

Electrical Safety Office

Electrical safety when working around grid connected solar photovoltaic (PV) systems

Scope

Grid connected solar PV systems are now common on many homes and buildings in Queensland. These systems, when installed and maintained correctly, do not present any more risk than other electrical equipment.

These systems produce electricity, however, when the solar panels are exposed to sunlight, even when the main switch for the installation has been turned off or the mains supply from the street has been isolated.

Voltages generated from grid-connected solar panels may be in the range of 300-400 volts DC.

Shutting down solar PV systems

When installed, it is a requirement for solar PV systems to have a "shutdown procedure". This procedure needs to be located near the system inverter.

It is important that this shutdown procedure is followed when shutting down the system.

If you are unfamiliar with the system or its shutdown procedure, do not proceed.

Consult the owner of the system for more information.

Note: Shutting down the solar PV system only stops the inverter supplying electricity to the electrical installation. It does not stop the solar panels from generating electricity. This means the cables running from the solar panels to the inverter are still energised.

Some solar panels / arrays may have an isolator fitted at the panels. Turning this off will isolate the cables running to the inverter but the panels will still be generating electricity when the sun is shining.

Accessing a roof where solar panels are installed.

Unless damaged, a correctly installed solar PV system does not create any additional risk when accessing a roof.

However it is recommended that when accessing a roof where solar panels exist, you maintain a safe distance from the solar panels and any associated cables.

This will minimise the risk of electric shock if the insulation of the supply cables have been damaged and this damage has not been identified.

It also minimises the risk of you accidentally damaging the panels or cables while performing any work on the roof.

If you think you have damaged the solar panels or any of the cables whilst performing your work, you must consult with the owner to arrange to have the system inspected by a licensed electrical contractor and repaired.

If, once on the roof, you notice any damage to the solar panels or supply cables, you should stop, get down from the roof and consult with the owner to have the system inspected and repaired.

If the solar PV system has been damaged

If you believe any part of the solar PV system has been damaged by events such as storms or floods, you need to stay well away from the system and any exposed conductive parts that may have become live as a result of the damaged components until a licensed electrical contractor has been able to attend and make the system safe.

Stay away from any debris that may be in contact with a damaged system. Even with mains supply from the street de-energised and isolated there may still be a risk from electricity being generated by the solar panels.

Who should you contact?

If you believe there is a safety issue with the solar PV system, you should consult with the owner of the system to arrange for the system to be inspected by a licensed electrical contractor and repaired.

Where there is a high risk to electrical safety contact the local electricity distribution entity e.g. Ergon Energy, Energex or Essential Energy

For more information

Visit www.electricalsafety.qld.gov.au or call the Electrical Safety Infoline on 1300 650 662.

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