



CHAPTER ONE: Solar

INTRODUCTION

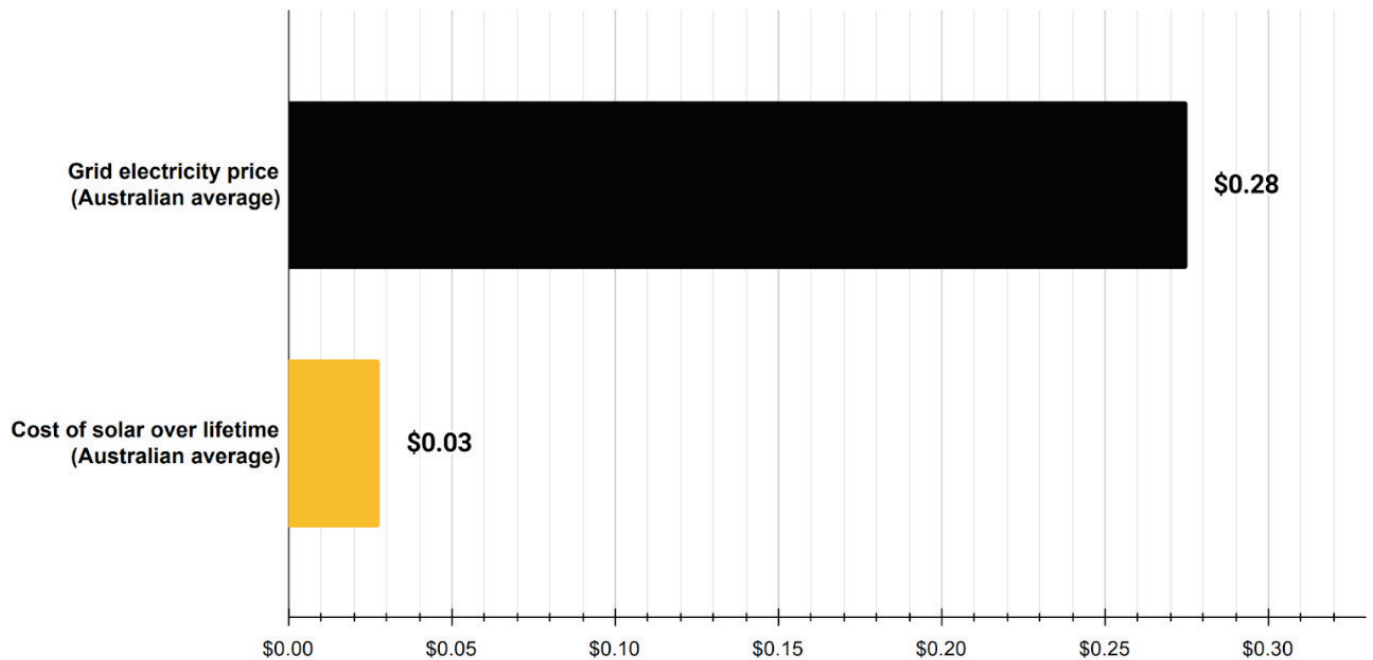
Solar power is becoming an increasingly popular option for households looking to reduce their reliance on grid power and transition to renewable energy sources. Solar panels generate electricity from the sun, and this electricity can be used to power a household's appliances and devices. In this chapter, we will provide information on how to install solar panels and estimate the costs and savings associated with this option.

Luckily in Australia we have access to the cheapest home energy in the world - our rooftop solar. We are the sunburnt country after all.

Over its lifetime rooftop solar costs about 3 cents per kWh, cheaper than any other source of home energy. Combined with a home or community battery it's still cheaper than the grid. When the grid becomes renewable you can use it for backup too, but the cheapest energy will always come from your roof.

Cost of grid electricity vs solar electricity

Solar capacity factor of 17.14%, \$838 /kW 25 year lifetime. SolarChoice & AEMC.



HOW TO INSTALL SOLAR PANELS

Installing solar panels requires a few steps, including:

1. Assessing your household's energy needs: Before installing solar panels, it is essential to determine how much energy your household uses on average. This will help you determine the number of solar panels you need to install to meet your energy needs.
2. Choosing a solar panel system: There are two types of solar panel systems: grid-tied and off-grid. Grid-tied systems are connected to the grid, and any excess energy generated by the solar panels is fed back into the grid. Off-grid systems are not connected to the grid and require batteries to store excess energy.
3. Finding a reputable solar panel installer: It is essential to find a reputable solar panel installer who can assess your household's energy needs, recommend a solar panel system, and install the panels.
4. Obtaining permits: Depending on where you live, you may need to obtain permits before installing solar panels. It is essential to check with your local government to determine what permits are required.
5. Installing the solar panels: Once you have chosen a solar panel system, found a reputable installer, and obtained the necessary permits, it is time to install the solar panels. The installation process typically takes a few days and involves mounting the panels on your roof and connecting them to your electrical system.

COSTS AND SAVINGS

The cost of installing solar panels varies depending on several factors, including the size of the system, the type of system, and the installation costs. On average, a standard 6-kilowatt solar panel system costs between \$5,000 and \$10,000 to install.

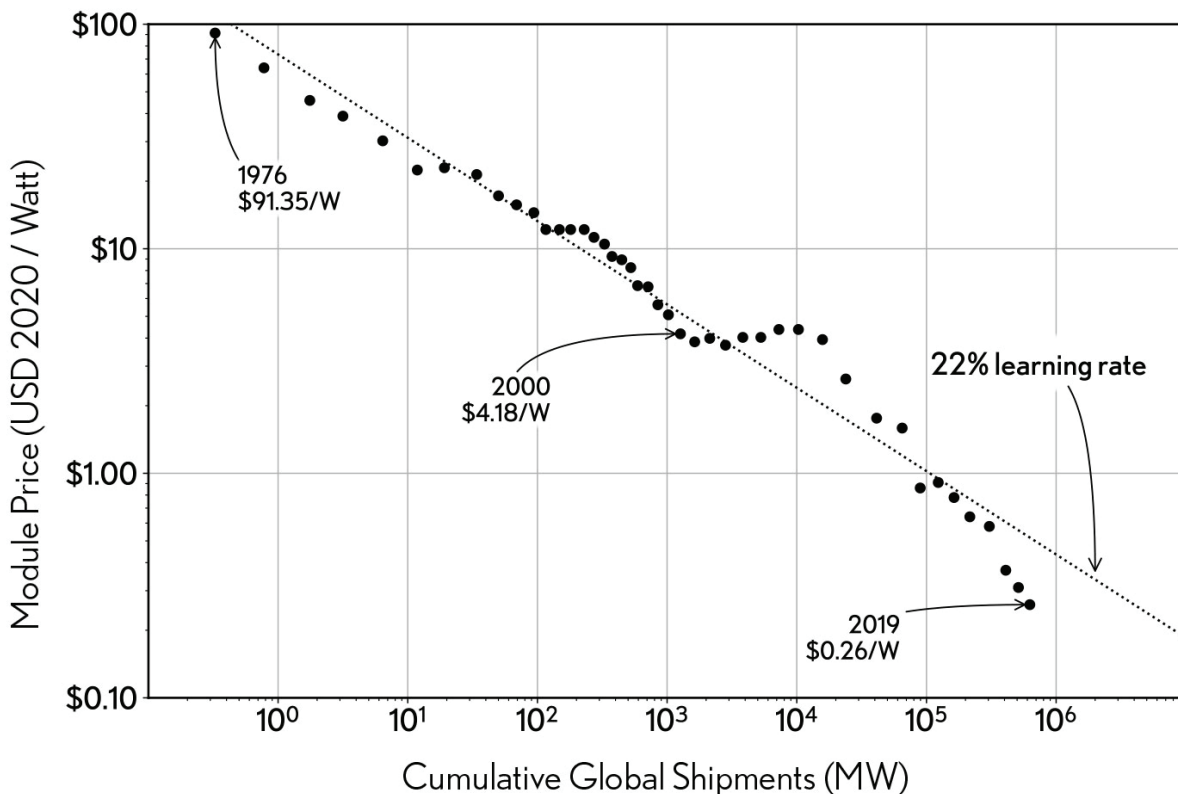
However, the cost of installing solar panels can be offset by the savings generated by using solar power. By generating your electricity, you can significantly reduce your reliance on grid power, which can save you money on your energy bills. The amount of money you can save depends on several factors, including the size of your solar panel system, your energy usage, and the cost of electricity in your area.

To estimate the savings associated with installing solar panels, you can use an online solar calculator. These calculators take into account your energy usage, the size of your solar panel system, and the cost of electricity in your area to estimate your savings.

For example, let's say you install a 6-kilowatt solar panel system, and your average monthly energy bill is \$150. According to the solar calculator, you could save approximately \$1,500 per year on your energy bills. Over the lifetime of the solar panel system, which is typically 25 years, you could save approximately \$37,500.

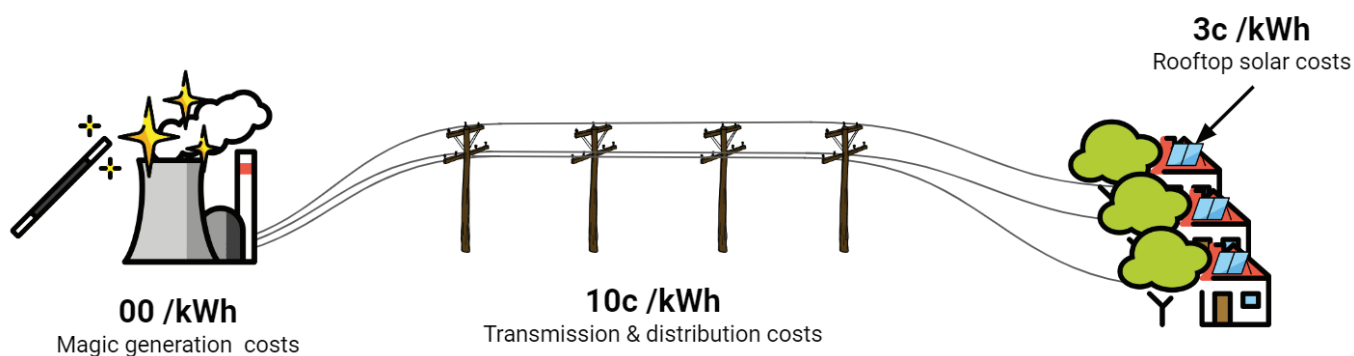
In addition to the savings generated by using solar power, installing solar panels can also increase the value of your home. According to a study by the Lawrence Berkeley National Laboratory, homes with solar panels sell for approximately 4% more than homes without solar panels.

COST OF SOLAR OVER TIME



Australian rooftop solar is so cheap that even a magic power plant providing free energy wouldn't beat it.

The cost of sending that energy over powerlines alone is more than the cost of the energy that comes from your roof. The best option is to power as much of your home off solar as you can.



CONCLUSION

Installing solar panels is an excellent way for households to reduce their reliance on grid power, save money on their energy bills, and contribute to a cleaner, greener future. While the initial cost of installing solar panels can be significant, the savings generated by using solar power can offset this cost over time.

By assessing your household's energy needs, choosing a solar panel system, finding a reputable installer, obtaining permits, and installing the solar panels, you can start generating your electricity and enjoying the benefits of solar power. Additionally, by using an online solar calculator, you can estimate the savings associated with installing solar panels and make an informed decision about whether solar power is right for your household.