



Australian Government

UEERE0002 Assemble and connect remote area power supplies

Release: 2

UEERE0002 Assemble and connect remote area power supplies

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 assemble and connect remote area power supply (RAPS) systems 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 to install RAPS, installing RAPS and completing maintenance work on battery banks and reporting.

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

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

UEECD0025 Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits 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 install RAPS

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) requirements for relevant work area are identified and applied in accordance with workplace procedures
- 1.2** Risks are identified, assessed and control measures 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** Installation of apparatus is prepared in consultation with relevant person/s and sequenced accordingly
- 1.5** Nature and location of the work is determined from documentation or relevant person/s to determine the scope of work
- 1.6** Location/s of apparatus and associated equipment is planned within constraints of the building structure and regulations
- 1.7** Advice on coordinating work with others is obtained from relevant person/s and applied
- 1.8** Material needed for installation work is obtained in accordance with workplace procedures and checked against job requirements
- 1.9** Tools, equipment and testing devices required for the installation work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.10** Preparatory work is checked to ensure no damage has occurred and it complies with requirements

2 Install RAPS

- 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 within workplace safety procedures
- 2.3** Circuits/machines/plant are isolated in accordance with WHS/OHS requirements and workplace procedures
- 2.4** Apparatus and associated equipment are installed in compliance with industry technical standards, job specifications and requirements, and with sufficient access to not impact terminations, adjustments and maintenance
- 2.5** Wiring is terminated at apparatus and associated equipment in accordance with manufacturer specifications, functional and regulatory requirements
- 2.6** Methods for dealing with unexpected events are discussed with appropriate person/s and documented in accordance with workplace procedures
- 2.7** Unexpected events are dealt with safely and with approval of authorised person/s
- 2.8** Quality checks of installed apparatus are conducted in accordance with workplace procedures
- 2.9** Apparatus installation is conducted minimising waste of materials, damage to apparatus, circuits, the surrounding environment and services using sustainable energy principles

3 Complete work on RAPS

- 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** Final checks that the installed apparatus conforms to requirements are conducted
- 3.4** 'As-installed' apparatus and associated equipment are documented and appropriate person/s notified in accordance with workplace 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.

Assembling and connecting RAPS must include at least the following:

- two different systems, including:
 - a generator set
 - a photovoltaic (PV) array
 - at least one similar RAPS system where the battery bank is charged from 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 UEENEEK111A Assemble and connect remote area power supplies.

Links

Companion Volume Implementation Guides are found in VETNet -

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

Assessment Requirements for UEERE0002 Assemble and connect remote area power supplies

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices, including the use of risk control measures
- assembling and connecting remote area power supply (RAPS) systems
- accurately placing and securing apparatus
- checking isolation of circuits/machines/systems
- completing relevant reporting
- complying with manufacturer specifications, functional and regulatory requirements
- conducting quality checks
- connecting apparatus and associated equipment
- coordinating work with relevant person/s
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- determining scope of work from documentation and/or relevant person/s
- determining live electrical testing/measurement requirements
- identifying and accessing materials, tools, equipment and testing devices
- reading and interpreting drawings related to apparatus, locations and circuit connections
- maintaining fire integrity.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- relevant manufacturer specifications

- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- RAPS extra-low voltage (ELV) installations, including:
 - documentation, including:
 - records of periodic inspection and testing
 - test results that comply with requirements
 - test results reporting required by authorities
 - methods for providing compliant protection
 - requirements for:
 - installation of wiring and equipment
 - installation planning and selection of equipment
 - testing and verification
- sustainable energy principles.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to assembling and connecting RAPS
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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