What Can I Do About Climate Change?

A Ranked Action Guide for Australians

Based on evidence from Project Drawdown, ClimateWorks Australia, CSIRO, IEA & leading peer-reviewed research

Australia is one of the world's highest per-capita greenhouse gas emitters, with the average Australian responsible for approximately 15–17 tonnes of CO -equivalent (CO e) per year — more than double the global average (CSIRO, 2023; ABS). This guide ranks the most impactful actions individuals can take, from highest to lowest carbon reduction potential, drawing on international and Australian-specific research.

Actions are grouped into four tiers based on annual CO e savings potential:

- Tier 1 (HIGH): >2 tonnes CO e/year saved
- Tier 2 (MEDIUM-HIGH): 0.5–2 tonnes CO e/year saved
- Tier 3 (MEDIUM): 0.1–0.5 tonnes CO e/year saved
- Tier 4 (MULTIPLIER): Actions that influence others — impact hard to quantify individually but potentially very large

RANKED SUMMARY: Top Individual Actions by CO e Impact

#	Action	Saving (tCO e/yr)	Why it ranks here	Source
TIER 1 — HIGH IMPACT (>2 tCO e/year)				
1	**Go car-free / switch to EV**	2.5–4.5 t	*Transport = 18% of Aus emissions; avg petrol car emits ~4.5t/yr*	CSIRO; IEA 2023
2	**Avoid one long-haul flight/yr**	2–3 t	*A return flight Sydney–London ≈ 5–6t CO e (radiative forcing incl.)*	atmosfair; ICAO
3	**Shift super/investments to fossil-free funds**	1.5–3+ t	*Avg super portfolio funds 27t CO e; divesting cuts financed emissions*	Market Forces 2023
4	**Switch to plant-rich diet**	1.5–2.0 t	*Meat & dairy = ~14% global GHGs; beef is 20x more GHG-intensive than legumes*	Project Drawdown; Poore & Nemecek 2018
5	**Electrify home (replace gas appliances)**	1.0–2.5 t	*Gas heating/cooking = 1–2t CO e/yr; heat pumps cut this by 70–90%*	ClimateWorks Aus 2023
TIER 2 — MEDIUM-HIGH IMPACT (0.5–2 tCO e/year)				
6	**Install rooftop solar + battery**	1.0–2.0 t	*Australian home avg 6,500 kWh/yr; solar covers 80–100% with storage*	CSIRO; ARENA 2023
7	**Switch to green electricity tariff (no solar)**	0.8–1.5 t	*Aus grid avg 0.51 kgCO /kWh; 100% renewables cuts household elec emissions ~85%*	AEMO; Clean Energy Regulator
8	**Reduce beef & lamb consumption**	0.5–1.5 t	*Cutting beef/lamb by half saves 0.5–1.5t depending on current diet*	Poore & Nemecek 2018; Foodprint Melbourne
9	**Stop buying new fast fashion**	0.5–1.0 t	*Fashion = ~10% global CO ;*	Fashion Revolution;

#	Action	Saving (tCO e/yr)	Why it ranks here	Source
			avg Aus buys 27 kg clothing/yr	UNEP 2022
TIER 3 — MEDIUM IMPACT (0.1–0.5 tCO e/year)				
10	**Work from home (reduce commuting)**	0.2–0.5 t	*Avg commute = 0.3–0.8t CO e/yr; partial WFH saves proportionally*	BITRE 2023
11	**Buy second-hand / reduce purchases**	0.2–0.5 t	*Embodied carbon in new goods significant; circular economy reduces demand*	WRAP; Project Drawdown
12	**Improve home insulation/draught-proofing**	0.2–0.4 t	*Poorly insulated homes waste 40% of heating energy*	Your Home (CSIRO/DCCEEW)
13	**Reduce food waste**	0.1–0.3 t	*Aus wastes 7.6Mt food/yr; rotting food = methane in landfill*	Fight Food Waste CRC 2021
14	**Choose an efficient fridge/appliances**	0.1–0.2 t	*Major appliances run 24/7; 6-star vs 2-star fridge saves ~200 kgCO /yr*	Energy Rating (DCCEEW)
TIER 4 — MULTIPLIER ACTIONS (Influence > direct savings)				
15	**Vote & advocate for climate policy**	Multiplier	*Political action is identified by researchers as highest-leverage individual act*	Wynes & Nicholas 2017
16	**Community organising & education**	Multiplier	*Social norms shift is key to systemic change; community groups accelerate adoption*	Project Drawdown
17	**Divest from big-4 banks (fund fossil fuels)**	Multiplier	*Aus major banks lent $26B to fossil fuel projects 2016–2022*	Market Forces 2023

1. TRANSPORT

Transport accounts for approximately 18% of Australia's total emissions (DCCEEW, 2023). The average Australian car emits 4.5 tonnes of CO e per year. This is the single largest controllable source of emissions for most individuals.

Car Use & Type [Ranks #1, #10]

- **HIGHEST IMPACT:** Go car-free or share a car
  - Living without a personal vehicle saves 2.5–4.5 tCO e/yr (CSIRO)
  - Car sharing (e.g. GoGet, Carbar) reduces embedded manufacturing emissions
- **HIGH IMPACT:** Switch to a Battery Electric Vehicle (BEV)
  - On the Australian grid (avg 0.51 kgCO /kWh), a BEV emits ~60% less than a petrol car; on 100% renewables, ~95% less (IEA, 2023)
  - Lifecycle emissions (including manufacturing) still ~50–70% lower than petrol equivalent (Transport & Environment, 2021)
  - If purchasing: prioritise smaller BEVs — manufacturing a large SUV has a higher 'carbon debt' to repay
- If keeping a petrol car: reduce use & maintain it
  - Every 10,000 km not driven saves approximately 2 tCO e for an average Australian vehicle
  - Keep tyres inflated, remove roof racks, and service regularly — can improve fuel economy by up to 10%

Aviation [Rank #2]

- Aviation is the fastest-growing source of transport emissions globally
- A return Sydney–London flight emits approximately 5–6 tCO e per passenger (ICAO Carbon Calculator) — when radiative forcing (the non-CO warming effects at altitude) is included, the impact approximately doubles
- One fewer long-haul flight per year is one of the single highest-impact actions an individual can take
- If you must fly: choose economy class (business/first class have 3–9x higher footprint per seat), choose direct routes, and offset with a high-integrity scheme (e.g. Gold Standard, ACCUs)
- Domestic alternatives: train travel between major Australian cities (when available) produces ~90% less CO than flying

Active & Public Transport [Rank #10 partial]

- Replacing one car trip per day by walking or cycling saves approximately 0.5 tCO e/yr
- Public transport is 4–10x less carbon-intensive per passenger-km than a single-occupancy petrol car (BITRE, 2023)
- E-bikes replace car trips at a fraction of the carbon cost and are growing rapidly in Australian cities

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2. SUPERANNUATION & INVESTMENTS

This category is frequently overlooked but research from Market Forces (2023) and Make My Money Matter (UK, 2021) identifies it as one of the most powerful levers available to individuals in high-income countries.

Superannuation [Rank #3]

- The average Australian super account finances approximately 27 tonnes of CO e per year through its investment portfolio — roughly 1.5–2x your entire direct carbon footprint (Market Forces, 2023)
- Moving to a fossil-fuel-free super fund can eliminate most of this 'financed emissions'
- Tools to compare super fund emissions: Market Forces 'Super Switch' tool; Responsible Returns (Responsible Investment Association Australasia, RIAA)
- Key questions to ask: Does the fund have a net-zero target? Does it exclude thermal coal, oil & gas exploration? Does it engage in active stewardship?
- High-performing ethical super options (as of 2023–24): Australian Ethical Super, Future Super, Verve Super — these screen out fossil fuels and have strong returns track records

Banking [Rank #17]

- Australia's big-4 banks (ANZ, CBA, NAB, Westpac) collectively lent $26 billion to fossil fuel projects between 2016 and 2022 (Market Forces, 2023)
- Switching to a bank with a no-new-fossil-fuel policy removes your deposits from this financing
- Alternatives: Bank Australia (certified carbon neutral), Teachers Mutual Bank, Regional Australia Bank (no new coal or gas lending)

Other Investments [Rank #3 related]

- If you hold shares or managed funds, check exposure via RIAA's Responsible Returns tool
- Green bonds, renewable energy ETFs, and impact investing funds allow capital to actively fund climate solutions
- Divesting from ASX-listed fossil fuel companies reduces demand for their capital and sends market signals

3. HOME ENERGY & ELECTRICITY

Residential buildings account for approximately 12% of Australia's greenhouse gas emissions (DCCEEW, 2023). The good news: the technology to eliminate most household emissions already exists and is cost-effective.

Electricity Source [Ranks #6, #7]

- **MOST EFFECTIVE:** Install rooftop solar PV
  - Australia has the highest per-capita uptake of rooftop solar in the world; average 6.6kW system offsets 8–10 tonnes CO e over its life
  - With a battery (e.g. Tesla Powerwall, Sungrow), households can become largely grid-independent and export surplus
  - ARENA and state government rebates are available — check energymadeeasy.gov.au
- Switch to a GreenPower or 100% renewable electricity tariff
  - If you rent or can't install solar, purchasing GreenPower through your retailer funds additional renewable generation
  - Saves approximately 0.8–1.5 tCO e/yr on the current grid (AEMO 2023 grid intensity: 0.51 kgCO /kWh)

Electrify Appliances & Replace Gas [Rank #5]

- Gas appliances in the home contribute 1–2 tCO e/yr — a large and often invisible source
- Replace gas heater with reverse-cycle air conditioning (heat pump): uses 3–5x less energy, saves ~0.8–1.5t CO e/yr
- Replace gas hot water with heat pump hot water: saves ~0.5–1t CO e/yr; payback typically 3–5 years
- Induction cooktops: gas cooking contributes less than hot water/heating but also improves indoor air quality (Stanford study 2022 found gas stoves emit harmful NOx and methane even when off)
- All-electric homes powered by renewables can achieve near-zero operational emissions — this is described as 'electrify everything' by Saul Griffith (Rewiring Australia)

Insulation & Efficiency [Rank #12, #14]

- Ceiling insulation reduces heating and cooling energy by 40–50% (Your Home, CSIRO/DCCEEW)
- Draught-proofing windows, doors and floorboards: cheap and effective — saves 10–20% of heating energy
- When replacing appliances, choose the highest energy star rating: a 6-star fridge vs a 2-star uses ~60% less electricity
- LED lighting: replacing all globes with LEDs saves approximately 100–200 kgCO /yr for an average home

4. FOOD & DIET

Food production accounts for approximately 26% of global greenhouse gas emissions (Poore & Nemecek, Science, 2018 — the most comprehensive lifecycle analysis to date covering 38,000 farms across 119 countries). In Australia, food contributes approximately 15% of an individual's carbon footprint (ClimateWorks Australia, 2020).

Shift to a Plant-Rich Diet [Rank #4]

- Beef is the single most carbon-intensive food: produces 60 kg CO e per kg of protein, vs 3.5 kg CO e/kg for legumes — a factor of 17x (Poore & Nemecek, 2018)
- Shifting to a fully vegan diet saves approximately 1.5–2.0 tCO e/yr for an average Australian
- Even a 'flexitarian' diet — reducing beef and lamb by 50% while maintaining other animal products — saves 0.5–1.0 tCO e/yr
- The 'EAT-Lancet Commission' (2019) recommends a planetary health diet: roughly halving current global meat consumption and doubling fruits, vegetables and legumes
- Australian-specific tool: foodprint.org.au provides a personalised food carbon calculator

Reduce Food Waste [Rank #13]

- Australia wastes 7.6 million tonnes of food per year, worth $36.6 billion (Fight Food Waste CRC, 2021)
- When food rots in landfill, it produces methane (a greenhouse gas 80x more potent than CO over 20 years)
- Actions: meal planning, FIFO storage ('first in, first out'), composting organic waste (diverts from landfill), freezing surplus
- A household that eliminates food waste can save approximately 0.1–0.3 tCO e/yr

Food Sourcing & Purchasing

- Buying local and seasonal food reduces transport emissions, though diet composition (what you eat) matters far more than food miles (Poore & Nemecek, 2018 — transport is only ~6% of food emissions)
- Organic agriculture doesn't necessarily have lower emissions than conventional — the key variable is animal vs plant
- Home growing and community gardens build resilience and reduce packaging waste

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5. CONSUMPTION & PURCHASING

The production of goods accounts for approximately 45% of global CO emissions when upstream supply chain impacts are included (Project Drawdown). For Australians, consumption of goods and services (beyond transport and energy) typically contributes 4–6 tCO e/yr.

Clothing & Fashion [Rank #9]

- The fashion industry produces approximately 10% of global CO emissions — more than aviation and shipping combined (UNEP, 2022)
- The average Australian buys approximately 27 kg of new clothing per year and discards 23 kg — one of the highest rates in the world (ABC/Fashion Revolution)
- Actions: buy second-hand (op shops, Depop, Facebook Marketplace), buy fewer but higher-quality items, repair clothing, avoid synthetic fabrics (microplastics in wash)
- Refusing 'fast fashion' and buying second-hand can save 0.5–1.0 tCO e/yr

Electronics & Appliances

- Electronics manufacturing is highly carbon-intensive — extending device lifespan is more effective than recycling
- Keep your smartphone for 4+ years instead of 2: saves approximately 40 kgCO e per year per device (iFixit; Fairphone lifecycle analysis)
- Right to repair advocacy: support legislation enabling self-repair to extend product lifespans
- Buy second-hand electronics where possible; donate or sell functional devices rather than discarding

General Consumption [Rank #11]

- Apply a 'hierarchy of consumption': refuse > reduce > reuse > repair > recycle
- Recycling is important but its climate impact is modest compared to reducing consumption — it is last resort, not first line
- The sharing economy (tool libraries, library of things, community swapping) reduces the need for individual ownership

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6. COMMUNITY & POLITICAL ACTION

Research by Wynes & Nicholas (2017, Environmental Research Letters) identified 'having one fewer child' and 'political engagement' as the highest-leverage actions available. The latter is particularly powerful for Australians given Australia's outsized role in fossil fuel exports (Australia is the world's 2nd largest coal exporter and 4th largest LNG exporter).

Political & Advocacy Action [Rank #15]

- Vote: Climate policy has been cited as a primary motivator in Australian elections (e.g. the 2022 'Teal' independents success). Voting for strong climate policy in federal, state and local elections is high-impact
- Contact your MP: written letters and emails to elected representatives demonstrably influence policy — particularly in marginal electorates
- Support climate litigation: organisations like the Environmental Defenders Office (EDO) use legal action to challenge fossil fuel approvals
- Join advocacy groups: GetUp!, Australian Parents for Climate Action (AP4CA), 350.org Australia, Climate Action Network Australia (CANA)

Community Organising [Rank #16]

- Social diffusion of low-carbon behaviour is a key mechanism of change: if you adopt an EV, solar panels, or a plant-rich diet and discuss it, you influence others
- Community energy projects: neighbourhood battery programs (VIC, NSW, QLD), community solar co-ops (e.g. Enova Community Energy in northern NSW), bulk-buy programs for EVs or solar
- Climate conversations: 'social contagion' research shows normalising climate action in your immediate social network is more effective than information campaigns alone (Sparkman et al., 2022)
- School & workplace: push for emissions audits, renewable procurement, sustainable food options, EV charging infrastructure, green travel plans

Banking & Corporate Pressure [Rank #17]

- Participate in shareholder activism: if you own company shares, vote against fossil fuel expansion at AGMs
- Support campaigns targeting corporate emitters: Market Forces, Australasian Centre for Corporate Responsibility (ACCR) coordinate this
- As a consumer, choosing lower-carbon service providers creates market incentives — especially in insurance, banking, and energy

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7. LOW-IMPACT ACTIONS (Don't Make These Your Focus)

Research consistently shows that public messaging has over-emphasised actions with relatively small impact. While every action helps, focusing only on these can divert attention and energy from high-impact changes:

- Turning off lights/standby power: saves roughly 50–100 kgCO e/yr — important but not transformative
- Bringing your own bag: saves approximately 5–10 kgCO e/yr
- Recycling: important for resource recovery but small direct climate impact compared to consumption reduction
- Individual carbon offsets without behaviour change: offsets should supplement, not replace, direct emission reductions

The concept of the 'personal carbon footprint' was popularised by BP's 2004 advertising campaign — a deliberate strategy to shift public attention from corporate/systemic emissions to individual responsibility. While individual action matters, it is most powerful when combined with political and systemic advocacy.

KEY SOURCES & FURTHER READING

Organisation / Study	Resource
Project Drawdown	drawdown.org — ranked global climate solutions with quantified CO reduction potential
ClimateWorks Australia	climateworks.org.au — 'Decarbonisation Futures' and 'Net Zero Momentum Tracker'
CSIRO	csiro.au — Australian emissions data and household carbon research
Market Forces	marketforces.org.au — 'Super Switch' tool and bank fossil fuel lending data
RIAA	responsiblereturns.com.au — ethical investment comparison tool
IEA	iea.org — 'Net Zero by 2050' and EV lifecycle emissions analysis
Poore & Nemecek (2018)	Science 360(6392) — global food systems lifecycle analysis (38,000 farms)
Wynes & Nicholas (2017)	Environmental Research Letters 12(7) — high-impact individual climate actions
Rewiring Australia	rewiringaustralia.org — household electrification guide and tools
Fight Food Waste CRC	fightfoodwastecrc.com.au — Australian food waste statistics
DCCEEW	dcceew.gov.au — Australian National Greenhouse Accounts
AEMO	aemo.com.au — Australian electricity grid emissions intensity

Note: CO e savings are estimates based on average Australian household profiles. Individual results will vary depending on current lifestyle, location, and energy mix. All figures represent annual savings unless otherwise stated.