



Australian Government

Department of Education, Employment and Workplace Relations

UEPOPS359A Monitor Climatic Conditions for Renewable Energy Production

Release: 1

UEPOPS359A Monitor Climatic Conditions for Renewable Energy Production

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit deals with the skills and knowledge required to monitor weather and climate conditions. It also includes taking suitable preventative actions to ensure the safety of personnel, plant and equipment in adverse weather conditions.

Application of the Unit

Application of the Unit 2)

This 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 do not require a licence to practise in the workplace. However, practice in this unit is subject to regulations directly related to Occupational Health and Safety and where applicable contracts of training such as apprenticeships.

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.

There are no prerequisite units.

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)

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 Interpret weather and climate information	1.1 Weather and climate information and warnings are regularly monitored to determine likely conditions.
	1.2 Potential variations in weather and climate conditions are anticipated and assessed according to warnings, weather patterns and historical experience.
	1.3 Possible impacts of weather and climate on plant, equipment and civil assets are identified.
	1.4 Stakeholders and key personnel are informed of the anticipated impacts of weather and climate on plant, equipment and civil assets.
2 Carry out preventative actions	2.1 Appropriate preventative actions are identified in accordance with enterprise and manufacturers procedures and recommendations.
	2.2 Stakeholders and key personnel are informed and involved in the development of preventative actions.
	2.3 Suitable preventative actions are reviewed to ensure availability of appropriate resources, safety of personnel, plant and equipment.
	2.4 Actions to minimise loss and damage of plant, equipment and civil assets are implemented in accordance with enterprise and manufacturers procedures and recommendations.
	2.5 Actions to ensure the safety of personnel are implemented in accordance with enterprise procedures.
3 Monitor weather and climate during adverse conditions	3.1 Weather and climate information and warnings are regularly monitored to determine ongoing suitability of current preventative actions.
	3.2 Preventative actions are adjusted and revised according to weather and climatic changes.

ELEMENT	PERFORMANCE CRITERIA
4 Return to normal operations	4.1 Weather and climate information and warnings are regularly monitored to determine the normal conditions have returned.
	4.2 Plant, equipment and civil assets are inspected for damage in accordance with enterprise and manufacturers procedures and recommendations
	4.3 Plant, equipment and civil assets are placed back into service in accordance with enterprise and manufacturers procedures and recommendations.
	4.4 Effectiveness of preventative actions is reviewed and recommendations are developed to improve the process.
5 Complete documentation	5.1 Documentation is updated in accordance with enterprise/site 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 shall show that knowledge has been acquired of operating and monitor climatic conditions for renewable energy production

The extent of the Essential Knowledge and Associated Skills required follows:

KS01-PO359A Climatic Conditions for Renewable Energy Production

Evidence shall show that knowledge has been acquired for safe working practices of:

T1 Relevant Environmental, Occupational Health and Safety legislation and regulations

T2 Enterprise procedures

T3 Plant drawings and manufacturers manuals

T4 Introduction to and typical arrangements of power production plant

T5 Relevant plant and equipment, its location and operating parameters

T6 Relevant state and territory regulations

T7 Plant status

T8 Effects of wind and rain on plant, equipment and civil assets

T9 Weather and climate conditions and its impact on plant, equipment and civil assets

T10 Knowledge of climate and weather patterns in local area.

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Specific skills needed to achieve the Performance Criteria:

T1 Interpret plant drawings and manufacturers manuals

T2 Interpret weather and climate conditions and its impact on plant, equipment and civil assets

T3 Apply relevant state and territory regulations

T4 Apply enterprise recording procedures

T5 Identify plant status

T6 Prepare plant/equipment for operation

T7 Organise resources

T8 Plan and prioritise work

T9 Use relevant hand tools

T10 Communicate effectively

T11 Apply data analysis techniques and tools.

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 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 components parts of this unit and, performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment 9.1)

Longitude 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 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 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 – UEP12”. Evidence shall 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 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 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 6) Essential Knowledge and Associated Skills of this unit
 - employability skills Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated performance across a representative range of contexts from the prescribed items below:
 - Knowledge and application of relevant sections of: Occupational Health and Safety legislation; Statutory legislation; Enterprise/site safety procedures; Enterprise/site emergency procedures
 - Interpret weather and climate information
 - Carry out preventative action
 - Monitor weather and climate during adverse conditions
 - Return to normal operations Dealing with an unplanned event by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items

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.

Competency Standards should be assessed in the workplace or simulated workplace and under the normal range of workplace conditions.

Assessment of this unit will be supported with documentary evidence, by means of endorsement stating type and application of work.

In addition to the resources listed above in Context of assessment', evidence should show competency working, in limited spaces, with different types of plant and equipment as well as different structural/construction types and methods and in a variety of environments.

Method of assessment 9.4)

This unit shall be assessed by methods given in Section 1.3.00 Assessment Guidelines.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this 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 skills described in this unit.

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

There are no recommended concurrent assessments with this unit, however in some cases efficiencies may be gained in terms of learning and assessment effort being concurrently managed with allied competency standard units where listed.

Nil

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.

Plant and equipment may include: wind turbines, solar dishes, solar panels, transformers, electrical supply switchboards and overhead electrical lines.

Civil assets may include: roads, fences, buildings and walkways.

Weather and climate information may be sourced from: Radio, T.V., Internet, email, fax, telephone, newspapers, word of mouth and enterprise weather stations.

Weather and climate conditions may include: fire, flood, wind, rain, hail, storm, cyclones, heat waves, snow, dust, frost, gale and rapid changes in temperature or weather conditions.

Preventative actions may include: placing plant and equipment in safe mode, lowering wind turbine towers, changing load on equipment, change electrical load, securing equipment and buildings, preparing fire breaks, assuring water supply, rescheduling work tasks and moving personnel to safe locations.

Safety standards may include relevant sections of Occupational Health and Safety legislation, enterprise safety rules, relevant state and federal legislation and environmental legislation

Information and documentation sources may include verbal or written communications; enterprise safety rules documentation; enterprise operating instructions; dedicated computer equipment; enterprise/site standing and operating instructions; enterprise log books; manufacturer operation and maintenance manuals; and equipment and alarm manuals.

Communications may be by means of telephone, two way radio, pager, computer (electronic mail), operating log (written or verbal) and public address system.

Appropriate personnel to consult, give or receive direction may include supervisor/team leader or equivalent, technical and engineering officers or equivalent, power system control personnel or equivalent; contractor and specialist personnel, maintenance staff and power plant operations personnel.

Generic terms are used throughout this Training Package for vocational standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms are given in Section 2.1 Preliminary Information and Glossaries.

Unit Sector(s)

Not applicable.

Competency Field

Competency Field 11)

Operations.