



**Australian Government**

# **UEPOPS108 Operate and monitor system equipment**

**Release: 1**

# UEPOPS108 Operate and monitor system equipment

## 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, monitor and control high voltage (H.V.) apparatus on the system via supervisory control and data acquisition (SCADA) control.

SCADA is a control system that uses computers, networked data communications and graphic interfaces. It uses other peripheral devices such as programmable logic controllers (PLCs) and discrete proportional integral derivative (PID) controllers to interface with plant, equipment or machinery.

Competency in this unit requires the ability to plan work, operate system equipment, monitor system equipment, analyse system equipment faults 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

Elements describe the essential outcomes.

### PERFORMANCE CRITERIA

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

- |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Plan and prepare work</b>        | <ul style="list-style-type: none"><li>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</li><li>1.2 Work requirements are identified from relevant personnel and documentation in accordance with workplace procedures</li><li>1.3 System and associated H.V. apparatus and SCADA equipment operational prerequisites are identified and established in accordance with manufacturers' recommendations and specifications, and workplace procedures</li><li>1.4 Sequence for recommissioning of system and H.V. apparatus and equipment through SCADA is identified and determined in accordance with workplace procedures</li></ul> |
| <b>2 Operate system and equipment</b> | <ul style="list-style-type: none"><li>2.1 System and equipment and SCADA programs are operated in accordance with workplace procedures</li><li>2.2 Load shedding requirements are identified, selected and monitored during equipment operations to ensure system integrity in accordance with workplace procedures</li><li>2.3 System and operations are completed in consultation with relevant personnel in accordance with workplace procedures</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>3 Monitor system and equipment</b> | <ul style="list-style-type: none"><li>3.1 Voltage and current requirements are assessed, evaluated and controlled to maintain system and equipment integrity and stability in accordance with workplace procedures</li><li>3.2 System and equipment are monitored for normal operations and to detect deviations in accordance with workplace procedures</li><li>3.3 Corrective actions to rectify system and equipment abnormalities are taken in accordance with workplace procedures</li><li>3.4 Relevant personnel are notified when system and equipment defects and abnormal operating conditions are detected in accordance with workplace procedures</li></ul>                                                                                                                                                                                          |

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|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4 Analyse system and equipment faults</b> | <b>4.1</b> Cause of system equipment operating faults are identified by analysing technical and operational information in accordance with workplace procedures                                                           |
|                                              | <b>4.2</b> Operation of protection system is identified and assessed evaluate nature and cause of fault conditions in accordance with workplace procedures                                                                |
|                                              | <b>4.3</b> Communication is established with key stakeholders to identify nature and source of equipment system fault and failure in accordance with workplace procedures                                                 |
|                                              | <b>4.4</b> System integrity and personnel safety are maintained in consultation with relevant personnel and technical and operational documentation, including contingency plans, in accordance with workplace procedures |
| <b>5 Complete documentation</b>              | <b>5.1</b> Equipment problems, movements and status are reported in accordance with workplace procedures                                                                                                                  |
|                                              | <b>5.2</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 UEPOPS441 Operate and monitor system equipment.

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>