



**Australian Government**

# **UEENEEK107A Conduct checks in the demand side use of remote area power supplies (RAPS)**

Release 2

## **UEENEEK107A Conduct checks in the demand side use of remote area power supplies (RAPS)**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**Unit Descriptor**                      **1) Scope:**

#### **1.1) Descriptor**

This unit covers checking the community use of a remote area power supply. This encompasses working safely, taking system readings, replacing the data-logging chip, identifying known types of systems faults caused by inappropriate use of electrical apparatus supplied from a remote area power supply system and completing the necessary check report.

### **Application of the Unit**

**Application of the Unit**            **2)**

This unit is intended primarily for indigenous persons seeking qualifications in RAPS system servicing. The unit may also be applied to work entry qualifications in renewable energy service work in general.

### **Licensing/Regulatory Information**

**License to practice**                      **3)**

The skills and knowledge described in this unit do not require a license to practice in the workplace. However, practice in this unit is subject to regulations directly related to occupational health and safety and contracts of training such as new apprenticeships.

## Pre-Requisites

**Prerequisite Unit(s)** 4)

**Competencies** 4.1)

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEE1 01A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEK1 02A Work safely with remote area power supply systems

UEENEEK1 03A Conduct periodic maintenance of remote area power supply battery banks

UEENEEK1 04A Conduct periodic maintenance of remote area power supply generator sets

UEENEEK1 05A Conduct periodic maintenance of remote area power supply photo voltaic arrays

UEENEEK1 06A Conduct periodic maintenance of remote area power supply wind generators

**Literacy and numeracy skills** 4.2)

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading 3      Writing 3      Numeracy 3

## Employability Skills Information

**Employability Skills** 5)

The required outcomes described in this unit of competency contain applicable facets of Employability

## Employability Skills

5)

Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

## Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit  
Performance Criteria describe the required performance needed to demonstrate achievement of the element.  
Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |                                    |  |
|------------------------------------|--|
| 1 Prepare to check RAPS system use | 1.1 OHS procedures for a RAPS system are identified, obtained and understood through established routines and procedures                             |
|                                    | 1.2 Established OHS risk control measures and procedures in preparation for the work are followed.   |
|                                    | 1.3 Safety hazards which have not previously been identified are reported and advice on risk control measures is sought from the work supervisor.    |
|                                    | 1.4 The nature and location of RAPS system is identified from documentation or from work supervisor to establish the scope of work to be undertaken. |
|                                    | 1.5 Advice is sought from the work supervisor to ensure the work is coordinated effectively with fellow workers and the local community.             |
|                                    | 1.6 Sources of materials that may be required for the work are identified and accessed in accordance with established routines and procedures.       |
|                                    | 1.7 Tools, equipment and testing devices needed to carry out the work are obtained and checked for   |

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
	correct operation and safety
2 Check use of RAPS system	2.1 Established OHS risk control measures and procedures for carrying out the work are followed.
	2.2 The need to test or measure live is determined in strict accordance with OHS requirements and when necessary conducted within established safety procedures
	2.3 Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures
	2.4 Prescribed check procedures are used to test and check RAPS systems
	2.5 Retrieval of performance data is carried out safely and to prescribed routines and procedures.
	2.6 Known types of functional faults are identified using routine fault finding procedures.
	2.7 Procedures are followed for referring non-routine events to immediate supervisor for directions.
	2.8 Checking is carried out efficiently without waste of materials and energy and without damage to apparatus, circuits, the surrounding environment or services
	2.9 Routine quality checks are carried out in accordance with work instructions.
3 Complete check of RAPS system and report	3.1 OHS work completion risk control measures and procedures are followed.
	3.2 Work site is cleaned and made safe in accordance with routine procedures.
	3.3 Procedures for referring local check issues to the community are followed.
	3.4 Check results are reported to the work supervisor through the established check reporting procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence must show that knowledge has been acquired of safe working practices and conducting checks in the demand side use of remote area power supplies.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

#### **KS01-EK107A RAPS system use auditing techniques**

Evidence shall show an understanding of effective RAPS systems use to an extent indicated by the following aspects:

T1 General safety

T2 Demand side use of power systems encompassing:

- Demand exceeds supply
- Size or capacity of the system
- Energy needs of the end users
- Energy use awareness of the end users
- Data logging chips

T3 Demand versus supply encompassing:

- selecting appliances
- using appliances
- using lights, hot water, freezers
- energy efficient items;
- CFL globes
- water saver shower heads
- weather stripping
- appropriate use of RAPS system components - overloading system components, using generator supply for heavy loads and the like.

T4 Reporting

## Evidence Guide

### EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit and must be read in conjunction with the performance criteria and the range statement of the unit and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of this unit and performed in accordance with the Assessment Guidelines of this Training Package.

### Overview of Assessment 9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. In some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accordance with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety issues inherent in working with electricity, electrical equipment, gas or any other hazardous substance/material present a challenge for those determining competence. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment

## Guidelines of this Training Package.

### **Critical aspects of evidence required to demonstrate competency in this unit 9.2)**

Before the critical aspects of evidence are considered all prerequisites must be met.

Evidence for competence in this unit must be considered holistically. Each element and associated performance criteria must be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines – UEE11'. Evidence must also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this must incorporate evidence that shows a candidate is able to:
  - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the performance criteria and range statement
  - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
  - Demonstrate an appropriate level of skills enabling employment
  - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Conduct checks in the demand side use of remote area power supplies as described in 8) and including:

- A Retrieving of performance data
- B Identifying demand use issues
- C Reporting all check activities



**Context of and specific resources for assessment** 9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

These should be part of the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to conducting checks in the demand side use of remote area power supplies.

**Method of assessment** 9.4)

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this unit applies. This requires assessment in a structured environment which is intended primarily for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

**Concurrent assessment and relationship with other units 9.5)**

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

UEENEEK10 3A Conduct periodic maintenance of remote area power supply battery banks

## **Range Statement**

### **RANGE STATEMENT**

**10)** This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit must be demonstrated in relation to least two different RAPS systems in which the battery bank is charged from a generator set and a wind generator.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

## **Unit Sector(s)**

Not applicable.

## **Competency Field**

**Competency Field 11)**

Renewable and Sustainable Energy