



Australian Government

UEPOPS036 Develop H.V. switching programs

Release: 1

UEPOPS036 Develop H.V. switching programs

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 develop high voltage (H.V.) switching programs where multiple sources of supply must be considered and managed.

Switching can be set up to provide power to critical circuits, or to entire electrical subpanels, or to allow loads in large backup generator installations to be smoothly transferred from the utility to synchronised generators and back again.

Competency in this unit requires the ability to interpret requirements, research switching program, draft switching programs and validate switching programs. 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.

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|-------------------------------------|---|
| 1 Interpret requirements | 1.1 Notification of switching program requirement is confirmed and assessed 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 Area of planned outage is identified in consultation with relevant personnel, power generation system diagrams, drawings and maps in accordance with workplace procedures |
| | 1.4 Work details are interpreted from outage request and draft switching program in accordance with workplace procedures |
| 2 Research switching program | 2.1 Implications of switching program on the power generation system are identified and recognised in accordance with workplace procedures |
| | 2.2 Types and function of switchgear to be operated are identified and suitability for operation under forecast system conditions during scheduled outage is assessed in accordance with workplace procedures |
| | 2.3 System loadings, limitations and alternate supply route capabilities are evaluated to ensure system integrity in accordance with workplace procedures |
| | 2.4 Consultation with relevant personnel affected by the switching program is undertaken in accordance with workplace procedures |
| | 2.5 Location of isolation points are identified to ensure shortest route when determining sequence of switching steps in accordance with workplace procedures |
| | 2.6 Safe working clearances are identified and maintained in accordance with workplace procedures |
| | 2.7 H.V., low voltage (L.V.) and control circuitry is examined to ensure no back-feed in accordance with workplace procedures |
| 3 Draft switching program | 3.1 Switching program draft is documented, including |

- location, apparatus, identification and the operation to be conducted, in accordance with workplace procedures,
- 3.2 Permit to work procedures are implemented in accordance with workplace procedures
 - 3.3 Switching program is planned and implemented in accordance with workplace procedures
 - 3.4 Switching program is checked for omissions in accordance with workplace procedures
 - 3.5 All documentation supporting the switching program is completed in accordance with workplace procedures
- 4 Validate switching program**
- 4.1 Switching program is forwarded to relevant personnel for verification in accordance with workplace procedures
 - 4.2 Documentation is recorded 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 UEPOPS428 Develop H.V. switching programs.

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 UEPOPS036 Develop H.V. switching programs

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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:

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - risk control measures
 - safe working practices
 - site emergency procedures
- communicating with personnel
- documenting and reporting switching program
- drafting switching program
- identifying power generation plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting switching program requirements
- researching switching program using data analysis techniques and tools
- utilising manuals
- validating switching program
- 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:

- arrangements of power production plant
- draft switching program
- high voltage (H.V), low voltage (L.V.) and control circuitry
- isolations
- manuals
- permit to work system
- power generation plant and equipment, location and operating parameters

- power generation plant status
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- switch program
- switchgear types and characteristics
- validation of switching programs
- WHS/OHS requirements, including:
 - site 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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