



**Australian Government**

**Department of Education, Employment and Workplace Relations**

**UETTD RIS63A Implement and monitor the  
power system environmental and  
sustainable energy management policies  
and procedures**

**Release: 1**

## **UETTDRIS63A Implement and monitor the power system environmental and sustainable energy management policies and procedures**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit Descriptor**

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

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

This Competency Standard Unit specifies the outcomes for the collecting, interpretation and application of environmental management information, identification of environmental impacts and assessment of risks and establishment of best practice procedures for implementation of the management plans to ensure compliance. It also consists of monitoring during the implementing of, environmental and sustainable energy policies and plans and, development of modifications as part of the review process.

### **Application of the Unit**

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

This Competency Standard Unit is intended to augment formally acquired competencies. It is suitable for employment-based programs under an approved contract of training.

### **Licensing/Regulatory Information**

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

The skills and knowledge described in this unit may require a licence/registration to practice in the work place subject to regulations for undertaking of electrical work. Practice in workplace and during training is also subject to regulations directly related to Occupational Health and

**License to practice**

**3)**

Safety, electricity/telecommunications/gas/water industry safety and compliance, industrial relations, environmental protection, anti discrimination and training.  
Commonwealth, State/Territory or Local Government legislation and regulations may exist that limits the age of operating certain equipment.

**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 be have been completed plus all the competencies in one (1) of the identified Pathway Unit Group(s):

Electrotechnology Pathway Unit Group

Unit Code

Unit Title

UEENEEK142A

Apply environmental and sustainable procedures in the energy sector

ESI – TDR Pathway Unit Group

UETTDREL11A

Apply sustainable energy and environmental procedures

**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 scales. Description of each scale is given in Volume 2, Part 3 “Literacy and Numeracy”

Reading 4

Writing 4

Numeracy 4

## Employability Skills Information

### Employability Skills 5)

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/plan to implement and monitor environmental and sustainable energy management policies and procedures | 1.1 Works schedule(s), including drawings, plans, requirements, established procedures, and material lists, are obtained, analysed, if necessary, by site inspection and the extent of the preparation of the work determined for planning and coordination. |
|   | 1.2 Work is prioritised and sequenced for the most efficient and effective outcome following consultation with others for completion within acceptable timeframes, to a quality standard and in accordance with established procedures.                      |
|   | 1.3 Relevant requirements and established procedures for the work are to all personnel and identified for all work sites.  |
|   | 1.4 Hazards are identified, OHS risks assessed and control measures are prioritised, implemented and monitored including emergency exits kept clear, to ensure safe systems of work are followed and according to established procedures.                    |

## **ELEMENT**

## **PERFORMANCE CRITERIA**

- |   |  |  |
|---|--|--|
|   | 1.5  | Relevant work permits are secured to coordinate the performance of work according to requirements and/or established procedures.   |
|   | 1.6  | Resources including personnel, equipment, tools and personal protective equipment required for the job are identified, scheduled and coordinated and confirmed in a safe and technical working order.                    |
|   | 1.7  | Clients/Customers are provided with possible solutions and/or options within the scope, acceptable cost and requirements.  |
|   | 1.8  | Liaison and communication issues with other/authorised personnel, authorities, clients and land owners are resolved and activities coordinated to carry out work.  |
|   | 1.9  | Personnel participating in the work, including plant operators and contractors, are fully briefed and respective responsibilities authorised and coordinated where applicable in accordance with established procedures. |
|   | 1.10   | Site is prepared according to the work schedule and to minimise OHS risk, damage to property, commerce, and individuals in accordance with established procedures.   |
|   | 1.11   | Positioning of road signs, barriers and warning devices is planned in accordance with requirements, traffic control management requirements and established procedures.  |
| 2 | Carry out the implementation and monitoring of environmental and sustainable energy management policies and procedures |  |
|   | 2.1  | OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are implemented and monitored and actioned in accordance with requirements and/or established procedures.    |
|   | 2.2  | First Aid, Pole Top Rescue and other related work procedures are performed according to requirements and/or established procedures.  |
|   | 2.3  | Lifting, climbing, working in confined spaces, working at heights, and use of power  |

## ELEMENT

## PERFORMANCE CRITERIA

- tools/equipment, techniques and practices are safely exercised according to requirements.
- 2.4 Hazard warnings and safety signs are recognised and hazards and assessed OHS risks are risk control measures are implemented, preventative action taken and monitored and/or appropriate authorities consulted, where necessary, in accordance with requirements and established procedures.
- 2.5 Remedial actions are taken to overcome any shortfalls encountered in the work schedule according to requirements and/or established procedures.
- 2.6 Implementation and monitoring of environmental and sustainable energy management policies and procedures are carried out, in accordance with the work schedule and requirements and/or established procedures.
- 2.7 Essential knowledge and associated skills are applied in the safe implementation and monitoring of environmental and sustainable energy management policies and procedures to ensure completion in an agreed timeframe and, to quality standards with a minimum of waste according to requirements.
- 2.8 Solutions to non-routine problems are identified and actioned using acquired essential knowledge and associated skills according to requirements.
- 2.9 Ongoing checks of quality of the work are undertaken in accordance with requirements and established procedures to ensure a quality like outcome is achieved for the client/customer and to a community/industry standard.
- 3 Complete the implementation and monitoring of environmental and sustainable energy management policies and procedures
- 3.1 Work undertaken is checked against works schedule for conformance with requirements, anomalies reported and solutions identified in accordance with established procedures.
- 3.2 Accidents, incidents and/or injuries are reported and followed up in accordance with

**ELEMENT**

**PERFORMANCE CRITERIA**

requirements/established procedures.

- 3.3 Work site is rehabilitated, cleaned up and confirmed safe in accordance with established procedures.
- 3.4 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures.
- 3.5 Relevant work permit(s) are signed off and the work completed/returned to service and advised to client/customer in accordance with requirements.
- 3.6 Works completion records, reports, as installed /modified drawing(s) and/or documentation and information are confirmed, processed and appropriate personnel notified.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

**8) Essential Knowledge and Associated Skills (EKAS):** This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of implementing and monitoring environmental and sustainable energy management policies and procedures.

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

**KS01-TIS63A** Power system environmental and sustainable energy management policies and procedures - implementation and monitoring

Evidence shall show an understanding of the implementation and monitoring the power system environmental and sustainable energy management policies and procedures to an extent indicated by the following aspects:

**T1** Environmental fundamentals encompassing:

- Environmental standards, codes, environmental legislation, supply authority regulations and or enterprise requirements applicable to the control of environment associated with the worksite - relevant federal legislation, relevant state/territory legislation, relevant local government by-laws, relevant government or quasi government policies and regulations, relevant community planning and development agreements (include land care agreements)
- Employer and employee responsibilities
- Methods of obtaining information on environmental issues and updates
- Methods of identifying environmental impacts from work related activities
- Meaning of environmental terms - identification, assessment and control of risks, compliance, best practice, sustainable energy.
- Procedures in implementing management plans to ensure compliance

**T2** Implementation and monitoring requirements for the impact of powerline installations and operation on the environment and/or the area surrounding the powerline and/or equipment encompassing:

- Identification of relevant legislation, codes and government guidelines for the implementation and monitoring of environmental impact factors in the workplace and areas of power distribution or transmission - Commonwealth/State/Territory legislation relevant to the workplace and the Environment Protection Act legislation and common law
- Identification, assessment, control and monitoring of the hazards to the environment associated with the Powerline industry
- Workplace environment quality standards enterprise plan - setting of acceptable emission level limits from power plant equipment, impact of the enterprise activities on air and water quality, nature, impact and level of emissions from power plant, power distribution and transmission equipment and network infrastructure (noise generation, noxious gas emissions, greenhouse gas production, electromagnetic emissions, electromagnetic field strength, oil leakage, insulation breakdown products)



## REQUIRED SKILLS AND KNOWLEDGE

- Provision of manufacturers and suppliers information such as material safety data sheets (MSDSs)
- Gathering of environment management information
- Maintenance of environmental records
- Risk assessment and its management in Powerline industry
- Maintenance strategies for environment protection programs - developing processes for promoting, maintaining and improving environmental impact in the workplace and identify techniques for the evaluating and reviewing environment protection education and training programs and elements of an effective environment protection management system, EPA consultation and accident/incident investigations.

T3 Implementation and monitoring requirements for the management of sustainable energy in powerline installations and operation of plant and equipment encompassing:

- Identification of relevant legislation, codes and government guidelines for the implementation and monitoring of sustainable energy principles in the workplace, the power distribution and the transmission networks - Commonwealth/State/Territory legislation, Legislation relevant to the workplace, Environment Protection Act legislation, Local government by-laws, community planning and development agreements (i.e. land care agreements)
- Monitoring and reporting procedures for enterprise specific policy implementation on sustainable energy issues, including the gathering of energy consumption and loss information
- Ongoing development of energy conservation policy - procedures for quantifying energy usage and wastage, energy usage auditing procedures, planning of energy conservation methods, monitoring and review processes.
- Resource availability planning for policy implementation
- Techniques in managing documentation - information on applicable sustainable energy laws or other requirements; complaint records; training records; process information; process operational log books; inspection, maintenance and calibration records; relevant contractor and supplier information; incident reports; information on emergency preparedness and response.

T4 Enterprise specific — policy and procedure instructions encompassing:

- Responsibilities and duty of care of employer and employee relationship
- Methods of obtaining the up-to-date information on enterprise policy and procedures
- Rules and regulations
- Induction into workplace - location of work area and storage area, timetable, uniform, personal well-being, housekeeping rules, emergency procedures, evacuation procedures
- Techniques when deal with others - working in teams, customer relation, complaint and issues procedures.
- Overview of enterprise professional development - fire fighting procedures,

## REQUIRED SKILLS AND KNOWLEDGE

fatigue management, training and competency development - understanding and promotion

T5 Enterprises specific — OHS instructions encompassing:

- Standards, codes, legislation, supply authority regulations and specific enterprise regulations pertaining to the OHS policies and procedures
- Methods of obtaining the up-to-date information on enterprise OHS policy and procedures
- Specific enterprise personal protection equipment - type and application, where and when to be used, method of replacement, responsibility of maintenance including cleaning inspection and testing, emergency response, rescue, evacuation and First Aid procedures
- Personal well-being – hygiene, fatigue/stress management, drugs/alcohol
- OHS training - induction training, specific hazard training, specific task or equipment training, emergency and evacuation training, training as part of broader programs such as equipment operation
- OHS records including audits, inspection reports, workplace health and environmental monitoring records, training and instruction records, manufacturers and suppliers information such as MSDSs, registers, maintenance reports, workers compensation and rehabilitation records and First Aid/medical records

T6 Enterprises specific — technical drawing and documents encompassing:

- Types and application of enterprise specific drawings and documents - electrical and electronic drawings, mechanical drawings, project charts, schedules, graphs, technical manuals and catalogues
- Instruction/worksheets sheets - types and application of enterprise specific symbols and diagrams
- Title box - description of parts and version control

T7 Enterprise policies and procedures in maintaining the operation of plant, equipment and powerline installations using sustainable energy principles encompassing:

- Overview of sustainable energy technologies – solar, wind, biomass, CO2 generation
- Economic benefits of sustainable energy initiatives
- Relationship between “greenhouse effect” and sustainable energy
- Types of renewable energy technology suitable for use in Australia - photovoltaic, solar thermal, wind energy conversion, biomass, wind/tidal, gas thermal
- Relationship between safe building design and energy efficiency - building aspect, insulation, ventilation, glazing and passive solar design and shading
- Techniques in selecting control devices
- Components within a lighting system
- Energy efficient lighting products, design and installation
- Use of natural light

## REQUIRED SKILLS AND KNOWLEDGE

- Automated lighting control systems
- Assessment of requirements and selection of system
- Techniques in selecting control devices
- Components within a HVAC and refrigeration control system
- Energy efficient refrigerants
- Detection systems to control air flow
- Energy star ratings for coefficient of performance
- Energy control systems
- Advantages of evaporative air conditioners in dry climates
- Assessment of requirements and selection of system

## Evidence Guide

### EVIDENCE GUIDE

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

The Evidence Guide forms an integral part of this Competency Standard Unit and shall be used in conjunction with all component 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's 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 accord with Industry and, Regulatory policy in this regard.

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. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment. Activities associated with normal every day 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 practiced. 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 shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the "Assessment Guidelines – UET12". Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes 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 essential knowledge and associated skills 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:

<b>Range of tools/equipment/materials/procedures/workplaces/other variables</b>		
<b>Group No</b>	<b>The minimum number of items on which skill is to be demonstrated</b>	<b>Item List</b>
A	All of the following:	Gather environmental management information. Implement and monitor environmental and sustainable energy policies and plans. Identify environmental impacts and assess risks. Implement and monitor the procedures for quantifying environmental impacts and controlling risks. Implement and monitor procedures for dealing with environmental incidents. Maintain environmental records, reports and plans.
B	At least one occasion	Dealing with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions incorporated in the holistic assessment with the

		above listed items.
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**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 implementation and monitoring of environmental and sustainable energy management policies and procedures.

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency working below ground, in limited spaces, with different structural/construction types and method and in a variety of environments.

**Method of assessment** 9.4)

This Competency Standard 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 Competency Standard Unit applies. This requires that the specified essential knowledge and associated skills are assessed 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 associated skills described in this unit.

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

For optimisation of training and assessment effort, competence in this unit may be assessed concurrently with the following units:

UETTDRIS62 Implement and monitor the power system  
A organisational OHS policies, procedures and  
programs

## Range Statement

### RANGE STATEMENT

**10)** This relates to the unit of competency 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 Competency Standard Unit shall be demonstrated in relation to implementing and monitoring environmental and sustainable energy management policies and procedures and may include the following equipment:

Environmental legislation may include relevant federal legislation; relevant state/territory legislation; relevant local government by-laws; relevant government or quasi government policies and regulations; relevant community planning and development agreements (e.g. land care agreements)

Incidents of environmental impact may include emissions to air; releases to/of water; releases to land; disposal of waste; contamination of land; impact on communities; destruction of habitat; use of energy sources; waste generation processes and technologies; extraction of water; changes to water temperature; changes to water salinity; regulation of water flow; land use; and may involve the implementation of emergency responses

Environmental management documentation may include information on applicable environmental laws or other requirements; complaint records; training records; process information; process operational log books; inspection, maintenance and calibration records; relevant contractor and supplier information; incident reports; information on emergency preparedness and response.

The following constants and variables included in the element/Performance Criteria in this unit are fully described in the Definitions Section 1 of this volume and form an integral part of the Range Statement of this unit:

- Appropriate and relevant persons (see Personnel)
- Appropriate authorities
- Appropriate work platform
- Assessing risk
- Assessment
- Authorisation
- Documenting detail work events, record keeping and or storage of information
- Drawings and specifications
- Emergency
- Environmental and sustainable energy procedures
- Environmental legislation
- Environmental management documentation
- Established procedures
- Fall prevention
- Hazards



## **RANGE STATEMENT**

- Identifying hazards
- Inspect
- Legislation
- Notification
- OHS practices
- OHS issues
- Permits and/or permits to work
- Personnel
- Quality assurance systems
- Requirements
- Testing procedures
- Work clearance systems

## **Unit Sector(s)**

Not applicable.

## **Competency Field**

**Competency Field**            **11)**

Industry Specific Cross-Discipline Units