Chromagen Australia

Scope of Installation Works - Solar Power

Effective: 1st January 2024

Section D. Solar Power PV – Battery Storage DC Coupled – Low Voltage (Single Phase)

Scope of works for Solar Power (PV – Photovoltaic) Installation:

All installation components must be in accordance with AS5033, AS3000, AS4777, AS1170.2 complying with all legislated Federal, State and local Government requirements.

The following scope applies to systems installed on the following Distribution networks.
For systems types/sizes not shown below the scope will be agreed on a case by case basis**.**

System Limitations and Notes

System Limitations by Distributor:

Please refer to separate Chromagen Australia documentation covering distributor requirements

IMPORTANT NOTES:

- **Additional costs will apply for connection applications for systems outside of the limitations specified in the table above.**
- **Safe and clear access is required for all works.**
- **Fall protection is the responsibility of the customer**
  The below is required for each according installation:

Single Storey
Pitched Roof (up to 25°)
Guard Rail Protection Required

Double Storey
Pitched Roof (up to 25°)
Platform Edge Protection Required

Double and Three Storey
Flat Roof
Roof Access Hatch Required

- **Additional site visits due to access restriction and / or site not being ready will incur rebooking fees**
- **Stage 1 must be completed after the roof cladding has been installed and prior to any internal plastering/cladding is installed. This is to allow access through the frame for cabling and conduit. Additional costs may apply if access for cabling is restricted or unavailable.**
- **Suitable substrate must be provided in the garage for mounting, allowing up to 45kg for any inverter and up to 25kg for any charger.**
- **No battery will be fully wall mounted and will always sit on the ground.**
- **Pre-approvals are not guaranteed – Whilst Chromagen will facilitate the requirements to apply for pre-approval, they are subject to being accepted or rejected by distributors, which is outside the control of Chromagen. Additional export limiting devices and associated works are not covered under this scope of works.**
- **Pre-approval and connection works excluded on embedded networks.**

WARNING: Not all roof types/materials are suitable for solar PV installations. Systems cannot be installed on slate or sites where asbestos may be present and disturbed.

Solar Power PV – Battery Storage
DC Coupled – Low Voltage (Single Phase)

NOTE:

Location of battery / solar inverter can only be in:

- **non-habitable location of the house**
- **readily available locations**
- **well ventilated**
- **minimized risk for mechanical stress and or impact**

Default location is the garage

Stage 1 of 2 - Installation of stage 1 PV

- Complete pre-approval (Not available for systems on embedded networks).
- Installation of mounting frames in accordance with manufacturer's instructions & plans (design book).
- Installation of PV panels, including earth (WEEB type) washers and clamps in accordance with manufacturer's instructions.
- Installation and support of cabling to mounting frame.
- Connection of PV panels in correct string configuration to roof top isolator(s) / disconnection points in accordance with manufacturer's instructions.
- Rough in DC cabling from panels to inverter location (includes 15m) in approved solar conduit with all labelling as per AS5033.
- Installation of rooftop DC isolator(s) / disconnection point fixed to mounting structure and locked off.
- Rough in AC cabling from switchboard to inverter location (Max 15mtr).
- Rough in AC Cabling for backup circuit from switchboard to inverter (back circuits by others).
- Rough in 240V rated CAT 5e or higher from inverter into the switchboard for battery/hybrid meter.
- Extra timbers fitted in the walls for the fixing of the solar battery.
- Take and record photos / scan serial numbers using BridgeSelect.
- Remove all associated rubbish from site.

Stage 2 of 2 – Installation of stage 2 PV

- Installation of inverter mounting bracket (supplied with inverter) to wall at mounting location.
- Fitting of inverter to bracket.
- Connection of DC cable to inverter (with self-contained DC isolator).
- Connection of AC wiring at inverter and switchboard (includes inverter breaker & isolator).
- Connection of AC wiring for backup at inverter and switchboard (includes circuit breaker) *(backup circuits by others*)*.
- Installation of consumption meter single phase
- Installation of battery and mechanical protection (E.G.bollards).
- Connection of data cable
- Completion and submission of the following documents to nominated retailer/distributor:
  - Electrical Works Request (EWR) (Not available for systems on embedded networks).
  - Certificate of Electrical Safety (CES or equivalent as per each State's requirement).

- PV connection form as per Network Distributor's requirement (Not available for systems on embedded networks)
  Note: The PV Connection form must be counter signed by the system owner.
  For purposes of connection the Customer will be considered the system owner.
- STC form (SGU) prepared for the owner's signature.

- Installation of all labelling as required.
- Take and record photos / serial numbers using BridgeSelect.
- Commissioning and testing of solar system.
- Remove all associated rubbish from site.
- Arrange external inspection or meter installation where required.

Builder Requirement:

- **Single phase home only**
- **Switchboard - Five pole spaces required (refer to separate switchboard examples).**
- **Backup circuits for use during black out situation (refer to inverter datasheet for maximum load).**
- **CAT 6 cable from proposed inverter location to proposed router location by customer.**
- **Installation of a hard-wired smoke alarm, with battery back up in close proximity to battery.**

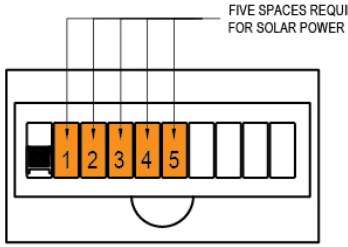
***NOTE: Chromagen will terminate the backup circuit at the Main backup isolator switch in the switchboard. Connections of the individual backup circuit(s) to be completed by others to operate in the blackout scenario.**

Backup circuit must not exceed the max load of the specific inverter. Refer to specific data sheet for this allowance.

SOLAR POWER SYSTEM REQUIREMENTS

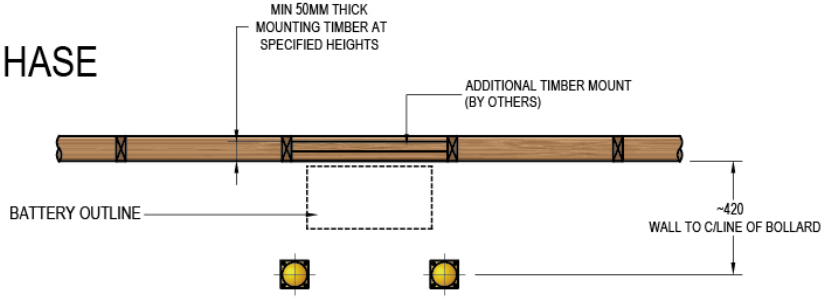
DC COUPLED (LOW VOLTAGE) BATTERY - SINGLE PHASE

[BUILDER REQUIREMENTS - FRAME STAGE]

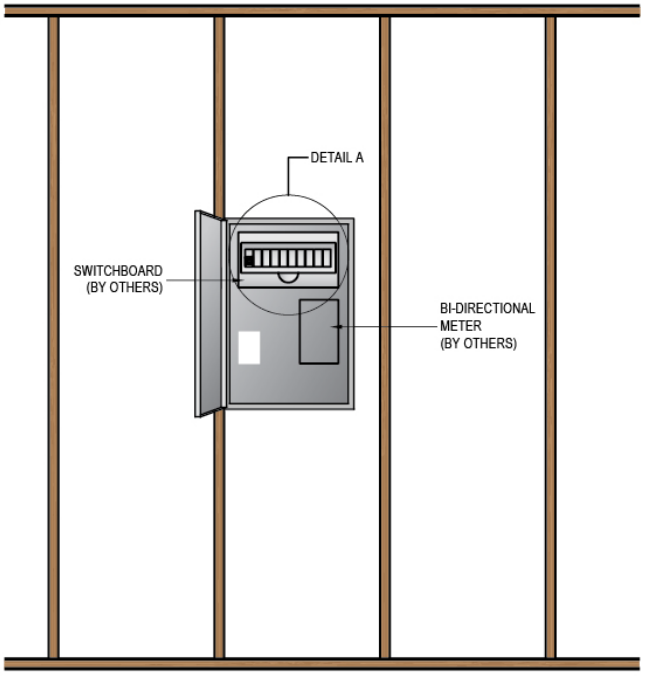


1. SOLAR MAIN SWITCH (25 AMP)
2-3. METER
4. SEPARATOR SPACE
5. BACK CIRCUIT SWITCH (BACKUP CIRCUIT BY OTHERS)

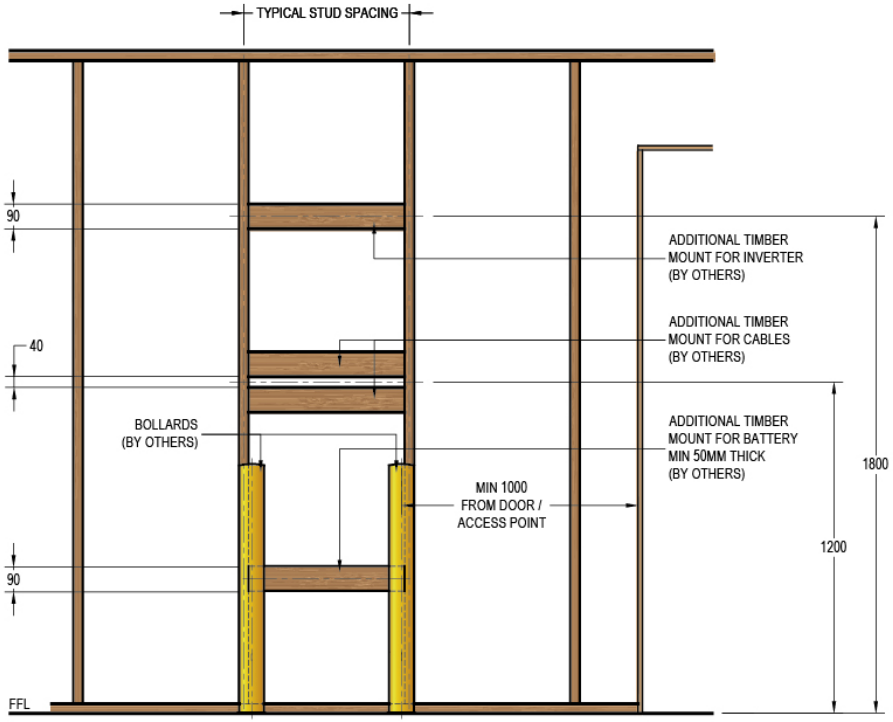
DETAIL A
SWITCHBOARD REQUIREMENTS



PLAN VIEW
INVERTER / BATTERY LOCATION
(FRAME STAGE)



FRONT ELEVATION
METER BOX LOCATION
(FRAME STAGE)



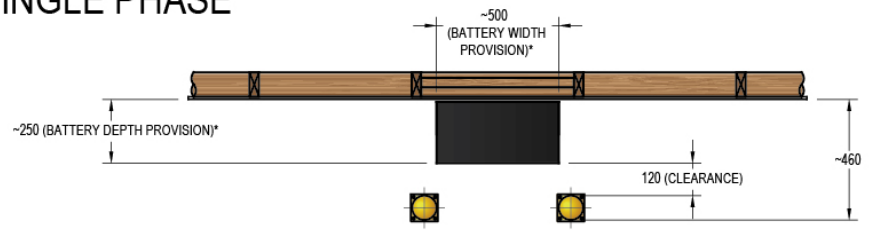
FRONT ELEVATION
INVERTER / BATTERY LOCATION
(FRAME STAGE)

DIMENSIONS IN MM. TO BE USED AS A GUIDE ONLY.
HARDWIRED SMOKE DETECTOR REQUIRED IN CLOSE PROXIMITY TO BATTERY LOCATION.

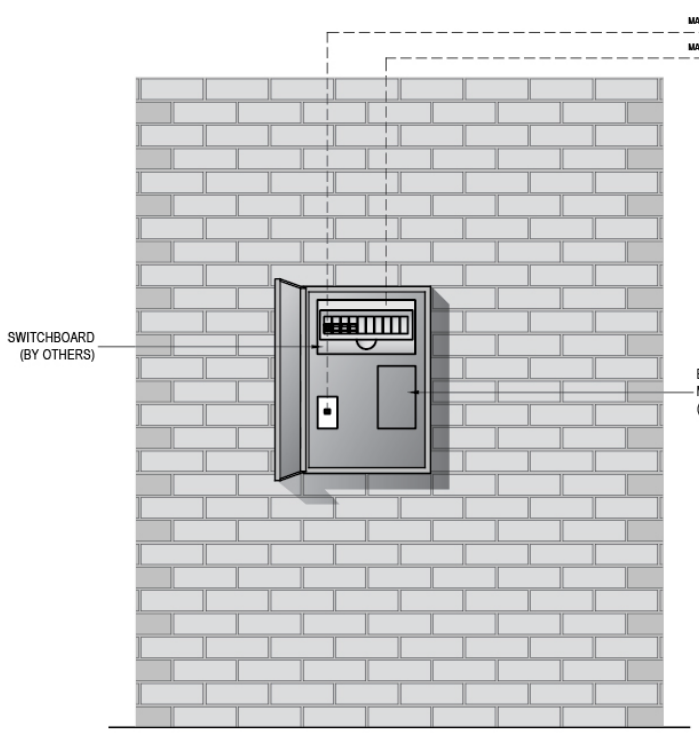
SOLAR POWER SYSTEM REQUIREMENTS

DC COUPLED (LOW VOLTAGE) BATTERY - SINGLE PHASE

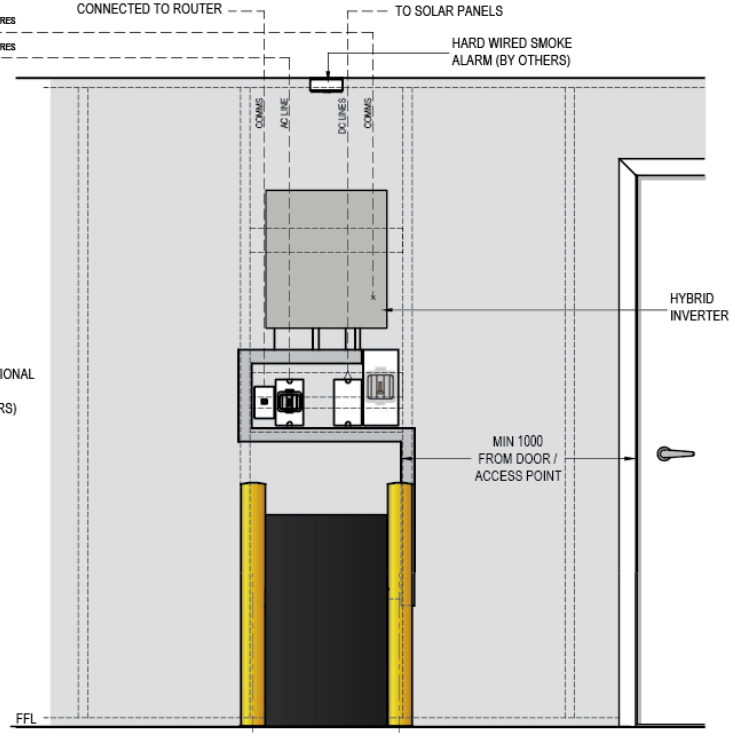
[FINAL INSTALLATION]



PLAN VIEW
INVERTER / BATTERY LOCATION
(FINAL INSTALL)



FRONT ELEVATION
METER BOX LOCATION
(FINAL INSTALL)



FRONT ELEVATION
INVERTER / BATTERY LOCATION
(FINAL INSTALL)

DIMENSIONS IN MM. TO BE USED AS A GUIDE ONLY. SUITABLE ASSESSMENT OF SITE CONDITIONS TAKE PRECEDENCE AND ARE UP TO THE INSTALLERS DECRETION. ALL INSTALLATIONS MUST ADHERE TO CEC & LOCAL REGULATIONS. STAGE 2 MUST HAVE A LIVE INTENET CONNECTION WITH COMMUNICATION LINES SUITABLY CONNECTED.
* CONFRIM FINAL BATTERY DIMENSIONS ON SPECIFIC DATA SHEET.