



**Australian Government**

# **UEPMNT201A Carry out routine work activities in an electricity supply industry generation environment**

**Release: 1**

## **UEPMNT201A Carry out routine work activities in an electricity supply industry generation environment**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

#### **1) Scope:**

##### **1.1) Descriptor**

This unit covers undertaking scheduled routine work activities in the electricity supply industry generation sector

### **Application of the Unit**

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

This competency standard is suitable for school based and employment-based programs under an approved contract of training at the AQF level of the qualification in which the unit is first packaged or higher.

The unit may be selected as an elective from the relevant elective group (see qualification packaging rules) provided that all prerequisite units are undertaken or addressed through recognition processes.

This unit may be included in a skill set provided that it is listed in the schedule of electives (see Qualification Framework) and all prerequisite units are undertaken or addressed through recognition processes.

Delivery and assessment of this unit should be undertaken within regard to the requirements of License to Practice (3 below), Prerequisite Competencies and Literacy and Numeracy skills (4 below) and the recommendations for concurrent assessment and relationship with other units (9.5 below).

Practice in the workplace and during training is also subject to regulations directly related to occupational health and safety and where applicable contracts of

training such as apprenticeships.

## 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.

Note:

1. Compliance with permits may be required in various jurisdictions and typically relates to the operation of plant, machinery and equipment such as elevating work platforms, powder operated fixing tools, and power operated tools, vehicles, road signage and traffic control, lifting equipment. Permits may also be required for some work environments such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation.
2. Compliance may be required in various jurisdictions relating to currency in First Aid, confined space, lifting and risk safety measures.

## Pre-Requisites

### Prerequisite Unit(s) 4)

### Competencies 4.1)

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

Where pre-requisite pathways have been identified. All competencies in the Common Unit Group must have been completed.

Common Unit Group

Unit Code

Unit Title

UEENEEE101A

Apply Occupational Health and

**Prerequisite Unit(s) 4)**

Safety regulations, codes and practices in the workplace

**Literacy and numeracy skills 4.2)**

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following levels. A description of what each level entails is provided in Section 2.3.1 Language, Literacy and Numeracy.

Reading 3 Writing 3 Numeracy 3

## **Employability Skills Information**

**Employability Skills 5)**

This unit contains Employability Skills.

The required outcomes described in this unit of competency contain applicable facets of Employability 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 undertake routine work activities.	1.1 Instructions for preparing the work activity are communicated and confirmed to ensure clear understanding.
	1.2 OHS policies and procedures are communicated and confirmed to ensure they are understood as they apply to the carrying out of the work.
	1.3 Tools, equipment and personnel protective equipment necessary for the work are identified, scheduled and checked to ensure they work correctly as intended and are safe to use in accordance with established procedures.
	1.4 Appropriate personnel are consulted to ensure the work is coordinated effectively with others involved.
	1.5 Resources and materials needed to do the work are confirmed, scheduled and obtained in accordance with established procedures.
	1.6 Schedule of work including practices for working safely are confirmed in accordance with instructions and requirements.
2 Carry out work as instructed.	2.1 OHS policies and procedures and safe work practices are followed to eliminate or minimise incidents.
	2.2 Schedule of work is followed to ensure work is completed in an agreed time, to a quality standard and with a minimum of waste.
	2.3 Knowledge of work practices applicable to the wind generation industry are applied to routine work activities.
	2.4 Further instructions are sought from appropriate personnel in the event of unplanned happenings or conditions.
	2.5 Ongoing checks of work quality are undertaken in accordance with instructions and requirements.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
3 Check results of the completed work.	3.1 Final checks are made to ensure the work conforms with instructions and to requirements.
	3.2 Appropriate personnel are notified of completion of the work.
	3.3 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures.
	3.4 Work area is cleaned up and made safe and sustainable energy practices are followed.
	3.5 Appropriate records are updated in accordance with instructions and established procedures.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

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

KS01-PM20 Routine work activities in an ESI generation environment  
1A

Evidence shall show that knowledge has been acquired of routine work activities in an ESI generation environment to the extent indicated by the following aspects:

- T1. ESI generation
  - Coal fired electricity generation
  - Gas fired electricity generation
  - Gas turbine electricity generation
  - Oil fired electricity generation
  - Hydro-electricity generation
  - Co-generation and tri-generation systems
  - Bio-mass electricity generation
  - Large-scale photo-voltaic electricity generation
  - Large-scale wind generation
  - Other forms of large scale renewable electricity generation
  - Mix of electricity generation in the marketplace
- T2. Workplace health and safety in the ESI generation industry
  - Electrical
  - Mechanical
  - Hydraulic
  - Pneumatic (pressurised air)
  - Steam
  - Toxic gases and chemicals used in the industry
- T3. Overview of the electricity distribution network
  - Generators
  - Substations and switching yards
  - Transformers
  - Circuit breakers and switches/isolators
  - Common voltages
  - 3-phase and single-phase electricity supply

## **REQUIRED SKILLS AND KNOWLEDGE**

- Electricity distributors and electricity retailers

### **T4. Lubrication**

- Refilling of greasing systems
- Checking oil levels
- Confirming lubrication of components

### **T5. Cleaning**

- Excess grease
- Dust
- Oil
- Water
- Salt
- Cleaning chemicals
  - Appropriateness of use
  - MSDS for cleaning products
  - Use of cleaning products in restricted spaces
  - Prohibited cleaning solvents

### **T6. Warehousing**

- Enterprise procedures for managing stock levels
  - Computer stock control
- Loading and unloading stock and products
  - Shelving
  - Inward goods receiving
  - Manual handling
  - Trolleys
- Enterprise communication protocols



## Evidence Guide

### EVIDENCE GUIDE

9) The Evidence Guide forms an integral part of this Unit and shall be used in conjunction with all components 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. It is recognised that, 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 nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. 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, Section 3.1 of this Training Package.

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

Evidence for competence in this unit shall be considered holistically. Each element and associated Performance Criteria shall be demonstrated:

- On at least two (2) occasions. In accordance with the "Assessment Guidelines" for the UEP12 Training Package.

Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframe typically expected of the discipline, work function and industrial environment. In particular this shall 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; and
  - Apply sustainable energy principles and practices as specified in the Performance Criteria and range; and
  - Demonstrate an understanding of the required skills and knowledge as described in this unit to such an extent that the learner's performance outcome is reported in accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment; and
  - Demonstrate an appropriate level of employability skills; and
  - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures; and
- Demonstrated performance across a representative range of contexts from the prescribed items below:

A All of the following:

- Receive a stock delivery and enter into the stock management system
- Store stock using appropriate work, health and safety practices
- Retrieve a stock item and check it out of the stock management system

- B All of the following:
- Clean up an oil spill
  - Clean up a grease spill
  - Retrieve an MSDS for a cleaning solvent
- C All of the following:
- Grease a bearing
  - Refill greasers
- D All of the following:
- Deal with an unplanned event by drawing on essential knowledge and skills to provide appropriate solutions.

**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 used in 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:

Carry out routine work activities in an electricity supply industry generation environment.

**Method of  
assessment**

**9.4)**

This unit shall be assessed by methods given in the Assessment Guidelines, Section 1.3 of this Training Package.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this competency standard unit applies. This requires assessment in a structured environment which is primarily intended 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)**

There are no concurrent assessment recommendations for this unit.

## Range Statement

### RANGE STATEMENT

**10)** This relates to the competency standard 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.

Large scale electricity plant is considered to be 10 kW and above

Scheduled servicing and maintenance activities may include assisting experienced technicians

Work areas requiring permits or licences are excluded from access unless accompanied by an appropriate and competent person

Greasing systems may be manual or automatic systems

Tools include spanners, screwdrivers, torque wrenches

Cleaning equipment includes rags, chemical cleaners, hoses and water cannons

Stock management systems include computer-based, internet, and paper-based enterprise systems and documents

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 the Glossaries, Section 2.1 of this Training Package.

## Unit Sector(s)

Not applicable.

## Competency Field

<b>Competency Field</b>	<b>11)</b>
	Maintenance