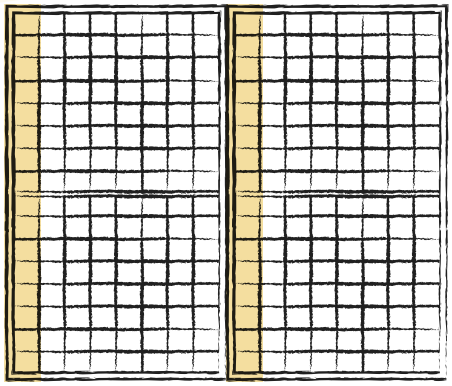
Rewiring Australia



FACT SHEET

Rooftop Solar

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 (average)	3 - 5 years
Rebates available	Yes (Federal, VIC, ACT, NSW, SA)
Difficulty of installation	Moderate
Electrical upgrade required	Yes
Installers	Registered Solar Installer

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.

Introduction

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 3.5 million Aussie households to install solar, which together accounts for over 11% of our nation's electricity supply[1]. 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. It's time that every Australian household can enjoy the solar revolution!

Solar panels

Rooftop solar systems utilise photovoltaic (PV) panels installed on your roof to convert sunlight into electricity

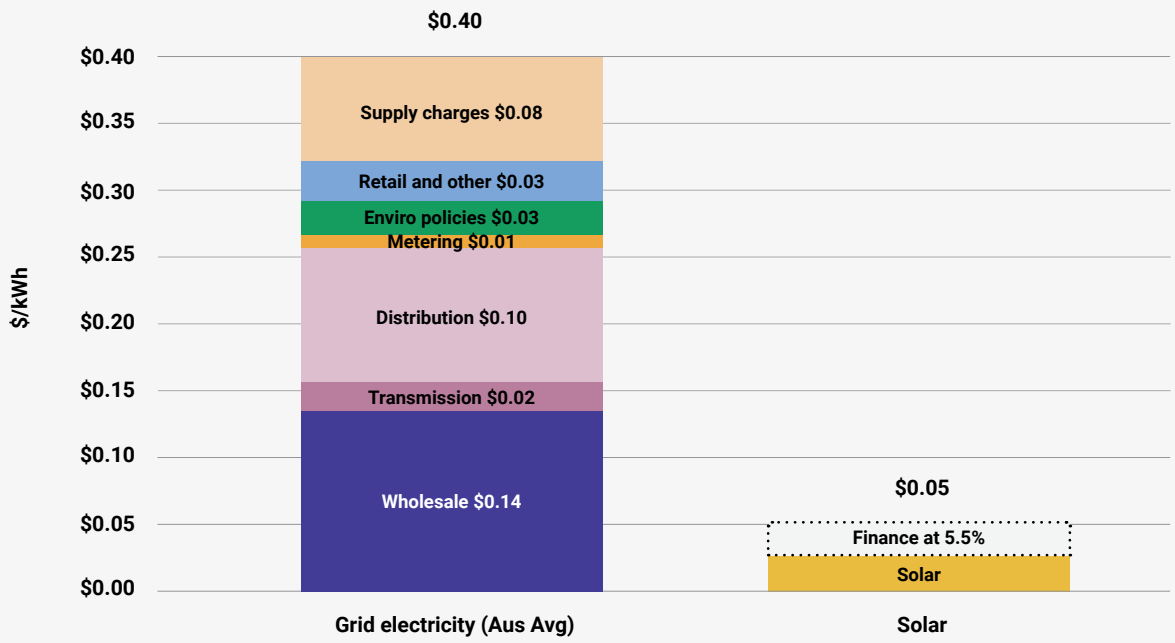
Why choose solar?

- **You'll save money** - The cheapest form of delivered energy available in the world is Australia's rooftop solar. The day you start powering your home's energy needs from your rooftop solar is the day you will save money on your energy bills.
- **They're good for our climate** - Thanks to this technology, you can power a lot of your energy needs using a clean energy source without the greenhouse gas emissions produced from fossil fuels. The more roofs with solar panels, the faster we can get to a cleaner, more sustainable energy future.
- **You can build your electric home** - Once you've got energy flowing straight off your rooftop, you can use electricity for heating, cooling, cooking, hot water, and even charging an electric vehicle.
- **You can be more energy independent** - By producing your own power on-site, you can have more control over your energy use. When you time your appliance use to when your solar is producing energy, this is the best way to maximise benefits.
- **Improve your property value** - Rooftop solar installations can increase the value of a property. Studies have shown that homes equipped with solar panels tend to sell faster and at higher prices than those without, as they offer prospective buyers long-term energy savings and environmental benefits.
- **Help your community** - The more solar there is, the more it benefits the whole community as increased local power generation reduces the costs of power transmission. It is also estimates that there are 39 jobs directly supported in Australia for every 1 megawatt of solar installed.

[1] https://www.cleanenergycouncil.org.au/news/rooftop-solar-generates-over-10-per-cent-of-australias-electricity

RUNNING COSTS: SOLAR PANELS

Yearly residential energy price comparison, average Australian energy use and pricing



Sources: Solar pricing based on capacity factor of 17.15%, 30 year operational lifetime, 0.5% degratin 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 excluding supply charges.

What to consider when buying solar panels?

Inverter type - Microinverters attach to the back of each panel, compared with string inverters which are all connected. Microinverters are generally more expensive but are more effective and good for shady roofs or complex installations.

Quality - Invest in high-quality solar panels and components from reputable manufacturers to ensure reliability and longevity. Better quality panels usually have higher efficiency and longer warranties too.

Future energy use & system size - If you can, choose the biggest system you can afford and will fit on your roof. This is so you can accommodate any future electric needs (eg. electric vehicle), it costs less to install all at once and you can be covered for winter use.

Getting It Installed

Assess your solar potential.

1

A solar provider can do this when they quote, or you can do it yourself using calculators such as **Sun Spot** to help you calculate your solar potential, potential costs and savings to replace any of your cookware.

Get quotes.

2

Receive a number of quotes from local providers or use a site like Solar Quotes to find recommended installers. During quotation, installers can advise you on your panel and inverter choice and size based on your roof and location, and let you know of any work that may be required beforehand (eg. waterproofing)

Install.

3

Your preferred solar provider will do the installation and connection to your electrical panel and grid.

Monitoring.

4

Many systems come with monitoring tools to track energy production to help you optimise your energy use.

Maintenance.

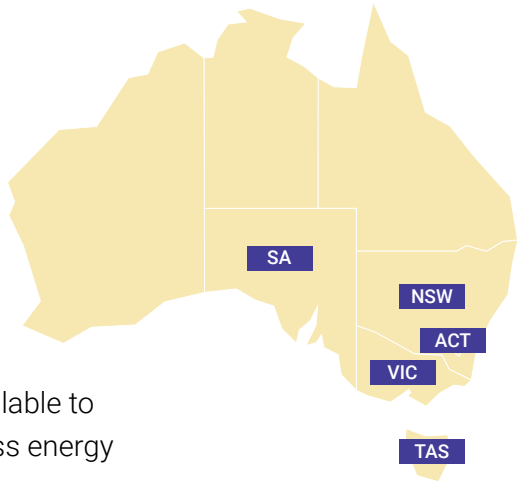
5

It's a good idea to have your panels cleaned every couple of years.

Did you know?

It used to be thought that solar panels were only good for north-facing roofs. With technological improvements and with falling costs, these days it can be economical to put solar panels even on south-facing or shady roofs. Your installer can advise you.

Government Assistance



National The government provides financial incentives in the form of Small-scale Technology Certificates (STCs), which will automatically be claimed when purchasing eligible solar panels. The amount depends on factors such as the size of your system.

TAS **Energy Saver Loan Scheme**. Interest-free loans are available to help Tasmanian individuals and small businesses access energy efficient products including solar.

ACT **Home Energy Support** program offers a grant of up to $2,500 for homeowners with an eligible concession card. **Sustainable Households Scheme** homeowners, including landlords, are eligible for a zero-interest loan of up to $15,000. **Solar for Apartments program** provides owners corporations $100,000 in grant funds and a zero-interest loan.

SA **Incentives for Sustainability** City of Adelaide residents may receive cash back for solar PV.

VIC **Solar Homes** program offers $1400 and an interest free loan for eligible homes which includes rentals. **Solar for Apartments** owners can apply for $2,800 per apartment, or up to $140,000 for buildings of up to 50 apartments.

Rebates current as of September 2024. Check **energy.gov.au** for latest updates.

Renters

Renters make up a third of Australian households, and are left behind on reaping the full benefits of electric efficient homes. Rewiring Australia, and other organisations, are advocating for better renters rights to rectify this, such as minimum rental standards and mandatory energy disclosure. Whether you're a renter or not, write to your MP and demand the same.

If you are renting, consider discussing solar options with your landlord. Some landlords may be open to installing solar panels, especially as it enhances the property value and could be eligible for a tax deduction. You could calculate a value proposition and negotiate a slight rental increase for the benefit of bill reduction.

Alternatively, explore community solar initiatives (eg. **Haystacks solar farm**) or shared solar programs where renters can subscribe to a solar project and benefit from clean energy without needing to install panels on their rental property. If you're in VIC, check out the rebate program that applies to renters. Purchasing 100% green energy is also available for renters to access renewable energy and some retailers offer cheap daytime energy rates that make use of solar in the grid.

FAQ

How do I make the most of it?

- **Monitor:** Spend the first few weeks of having solar by using an app to monitor your energy habits to ensure you are matching consumption to production. You might be surprised!
- **Load shift**: There is a lot of potential to maximise your savings by doing simple measures, such as shifting more of your energy consumption during daylight hours. Use the delayed timer feature on appliances like dishwashers and washing machines, and set timers for hot water systems. If you have an EV, make sure you charge it off your solar to enjoy huge energy bill savings.
- **Get off gas:** Once you have solar, you should remove all gas appliances including your water heater, space heater and cooktop and install efficient, electric appliances.
- **Invest in a battery:** The next step is to consider investing in a household battery.

Will I need to upgrade my electricity meter?

A solar system requires a smart meter on your main connection, and if your switchboard is old it could also require replacement but not necessarily. Your installer will tell you if you need upgrades as part of your quote.

What about Feed In Tariffs?

Any excess solar you're not using is automatically fed back to the grid (unless you have a battery). The Feed In Tariff is what your energy retailer is prepared to pay you for the energy fed back, which has been falling for years as solar becomes more prevalent.

Real savings are made if you can use as much solar as you can when it's produced such as setting timers and using appliances and chargers during the daytime.

Can the grid handle more solar?

Yes. Our energy regulators have not proactively prepared for the rise in solar by encouraging dynamic or smart solar systems to be installed, which has resulted in blunt responses to try 'curb' the rise of solar energy in the grid. However, restricting solar production is not the solution and doesn't recognise the crucial role household solar has played in lowering energy prices for everyone and helping the grid. A holistic approach to energy management is required that encourages dynamic operating envelopes and more storage in the system. There is a lot more potential to untap on our rooftops!

Will my solar work in a blackout?

No. Grid-connected solar PV systems are shut down during a grid outage for safety reasons. However, if you have a home battery backing up your PV system, you can charge the battery with your solar panels and use your battery for power.

What about strata properties?

Strata owners do have added challenges for installing solar power, however, many of these can be overcome. Some councils have support programs in place (eg NSW's Inner West council), and if you are in ACT or VIC be sure to check out the strata based rebate programs available to you. There are some helpful strata-specific resources available such as at **Wattblock** to get started.

What finance options are available?

Some of the options to afford your solar that people use include:

1. Pay up front (average systems take around 3-5 years to pay back, making it a solid investment).
2. Talk to your existing lender to add it to your mortgage or to see what green finance products they offer (eg. CommBank's Green Loan)
3. Explore specialist solar lenders such as Brighte, Parker Lane or Plenti.

Please note everyone's situation is different and this does not constitute financial advice (speak to your accountant or financial advisor).

Useful Resources

→ **Solar Quotes**
The Good Solar Guide

→ **Solar Choice**
solarchoice.net.au

→ **Your Home**
yourhome.gov.au/energy

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

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