Australian Government

UEERE0081 Install photovoltaic systems to power conversion equipment

Release: 1

UEERE0081 Install photovoltaic systems to power conversion equipment

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

This unit replaces and is not equivalent to UEERE0016 Install, configure and commission LV grid-connected photovoltaic power systems. Modifications include:

- Unit title changed
- Unit application updated
- Prerequisites changed
- Significant amendments made to Elements and Performance Criteria
- Range of conditions updated
- Significant amendments to Performance and Knowledge Evidence.

Application

This unit involves the skills and knowledge required to install and commission a photovoltaic (PV) power system to power conversion equipment (PCE).

It includes working safely to industry installation standards, matching PV components specified for a given location, placing and securing system components accurately, making required circuit connections and completing the necessary installation documentation.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations, which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, a relevant contract of training, such as an Australian Apprenticeship, is required.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Note: Those holding an Unrestricted Electrician's Licence or equivalent issued in an Australian state or territory meet the prerequisite requirements of UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories. All other prerequisite requirements must be met.

Pre-requisite Unit

UEEEL0012 Install low voltage wiring, appliances, switchgear and associated accessories

And

UEERE0054 Conduct site survey for grid-connected photovoltaic and battery storage systems

Or

UEERE0055 Conduct site survey for off-grid photovoltaic/genset systems

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Plan to install PV power system	**1.1** Nature of the installation is verified from design documentation and any design concerns identified are referred to designer
	1.2 WHS/OHS processes and procedures for work are identified and applied in accordance with workplace procedures
	1.3 WHS/OHS hazards are identified, risks assessed, reported to relevant person/s and workplace procedures for risk control measures applied in preparation for work
	1.4 Work is planned in consultation with the customer and others impacted by the work and sequenced appropriately
	1.5 PV array mounting methods are verified in accordance with relevant industry standards
	1.6 Location of PV array components is verified within the constraints of the building structure, design and industry standards and regulations
	1.7 Material, tools, equipment and measuring devices

		required for the PV installation are obtained in accordance with workplace procedures and checked against relevant diagrams and job requirements prior to installation
	1.8	Live testing, measurement and isolation requirements determined and applied in accordance with WHS/OHS requirements and workplace procedures
2 Install LV PV power array	**2.1**	Circuits/machines/plant are isolated in accordance with WHS/OHS requirements and workplace procedures
	2.2	PV array is installed in compliance with industry standards, regulations and job/manufacturer specifications, and with sufficient access to enable terminations, adjustment and maintenance
	2.3	Wiring is terminated at components and associated equipment in accordance with manufacturer specifications, and functional and regulatory requirements
	2.4	Quality checks of installed apparatus are conducted in accordance with workplace procedures
	2.5	Testing and commissioning of the system is conducted in accordance with design documentation, regulations, relevant industry standards and manufacturer specifications
	2.6	Worksite is cleaned and made safe in accordance with workplace procedures
	2.7	'As-installed' system and associated equipment are documented, manuals produced, and system is handed over to required person/s as per legislation, regulations, industry standards and job requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Installation of PV array must include:

- two different types of mounting systems.

Unit Mapping Information

This unit replaces and is not equivalent to UEERE0016 Install, configure and commission LV grid-connected photovoltaic power systems.

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6