



# Green Power Electrical | [greenpowerelec.com.au](https://greenpowerelec.com.au)

Green Power is electricity generated from renewable resources such as solar, wind, geothermal, biomass, and some forms of low-impact small hydroelectric. The electricity you use with Green Power is safe, clean, and reliable.

The Green Power Box stores energy in its capacitors that would otherwise be wasted as heat (I<sup>2</sup>R losses) from your inductive motors like air conditioners, refrigerators, dishwashers and pumps. This decreases your demand from the utility.

## Benefits

Purchasing [green power electrical](#) through your electric provider allows you to support cleaner, more sustainable energy solutions for the future. The utility remains responsible for delivering your electricity safely and reliably. The environmental disclosure label in your electric bill will show the mix of fuels used to generate your electricity.

Green power uses renewable resources to produce electricity, and is not dependent on the weather. Unlike fossil fuels, green plants can be used to produce electricity 24 hours a day, 7 days a week. Green power also benefits the environment by reducing emissions and contributing to cleaner air.

One of the most popular forms of green power is solar. The sun's heat is harnessed to turn turbines that produce electricity. Wind and biomass are other common sources of green power. Geothermal energy is another source of renewable electricity. When a motor is running, it draws power from the utility's transformer through panel boxes, meters and wiring. This creates heat which can strain and damage the motor and wires. The Green Power Box pulls this wasted energy from the meter and stores it in capacitors, which reduces the amount of heat drawn from the motors.

## Cost

The cost of green power varies from one electricity provider to the next. Some offer a standard price premium for green energy while others do not include a premium in their prices. The cost of green energy can also vary depending on the type of renewable energy that is used.

The most common forms of renewable energy are wind, solar, and hydropower. Each of these sources has its own advantages and disadvantages. For example, wind and [solar power installation](#) are cheaper than coal or nuclear. Currently, according to Lazard, residential solar

and onshore wind produce the most inexpensive electricity followed by large-scale hydroelectricity.

Whether you're an individual or business, you can support sustainable energy by purchasing certified green power through your electricity retailer. While it's impossible to ensure that your electricity is solely generated from renewable energy, your purchase still contributes to an increase in the share of clean, renewable energy on the grid. It's simple to get started with green renewable energy today.

## Scalability

In competitive energy markets, customers can procure green power through utility green power programs and through competitive supplier green power products. These programs are based on customer payment of a premium to the standard electricity offering, in return for the bundled green power and RECs. However, the exact premium depends on the product category and how it is procured.

For example, competitive supplier green power products typically use a single price for electricity plus RECs, whereas utility green power programs use multiple prices for different types of bundled products. Therefore, it is difficult to compare prices across product categories.

The scalability of a renewable energy business is critical to its success. Newer companies may struggle to find the right mix of capital and technology that will allow them to scale up their operations. These challenges can be overcome by adopting a newer approach to operational management. For example, newer companies may manage sales leads informally and track project progression on large whiteboards. Then, they can move to spreadsheets and checklists to streamline the process.

## Reliability

The reliability of our power is a critical concern for policymakers, utilities, grid operators and electricity consumers. As the fossil fuel power plants that provide the bulk of our energy continue to retire, it is more important than ever that new capacity be deployed quickly and efficiently.

DOE is helping to ensure that dispatchable renewables and other advanced technologies are ready to meet future electricity demands. This work includes research, development and deployment of grid-enhancing technologies, advanced modeling for grid operations and risk management, and industry-wide cost reductions and performance improvements.

In systems that only use [solar green power](#) and wind generation, without energy storage, a country's available land area, level of excess annual production, and the size of deployed energy storage determine the frequency with which electricity demand is not met for longer durations than 24 hours (see Figure 3). For most countries with small land areas, more solar in the mix reduces the frequency of these long-duration gaps more than adding 12 h of storage.