



Australian Government

UEERE0008 Conduct periodic maintenance of remote area power supply photovoltaic arrays

Release: 2

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Modification History

Release 2. This minor update is the second release of this unit of competency in the UEE Electrotechnology Training Package.

Typographic error in prerequisite option requirements fixed.

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

Application

This unit involves the skills and knowledge required to conduct periodic maintenance of remote area power supply (RAPS) photovoltaic (PV) arrays where the exposed voltage is not greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c).

It includes preparing for, completing and reporting on maintenance of RAPS PV arrays.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEERE0019 Maintain safety and tidiness of remote area power supply systems

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEERE0023 Work safely with remote area power supply systems

and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to conduct periodic maintenance on PV arrays

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) procedures for a RAPS plant are identified and applied in accordance with workplace procedures
- 1.2** Risk control measures are applied in accordance with workplace procedures prior to commencing work
- 1.3** Risks/hazards are identified, assessed, reported to relevant person/s and control measures implemented
- 1.4** Nature and location of RAPS system is identified from relevant documentation or from relevant person/s to determine the scope of work
- 1.5** Instructions for coordinating work with relevant personnel and the local community are obtained from relevant person/s and applied
- 1.6** Materials required for the work are identified and accessed in accordance with workplace procedures
- 1.7** Tools, equipment and testing devices required for work are obtained and checked for correct operation and safety

2 Maintain RAPS systems PV arrays

- 2.1** Workplace risk control measures and procedures are applied
- 2.2** Need to test or measure live electrical work is determined in accordance with WHS/OHS requirements and conducted in accordance with workplace procedures
- 2.3** Circuits/machines/plant are isolated in accordance with WHS/OHS requirements and workplace procedures
- 2.4** RAPS system PV arrays are tested in accordance with relevant workplace procedures
- 2.5** PV array maintenance, including performance

		measurements and repairs, is completed safely in accordance with workplace routines and procedures
	2.6	Known types of PV array functional faults are identified using fault-finding procedures
	2.7	Non-routine events are referred to relevant person/s for directions in accordance with workplace procedures
	2.8	Maintenance and repair work are completed minimising waste of materials, energy, damage to apparatus, circuits, the surrounding environment and services
	2.9	Quality checks are completed in accordance with workplace procedures
3	Complete maintenance work of PV arrays and report outcomes	
	3.1	Workplace risk control measures and procedures are applied
	3.2	Worksite is cleaned and made safe in accordance with workplace procedures
	3.3	Maintenance issues are referred to the local community in accordance with workplace procedures
	3.4	PV array performance measurements are reported to relevant person/s in accordance with maintenance reporting procedures

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.

Maintaining RAPS PV arrays must include at least the following:

- two different systems where the PV array is charged from:
 - a generator set and a PV array
 - a wind generator

Exposed voltage is not greater than:

- 50 V a.c., or
- 120 V d.c

Unit Mapping Information

This unit replaces and is equivalent to UEENEEK105A Conduct periodic maintenance of remote area power supply photo voltaic arrays.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>