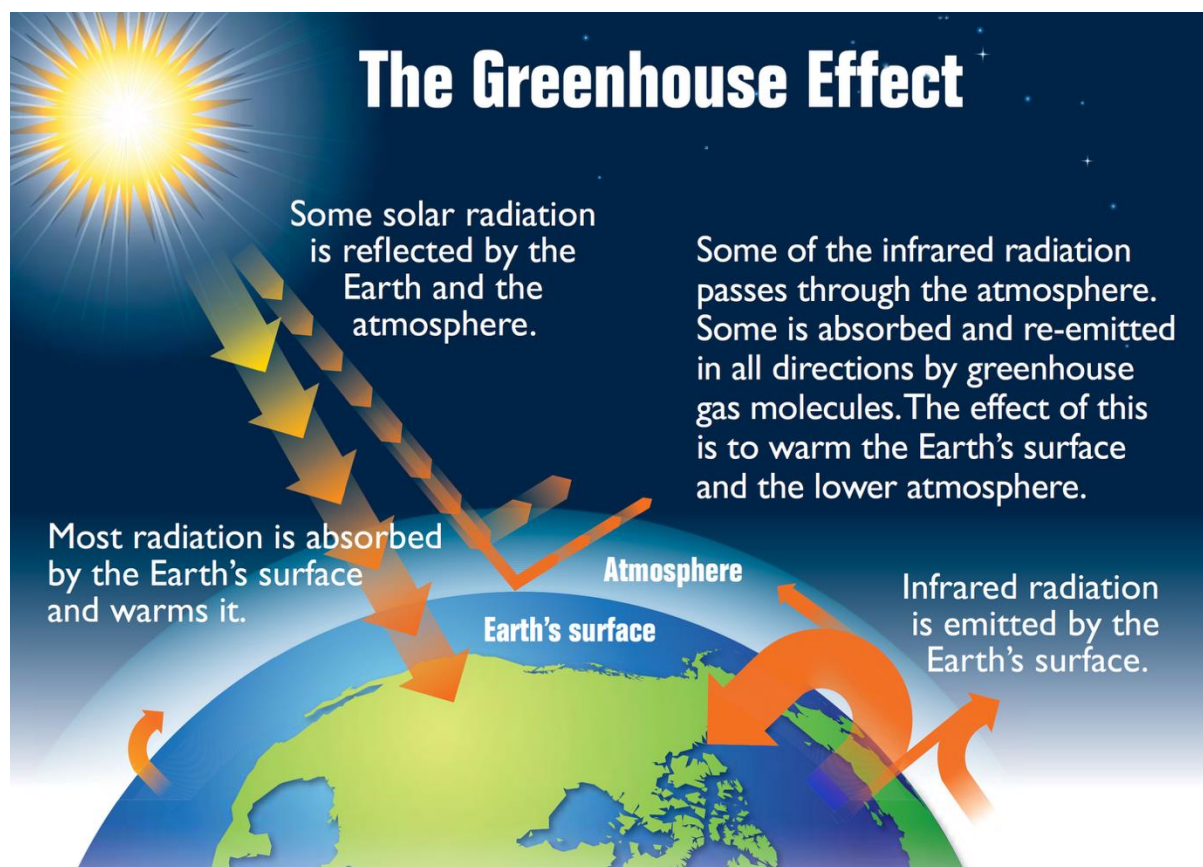
Climate Change and the Atmosphere: What It Means for Everyday Australian Households and How Can We Respond

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If Summers feel longer and hotter than they used to, if your insurance premiums keep climbing, or if your air - conditioner is running harder just to keep the house bearable, you are not imagining things. Australia's climate is changing, and those changes are already impacting our homes, bills and our health.

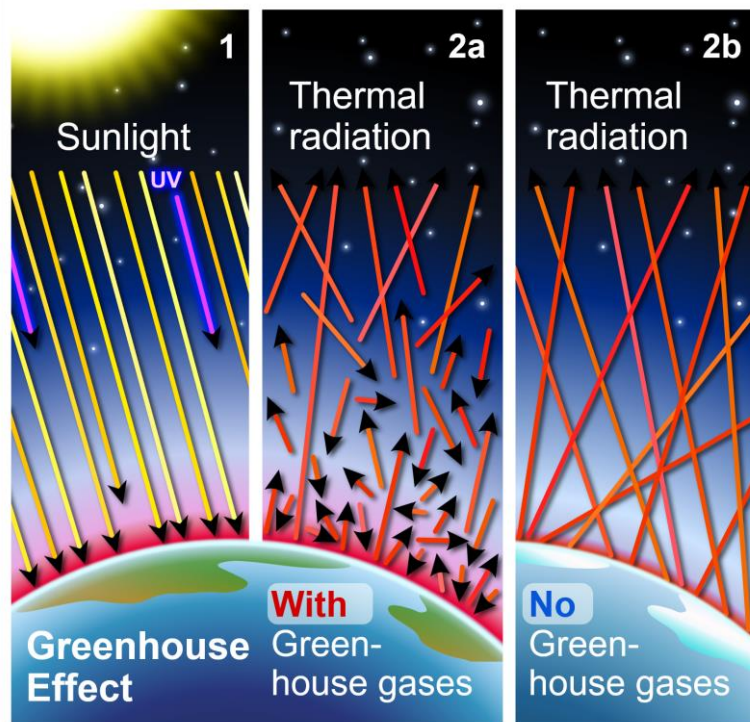
Australia's average temperature has risen by around 1.51 °C since reliable national records began being kept in 1910, with most of that increase occurring after 1950 (CSIRO, 2024). The main cause is the accumulation of greenhouse gases in the atmosphere, especially carbon dioxide released from burning coal, oil and gas. These gases act as an additional layer of insulation around the planet, trapping more of the sun's heat and raising the temperature higher year after year.

Burning fossil fuels to generate electricity, transport us, support industry and heat buildings releases carbon dioxide, methane, and other greenhouse gases, thickening the atmosphere's "blanket". This is known as the Greenhouse Effect which is how some of the heat from the Earth's surface is trapped by greenhouse gases in the atmosphere.



[https://commons.wikimedia.org/wiki/File:Earth%27s_greenhouse_effect_\(US_EPA,_2012\).png](https://commons.wikimedia.org/wiki/File:Earth%27s_greenhouse_effect_(US_EPA,_2012).png)

The Greenhouse Effect – how some of the heat from the Earth's surface is trapped by greenhouse gas in the atmosphere.



<https://commons.wikimedia.org/wiki/File:Greenhouse-effect.svg>

The Greenhouse Effect: sunlight reaches the Earth (panel 1). With greenhouse gases in the atmosphere, some of the heat is trapped and warms the surface (panel 2a). Without greenhouse gases, most of the heat would escape back into space (panel 2b).

There is some encouraging news. Australia's emissions have begun to fall, dropping 2.1 per cent in the year to December 2025, driven by record levels of renewable electricity generation alongside reduced coal and gas consumption (DCCEE, 2026). Even so, the warming already built into the climate system continues to drive more intense heatwaves, heavier rainfall, longer fire seasons and growing risks for ordinary households.

Impact on Australian Households

The first signs are practical and felt by many families. Australian homeowners are losing about \$4 to \$4.5 billion a year in insured losses from floods, bushfires, storms and cyclones due to extreme weather. Some reports indicate home insurance premiums have increased significantly, by around 51 per cent over the past five years, and hundreds of thousands of properties are at an increasing risk of becoming unaffordable or even impossible to insure (Authority, 2025; Council, 2026). Heat is the most silent and most deadly of all effects. (Authority, 2025; Council, 2026)

Today, heatwaves kill more Australians than any other natural hazard. One careful study alone linked more than 1,000 deaths to heatwaves from 2019 and 2026. Older people, young children, those with existing health conditions and people living in poorly insulated homes are most at risk. The threat to our health system is considered moderate to high, and it is expected to become severe by 2050 if warming continues (Service, 2025).

Other impacts are left in everyday life too: higher grocery bills after floods or droughts, more days when outdoor work or school sports are cancelled, and that nervousness when the power grid is pushed to its limits on the hottest afternoons. The people feeling the brunt of these pressures are lower-income households, renters and those in areas prone to flooding or fires- the very people who often have the fewest options to adapt

Practical steps towards a more sustainable

The good news is that many of the most useful responses begin at home and in the local community: householders can cut emissions, lower their bills, and make their places more resilient all at the same time.

Make your housework with the climate instead of against it

Heating and cooling typically account for the biggest portion of a household's energy bill. A few simple, low-cost moves can make a real difference. Seal the cracks around the windows and doors. Hang heavier curtains and

close them on hot days. Open them to let in the winter sun. In summer, set the air conditioner a little higher (around 25-27 C°); in winter, set the heater a little lower (18-20 C°). Every little helps. Insulation in the roof and walls, or even good draught-proofing, makes the place more comfortable during heatwaves and cuts the bills (Energ.gov.au, 2026).

Bring clean energy to home

One of the most effective steps many Australian households can still take is to go Rooftop solar. Pair it with efficient electric appliances – particularly a heat pump hot-water system and a reverse cycle air conditioner – and you reduce both emissions and running costs. Batteries are becoming more affordable and let you store daytime solar power for the evening peak. Government incentives still help with the upfront cost. Here, a realistic photo of an ordinary suburban Australian house with solar panels on the roof works well. It helps readers picture the solution in a setting they recognise. Good search terms on



<https://www.shutterstock.com/image-photo/engineer-safety-gear-standing-on-large-263722283?trackingId=3ca4e824-217f-40c5-a1df-b11c4167090e&listId=searchResults>

Rooftop solar panels – one of the most effective practical steps Australian households can take to cut emissions and reduce energy costs

Reduce waste and consider what we buy

Food that ends up in landfill produces methane, a potent greenhouse gas. Planning meals, using leftovers and composting are small habits that add up.

Repairing things instead of replacing them, choosing second-hand where appropriate, and removing unnecessary packaging all lower the energy demand built into the products we use.

Look after each other and our local environment

Your street could face flooding, fire or extreme heat at any point. It pays to keep an emergency kit ready. Support local Landcare groups, community gardens or neighbourhood networks that help people stay cool or recover after disasters. These connections make individual households more resilient and strengthen the wider community

Your voice beyond the front gate

Better policy for individual actions. Stronger higher national emissions targets, more equitable help for renters and lower-income households to upgrade their homes, and smarter local planning for heat and flood help to tackle the bigger atmospheric problem.

A Way Forward with HOPE

Climate change and the atmosphere can feel overwhelming at times, but we do not face these problems alone or without options. The science is clear, the impacts on households are real, and practical responses are within reach for most of us. Every sealed draught, efficient appliance, solar panel, reduced waste stream and

conversation with the neighbours brings us a little closer to safer, more comfortable homes and a more stable climate.

HOPE has a long history, but the message is just as true today: ordinary people, acting thoughtfully where they live, can make a real difference. The atmosphere belongs to all of us. By understanding the challenges and choosing practical everyday responses, Australian householders can support their own wellbeing and the living systems that support us all.

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