



Australian Government

UEPOPS034 Coordinate wind farm operations

Release: 1

UEPOPS034 Coordinate wind farm operations

Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry - Generation Sector Training Package Release 2.0.

Application

This unit involves the skills and knowledge required to coordinate the safe management of energy production at a wind farm.

A wind farm consists of a group of wind turbines in the same location used to produce electricity. Turbines at a wind farm are interconnected, with a substation transformer used to send the power to grid destination.

Competency in this unit requires the ability to plan for plant operation, monitor wind farm operations, control wind farm electrical energy production, test wind farm operation, analyse system or plant faults and the completion of all documentation. Individuals will, in general, work as an operator at a wind farm with responsibilities for coordination activities.

Power generation plant operators are trained and authorised to isolate, prepare plant and issue permits to work.

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

Pre-requisite Unit

There are no prerequisite units

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Plan for plant operation

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, environmental requirements and workplace procedures are identified, applied and monitored
- 1.2** Work and resource requirements are identified from relevant personnel and documentation in accordance with workplace procedures
- 1.3** Preoperational checks of wind farm plant and equipment are carried out in accordance with workplace procedures

2 Monitor wind farm operations

- 2.1** Wind turbines and equipment are monitored for normal operation in accordance with workplace procedures
- 2.2** Alarms are acknowledged, prioritised and responded to in accordance with workplace procedures
- 2.3** Deviations from wind farm operations are identified and corrective actions are taken in accordance with workplace procedures
- 2.4** Wind farm plant and equipment use is monitored in key areas and trends in problems are identified in accordance with workplace procedures

3 Control wind farm electrical energy production

- 3.1** Wind farm energy output is controlled to meet operational or load requirements of power generation facility in accordance with workplace procedures
- 3.2** Wind turbines are manually adjusted to meet operational requirements in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 3.3** Wind turbines are taken out of service and are shut down to meet operational and maintenance requirements in accordance with manufacturers' specifications and workplace procedures
- 3.4** Wind turbines are run-up and placed into service to meet operational requirements in accordance with manufacturers' recommendations and specifications, and workplace procedures

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| | 3.5 | Relevant personnel are notified when wind turbine defects and abnormal operating conditions are detected in accordance with workplace procedures |
| 4 Test wind farm operation | 4.1 | Wind farm operational tests are performed in accordance with workplace procedures |
| | 4.2 | Wind farm system and plant is observed for operational response in accordance with workplace procedures |
| | 4.3 | Wind farm system and plant is returned to required operational status on completion of test in accordance with workplace procedures |
| 5 Analyse wind farm system and plant faults | 5.1 | Causes of abnormal wind farm system operating conditions are identified by analysing technical and operational information in accordance with workplace procedures |
| | 5.2 | Wind farm system and plant integrity and personnel safety are maintained in consultation with personnel, and technical and operational documentation in accordance with workplace procedures |
| | 5.3 | Relevant personnel, including specialists, are arranged for investigation of identified operational wind farm abnormalities in accordance with workplace procedures |
| 6 Complete documentation | 6.1 | Wind farm plant problems, movements and status are reported in accordance with workplace procedures |
| | 6.2 | Documentation is updated in accordance with workplace procedures |

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 UEP Electricity Supply Industry - Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS443 Coordinate wind farm operations.

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 UEPOPS034 Coordinate wind farm operations

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Performance Evidence

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

- analysing wind farm system and plant faults using data analysis techniques and tools
- applying work health and safety (WHS)/occupational health and safety (WHS) requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with personnel
- completing documentation using recording procedures
- controlling wind farm electrical energy production
- coordinating wind farm electrical energy generation, including:
 - identifying wind farm plant status
 - operating interacting systems
 - running wind farm plant and equipment
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- monitoring wind farm operations
- planning for wind farm plant operation
- preparing wind farm plant and equipment for operation
- recognising and responding to abnormal wind farm plant operating conditions
- testing wind farm operation using diagnostic and testing techniques.

Knowledge Evidence

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

- arrangements of power production plant
- manuals

- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- WHS/OHS requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- wind farm generator and system stability principles
- wind farm plant and equipment, location and operating parameters, including:
 - wind farm control system types
 - wind farm system components and interactions
 - wind turbine and generator types and characteristics
 - wind turbine support systems
- workplace documentation
- workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

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

Links

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