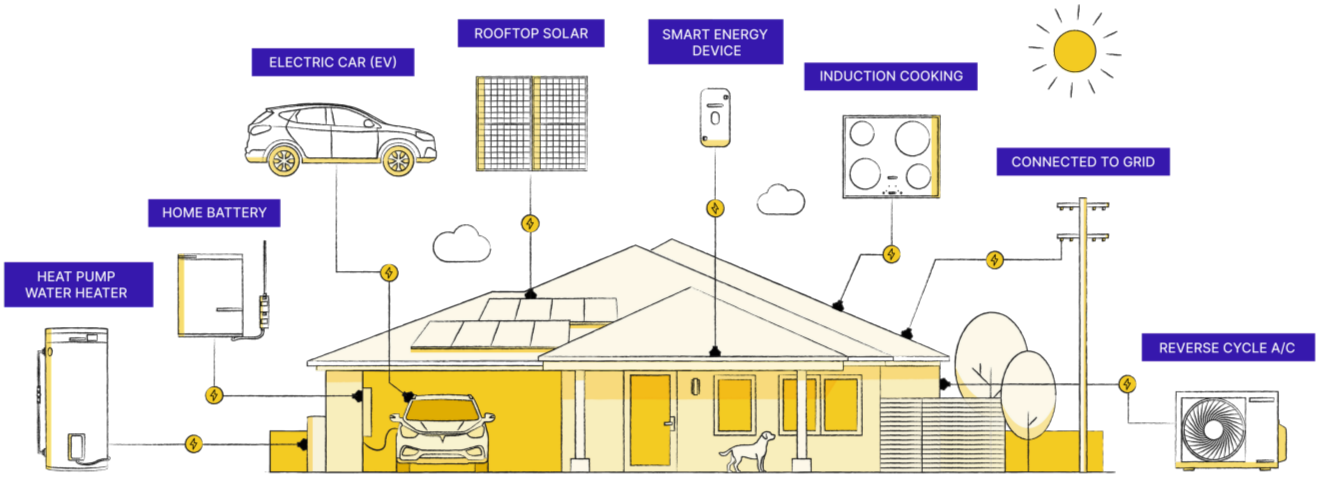
Rewiring Australia

Electrifying Homes for Tradespeople

Tradies: The Heroes of Our Homes

While households increasingly want to upgrade their homes to cut energy bills and their carbon footprint, it is our tradespeople who are the heroes of this crucial electrification journey. Our local plumbers, electricians, air conditioner installers and others are helping millions of Australians navigate the complexity of these upgrades and provide tailored solutions. And in doing so, electrifying homes is creating thousands of new jobs and market opportunities for tradespeople.

Here is a quick snapshot on some of the latest data on the 6 key electric appliances produced by independent, non-partisan and non-profit research organisation Rewiring Australia.



What is an electric home?

An electric home is one that has upgraded all fossil fuel based appliances and cars for efficient electric versions powered on renewable energy.

- **Space Heating:** Upgrading gas heaters to reverse cycle a/c
- **Water Heating:** Upgrading from gas to heat pump systems
- **Cooking**: Upgrading gas stovetops to induction cooktops
- **Vehicles**: Transitioning to electric vehicles (with home charging)
- **Solar Panels**: Installing rooftop solar systems
- **Battery Storage:** Adding home batteries to store solar energy

What tradespeople are needed to electrify Aussie homes?

Monash University predicts 13,500 *additional* direct full-time tradie jobs could be created to electrify Australian homes, not to mention an increase in opportunities for current jobs and indrect jobs like retail, manufacturing and distribution.

Electrifying Homes

- Electricians - upgrading electrical panels, installing EV chargers, solar panels, battery storage, home wiring
- HVAC technicians - installing and maintaining heat pumps for heating/cooling
- Plumbers - installing heat pump water heaters, transitioning from gas appliances
- Insulation specialists - improving home efficiency for electric heating/cooling
- Solar installers - mounting and wiring solar panels, integrating with home systems
- Energy auditors - assessing homes for electrification upgrades
- Home automation specialists - installing smart thermostats and energy management systems

Electrifying Cars

- EV mechanics/technicians - servicing electric vehicles
- Auto electricians - specialising in EV electrical systems
- Battery specialists - maintaining and replacing EV batteries
- Charging station installers - public and commercial charging infrastructure
- Industrial electricians - upgrading power infrastructure for charging stations
- Electronics technicians - working on EV control systems and diagnostics

Other Roles

Building performance specialists, project managers for electrification upgrades, equipment maintenance technicians, product maintenance, training, grid infrastructure technicians and plenty more!

Did you know?

Around 6 job-years of work are created for every megawatt of rooftop solar installed!

Why your customers will love going electric

Lower Bills
Modern electric appliances are incredibly efficient. Heat pumps, for instance, can be 300-600% efficient, meaning for every unit of electricity used, they produce 3-6 units of heating or cooling. Compare that to gas systems that are usually only 70-95% efficient. What does this mean for your customers? Significant savings on their energy bills.

Healthier Homes
Leading health organisations like Asthma Australia advise to remove gas appliances, especially cooktops and unflued gas heaters, as they can release indoor air pollutants which trigger asthma and other respiratory issues. Electric alternatives don't produce any indoor emissions, creating healthier living spaces for families.

Better Performance
Modern electric appliances and vehicles often outperform their fossil fuel counterparts due to their efficiency and power such as heating up water faster and offer precise temperature control.

Future-Proof Investment
As more states phase out gas connections in new builds and energy prices fluctuate, all-electric homes are becoming more valuable. Plus, with rooftop solar and batteries, households can generate their own electricity, reducing their dependence on the grid.

Why this matters for you

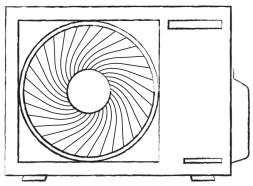
Growing Job Market
The transition to electric homes isn't just a trend – it's a fundamental shift in how we power our homes. This means steady work installing new electric systems, regular maintenance and upgrade opportunities and chances to expand your skill set and services.

Business Growth
By positioning yourself as an electrification expert, you can tap into a rapidly growing market, offer complete home energy upgrades, build long-term relationships with customers and command higher rates for specialised services

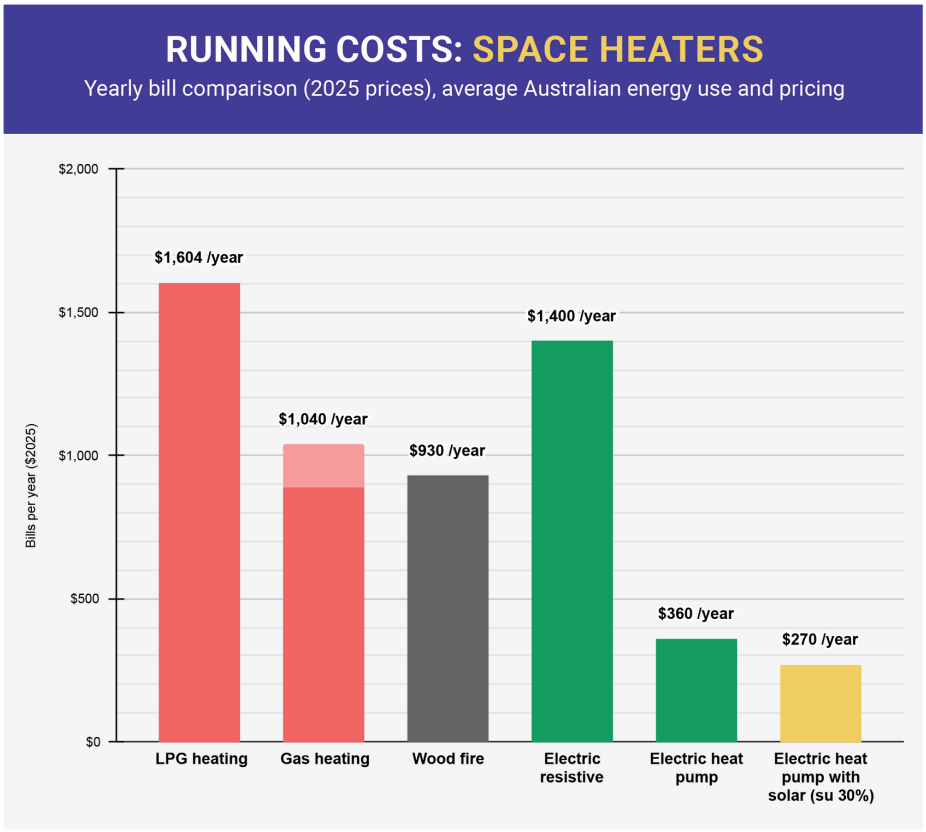
Skills Development
The electrification boom means opportunities to learn new technologies and installation techniques, get certifications for emerging systems and become a go-to expert in your area

1. Space Heating

Recommended
Reverse cycle air conditioners



Space heating and cooling is one of the largest energy uses in the average Australian household, accounting for 37% of a home's energy use (excluding vehicles). This varies based on climate, with colder states like Tasmania and Victoria spending an even greater share of their energy bills on heating their homes. Reverse cycle air conditioners (aka heat pumps) are 3 to 4 times more efficient than gas heaters, and 2 to 3 times more efficient than standard electric resistance heaters, such as oil-column heaters/fan heaters/radiant-electric panel heaters, resulting in significant energy and bill reductions.



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 $0.32kWh, 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.

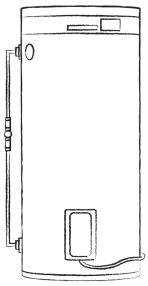
Snapshot

Emissions Saved	High
Lifetime	15 - 20 years
Average upfront cost (before rebates)	$3,000 - $10,000 installed for average sized home
Potential bill savings (with solar)*	$10,250 over 15 years ($570/year in 2024)
Potential bill savings (without solar)*	$8,300 over 15 years ($470/year in 2024)
Rebates available	Yes (NSW, ACT, VIC, SA, QLD)

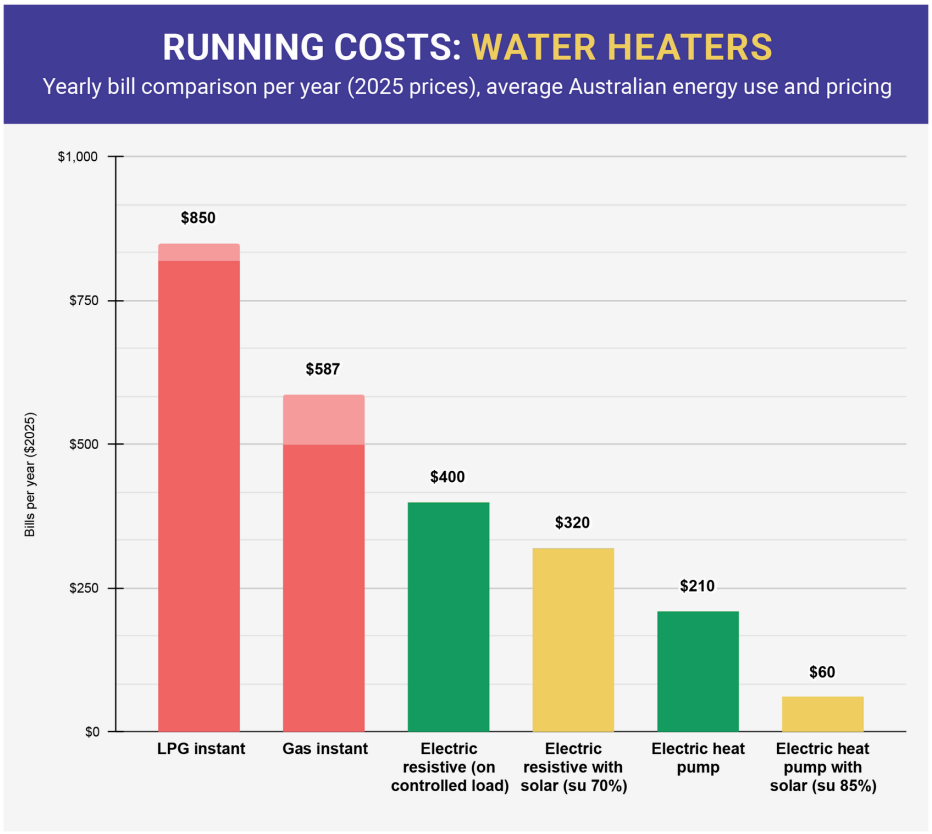
Assumptions: Average space heating energy use from the Residential Baseline Study 2021, adjusted to performance of different heating types. 2024 energy and product prices. 15 year appliance lifetime. Excludes gas fixed/supply costs which would increase electrification savings. Energy prices for forward years are estimated with the historic real inflation rate of each energy type from the associated consumer price index category. COP for gas heater 80%, COP for heat pump 400% average.

2. Water Heating

Recommended
Electric heat pumps



Water heating is one of the biggest household energy loads, using on average 24% of a home's energy use, making it one of the key appliances to electrify. Most Aussie homes have an instantaneous gas system (45%) or an electric resistance system (45%). However, it is the electric heat pump that will bring the most energy bill savings as it uses 65-76% less energy. While heat pumps may seem expensive to buy, they are incredibly cheap to run, resulting in savings over the long term. Many governments recognise their value so also offer generous rebates to encourage the switch.



Sources: Rewiring Australia analysis. Residential Baseline Study 2021, heat pump COP 3.48, resistance tank 0.94, gas/LPG instant 0.80, gas/LPG tank 0.70. Electricity $0.32kWh, 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.

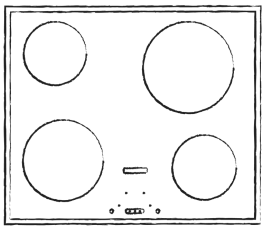
Snapshot

Emissions Saved	High
Lifetime	8 - 20 years
Average upfront cost (before rebates)	$1,500 - $5,500 (excluding installation)
Potential bill savings (with solar)*	$6,000 over 15 years ($350/year in 2024)
Potential bill savings (without solar)*	$2,900 over 15 years ($180/year in 2024)
Rebates available	Yes (Federal, VIC, ACT, NSW, SA)

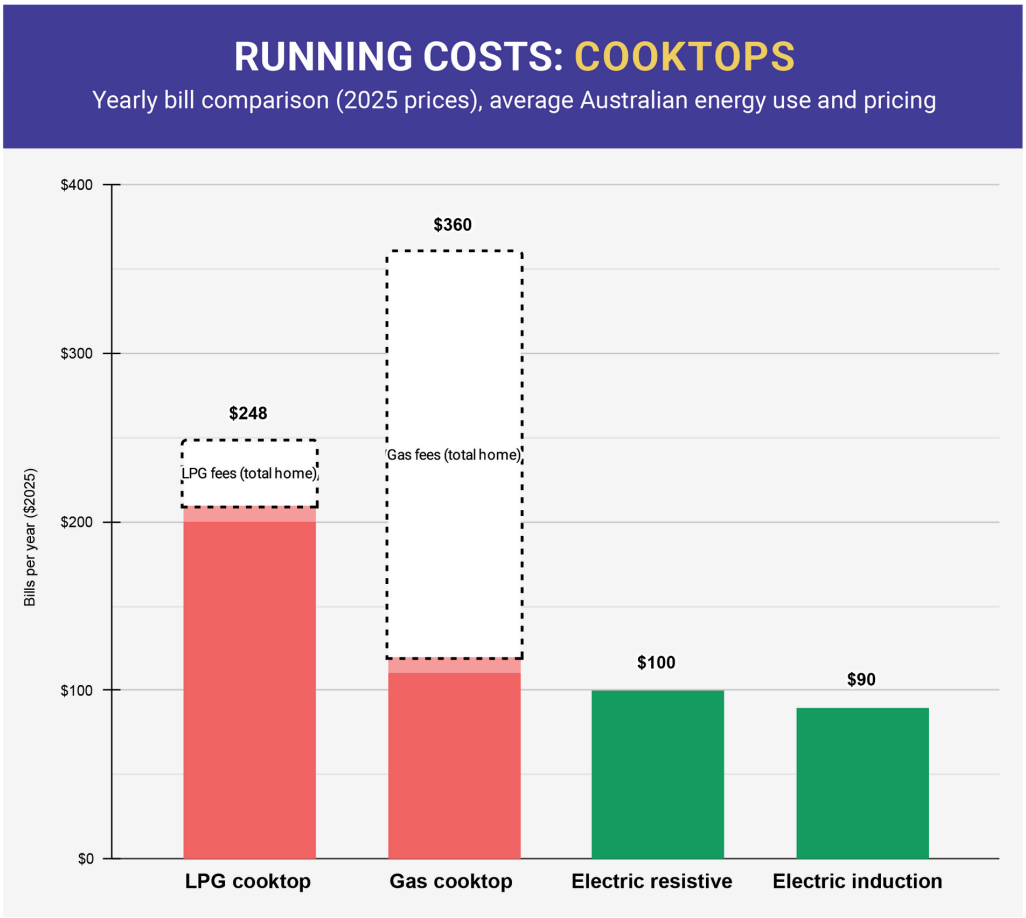
Assumptions: Average water heating energy use from the Residential Baseline Study 2021, adjusted to performance of different water heating types. 2024 energy and product prices. 15 year appliance lifetime. Excludes gas fixed/supply costs which would increase electrification savings. Energy prices for forward years are estimated with the historic real inflation rate of each energy type from the associated consumer price index category. COP for gas instant water heater 95%, COP for heat pump water heater 360% average.

3. Cooking

Recommended Electric Induction



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.



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

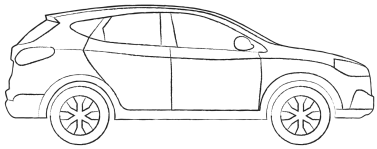
Snapshot

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)

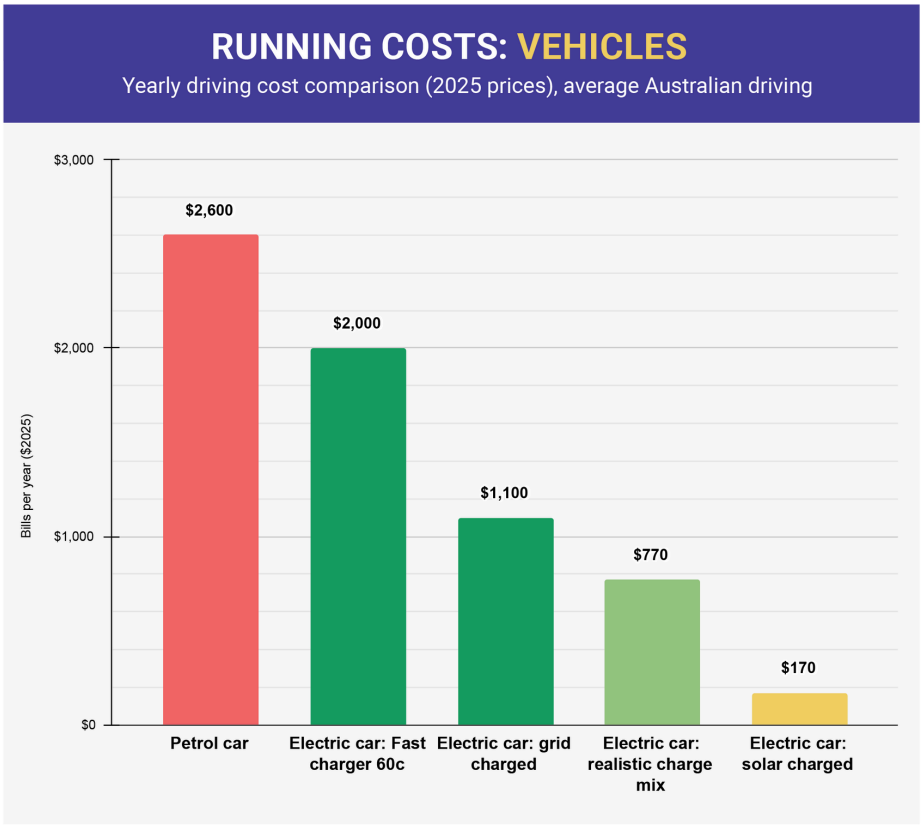
Assumptions: Average cooktop energy use from the Residential Baseline Study 2021, adjusted to performance of different stove top types. 2024 energy and stove top prices. 15 year appliance lifetime. Excludes gas fixed/supply costs which would increase electrification savings. Energy prices for forward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

4. Vehicles

Recommended
Electric venicle



The average Aussie home has 1.8 cars parked in their driveway and spends up to $2700 every year filling them up. Collectively, our private cars are responsible for 16% of Australia's domestic emissions and 60% of a household's energy costs. Electrifying our vehicles is the single biggest impact a household can make from both a bill savings and emissions savings perspective. With prices dropping rapidly, it won't be long until EVs are also cheaper to buy (By 2030, EV prices are expected to drop to around 80% of the price of their petrol counterparts). Brendan, an electrician from Victoria, recently swapped his ute for a Tesla Y due to there being more storage space for tools and he's saving $300 a week on his fuel costs. Nice.



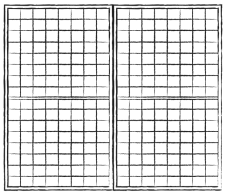
Sources: Rewiring Australia analysis. ABS motor vehicle survey 2018. 2025 electricity, petrol, and solar prices. 2025 new vehicle prices. Charge mix 50% solar, 35% grid, 15% public charging

Snapshot

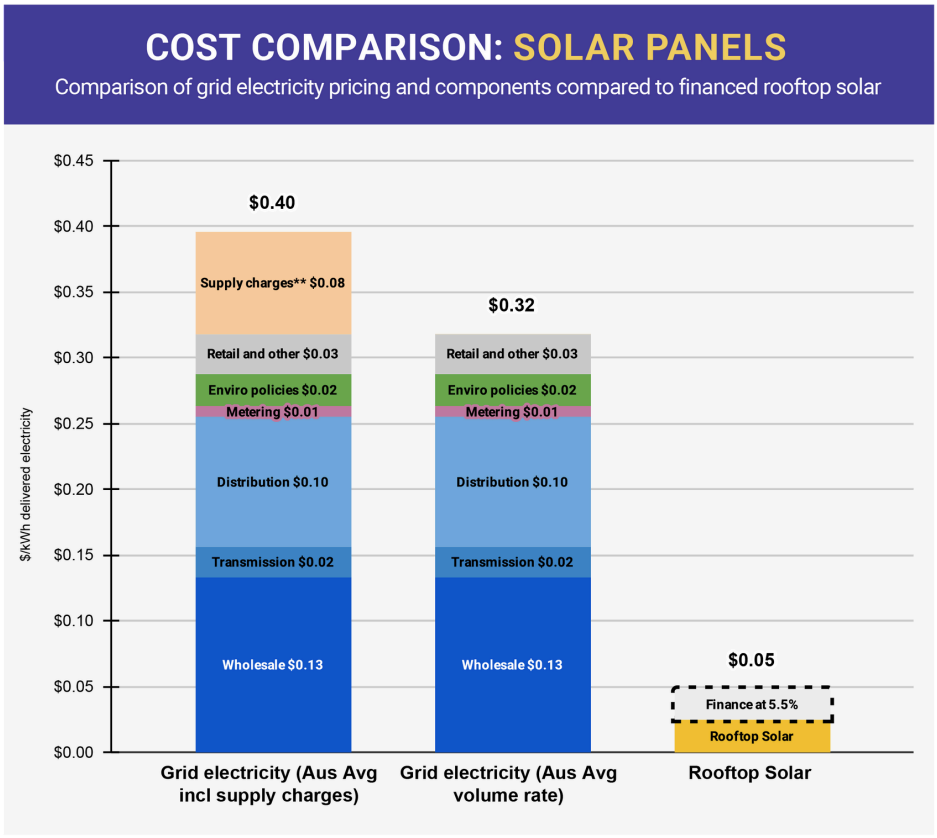
Emissions Saved	Extremely High
Lifetime	10 - 20 years
Average upfront cost (before rebates)	$35,000 - $70,000 new
Potential bill savings (with solar)*	$43,000 over 15 years ($2,500/year in 2024)
Potential bill savings (without solar)*	$26,100 over 15 years ($1,600/year in 2024)
Rebates available	Yes (WA, QLD)

Assumptions: Vehicle price comparison and energy prices from 2024. Assumes average vehicle driving distance from ABS Motor Vehicle Survey 2018. Future prices of fuels and electricity assumed to increase at historic real inflation rate based off their associated category in the Consumer Price Index. Vehicle lifetime assumption 15 years. Finance rate 5.5% over 15 years.

5. Rooftop Solar



Australia truly is the lucky country having the world's cheapest source of energy delivered to homes with our rooftop solar. Our abundant solar energy, positive policy decisions and technological improvements have enabled over 4 million Aussie households to install solar, which together accounts for over 11% of our nation's electricity supply. Households can enjoy cheap and clean energy, and use this to power their efficient electric appliances and cars, unlocking a lifetime of savings and low emissions living.



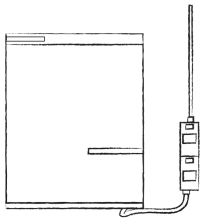
Sources: Solar pricing based on capacity factor of 17.1%, 30 year operational lifetime, 0.5% degradation per year and one replacement inverter. Financed over 30 years at 5.5% interest. Note solar homes will usually remain connected to the grid, and as such continue to pay supply charges. Therefore the better comparison point is the volume rate.

Snapshot

Emissions Saved	Very High
Lifetime	20 - 40 years
Average upfront cost	$5,000 - 10,000 for 6kW installed
Potential bill savings	$28,000 over 15 years ($1,900/year in 2024)
Return on Investment	3 - 5 years average
Rebates available	Yes (Federal, VIC, ACT, NSW, SA)

Assumptions: 9kW installation at $901/kW + a $2,000 replacement inverter in year 15. 30 year solar lifetime. Finance rate 5.5% over a 30 year term. 50% self consumption of an electrified home's electricity needs including electric vehicles. Not 50% of what is generated, but 50% of what the home consumes. These savings may increase with more self consumption (e.g. a resistive water heater not heat pump, or increase in occupants above the average), and may decrease with less consumption (e.g. the home doesn't have an electric vehicle) though the solar system could also be sized down to more economically meet the needs of a lower consuming home.

6. Home battery



Battery storage, from household to utility-scale batteries and within electric vehicles, is a game changer in the energy transition. We already know how Australia's cheap and abundant solar resources have unlocked millions of savings for households and businesses, and reduced our carbon emissions. But to get the full value of our solar resources, we need to capture and store it to be used when the sun isn't shining. With the cost of batteries falling and the performance of the technology rapidly improving, whether your customers are aiming to save money on electricity bills, minimise their carbon footprint, or prepare for emergencies, now is the time to consider investing in a home battery.

Snapshot

Emissions Saved	High
Lifetime	12 - 17 years
Average upfront cost (after rebates)	$7,000 - $10,500
Potential bill savings (with solar)*	$16,900 over 15 years
Return on Investment	7 - 15 years
Rebates available	Yes (Federal TAS, ACT, NSW, WA)

Assumptions: Battery price $1,200 kWh installed. Lifetime 15 years with accelerating degradation to 60%. Finance at 5.5% over 15 years. Assumes home has solar that can feed into the battery, in that these savings are additional savings that can be provided from a battery to a home that has solar. Assumes 50% of grid energy taken comes at a lower rate (e.g. nightly) which is 33% lower than average volume electricity rate. Does not account for the battery doing other services, peak exporting, or arbitrage on the market, which we would expect to increase savings further.

Affording Electrification

While we know once electric appliances and cars are in place, your customers will start saving money on their energy and fuel bills immediately. But the upfront costs can be prohibitive for many. Besides customers paying for installations from their savings, here are a few other options to consider. *Note this is general information and does not constitute financial advice.*

- The federal, state and local governments all offer a range of rebates, subsidies and programs to support electric upgrades. Visit individual Council pages and energy.gov.au/rebates
- 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.

Rewiring Australia

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

Join us!
rewiringaustralia.org/join

Support our work
rewiringaustralia.org/donate