1KOM MA5°

Your Solar Power Guide

A Comprehensive Guide to Solar Power: How it works, how much it costs, rebates, savings, installation, batteries and more.

Why Go Solar?

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Why Go Solar?

Solar is the cheapest form of energy you can get. In fact, once it's installed, the cost per kWh is zero! And Australia has more sunshine (or free power) than most countries around the globe.

We've all seen energy prices more than double in the last 10 years. but at the same time the cost of solar has gone down by around 90%. A well-designed solar system will last for decades and is one of the few renovations to your home that will save you, or even make you money, helping you manage your future energy costs.

Solar power has never been this affordable

As power prices continue to rise, a good quality solar power system can typically pay for itself in as little as 3 to 5 years. A solar power system can save you tens of thousands of dollars on your power bills over the life of the system, add value to your home, and significantly reduce your carbon footprint.

We now have many customers getting a credit from their electricity retailer each month, and by adding a battery to your system you can benefit from even greater savings.

Angela, 1KOMMA5° Customer with Solar and Battery

"My power bill used to be $600 per quarter, the last bill I got was a credit of $40. I'm sure the next bill will be even better since it's summer."

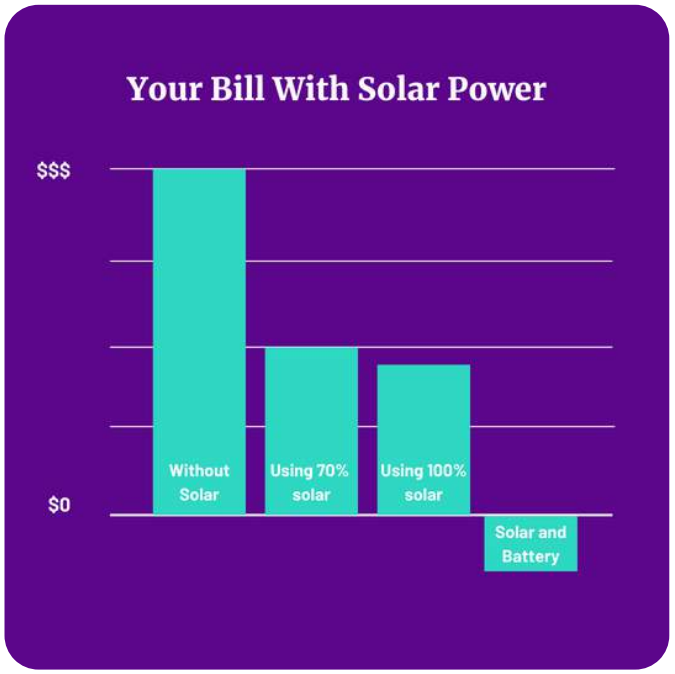
When Does Solar Make Financial Sense?

When Does Solar Make Sense?

The main benefit of solar power is that it reduces your power bill, so in round terms, the higher your bill, the more sense solar makes.

If your bills are only around $200 a quarter for example, solar power may not be worth it purely on financial grounds.

We generally recommend you have a quarterly power bill of at least $400 to be able to get any significant saving. If your power bill is more than $500 a quarter, a solar power system will almost certainly be of great benefit, and generally the larger your power bill, the more money you can save from solar power.



For many households, this rule of thumb is good enough. As solar power prices continue to fall, getting the maths exactly right is not as important as it used to be. Many of our customers get a rough sense of what they need and then add on a few more panels to future-proof their investment.

Of course, the 1KOMMA5° Team will help you accurately size up a system. When you are ready for a quote, you can call 1300 525 451 or request a quote via www.1komma5.com.au.

How Much Will Solar Save You?

How Much Will Solar Power Save Me?

Solar power is fed into your home to be used as it is generated, and so the amount you save depends on the size of the solar system, how much you pay for power and your usage patterns.

Simply put, an 8kW solar system can output around 11,500kWh per year of energy.

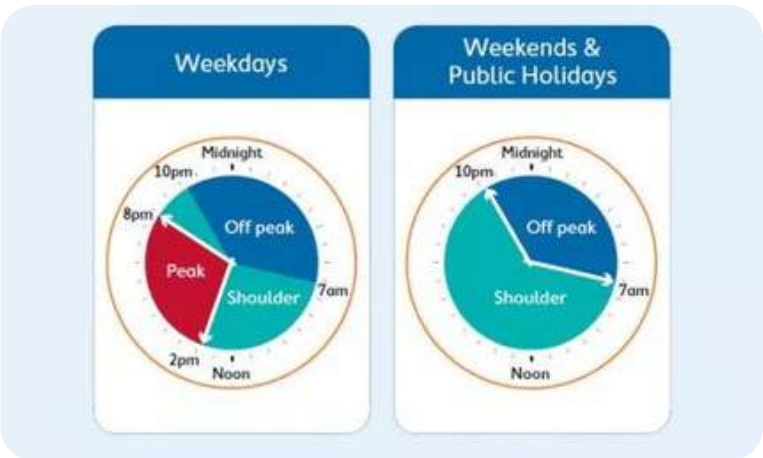
If you use all of that during daylight hours (which is unlikely but we will use this to help with your calculation), and you pay say 30c/kWh for power, then you could save around $3450 per year.

If you use around 2/3rds of the solar power during daylight hours, you would then save around $2700 per year.

For those that like detail and formulas, it is as simple as:
(11,500 (kWh) x 2/3 x 30c) + (11,500 x 1/3 x 11c Feed in Tariff) = $2,721

The savings increase if you have battery storage meaning you are getting full value from your solar output.

Many households have Time of Use billing which, for most homes means the savings can be even greater. It gets a little complicated to work that out in a Guide such as this, so it is worth talking through how this will actually work for you with one of our consultants.



Get Paid to Generate Grid Power

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Get Paid to Generate Power

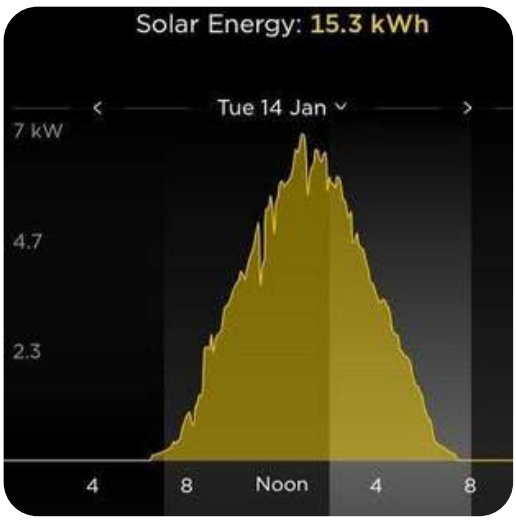
When a solar system is installed, solar power is fed into your home to power everything that is connected to mains power (except for off peak hot water), reducing the energy you buy.

If you don't use the solar power as it is generated, it is automatically fed out to the grid and you will be paid a feed-in-tariff by your energy retailer. This is generally around 5-12 cents per kWh and is paid as a credit on your power bill (you can get a higher tariff but usually in return for paying more for your power).

If you are using more power than the solar system is generating, you will automatically buy power from the grid at your contracted rates.

Use More Power During the Day

Solar power is generated during the day between around 7 am and 7 pm in summer (less in winter), so the savings increase if you use power in daylight hours. To get the most benefit from solar power, you should aim to use most of the solar power at the time it is generated, or consider a battery either now or at some point in the future.



To work out the best option requires some analysis of your current and future usage patterns - as well as preferably some knowledge about how solar power works, talk to the 1KOMMA5° Team today for more information.

Store Your Solar Energy For Night

Save on buying energy during the night with battery storage. Battery storage allows you to maximise more of your solar power savings. Simply put, battery storage captures any excess solar power in the daylight hours and uses it to power your home at night.

What is the Payback Period on Solar?

What is the Payback Period on Solar?

Paying back your investment as quickly as possible requires sizing up a system to match your daytime energy usage. In a perfect situation, you would use all the solar power that is generated.

For example, if you install an 8kW system for $9,600 and it generates around 11200 kWh every year, if you pay on average 30c/kW for your power you could save over $3360 a year on your bills. This would result in a return on your investment in less than 3 years! It is difficult to use 100% of the power a solar system generates, however if the system is sized correctly you should be able to use around 80% or more.

The reason returns diminish when you have a larger system than you need, is that instead of saving money from your bill by using solar power, you are selling excess solar power to the grid at your contracted feed in tariff rate (often around 11 cents per kWh).

However, with Electric Vehicles becoming more common, most customers are installing larger systems now to get free power to run their EV later. Adding a battery also allows more savings from a larger system.

If you are environmentally motivated, the bigger the solar system the better, as you are reducing your reliance on polluting industries such as coal and gas and helping to produce clean, renewable energy. Buying a solar system is one of the biggest steps you can take as an individual and a household to help build the renewable energy sector and reduce our reliance on old and polluting technology.

A quick word on the environmental benefits of solar – there are many solar systems installed that are only lasting around 5 years before needing to be replaced (even with '25 year warranties', but that's another story), with most of the panels being sent to landfill. These cheap systems can often be detrimental to the environment if they don't produce clean power for their expected life of 25+ years.

Needless to say, a well-designed, high quality system will generally output more than a cheaper, old technology system – especially over the long term

Government Incentives

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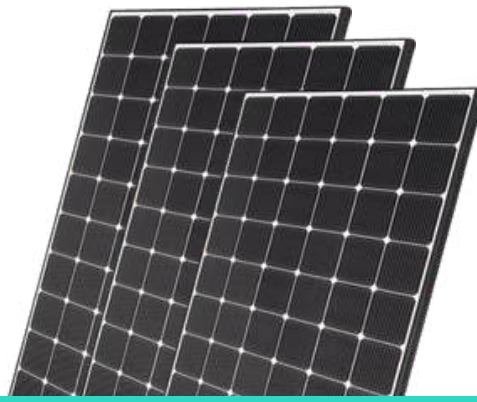
What Government Rebates are Available?

Government incentives are available to residential and commercial premises in Australia that install Solar Panels. These rebates can mean significant reductions in the cost of Solar Systems and have been designed to encourage Australia's use of renewable energy.

The government incentives are a part of Australia's Renewable Energy Target. When you install a solar system, a number of Renewable Energy Certificates (called STC's) are created. These Certificates are then purchased from you by Energy Companies as part of their Renewable Energy commitments.

The number of STC's depends on the size of the system. There are currently great rebates available on all our solar systems and the larger your system the greater the rebate:



- 5kW System - $1,900 rebate
- 10kW System - $3,800 rebate

1KOMMA5° make it simple for our customers by simply deducting the value of the STC's from the purchase price of your system.

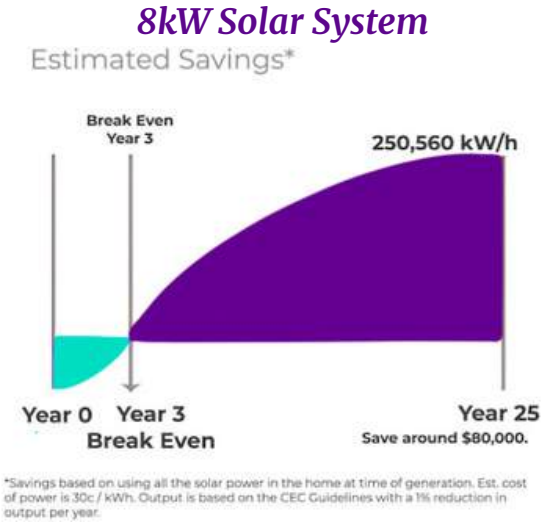
Key Points on Benefits

- Solar power can save you around $100 per kW per quarterly bill.
- A solar system will output (kWh) around 4 times its size (kW) per day.
- Battery storage allows you to use that energy 24/7.
- Currently Australians are paying around 25-30c per kWh, which you save when using solar electricity.
- You can be paid for any extra power you don't use at a rate of 5- 12c per kWh.
- The payback period is generally 3-6 years.
- The government incentives will give you $3,800 off a 10kW system. More for bigger systems.

The Financial Benefit of an 8kW System

The payback of an 8kW solar system has become so good, many people are surprised to find out it is now possible to get a good quality system to pay for itself in as quickly as 3 to 5 years, with a possible total profit of up to around $80,000 over the life of the system.

What's more, you are taking around $80,000 in future revenue off the books of Australia's coal industry, creating a huge impact on the future of Australia's Renewable Energy Industry.



This is why buying a solar power system is the single most effective action you can take to not only reduce your power bill but to vote for a clean energy future in

The output of an 8kW system varies depending on several factors including the orientation of your roof, the angle of your roof, shade, the quality of the brands you select and the standard of the installation.

The Clean Energy Council Guidelines state that an 8kW solar system in Sydney will output around 32 kWh a day. Importantly, this is not distributed equally across the year:

This annual output figure of 11,500kW/h from the CEC is considered to be a conservative estimate, and from our own data it is common to see 8kW systems significantly outperform this. On average, our internet connected Enphase systems with 24/7 back to base monitoring output 110% of their predicted output, reinforcing the importance of buying quality brands.

Have a look at your power bill to see how much you pay for your electricity. If you have time of use billing, the average benefit of a solar system is around 30 cents per kWh. If you have a flat rate it tends to be around 25 cents per kWh (remember to add GST).

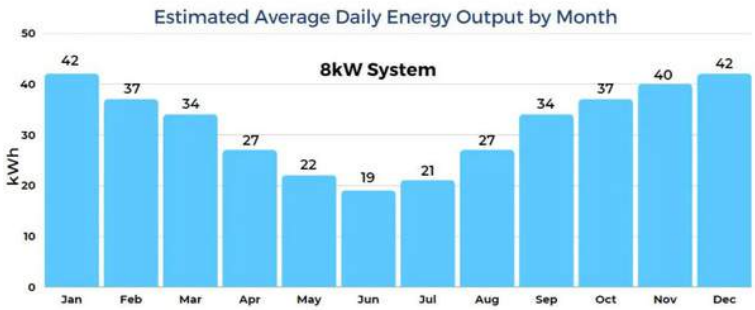
Using this number and multiplying the estimated system output by how much you pay for your power, you can see that with an investment of around $9,600 for an 8kW solar system you can save up to an impressive $80,000 on your power bills over 25 years!

This number can be even greater if you are using most of your solar power during the peak billing period of 2pm to 8pm, or if you chose top quality panels such as the 1KOMMA5° full black module, as they are built to last longer and output more power over time.

Factors That Will Impact My Panels

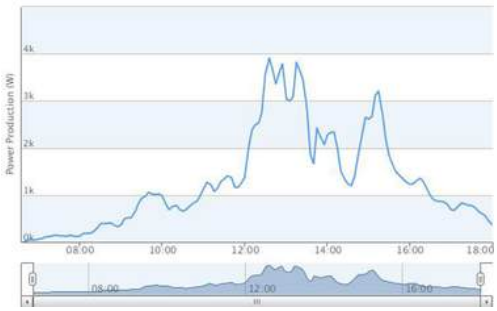
Main Factors Affecting Power Generation

How much power your solar system will generate depends on several factors including your roof orientation, the angle of the panels, the weather, the season and the size of your system. Because of this we use averages based on guidelines from the Clean Energy Council.



The Clean Energy Council advise that a solar system in Sydney should output an average of 3.9 kWh of energy per day for every kW of solar installed. Considering the seasons and the weather, on any given day this figure could be extremely different.

As an example, a 8kW system should output an average of 32kWh per day, producing more in summer and less in winter (graph above).



Does Solar Power Work on Cloudy Days?

A solar system does not only work at maximum capacity. In low light conditions such as early in the morning or when it is overcast, solar panels will still convert light into power for your home, just at a reduced rate.

For example, a 8kW system may only be outputting 4 or 5 kWs of power on a cloudy day (as illustrated through the graph above). There is a point where the energy produced is no longer strong enough to power the inverter and the system will turn off. This happens every evening and perhaps during an especially dark storm.
You can see in the graph above as the clouds move in front of the sun, and production dips.

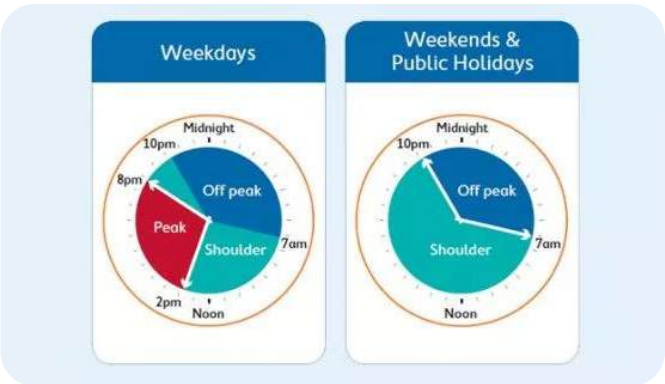
Factors That Will Impact My Panels

What Direction Should My Solar Panels Face?

Solar panels will generate the most energy over the course of a year when they are facing north. This is especially important in winter when the sun is lower in the northern sky. A 1KOMMA5° consultant can use specially designed software to demonstrate the sun and shade that your roof will have in winter, summer and at any time during the year.

If you house has a north- south roof line, we can install panels on either the eastern or western roof depending on what time of the day you use the most power. Many households will use more power in the afternoon when the kids are home from school and the air conditioner and pool pumps are running. If this is the case we would recommend installing solar panels on the western roof.

The other point that can influence this decision is time of use billing. In this case you may want to have some panels facing west to cover the peak billing period.



It is important to understand that panels installed on a roof facing south of either east or west will generate significantly less power than a solar system facing north. However, although this will reduce the output in winter (and also reduce your annual savings), they will still work well in summer. This may or may not suit your individual goals.

Picking the Right Installer

1KOMMA5°

The benefits of solar power are well known - you'll save money while doing your part to help the environment. But not all solar installers are created equal.

1KOMMA5° is an award-winning smart-solar installer with thousands of satisfied customers across Australia. Our friendly team will help you design and install a solar system without the usual sales pressure. Plus, we offer the highest level of customer support in the industry at no extra cost, ensuring maximum system performance & peace of mind.

We specialise in high quality solar power systems built to perform, along with battery storage and energy management. The result is happy customers and lower power bills. Find out more about 1KOMMA5° here.

Peter, 1KOMMA5° Client

"I am pleased to be able to say that the system has worked flawlessly since commissioning and has exceeded my expectations.

Our last monthly bill was $10.53 – the same bill in previous years was $198.79 and $163.67"

TESLA
POWERWALL
CERTIFIED INSTALLER
PREMIUM INSTALLER 2024

NEW ENERGY TECH
Approved Seller

1KOMMA5° AUSTRALIA
100,000
ENPHASE
MICROINVERTERS
INSTALLED
2023

Picking the Right Installer

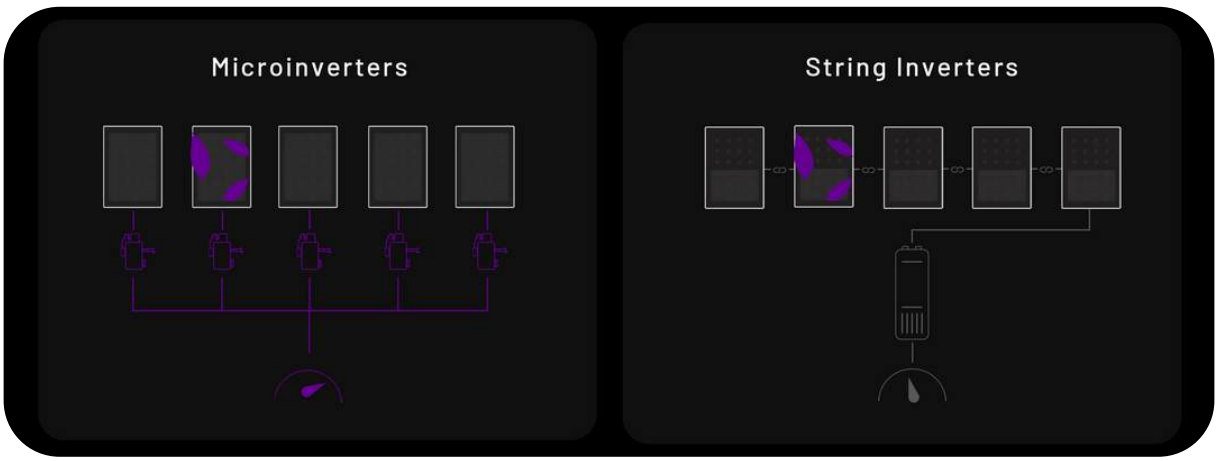
1KOMMA5°

Operating for over a decade and with more industry experience than almost any other solar company, 1KOMMA5° is now one of the leading Australian installers of residential solar & storage systems.

- The largest and most experienced installer of Enphase systems in Australia
- Enphase's Dealer Of The Year five years in a row: 2016 to 2020
- Rated #1 in customer experience by Enphase customers in Australia in 2022
- Tesla Powerwall Certified Premium Installer from 2021 to 2023
- Over 10 years operating with more industry experience than almost any other solar company in Australia

The 1KOMMA5° Difference	'Cheap Solar'	All 1K5° Systems	1K5° Smart Solar
Decades Of Reduced Power Bills	?	✓	✓
Most Efficient Solar Panels	✗	✓	✓
Full-service Warranties	✗	✓	✓
Free Technical Support	✗	✓	✓
Whole Of System Warranty	✗	✓	✓
Free Online Monitoring	✗	✓	✓
Easily Expandable	✗	✗	✓
Work In Partially Shaded Sites	✗	✗	✓
Panel-Level System Output	✗	✗	✓

Smart Solar Produces More Power



Shaded panels with Smart Solar

Shaded panels wired with a string inverter

More Electricity From Your Panels

One of the biggest limitations with standard solar installations is that the panels are installed in series, meaning that each panel in the string will always perform at the rate of the worst performing panel. This means that partial shade on even just one panel can have a large impact on the output of a system.

Smart 1KOMMA5° Systems (such as those from Enphase) feature panel level inverters that allows each individual panel to output power independently from the other panels, significantly increasing system performance.

Increased Performance in Patchy Shade

According to Renewable Energy World, shading of as little as 9% of a solar system connected to a central inverter, can lead to a system-wide decline in output by as much as 54%. It is not just shade from trees that can affect solar output. Bird droppings and dust as well as chimneys and power lines can all affect solar output.

The above image is a great example of how a 1KOMMA5° System can significantly increase output. In this image, the 1KOMMA5° System will be working at a significantly higher level compared to a standard system in the patchy shade, because each panel is independent from the rest of the array.

Not All Panels Were Made Equal

Solar panels vary in quality slightly. For example, 1KOMMA5° panels have a +5% tolerance, so their output can be 5% higher than their rating. It is important to note that you will only get the benefit of this manufacturing tolerance if you have a smart solar system, otherwise your system will always be outputting power at the level of the worst performing panel.

More Benefits of Smart Solar

Track Your Power

1KOMMA5°'s smart solar systems use advanced technology from Enphase to help you monitor the performance of your system, right down to the level of each individual panel.
These smart solar systems come with sophisticated real-time monitoring systems that are connected to the internet, and track data, with status reports and automated alerts. Consumption monitoring is also available to help you monitor how much power you are using in your home.

If there is a technical issue with your system, 1KOMMA5° can receive an automatic status alert from the monitoring platform, making it simple to conduct system checks remotely from our Operations Centre in Glendenning, or even when our technicians are on the road. Previously, system owners had to keep an eye on system performance manually or book regular service calls.

Increased Flexibility

Innovative solar technology now allows our technicians to design a panel array across multiple roof areas – both across different orientations and angles. If you use most of your power in the afternoon, it can be beneficial to have panels facing both north and west to distribute the output of solar power across the day.

This avoids having a big peak of solar power in the middle of the day, making it easier to use a large percentage of the solar power as it is generated, and hence increasing the effectiveness of your system.

"All set up and running smoothly. Very happy with the service and overall experience."
Brendon - 5 Stars

Trustpilot

TrustScore **4.5** | **514** reviews

What Can Go Wrong With Your System

System Safety

If a string inverter system was invented today it would probably be deemed illegal due to the need for high voltage cables to run through your home. By running an AC (instead of DC) cable from the panel array directly into your meter board, your risk of fire and electrocution are significantly reduced.

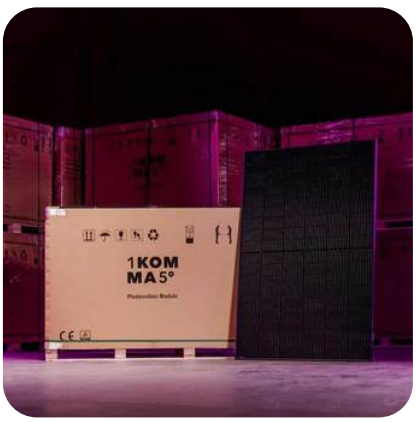
There is also power leakage on longer DC cable runs, making safe and easy AC cable runs the preferred option whenever possible. Gone are the days of high-voltage cable runs through the house.

Remote Technical Support

As your installer, the 1KOMMA5° Support Team have access to live, real-time monitoring of every panel. In the event of a fault, 1KOMMA5° receives an automated message that alerts us to the issue.
In many cases, the system can be updated and the problem fixed remotely. This can save you days of downtime and the frustration of having to call out a technician

No Single Point of Failure

In the unlikely event that something goes wrong with one of the panels, the rest of the system that is unaffected can still be operational. This allows for less down time and allows you to continue to generate solar power during a warranty claim or service check.



Longer Warranties as Standard

1KOMMA5° service a 25-year warranty as standard on LG NeON panels. As a part of our Platinum Service Package, 1KOMMA5° service full replacement warranties so you are not out of pocket in the event of a failure.

This, along with our free technical support is one of the main reasons 1KOMMA5° ranks in the top 5 Solar Installers in Australia.

Use Your Solar at Night

Eliminate Your Power Bill Entirely

People that are looking to eliminate their bills entirely buy solar with batteries. Really simply, battery storage captures any excess solar power in the daylight hours and uses it to power your home at night.

Solar with batteries is the better option because it protects you from any further increases in the price of electricity. If you have solar only and the power price shoots through the roof, you're still paying the higher rates for any power you use at night.

Battery Ready

1KOMMA5° systems are battery ready and are fully compatible with the leading brands on the market, including the Tesla Powerwall 2 and the Enphase AC battery.

Solar Batteries can be installed with your system or added to an existing system. We connect the batteries directly to the meter board, where we install a control hub that manages power consumption and storage in the home.

1KOMMA5° Systems have been designed to be modular, expandable, easily installed and can be tailored to each customer's usage profile. A household or business is then able to monitor their usage, solar generation and peak times, and install more battery capacity knowing that it will pay for itself in the quickest possible time

"Impressed with their systems and follow-up. Weren't the cheapest but solid product range and helpful through the decision process. Very happy with the install. Professional and looks like a decent job. All in all very happy to recommend.

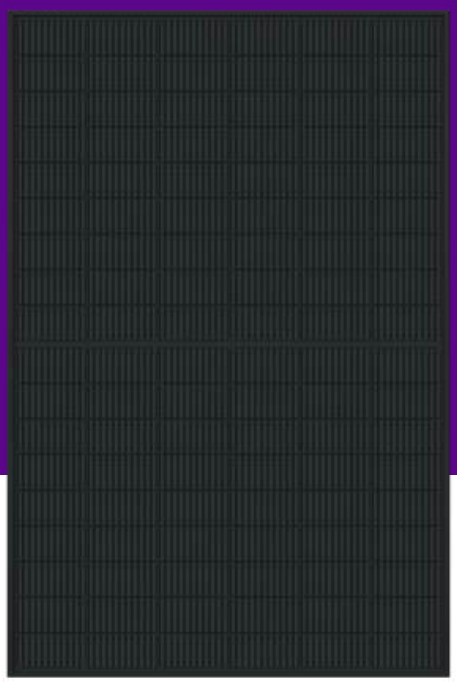
Rob - 5 Stars

Talk To An Experienced Installer Today

Our team has helped **thousands** of homeowners. Talk to us to help with your solar journey.

Next steps to take for your carbon-neutral future:

1. Request your personalised quote
2. Speak to our solar experts for tailored advice and product recommendations
3. Relax while our experienced team install your system so you can start saving on your power bills



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