



Australian Government

UETDRSO019 Manage supply and demand in distribution and sub-transmission networks

Release: 1

UETDRSO019 Manage supply and demand in distribution and sub-transmission networks

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

Application

This unit includes the skills and knowledge required to manage supply and demand in distribution and sub-transmission networks in the electricity supply industry (ESI).

It includes supply and demand management for sub-transmission and distribution network constraints, including entire networks, sub-transmission lines, transformers, distribution lines, or switchgear.

It also includes procedures for each of the demand management actions, including load, voltage, system reliability, and critical customers.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

Other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UETDRSO012 Coordinate and manage distribution and sub-transmission network access and activities

UETDRSO015 Develop and validate distribution and sub-transmission switching programs

UETDRSO020 Operate SCADA equipment

Competency Field

System Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Prepare to manage supply and demand in distribution and sub-transmission networks

- 1.1** Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be done are reviewed and determined
- 1.2** Purpose of the management is established after data is analysed and expected outcomes of the work are confirmed with appropriate personnel
- 1.3** Work plan is obtained and confirmed in accordance with workplace requirements, and where relevant, communicated to the appropriate personnel
- 1.4** Work roles and tasks are determined according to requirements and individual competencies
- 1.5** Work is prioritised and sequenced for completion in accordance with work plan and workplace requirements
- 1.6** Liaison and communication issues with authorised personnel, authorities and clients are resolved to perform work, as required
- 1.7** Hazards are identified, risks assessed, and control measures identified and applied
- 1.8** Work permits are determined in accordance with workplace requirements

2 Manage supply and demand in distribution and sub-transmission networks

- 2.1** Legislation, regulations, standards, codes of practice and organisational workplace requirements for the work to be performed are applied and monitored
- 2.2** Systems modelling is used to evaluate and determine best outcomes in accordance with workplace requirements

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| | 2.3 | Supply and demand in distribution and sub-transmission networks is managed in accordance with workplace requirements |
| | 2.4 | All stakeholders are updated on progress |
| | 2.5 | Incidents or unplanned events are responded to in accordance with workplace requirements |
| 3 Complete work and documentation | 3.1 | Completed work is checked for compliance against the work plan and workplace requirements |
| | 3.2 | Work records, reports and documentation are completed, and where relevant, appropriate personnel notified in accordance with workplace requirements |

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 UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is not equivalent to UETDRSO007 Manage high voltage distribution and sub-transmission network demand.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETDRSO019 Manage supply and demand in distribution and sub-transmission networks

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two (2) separate occasions and include:

- applying relevant legislation, regulations, standards, codes of practice and organisational workplace requirements including:
 - work health and safety (WHS)/occupational health and safety (OHS) requirements
- identifying hazards, assessing risks, and identifying, applying and monitoring control measures
- dealing with an unplanned event on at least one (1) occasion
- completing relevant work records, reports and documentation
- demonstrating at least three (3) demand management actions for sub-transmission and distribution network constraints that include the following:
 - sub-transmission lines
 - transformers
 - distribution lines
 - switchgear
- managing all of the following for each of the demand management actions:
 - load
 - voltage
 - system reliability
 - critical customers
- coordinating, prioritising and communicating network planned and unplanned work, with relevant personnel
- monitoring the status of access authorities and permits
- demonstrating application of supply and demand management tools
- meeting paralleling conditions for interconnected networks
- updating personnel, management and customers of progress.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of

the requirements of the elements and performance criteria and include knowledge of:

- relevant legislation, regulations, standards, codes of practice and organisational workplace requirements, including WHS/OHS requirements
- hazard, risk assessment and risk control requirements, including potential hazards
- application, purpose, and types of permits and access authorities
- events constituting an unplanned event or incident
- procedures for responding to an unplanned event or incident
- workplace records, reports and documentation
- manuals, diagrams and drawings
- use of supply and demand management tools
- coordination, prioritisation, and communication of network planned and unplanned work
- communication with personnel, management and customers
- paralleling of interconnected networks
- actions and documentation for supply and demand management for sub-transmission and distribution network constraints, including:
 - sub-transmission lines
 - transformers
 - distribution lines
 - switchgear
- demand management actions, including:
 - load
 - voltage
 - system reliability
 - critical customers.

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 conditions involving realistic and authentic activities that replicate operational 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:

- relevant and appropriate materials, tools, facilities, equipment, protection, control, metering and alarm equipment, computerised electrical plant control and monitoring facilities, and personal protective equipment (PPE) currently used in industry

- applicable documentation including, workplace requirements, relevant industry standards, equipment specifications, regulations, codes of practice, operational event data, network drawings, crisis management procedures and operation manuals.

Links

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