

# COMPANION VOLUME IMPLEMENTATION GUIDE

UET Transmission, Distribution and Rail

Release 5.0



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## ABOUT AUSTRALIAN INDUSTRY STANDARDS

Australian Industry Standards (AIS) provides high-quality, professional secretariat services to eleven Industry Reference Committees (IRCs), in our role as a Skills Service Organisation (SSO).

The eleven allocated IRCs incorporate Gas, Electricity, Electrotechnology, Corrections, Public Safety (including Police, Fire Services and Defence), Water, Aviation, Rail, Maritime and Transport and Logistics industries. AIS supports these important industry sectors using our world-class in-house capability and capacity in technical writing, quality assurance, project management and industry engagement in the production of training packages.

AIS was established in early 2016, 20 years after its predecessor the Transport and Logistics Industry Skills Council (TLISC) was established in 1996. More information about AIS can be found at [www.australianindustrystandards.org.au](http://www.australianindustrystandards.org.au)

- We support industry growth and productivity through our modern innovative approach to establishing skills standards.
- We provide high-quality, professional secretariat services to help our allocated IRCs develop the skills that industry needs.
- We partner with industry to shape the workforce of the future.

## OVERVIEW INFORMATION

This Companion Volume Implementation Guide (CVIG) is designed to assist assessors, trainers, Registered Training Organisations (RTOs) and enterprises in delivering the UET Transmission, Distribution and Rail Sector Training Package. It provides advice about the structure of the Training Package, its key features and useful links to more detailed information on a range of related topics.

### VERSION CONTROL AND MODIFICATION HISTORY

Training Packages are dynamic documents and are amended periodically to reflect the latest industry practices. Training Packages are version controlled so it is essential that the latest release is always used.

In the version control and modification history table below, the latest information is provided first.

Version Number	Release Date	Comments
5.0	TBA 2022	<p>This is the fifth release of this Training Package.</p> <p>This release incorporates 1 new Unit of Competency and 1 new Skill Set.</p> <p>New Unit of Competency:</p> <ul style="list-style-type: none"> <li>• UETDRCD001 Work safely around powerlines as an ordinary person</li> </ul> <p>New Skill Set:</p>

		<ul style="list-style-type: none"> <li>• UETSS00055 Work Safely Around Powerlines as an Ordinary Person Skill Set</li> </ul>
4.0	TBA 2022	<p>This is the fourth release of this Training Package.</p> <p>This release incorporates 3 revised Qualifications, 1 new Skill Set, 4 new Units of Competency and 79 revised Units of Competency. It also includes the deletion of three Qualifications, 18 Skill Sets and 35 Units of Competency.</p> <p>Revised Qualification:</p> <ul style="list-style-type: none"> <li>• UET40422 Certificate IV in ESI - Network Systems</li> <li>• UET40522 Certificate IV in ESI - Power Systems Substations</li> <li>• UET60222 Advanced Diploma of ESI - Power Systems</li> </ul> <p>New Skill Set:</p> <ul style="list-style-type: none"> <li>• UETSS00054 Maintain Energised Rail Traction Networks Skill Set</li> </ul> <p>Revised Units of Competency:</p> <ul style="list-style-type: none"> <li>• UETDRDS016 Coordinate and perform line and easement surveys</li> <li>• UETDRDS017 Design customer substations</li> <li>• UETDRDS018 Design distribution protection systems</li> <li>• UETDRDS019 Design distribution substations</li> <li>• UETDRDS020 Design overhead distribution systems</li> <li>• UETDRDS021 Design public lighting systems</li> <li>• UETDRDS022 Design underground distribution systems</li> <li>• UETDRDS023 Draft and layout a distribution substation minor upgrade</li> <li>• UETDRDS024 Draft and layout overhead distribution extension</li> <li>• UETDRDS025 Draft and layout street lighting system</li> <li>• UETDRDS026 Draft and layout underground distribution extension</li> <li>• UETDRDS027 Investigate quality of supply issues</li> <li>• UETDRDS028 Prepare and manage construction plans for electrical infrastructure</li> <li>• UETDRDU020 Joint, terminate and maintain gas and oil filled underground cables</li> <li>• UETDRDU021 Joint, terminate and maintain underground polymeric cable 33kv and above</li> <li>• UETDRDU022 Maintain gas and oil pressure systems for underground cables</li> <li>• UETDRIS020 Contribute to coordinated HV live work</li> <li>• UETDRIS021 Coordinate and direct switching programs</li> <li>• UETDRIS022 Coordinate permit procedures</li> <li>• UETDRIS023 Develop and validate high voltage distribution switching program</li> <li>• UETDRIS024 Develop basic low voltage switching program</li> <li>• UETDRIS025 Diagnose and resolve faults in distribution systems</li> <li>• UETDRIS026 Diagnose and resolve faults in electrical apparatus</li> <li>• UETDRIS027 Diagnose and resolve faults in transmission systems</li> <li>• UETDRIS028 Implement and monitor environmental policies and procedures</li> </ul>

		<ul style="list-style-type: none"> <li>• UETDRIS029 Implement and monitor organisational WHS/OHS policies, procedures and programs</li> <li>• UETDRIS030 Install high voltage mobile generator</li> <li>• UETDRIS031 Maintain insulating oil</li> <li>• UETDRIS032 Solve problems in network equipment</li> <li>• UETDRIS033 Solve problems in network protection</li> <li>• UETDRMP001 Apply access authority procedures to work on or near electrical apparatus</li> <li>• UETDRMP002 ESI safety rules for work on, near or in the vicinity of electrical apparatus</li> <li>• UETDRMP003 Perform cable pit/trench/excavation rescue</li> <li>• UETDRMP004 Perform elevated work platform controlled descent escape</li> <li>• UETDRMP005 Perform elevated work platform rescue</li> <li>• UETDRMP006 Perform pole top rescue</li> <li>• UETDRMP007 Perform rescue from a live low voltage panel</li> <li>• UETDRMP008 Perform rescue from switchyard structures</li> <li>• UETDRMP009 Perform tower rescue</li> <li>• UETDRMP010 Provide first aid in an ESI environment</li> <li>• UETDRMP011 Testing of connections to low voltage electricity networks</li> <li>• UETDRSB002 Commission and maintain discrete control and protection systems</li> <li>• UETDRSB003 Commission and maintain distribution field devices</li> <li>• UETDRSB004 Conduct surveys using thermovision techniques</li> <li>• UETDRSB005 Diagnose and resolve faults in a substation environment</li> <li>• UETDRSB006 Inspect substations</li> <li>• UETDRSB007 Install and maintain substation direct current systems</li> <li>• UETDRSB008 Install high current d.c. equipment and switchgear</li> <li>• UETDRSB009 Install high voltage plant and equipment</li> <li>• UETDRSB010 Maintain capacitor bank equipment</li> <li>• UETDRSB011 Maintain high current d.c. equipment and switchgear</li> <li>• UETDRSB012 Maintain high voltage circuit breakers</li> <li>• UETDRSB013 Maintain on-load tap changers (OLTCs)</li> <li>• UETDRSB014 Maintain power and instrument transformers</li> <li>• UETDRSB015 Maintain static var compensators (SVC)</li> <li>• UETDRSB016 Maintain synchronous condensers</li> <li>• UETDRSO012 Coordinate and manage distribution and sub-transmission network access and activities</li> <li>• UETDRSO013 Coordinate and manage transmission network access and activities</li> <li>• UETDRSO014 Coordinate operations in a regulated energy market</li> <li>• UETDRSO015 Develop and validate distribution and sub-transmission switching programs</li> <li>• UETDRSO016 Develop and validate low voltage switching programs</li> <li>• UETDRSO017 Develop and validate transmission switching programs</li> <li>• UETDRSO018 Dispatch and monitor field staff activities</li> <li>• UETDRSO019 Manage supply and demand in distribution and sub-transmission networks</li> <li>• UETDRSO020 Operate SCADA equipment</li> <li>• UETDRSO021 Respond to protection operations</li> </ul>
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		<ul style="list-style-type: none"> <li>• UETDRTS028 Calibrate verify and certify revenue metering/energy measurement instruments</li> <li>• UETDRTS029 Commission and maintain communication equipment</li> <li>• UETDRTS030 Commission and maintain complex energy/revenue metering schemes</li> <li>• UETDRTS031 Commission and maintain energy/revenue metering schemes</li> <li>• UETDRTS032 Commission and maintain metering schemes</li> <li>• UETDRTS033 Commission and maintain network protection and control systems</li> <li>• UETDRTS034 Commission and maintain voltage regulating equipment</li> <li>• UETDRTS035 Conduct evaluation of network protection and control system faults</li> <li>• UETDRTS036 Develop secondary protection and control scheme isolation instructional documents</li> <li>• UETDRTS037 Maintain and calibrate protection relays and meters</li> <li>• UETDRTS038 Perform accuracy checks on instrument transformers</li> <li>• UETDRTS039 Perform current injection testing of secondary devices</li> <li>• UETDRVC012 Coordinate vegetation control operations</li> </ul> <p>New Units of Competency:</p> <ul style="list-style-type: none"> <li>• UETDRDS015 Assess distributed energy resource connections to a distribution network</li> <li>• UETDRMP012 Working on Energised Low Voltage Overhead Electrical Apparatus</li> <li>• UETDRMP013 Working on Energised Low Voltage Underground Electrical Apparatus</li> <li>• UETDRRT015 Maintain energised rail traction networks</li> </ul>
3.0	3 June 2022	<p>This is the third release of this Training Package.</p> <p>This release incorporates one revised Qualification, and 3 revised Units of Competency.</p> <p>It also includes the deletion of two Units of Competency.</p> <p>Revised Qualification:</p> <ul style="list-style-type: none"> <li>• UET20422 Certificate II in Transmission Line Construction</li> </ul> <p>Revised Units of Competency:</p> <ul style="list-style-type: none"> <li>• UETDRTO015 Assemble and erect transmission structures</li> <li>• UETDRTO016 Install transmission structure hardware</li> <li>• UETDRTO017 String overhead transmission conductors</li> </ul> <p>Minor changes to a range of UET Training Package components were made at the same time as products endorsed as part of Release 3.0 was published. This included updating five Qualifications and one Unit of Competency.</p>
2.0	20 September 2021	<p>This is the second release of this Training Package.</p>

		<p>This release incorporates 14 revised Qualifications, six new Units of Competency and 156 revised Units of Competency. It also includes the deletion of one Qualification and eight Units of Competency.</p> <p>Revised Qualifications:</p> <ul style="list-style-type: none"> <li>• UET20321 Certificate II in ESI – Powerline Vegetation Control</li> <li>• UET20421 Certificate II in Transmission Structure and Line Assembly</li> <li>• UET20621 Certificate II in ESI – Asset Inspection and Testing</li> <li>• UET30521 Certificate III in ESI – Transmission Overhead</li> <li>• UET30621 Certificate III in ESI – Distribution Overhead</li> <li>• UET30721 Certificate III in ESI – Rail Traction</li> <li>• UET30821 Certificate III in ESI – Distribution Underground</li> <li>• UET30921 Certificate III in ESI – Very Remote Community Utilities</li> <li>• UET40421 Certificate IV in ESI – Network Systems</li> <li>• UET40521 Certificate IV in ESI – Power Systems Substations</li> <li>• UET40621 Certificate IV in ESI – Power Systems Network Infrastructure</li> <li>• UET50221 Diploma of ESI – Power Systems</li> <li>• UET50321 Diploma of ESI – Power Systems Operations</li> <li>• UET60221 Advanced Diploma of ESI – Power Systems</li> </ul> <p>New Units of Competency:</p> <ul style="list-style-type: none"> <li>• UETDRAI002 Inspect poles, hardware and electrical apparatus</li> <li>• UETDRAI004 Treat poles</li> <li>• UETDREL003 Identify and apply controls for alternate supplies on the distribution network</li> <li>• UETDRDU002 Inspect underground electrical apparatus</li> <li>• UETDRDU007 Install and maintain underground public lighting</li> <li>• UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> </ul>
1.2	20 April 2021	<p>This release incorporates the deletion of one Qualification and 26 Units of Competency.</p> <p>Deleted Qualification:</p> <ul style="list-style-type: none"> <li>• UET60319 Advanced Diploma of ESI – Power Systems Operations</li> </ul> <p>Deleted Units of Competency:</p> <ul style="list-style-type: none"> <li>• UETDRDS40 Prepare and appraise power systems financial impact statements</li> <li>• UETDRDS41 Manage electrical power systems infrastructure projects</li> <li>• UETDRDS44 Design power system substations modifications</li> <li>• UETDRDS47 Review power system asset management strategies</li> <li>• UETDRDS48 Analyse and appraise power system fault and outage data</li> <li>• UETDRDS49 Establish and manage power system geographical information systems data</li> <li>• UETDRDS51 Manage power system transmission and sub-transmission design process</li> <li>• UETDRDS52 Design power system transmission, sub-transmission and zone substation buildings</li> </ul>



		<ul style="list-style-type: none"> <li>• UETTD RDS53 Design power system transmission and sub-transmission substation primary plant</li> <li>• UETTD RDS54 Design power system transmission and sub-transmission protection and control</li> <li>• UETTD RDS55 Design power system transmission and sub-transmission substation earthing</li> <li>• UETTD RDS56 Design power system transmission, sub-transmission &amp; zone substation civil &amp; structural components</li> <li>• UETTD RDS57 Design power system overhead transmission systems</li> <li>• UETTD RDS58 Design underground transmission systems</li> <li>• UETTD RIS66 Manage an electricity power system WHS/OHS management system</li> <li>• UETTD RRT34 Install and maintain traction network wiring systems</li> <li>• UETTD RRT35 Install and maintain traction network equipment and components</li> <li>• UETTD RRT36 Maintain traction network wiring systems</li> <li>• UETTD RRT37 Maintain traction network equipment and components</li> <li>• UETTD RSO33 Manage power systems critical events</li> <li>• UETTD RSO34 Control power systems generating plant</li> <li>• UETTD RSO39 Coordinate low voltage distribution networks</li> <li>• UETTD RSO42 Manage power systems transmission network demand</li> <li>• UETTD RSO43 Coordinate low voltage distribution network demand</li> <li>• UETTD RSO44 Develop crisis power systems management plans</li> <li>• UETTD RSO51 Manage network systems power flows</li> </ul>
1.1	24 March 2021	<p>Amendment to the Performance Evidence for the following units:</p> <ul style="list-style-type: none"> <li>• UETTD RRF01 Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus</li> <li>• UETTD RRF02 Perform pole top rescue</li> <li>• UETTD RRF03 Perform EWP rescue</li> <li>• UETTD RRF04 Perform tower rescue</li> <li>• UETTD RRF05 Perform rescue from switchyard structures at heights</li> <li>• UETTD RRF06 Perform rescue from a live LV panel</li> <li>• UETTD RRF07 Perform cable pit/trench/excavation rescue</li> <li>• UETTD RRF08 Perform EWP controlled descent escape</li> <li>• UETTD RRF09 Apply access procedures to work on or near electrical network infrastructure</li> <li>• UETTD RRF10 Provide first aid in an ESI environment</li> <li>• UETTD RRF11 Testing of connections to low voltage electricity networks</li> </ul>
1.0	25 September 2019	<p>This is the first release of this Training Package.</p> <p>Supersedes UET12 Transmission, Distribution and Rail Sector Training Package Release 2.1.</p>

# TRAINING PACKAGES, THE AUSTRALIAN QUALIFICATIONS FRAMEWORK AND COMPETENCY STANDARDS

## Training Packages

Training Packages:

- Specify the qualifications determined by industry groups and when required, by regulatory requirements to be most relevant for employment within the industry
- Are developed by the relevant national IRCs in consultation with a range of stakeholders
- Are recommended to the Australian Industry and Skills Committee (AISC) for endorsement by the Council of Australian Governments (COAG) Industry and Skills Council
- Enable nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- Encourage the development and delivery of flexible training to suit individual needs and industry requirements
- Support learning, training and assessment in a work-related environment, leading to verifiable workplace outcomes.

The title of each endorsed Training Package is unique and relates to the broad industry coverage of the Training Package.

Each Training Package has a unique national code assigned when the Training Package is endorsed, for example UET.

Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualification/s or specific Unit/s of Competency on its scope of registration.

New *Standards for Registered Training Organisations (RTOs) 2015* came into effect on 1 April 2015 and are located on the [Australian Government ComLaw website](#).

Information about these standards can be found at the:

- [Department of Education and Training](#)
- [Australian Skills Quality Authority](#)

*Standards for Training Packages* apply to the design and development of Training Packages for endorsement by the authorising body.

Information about these current standards, including applicable templates, can be found at the Department of Education, Skills and Employment website (<https://www.education.gov.au/training-packages>).

These templates describe mandatory and optional information that applies to Units of Competency, assessment requirements and qualifications.

## Australian Qualifications Framework

The Australian Qualifications Framework (AQF) provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the Vocational Education and Training (VET) sector the AQF enables national recognition of qualifications and Statements of Attainment.

The UET Transmission, Distribution and Rail Sector Training Package Release 5.0 provides details of the Units of Competency that must be achieved to award AQF qualifications.

The rules around which Units of Competency can be combined to make up a valid AQF qualification are referred to as the packaging rules. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

The packaging rules are defined within each qualification in a Training Package.

## Competency Standards

The broad concept of industry competency is the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency standards cover all aspects of workplace performance and involve:

- Performing individual tasks
- Managing a range of different tasks
- Responding to contingencies or breakdowns
- Dealing with the responsibilities of the workplace, including working with others.

Workplace competency is the ability to apply relevant skills and knowledge consistently over time and in the required workplace situations and environments.

Competency standards are determined by industry to meet industry skill needs and focus on what is expected of a competent individual in the workplace.

## AUSTRALIAN QUALIFICATIONS FRAMEWORK QUALIFICATIONS, SKILL SETS AND UNITS OF COMPETENCY IN THE UET TRANSMISSION, DISTRIBUTION AND RAIL SECTOR TRAINING PACKAGE

### Qualifications

The UET Transmission, Distribution and Rail Sector Training Package Release 5.0 provides details of the Units of Competency that must be achieved to award AQF qualifications.

The rules around which Units of Competency can be combined to make up a valid AQF qualification are referred to as the packaging rules. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

## Codes and titles

There are mandatory conventions specified in the Standards for Training Packages for the titles and codes used in Training Packages and their components.

<b>QUALIFICATION CODE</b> MANDATORY FIELD	The qualification code contains the three alpha characters identifying the Training Package, a numeric character identifying the AQF level, a two numeric character sequence identifier, and two numeric characters identifying the year the qualification was endorsed. It must comply with the length specified in the AVETMIS Standard.
<b>QUALIFICATION TITLE</b> MANDATORY FIELD	A unique title that reflects the qualification outcome. It must comply with the length specified in the AVETMIS Standard (no more than 100 characters).

Extract from [Standards for Training Packages](#)

Extract from [Training Package Products Policy](#)

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- First, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma, Graduate Certificate, or Graduate Diploma
- This is followed by the words 'in' for Certificates I to IV and Graduate Certificate, and 'of' for Diploma, Advanced Diploma and Graduate Diploma
- Then, the industry descriptor, for example Warehousing
- Then, if applicable, the occupational or functional stream in brackets, for example (Track Work).

Each qualification has an eight-character code where the:

- First three characters identify the Training Package
- First number identifies the AQF qualification level
- Second and third numbers identify a qualification's position in the sequence of qualifications at that AQF qualification level
- Fourth and fifth numbers identify the year in which the qualification was endorsed.

For example: UET30721 Certificate III in ESI – Rail Traction

## AQF Qualifications in the UET Transmission, Distribution and Rail Sector Training Package

The following AQF qualifications are in the UET Transmission, Distribution and Rail Sector Training Package:

Code	Qualification Title
<b>AQF 2</b>	
UET20321	Certificate II in ESI – Powerline Vegetation Control
UET20621	Certificate II in ESI – Asset Inspection and Testing
UET20422	Certificate II in Transmission Line Construction
<b>AQF 3</b>	
UET30521	Certificate III in ESI – Transmission Overhead
UET30621	Certificate III in ESI – Distribution Overhead
UET30721	Certificate III in ESI – Rail Traction
UET30821	Certificate III in ESI – Distribution Underground
UET30921	Certificate III in ESI – Very Remote Community Utilities
<b>AQF 4</b>	
UET40422	Certificate IV in ESI – Network Systems
UET40522	Certificate IV in ESI – Substations
<b>AQF 6</b>	
UET60222	Advanced Diploma of ESI – Power Systems

## Skill Sets

Skill Sets are single Units of Competency or combinations of Units of Competency from an endorsed Training Package/s that link to a licensing or regulatory requirement or a defined industry need.

Source: [Training Package Products Policy](#)

A Skill Set is awarded with the issuing of a Statement of Attainment.

Each Skill Set has a code that is automatically issued by training.gov.au (TGA) where the:

- First three characters identify the Training Package
- Next two characters indicate that it is a Skill Set
- Numbers identify the Skill Set's position in the sequence of Skill Sets.

### Skill Sets in the UET Transmission, Distribution and Rail Sector Training Package

The following Skill Sets are in the UET Transmission, Distribution and Rail Sector Training Package:

Code	Title
UETSS00054	Maintain Energised Rail Traction Networks Skill Set
UETSS00055	Work Safely Around Powerlines as an Ordinary Person Skill Set

## Units of Competency

### Codes and titles

Units of Competency are nationally agreed statements about the skills and knowledge required for effective performance in the workplace. They outline work outcomes as defined by regulatory requirements and agreed by industry.

As such, they identify the skills and knowledge (as outcomes) that contribute to the whole job function – they do not describe how to perform a particular role.

Each Unit of Competency covers a specific work activity, the range of conditions under which the activity is conducted and the foundation skills essential to performance.

The same Unit of Competency (i.e. specific work activity) can be relevant across a range of AQF qualification levels. It is important to check the packaging rules in qualifications to establish how units can apply.

<b>UNIT CODE</b> MANDATORY FIELD	The unit code contains the three alpha characters identifying the Training Package, followed by alpha and/or numeric characters. It must comply with the length specified in the AVETMIS Standard (no more than 12 characters).
<b>UNIT TITLE</b> MANDATORY FIELD	The title concisely describes the unit outcome. It must comply with the length specified in the AVETMIS Standard (no more than 100 characters)

Extract from [Standards for Training Packages](#)

Extract from [Training Package Products Policy](#)

There are mandatory conventions specified in the *Standards for Training Packages* for the titles and codes used in Training Packages and their components.

The codes are assigned to Units of Competency when the Training Package is endorsed, or when new Units of Competency are added to an existing endorsed Training Package.

Each Unit of Competency has a specific character code where the:

- First three characters identify the Training Package
- Next character/s indicates the competency field
- Numbers identify a unit's position in the sequence of units in the competency field in the Training Package.

For example: UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable

### Assessment Requirements

Each Unit of Competency has its own assessment requirements that identify the:

- Performance evidence
- Knowledge evidence
- Assessment conditions

<b>TITLE</b> MANDATORY FIELD	Assessment Requirements for [insert Unit of Competency Code and Title]
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The same code is used for the Unit of Competency and its associated assessment requirements.

### Units of Competency in the UET Transmission, Distribution and Rail Sector Training Package

The following Units of Competency are in the UET Transmission, Distribution and Rail Sector Training Package:

Code	Title
UETDRAI001	Inspect and test poles at and below ground level
UETDRAI002	Inspect poles, hardware and electrical apparatus
UETDRAI003	Perform minor maintenance on electricity network assets
UETDRAI004	Treat poles
UETDRAI005	Use asset inspection equipment
UETDRCD001	Work safely around powerlines as an ordinary person
UETDRDO001	Inspect overhead poles, structures and electrical apparatus
UETDRDO003	Maintain energised high voltage distribution overhead electrical apparatus (glove and barrier)

<b>Code</b>	<b>Title</b>
UETDRDO004	Maintain energised high voltage distribution overhead electrical apparatus (stick)
UETDRDO005	Maintain overhead energised low voltage distribution network
UETDRDO006	Maintain, test and verify distribution overhead network
UETDRDS015	Assess distributed energy resource connections to a distribution network
UETDRDS016	Coordinate and perform line and easement surveys
UETDRDS017	Design customer substations
UETDRDS018	Design distribution protection systems
UETDRDS019	Design distribution substations
UETDRDS020	Design overhead distribution systems
UETDRDS021	Design public lighting systems
UETDRDS022	Design underground distribution systems
UETDRDS023	Draft and layout a distribution substation minor upgrade
UETDRDS024	Draft and layout overhead distribution extension
UETDRDS025	Draft and layout street lighting system
UETDRDS026	Draft and layout underground distribution extension
UETDRDS027	Investigate quality of supply issues
UETDRDS028	Prepare and manage construction plans for electrical infrastructure
UETDRDU001	Conduct high voltage testing of underground power cable system
UETDRDU002	Inspect underground electrical apparatus
UETDRDU007	Install and maintain underground public lighting
UETDRDU009	Install, test and verify distribution underground cable installations
UETDRDU010	Joint, terminate and maintain energised low voltage underground paper insulated cable
UETDRDU011	Joint, terminate and maintain energised low voltage underground polymeric cable



Code	Title
UETDRDU012	Joint, terminate and maintain high voltage underground paper insulated cable
UETDRDU013	Joint, terminate and maintain high voltage underground polymeric cable
UETDRDU014	Joint, terminate and maintain low voltage underground paper insulated cable
UETDRDU015	Joint, terminate and maintain low voltage underground polymeric cable
UETDRDU016	Lay power cables
UETDRDU017	Locate faults in underground power cables
UETDRDU019	Transition joint high voltage paper insulated cable to high voltage polymeric cable
UETDRDU020	Joint, terminate and maintain gas and oil filled underground cables
UETDRDU021	Joint, terminate and maintain underground polymeric cable 33kv and above
UETDRDU022	Maintain gas and oil pressure systems for underground cables
UETDREL001	Apply environmental requirements
UETDREL002	Comply with environmental requirements
UETDREL003	Identify and apply controls for alternate supplies on the distribution network
UETDREL004	Operate plant and equipment in the vicinity of live electrical apparatus
UETDREL005	Work safely in the vicinity of live electrical apparatus
UETDREL006	Work safely in the vicinity of live electrical apparatus as a non-electrical worker
UETDRIS007	Install and maintain distribution overhead conductors and cables
UETDRIS008	Install and maintain electrical apparatus
UETDRIS010	Install and maintain low voltage overhead services
UETDRIS011	Install and maintain low voltage underground services
UETDRIS012	Install and maintain poles, structures and hardware
UETDRIS013	Install and maintain public lighting systems
UETDRIS014	Install and replace energy meters and associated equipment

<b>Code</b>	<b>Title</b>
UETDRIS015	Install low voltage mobile generator
UETDRIS017	Perform high voltage field switching operation to a given schedule
UETDRIS018	Perform low voltage field switching operation to a given schedule
UETDRIS020	Contribute to coordinated HV live work
UETDRIS021	Coordinate and direct switching programs
UETDRIS022	Coordinate permit procedures
UETDRIS023	Develop and validate high voltage distribution switching program
UETDRIS024	Develop basic low voltage switching program
UETDRIS025	Diagnose and resolve faults in distribution systems
UETDRIS026	Diagnose and resolve faults in electrical apparatus
UETDRIS027	Diagnose and resolve faults in transmission systems
UETDRIS028	Implement and monitor environmental policies and procedures
UETDRIS029	Implement and monitor organisational WHS/OHS policies, procedures and programs
UETDRIS030	Install high voltage mobile generator
UETDRIS031	Maintain insulating oil
UETDRIS032	Solve problems in network equipment
UETDRIS033	Solve problems in network protection
UETDRMP001	Apply access authority procedures to work on or near electrical apparatus
UETDRMP002	ESI safety rules for work on, near or in the vicinity of electrical apparatus
UETDRMP003	Perform cable pit/trench/excavation rescue
UETDRMP004	Perform elevated work platform controlled descent escape
UETDRMP005	Perform elevated work platform rescue
UETDRMP006	Perform pole top rescue

<b>Code</b>	<b>Title</b>
UETDRMP007	Perform rescue from a live low voltage panel
UETDRMP008	Perform rescue from switchyard structures
UETDRMP009	Perform tower rescue
UETDRMP010	Provide first aid in an ESI environment
UETDRMP011	Testing of connections to low voltage electricity networks
UETDRMP012	Working on Energised low voltage overhead electrical apparatus
UETDRMP013	Working on Energised low voltage underground electrical apparatus
UETDRRC001	Install and maintain low voltage overhead services in a very remote community
UETDRRC002	Install and maintain low voltage underground services in a very remote community
UETDRRC003	Install and maintain public lighting systems in a very remote community
UETDRRC004	Install and replace energy meters and associated equipment in a very remote community
UETDRRC005	Maintain, test and verify power systems in a very remote community
UETDRRC006	Perform low voltage electricity network switching in a very remote community
UETDRRC007	Solve problems in electrical network apparatus in a very remote community
UETDRRC008	Solve problems in low voltage electrical network circuits in a very remote community
UETDRRT001	Install overhead rail traction configurations
UETDRRT002	Install overhead traction components and equipment
UETDRRT003	Install rail traction bonds
UETDRRT004	Install traction overhead wiring systems
UETDRRT008	Maintain overhead rail traction configurations
UETDRRT009	Maintain overhead traction components and equipment
UETDRRT010	Maintain rail traction bonds

<b>Code</b>	<b>Title</b>
UETDRRT011	Maintain traction overhead wiring systems
UETDRRT012	Operate rail road height access plant near rail traction systems
UETDRRT013	Perform rail traction switching operations to a given schedule
UETDRRT014	Test and verify rail traction installations
UETDRRT015	Maintain energised rail traction networks
UETDRSB001	Perform substation switching operations to a given schedule
UETDRSB002	Commission and maintain discrete control and protection systems
UETDRSB003	Commission and maintain distribution field devices
UETDRSB004	Conduct surveys using thermovision techniques
UETDRSB005	Diagnose and resolve faults in a substation environment
UETDRSB006	Inspect substations
UETDRSB007	Install and maintain substation direct current systems
UETDRSB008	Install high current d.c. equipment and switchgear
UETDRSB009	Install high voltage plant and equipment
UETDRSB010	Maintain capacitor bank equipment
UETDRSB011	Maintain high current d.c. equipment and switchgear
UETDRSB012	Maintain high voltage circuit breakers
UETDRSB013	Maintain on-load tap changers (OLTCs)
UETDRSB014	Maintain power and instrument transformers
UETDRSB015	Maintain static var compensators (SVC)
UETDRSB016	Maintain synchronous condensers
UETDRSO012	Coordinate and manage distribution and sub-transmission network access and activities
UETDRSO013	Coordinate and manage transmission network access and activities

<b>Code</b>	<b>Title</b>
UETDRSO014	Coordinate operations in a regulated energy market
UETDRSO015	Develop and validate distribution and sub-transmission switching programs
UETDRSO016	Develop and validate low voltage switching programs
UETDRSO017	Develop and validate transmission switching programs
UETDRSO018	Dispatch and monitor field staff activities
UETDRSO019	Manage supply and demand in distribution and sub-transmission networks
UETDRSO020	Operate SCADA equipment
UETDRSO021	Respond to protection operations
UETDRTO004	Inspect and maintain transmission overhead network
UETDRTO005	Inspect transmission structures, conductors and hardware
UETDRTO006	Install and maintain transmission conductors
UETDRTO007	Install and maintain transmission structures and hardware
UETDRTO010	Maintain energised transmission lines using barehand techniques from a helicopter
UETDRTO011	Maintain energised transmission lines using live work barehand techniques
UETDRTO012	Maintain energised transmission lines using live work stick techniques
UETDRTO015	Assemble and erect transmission structures
UETDRTO016	Install transmission structure hardware
UETDRTO017	String overhead transmission conductors
UETDRTS028	Calibrate verify and certify revenue metering/energy measurement instruments
UETDRTS029	Commission and maintain communication equipment
UETDRTS030	Commission and maintain complex energy/revenue metering schemes
UETDRTS031	Commission and maintain energy/revenue metering schemes
UETDRTS032	Commission and maintain metering schemes

<b>Code</b>	<b>Title</b>
UETDRTS033	Commission and maintain network protection and control systems
UETDRTS034	Commission and maintain voltage regulating equipment
UETDRTS035	Conduct evaluation of network protection and control system faults
UETDRTS036	Develop secondary protection and control scheme isolation instructional documents
UETDRTS037	Maintain and calibrate protection relays and meters
UETDRTS038	Perform accuracy checks on instrument transformers
UETDRTS039	Perform current injection testing of secondary devices
UETDRVC001	Apply work health and safety requirements for powerline vegetation control
UETDRVC002	Assess vegetation in an electricity supply industry environment
UETDRVC003	Control vegetation for powerline work
UETDRVC004	Control vegetation in the vicinity of live electrical apparatus from an elevated work platform
UETDRVC005	Control vegetation in the vicinity of live electrical apparatus from ground level
UETDRVC006	Control vegetation in the vicinity of live electrical apparatus from within the tree
UETDRVC007	Control vegetation using pruning techniques
UETDRVC009	Monitor vegetation control work in the vicinity of live electrical apparatus
UETDRVC010	Perform rescue from within a tree in the vicinity of live electrical apparatus
UETDRVC011	Use specialised plant to cut vegetation above ground in the vicinity of live electrical apparatus
UETDRVC012	Coordinate vegetation control operations

## QUALIFICATION MAPPING INFORMATION

The qualification mapping information maps the UET Transmission, Distribution and Rail Sector Training Package Release 5.0 qualifications to qualifications in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

[\*\*Attachment A: Qualification mapping information\*\*](#)

## SKILL SETS MAPPING INFORMATION

The Skill Sets information maps the UET Transmission, Distribution and Rail Sector Training Package Release 5.0 Skill Sets to Skill Sets in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

[\*\*Attachment B: Skill sets mapping information\*\*](#)

## UNIT OF COMPETENCY MAPPING INFORMATION

The Unit of Competency information maps the UET Transmission, Distribution and Rail Sector Training Package Release 5.0 Units of Competency to Units of Competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

[\*\*Attachment C: Units of Competency mapping information\*\*](#)

## TRANSMISSION, DISTRIBUTION AND RAIL COMPETENCY FIELDS

The following table identifies the Unit of Competency letter codes for the competency field:

Code	Competency Field
AI	Asset Inspection
CD	Cross Discipline
DO	Distribution Overhead
DS	Design
DU	Distribution Underground
EL	Entry Level
IS	Industry Specific
MP	Mobility and Portability
RC	Remote Community
RT	Rail Traction
SB	Substation
SO	System Operations
TO	Transmission Overhead
TS	Testing
VC	Vegetation Control



## PREREQUISITE UNITS OF COMPETENCY

Candidates must be deemed competent in the required prerequisite Unit/s of Competency prior to the determination of competency in the Units of Competency they appear in. Some Units of Competency within the UET Training Package have prerequisites that are streamed to facilitate different industry pathways and care must be taken to ensure the correct prerequisite requirements are implemented.

In some instance Units of Competency may not list any prerequisite units of competency, they instead provide information in the unit description regarding preferred entry into the unit.

### Equivalency/ Or Equivalent

The term Equivalency/ Or Equivalent has been used within the UET Training Package in addressing the prerequisite unit requirements of a unit or the entry requirements of a qualification.

“Or equivalent” means a situation where a learning framework and outcome from one period of time is treated as equal to a current training outcome, e.g., a pre-AQF state or enterprise-based certificate of proficiency is treated as equal to a current qualification. The primary purpose of the Equivalency rule is to ensure that existing trade qualified workers trained under previous systems/qualifications are not unfairly treated in the current AQF environment.

It is important to note, that the specifics of the qualification structure may not be the same, but the trade qualification outcomes are treated as equal by the network operators.

To accurately identify prerequisite requirements, refer to the individual units.

Code	Title
UETDRAI001	Inspect and test poles at and below ground level L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace and L UETDREL002 Comply with environmental requirements L UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker or L UETDREL001 Apply environmental requirements L UETDREL005 Work safely in the vicinity of live electrical apparatus
UETDRAI002	Inspect poles, hardware and electrical apparatus L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UETDREL002 Comply with environmental requirements L UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker
UETDRAI003	Perform minor maintenance on electricity network assets L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

	<ul style="list-style-type: none"> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRAI004	<ul style="list-style-type: none"> <li>Treat poles</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRAI005	<ul style="list-style-type: none"> <li>Use asset inspection equipment</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRDO001	<ul style="list-style-type: none"> <li>Inspect overhead poles, structures and electrical apparatus</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDO005	<ul style="list-style-type: none"> <li>Maintain overhead energised low voltage distribution network</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> </ul>
UETDRDO006	<ul style="list-style-type: none"> <li>Maintain, test and verify distribution overhead network</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRDO001 Inspect overhead poles, structures and electrical apparatus</li> <li>└ UETDRDO005 Maintain overhead energised low voltage distribution network</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS008 Install and maintain electrical apparatus</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRIS010 Install and maintain low voltage overhead services</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> </ul>
UETDRDS015	<ul style="list-style-type: none"> <li>Assess distributed energy resource connections to a distribution network</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRDS027 Investigate quality of supply issues</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS016	<ul style="list-style-type: none"> <li>Coordinate and perform line and easement surveys</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRDS028 Prepare and manage construction plans for electrical infrastructure</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS017	<ul style="list-style-type: none"> <li>Design customer substations</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS018	<p>Design distribution protection systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS019	<p>Design distribution substations</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS020	<p>Design overhead distribution systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS021	<p>Design public lighting systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>

UETDRDS022	<p>Design underground distribution systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS023	<p>Draft and layout distribution substation minor upgrade</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS024	<p>Draft and layout overhead distribution extension</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS025	<p>Draft and layout street lighting system</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS026	<p>Draft and layout underground distribution extension</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS027	<ul style="list-style-type: none"> <li>Investigate quality of supply issues</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDS028	<ul style="list-style-type: none"> <li>Prepare and manage construction plans for electrical infrastructure</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU001	<ul style="list-style-type: none"> <li>Conduct high voltage testing of underground power cable system</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU002	<ul style="list-style-type: none"> <li>Inspect underground electrical apparatus</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>and</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>or</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>

UETDRDU007	<p>Install and maintain underground public lighting</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU009	<p>Install, test and verify distribution underground cable installations</p> <ul style="list-style-type: none"> <li>└ CPCCLDG3001 Licence to perform dogging</li> <li>└ TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRDU002 Inspect underground electrical apparatus</li> <li>└ UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable</li> <li>└ UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS008 Install and maintain electrical apparatus</li> <li>└ UETDRIS011 Install and maintain low voltage underground services</li> </ul>
UETDRDU010	<p>Joint, terminate and maintain energised low voltage underground paper insulated cable</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRDU014 Joint, terminate and maintain low voltage underground paper insulated cable</li> </ul>
UETDRDU011	<ul style="list-style-type: none"> <li>Joint, terminate and maintain energised low voltage underground polymeric cable</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable</li> </ul>
UETDRDU012	<ul style="list-style-type: none"> <li>Joint, terminate and maintain high voltage underground paper insulated cable</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU013	<ul style="list-style-type: none"> <li>Joint, terminate and maintain high voltage underground polymeric cable</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> </ul>



	<ul style="list-style-type: none"> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU014	<p>Joint, terminate and maintain low voltage underground paper insulated cable</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU015	<p>Joint, terminate and maintain low voltage underground polymeric cable</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU017	<p>Locate faults in underground power cables</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRDU019	<p>Transition joint high voltage paper insulated cable to high voltage polymeric cable</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> </ul>

	specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL001 Apply environmental requirements L UETDREL005 Work safely in the vicinity of live electrical apparatus L UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable
UETDRDU021	Joint, terminate and maintain underground polymeric cable 33kV and above L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable L UETDREL001 Apply environmental requirements L UETDREL005 Work safely in the vicinity of live electrical apparatus
UETDRDU022	Maintain gas and oil pressure systems for underground cables L UETDRDU020 Joint, terminate and maintain gas and oil filled underground cables
UETDREL003	Identify and apply controls for alternate supplies on the distribution network L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL005 Work safely in the vicinity of live electrical apparatus
UETDREL004	Operate plant and equipment in the vicinity of live electrical apparatus L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UETDREL005	Work safely in the vicinity of live electrical apparatus L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UETDRIS007	Install and maintain distribution overhead conductors and cables L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UETDREL001 Apply environmental requirements L UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus L UETDRIS012 Install and maintain poles, structures and hardware
UETDRIS008	Install and maintain electrical apparatus L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL001 Apply environmental requirements L UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus and L UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable L UETDRDU013 Joint, terminate and maintain high voltage underground polymeric cable or L UETDRIS012 Install and maintain poles, structures and hardware L UETDRIS007 Install and maintain overhead conductors and cables
UETDRIS010	Install and maintain low voltage overhead services L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL001 Apply environmental requirements

	<ul style="list-style-type: none"> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRIS011	<ul style="list-style-type: none"> <li>Install and maintain low voltage underground services</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRIS012	<ul style="list-style-type: none"> <li>Install and maintain poles, structures and hardware</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRIS013	<ul style="list-style-type: none"> <li>Install and maintain public lighting systems</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRDO005 Maintain overhead energised low voltage distribution network</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> </ul>

UETDRIS014	Install and replace energy meters and associated equipment L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL001 Apply environmental requirements
UETDRIS015	Install low voltage mobile generator L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL001 Apply environmental requirements L UETDREL005 Work safely in the vicinity of live electrical apparatus
UETDRIS017	Perform high voltage field switching operation to a given schedule L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0019 Fabricate, assemble and dismantle utilities industry components L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UEEEL0020 Solve problems in low voltage a.c. circuits L UEEEL0021 Solve problems in magnetic and electromagnetic devices L UETDREL001 Apply environmental requirements L UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus L UETDRIS018 Perform low voltage field switching operations to a given schedule
UETDRIS018	Perform low voltage field switching operation to a given schedule L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0044 Solve problems in multiple path circuits L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

	<ul style="list-style-type: none"> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRIS020	<ul style="list-style-type: none"> <li>Contribute to coordinated HV live work</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRIS025	<ul style="list-style-type: none"> <li>Diagnose and resolve faults in distribution systems</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS026 Diagnose and resolve faults in electrical apparatus</li> <li>└ UETDRIS032 Solve problems in network equipment</li> </ul>
UETDRIS026	<ul style="list-style-type: none"> <li>Diagnose and resolve faults in electrical apparatus</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS032 Solve problems in network equipment</li> </ul>
UETDRIS027	<ul style="list-style-type: none"> <li>Diagnose and resolve faults in transmission systems</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDRIS026 Diagnose and resolve faults in electrical apparatus</li> <li>└ UETDRIS032 Solve problems in network equipment</li> </ul>
UETDRIS032	<p>Solve problems in network equipment</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>
UETDRIS033	<p>Solve problems in network protection</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS032 Solve problems in network equipment</li> </ul>
UETDRMP001	<p>Apply access authority procedures to work on or near electrical apparatus</p> <ul style="list-style-type: none"> <li>└ UETDRMP002 ESI safety rules for work on, near or in the vicinity of electrical apparatus</li> </ul>
UETDRMP003	<p>Perform cable pit/trench/excavation rescue</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation and</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRMP004	<p>Perform elevated work platform controlled descent escape</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)</li> </ul>
UETDRMP005	<p>Perform elevated work platform rescue</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul>

	<p>and</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRMP006	<p>Perform pole top rescue</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRMP007	<p>Perform rescue from a live low voltage panel</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>
UETDRMP008	<p>Perform rescue from switchyard structures</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> <li>└ UETDRMP002 ESI safety rules for work on, near or in the vicinity of electrical apparatus</li> </ul>
UETDRMP009	<p>Perform tower rescue</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul> <p>and</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ CPCCLDG3001 Licence to perform dogging</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> </ul>
UETDRMP010	<p>Provide first aid in an ESI environment</p> <ul style="list-style-type: none"> <li>└ HLTAID009 Provide cardiopulmonary resuscitation</li> </ul>
UETDRMP011	<p>Testing of connections to low voltage electricity networks</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> </ul>



	<ul style="list-style-type: none"> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements and</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS010 Install and maintain low voltage overhead services or</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS011 Install and maintain low voltage underground services or</li> <li>└ UETDRIS014 Install and replace energy meters and associated equipment</li> </ul>
UETDRMP012	<p>Working on Energised Low Voltage Overhead Electrical Apparatus</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRDO005 Maintain overhead energised low voltage distribution network</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> </ul>
UETDRMP013	<p>Working on Energised Low Voltage Underground Electrical Apparatus</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDRDU011 Joint, terminate and maintain energised low voltage underground polymeric cable</li> <li>└ UETDRDU015 Joint, terminate and maintain low voltage underground polymeric cable</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRRC001	<ul style="list-style-type: none"> <li>Install and maintain low voltage overhead services in a very remote community</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRRC007 Solve problems in electrical network apparatus in a very remote community</li> <li>└ UETDRRC008 Solve problems in low voltage electrical network circuits in a very remote community</li> <li>└ UETDRRC006 Perform low voltage electricity network switching in a very remote community</li> </ul>
UETDRRC002	<ul style="list-style-type: none"> <li>Install and maintain low voltage underground services in a very remote community</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRRC007 Solve problems in electrical network apparatus in a very remote community</li> <li>└ UETDRRC008 Solve problems in low voltage electrical network circuits in a very remote community</li> <li>└ UETDRRC006 Perform low voltage electricity network switching in a very remote community</li> </ul>
UETDRRC003	<ul style="list-style-type: none"> <li>Install and maintain public lighting systems in a very remote community</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and</li> </ul>

	<p>specifications</p> <ul style="list-style-type: none"> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRRC007 Solve problems in electrical network apparatus in a very remote community</li> <li>└ UETDRRC008 Solve problems in low voltage electrical network circuits in a very remote community</li> <li>└ UETDRRC006 Perform low voltage electricity network switching in a very remote community</li> </ul>
UETDRRC004	<p>Install and replace energy meters and associated equipment in a very remote community</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRRC007 Solve problems in electrical network apparatus in a very remote community</li> <li>└ UETDRRC008 Solve problems in low voltage electrical network circuits in a very remote community</li> <li>└ UETDRRC006 Perform low voltage electricity network switching in a very remote community</li> </ul>
UETDRRC005	<p>Install, maintain, test and verify power systems in a very remote community</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEERE0007 Conduct periodic maintenance of remote area power supply generator sets</li> <li>└ UEERE0018 Maintain and repair remote area power generation facilities</li> <li>└ UEERE0019 Maintain safety and tidiness of remote area power supply systems</li> <li>└ UEERE0023 Work safely with remote area power supply systems</li> <li>└ UEERE0041 Maintain operation of remote area power generation plant</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical</li> </ul>

	apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus L UETDRRC007 Solve problems in electrical network apparatus in a very remote community L UETDRRC008 Solve problems in low voltage electrical network circuits in a very remote community L UETDRRC006 Perform low voltage electricity network switching in a very remote community
UETDRRC006	Perform low voltage electricity network switching in a very remote community L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UETDREL001 Apply environmental requirements L UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus
UETDRRC007	Solve problems in electrical network apparatus in a very remote community L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UETDREL001 Apply environmental requirements L UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus L UETDRRC006 Perform low voltage electricity network switching in a very remote community
UETDRRC008	Solve problems in low voltage electrical network circuits in a very remote community L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UEECD0046 Solve problems in single path circuits L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications L UETDREL001 Apply environmental requirements L UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus L UETDREL005 Work safely in the vicinity of live electrical apparatus L UETDRRC007 Solve problems in electrical network apparatus in a very remote community L UETDRRC006 Perform low voltage electricity network switching in a very remote community

<p>UETDRRT001</p>	<p>Install overhead rail traction configurations</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> </ul>
<p>UETDRRT002</p>	<p>Install overhead traction components and equipment</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> </ul>
<p>UETDRRT003</p>	<p>Install rail traction bonds</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> </ul>
UETDRRT004	<ul style="list-style-type: none"> <li>Install traction overhead wiring systems</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> </ul>
UETDRRT008	<ul style="list-style-type: none"> <li>Maintain overhead rail traction configurations</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT011 Maintain traction overhead wiring systems</li> <li>└ UETDRRT001 Install overhead rail traction configurations</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDRRT002 Install overhead traction components and equipment</li> <li>└ UETDRRT009 Maintain overhead traction components and equipment</li> </ul>
UETDRRT009	<p>Maintain overhead traction components and equipment</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> </ul>
UETDRRT010	<p>Maintain rail traction bonds</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT011 Maintain traction overhead wiring systems</li> <li>└ UETDRRT003 Install rail traction bonds</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> <li>└ UETDRRT009 Maintain overhead traction components and equipment</li> </ul>
UETDRRT011	<p>Maintain traction overhead wiring systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> </ul>
UETDRRT012	<ul style="list-style-type: none"> <li>Operate rail road height access plant near rail traction systems</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRRT013	<ul style="list-style-type: none"> <li>Perform rail traction switching operations to a given schedule</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT001 Install overhead rail traction configurations</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> </ul>



<p>UETDRRT014</p>	<p>Test and verify rail traction installations</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRIS012 Install and maintain poles, structures and hardware</li> <li>└ UETDRIS007 Install and maintain distribution overhead conductors and cables</li> <li>└ UETDRRT004 Install traction overhead wiring systems</li> <li>└ UETDRRT011 Maintain traction overhead wiring systems</li> <li>└ UETDRRT003 Install rail traction bonds</li> <li>└ UETDRRT010 Maintain rail traction bonds</li> <li>└ UETDRRT001 Install overhead rail traction configurations</li> <li>└ UETDRRT008 Maintain overhead rail traction configurations</li> <li>└ UETDRRT002 Install overhead traction components and equipment</li> <li>└ UETDRRT009 Maintain overhead traction components and equipment</li> <li>└ UETDRRT012 Operate rail road height access plant near rail traction systems</li> </ul>
<p>UETDRSB003</p>	<p>Commission and maintain distribution field devices</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
<p>UETDRSB007</p>	<p>Install and maintain substation direct current systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>
UETDRSO012	<p>Coordinate and manage distribution and sub-transmission network access and activities</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRSO015 Develop and validate distribution and sub-transmission switching programs</li> <li>└ UETDRSO016 Develop and validate low voltage switching programs</li> <li>└ UETDRSO020 Operate SCADA equipment</li> </ul>
UETDRSO013	<p>Coordinate and manage transmission network access and activities</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRSO017 Develop and validate transmission switching programs</li> <li>└ UETDRSO020 Operate SCADA equipment</li> </ul>
UETDRSO014	<p>Coordinate operations in a regulated energy market</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>
UETDRSO015	<p>Develop and validate distribution and sub-transmission switching programs</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>
UETDRSO016	<ul style="list-style-type: none"> <li>Develop and validate low voltage switching programs</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>
UETDRSO017	<ul style="list-style-type: none"> <li>Develop and validate transmission switching programs</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>
UETDRSO019	<ul style="list-style-type: none"> <li>Manage supply and demand in distribution and sub-transmission networks</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRSO012 Coordinate and manage distribution and sub-transmission network access and activities</li> <li>└ UETDRSO015 Develop and validate distribution and sub-transmission switching programs</li> <li>└ UETDRSO020 Operate SCADA equipment</li> </ul>
UETDRSO021	<ul style="list-style-type: none"> <li>Respond to protection operations</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDRSO020 Operate SCADA equipment</li> </ul>
UETDRTO004	<ul style="list-style-type: none"> <li>Inspect and maintain transmission overhead network</li> <li>└ CPCCLDG3001 Licence to perform dogging</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> <li>└ TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTO005 Inspect transmission structures, conductors and hardware</li> <li>└ UETDRTO006 Install and maintain transmission conductors</li> <li>└ UETDRTO007 Install and maintain transmission structures and hardware</li> </ul>
UETDRTO005	<ul style="list-style-type: none"> <li>Inspect transmission structures, conductors and hardware</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRTO006	<ul style="list-style-type: none"> <li>Install and maintain transmission conductors</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTO007 Install and maintain transmission structures and hardware</li> </ul>
UETDRTO007	<ul style="list-style-type: none"> <li>Install and maintain transmission structures and hardware</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> </ul>

	<ul style="list-style-type: none"> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRTO010	<p>Maintain energised transmission lines using barehand techniques from a helicopter</p> <ul style="list-style-type: none"> <li>└ UETDRTO012 Maintain energised transmission lines using live work stick techniques</li> </ul>
UETDRTO011	<p>Maintain energised transmission lines using live work barehand techniques</p> <ul style="list-style-type: none"> <li>└ UETDRTO012 Maintain energised transmission lines using live work stick techniques</li> </ul>
UETDRTO015	<p>Assemble and erect transmission structures</p> <ul style="list-style-type: none"> <li>└ CPCCLDG3001 Licence to perform dogging</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL002 Comply with environmental requirements</li> </ul>
UETDRTO016	<p>Install transmission structure hardware</p> <ul style="list-style-type: none"> <li>└ CPCCLDG3001 Licence to perform dogging</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL002 Comply with environmental requirements</li> </ul>
UETDRTO017	<p>String overhead transmission conductors</p> <ul style="list-style-type: none"> <li>└ CPCCLDG3001 Licence to perform dogging</li> <li>└ CPCCLRG3001 Licence to perform rigging basic level</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRTO015 Assemble and erect transmission structures</li> <li>└ UETDRTO016 Install transmission structure hardware</li> </ul>
UETDRTS028	<p>Calibrate, verify and certify revenue metering/energy measurement instruments</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> </ul>

	<ul style="list-style-type: none"> <li>L UEEEL0019 Solve problems in direct current (d.c.) machines</li> <li>L UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>L UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>L UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRTS029	<p>Commission and maintain communication equipment</p> <ul style="list-style-type: none"> <li>L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>L UEECD0010 Compile and produce an energy sector detailed report</li> <li>L UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>L UEECD0044 Solve problems in multiple path circuits</li> <li>L UEECD0046 Solve problems in single path circuits</li> <li>L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>L UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>L UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>L UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>L UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS030	<p>Commission and maintain complex energy/revenue metering schemes</p> <ul style="list-style-type: none"> <li>L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>L UEECD0010 Compile and produce an energy sector detailed report</li> <li>L UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>L UEECD0044 Solve problems in multiple path circuits</li> <li>L UEECD0046 Solve problems in single path circuits</li> <li>L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>L UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>L UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>L UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>L UETDRTS031 Commission and maintain energy/revenue metering schemes</li> <li>L UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS031	<p>Commission and maintain energy/revenue metering schemes</p> <ul style="list-style-type: none"> <li>L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>L UEECD0010 Compile and produce an energy sector detailed report</li> <li>L UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>L UEECD0044 Solve problems in multiple path circuits</li> <li>L UEECD0046 Solve problems in single path circuits</li> <li>L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>L UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>L UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS032	<ul style="list-style-type: none"> <li>Commission and maintain metering schemes</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0010 Compile and produce an energy sector detailed report</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS033	<ul style="list-style-type: none"> <li>Commission and maintain network protection and control systems</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0010 Compile and produce an energy sector detailed report</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS034	<ul style="list-style-type: none"> <li>Commission and maintain voltage regulating equipment</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0010 Compile and produce an energy sector detailed report</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS035	<ul style="list-style-type: none"> <li>Conduct evaluation of network protection and control system faults</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0010 Compile and produce an energy sector detailed report</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS036	<ul style="list-style-type: none"> <li>Develop secondary protection and control scheme isolation and restoration documents</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRTS037	<ul style="list-style-type: none"> <li>Maintain and calibrate protection relays and meters</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0010 Compile and produce an energy sector detailed report</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>



UETDRTS038	<p>Perform accuracy checks on instrument transformers</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0010 Compile and produce an energy sector detailed report</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> <li>└ UETDRTS036 Develop secondary protection and control scheme isolation and restoration documents</li> </ul>
UETDRTS039	<p>Perform current injection testing of secondary devices</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRVC002	<p>Assess vegetation in an electricity supply industry environment</p> <ul style="list-style-type: none"> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> </ul>
UETDRVC003	<p>Control vegetation whilst performing linework</p> <ul style="list-style-type: none"> <li>└ AHCMOM213 Operate and maintain chainsaws</li> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UETDREL001 Apply environmental requirements</li> <li>└ UETDREL004 Operate plant and equipment in the vicinity of live electrical apparatus</li> <li>└ UETDREL005 Work safely in the vicinity of live electrical apparatus</li> </ul>
UETDRVC004	<p>Control vegetation in the vicinity of live electrical apparatus from an elevated work platform</p> <ul style="list-style-type: none"> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> </ul>

	<ul style="list-style-type: none"> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> <li>└ UETDRVC009 Monitor vegetation control work in the vicinity of live electrical apparatus</li> <li>└ UETDRVC007 Control vegetation using pruning techniques</li> </ul>
UETDRVC005	<ul style="list-style-type: none"> <li>Control vegetation in the vicinity of live electrical apparatus from ground level</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> <li>└ UETDRVC009 Monitor vegetation control work in the vicinity of live electrical apparatus</li> </ul>
UETDRVC006	<ul style="list-style-type: none"> <li>Control vegetation in the vicinity of live electrical apparatus from within the tree</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> <li>└ UETDRVC009 Monitor vegetation control work in the vicinity of live electrical apparatus</li> <li>└ UETDRVC007 Control vegetation using pruning techniques</li> </ul>
UETDRVC007	<ul style="list-style-type: none"> <li>Control vegetation using pruning techniques</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> </ul>
UETDRVC009	<ul style="list-style-type: none"> <li>Monitor vegetation control work in the vicinity of live electrical apparatus</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> </ul>
UETDRVC010	<ul style="list-style-type: none"> <li>Perform rescue from within a tree in the vicinity of live electrical apparatus</li> <li>└ UETDREL002 Comply with environmental requirements</li> <li>└ UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker</li> <li>└ UETDRVC001 Apply work health and safety requirements for powerline vegetation control</li> <li>└ UETDRVC006 Control vegetation in the vicinity of live electrical apparatus from within the tree</li> <li>└ UETDRVC009 Monitor vegetation control work in the vicinity of live electrical</li> </ul>

	apparatus L UETDRVC007 Control vegetation using pruning techniques
UETDRVC011	Use specialised plant to cut vegetation above ground in the vicinity of live electrical apparatus L UETDREL002 Comply with environmental requirements L UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker L UETDRVC001 Apply work health and safety requirements for powerline vegetation control L UETDRVC009 Monitor vegetation control work in the vicinity of live electrical apparatus
UETDRVC012	Coordinate vegetation control operations L UETDREL002 Comply with environmental requirements L UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker L UETDRVC001 Apply work health and safety requirements for powerline vegetation control or L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace L UETDREL001 Apply environmental requirements L UETDREL005 Work safely in the vicinity of live electrical apparatus

## IMPORTED UNITS AND THEIR PREREQUISITE UNITS

The UET Transmission, Distribution and Rail Sector Training Package Release 5.0 includes imported Units of Competency from other Training Packages.

Please check the relevant assessment requirements of the source Training Package by accessing the national training website [www.training.gov.au](http://www.training.gov.au) (TGA) or a physical copy regarding any special conditions that may apply to the assessment of imported Units of Competency.

For up-to-date releases of the imported units, refer to [www.training.gov.au](http://www.training.gov.au) or the respective SSO.

Where any of the Units of Competency listed below are used to form a qualification or Skill Set they do not count as Units of Competency imported under the qualification packaging rule:

- Refer to the packaging rules in each of the qualifications for the required general elective Units of Competency that may be selected from any relevant nationally endorsed Training Package or accredited course. The general elective Units of Competency must contribute to the vocational outcomes of the qualification.

Where imported units are selected, care must be taken to ensure that all prerequisite Units of Competency specified are complied with.

Code	Title
<b>AHC - Agriculture, Horticulture and Conservation and Land Management Training Package</b>	
AHCARB322	Access trees for inspection
AHCCHM201	Apply chemicals under supervision
AHCMOM213	Operate and maintain chainsaws
AHCMOM304	Operate machinery and equipment
AHCPCM204	Recognise plants
AHCPCM205	Fell small trees └ AHCMOM213 Operate and maintain chainsaws
<b>AVI – Aviation Training Package</b>	
AVIW0006	Perform infrastructure inspections using remote operated systems
<b>BSB - Business Services Training Package</b>	
BSBFIN501	Manage budgets and financial plans
BSBHRM523	Coordinate the learning and development of teams and individuals

BSBINS402	Coordinate workplace information systems
BSBINS501	Implement information and knowledge management systems
BSBLDR413	Lead effective workplace relationships
BSBLDR414	Lead team effectiveness
BSBLDR522	Manage people performance
BSBOPS402	Coordinate business operational plans
BSBOPS502	Manage business operational plans
BSBOPS505	Manage organisational customer service
BSBPEF501	Manage personal and professional development
BSBSTR402	Implement continuous improvement
BSBSTR501	Establish innovative work environments
BSBSTR502	Facilitate continuous improvement
BSBSUS511	Develop workplace policies and procedures for sustainability
BSBTWK502	Manage team effectiveness
<b>CPC - Construction, Plumbing and Services Training Package</b>	
CPCCLDG3001	Licence to perform dogging
CPCCLRG3001	Licence to perform rigging basic level └ CPCCLDG3001 Licence to perform dogging
CPCCLRG3002	Licence to perform rigging intermediate level └ CPCCLRG3001 Licence to perform rigging basic level
CPCCLRG4001	Licence to perform rigging advanced level └ CPCCLRG3002 Licence to perform rigging intermediate level
<b>FWP - Forest and Wood Products Training Package</b>	
FWPHAR2208	Operate a mobile chipper/mulcher
<b>HLT - Health Training Package</b>	

HLTAID009	Provide cardiopulmonary resuscitation
<b>ICT - Information and Communications Technology</b>	
ICTWHS202	Work safely in a radio frequency electromagnetic radiation environment
<b>MEM- Manufacturing and Engineering</b>	
MEM30031A	Operate computer-aided design (CAD) system to produce basic drawing elements
MEM30033A	Use computer-aided design (CAD) to create and display 3-D models <ul style="list-style-type: none"> <li>└ MEM30031A Operate computer-aided design (CAD) system to produce basic drawing element</li> </ul>
<b>NWP – National Water Training Package</b>	
NWPCAD004	Maintain catchment and surrounding areas
NWPCAD019	Monitor and operate groundwater extraction
NWPGEN017	Apply the risk management principles of the water industry standards, guidelines and legislation
NWPGEN020	Sample and test source or drinking water
NWPGEN021	Sample and test wastewater
NWPGEN023	Use maps, plans, drawings and details
NWPGEN027	Monitor and operate pump stations
NWPNET020	Control electrical risk on metallic pipes
NWPNET036	Perform leak detection
NWPNET038	Install metering equipment
NWPNET039	Maintain and repair network assets for drinking water
NWPNET040	Maintain and repair network assets for wastewater
NWPTRT005	Monitor and operate water treatment processes
NWPTRT027	Monitor and operate wastewater treatment processes
<b>RII - Resources and Infrastructure Industry Training Package</b>	

RIIHAN309F	Conduct telescopic materials handler operations
<b>TLI – Transport and Logistics Training Package</b>	
TLIF0021	Administer the implementation of fatigue management strategies
TLIF2010	Apply fatigue management strategies
TLILIC0003	Licence to operate a forklift truck
TLILIC0005	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)
TLILIC0022	Licence to operate a slewing mobile crane (up to 20 tonnes)
TLILIC0024	Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)
TLILIC2015	Licence to drive a medium rigid vehicle
TLILIC2016	Licence to drive a heavy rigid vehicle
<b>UEE – Electrotechnology Training Package</b>	
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace
UEECD0010	Compile and produce an energy sector detailed report
UEECD0019	Fabricate, assemble and dismantle utilities industry components ⊣ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace
UEECD0030	Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software ⊣ UEECS0033 Use engineering applications software on personal computers ⊣ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace ⊣ UEECD0019 Fabricate, assemble and dismantle utilities industry components ⊣ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications ⊣ UEECD0031 Prepare engineering drawings using manual drafting and CAD for electrotechnology applications and ⊣ UEECD0043 Solve problems in direct current circuits

	<p>or</p> <p>└ UEECD0044 Solve problems in multiple path circuits</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEECD0031	<p>Prepare engineering drawings using manual drafting and CAD for electrotechnology applications</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEECS0033 Use engineering applications software on personal computers</p> <p>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</p> <p>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p>
UEECD0032	<p>Produce detailed electrotechnology/utilities drawings using CAD equipment and software</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</p> <p>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>└ UEECD0031 Prepare engineering drawings using manual drafting and CAD for electrotechnology applications</p> <p>└ UEECD0030 Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software</p> <p>└ UEECS0033 Use engineering applications software on personal computers and</p> <p>└ UEECD0043 Solve problems in direct current circuits</p> <p>or</p> <p>└ UEECD0044 Solve problems in multiple path circuits</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEECD0036	<p>Provide engineering solutions for problems in complex multiple path circuits</p>
UEECD0039	<p>Provide solutions to basic engineering computational problems</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>
UEECD0043	<p>Solve problems in direct current circuits</p>



UEECD0044	<p>Solve problems in multiple path circuits</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEECD0046	<p>Solve problems in single path circuits</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>
UEECD0051	<p>Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>
UEECO0001	<p>Estimate electrotechnology projects</p>
UEECS0033	<p>Use engineering applications software on personal computers</p>
UEEEL0019	<p>Solve problems in direct current (d.c.) machines</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices and</p> <p>└ UEECD0043 Solve problems in direct current circuits</p> <p>or</p> <p>└ UEECD0044 Solve problems in multiple path circuits</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEEEL0020	<p>Solve problems in low voltage a.c. circuits</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices and</p> <p>└ UEECD0043 Solve problems in direct current circuits</p> <p>or</p> <p>└ UEECD0044 Solve problems in multiple path circuits</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEEEL0021	<p>Solve problems in magnetic and electromagnetic devices</p>

	<p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>and</p> <p>└ UEECD0043 Solve problems in direct current circuits</p> <p>or</p> <p>└ UEECD0044 Solve problems in multiple path circuits</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEEEL0062	<p>Provide engineering solutions to problems in complex polyphase power circuits</p> <p>└ UEECD0036 Provide engineering solutions for problems in complex multiple path circuits</p> <p>└ UEEEL0020 Solve problems in low voltage a.c. circuits</p>
UEEIC0012	<p>Develop structured programs to control external devices</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p>
UEERE0006	<p>Conduct periodic maintenance of remote area power supply battery banks</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</p> <p>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p> <p>└ UEERE0019 Maintain safety and tidiness of remote area power supply systems</p> <p>└ UEERE0023 Work safely with remote area power supply systems</p> <p>and</p> <p>└ UEECD0043 Solve problems in direct current circuits</p> <p>or</p> <p>└ UEECD0044 Solve problems in multiple path circuits</p> <p>└ UEECD0046 Solve problems in single path circuits</p>
UEERE0007	<p>Conduct periodic maintenance of remote area power supply generator sets</p> <p>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</p> <p>└ UEECD0019 Fabricate, dismantle, assemble of utilities industry components</p> <p>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</p>

	<p>           L UEERE0019 Maintain safety and tidiness of remote area power supply systems            L UEERE0023 Work safely with remote area power supply systems            and            L UEECD0043 Solve problems in direct current circuits            or            L UEECD0044 Solve problems in multiple path circuits            L UEECD0046 Solve problems in single path circuits         </p>
UEERE0008	<p>           Conduct periodic maintenance of remote area power supply photovoltaic arrays            L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace            L UEECD0019 Fabricate, assemble and dismantle utilities industry components            L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications            L UEERE0019 Maintain safety and tidiness of remote area power supply systems            L UEERE0023 Work safely with remote area power supply systems            and            L UEECD0043 Solve problems in direct current circuits            or            L UEECD0044 Solve problems in multiple path circuits            L UEECD0046 Solve problems in single path circuits         </p>
UEERE0009	<p>           Conduct periodic maintenance of remote area power supply wind generators            L UEECD0007 Apply work health and safety regulations, codes and practices in the workplace            L UEECD0019 Fabricate, assemble and dismantle utilities industry components            L UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications            L UEERE0019 Maintain safety and tidiness of remote area power supply systems            L UEERE0023 Work safely with remote area power supply systems            and            L UEECD0043 Solve problems in direct current circuits            or            L UEECD0044 Solve problems in multiple path circuits         </p>

	<ul style="list-style-type: none"> <li>└ UEECD0046 Solve problems in single path circuits</li> </ul>
UEERE0018	<p>Maintain and repair remote area power generation facilities</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEECD0019 Fabricate, assemble and dismantle utilities industry components</li> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEERE0007 Conduct periodic maintenance of remote area power supply generator sets</li> <li>└ UEERE0019 Maintain safety and tidiness of remote area power supply systems</li> <li>└ UEERE0023 Work safely with remote area power supply systems and</li> <li>└ UEECD0043 Solve problems in direct current circuits</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>└ UEECD0044 Solve problems in multiple path circuits</li> <li>└ UEECD0046 Solve problems in single path circuits</li> </ul>
UEERE0019	<p>Maintain safety and tidiness of remote area power supply systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> <li>└ UEERE0023 Work safely with remote area power supply systems</li> </ul>
UEERE0023	<p>Work safely with remote area power supply systems</p> <ul style="list-style-type: none"> <li>└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace</li> </ul>
UEERE0041	<p>Maintain operation of remote area power generation plant</p> <ul style="list-style-type: none"> <li>└ UEERE0018 Maintain and repair remote area power generation facilities</li> </ul>
<b>UEP – ESI Generation Training Package</b>	
UEPOPS030	<p>Conduct project management</p>
UEPOPS038	<p>Evaluate cost estimations and initiate appropriate solutions</p> <ul style="list-style-type: none"> <li>└ UEECO0001 Estimate electrotechnology projects</li> </ul>

## KEY WORK AND TRAINING REQUIREMENTS IN THE INDUSTRY

The ESI Transmission, Distribution and Rail industry refers to Australia's infrastructure networks that are used to transport high voltage (HV) electricity from generators to distribution networks, and then directly to domestic and industrial users. The transmission network is inclusive of power lines and substations. The transmission industry accounts for \$3.25 billion in revenue and employs more than 4,500 people. The distribution network is significantly bigger generating \$17.12 billion in revenue and employing over 36,000 people.

The UET Transmission, Distribution and Rail Sector Training Package provides the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in Transmission Structure and Line Assembly, Asset Inspection and Testing, Transmission Overhead (erection of towers, poles, structures and hardware), Distribution Overhead (installation, maintenance and inspection of poles, structures and hardware), Distribution Underground, Power Systems and Power Systems Operations.

The UET Transmission, Distribution and Rail Sector Training Package comprises 11 qualifications, 2 Skill Sets and 163 units of competency and associated assessment requirements, and covers distribution, transmission, rail traction, distribution underground, asset inspection and testing, vegetation control, equipment installation, maintenance and design.

<http://australianindustrystandards.org.au/industries/esi-transmission-distribution-and-rail/>

The traditional centralised and uni-directional electricity distribution network as we used to know is now omnidirectional, where electricity is locally generated, stored, consumed or sent back to the grid. The Internet of Things (IoT), the trend of connecting devices, sensors and data collecting tools to networks, relaying information without a human intermediary, is also radically changing the nature of electricity supply. Sensors and wireless communication gateways collect and process data, enabling higher resolution (real-time) data collection of electricity use. Distributed Energy Resources (DERs), such as battery energy storage and solar photovoltaics (PVs), are transforming the way electricity is produced and distributed. DERs are instrumental in addressing electricity supply reliability gaps. New software technologies continue to alter the operations of DERs by forecasting moments of peak demand on the grid and optimising electricity distribution using Big Data and Machine Learning. Energy storage reduces load on grids at peak times and enables energy providers to manage their supply and demand more effectively. Traditional consumers have now become prosumers, i.e., consumers who are able to produce electricity as well. This can be done via Virtual Power Plants (VPPs) which are cloud-based power plants that can integrate electricity from solar panels and wind farms and release it into the grid. VPPs offer consumers the opportunity to tap into their stored solar power during peak times. Digitalisation is giving rise to smart energy networks which communicate between users and producers via technologies such as sensors and smart meters. The Western Australian Government is currently investing in the deployment of advanced metering infrastructure to install 238,000 smart meters in the next three years. This project will encompass smart communication infrastructure which will enable bi-directional power flow, leading to improved visibility of electricity flow, efficiency, safety, reliability of operations and customer services. Therefore, energy management, control and communication technology will have a central role in the digitalisation of the energy sector. With increasing interconnectedness and decentralised distribution models it is critical to have technical expertise at all

levels to maintain the operations of these systems. To this end, workforce planning and skills development needs to occur now if the industry is to fulfil future labour force needs.

## REGULATION AND LICENSING IMPLICATIONS FOR IMPLEMENTATION

The Transmission, Distribution and Rail Industry is subject to a high level of regulation, guidelines and codes of practice related to the assembly, installation and maintenance of parts, components and the control and operation of equipment and apparatus. The regulations, guidelines and codes of practice are based on principles of the operation of overhead and underground wiring systems and associated circuits involving equipment, apparatus and systems, public safety, safety and health of individuals who work on systems and apparatus/equipment and other codes and practices related to the environment in which they are installed and maintained.

Units of Competency in this Training Package have been developed in consultation with the relevant Industry Technical Advisory Committee (TAC) so that, where appropriate, these align to the requirements of legislation, regulations and mandated codes of practice.

Licensing and regulatory authorities will recognise a range of Units of Competency contained within this Training Package for respective licensing, registration or accreditation purposes.

**[Attachment D: Summary of qualification licensing and regulatory requirements](#)**

## IMPLEMENTATION INFORMATION

### KEY FEATURES OF THE TRAINING PACKAGE AND THE INDUSTRY THAT WILL IMPACT ON THE SELECTION OF TRAINING PATHWAYS

Pathways define a sequence of learning or experience that can be followed to attain competency and describe the way in which training and assessment is undertaken in an education or training program. They are **not mandatory** and may vary depending on the qualification or training program, the needs of the individual and the industry.

The UET Transmission, Distribution and Rail Sector Training Package is flexible and various pathways can be constructed to align with individual requirements and business needs. RTOs can work with their clients to apply the flexibility available in the packaging rules to ensure 'fit for purpose outcomes'.

The UET Transmission, Distribution and Rail Sector Training Package also contains Units of Competency imported from other Training Packages to enable organisations with broader needs to ensure qualifications are relevant to their operation.

### ELECTRICITY SUPPLY INDUSTRY, TRANSMISSION, DISTRIBUTION AND RAIL MUTUAL AID PROTOCOL

The development of the National Energy Market, increased interconnection of energy infrastructure across jurisdictional boundaries, energy companies operating in multiple jurisdictions and the desire for a rapid response to emergency situations has produced an increasing need for portability of workers and national harmonisation of energy industry regulation.

This protocol has been developed initially to facilitate the portability of Electricity Supply Industry, Transmission, Distribution and Rail (ESI TDR) workers, to assist in the restoration of electricity supply in response to an emergency situation, such as a bushfire or cyclone. In the longer term, it will facilitate the portability of refresher training competencies (units identified within the competency field of Mobility and Portability, MP) held by network workers.

The protocol:

- Identifies the minimum refresher training requirements which must be current for ESI TDR workers in an emergency situation to gain and maintain access for the duration of the emergency to any ESI network infrastructure nationally.
- Confirms agreement to mutual recognition of these refresher training competencies and their currencies for the purposes of gaining and maintaining access to any ESI network infrastructure nationally.
- Confirms the agreement of each network operator to assess the refresher training competencies for ESI TDR workers and to conduct induction training which includes local safety procedures, risk assessments, familiarisation in the tasks to be performed and identifies restricted work activities.
- Recognises that these refresher training competencies form the longer-term basis for workforce mobility and skills portability enhancement opportunities.

To accommodate the requirements for the protocol, units of competency are available in Group B elective bank within UET30621 Certificate III in ESI – Distribution Overhead qualification.

The units are:

HLTAID009 Provide cardiopulmonary resuscitation

UETDRMP001 Apply access authority procedures to work on or near electrical apparatus

UETDRMP002 ESI safety rules for work on, near or in the vicinity of electrical apparatus

UETDRMP003 Perform cable pit/trench/excavation rescue

UETDRMP004 Perform elevated work platform controlled descent escape

UETDRMP005 Perform elevated work platform rescue

UETDRMP006 Perform pole top rescue

UETDRMP007 Perform rescue from a live low voltage panel

UETDRMP008 Perform rescue from switchyard structures

UETDRMP009 Perform tower rescue

UETDRMP010 Provide first aid in an ESI environment

UETDRMP011 Testing of connections to low voltage electricity networks

UETDRMP012 Working on Energised Low Voltage Overhead Electrical Apparatus

UETDRMP013 Working on Energised Low Voltage Underground Electrical Apparatus

## INDUSTRY SECTORS AND OCCUPATIONAL OUTCOMES OF QUALIFICATIONS

State and territory authorities have different regulatory requirements for licensing in this sector based on UET Transmission, Distribution and Rail Sector Training Package components. Users are advised to contact the relevant state or territory regulatory authority to confirm licensing requirements. - [refer to Attachment D](#). The UET Transmission, Distribution and Rail Sector Training Package Release 5.0 contains 11 qualifications, 2 Skill Sets and 163 industry-specific Units of Competency aligned to the occupations below:



## Industry Occupations Guide

Qualification	Occupation	Industry Sector
UET20321 Certificate II in ESI - Powerline Vegetation Control	Powerline Vegetation Control Worker	<p>Powerline Vegetation Control Workers control the growth of vegetation in the vicinity of live electrical apparatus. They work at heights, pruning trees and other plants.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Distribution</p> <p>This sector covers the delivery of electricity to customers, including homes and businesses.</p>
UET20621 Certificate II in ESI - Asset Inspection and Testing	ESI Asset Inspector	<p>ESI Asset Inspectors inspect, test and report on the status of electricity network assets, including poles, hardware, cables, overhead conductors, public lighting and electrical apparatus.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>
UET20721 Certificate II in Transmission Line Construction	Transmission Line Assembly Worker	<p>Transmission Line Assembly Workers assemble transmission towers and structures and string transmission overhead conductors prior to them being tensioned.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>
UET30521 Certificate III in ESI - Transmission Overhead	Transmission Lineworker (Tradesperson)	<p>Transmission lineworkers install and maintain transmission infrastructure and networks. They work on de-energised high voltage (HV) powerlines conveying electricity from generating plants to substations. They install, inspect and maintain towers, poles, structures conductors and hardware.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>

Qualification	Occupation	Industry Sector
UET30621 Certificate III in ESI - Distribution Overhead	Distribution Lineworker	<p>Distribution lineworkers install, maintain, repair and patrol electrical sub-transmission and distribution systems. They maintain cables, overhead conductors for electric trains, public lighting, and substation infrastructure, such as buses and transformers.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Distribution</p> <p>This sector covers the delivery of electricity to customers, including homes and businesses.</p>
UET30721 Certificate III in ESI - Rail Traction	Rail Traction Lineworker	<p>Rail Traction Workers install, maintain and inspect overhead powerlines for trains and trams. They deal with overhead poles/structure, conductors and cable and rail traction wiring systems.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>
UET30821 Certificate III in ESI - Distribution Underground	Distribution Underground Lineworker or Cable Jointer	<p>Distribution Underground Lineworkers join, terminate and repair electrical cables. They install and maintain HV and low voltage (LV) underground cables, services and electrical equipment, and may work on underground or overhead lines.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Distribution</p> <p>This sector covers the delivery of electricity to customers, including homes and businesses.</p>
UET30921 Certificate III in ESI - Very Remote Community Utilities	Very Remote Community Utilities Worker	<p>Very Remote Community Utilities Workers operate, monitor and maintain generation power systems (excluding mine sites) within very remote communities. All work on essential</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the</p>

Qualification	Occupation	Industry Sector
		<p>electrical utilities is undertaken in a non-energised (Dead) environment other than for testing purposes.</p> <p>points where it is transformed for delivery to consumers.</p>
UET40422 Certificate IV in ESI – Network Systems	Live Line Worker	<p>Live Line Workers are certified to install, repair and maintain HV powerlines and infrastructure, including underground and overhead cables, and electric train services. They may lead work teams.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>
UET40422 Certificate IV in ESI – Network Systems	Powerline Supervisor	<p>Powerline Supervisors lead and manage a team of ESI distribution and/or transmission tradespeople to deliver a power company's operational priorities.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>
UET40422 Certificate IV in ESI – Network Systems	Specialised Line Worker	<p>Line Workers provide technical guidance for the installation and maintenance of overhead or underground electricity cables and may also help plan distribution systems. They may work in transmission, distribution or rail.</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>
UET40522 Certificate IV in ESI – Substations	Substation Maintenance Electrician	<p>Substation Maintenance Technicians lead teams and provide high-level guidance for substation maintenance work. They maintain HV power systems, including circuit breakers and</p> <p>Utilities Services -&gt; Electricity Industry -&gt; Electricity Transmission</p> <p>This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.</p>

Qualification	Occupation	Industry Sector
		transformers. They carry out inspections, diagnose and rectify faults.
UET40522 Certificate IV in ESI - Substations	Electrical Technician (ESI)	Electrical Technicians in the ESI install, maintain, repair, test and commission electrical equipment. They can work on the construction and/or maintenance of substations.
UET40522 Certificate IV in ESI - Substations	Substation Electrician	Substation Technicians work as Technicians and Team Leaders in the HV section of the transmission and distribution sector of the ESI.
UET60222 Advanced Diploma of ESI - Power Systems	Power Systems Technical Officer	Power Systems Technical Officers design new overhead and underground powerline systems. They work in the transmission, distribution and/or rail sectors, generally working indoors in a design/drafting facility.
UET60222 Advanced Diploma of ESI - Power Systems	High Voltage Substation Project Manager	High Voltage Substation Project Managers oversee the construction of electrical substations and related projects within the ESI. They manage
		Utilities Services -> Electricity Industry -> Electricity Transmission
		This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.
		Utilities Services -> Electricity Industry -> Electricity Transmission
		This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.
		Utilities Services -> Electricity Industry -> Electricity Distribution
		This sector covers the delivery of electricity to customers, including homes and businesses.
		Utilities Services -> Electricity Industry -> Electricity Transmission
		This sector covers the movement or transfer of electricity between the point of supply and the points where it is transformed for delivery to consumers.
		Utilities Services -> Electricity Industry -> Electricity Distribution
		This sector covers the delivery of electricity to customers, including homes and businesses.

Qualification	Occupation	Industry Sector
	personnel and the business aspects of projects, and give specialist advice to deal with day-to-day issues and problems.	Utilities Services -> Electricity Industry -> Electricity Transmission
UET60222 Advanced Diploma of ESI - Power Systems	Senior Systems Operator (Electricity Supply Industry)	Utilities Services -> Electricity Industry -> Electricity Distribution
	Senior Systems Operators develop operational procedures for, and oversee, the isolation of plant and equipment in various sectors of the ESI. They monitor power station operations, use protection equipment such as switchgear to isolate plant from circuits or processes, to prevent electrical damage. They supervise and coordinate teams and activities.	Utilities Services -> Electricity Industry -> Electricity Transmission
UET60222 Advanced Diploma of ESI - Power Systems	Power Systems Senior Technical Officer	Utilities Services -> Electricity Industry -> Electricity Transmission
	Power Systems Senior Technical Officers perform high-level managerial, design, testing and system operation functions in the transmission and distribution sectors of the ESI.	Utilities Services -> Electricity Industry -> Electricity Transmission
UET60222 Advanced Diploma of ESI - Power Systems	Power Transmission and Distribution System Engineer	Utilities Services -> Electricity Industry -> Electricity Transmission
	Power Transmission and Distribution System Engineers install, commission, maintain, diagnose and repair the hardware and software of complex power system protection, control and metering systems.	Utilities Services -> Electricity Industry -> Electricity Transmission

## QUALIFICATIONS ENTRY REQUIREMENTS

Entry requirements are the knowledge, skills or experience required to enter a qualification. They may be expressed as Units of Competency, qualifications or vocational outcomes and **must** be demonstrated prior to commencing the qualification.

In the UET Transmission, Distribution and Rail Sector Training Package there are entry requirements that apply to the following qualifications:

Code	Qualification Title	Rationale
UET40522	Certificate IV in ESI - Substations	This is a post-trade qualification for Electricians.

### Equivalency/ Or Equivalent

The term Equivalency/ Or Equivalent has been used within the UET Training Package in addressing the prerequisite unit requirements of a unit or the entry requirements of a qualification.

“Or equivalent” means a situation where a learning framework and outcome from one period of time is treated as equal to a current training outcome, e.g., a pre-AQF state or enterprise-based certificate of proficiency is treated as equal to a current qualification. The primary purpose of the Equivalency rule is to ensure that existing trade qualified workers trained under previous systems/qualifications are not unfairly treated in the current AQF environment.

It is important to note, that the specifics of the qualification structure may not be the same, but the trade qualification outcomes are treated as equal by the network operators.

## PATHWAYS ADVICE

Attachment E provides sector and qualification pathways guidance. Information about specific pathways relevant to qualifications in the Training Package is best provided by RTOs delivering the qualifications and state/territory advisory bodies.

Generally, all qualifications in the UET Transmission, Distribution and Rail Sector Training Package are suitable for delivery via an Australian Apprenticeship pathway.

The [Australian Apprenticeships website](#) offers information about traineeships and apprenticeships and includes links to State and Territory Training Authorities (STAs) that monitor provision.

VET in Schools programs are packaged and delivered in a variety of ways across Australia. However, it is highly recommended that schools work together in partnership with an RTO where qualifications or Skill Sets result in strong transferable skills relevant to the needs of the individual and commercial enterprises.

Qualifications from the UET Training Package are identified as not being suitable for VET in Schools. A possible VET in School pathway into the UET Training package is through the UEE22020 Certificate II in Electrotechnology (Career Start) qualification.

Qualifications at AQF 2 levels are not prerequisites for the higher-level qualifications.

Principle pathways into the AQF 3 qualifications are through employment or apprenticeships. In practice, the qualifications through the structure of electives, generally incorporate transferable broad-based skills applicable to a diverse range of job roles in more than one qualification.

Pathway options for Line Workers (AQF 3) are available in the Training Package. Figure 1 in Attachment E shows a hierarchical pathway and is a useful snapshot of the qualifications leading to the AQF 4.

Qualifications at AQF 3 and 4 levels are not entry requirements for the higher-level qualifications.

The UET ESI TDR Training Package qualifications provide pathways in the following disciplines:

- Distribution Underground (Cable Jointing)
- Distribution Overhead
- Transmission Overhead
- Rail Traction
- Very Remote Communities Linework
- Systems Operations

Users of the UET Transmission, Distribution and Rail Sector Training Package are encouraged to clarify with the relevant authorities, the various regulated occupations in the ESI TDR industry, the full certification requirements for each, and the availability of Australian Apprenticeships and VET in Schools.

### **Skill Set Pathways**

UET Training Package Skill Sets provide pathways to a range of UET qualifications. The Table below show the AQF levels of qualifications the Skill Set provides a pathway to.

Code	Skill Set Title	Pathways
UETSS00054	Maintain energised rail traction networks Skill Set	AQF 4 UET qualification
UETSS00055	Work Safely Around Powerlines as an Ordinary Person Skill Set	AQF 1 -4 qualifications in all training packages

### **[Attachment E: UET Training Package pathways advice](#)**

## CREDIT ARRANGEMENTS

Currently there are no credit transfer arrangements between qualifications in this Training Package and higher education qualifications.

## ACCESS AND EQUITY

Good vocational education and training, and assessment include making adjustments to meet the learning and assessment needs of individuals. An open mind, common sense and tailoring training and assessment to individual circumstances should ensure individuals achieve the standards employers and RTOs expect.

Reasonable adjustments may be made to assist learners to access and participate in vocational education and training. Adjustments are considered reasonable if they achieve the outcome of the training package, but also consider factors such as the learner's location, personal ability, cultural diversity, and language, literacy and numeracy skills.

Commonwealth anti-discrimination legislation and associated standards and regulations have been upheld in the UET ESI TDR Training Package. Australia's federal anti-discrimination laws have been maintained through appropriate use of language and reference in the products. These are contained in the following legislation:

- Age Discrimination Act 2004
- Disability Discrimination Act 1992
- Racial Discrimination Act 1975
- Sex Discrimination Act 1984

The design and content of this Training Package supports equitable access and progression for all learners. It is the responsibility of the RTO delivering and assessing qualifications to:

- ensure that training and assessment processes and methods do not disadvantage individual learners, and
- determine the needs of individual learners and provide access to required educational and support services.

Some practical ways that access and equity issues could be addressed include reasonable adjustments to:

- assessment processes and techniques for distance learners,
- materials to ensure that it is culturally appropriate for learners,
- activities and assessments to ensure it is suitable for the language, literacy and numeracy skill levels of learners

## FOUNDATION SKILLS

Language, literacy and numeracy skills can make the difference between whether or not someone succeeds in training and at work. These important skills are now called 'core skills' or



'foundation skills' because they are at the core of – or the foundation to – other more specific technical skills.

All Units of Competency in UET Transmission, Distribution and Rail Sector Training Packages clearly describe the foundation skills that are essential to performance in the elements and performance criteria of the unit.

There is a distinction between 'core skills' and 'foundation skills' in Training Packages, which can be summarised as follows:

- **Core skills** are those described in the ACSF: learning, numeracy, oral communication (speaking and listening), reading and writing.
- **Foundation skills** is the term that the Australian Government uses in a number of different contexts, including vocational units of competency, to capture language, literacy and numeracy skills and employment skills.

In the UET Transmission, Distribution and Rail Sector Training Package, foundation skills are explicit in the performance criteria in each Unit of Competency.

This is achieved with the use of key words or phrases to indicate foundation skills that are essential to performance. It is important to note that foundation skills may not have the same meaning in every instance and do need to be considered in the relevant job context.

The significance of each of these skills will also vary in respect to job roles and the strengths of individuals. It is important for users of the Training Package to contextualise relevant foundation skills identified in Units of Competency and assessment requirements.

## FSK Foundation Skills Training Package

The FSK Foundation Skills Training Package allows RTOs to choose and deliver foundation skills units, qualifications and Skill Sets that will enable learners to build the specific foundation skills they need to achieve vocational competency.

Foundation skills units provide additional information about the types of language, literacy and numeracy skills that are needed to meet the requirements of vocational units.

The Training Package can be downloaded from [www.training.gov.au](http://www.training.gov.au).

## HEALTH AND SAFETY IMPLICATIONS IN THE INDUSTRY

Work health and safety (WHS)/occupational health and safety (OHS) has been referenced in Units of Competency to refer to the relevant legislation. As not all jurisdictions have implemented the Model Work Health and Safety (WHS) Act the combined term is used to recognise that either the national model or existing state instrument will apply, as specified by the relevant regulatory authority.

In jurisdictions where the Model WHS Act has not been implemented, RTOs are advised to contextualise the Unit of Competency by referring to the existing state/territory OHS legislative requirements.

## RESOURCES AND EQUIPMENT RELEVANT TO THE TRAINING PACKAGE

The assessment requirements relevant to each Unit of Competency refer to the relevant resources and equipment required for assessment.

Where a specific vehicle or piece of equipment is referred to, it must be used in the relevant assessment.

In particular, for assessment, access is required to:

- a range of relevant exercises, case studies and/or simulations
- a vehicle typical of that used in the industry
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment (PPE) currently used in the ESI TDR industry.

Specific assessment requirements and strategies are defined in the relevant Units of Competency where applicable.

RTOs can only conduct training and/or assessment of the qualifications and/or Units of Competency in this Training Package provided they are covered by their Scope of Registration.

The assessment requirements for each Unit of Competency specify the relevant resources and equipment required to achieve the vocational outcomes of the UET Transmission, Distribution and Rail Sector Training Package.

## LEGAL CONSIDERATIONS FOR LEARNERS IN THE WORKPLACE/ON PLACEMENTS

Legal requirements that apply to specific industries and VET vary across each state and territory, and the Commonwealth and can change.

Contact relevant state/territory and Commonwealth departments to determine specific legal requirements.

## LINKS

Companion Volume Implementation Guide (CVIG) for UET Transmission, Distribution and Rail Sector Training Package.

## DEFINITION GUIDE

For the standardised industry definitions refer to Energy Networks Australia [list of definitions](#).

These definitions are for application within UET Transmission, Distribution and Rail Sector Training Package and are not to be considered a definitive list, but a clearer understanding of the meaning of the terms contained in a Unit of Competency. These terminologies do not necessarily apply in all states/territories and can vary between states/territories.

Term	Definition
Chemicals	Means in relation to herbicides, insecticides and fungicides. May also include those used to clean and lubricate electrical apparatus, tools and equipment.
Commissioning	Means placing into service electrical apparatus or an electricity network.
Electrical Equipment	Means electrical apparatus that is connected to the electricity network via conductors or cables. This term can be used when referring to apparatus that is are conductors and cables, e.g., transformers and ring main switches.
Epicormic Growth	Means a shoot or branch growing from a previously dormant bud on a trunk or limb of a tree.
Gases	Means any used in the ESI for example: <ul style="list-style-type: none"> <li>• liquefied petroleum gas (LPG)</li> <li>• SF6</li> <li>• oxy-acetylene.</li> </ul>
Hardware	Means items fixed to a pole, structure or electrical apparatus, e.g., crossarms, brackets and insulators.
Incident	Means any event that results in a reportable or notifiable injury, illness or fatality of people, or damage or loss to property, plant, materials and environmental or a financial burden.
Licence	Means the approval required by the Commonwealth, state and territory legislative and regulatory requirements to complete work in the ESI.
Lifting	Means pushing, pulling and manual handling tasks.
Maintenance	Means the identification and diagnosis of faults, cleaning, repairing or replacement of structures, hardware and electrical apparatus.

Term	Definition
Materials	Encompasses hardware, fittings and other items used for construction, installation and maintenance of the ESI network.
Network Standards	Network operator workplace requirements.
Notification	Notification (Notified) may include verbal, written, electronic or recorded information during or at the completion of work, which may be required to be completed in accordance with workplace requirements.
Personal protective equipment (PPE)	Means clothing, equipment and/or substances, which when worn or correctly used, protect parts or all of the body from foreseeable risk of injury or disease at work or in the workplace.
Powerline	Powerlines means electrical equipment, including overhead lines and underground cables, the conductors of which are live or can be made live.
Powerline Infrastructure	Infrastructure and associated equipment that includes, but is not limited to wires, anchors, towers, poles, stays, ground mounted equipment, tunnels and cavities.
Plant	<p>Means any machinery, equipment and appliances that are provided with some form of self-propulsion that is ordinarily under the direct control of an operator, in the construction, installation, operation and maintenance of the ESI network.</p> <p>It includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Elevated work platform (EWP)</li> <li>• Cranes (Lifter Borer)</li> <li>• Excavator</li> <li>• Forklifts</li> <li>• Earth drilling rigs.</li> </ul>
Remote Control Systems	Refers to systems such as Supervisory Control and Data Acquisition (SCADA), Remote Administration Tools (RAT), and Annunciated dial-up (voice annunciation).
Safe Use	<p>Safe use includes techniques, the inspection, care and maintenance of:</p> <ul style="list-style-type: none"> <li>• Personal protective equipment</li> <li>• Plant</li> <li>• Tools</li> </ul>

Term	Definition
	<ul style="list-style-type: none"> <li>• Equipment.</li> </ul>
Site Security	<p>Definition as defined by Safe Work Australia.</p> <p>If a notifiable incident occurs, you must:</p> <ul style="list-style-type: none"> <li>• report it to the regulator immediately, and</li> <li>• preserve the incident site until an inspector arrives or directs otherwise. This doesn't prevent you helping an injured person or make the site safe.</li> </ul>
Unplanned Event	<p>Means an episode/s that are not expected to occur during the construction, installation, operation and maintenance of the ESI network that causes lost time, rework or an incident.</p> <p>It includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Breakdowns (plant and equipment)</li> <li>• Missing materials</li> <li>• Weather events</li> <li>• Network issues (Unplanned outage)</li> <li>• Traffic (vehicles, pedestrian, access issues)</li> <li>• Faulty equipment</li> <li>• Motor vehicle accident</li> <li>• Threatening customer</li> <li>• Hazardous animals/insects, tree/plants</li> <li>• Contact with live electrical apparatus</li> <li>• Chemical/fuel spills</li> <li>• Fire.</li> </ul>
Validate	<p>Means to check, verify, or perform an action of quality control, either by the user or another user depending on workplace requirements.</p>
Vegetation Control	<p>Includes vegetation cutting and pruning techniques, and the use of chemicals to minimise regrowth.</p> <p>It takes into consideration the heritage, areas of particular significance, urban/rural, vegetation fire prone areas.</p> <p>It may include site rehabilitation.</p>
Vicinity	<p>Means a situation where it is unlikely that a person will, either directly or through any conducting medium (e.g., via mobile plant), come within the relevant safe approach distances.</p>

Term	Definition
Work Instruction	See 'Work Plan' for definition.
Work Permit/Approval	<p>Means a document providing written permission for persons to undertake work activities in the ESI.</p> <p>Permits/Approvals may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Electrical access</li> <li>• Vicinity</li> <li>• Contractor</li> <li>• Testing</li> <li>• Live work</li> <li>• Confined space</li> <li>• Environmental</li> <li>• Safe working.</li> </ul>
Work Plan	<p>These form part of the organisation's formal arrangements in the construction, installation, operation and maintenance of the ESI network.</p> <p>May include the following:</p> <ul style="list-style-type: none"> <li>• Plans</li> <li>• Drawings</li> <li>• Quality checklists</li> <li>• Testing and commissioning sheets</li> <li>• Workplace requirements (specific to the task)</li> <li>• Manufacturer specifications/instructions.</li> </ul>
Workplace Requirements	<p>These are established by the organisation and may only apply to that organisation and includes:</p> <ul style="list-style-type: none"> <li>• Policies</li> <li>• Procedures</li> <li>• Standards</li> <li>• Instructions.</li> </ul>

## IMPLEMENTATION ADVICE

### In accordance with workplace requirements

The term used in the Units of Competency ‘in accordance with workplace requirements’ refers to contextualising the training and assessment requirements to reflect organisational policies, procedures, standards and instructions.

### Two separate occasions

The term used in the Units of Competency’s performance evidence ‘on at least two separate occasions’ refers to structured assessment conducted by an RTO.

Separate occasions ensures a timeframe between assessments, the timeframe is based on the complexity of the Unit of Competency and assessment evidence required.

### Equivalency/ Or Equivalent


The term Equivalency/ Or Equivalent has been used within the UET Training Package in addressing the prerequisite unit requirements of a unit or the entry requirements of a qualification.

“Or equivalent” means a situation where a learning framework and outcome from one period of time is treated as equal to a current training outcome, e.g., a pre-AQF state or enterprise-based certificate of proficiency is treated as equal to a current qualification. The primary purpose of the Equivalency rule is to ensure that existing trade qualified workers trained under previous systems/qualifications are not unfairly treated in the current AQF environment.

It is important to note, that the specifics of the qualification structure may not be the same, but the trade qualification outcomes are treated as equal by the network operators.

Unit Implementation Advice	
<b>UETDRAI004 Treat poles</b>	
Treatment applications of poles may include:	<ul style="list-style-type: none"> <li>• chemical treatment for the prevention of pole deterioration through the insertion of chemical preservatives (i.e., Polesaver) into the base of wooden poles</li> <li>• fungicide treatment</li> <li>• pesticide treatment</li> <li>• polymer wrap (steel poles)</li> <li>• bitumen wrap</li> <li>• glass fibre reinforced plastic (GPP)</li> <li>• steel cuff</li> <li>• galvanisation treatment for prevention of corrosion (thermic, paint)</li> </ul>
<b>UETDRCD001 Work safely around powerlines as an ordinary person</b>	



Unit Implementation Advice	
Powerline definition:	<ul style="list-style-type: none"> <li>Powerlines means electrical equipment, including overhead lines and underground cables, the conductors of which are live or can be made live.</li> </ul>
Powerline infrastructure definition:	<ul style="list-style-type: none"> <li>Infrastructure and associated equipment that includes, but is not limited to wires, anchors, towers, poles, stays, ground mounted equipment, tunnels and cavities.</li> </ul>
Calling for help may include the following:	<ul style="list-style-type: none"> <li>000</li> <li>Emergency Plus app</li> </ul>
Further information on techniques for exiting vehicle/plant:	
Basic electrical principles may include:	<ul style="list-style-type: none"> <li>Voltage, Current and Resistance</li> <li>There is no requirement to calculate the relationship (Ohms Law)</li> </ul>
Powerline identification tools may include:	<ul style="list-style-type: none"> <li><a href="http://www.Lookupandlive.com.au">www.Lookupandlive.com.au</a></li> <li><a href="http://www.byda.com.au">www.byda.com.au</a></li> </ul>
Further resources:	<ul style="list-style-type: none"> <li><a href="https://www.youtube.com/watch?v=lkQt6jxvDlc">https://www.youtube.com/watch?v=lkQt6jxvDlc</a></li> <li><a href="https://www.essentialenergy.com.au">Safety Collateral Order Form (essentialenergy.com.au)</a></li> <li><a href="https://www.youtube.com/watch?v=6e0ETkWnEok">https://www.youtube.com/watch?v=6e0ETkWnEok</a></li> </ul>
<b>UETDRDU009 Install, test and verify distribution underground cable installations</b>	
Maintenance may include:	<ul style="list-style-type: none"> <li>the removal, repair and replacement of electrical equipment encompassing "like for like" and associated hardware as well as the termination and/or connection of this equipment according to requirements and the temporary installation of services and associated equipment. It also encompasses the identification of faults; the pre-</li> </ul>

<b>Unit Implementation Advice</b>	
	commissioning tests involving the equipment/system and the interpretation of these tests against agreed specifications
<b>UETDREL001 Apply environmental requirements</b>	
Environmental impacts may include but are not limited to:	<ul style="list-style-type: none"> <li>• emissions to air</li> <li>• releases to/of water</li> <li>• releases to land</li> <li>• vibration and noise</li> <li>• disposal of waste</li> <li>• contamination of land</li> <li>• impact on agricultural communities (livestock, crops etc)</li> <li>• impact on communities</li> <li>• destruction of habitat</li> <li>• use of energy sources</li> <li>• waste generation processes and technologies</li> <li>• impact on culturally significant sites</li> <li>• the implementation of emergency responses</li> </ul>
Environmental management documentation may include but is not limited to:	<ul style="list-style-type: none"> <li>• information on applicable environmental laws or other requirements</li> <li>• complaint records</li> <li>• training records</li> <li>• process operational log</li> <li>• inspection, maintenance and calibration records</li> <li>• relevant contractor and supplier information</li> <li>• incident reports</li> <li>• information on emergency preparedness and response</li> <li>• records of significant environmental impacts</li> <li>• chain of custody and compliance records</li> <li>• audit results</li> <li>• management reviews</li> </ul>
<b>UETDREL003 Identify and apply controls for alternate supplies on the distribution network</b>	
Alternate supplies may include but are not limited to:	<ul style="list-style-type: none"> <li>• generation sources               <ul style="list-style-type: none"> <li>○ photovoltaic (PV) systems</li> <li>○ wind</li> <li>○ engine driven</li> <li>○ turbine</li> </ul> </li> <li>• storage sources               <ul style="list-style-type: none"> <li>○ uninterruptible power supply (UPS)</li> </ul> </li> </ul>

Unit Implementation Advice	
	<ul style="list-style-type: none"> <li>○ engine driven</li> <li>○ turbine</li> <li>○ electric vehicles</li> <li>○ fuel cells</li> <li>○ battery systems</li> <li>○ flywheels</li> </ul>
Isolation points may include:	<ul style="list-style-type: none"> <li>● switching</li> </ul>
Earthing may include:	<ul style="list-style-type: none"> <li>● access permits earths</li> <li>● working earths</li> <li>● boxing in</li> </ul>
<b>UETDRIS010 Install and maintain low voltage overhead services</b>	
Work requirements include knowledge of:	<ul style="list-style-type: none"> <li>● limitations of LV distribution mains protection systems</li> </ul>
Training to comply with:	<ul style="list-style-type: none"> <li>● AS 4741-2010 Testing of connections to LV electricity networks</li> </ul>
<b>UETDRIS014 Install and replace energy meters and associated equipment</b>	
Meters include:	<ul style="list-style-type: none"> <li>● induction disc energy meters, electronic energy meters, smart meters, maximum demand meters, electronic summators, time switches and relays, provided that they are basic direct-wired instruments</li> <li>● current transformer and HV metering are not included</li> </ul>
<b>UETDRIS018 Perform low voltage field switching operation to a given schedule</b>	
Links may also be known as:	<ul style="list-style-type: none"> <li>● disconnectors</li> <li>● isolators</li> <li>● secondary Isolations</li> </ul>
<b>UETDRIS028 Implement and monitor environmental policies and procedures</b>	
Incidents of environmental	<ul style="list-style-type: none"> <li>● emissions to air; releases to/of water; releases to land; disposal of waste; contamination of land; impact on communities; destruction of habitat; use of energy sources; waste generation processes and technologies;</li> </ul>

<b>Unit Implementation Advice</b>	
impact may include:	extraction of water; changes to water temperature; changes to water salinity; regulation of water flow; land use; and may involve the implementation of emergency responses
Environmental management documentation may include:	<ul style="list-style-type: none"> <li>• information on applicable environmental laws or other requirements; complaint records; training records; process information; process operational logbooks; inspection, maintenance and calibration records; relevant contractor and supplier information; incident reports; information on emergency preparedness and response</li> </ul>
<b>UETDRIS029 Implement and monitor organisational WHS/OHS policies, procedures and programs</b>	
Hazardous events include:	<ul style="list-style-type: none"> <li>• accidents, fire and emergencies such as chemical spills or bomb scares</li> <li>• procedures for dealing with them include evacuation, chemical containment and first aid procedures</li> </ul>
Workplace procedures for:	<ul style="list-style-type: none"> <li>• risk assessment and management; inspection; housekeeping; participative arrangements, either general or specific to WHS/OHS training and assessment; specific hazard policies and procedures; WHS/OHS information; WHS/OHS record keeping; maintenance of plant and equipment; purchasing of supplies and equipment; and counselling/disciplinary processes</li> </ul>
<b>UETDRIS031 Maintain insulating oil</b>	
This unit relates to:	<ul style="list-style-type: none"> <li>• the filtering, sampling and testing of transformers, switchgear and cable insulating oil and may include tests for dielectric strength and moisture</li> </ul>
Equipment may include:	<ul style="list-style-type: none"> <li>• (pump) filter press, hoses, pipes, soil kits, sample bottles, storage vessels etc</li> </ul>
<b>UETDRMP005 Perform elevated work platform rescue</b>	
EWP retrieval systems refers to:	<ul style="list-style-type: none"> <li>• back-up systems</li> <li>• back-up retrieval systems</li> <li>• emergency control systems</li> </ul>
<b>UETDRRC004 Install and replace energy meters and associated equipment in a very remote community</b>	

<b>Unit Implementation Advice</b>	
Meters include:	<ul style="list-style-type: none"> <li>• induction disc energy meters, electronic energy meters, smart meters, maximum demand meters, electronic summators, time switches and relays, provided that they are basic direct-wired instruments</li> <li>• current transformer and HV metering are not included</li> </ul>
<b>UETDRRC006 Perform low voltage electricity network switching in a very remote community</b>	
Low voltage (LV) switching operations involving:	<ul style="list-style-type: none"> <li>• the operation of circuit breaking and isolation devices from a given switching schedule as it relates to LV distribution systems in field situations but also includes paralleling in accordance with the switching schedule</li> <li>• operation of circuit isolation devices associated with energy reticulation systems/networks is confined to LV systems in field situations which are performed in accordance with a switching schedule and established procedures</li> </ul>
Authorisation authority refers to:	<ul style="list-style-type: none"> <li>• an appropriate person designated as such by regulations, codes or enterprise arrangements who is responsible for coordinating and directing switching activities in consultation with field operators</li> </ul>
<b>UETDRRT001 Install overhead rail traction configurations</b>	
Types of track configurations may include:	<ul style="list-style-type: none"> <li>• overlaps, crossovers, turnouts, 15-90 degree crossings, diamond crossings, insulated crossings, train/tram crossing, tram frogs and sidings</li> </ul>
Plant may include:	<ul style="list-style-type: none"> <li>• elevating work platforms (EWPs), road rail traction height access equipment or ladder</li> </ul>
Testing and recording equipment include:	<ul style="list-style-type: none"> <li>• voltage detectors, volt meters, insulation resistance testers, field intensity testers, height and stagger gauge</li> </ul>
<b>UETDRRT002 Install overhead traction components and equipment</b>	
Types of traction wire support structures may consist of:	<ul style="list-style-type: none"> <li>• portals, pull-off, drop verticals, head spans, cross spans, tramway support networks, cantilever and tunnel/bridge arms</li> </ul>

<b>Unit Implementation Advice</b>	
Types of traction components may include:	<ul style="list-style-type: none"> <li>droppers, cantilever hardware, portal hardware, steady spans hardware, steady spans, insulators, pull-off, tension regulators, section insulators, neutral sections, tramway frogs, pendulums, crossing pans and hangers, in-span feeders, knuckles (insulated and non-insulated) and cross-arms</li> </ul>
Types of conductors may include:	<ul style="list-style-type: none"> <li>high definition (HD), computer-aided drafting (CAD) and tin bearing copper, aluminium, steel, aluminium conductor steel reinforced (ASCR), and copper cover steel</li> </ul>
Types of wiring arrangements include:	<ul style="list-style-type: none"> <li>single wire/tram systems, simple and compound catenary systems</li> </ul>
Plant may include:	<ul style="list-style-type: none"> <li>ladders, elevated work platforms (EWPs), winches, specialist tension string equipment, cable trailers, work trains, rail mounted overhead wiring equipment/vehicles and road rail mounted overhead wiring equipment/vehicles</li> </ul>
Ancillary equipment may include:	<ul style="list-style-type: none"> <li>booster and auxiliary transformers, transformers, air-break switches, isolation switches, switches and surge diverters</li> </ul>
<b>UETDRRT003 Install rail traction bonds</b>	
Earthing and bonding systems may be:	<ul style="list-style-type: none"> <li>permanent or temporary</li> </ul>
Types of conductors may include:	<ul style="list-style-type: none"> <li>steel, rail, copper, aluminium and steel, bare and sheathed cables, single core, stranded and flexible</li> </ul>
Cables may be:	<ul style="list-style-type: none"> <li>surfaced mounted, buried and enclosed</li> </ul>
Permanent jointing and terminating materials include:	<ul style="list-style-type: none"> <li>polymeric tape materials, polymeric heat shrink and covering materials, exothermic welds, crimped and bolted connections</li> </ul>

<b>Unit Implementation Advice</b>	
Temporary terminating components include:	<ul style="list-style-type: none"> <li>screwed and clipped earth/rail/conductor clamps</li> </ul>
<b>UETDRRT004 Install traction overhead wiring systems</b>	
Types of conductors may include:	<ul style="list-style-type: none"> <li>high definition (HD), computer-aided drafting (CAD), tin bearing and magnesium copper, aluminium, steel, aluminium conductor steel reinforced (ACSR), insulated screened and unscreened cable and pilot and control cables</li> </ul>
Materials may include:	<ul style="list-style-type: none"> <li>porcelain, glass, ceramic, fibre glass and composite insulators, steel, brass, stainless steel, neoprene, copper, cast and galvanized fittings, and parafil rope/cable</li> </ul>
Equipment may include:	<ul style="list-style-type: none"> <li>ladders, drums, pulleys, hooks, line grips, tensioning devices, ropes, slings, hydraulic/manual crimping and cutting tools, specialised tools and dynamometers</li> </ul>
Conductors and support wires include:	<ul style="list-style-type: none"> <li>droppers wire, catenary wire, contact/trolley wire, earth wire, feeder wire, drape/potential jumper wire, stay wire, cross-span, networks and head span wire</li> </ul>
Associated equipment to conductors may include:	<ul style="list-style-type: none"> <li>registration arms, midpoint anchors, section insulators, neutral sections, supports, cantilevers, portals, drop verticals, surge diverters and tensioning devices</li> </ul>
Plant may include:	<ul style="list-style-type: none"> <li>elevated work platform (EWP), winches and capstans, specialist tensioning stringing equipment, cable trailers and drum stands, rail and road rail mounted overhead wiring vehicles</li> </ul>
Profiling includes:	<ul style="list-style-type: none"> <li>sag, tension, encumbrances, offsets, cants and registration which involves horizontal and vertical calibration of the contact wire or trolley wire to a design height and stagger in reference to the running rail</li> </ul>
<b>UETDRRT008 Maintain overhead rail traction configurations</b>	
Types of track configurations may include:	<ul style="list-style-type: none"> <li>overlaps, crossovers, turnouts, 15-90 degree crossings, diamond crossings, Insulated crossings, train/tram crossing, tram frogs and sidings</li> </ul>

<b>Unit Implementation Advice</b>	
Plant may include:	<ul style="list-style-type: none"> <li>elevated work platforms (EWPs), road rail traction height access equipment or ladder</li> </ul>
Testing and recording equipment include:	<ul style="list-style-type: none"> <li>voltage detectors, volt meters, insulation resistance testers, field intensity testers, height and stagger gauge</li> </ul>
<b>UETDRRT009 Maintain overhead traction components and equipment</b>	
Types of traction wire support structures may consist of:	<ul style="list-style-type: none"> <li>portals, pull-off, drop verticals, head spans, cross spans, tramway support networks, cantilever and tunnel/bridge arms</li> </ul>
Types of traction components may include:	<ul style="list-style-type: none"> <li>droppers, cantilever hardware, portal hardware, steady spans hardware, steady spans, insulators, pull-off, tension regulators, section insulators, neutral sections, tramway frogs, pendulums, crossing pans and hangers, in-span feeders, knuckles (insulated and non-insulated) and cross-arms</li> </ul>
Types of conductors may include:	<ul style="list-style-type: none"> <li>high definition (HD), computer-aided drafting (CAD) and tin bearing copper, aluminium, steel, aluminium conductor steel reinforced (ACSR) and copper cover steel</li> </ul>
Types of wiring arrangements include:	<ul style="list-style-type: none"> <li>single wire/tram systems, simple and compound catenary systems</li> </ul>
Plant may include:	<ul style="list-style-type: none"> <li>ladders, elevated work platforms (EWPs), winches, specialist tension string equipment, cable trailers, work trains, rail mounted overhead wiring equipment/vehicles and road rail mounted overhead wiring equipment/vehicles</li> </ul>
Ancillary equipment may include:	<ul style="list-style-type: none"> <li>booster and auxiliary transformers, transformers, air-break switches, isolation switches, switches and surge diverters</li> </ul>
<b>UETDRRT010 Maintain rail traction bonds</b>	
Earthing and bonding	<ul style="list-style-type: none"> <li>permanent or temporary</li> </ul>



<b>Unit Implementation Advice</b>	
systems may be:	
Types of conductors may include:	<ul style="list-style-type: none"> <li>• steel, rail, copper, aluminium and steel, bare and sheathed cables, single core, stranded and flexible</li> </ul>
Cables may be:	<ul style="list-style-type: none"> <li>• surfaced mounted, buried and enclosed</li> </ul>
Permanent jointing and terminating materials include:	<ul style="list-style-type: none"> <li>• polymeric tape materials, polymeric heat shrink and covering materials, exothermic welds, crimped and bolted connections</li> </ul>
Temporary terminating components include:	<ul style="list-style-type: none"> <li>• screwed and clipped earth/rail/conductor clamps</li> </ul>
<b>UETDRRT011 Maintain traction overhead wiring systems</b>	
Types of conductors may include:	<ul style="list-style-type: none"> <li>• high definition (HD), computer-aided drafting (CAD), tin bearing and magnesium copper, aluminium, steel, aluminium conductor steel reinforced (ACSR), insulated screened and unscreened cable and pilot and control cables</li> </ul>
Materials may include:	<ul style="list-style-type: none"> <li>• porcelain, glass, ceramic, fibre glass and composite insulators, steel, brass, stainless steel, neoprene, copper, cast and galvanized fittings, and parafil rope/cable</li> </ul>
Equipment may include:	<ul style="list-style-type: none"> <li>• ladders, drums, pulleys, hooks, yoke plate, line grips, tensioning devices, ropes, slings, hydraulic/manual crimping and cutting tools, specialised tools and dynamometers</li> </ul>
Conductors and support wires include:	<ul style="list-style-type: none"> <li>• droppers wire, catenary wire, contact/trolley wire, earth wire, feeder wire, drape/potential jumper wire, stay wire, cross-span, networks and head span wire</li> </ul>
Associated equipment to	<ul style="list-style-type: none"> <li>• registration arms, midpoint anchors, section insulators, neutral sections, supports, cantilevers, portals, drop verticals, surge diverters and tensioning devices</li> </ul>

<b>Unit Implementation Advice</b>	
conductors may include:	
Plant may include:	<ul style="list-style-type: none"> <li>elevated work platform (EWP), winches and capstans, specialist tensioning stringing equipment, cable trailers and drum stands, rail and road rail mounted overhead wiring vehicles</li> </ul>
Profiling includes:	<ul style="list-style-type: none"> <li>sag, tension, encumbrances, offsets, cants and registration which involves horizontal and vertical calibration of the contact wire or trolley wire to a design height and stagger in reference to the running rail</li> </ul>
<b>UETDRRT012 Operate rail road height access plant near rail traction systems</b>	
Plant may include:	<ul style="list-style-type: none"> <li>elevated work platforms (EWPs), winches, specialist tension string equipment, cable trailers, rail and road mounted overhead vehicles and vehicle mounted cranes</li> </ul>
Equipment operation includes:	<ul style="list-style-type: none"> <li>the horizontal and vertical operation of the work platform, pre-operational checks, obtaining appropriate relevant track or road authorities, observing relevant statutory electrical and mechanical clearances, and communication protocol between relevant personnel</li> </ul>
Operating environment may include:	<ul style="list-style-type: none"> <li>off-track, on-track in the vicinity of live and dead traction and distribution equipment, live line working and within an operational road, rail or tram traffic environment</li> </ul>
<b>UETDRRT013 Perform rail traction switching operations to a given schedule</b>	
Equipment may include:	<ul style="list-style-type: none"> <li>circuit breakers, isolators, links, fuses, field switches, air-break switches, gas switches, LV switches, combined rail isolating switches, siding switches, earthing/ rail connect equipment, test equipment, HV gloves, HV mats, operating rods/sticks, aerial switches and motor driven switches, and voltage detectors</li> </ul>
<b>UETDRSB001 Perform substation switching operations to a given schedule</b>	
Links may also be known as:	<ul style="list-style-type: none"> <li>HV or LV links</li> <li>isolators</li> <li>secondary Isolations</li> </ul>
<b>UETDRSB004 Conduct surveys using thermovision techniques</b>	

<b>Unit Implementation Advice</b>	
This unit is in relation to:	<ul style="list-style-type: none"> <li>the thermographic surveying of distribution, transmission and rail lines and the apparatus and equipment found in and around substations</li> </ul>
Surveys can be carried out using:	<ul style="list-style-type: none"> <li>handheld thermographic cameras at ground level or in a helicopter</li> </ul>
<b>UETDRSB005 Diagnose and resolve faults in a substation environment</b>	
This unit relates to:	<ul style="list-style-type: none"> <li>LV AC/DC control and supervisory systems associated with substation plant and equipment</li> <li>initial fault location may be performed with the affected circuits energised</li> </ul>
Control systems may include:	<ul style="list-style-type: none"> <li>those associated with HV transformers, tap changers, switchgear and associated control panels, alarms, alternators, mimic panels, cooling systems, automatic voltage regulators, batteries and battery chargers</li> </ul>
Test instruments may include:	<ul style="list-style-type: none"> <li>multimeters, tong testers, insulation resistance/continuity tester, low resistance high current tester, overload injection tester and specialist test equipment</li> </ul>
Fault finding and diagnostic techniques may include:	<ul style="list-style-type: none"> <li>linear approach, half split rule, sensory detection, loop test, insulation/resistance and continuity tests</li> </ul>
<b>UETDRSB006 Inspect substations</b>	
This unit relates to:	<ul style="list-style-type: none"> <li>the inspection of plant, equipment and auxiliaries contained in and around substations, including the associated environmental protection and substation security and safety systems</li> </ul>
Checks and measurements may include:	<ul style="list-style-type: none"> <li>operation counters, oil in water levels, consumable material consumption, oil containment levels, gas quantities, equipment inspection and condition assessment, lighting and supply conditions</li> </ul>
<b>UETDRSB007 Install and maintain substation direct current systems</b>	
This unit relates to:	<ul style="list-style-type: none"> <li>the installation and maintenance of DC systems contained in and around substations, including the associated control systems</li> </ul>

<b>Unit Implementation Advice</b>	
DC systems may include:	<ul style="list-style-type: none"> <li>lighting systems, battery chargers, substation batteries, communication systems batteries, isolated pilot batteries and uninterrupted power supply (UPS) systems</li> </ul>
Tests may include but are not limited to:	<ul style="list-style-type: none"> <li>cell voltage test, hydrometer/specific gravity test, battery discharge and capacity tests, and impedance tests</li> </ul>
<b>UETDRSB008 Install high current d.c. equipment and switchgear</b>	
D.c. switchgear and other equipment include but are not limited to:	<ul style="list-style-type: none"> <li>direct current circuit breakers, rectifier transformers, rectifiers, invertors, isolators and links, harmonic filters, negative reactors, energy dissipating resistors (EDR's) and rail earth contactor</li> </ul>
Associated equipment may include:	<ul style="list-style-type: none"> <li>D.c. feeders, surge arresters, isolating links, busbars, cables, cable supports, pits and enclosures, control wiring of protection/alarm systems, metering, supervisory interface and cabinets</li> </ul>
Test equipment may include:	<ul style="list-style-type: none"> <li>multimeters, low resistance high current, megger tester, ammeter, voltmeter and 1500 V dropout test sets</li> </ul>
Confined spaces may apply to:	<ul style="list-style-type: none"> <li>pits, cable tunnels, false floors and cable basements</li> </ul>
Protection systems may include:	<ul style="list-style-type: none"> <li>Buchholz, frame leakage, overcurrent, earth leakage, reverse current, Delta I and diode protection</li> </ul>
<b>UETDRSB009 Install high voltage plant and equipment</b>	
Substation high voltage plant and equipment may include:	<ul style="list-style-type: none"> <li>transformers and instrument transformers, auxiliary transformers, surge arrestors, wave traps, circuit breakers, capacitor banks, disconnectors, earth switches, ripples filters, static VAR compensators, gas insulated switchgear, fault throwers, resistor banks, neutral earthing transformers and reactors, high current DC switchgear and equipment</li> </ul>
Pre-commissioning	<ul style="list-style-type: none"> <li>insulation resistance, winding resistance, dielectric dissipation factor, winding ratio, vector group, low voltage excitation, continuity, trip and</li> </ul>

<b>Unit Implementation Advice</b>	
checks and measurements may include:	close checks, gas pressure checks, contact timing and other checks and measurements as required by the manufacturer
<b>UETDRSB010 Maintain capacitor bank equipment</b>	
Checks may include:	<ul style="list-style-type: none"> <li>inspection and cleaning, identification and replacement of defective/unserviceable elements/cans, unbalance current/voltage tests, functional tests and control/alarm system checks</li> </ul>
<b>UETDRSB011 Maintain high current d.c. equipment and switchgear</b>	
D.c. switchgear and other equipment includes but is not limited to:	<ul style="list-style-type: none"> <li>D.c. circuit breakers, rectifier transformers, rectifiers, invertors, isolators and links, harmonic filters, negative reactors and energy dissipating resistors (EDR's) and rail earth contactor</li> </ul>
Associated equipment may include:	<ul style="list-style-type: none"> <li>D.c. feeders, surge arresters, isolating links, busbars, cables, cable supports, pits and enclosures, protection/alarm systems, control wiring, metering, supervisory interface and cabinets</li> </ul>
Associated components may include:	<ul style="list-style-type: none"> <li>main and auxiliary contacts, holding coils, contactor, busbar fingers, diodes, heatsinks, capacitors, fuses, metering, shunts, resistors banks and resistor bank housing</li> </ul>
Test equipment may include:	<ul style="list-style-type: none"> <li>multimeters, low resistance high current, megger tester, ammeter, voltmeter, 1500 V drop out test set and feeler gauge</li> </ul>
Confined spaces may apply to:	<ul style="list-style-type: none"> <li>pits, cable tunnels, false floors and cable basements</li> </ul>
<b>UETDRSB012 Maintain high voltage circuit breakers</b>	
This unit is in relation to:	<ul style="list-style-type: none"> <li>the maintenance of HV circuit breakers in power system substations and switching stations</li> </ul>
Circuit breaker types may include:	<ul style="list-style-type: none"> <li>bulk oil, small oil volume, air blast, vacuum, air-insulated and gas-insulated SF6</li> </ul>

<b>Unit Implementation Advice</b>	
Associated control circuits include:	<ul style="list-style-type: none"> <li>operating mechanisms, solenoids, spring, hydraulic and pneumatic drives, contactors, AC heaters, tripping and closing circuits and control wiring</li> </ul>
Diagnostic checks may include:	<ul style="list-style-type: none"> <li>insulation resistance, contact resistance (dynamic and static), timing (in-service and out of service), gas pressure, air pressure, gas density, oil pressure and minimum operate checks</li> </ul>
Specialised tools may include:	<ul style="list-style-type: none"> <li>insulation resistance test sets, contact resistance tester, trip and close coil testers, manufacturer's specific tools and sequence timing equipment, switching stick (also referred to as switch stick, isolated stick, isolated pole or hotstick)</li> </ul>
<b>UETDRSB013 Maintain on load tap changers (OLTC)</b>	
Checks may include:	<ul style="list-style-type: none"> <li>mechanism alignment, contact erosion, component replacement, inspection and cleaning, disassembly and re-assembly, functional tests and operating mechanism checks. It includes the testing, filtering or replacement of diverter switch oil</li> </ul>
<b>UETDRSB015 Maintain static var compensators (SVC)</b>	
Checks may include:	<ul style="list-style-type: none"> <li>inspection and cleaning, identification of defective/unserviceable components, functional tests and control/alarm system checks</li> </ul>
<b>UETDRSB016 Maintain synchronous condensers</b>	
Checks may include:	<ul style="list-style-type: none"> <li>cooling water resistivity, gas pressure levels, residual gas content, winding resistance, insulation resistance and control circuit functionality</li> </ul>
<b>UETDRTO010 Maintain energised transmission lines using barehand techniques from a helicopter</b>	
Training to comply with:	<ul style="list-style-type: none"> <li>AS 5804 High Voltage Live Working parts 1, 3 and 4</li> </ul>
<b>UETDRTO011 Maintain energised transmission lines using live work barehand techniques</b>	
Training to comply with:	<ul style="list-style-type: none"> <li>AS 5804 High Voltage Live Working parts 1, 3 and 4</li> </ul>
<b>UETDRTO012 Maintain energised transmission lines using live work stick techniques</b>	

<b>Unit Implementation Advice</b>	
Training to comply with:	<ul style="list-style-type: none"> <li>AS 5804 High Voltage Live Working parts 1 and 3</li> </ul>
<b>UETDRTS033 Commission and maintain network protection and control systems</b>	
Protection systems may include but are not limited to:	<ul style="list-style-type: none"> <li>Circuit breaker fail protection, master-controlled earth fault, inter-tripping, auto reclose/blocking, synchronising, line protection, load shedding, voltage control protection, reverse power, and anti-islanding.</li> </ul>
<b>UETDRVC007 Control vegetation using pruning techniques</b>	
This unit relates to:	<ul style="list-style-type: none"> <li>the pruning principles and techniques to perform vegetation clearing activities in accordance with AS 4373 Pruning of Amenity Trees as far as practical</li> </ul>

## **ATTACHMENT A: QUALIFICATION MAPPING**

Mapping information for Qualifications can be found in the UET Transmission, Distribution and Rail CVIG Mapping Information [Attachments A-C](#).

## **ATTACHMENT B: SKILL SETS MAPPING**

Mapping information for Skill Sets can be found in the UET Transmission, Distribution and Rail CVIG Mapping Information [Attachments A-C](#).

## **ATTACHMENT C: UNITS OF COMPETENCY MAPPING**

Mapping information for Units of Competency can be found in the UET Transmission, Distribution and Rail CVIG Mapping Information [Attachments A-C](#).



## ATTACHMENT D: SUMMARY OF QUALIFICATION LICENSING/REGULATORY INFORMATION

Licensing and registration requirements that apply to specific industries and VET, vary between each state and territory, and can regularly change.

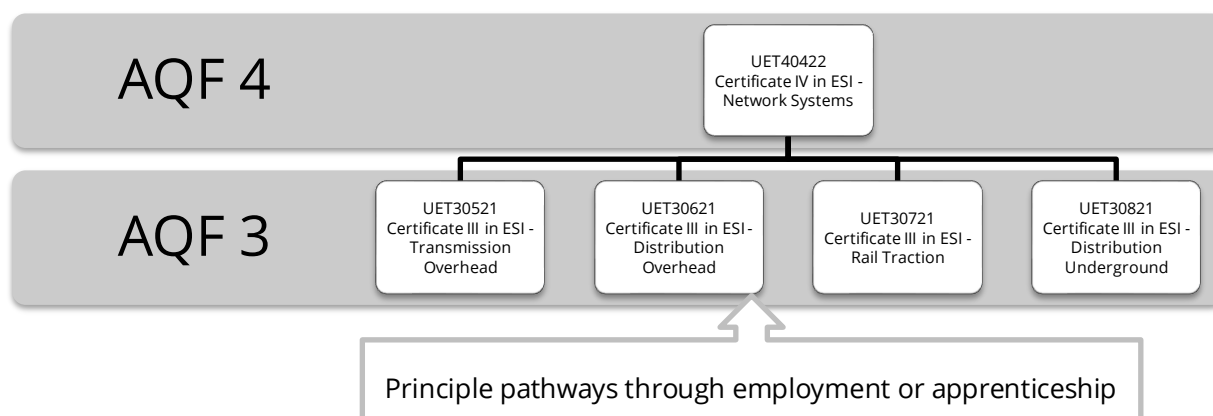
Contact details for the main relevant state or territory authorities that can assist in providing the most up to date information are listed below.

The regulatory authorities for the UET Transmission, Distribution and Rail Sector Training Package at the time of publication of this Training Package are listed below.

Jurisdiction	Regulatory Body	Contacts
Australian Capital Territory	Chief Minister, Treasury and Economic Development Directorate – Access Canberra	02 6207 7775
Australian Commonwealth	Australian Greenhouse Office; Department of Environment and Heritage	02 6274 1888
New South Wales	Office of Fair Trading	133 320
New South Wales	Department of Trade and Investment; Division of Resources and Energy	02 8281 7777
Northern Territory	NT WorkSafe	1800 019 115
Queensland	Electrical Safety Office; Office of Industrial Relations	07 3874 7766
Queensland	Department of Mines and Energy	07 3898 0375
South Australia	Office of the Technical Regulator	08 8226 5500
South Australia	Office of Consumer and Business Affairs (Licensing only)	08 8204 9696
Tasmania	Electricity Standards and Safety; Department of Justice	03 6166 4699
Victoria	Energy Safe Victoria	03 9203 9700
Western Australia	Department of Mines, Industry Regulation and Safety	1300 489 099
Western Australia	Energy Safety WA	08 9422 5200

## ATTACHMENT E: TRAINING PACKAGE PATHWAYS ADVICE

Figure 1. Line Worker Pathways



# ATTACHMENT F: COMPANION VOLUME IMPLEMENTATION GUIDE

## QUALITY ASSURANCE PROCESS

A CVIG is initiated in accordance with the requirements of the National Skills Standard Council (NSSC) Standards for Training Packages and is located within the CVIG.

The steps in the Quality Assurance (QA) process as they apply to the CVIG are:

1. The CVIG is developed by the Industry Skills Specialist (ISS) in accordance with Standards 11 and 12 (NSSC Standards for Training Packages):
  - **Standard 11:** A quality assured Companion Volume Implementation Guide produced by the Training Package developer is available at the time of endorsement and complies with the Companion Volume Implementation Guide template
  - **Standard 12:** Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required
2. Content is validated and amended as part of the validation stage in the implementation of the Standards.
3. The CVIG is submitted for external QA with the Training Package changes, to ensure it is available at the time of endorsement.
4. As the implementation of the Standards continues for the Training Package, the CVIG is reviewed by the ISS to ensure mapping tables are updated and any additional information is added as required. Proposed changes are subject to industry validation as part of the Endorsement process.
5. Where changes are made to a Training Package and minor amendments are required for the CVIG, the ISS includes amendments as part of the validation phase and incorporates the reference in the version control modification history at the front of the CVIG.

## ATTACHMENT G: COMPANION VOLUME IMPLEMENTATION GUIDE TEMPLATE

### COMPANION VOLUME IMPLEMENTATION GUIDE FOR UET TRANSMISSION, DISTRIBUTION and RAIL SECTOR PROJECT

*Mandatory field*

<p><b>OVERVIEW INFORMATION</b></p> <p><i>Mandatory field</i></p>	<ul style="list-style-type: none"> <li>• Version control and modification history.</li> <li>• List of AQF qualifications, Skill Sets and Units of Competency in the Training Package.</li> <li>• Unit mapping information, including equivalence table linking old to new Units of Competency.</li> <li>• Qualification mapping information, including equivalence table linking old to new qualification.</li> <li>• List of imported and prerequisite units in the Training Package.</li> <li>• Key work and training requirements in the industry.</li> <li>• Regulation and licensing implications for implementation.</li> </ul>
<p><b>IMPLEMENTATION INFORMATION</b></p> <p><i>Mandatory field</i></p>	<ul style="list-style-type: none"> <li>• Information on the key features of the Training Package and the industry that will impact on the selection of training pathways.</li> <li>• Industry sectors and occupational outcomes of qualifications.</li> <li>• Explanation of any mandatory entry requirements for qualifications.</li> <li>• Pathways advice, particularly in line with requirements of the AQF Pathways Policy.</li> <li>• Access and equity considerations.</li> <li>• Foundation Skills.</li> <li>• Advice on any health and safety implications in the industry.</li> <li>• Resource and equipment lists relevant to the Training Package.</li> <li>• Legal considerations for learners in the workplace/on placements.</li> <li>• Other information relevant to implementation of the Training Package.</li> </ul>
<p><b>LINKS</b></p> <p><i>Optional field</i></p>	<ul style="list-style-type: none"> <li>• Resources supporting the companion volume implementation guide.</li> <li>• Other companion volumes as required including:             <ul style="list-style-type: none"> <li>○ Learning strategies guidance, describing the diversity of learners and learning strategies.</li> <li>○ Knowledge guidance, identifying contextual information such as knowledge requirements and resources.</li> <li>○ Assessment strategies, providing guidance on implementation of assessment requirements.</li> </ul> </li> <li>• Training Package developer's quality assurance process for companion volumes.</li> </ul>