



Australian Government

UEERE0007 Conduct periodic maintenance of remote area power supply generator sets

Release: 2

UEERE0007 Conduct periodic maintenance of remote area power supply generator sets

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) generator sets 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 generator sets.

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

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Prepare to conduct periodic maintenance on generator sets

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) procedures for a RAPS plant are identified and applied
- 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 is 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 generator sets

- 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 generator sets are tested in accordance with relevant workplace procedures
- 2.5** Generator set maintenance, including performance

	measurements and repairs, is completed safely in accordance with workplace routines and procedures
	2.6 Known types of generator set 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 is completed minimising waste of materials, energy, damage to apparatus, circuits, the surrounding environment and services
	2.9 Quality checks are conducted in accordance with workplace procedures
3 Complete maintenance work of generator sets 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 Generator set 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 generator sets must include at least the following:

- two different systems, including:
 - where the generator set is charged from a generator set and a photovoltaic (PV) array and at least one similar RAPS system where the generator set is charged

from a wind generator

Unit Mapping Information

This unit replaces and is equivalent to UEENEEK104A Conduct periodic maintenance of remote area power supply generator sets.

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 UEERE0007 Conduct periodic maintenance of remote area power supply generator sets

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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 one occasion 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
- coordinating work with relevant personnel and the local community
- determining live electrical work testing/measurement requirements
- checking isolation of circuits/machines/systems
- identifying and accessing materials, tools, equipment and testing devices
- maintaining remote area power supply (RAPS) generator sets measuring and recording generator no-load and load voltages
- measuring and recording generator output for three load conditions
- checking drive engine coolant and oil level
- visually inspecting drive engine for coolant and oil leaks
- checking condition of drive engine oil, oil filter and air filter
- identifying need to change drive engine oil, oil filter and air filter
- changing drive engine oil, oil filter and air filter
- topping up low coolant and oil levels
- identifying the cause of any coolant and oil leaks
- reporting all maintenance activities
- dealing with unplanned events.

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:

- RAPS system generator sets maintenance techniques, including:
 - basic generator set maintenance encompassing:
 - checking of radiator and oil level
 - periodic oil change
 - periodic air, oil and fuel filter change
 - maintaining logbooks for maintenance regime
 - generator set performance measurement
 - methods for identification of generator set faults
 - maintenance reporting requirements
 - relevant generator set manufacturer specifications
 - relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
 - relevant WHS/OHS legislated requirements
 - relevant workplace documentation, policies and procedures.

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 practice in relation to conducting periodic maintenance of RAPS generator sets
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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