



**Australian Government**

# **UEPOPS076 Operate and monitor air conditioning plant and ventilation systems**

**Release: 1**

# **UEPOPS076 Operate and monitor air conditioning plant and ventilation systems**

## **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 operate and monitor air conditioning plant, ventilation systems and associated equipment.

Air conditioning is used to cool and dehumidify a variety of plant that is heat producing in power generation facilities. Ventilation is the process of changing or replacing air to control temperatures or remove a combination of moisture, odour, smoke, heat, dust, airborne bacteria, carbon dioxide or to replenish oxygen.

Competency in this unit requires the ability to plan work, operate and monitor air conditioning plant and ventilation systems, test air conditioning plant and ventilation system operations, identify air conditioning plant and ventilation system faults, monitor and inspect air conditioning plant and ventilation system, and complete all documentation. Individuals will, in general, work under supervision, in a power generation facility as an operator.

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

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|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Plan and prepare for work</b>                                                              | <b>1.1</b> 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 |
|                                                                                                 | <b>1.2</b> Work and resource requirements are identified from relevant personnel and documentation in accordance with workplace procedures                                                                                                                                          |
|                                                                                                 | <b>1.3</b> Documentation to determine air conditioning plant and ventilation system status is assessed and evaluated in accordance with workplace procedures                                                                                                                        |
|                                                                                                 | <b>1.4</b> Inspection and field preparation for air conditioning plant and ventilation system service is carried out in accordance with manufacturers' recommendations and specifications, and workplace procedures                                                                 |
|                                                                                                 | <b>1.5</b> Air conditioning plant and ventilation system operational prerequisites are established in accordance with manufacturers' recommendations and specifications, and workplace procedures                                                                                   |
|                                                                                                 | <b>1.6</b> Sequence and air conditioning plant and ventilation system requirements for operation are determined in accordance with workplace procedures                                                                                                                             |
| <b>2 Perform operation and monitoring of air conditioning equipment and ventilation systems</b> | <b>2.1</b> Air conditioning plant and ventilation system is operated and shut down in accordance with manufacturers' recommendations and specifications, and workplace procedures                                                                                                   |
|                                                                                                 | <b>2.2</b> Air conditioning plant and ventilation system is monitored and observed to detect deviations from normal operating conditions in accordance with workplace procedures                                                                                                    |
|                                                                                                 | <b>2.3</b> Air conditioning plant and ventilation system performance and quality are monitored, including temperature and airflow humidity, in accordance with workplace procedures                                                                                                 |
|                                                                                                 | <b>2.4</b> Corrective actions are taken to rectify abnormalities in accordance with workplace procedures,                                                                                                                                                                           |

- |                                                                            |            |                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3 Test air conditioning and ventilation system plant operation</b>      | <b>3.1</b> | Operational tests are performed in accordance with workplace procedures                                                                                                                                                 |
|                                                                            | <b>3.2</b> | Air conditioning plant and ventilation system is returned to required operational status upon completion of testing in accordance with workplace procedures                                                             |
| <b>4 Identify air conditioning and ventilation system plant faults</b>     | <b>4.1</b> | Causes of abnormal air conditioning and ventilation system plant operating conditions are identified by analysis of technical and operational information in accordance with workplace procedures                       |
|                                                                            | <b>4.2</b> | Air conditioning plant and ventilation system integrity and personnel safety are maintained in consultation with relevant personnel and technical and operational documentation in accordance with workplace procedures |
| <b>5 Monitor and inspect air conditioning and ventilation system plant</b> | <b>5.1</b> | Air conditioning plant and ventilation system is monitored and inspected for normal operation and to detect deviations in accordance with workplace procedures                                                          |
|                                                                            | <b>5.2</b> | Relevant personnel are notified when defects are detected in accordance with workplace procedures                                                                                                                       |
| <b>6 Complete documentation</b>                                            | <b>6.1</b> | Air conditioning plant and ventilation system problems, movements and status are reported in accordance with workplace procedures                                                                                       |
|                                                                            | <b>6.2</b> | 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 UEPOPS309 Operate and monitor air conditioning plant and ventilation systems.

## 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 UEPOPS076 Operate and monitor air conditioning plant and ventilation systems

## 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.

## 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:

- 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 using recording procedures
- identifying air conditioning plant and ventilation system status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- monitoring and inspecting air conditioning plant and ventilation system
- operating air conditioning plant and ventilation system, including temperature and air flow using data analysis techniques and tools
- operating and monitoring air conditioning plant, equipment and ventilation system
- organising resources
- preparing air conditioning plant and ventilation system for operation
- preparing and planning work
- recognising and responding to abnormal faults in air conditioning plant and ventilation system operating conditions
- testing air conditioning plant and ventilation system operation using diagnostic testing techniques and procedures
- utilising repair techniques and procedures
- working with permit to work system.

## 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:

- air conditioning and ventilation system plant status
- arrangements of power production plant
- permit to work system
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- plant and equipment, location and operating parameters, including:
  - air conditioner systems
  - ventilation systems
  - refrigerant gases
- WHS/OHS requirements, including:
  - emergency procedures
  - risk control measures
  - safe working practices
- 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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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>