



Australian Government

UEPOPS025 Coordinate local H.V. networks

Release: 1

UEPOPS025 Coordinate local H.V. networks

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 control and management of high voltage (H.V.) substations or local networks.

H.V. substations are a node point in power generation infrastructure. They transform voltage from high to low, or the reverse, and enable the reliable transmission of large amounts of power.

Competency in this unit requires the ability to plan and prepare work; operate, monitor and control H.V. substation and local network; analyse and respond to H.V. substation or local network faults or incidents; review incident response and preventative procedures and complete all documentation. Individuals will, in general, work as an operator with responsibility for H.V. network coordination, in a power generation facility.

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 and prepare work

- 1.1** Documentation to determine H.V. substation or local network status is assessed and evaluated in accordance with workplace procedures
- 1.2** 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
- 1.3** H.V. substation or local network equipment operational prerequisites are established in accordance with manufacturers' recommendations and specifications, and workplace procedures
- 1.4** Sequence for operating local network section and equipment is determined in accordance with workplace procedures
- 1.5** Information to forecast and plan response for efficient operation of H.V substation or local network is utilised in accordance with workplace procedures
- 1.6** Regular consultation with key stakeholders is maintained in accordance with workplace procedures
- 1.7** Implications of operator's actions to H.V substation or local network are identified and assessed in accordance with workplace procedures

2 Operate, monitor and control H.V. substation or local network

- 2.1** Local network is operated and coordinated in accordance with workplace procedures
- 2.2** Local network voltage and current requirements are assessed and evaluated to maintain stability and system integrity in accordance with workplace procedures
- 2.3** Voltage and load profiles are identified in accordance with workplace procedures
- 2.4** Corrective actions to rectify H.V. substation or local network abnormalities are implemented following analysis of data in accordance with manufacturers' recommendations and specifications, and workplace procedures

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| | 2.5 | Resources are identified and coordinated to meet H.V. substation or local network system requirements in accordance with workplace procedures |
| 3 Analyse and respond to H.V. substation or local network faults | 3.1 | Cause of H.V. substation or local network fault conditions are identified by analysing technical and operational information in consultation with system control personnel in accordance with workplace procedures |
| | 3.2 | Operation of protection systems for H.V. substation or local network is identified and assessed to evaluate nature and cause of fault conditions in accordance with workplace procedures, |
| | 3.3 | Communication is established with key stakeholders to identify nature or source of H.V. substation or local network system interference in accordance with workplace procedures |
| | 3.4 | Corrective action is taken in accordance with workplace procedures |
| | 3.5 | Local system integrity and personnel safety are maintained through consultation with relevant personnel, operational documentation and contingency plans in accordance with workplace procedures |
| 4 Review incident response and preventative procedures | 4.1 | Incident or fault responses are assessed and reviewed in accordance with workplace procedures |
| | 4.2 | Alternative responses or contingency plan strategies are identified and assessed in accordance with workplace procedures |
| | 4.3 | Alternative responses or contingency plan strategies are documented in accordance with workplace procedures |
| 5 Complete documentation | 5.1 | H.V. substation or local network 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 UEP Electricity Supply Industry - Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS424 Coordinate local H.V. networks.

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 UEPOPS025 Coordinate local H.V. networks

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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 and responding to high voltage (H.V.) substation and local network faults or incidents
- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with key stakeholders
- communicating with personnel and external agencies
- completing documentation using recording procedures
- identifying power generation plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- operating, monitoring and controlling local H.V. substation and local network
- preparing for H.V. network system operations
- recognising and responding to abnormal H.V. substations and local network operating conditions using data analysis techniques and tools
- reviewing incident response and preventative procedures
- using contingency plans.

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:

- abnormal operating conditions in H.V substations and local networks
- arrangements of power production plant
- contingency plans

- coordination of H.V substations and local networks
- H.V substations and local network types and characteristics
- manuals
- power generating plant and equipment, location and operating parameters
- power generating plant status
- 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
- 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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