

Home Energy Grants: Technical Bulletin

Solar PV Installation Guidance
Series 2023-01-001 SPV



Introduction

Microgeneration is undergoing increasing popularity with homeowners. This is a big opportunity for your business. However, if we are going to scale up together, we need to bring about improvements in the efficient management of installs.

This document describes the issues and related clarifications that commonly arise on the programme.

SEAI requires that registered companies and their installers pay close attention to the contents of this this document and use it for training purposes.

Installation must be carried out in accordance with the relevant:

- SEAI Domestic Technical Specifications and Standards (DTSS) and
- SPV Contractor's Code of Practice (COP).

In Appendix 2 of the Quality Assurance and Disciplinary Procedures (QADP) there is a full list of checks, used by SEAI inspectors. Use these checks as part of your own Quality Management System before signing and submitting DOWs to SEAI. <https://www.seai.ie/publications/Quality-Assurance-and-Development-Programme-for-Solar-PV.pdf>

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Firstly, SEAI would like to thank all the Solar PV companies and installers for their support over the past year and for helping to make the solar PV scheme as successful as it was in 2022. Solar PV companies and installers have made a massive contribution towards Irelands carbon reduction targets in 2022 alone installing over 47MW of domestic rooftop solar PV through the scheme.

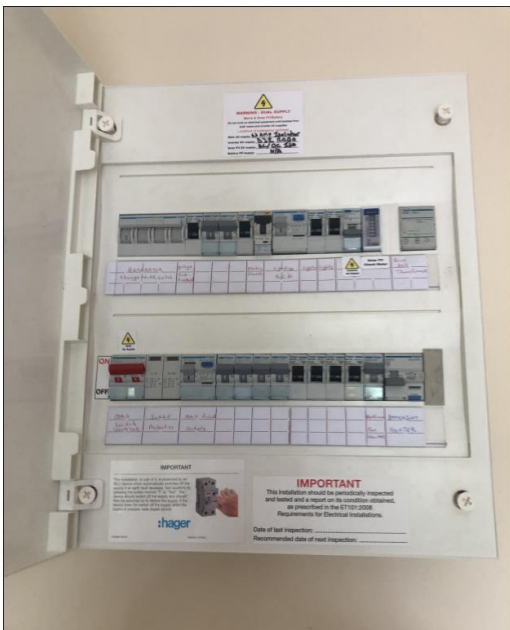
We would like to take this opportunity to wish you and your families a prosperous New Year.

1. Labelling

One of the highest non-compliances found during inspections is for Labelling. It is essential that all Safety and Information labels are in place. Details of the locations for labels are outlined below. Pay particular attention to sub-boards and make sure to make yourself aware of the location of these in sheds, garages, outhouses etc.

Remember that for each one of these reworks for labelling, the homeowner is also notified of the rework, you may have to revisit the house, provide evidence etc and the homeowner may have their grant delayed as a result. Beyond the impact to the customer and the reputational damage to your company, this has an impact on your time, costs, productivity and inspection rate. The goal should be to get this right first time, every time.

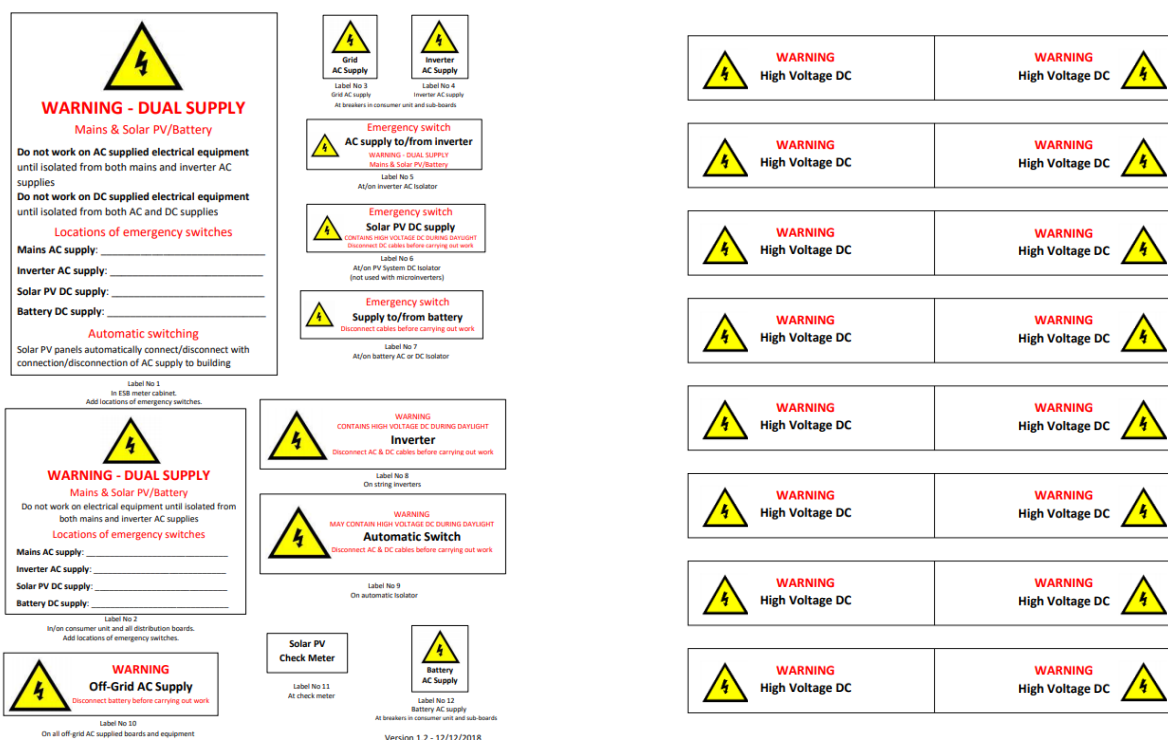
Within labelling, the main findings would be the main grid isolator not labelled and warning dual supply at the ESB cabinet and sub boards. Below is an example of a photo displaying clear labelling on the main isolator and the inverter supply along with the check meter label and dual supply.



The required safety labels are as follows:

- In ESB meter cabinet. Add locations of emergency switches.
- In/on consumer unit and all distribution boards. Add locations of emergency switches.
- At breakers in consumer unit and sub-boards

- At/on inverter AC Isolator
- At/on PV System DC Isolator
- At/on battery AC or DC Isolator
- On string inverters
- On automatic Isolator
- On all off-grid AC supplied boards and equipment
- At check meter
- At breakers in consumer unit and sub-boards



A template of the above labels can be obtained on the Domestic Solar Photovoltaic Code of Practice for Installers V1.3 at: <https://www.seai.ie/publications/Code-of-Practice-Solar-PV-Grant.pdf>

2. O&M Manual

Another common rework where there is no manual for the components (inverter etc) in the Operation & Maintenance (O&M) manual that is provided to the homeowner and uploaded to the portal. Please make sure you include manuals for all applicable components where required

3. Images required to be submitted

As part of the requirement to process an application for payment, companies are required to submit certain images. Please make sure these images are clear and not blurred and where applicable, contain the detail required. An example is the image of the data labels. These need to be clear and close enough for a viewer to be able to read the parameters of the component. Below is an appropriate image of an inverter data label:

solis	
Model:	S6-GR1P3K-M
Max. input voltage d.c.	600V
Mppt voltage range d.c.	80-500V
Max. input current d.c.	14A
Isc PV (absolute maximum) d.c.	22A
Rated grid voltage a.c.	1/IN/PE, 220V/230V
Rated grid frequency	50/60Hz
Rated output power	3000W/3000VA
Max. AC output active power	3300W*(1)
Max. AC output apparent power	3300VA*(1)
Max. continuous output current a.c.	15.7A*(2)
Adjustable cos(φ)	-0.8...1...+0.8
Operating temperature range	-25...+60°C
Ingress protection	IP66
Protective class	I
Overvoltage category	II(PV) III(MAINS)
Inverter topology	Non-Isolated
<small>(1) 3000 for AS/NZS 4777.2:2020 (2) Rated output current for AS/NZS 4777.2:2020 is consistent with the maximum output current</small>	
Name: Ginlong Technologies Co., Ltd. Address: No. 57 Jintong Road, Binhai Industrial Park, Xiangshan, Ningbo, Zhejiang, 315712, P. R. China www.solisinverters.com Made in China	

4. Company Search Function

The Company search function is now live on the Domestic SPV web page. This function enables a homeowner (HO) to browse and search registered companies, either based on the HO's company preference, or location. This function will make searching for a SEAI Registered Company more user friendly for the HO. This is an opportunity for a company to review their existing registered details, including Counties covered and update accordingly. <https://www.seai.ie/grants/find-a-registered-professional/solar-pv-installers/>

5. Post Works BER assessment

We are currently seeing a trend where we are unable to process some applications for payment as homeowners are waiting for a BER assessor to complete their post works BER. It would help if you could advise your customers to try to arrange their BER for as close to their installation date as possible. When you will be notifying them of their installation date, that would be a good time to tell them to start contacting assessors and arranging their assessment for within a few days of installation. It is a good time to remind them that their grant cannot be processed for payment until the BER is complete.

6. Quality Management Systems

It is important to have a good Quality Management System in place and to use it. Quality Management takes an end-to-end approach to compliance setting standards for training and competency, the quality control of technical works and documentation, complaints management, and continuous process improvement.

To help better equip solar PV companies with their QMS, we recently held a very informative webinar on QMS systems. It is now available to view on our YouTube channel: [Quality Management Systems Fundamentals Webinar - YouTube](#)

This is an excellent resource and companies should avail of the opportunity to learn from and implement the systems discussed in the webinar.

7. Shunt

A reminder that in all cases, the position of the shunt switch must be within 1.5M of the array. This also applies to external systems where the inverter is located outside and the shunt needs to be within 1.5m of the array, taking care to ensure the DC cable is appropriately protected from external forces i.e., use of conduit or SWA cable etc.

8. Electricity Primary Energy and CO2 Emission Factors

In line with EPBD requirements, SEAI is updating the electricity primary energy and CO2 emission factors for use in the BERs. These are also used to calculate the primary energy of the grid electricity displaced by the PV generation within the building.

Calculations are based on policy outlook for the electricity grid. These factors may be revised prior to 2030, subject to availability of new forecast figures.

The update will take effect in DEAP and NEAP software around mid-January. The updated figures are:

Electricity factors	Primary energy	CO2 emissions [kgCO2/kWh]
Upcoming in January 2023	1.75	0.224
Current	2.08	0.409

Details of the calculations and implementation can be found in the report published on the SEAI website (<https://www.seai.ie/home-energy/building-energy-rating-ber/support-for-ber-assessors/software/deap/>)

9. Data Protection

For data protection reasons, the SEAI can only discuss matters related to grant application, registration etc with the registered email address on the Company profile. We wish to remind all solar PV companies that any queries sent to SEAI must be sent directly from the Company's registered email address.

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