



Australian Government

UEPMNT446 Coordinate maintenance on a wind farm

Release: 1

UEPMNT446 Coordinate maintenance on a wind farm

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Application

This unit involves the skills and knowledge required to coordinate scheduled servicing and maintenance of wind turbine generators on a wind farm.

Scheduled maintenance is the process of optimising plant and equipment operations through regular inspections and verification of wind turbine generators for operational efficiency.

Competency in this unit requires the ability to plan for scheduled maintenance, coordinate scheduled maintenance, respond to wind turbine generator breakdown, produce production and maintenance reports and make recommendations for dealing with wind turbine generator breakdowns. Individuals will, in general, work as a coordinator in an electrical, electronic and/or mechanical equipment repair workshop or on site.

Power generation maintenance personnel are typically trained and authorised to receive permits to work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Note: Workplace practice

The application of the skills and knowledge described in this unit of competency may require a licence or training permit to practice in the workplace, where work is carried out on gas and electrical installations. Additional and/or other conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

UEPMNT445 Diagnose and repair faults in large scale wind turbine generators

UEPMNT448 Diagnose and repair faults in large scale wind turbine generator control systems

UEPMNT449 Diagnose and repair mechanical systems faults in large scale wind turbine generators mechanical systems

UEPMNT371 Maintain large scale wind turbines generators

UEENEEG108A Troubleshoot and repair faults in low voltage electrical apparatus and circuits

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in D.C. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEG107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits

UEENEEG063A Arrange circuits, control and protection for general electrical installations

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage A.C. circuits

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

UEPMNT443 Maintain wind turbine generator control systems

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEPMNT444 Maintain wind turbine generator mechanical systems

Competency Field

Maintenance

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan for scheduled maintenance

2 Coordinate scheduled maintenance

PERFORMANCE CRITERIA

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

1.1 Maintenance schedules provided by key stakeholders and organisational representatives are accessed and interpreted

1.2 Local maintenance work schedules are developed, in accordance with workplace procedures

1.3 Stock and spare parts are identified, in accordance with workplace procedures

2.1 Roles and tasks are allocated to onsite personnel, in accordance with workplace procedures

2.2 Scheduled maintenance is performed, in accordance with workplace procedures and within established

timeframes

- 2.3 A financial budget for scheduled maintenance is identified and coordinated
- 2.4 Maintenance tasks are completed as per the maintenance schedule and industry standards
- 2.5 Allocation of work tasks is coordinated, in accordance with workplace procedures
- 2.6 Risk control measures are identified, prioritised and evaluated against maintenance schedule
- 2.7 Work permits are secured for performance of maintenance tasks, in accordance with workplace procedures

3 Respond to wind turbine generator breakdown

- 3.1 An action plan for wind turbine generator breakdowns is developed and implemented, in accordance with workplace procedures
- 3.2 Key stakeholders, personnel and organisations are advised of outage, in accordance with workplace procedures
- 3.3 Out of hours' breakdown roster is updated and applied, in accordance with workplace procedures
- 3.4 Analysis of wind turbine generator breakdown to determine likely remediation actions is undertaken, in accordance with workplace procedures
- 3.5 Resources to find cause of wind turbine generator fault or breakdown are allocated
- 3.6 Escalation procedures are applied, if required, for wind turbine generator fault
- 3.7 Remediation for defective components or plant is selected, in accordance with workplace procedures
- 3.8 Technical advice is given regarding potential hazards, safety risks and risk control measures or appropriate authorities are consulted
- 3.9 Solutions to non-routine problems are identified and actioned, in accordance with workplace procedures

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| 4 Produce production and maintenance reports | 4.1 | Wind turbine generator records to produce maintenance reports are accessed |
| | 4.2 | Reports are produced, in accordance with workplace procedures and standards using applicable software and formats |
| | 4.3 | Reports are distributed to stakeholders and appropriate personnel, in accordance with workplace procedures |
| 5 Make recommendations for dealing with wind turbine generator breakdowns | 5.1 | Recommendations for dealing with wind turbine generator breakdowns are made to appropriate personnel |
| | 5.2 | Debriefing discussion is held with team members to facilitate managing similar wind turbine generator breakdowns |

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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPMT446A Coordinate maintenance on a wind farm.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPMNT446 Coordinate maintenance on a wind farm

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and includes:

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including:
 - emergency procedures
 - hazard identification
 - risk control measures
 - safe working practices
- communicating with personnel and stakeholders
- coordinating scheduled maintenance
- determining permit to work requirements
- developing maintenance schedule plan
- implementing legislation, industry standards, codes of practice and regulations
- making recommendations for dealing with wind turbine generator breakdowns
- planning for scheduled maintenance work
- producing maintenance reports
- producing maintenance reports
- providing direction to team members involved in maintenance activities
- responding to wind turbine generator breakdown
- using manufacturers' specifications and manuals
- utilising risk control register

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of:

- communication in a team environment
- coordination responsibilities
- development of team members through task allocation

- equipment spares and consumables suitable for maintenance
- escalations for identified faults
- legislation, industry standards, codes of practice and regulations
- manufacturers' specifications and manuals
- organising maintenance schedules and plans
- permit to work system
- report writing including standards and styles
- WHS/OHS legislated requirements including:
 - emergency procedures
 - hazard identification
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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 currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>