



**SOLAR  
ACCREDITATION  
AUSTRALIA**

# **SAA Requirements**

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These SAA Requirements have been developed by Solar Accreditation Australia (SAA). SAA Requirements apply to the design and installation of grid-connected solar photovoltaic systems (GCPV), grid connected battery systems (GCBS), stand alone power systems (SPS), Wind and Micro Hydro. SAA Requirements exist in addition to applicable Australian Standards and the local, state/territory and national legal requirements.

While all care has been taken to ensure these SAA Requirements are free from omission and error, they are provided to support best practice and are no substitute for the due care and diligence of designers and installers. No responsibility can be taken for the use of this information in the installation of any GCPV, GCBS or SPS.

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## 1 GENERAL

The objective of the SAA Requirements:

- Improve the safety, performance and reliability of GCPV, GCBS and SPS installed in the field.
- Encourage industry best practice for all design and installation work involving solar photovoltaic power systems.
- Provide a network of competent designers and installers.
- Increase the uptake of renewable energy systems by giving system owners increased
- confidence in the design and installation work.

The performance of a reliable installation, that fulfils system owner expectations, requires both careful design and correct installation practice. Compliance with relevant state health and safety regulations is also necessary.

NOTE: These SAA Requirements alone do not constitute a fully definitive set of rules and are to be read in conjunction with all relevant Australian Standards and local requirements. Where these SAA Requirements go beyond those stated in the Australian Standards, then the SAA Requirements shall be followed.

### About your accreditation

Central to SAA's work with designers and installers is an accreditation program we refer to as the SAA Scheme.

The SAA Scheme is an accreditation scheme for the purpose of reg 20AC of the Renewable Energy Electricity (REE) regulations<sup>1</sup> under the Small-scale Renewable Energy Scheme (SRES) the Clean Energy Regulator (CER) administers. All PV systems within the SRES must be designed and installed by a person accredited under the SAA Scheme.

SAA accreditation, depending on the type held, demonstrates a person's competence in the design and/or installation of:

- grid-connected solar PV systems (GCPV)
- stand-alone solar PV systems (SPS)
- grid-connected battery storage (GCBS)

<sup>1</sup> Renewable Energy (Electricity) Regulations 2001

Holding SAA accreditation is one criterion for participation in Government incentive schemes such as the SRES. The objective of the SAA's regulatory program is to increase consumer confidence in renewable energy services, systems and products. SAA's main strategic objective is to accelerate Australia's transition to a clean energy future. Growth of the PV sector relies on the industry maintaining a high standard of quality, customer service and safety.

The SAA Code of Conduct requires an accredited person to follow all requirements in the relevant Australian Standards, local, state/territory and national laws, and these SAA Requirements. Where a SAA accredited person is found not to comply with these requirements, the accredited person will be subject to the SAA compliance process and may be subject to other regulatory action by relevant state/territory and/or federal bodies.

The SAA compliance process may include:

- being required to rectify non-compliant work
- additional training or assessment
- suspension or cancellation of accreditation

Installers and Designers are required to stay up to date with changes in the industry by completing 100 continual professional development (CPD) points per year.

## 2 DEFINITIONS

This document uses the same terminology as outlined in AS/NZS 3000. Two important definitions are:

- 2.1 Shall:** Where the word "shall" is used, this indicates that the requirements of a statement are mandatory.
- 2.2 Should:** Where the word "should" is used, this indicates that the matters recommended in a statement are recommendations.

### **3 RESPONSIBILITIES OF AN ACCREDITED PERSON**

#### **3.1 SIGNING OFF AS AN ACCREDITED INSTALLER**

##### **3.1.1**

An Accredited Person shall only sign off on systems where they have:

- met all relevant requirements of the accreditation scheme;
- undertaken the installation; or
- supervised the installation by others (Unrestricted electrical license required when supervising the installation of systems operating above ELV)
- Supervision includes attending the site during:
  - job set up;
  - mid-installation check-up; and
  - testing and commissioning.

##### **3.1.2**

Sign off is defined as the installer or supervisor performing the testing and commissioning requirements.

##### **3.1.3**

The date of sign off is the day that the installer or supervisor performs the testing and commissioning requirements.

**NOTE:** It is vitally important that a system is tested to ensure it is safe at the time of final sign off.

#### **3.2 MULTIPLE INSTALLERS PERFORMING DIFFERENT PHASES OF A SINGLE INSTALLATION**

##### **3.2.1**

If multiple installers are to complete separate phases of a single installation, the Clean Energy Regulator (CER) must be notified in writing, prior to the change of installer with the:

- details of the installation
- details of each installer
- the rationale for the change of installer

Should it not be practical or possible for notification to be provided prior to the installation the CER will consider the request and the compliance of the installation with this clause on a case-by-case basis at their sole discretion.

#### **3.3 RESPONSIBILITIES OF SYSTEM DESIGNERS**

##### **3.3.1**

System designers must comply with the following responsibilities:

- A. Provide full specifications of the system including quantity, make and model
- B. number of the solar modules and inverter/s.
- C. Provide a site-specific full system design including all shading issues, orientation and tilt, along with the system's site-specific energy yield, including average daily performance estimate in kWh for each month of solar generation.

- D. Ensure array design will fit on available roof space.
- E. Ensure array mounting frame installation will comply with AS/NZS1170.2.
- F. Ensure array configuration is compatible with the inverter specification.
- G. Ensure all equipment is fit for purpose and correctly rated.
- H. Obtain warranty information on all equipment.

### **3.4 LIMITS APPLY TO THE NUMBER OF INSTALLATIONS AN ACCREDITED PERSON SHALL SIGN OFF IN ONE DAY**

#### **3.4.1**

Where an Accredited Person is installing or supervising complete installations only, they shall not sign off on more than two (2) installations per day.

#### **3.4.2**

Where an Accredited Person is installing or supervising complete installations and upgrades/repairs (e.g. the installation or replacement of modules only) in the same day, they shall not sign off on more than one (1) complete installation and not more than three (3) upgrades/repairs on the same day. *Note: Upgrades cannot increase the overall size of the PV array (Wp) by more than 50% of existing.*

#### **3.4.3**

Where an Accredited Person is installing or supervising upgrades and/or repairs to existing systems involving the installation or replacement of modules only, the installer or supervisor shall not sign off on more than four (4) system upgrades/repairs per day. *Note: Upgrades cannot increase the overall size of the PV array (Wp) by more than 50% of existing.*

### **3.5 MULTIPLE SYSTEMS AT ONE LOCATION**

If a project involves multiple systems at one location, where the systems are installed in stages, the Accredited Person installing or supervising these installations may request a formal exemption from clause 3.3 to sign off up to **TEN** systems per day.

*Note: Exemption applications can include more than ten addresses from a single site. While all addresses can be listed in a single application, the sign off limit of **TEN** systems per day still applies.*

Exemption applications shall be submitted prior to the commissioning date of the systems contained within the application. Retrospective exemptions shall not be provided by SAA.

Exemption applications can apply where the cables are roughed in on one date, the inverter, mounting frame and modules are installed on another date; and the final connection and commissioning occurs on another date.

Examples of this are:

- an apartment block;
- a retirement village;
- a factory development;

#### **3.5.1**

An installer shall request an exemption from SAA Requirements Clause 3.3 using the application form. The installer must provide details of the project for assessment by SAA. Exemptions may be

granted by SAA to installers who can demonstrate that the site is eligible for exemption.

**3.5.2**

Once the assessment is complete, SAA will respond to the installer in writing. An SAA Exemption Approval shall be the only acceptable evidence of an exemption from clause 3.3.1 for the purposes of STC creation.

**3.5.3**

Only systems listed on the exemption can be signed off on the date of commissioning. Additional sites not listed on the exemption will be ineligible for an STC claim if signed off on the same day as exempt sites.

**3.6 ACCREDITATION TYPE REQUIRED FOR OFF-GRID PUMPING SYSTEMS, SOLAR POWERED POOL PUMPS AND SOLAR POWER SYSTEMS THAT POWER AIR CONDITIONERS**

**3.6.1**

An SAA Grid Connect PV (GCPV) Accreditation is sufficient for off-grid pumping systems, solar powered pool pumps and solar power systems that power air conditioners.

## 4 OVERSIZING

### 4.1 PV TO INVERTER RATIO – NO BATTERIES

The inverter nominal AC power output cannot be less than 75% of the array peak power and it shall not be outside the inverter manufacturer’s maximum allowable array size specifications.

### 4.2 PV TO INVERTER RATIO – WITH CONNECTED BATTERY SYSTEMS

PV array peak power can exceed the 75% ratio in clause 4.1 but shall not be outside the inverter manufacturer’s maximum allowable array size specifications. The table below contains examples.

<b>SYSTEM DETAILS</b>				
Array peak power in Watts Peak (Wp)	6600Wp	6600Wp	6600Wp	6600Wp
75% of array peak power.	4950Wp	4950Wp	4950Wp	4950Wp
Inverter manufacturer’s maximum allowable array size.	7500Wp	6500Wp	7500Wp	6500Wp
Inverter manufacturer’s nominal AC power.	5000Wp	5000Wp	4500Wp	4500Wp
<b>QUESTIONS</b>				
Is the manufacturer’s maximum allowable array size greater than array peak power?	YES	NO	YES	NO
Is the inverter nominal AC power greater than 75% of array peak power?	YES	YES	NO	NO
<b>RESULT – SYSTEMS COVERED BY CLAUSE 4.1</b>				
Is the array peak power to inverter nominal AC power acceptable?	YES	NO	NO	NO
<b>RESULT – SYSTEMS COVERED BY CLAUSE 4.2</b>				
Is the array peak power to inverter nominal AC power acceptable?	YES	NO	YES	NO

## **5 INSTALLATION REQUIREMENTS**

### **5.1 ROOF MOUNTING (NOT BUILDING INTEGRATED)**

#### **5.1.1**

It is important to allow enough clearance under the array to facilitate self-cleaning of the roof to prevent the build-up of leaves and other debris (refer to roofing manufacturer's installation manual).

#### **5.1.2**

If fauna (such as birds, vermin, etc) are a problem in the vicinity of the installation, consideration should be given to how to prevent them gaining access to the roof area under the array.

#### **5.1.3**

Tiles shall sit flat after the installation of tile mounting brackets to ensure the tiles maintain their original ingress protection. There may be a requirement to grind the underside of the tile to enable it to sit correctly.

*NOTE: Due to updated requirements for control of silica dust, we recommend you seek advice from your relevant State or Territory Work Safety Regulator.*

### **5.2 BUILDING INTEGRATED (BIPV) INSTALLATIONS**

#### **5.2.1**

The installation of modules that are being used as building material (e.g. tiles, building walls, sun-screens) shall only be installed by a person qualified to install that particular type of building element and the accredited installer/s.

#### **5.2.2**

Roof tiles shall be installed in accordance with these Guidelines, all relevant Standards and the additional requirements as specified by the manufacturer's requirements.

### **5.3 WIRING SYSTEM ROOF PENETRATION**

#### **5.3.1**

Where the PV array cable and conduit passes through a tile or steel roof, a fit for purpose collar flashing shall be installed (e.g. dektite).

*NOTE: Equipment selected shall be fit for purpose and shall last the life of the system*