

# NORTHERN RIVERS SOLAR & ELECTRICAL

## FREQUENTLY ASKED QUESTIONS



### Is my home right for solar?

As part of the application process, as your approved solar installer, we will check if your house is suitable for solar. This includes making sure solar can be safely installed on your roof and that the system will produce enough energy to reduce your electricity bills.

Consider the following questions to decide if your house is right for solar:

#### **What is the condition of your roof?**

If your roof is damaged or will need replacing in the next few years, you must consider there can be additional costs or damages when a solar system is taken down and re-installed as part of a roof restoration or replacement.

#### **What direction does your roof face?**

The direction of your roof faces impacts the amount of electricity your solar system can produce. North-facing roofs are the most suitable for solar as they catch the most sunlight and produce the most electricity. East or west facing roofs are also suitable for solar production. South facing roofs are usually not suitable for solar.

## **Does your roof get full sun?**

When a shadow covers your solar panel, it reduces the amount of electricity produced. We will analyse your roof surroundings to identify any items, such as buildings or trees, that may cause shading on your roof now or in the future.

## **What is the angle of your roof?**

Solar panels are generally mounted with the angle of your roof. This means the tilt of your roof can impact the amount of sunlight on the panels. If you have a roof that is flat, or close to flat, it could affect the amount of electricity produced and reduce your bill savings.

## **Do you have enough roof space?**

There needs to be enough space on your roof to accommodate around 10 solar panels. This means you will require between 17-20m<sup>2</sup> of roof space.

## **How much weight can your roof hold?**

Solar panels will add weight onto your roof. As part of our house suitability assessment, we will check whether the roof structure is strong enough to support the additional weight of the solar system.

## **Can I upsize my solar system?**

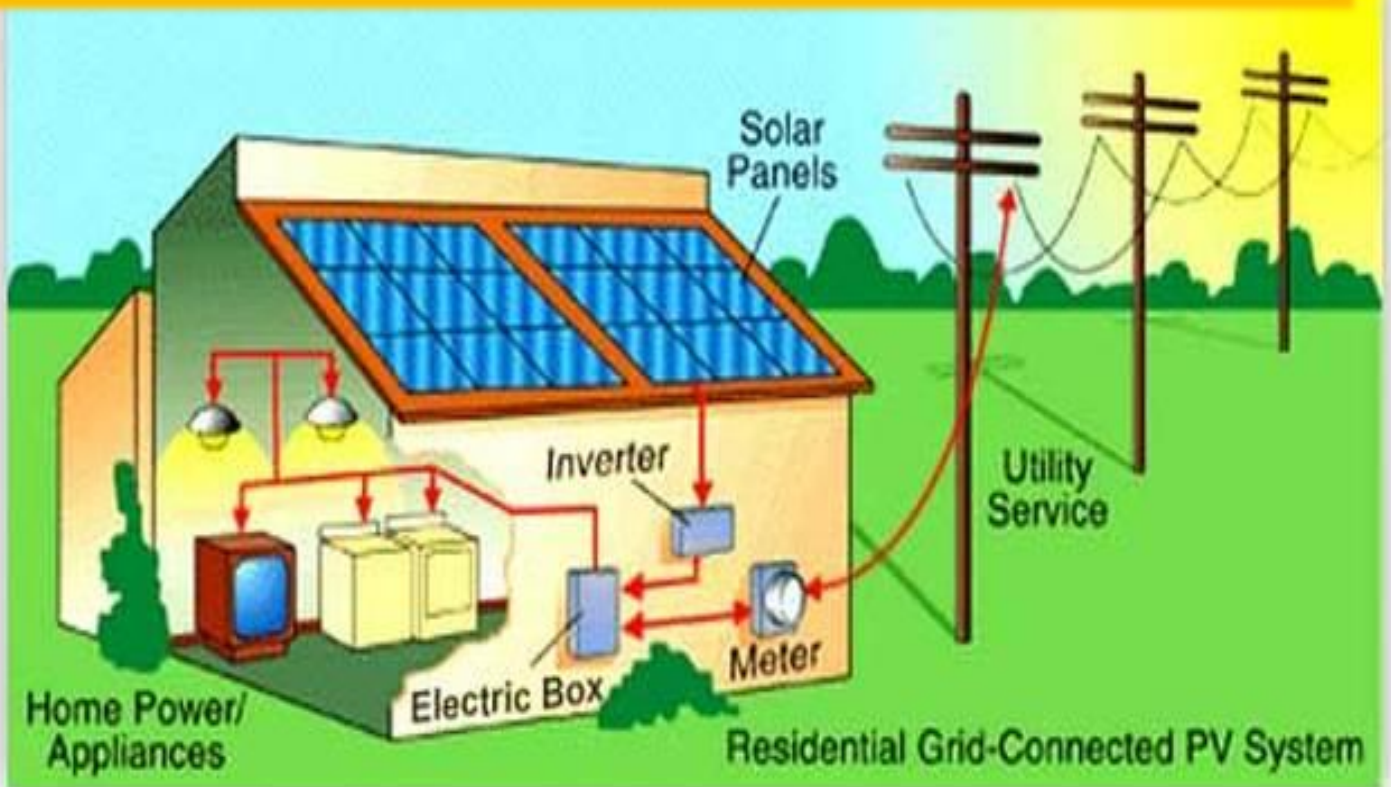
The amount of savings you are likely to see from a larger system will depend on your lifestyle and electricity use. A larger system will work for you if you consume most of your electricity produced during daylight hours. Solar electricity not consumed will be fed back to the grid. While you may receive a solar feed-in tariff for this electricity, this is generally much less than the amount you pay for the electricity you draw from the grid.

## **What are the ongoing costs of a solar system?**

To ensure your system is performing at its best, regular service and maintenance is necessary.

We recommend you plan for a service and maintenance visit once every 12 months.

# HOW YOUR PV SYSTEM WORKS



1. SOLAR PANELS TURN UV LIGHT INTO DIRECT CURRENT (DC) POWER

2. AN INVERTER TURNS- DC- CURRENT INTO (AC) FOR USE IN HOME

3. A SOLAR METER MEASURES HOW MUCH YOUR SOLAR SYSTEM EXPORTS TO THE GRID

4. EXCESS POWER YOU DON'T USE IS SOLD BACK TO YOUR POWER COMPANY

## SOLAR PANELS

**Function** Solar panel/modules use semiconducting materials to directly convert sunlight into direct current (DC) electricity, making it a clean, sustainable energy technology.

**Location** Multiple panels are wired together to form an array. The larger the array area (the more panels you have installed), the more electricity that will be produced. In the southern hemisphere, the ideal location for these to be installed is on the north facing roof and at an optimum angle of 27-28 degrees.

## INVERTERS

**Function;** Solar inverters play a crucial role in any solar energy system. The inverters function is to convert the DC electricity produced by the solar panels, into alternating current (AC), meaning it can be used to power all commercial appliances and fed back into a commercial electricity grid.

**Location** Inverters are ideally located adjacent to the house main switchboard. They can also be installed in an alternate location due to the nature of the inverter supplied or any physical limitations deemed by the installer during installation

## AC/DC ISOLATORS

**Function** The isolator is designed to isolate the PV array output into the inverter. This may need to be used in the event of system maintenance, for safety purposes or in emergency situations.

**Location** The isolator is mounted next to the inverter and is clearly labelled “DC Isolator”

## SOLAR RACKING

**Function** Designed for residential and commercial applications, the racking is mounted to the roof providing a rigid structure on which the solar panels are secured. Featuring a low-profile installation, the racking system adapts to tiled and tin roof types and uses minimal roof penetrations for a leak-proof fit. Manufactured from T5 aluminium, the rail comes in various lengths and is anodized for increased durability.

**Location** The racking is secured to domestic housing or commercial roofs and can also be attached to external structures such as garages and car ports depending on the structural integrity of the roof.