

The background of the cover is a close-up photograph of green grass blades with water droplets, set against a bright, sunlit background that creates a bokeh effect. A dark green horizontal bar is positioned across the middle of the image, containing the title text.

Energy Matters

The Little Green Book


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Cheap energy shouldn't have to cost the Earth

Electricity prices right across Australia are increasing sharply as power companies struggle to maintain expensive infrastructure and boost shareholder returns. What's more, our reliance on fossil fuels to produce that electricity means we face a growing chorus of criticism over the impact that coal mining and pollution from power stations is making on our environment. Australia has become the worst greenhouse gas polluter per capita of any country in the world. With the climate crisis looming as the most critical challenge of our time, renewable energy is our chance to be part of the solution.



Sunlight is free, and
we live on the sunniest
continent on Earth.

Making the switch

More Australian households are now taking advantage of government incentives and emerging technology to make the switch to solar power as their main source of electricity.

In doing so, they realise more than just the sensible economic, environmental and practical benefits of powering their homes with free energy from the sun. By investing in renewable energy, pioneering Australians are committing to better awareness about climate change, creating jobs and inspiring others to strive for a greener community, helping to preserve the environment for our future.

At Energy Matters we offer reliable, independent advice on all questions relating to renewable energy installation, including solar power, solar hot water, wind power and more. Our main goal is to provide flexible, affordable solutions tailored to meet the specific needs of each of our customers, regardless of where they live.

And because we combine a straightforward approach with precision installation and support, most of our systems take less than a day to install, and do not require ongoing maintenance.

We're looking forward to helping you make the switch.

Energy Matters



Partners for a Sustainable Future

Home and Business

In sun-drenched Australia, solar energy is the cleanest, greenest and most viable form of renewable energy available to help run your home or enterprise.

Powering a house or business on solar energy is easier and cheaper than you might think. Our team of accredited technicians have successfully installed thousands of solar power systems in rural and urban properties right across Australia, New Zealand and the Pacific. The economy and efficiency of solar power systems are now greatly improved over earlier models, while designs have become smaller and easier on the eye.

And in addition to the money you'll quickly begin to save on electricity, there are Government incentives available for green energy customers, making solar power even more affordable for families and business operators.

“Cannot thank the Energy Matters team enough, the installation was professional and painless, and there is no nicer feeling than watching the meter spin backwards, would recommend them anytime.”

Derek Tsao Blackburn North Victoria

Schools

Energy Matters is working with schools and the Federal Government to help show the next generation the way forward for a greener environment. Supporting education on renewable energy such as solar power is a key part of this goal.

Grants of \$50,000 per campus under the National Solar Schools Program enable your school to switch to solar power without cutting into your budget.

As part of our school solar package, Energy Matters offers a real time monitoring display and on-site staff training in operations and maintenance to help raise students' awareness of the benefits of green energy. We'll also provide resources on renewable energy and sustainable living for students, including detailed information on your school's custom designed system.

Discounts on individual solar power systems are also available for staff and school community members

“The presentation given by Matt of Energy Matters was really well pitched to our Year 11 secondary school group, giving an insight into the foundation themes and theories. The session went on to demonstrate some of the applications of both wind and solar energy/power, which really helped to validate the things covered earlier. I would highly recommend this presentation to other secondary schools as part of an exciting Alternative Energy study unit”

David Carpenter,
Australian Technical College, Sunshine

Latrobe City Council Intergenerational hub

System size: 40 x 175 W Modules = 7kW

Project manager: Luke Pickles

Lead Installer: Jan Stockley BCSE accredited

Electrician: Deb Porter BCSE accredited

This system generates an average of 28kWh per day and removes about 13 tonnes of CO₂ from the Earth's atmosphere each year.* In addition, the system raises awareness among parents and children using the centre as well as delivering considerable savings in electricity costs.

*Based on comparison with electricity generated from brown coal.

Community Buildings

Energy Matters is committed to supporting grass roots groups and community organisations, regardless of their income or geographic location.

With this commitment in mind, we offer generous discounts for community buildings and churches across Australia who choose to become our customers.

This commitment even extends to remote facilities that do not have access to mains grid power. Whether your community building is located in the inner-city or beyond the Birdsville Track, Energy Matters has a tailored green energy solution available for you.



Remote Areas

Living or working in a remote area where mains electricity just isn't available or is too cost prohibitive?

With major advancements in solar and wind power technology, off-grid electricity is now more affordable and more efficient than most Australians are aware.

Establishing an off-grid renewable energy system has never been easier or cheaper, so residing in a remote location no longer means Australians have to miss out on creature comforts and essential appliances.

Whether you're interested in a stand alone wind turbine or solar power system, our team of experts at Energy Matters can provide information on the cutting edge technology most suitable for your needs.

Living in a remote location no longer means Australians have to miss out on creature comforts and essential appliances.



What's the difference between grid connect and off-grid?

Most customers invest in grid connect systems. These are usually located in developed areas, and supply solar or wind powered electricity through an inverter directly to the household. Whenever the system produces more power than is being used, the surplus is fed into the mains grid.

Depending on your power provider and your location, you will be paid a premium for every kWh of energy you feed into the grid.

When your system is not producing energy – for example, at night, for solar panel owners – your electricity is supplied by the mains power grid, as usual.

Whenever your property is unoccupied, you will continue to be credited for any electricity your solar or wind power system produces.

How a Grid Connect System works

1. Photovoltaic modules

Also known as solar panels, directly convert energy in the form of sunlight into direct current (DC) electrical energy.

2. Inverter

An inverter changes the solar DC power into 240V alternating current (AC) ready to be fed back into the grid or used in your home.*

3. Switch board

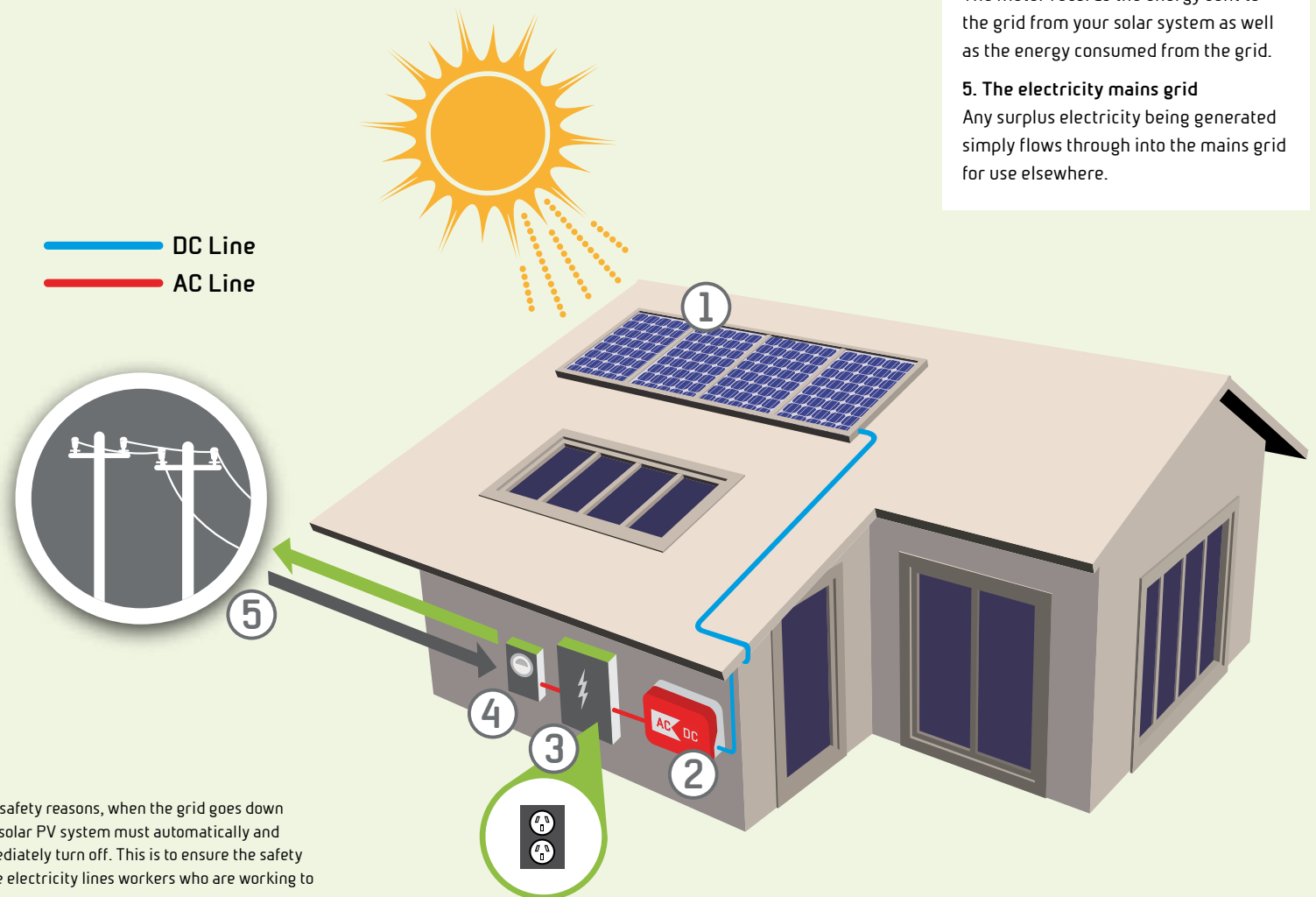
AC power from the inverter goes through the switch board for use in your home.

4. Electricity meter

The meter records the energy sent to the grid from your solar system as well as the energy consumed from the grid.

5. The electricity mains grid

Any surplus electricity being generated simply flows through into the mains grid for use elsewhere.



*For safety reasons, when the grid goes down your solar PV system must automatically and immediately turn off. This is to ensure the safety of the electricity lines workers who are working to restore power.

Off-Grid

Off-grid systems are suitable for people in remote areas, where a connection to the mains power grid is not available or too expensive, or for light industrial precincts where power security is essential.

These systems supply solar or wind powered electricity through an inverter to a charge controller, which regulates the charging of batteries for energy storage. Appliances can then be run off the electricity stored in the batteries, even at night, or – in the case of wind power – when the turbine isn't operating.

How an Off Grid System works

1. Photovoltaic modules

Also known as solar panels, directly convert energy in the form of sunlight into direct current (DC) electrical energy.

2. Regulator

DC electricity flows via the regulator which prevents the batteries overcharging.

3. Control board

The control board controls DC and AC power and houses the switching and circuit protection devices.

4. Inverter

The inverter changes the battery DC power into 240V alternating current (AC) ready to be used in the home.

5. Batteries

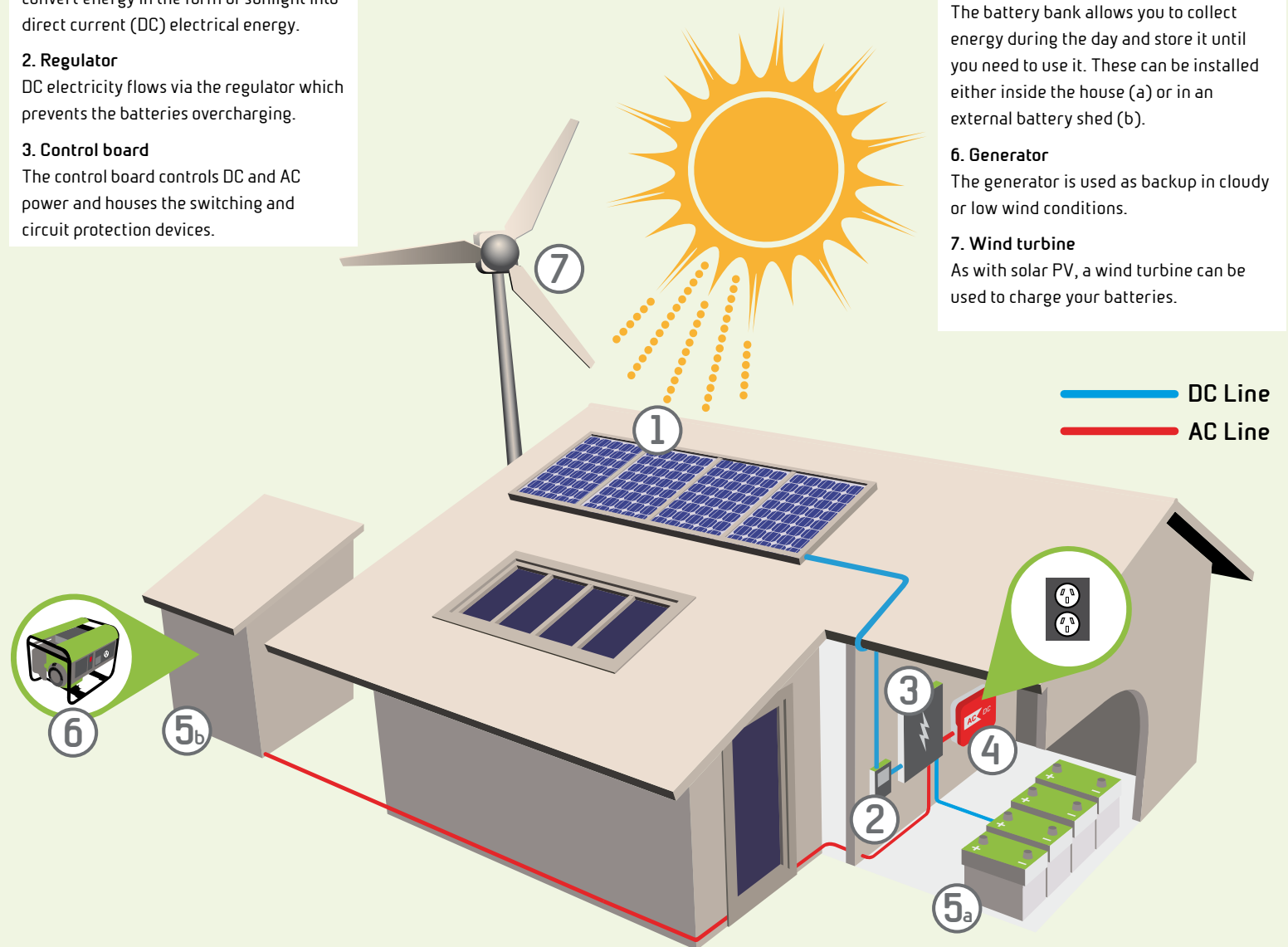
The battery bank allows you to collect energy during the day and store it until you need to use it. These can be installed either inside the house (a) or in an external battery shed (b).


6. Generator

The generator is used as backup in cloudy or low wind conditions.

7. Wind turbine

As with solar PV, a wind turbine can be used to charge your batteries.





Energy Matters is
solar power.

Solar Panels

Unlike conventional forms of power generation which require large scale plants and maintenance, solar power systems can be installed at any location on any scale, from portable kits to multi-acre solar farms, removing the expense and inefficiency of distributing power over long distances.

Because they have no moving parts, solar modules are extremely reliable, with an expected life span of several decades. They are also self-cleaning, easy to install, and rarely require maintenance.

Energy Matters is solar power.

We offer trusted brands and expert installation at competitive prices.

This is why Energy Matters is one of the fastest growing green energy providers in Australia.

And with a broad array of solar panels available for every scale, we can design a solution which best matches your needs.

Residential Grid Connect System

System size: 14x175 W modules = 2.45kW

Installed by: Energy Matters

This system generates an average of 9.8kWh per day and removes about 4.6 tonnes of CO₂ from the Earth's atmosphere each year.*

*Based on comparison with electricity generated from brown coal.

In the right circumstances, wind turbines are superior even to solar panels as a source of green energy

Wind turbines

Wind turbines convert wind energy into cost-effective, clean and sustainable electricity. A typical turbine has three propeller-like blades, attached to an electrical generator.

Energy Matters offers a range of turbines for your property, boat, or caravan. Because their success relies on having good average wind speeds, these systems are best located in rural and coastal regions away from built-up areas.

In the right circumstances, wind turbines are superior even to solar panels as a source of green energy, with a single turbine being sufficient to generate electricity for a household.

Our Australia-wide network of technicians has unparalleled experience of installing both wind power and hybrid wind and solar power solutions.

Solar Hot Water


All energy smart houses should have a solar hot water system installed.

Aside from being costly, electric and gas hot water systems are also the single biggest source of greenhouse emissions for households, accounting for up to 20% of their total emissions. In response, the Federal Government is providing very generous rebates to encourage households and community organisations to make the switch to solar hot water technology.

By installing a solar hot water service, you'll not only be reducing your family's environmental impact, but also saving up to 75% on your water heating costs.

At Energy Matters, we offer and install the most cost-effective and efficient solar hot water products. We are also very happy to provide assistance in claiming Government rebates.

Talk to us to find out more.



By installing a solar hot water service, you'll not only be reducing your family's environmental impact, but also saving up to 75% on your water heating costs.



What happens next?

At Energy Matters, we understand the importance of making sure that the switch to green energy is easy. Our priority is to help you select and install the best and most straightforward system for you, so you can feel confident in your choice.

Call us on 1300 727 151

Our friendly representatives are on hand to answer all of your questions. If you are ready to purchase a system, we can provide a cost estimate for a suitable solution. This is usually followed by an assessment and formal quote, during which we can arrange a time and date to install your investment.

Because of the simplicity of modern designs, integration of a system doesn't require major changes to your electrical infrastructure. Our BCSE accredited members have extensive experience in installing green power technology, so the process usually takes less than a day.

Solar modules from Energy Matters have a guaranteed lifespan of two decades or more, so you'll have many years to reap the savings of your investment.

We'll be on hand to help you make the switch.

Energy Matters

The switch to solar is as easy as

- 1 Call 1300 727 151 to obtain an estimate
- 2 Complete an assessment for a formal quote
- 3 Arrange a time and date to install your new system



www.energymatters.com.au