



Australian Government

UEPOPS526 Coordinate electrical energy production

Release: 1

UEPOPS526 Coordinate electrical energy production

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 the safe and effective management of energy production to meet demand on an electricity generating unit.

Power utilities match demand and supply through adjusting the production rate of their power generating facilities. This is achieved by taking generating units online and offline or through importing power from other utilities.

Competency in this unit requires the ability to coordinate unit operations, monitor network system and power generating plant, analyse network system and power generating plant faults and complete all documentation. Individuals will, in general, work as an operator with responsibility for coordinating electrical energy production, in a power generation facility.

Power generation plant operators are typically 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.

Note: Workplace practice

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

Pre-requisite Unit

UEPOPS457 Control electrical energy production

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Coordinate unit operations

- 1.1 Electricity generating unit is operated, in accordance with workplace procedures, industry standards and Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) regulations to meet demand requirements whilst observing power generating plant limitations
- 1.2 Electricity generating unit is monitored and observed, in accordance with workplace procedures, to detect deviations from normal operating conditions
- 1.3 Causes of abnormal operating conditions in electricity generating unit is identified, in accordance with workplace procedures, by analysing technical and operational information
- 1.4 Corrective actions are taken to rectify electricity generating unit abnormalities, in accordance with workplace procedures and site requirements
- 1.5 Electricity generating unit's integrity personnel safety and continuity of supply are maintained, in accordance with workplace procedures
- 1.6 Consultation with appropriate personnel is undertaken, as required, in accordance with workplace procedures
- 1.7 Electricity generating unit is operated at optimum efficiency, in accordance with workplace procedures

2 Monitoring unit and plant

- 2.1 Electricity generating unit and power generating plant to be monitored is physically identified, in accordance with workplace procedures
- 2.2 Electricity generating unit and power generating plant is monitored, in accordance with workplace procedures, for normal operation or to detect deviations
- 2.3 Corrective action is taken, in accordance with workplace procedures
- 2.4 Appropriate personnel are notified, in accordance with workplace procedures, when defects and abnormal

- operating conditions in electricity generating unit and power generating plant are detected
- 3 Test unit and plant operation**
- 3.1** Operational tests are performed, in accordance with workplace procedures
- 3.2** Electricity generating unit and power generating plant is observed, in accordance with workplace procedures, for correct operational response
- 3.3** Corrective action is taken, in accordance with workplace procedures, when response does not meet with documentation, electricity generating unit and power generating plant integrity or personnel safety requirements
- 3.4** Electricity generating unit and power generating plant is returned to operational status, in accordance with workplace procedures, upon completion of testing
- 4 Analyse unit and plant faults**
- 4.1** Causes of abnormal electricity generating unit operating conditions are identified, in accordance with workplace procedures, by analysing technical and operational information
- 4.2** Corrective actions to rectify faults are determined, in accordance with workplace procedures
- 4.3** Electricity generating unit and power generating plant integrity and personnel safety are maintained, in accordance with workplace procedures, through consultation with personnel and technical and operational documentation
- 4.4** Appropriate personnel, including specialists, are arranged for investigation of identified operational abnormalities, in accordance with workplace procedures
- 5 Complete documentation**
- 5.1** Electricity generating unit and power generation plant problems, movements and status are reported, in accordance with workplace procedures
- 5.2** 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS526A Coordinate electrical energy production.

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 UEPOPS526 Coordinate electrical energy production

Modification History

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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, performance criteria and range of conditions on at least two separate occasions and includes:

- analysing electricity generating unit and generating power plant faults using data
- analysis techniques and tools
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including:
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with personnel
- completing documentation
- coordinating electricity generating unit operations
- coordinating power generation including:
 - controlling electricity generating unit systems energy generation
 - maintaining generator unit integrity
 - monitoring power generating plant and equipment operations
 - preparing power generation plant and equipment for operation
 - recognising power generation plant status
- identifying and responding to abnormal electricity generating unit system and power generating plant operating conditions
- implementing legislation, industry standards, codes of practice and regulations
- interpreting manufacturers' specifications and manuals
- monitoring electricity generating unit and power generating plant
- testing electricity generating unit and power generating plant operations 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, performance criteria and range of conditions and includes

knowledge of:

- analysis of electricity generating unit and power generating plant faults
- control electricity generating unit energy generation
- coordination of electricity generating unit operations
- electricity generating unit and power generating plant components and interactions
- generator and electricity generating unit stability
- legislation, industry standards, codes of practice and regulations
- manufacturers' specifications and manuals
- monitor electricity generating unit and power generating plant operation
- power generating plant and equipment, its location and operating parameters
- typical arrangements of power production plant
- WHS/OHS legislated requirements including:
 - emergency procedures
 - 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.

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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.

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