

# Guide on solar panel installations (photovoltaic)



This Guide is a resource and reference document and is for general information only.

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## Solar panel installations (photovoltaic)

Installing solar panels involves building work and electrical work. As a result, planning and building approval must be obtained prior to an installation when required (for example, solar panels that are not installed parallel with the roof) and a licensed electrician must do the electrical work. This Information Guide provides more information on these requirements.

There is a separate [Fact Sheet – Installing solar panels in your home](#) for home owners on the CBOS website at [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au).

## Who can install solar panels?

### Electrical work

Electrical work for all solar panel installations must be done by a person:

- with a valid unrestricted electrical practitioner licence and
- who is working under a licensed electrical contractor.

You can find a licensed tradesperson by searching the database on the CBOS website at [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au)

The electrician installing the panels should have Clean Energy Council accreditation. This is to be eligible for certain Federal Government rebates. Electricians can apply for accreditation with the Clean Energy Council at [www.cleanenergycouncil.org.au](http://www.cleanenergycouncil.org.au)

### Building work

The owner can contract a ‘competent person’ to do the building work for solar panel installation. For example this could be attaching the panels to a roof or a support structure. However a licensed electrician must supervise the work. An electrician can also do the work if they are competent.

### What does ‘competent person’ mean?

A ‘**competent person**’ is someone who has enough training, experience or knowledge to allow them to do the work safely and in accordance with the applicable technical requirements outlined on Page 10 of this Information Guide.

## Responsibility for solar panel approvals

The following people are **all** responsible for making sure there is planning and building approval in place (if required) before solar panels are installed:

- the electrical contractor
- the nominated manager
- the electrical practitioner
- the person who does the building work for the solar panel installation (which may be the electrical practitioner) and
- the property owner.

### Building Act 2016

A person must not perform building work (such as attaching solar panels to a roof or support structure) without the required approvals in place.

### Occupational Licensing Act 2005

The holder of a practitioner licence, contractor licence and the nominated manager for that licence must ensure that work is done in accordance with any approval required under any other law.

### Australian Standard AS/NZS 5033:2014 Installation and safety requirements for photovoltaic (PV) arrays

Clause 2.2 requires all support structures and PV module mounting arrangements to comply with applicable building codes, regulations and standards.

### Doing work without required approvals

Penalties for doing work without the required approvals in place may include fines and licence implications. In addition, if solar panels are installed without the required approvals, the local council may make the owner remove the installation. For more information, see Page 12 of this Information Guide “What happens if solar panels are installed illegally?”

Therefore, before installation work begins, all the parties should discuss and decide who is going to ask about and apply for approval.

An owner or their agent can apply for planning and building approval. An **agent** is someone acting on behalf of the owner in getting the necessary approvals for a solar panel installation. This might be the solar company, the electrician or someone else. If a person or organisation is going to apply for the approvals for the owner, they should agree on this with the owner at the outset (in writing if possible) so everyone knows what they are responsible for.

## Approvals required

### 1. Contact electricity provider and insurance company

Before installing solar panels, the installer should contact the applicable energy network provider to get connection approval. In Tasmania the energy network provider is TasNetworks. However, on the Bass Strait Islands contact Hydro Tasmania. The owner may have already arranged this so the installer should discuss this with them.

The owner should check with their insurance company to make sure their home insurance covers the solar panel system.

### 2. Make sure there is a contract in place for the installation

Before the project starts, the person arranging the installation must enter into a written contract with the owner if the solar panel installation:

- Is on residential property and will cost over \$20,000 or
- Is part of an overarching residential building project costing over \$20,000.

The owner must be given a copy of:

- the signed contract and
- the *Residential Building Consumer Guide* which is available on the Consumer, Building and Occupational Services (CBOS) website [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au)

This is required under the *Residential Building Work Contracts and Dispute Resolution Act 2016*.

For installations under \$20,000 where the owner does not receive a contract the person arranging the installation should, at a minimum, provide the owner with a written quote.

### 3. Get planning approval if required

Before installing solar panels, the installer needs to contact the local council about whether planning permission is required for the installation, unless the owner has arranged this already. Planning permission requirements are separate from building approvals and cover issues such as:

- visual amenity
- boundary setbacks
- impact on neighbours and
- heritage considerations.

## 4. Get building approval if required

To find out if building approval is needed, the installer needs to determine whether the installation is:

- low risk
- notifiable (medium risk) or
- permit (high risk) work.

This is because the building work approval required depends on the risk category for the work.

To work out the risk category, some basic information about the proposed installation is required:

- Is the installation for a house or shed (class 1 or 10 building under *National Construction Code*) or a commercial building (class 2-9 building)?
- Will the installation be mounted on a roof or on a separate support structure at ground level?
- If roof mounted, will the panels be parallel to the roof plane or tilted?
- How large in area will the solar panels be in square metres?
- How close will the solar panels be to the edge and surface of the roof?

With this information, the installer can work out what category the work falls into under the [Director's Determination - Categories of Building and Demolition Work](#) which is available on the CBOS website [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au)

The following is a summary to help with navigating the *Director's Determination*. For the full requirements, view the *Director's Determination* on the CBOS website. If the category of work is unclear, seek advice from a building surveyor.

### Houses and sheds

Installation type	Key criteria	Risk category	Determination no.
Roof mounted	<ul style="list-style-type: none"> <li>• Proprietary product/pre-engineered solution</li> <li>• Parallel to roof (not on tilt)</li> <li>• Max 38m<sup>2</sup></li> <li>• Max 100kg dead load per load point</li> <li>• Max 100mm off roof surface</li> <li>• Min 200mm from roof plane edge</li> </ul>	Low Risk (Category 1)	1.1.13
	<ul style="list-style-type: none"> <li>• Outside of the above limits (unlimited)</li> </ul>	Notifiable (Category 3)	3.0.2
Support structure mounted (at ground level)	<ul style="list-style-type: none"> <li>• Proprietary product/pre-engineered solution</li> <li>• Max 38m<sup>2</sup></li> <li>• Max support structure height 3m</li> </ul>	Low Risk (Category 1)	1.1.14

Installation type	Key criteria	Risk category	Determination no.
	<ul style="list-style-type: none"> <li>Support structure capable of bearing static and non-static loads</li> <li>Fire separation standard limitation</li> </ul>		
	<ul style="list-style-type: none"> <li>Outside of the above limits (unlimited)</li> <li>Fire separation standard limitation</li> <li>Ground level support structure to be designed by an engineer</li> </ul>	Notifiable (Category 3)	3.0.2

### Commercial buildings

Installation type	Key criteria	Risk category	Determination no.
Roof mounted	<ul style="list-style-type: none"> <li>Proprietary product/pre-engineered solution</li> </ul>	Notifiable (Category 3)	3.6.3
	<ul style="list-style-type: none"> <li>Outside of the above limits (unlimited)</li> </ul>	Permit (Category 4)	Page 52
Support structure mounted (at ground level)	<ul style="list-style-type: none"> <li>Ground level support structure to be designed by an engineer</li> <li>Fire separation standard limitation</li> </ul>	Notifiable (Category 3)	3.6.3
	<ul style="list-style-type: none"> <li>Outside of the above limits (unlimited)</li> <li>Ground level support structure to be designed by an engineer</li> <li>Fire separation standard limitation</li> </ul>	Permit (Category 4)	Page 52

Once the installer knows whether the work is low risk, notifiable or permit work, they can make sure the correct approvals are in place before work starts. The different approvals are regulated by the *Building Act 2016* which is available at [www.legislation.tas.gov.au](http://www.legislation.tas.gov.au)

## Requirements summary

### Low risk work

For low risk work installations there is no requirement to get building approval from a building surveyor or council permit authority except for getting planning permission if required.

### Notifiable work

#### **Before work starts**

Before a notifiable work installation starts the owner will engage a building surveyor. Then, the owner or their agent (who may be the installer) will submit a **Form 2 - Notice of Work** to the building surveyor. All forms mentioned in this Information Guide are available on the CBOS website at [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au)

The Notice of Work needs to include building work designs and site plans. Usually building work designs must be prepared by a licensed building designer. However, for solar panels, the installer can prepare designs and site plans.

- **For roof-mounted installations**, the design is to include details of the solar panels and how they will be attached to the roof. Some of this information may be in the manufacturer's specifications. The site plan is to show the location of the panels on the roof plane to scale and show where the building is located in relation to property boundaries. Depending on the site plan scale, a separate roof plan at a larger scale may be needed to show the panel layout. The building surveyor will advise of any other details they need to assess the work. This may include an engineering check of the roof structure.
- **For support structure-mounted installations**, the design is to include details of the panels, the support structure design and how the panels will be attached to the structure. The support structure must be engineer designed. The site plan is to show the location of the panels and support structure on the ground in relation to the building and property boundaries to scale. The building surveyor will advise of any other details needed to assess the work.

If the building surveyor is satisfied the work is likely to comply with the *Building Act 2016* and the *National Construction Code*, they will issue a **Form 11A - Certificate of Likely Compliance** to the applicant within 14 days. They will also forward this to the council permit authority within 7 business days.

When the installer is ready to start the installation, they must notify the building surveyor of this and wait for a **unique authorisation number** if they have not received this already. They may then start work.

#### **After work is complete**

When the installation is complete, the person who did the building work for the installation will provide a **Form 71A - Standard of Work Certificate** to the building surveyor and the owner within 5 days of completing the work. By signing this form, the installer is certifying that they are responsible for the building work and the work is complete and compliant.

Form 71A is normally signed by a licensed builder for notifiable building work. However, a competent person contracted by the owner can do the building work for notifiable solar panel installations, so they are also allowed to sign Form 71A for that work. They just put 'N/A' (not applicable) in the building licence part of the form.

The building surveyor has to be satisfied that the competent person who did the building work was supervised by the electrician, or that the electrician did the work themselves. The building surveyor may ask for evidence such as a letter to confirm this.

Once the building surveyor receives Form 71A, they may inspect the work and issue a **Form 20 - Certificate of Completion** within 5 business days if satisfied that the work is complete and compliant. They will forward this to the council permit authority within 7 business days.

There is a checklist on page 13 of this Information Guide which summarises the approvals process for solar panel installations.

### Permit work

For permit work (high risk work), the steps above for notifiable work apply. The owner or their agent (which may be the installer) also needs to apply for a Building Permit from the council permit authority before work starts using **Form 2 - Application for Building Permit**. When the installation is complete, the building surveyor must inspect the work and will issue a **Form 12 - Certificate of Final Inspection** if the work is complete and compliant. The permit authority will issue a **Form 20 - Certificate of Completion** for the work when it is complete and compliant.

## Technical requirements for solar panels installations

The electrical work for a solar panel installation must comply with:

- the manufacturer's specifications
- Australian Standard AS/NZS 4777 *Grid connection of energy systems*
- Australian Standard AS/NZS 5033 *Installation and safety requirements for photovoltaic (PV) arrays*, and
- Australian Standard AS/NZS 3000 *Wiring rules*.

The electrician will sign a **Certificate of Electrical Compliance** once the work is complete and must submit it to TechSafe Australia within 3 days of energising the electrical work. TechSafe is contracted by the Department of Justice to provide the Electrical Safety Inspection Service. A TechSafe inspector may inspect the installation to check that it complies with the Australian Standards.

The building work (attaching the panels to a roof or support structure) must comply with the *National Construction Code* and the manufacturer's specifications. For notifiable (medium risk) and permit (high risk) building work, the person who does the building work will sign a **Form 71A Standard of Work Certificate** certifying that the work is complete and compliant. They must submit this to the building surveyor and owner within 5 days. The building surveyor may inspect notifiable work, and must inspect permit work.

## Record keeping

Owners should keep copies of documents about their solar panel installation in case an issue arises in the future including:

- The contract or written quote from installer/solar company
- Manuals and warranty information for the system
- Planning information (for example, exemption, planning permit, advice from council)
- Building approval documents (for example, Certificate of Likely Compliance, approved designs and site plans, Standard of Work Certificate, Certificate of Completion)
- Record of Electrical Work from the electrician, for example Certificate of Electrical Compliance (the electrician will provide this record to the person who engaged them, which may be the solar company)

Building surveyors and council permit authorities have record keeping obligations under the *Building Act 2016*.

Electrical practitioners and contractors must keep a record of electrical work for 10 years under the *Occupational Licensing (Electrical Work) Regulations 2018*.

## What if an owner is unsatisfied with the installation?

A trader or supplier who provides a service to a consumer must ensure that the Consumer Guarantees under the Australian Consumer Law are met. This means that the service is:

- delivered with due care and skill
- fit for any specified purpose, and
- delivered within an agreed or reasonable time.

If a consumer experiences a failure of goods or services they may be entitled to a remedy from the trader or supplier.

The remedy available to owners for unsatisfactory solar panel installations depends on what the problem is.

If the owner can identify what caused the problem, they should first contact the person they believe is responsible and seek a remedy:

- **Faults with the solar panel system** - contact the retailer or manufacturer
- **Defective electrical work** - contact the electrician who installed the system
- **Defective building work** - contact the person who did the building work (this may have been the electrician) or the building surveyor if there was one.

If this does not lead to a satisfactory outcome, the owner can contact CBOS (see contact details at the end of this document). An officer will be in touch to discuss options. In some cases, owners may need to get legal advice.

## What if solar panels need repairing?

Solar panels may be damaged such as in a storm. If this happens, the owner should contact their insurer if they have insurance.

The owner should engage a qualified person to repair or replace the system. They should talk to their insurer about this.

- Electrical work must be done by an unrestricted electrical practitioner who is working under a licenced electrical contractor. The electrician will submit a **Certificate of Electrical Compliance** to TechSafe for electrical repairs/replacements if required.
- A competent person can do the building work on solar panel repairs/replacements (this may be the electrician if they are competent).

The category of building work needs to be assessed under the *Director's Determination - Categories of Building and Demolition Work*. If this is unclear, talk to a building surveyor.

If the system was not installed legally to begin with, the owner may be required to remove the system and apply for approval for a new system. They should talk to the council and a building surveyor about this.

## What happens if solar panels are installed illegally?

The council may take action if planning or building approval was not in place before solar panels are installed. The council may make the property owner remove the solar panels or they may, at their discretion, give the option of applying for retrospective approval. For more information on this, contact the local council.

Unlicensed electrical work will need to be inspected by a licensed electrician and any necessary rectification work carried out. The licensed electrician will submit a Certificate of Electrical Compliance to TechSafe when the work is compliant. For more information on this, contact Electricity Standards and Safety at CBOS (see contact details at the end of this document).

CBOS may take compliance action against people for undertaking unlicensed, illegal or defective work. Consequences may include a fine or licence implications.

## Checklist for solar panel installers

This checklist summarises what solar panel installers need to do before, during and after installations.

### Before the installation

- Connection approval from energy network provider
- Contract with owner (residential installations/projects over \$20,000)
- Owner has contacted insurance company
- Agree with owner on who will apply for planning and building approval
- Planning approval from local council (if required)
- Check building work approval category under *Director's Determination – Categories of Building and Demolition Work*

### **Extra steps for notifiable (medium risk) building work**

- Owner has engaged a building surveyor
- Send designs and site plans to building surveyor with Notice of Work (Form 2)
- Receive Certificate of Likely Compliance (Form 11A) from building surveyor
- Notify building surveyor of intention to start installation and get their authorisation before starting work

### **Extra steps for permit (high risk) building work**

- Steps for notifiable work (above)
- Send Application for Building Permit (Form 2) to council permit authority
- Receive Building Permit (Form 18) from council permit authority
- Notify building surveyor of intention to start installation and get their authorisation before starting work

### During the installation

- Electrical work done by licensed unrestricted electrical practitioner working under licensed electrical contractor
- Building work done by competent person
- All work complies with manufacturer's specifications, Australian Standards and *National Construction Code*

### After the installation

- Standard of Work Certificate (Form 71A) signed by person who did building work and sent to building surveyor and owner within 5 days of completing work (for notifiable and permit building work)
- Certificate of Electrical Compliance signed by electrician and sent to TechSafe within 3 days of energising the work and to the person who engaged them
- Keep records of electrical work and building work done

## More information

### **Consumer, Building and Occupational Services (CBOS)**

CBOS is the building standards, electricity standards and consumer affairs regulator in Tasmania. It also regulates the licensing of trades. The approved forms mentioned in this Information Guide are on the CBOS website.

Website: [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au)

Phone: 1300 654 499

Email: [cbos.info@justice.tas.gov.au](mailto:cbos.info@justice.tas.gov.au)

### **Building Surveyors**

Building surveyors can give advice on what category of building work a solar panel installation falls into, and provide the certification and sign offs for the building work aspects of notifiable and permit installations.

To find a licensed building surveyor, search the Find a Licensed Tradesperson database on the CBOS website [www.cbos.tas.gov.au](http://www.cbos.tas.gov.au)

### **Local Council**

The local council can give advice on planning requirements and building approvals for solar panel installations.

You can find the contact details for the local council on their website or at [www.lgat.tas.gov.au](http://www.lgat.tas.gov.au)

### **Clean Energy Council**

The Clean Energy Council accredits solar panel installers in Australia and provides information to consumers about purchasing solar panels. They have a database of accredited installers on their website.

Website: [www.solaraccreditation.com.au](http://www.solaraccreditation.com.au)

Phone: 03 9929 4141

Email: CEC have an online enquiry form

### **Clean Energy Regulator**

The Clean Energy Regulator is a Federal Government body who administers the rebates for solar installations under the Small-Scale Renewable Energy Scheme.

Website: [www.cleanenergyregulator.gov.au](http://www.cleanenergyregulator.gov.au)

Phone: 1300 553 542

Email: [enquiries@cleanenergyregulator.gov.au](mailto:enquiries@cleanenergyregulator.gov.au)

### **TasNetworks**

TasNetworks is one of Tasmania's electricity distributors.

Website: [www.tasnetworks.com.au](http://www.tasnetworks.com.au)

Phone: 1300 137 008 (general enquiries on solar connections)

Email: TasNetworks have an online enquiry form

### **Hydro Tasmania**

Hydro Tasmania is Tasmania's electricity distributor for the Bass Strait Islands

Website: [www.hydro.com.au](http://www.hydro.com.au)

Phone: 1300 360 411

Email: [contactus@hydro.com.au](mailto:contactus@hydro.com.au)