



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UET12 Transmission, Distribution and Rail Sector Training Package**

**Release: 1.0**

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## UET12 Transmission, Distribution and Rail Sector Training Package

### Modification History

This work has been produced with the assistance of funding provided by the Australian Government.

## UET12 Electricity Supply Industry - Transmission, Distribution and Rail Sector Training Package Version 1

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## UET12 Electricity Supply Industry - Transmission, Distribution and Rail Sector Training Package Version 1

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## **Modification History**

### **Electricity Supply Industry - Transmission, Distribution and Rail Sector Training Package (UET12)**

#### **Version modification history**

The version details of this endorsed Training Package which contains the vocational standards for industry is in the table below. The latest information is at the top of the table.

Version	Release Date	Authorisation	Comments
<b>UET12 Version 1</b>	<b>TBC</b>	<b>TBA</b>	<p><b>The following qualifications were added:</b></p> <p>UET20312; UET20412; UET20612;            UET30512; UET30612; UET30712;            UET30812; UET30912; UET40412;            UET40512; UET40612; UET50212;            UET60212</p> <p><b>The following qualifications were replaced:</b></p> <p>UET20110; UET20209; UET30109;            UET30209; UET30309; UET30409;            UET40109; UET40209; UET40309;            UET50109; UET60109</p> <p><b>The following qualifications were amended:</b></p> <p>UET20511</p> <p><b>The following new units were added:</b></p> <p>UETTDRCJ21A; UETTDRCJ22A;            UETTDRCJ23A; UETTDRCJ24A;            UETTDRCJ25A; UETTDRCJ26A;            UETTDRCJ27A; UETTDRCJ28A;            UETTDRCJ29A; UETTDRCJ30A;            UETTDRCJ31A; UETTDRCJ32A;            UETTDRCJ33A; UETTDRCJ34A;            UETTDRCJ99A; UETTDTRDP11A;            UETTDTRDP12A; UETTDTRDP13A;            UETTDTRDP14A; UETTDTRDP15A;            UETTDTRDP99A; UETTDTRDS31A;            UETTDTRDS32A; UETTDTRDS33A;            UETTDTRDS34A; UETTDTRDS35A;            UETTDTRDS36A; UETTDTRDS37A;            UETTDTRDS38A; UETTDTRDS39A;            UETTDTRDS40A; UETTDTRDS41A;            UETTDTRDS42A; UETTDTRDS43A;            UETTDTRDS44A; UETTDTRDS45A;            UETTDTRDS46A; UETTDTRDS47A;            UETTDTRDS48A; UETTDTRDS49A;            UETTDTRDS50A; UETTDTRDS51A;            UETTDTRDS52A; UETTDTRDS53A;            UETTDTRDS54A; UETTDTRDS55A;            UETTDTRDS56A; UETTDTRDS57A;            UETTDTRDS58A; UETTDREL11A;            UETTDREL12A; UETTDREL13A;            UETTDREL14A; UETTDREL15A;</p>

			UETTDREL16A; UETTDREL17A; UETTDREL18A; UETTDREL19A; UETTDREL20A; UETTDREL21A; UETTDREL32A; UETTDREL33A; UETTDREL34A; UETTDREL35A; UETTDREL36A; UETTDREL37A; UETTDREL38A; UETTDREL41A; UETTDREL42A; UETTDREL43A; UETTDREL44A; UETTDREL45A; UETTDREL46A; UETTDREL47A; UETTDREL48A; UETTDREL49A; UETTDREL50A; UETTDREL51A; UETTDREL52A; UETTDREL53A; UETTDREL54A; UETTDREL55A; UETTDREL56A; UETTDREL57A; UETTDREL58A; UETTDREL59A; UETTDREL60A; UETTDREL61A; UETTDREL62A; UETTDREL63A; UETTDREL64A; UETTDREL65A; UETTDREL66A; UETTDREL67A; UETTDREL68A; UETTDREL69A; UETTDREL70A; UETTDREL71A; UETTDREL72A; UETTDREL73A; UETTDREL74A; UETTDREL81A; UETTDREL99A; UETTDRELF11A; UETTDRELT21A; UETTDRELT22A; UETTDRELT23A; UETTDRELT24A; UETTDRELT25A; UETTDRELT26A; UETTDRELT27A; UETTDRELT28A; UETTDRELT29A; UETTDRELT30A; UETTDRELT31A; UETTDRELT32A; UETTDRELT33A; UETTDRELT34A; UETTDRELT35A; UETTDRELT36A; UETTDRELT37A; UETTDRELT99A; UETTDRELSB21A; UETTDRELSB22A; UETTDRELSB23A; UETTDRELSB24A; UETTDRELSB25A; UETTDRELSB26A; UETTDRELSB27A; UETTDRELSB29A; UETTDRELSB30A; UETTDRELSB31A; UETTDRELSB32A; UETTDRELSB33A; UETTDRELSB34A; UETTDRELSB35A; UETTDRELSB36A; UETTDRELSB37A; UETTDRELSB38A; UETTDRELSB39A; UETTDRELSO32A; UETTDRELSO33A; UETTDRELSO34A; UETTDRELSO35A; UETTDRELSO36A; UETTDRELSO37A; UETTDRELSO38A; UETTDRELSO39A; UETTDRELSO40A; UETTDRELSO41A;
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			<p>UETTDRSO42A; UETTDRSO43A;  UETTDRSO44A; UETTDRSO45A;  UETTDRSO46A; UETTDRSO47A;  UETTDRSO48A; UETTDRSO49A;  UETTDRSO50A; UETTDRSO51A;  UETTD RTP22A; UETTD RTP23A;  UETTD RTP24A; UETTD RTP25A;  UETTD RTP26A; UETTD RTP27A;  UETTD RTP28A; UETTD RTP29A;  UETTD RTP30A; UETTD RTP31A;  UETTD RTP32A; UETTD RTP33A;  UETTD RTP34A; UETTD RTP35A;  UETTD RTP99A; UETTD RTS21A;  UETTD RTS22A; UETTD RTS23A;  UETTD RTS24A; UETTD RTS25A;  UETTD RTS26A; UETTD RTS27A;  UETTD RTS28A; UETTD RTS29A;  UETTD RTS30A; UETTD RTS31A;  UETTD RTS32A; UETTD RTS33A;  UETTD RTS34A; UETTD RTS35A;  UETTD RTS36A; UETTD RTS37A;  UETTD RTS38A; UETTD RVC21A;  UETTD RVC23A; UETTD RVC24A;  UETTD RVC25A; UETTD RVC26A;  UETTD RVC27A; UETTD RVC29A;  UETTD RVC30A; UETTD RVC31A;  UETTD RVC32A; UETTD RVC33A;  UETTD RVC34A</p> <p><b>The following units were replaced:</b></p> <p>UETTD RCJ01B; UETTD RCJ02B;  UETTD RCJ03B; UETTD RCJ04B;  UETTD RCJ05B; UETTD RCJ06B;  UETTD RCJ07B; UETTD RCJ08B;  UETTD RCJ09B; UETTD RCJ10B;  UETTD RCJ11B; UETTD RCJ12B;  UETTD RCJ13B; UETTD RCJ14B;  UETTD RDP01B; UETTD RDP02B;  UETTD RDP03B; UETTD RDP04B;  UETTD RDP05B; UETTD RDS01B;  UETTD RDS02B; UETTD RDS03B;  UETTD RDS04B; UETTD RDS05B;  UETTD RDS06B; UETTD RDS07B;  UETTD RDS08B; UETTD RDS09B;  UETTD RDS10B; UETTD RDS11B;  UETTD RDS12B; UETTD RDS13B;  UETTD RDS14B; UETTD RDS15B;  UETTD RDS16B; UETTD RDS17B;</p>
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			UETTDARDS18B; UETTDARDS19B; UETTDARDS20B; UETTDARDS21B; UETTDARDS22B; UETTDARDS23B; UETTDARDS24B; UETTDARDS25B; UETTDARDS26B; UETTDARDS27B; UETTDARDS28B; UETTDRELO1B; UETTDRELO2B; UETTDRELO3B; UETTDRELO4B; UETTDRELO5B; UETTDARIS01B; UETTDARIS02B; UETTDARIS03B; UETTDARIS04B; UETTDARIS27B; UETTDARIS06B; UETTDARIS07B; UETTDARIS08B; UETTDARIS09B; UETTDARIS10B; UETTDARIS11B; UETTDARIS12B; UETTDARIS13B; UETTDARIS14B; UETTDARIS15B; UETTDARIS16B; UETTDARIS17B; UETTDARIS18B; UETTDARIS19B; UETTDARIS20B; UETTDARIS21B; UETTDARIS22B; UETTDARIS23B; UETTDARIS24B; UETTDARIS25B; UETTDARIS26B; UETTDARRF01A; UETTDARRF02A; UETTDARRF03A; UETTDARRF04A; UETTDARRF05A; UETTDARRF06A; UETTDARRF07A; UETTDARRF08A; UETTDARRF09A; UETTDARRF10A; UETTDARRT01B; UETTDARRT02B; UETTDARRT03B; UETTDARRT04B; UETTDARRT05B; UETTDARRT06B; UETTDARRT07B; UETTDARRT08B; UETTDARRT09B; UETTDARRT10B; UETTDARRT11B; UETTDARRT12B; UETTDARRT13B; UETTDARRT14B; UETTDARRT15B; UETTDARSB01B; UETTDARSB02B; UETTDARSB03B; UETTDARSB04B; UETTDARSB05B; UETTDARSB06B; UETTDARSB07B; UETTDARSB09B; UETTDARSB10B; UETTDARSB11B; UETTDARSB12B; UETTDARSB13B; UETTDARSB14B; UETTDARSB15B; UETTDARSB16B; UETTDARSB17B; UETTDARSB18B; UETTDARSO02B; UETTDARSO03B; UETTDARSO04B; UETTDARSO05B; UETTDARSO06B; UETTDARSO07B; UETTDARSO08B; UETTDARSO09B; UETTDARSO10B; UETTDARSO11B; UETTDARSO12B; UETTDARSO13B;
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			<p>UETDRSO14B; UETDRSO15A;  UETDRSO16A; UETDRSO17A;  UETDRSO18A; UETDRSO19A;  UETDRSO20A; UETDRSO21A;  UETTD RTP02B; UETTD RTP03B;  UETTD RTP04B; UETTD RTP05B;  UETTD RTP06B; UETTD RTP07B;  UETTD RTP08B; UETTD RTP09B;  UETTD RTP10B; UETTD RTP11B;  UETTD RTP12B; UETTD RTP13B;  UETTD RTP14B; UETTD RTP15B;  UETTD RTS01B; UETTD RTS02B;  UETTD RTS03B; UETTD RTS04B;  UETTD RTS05B; UETTD RTS06B;  UETTD RTS07B; UETTD RTS08B;  UETTD RTS09B; UETTD RTS10B;  UETTD RTS11B; UETTD RTS12B;  UETTD RTS13B; UETTD RTS14B;  UETTD RTS15B; UETTD RTS16B;  UETTD RVC01B; UETTD RVC02B;  UETTD RVC03B; UETTD RVC04B;  UETTD RVC05B; UETTD RVC06B;  UETTD RVC07B; UETTD RVC08B;  UETTD RVC09B; UETTD RVC10B  UETTD RRF01B; UETTD RRF02B;  UETTD RRF03B; UETTD RRF04B;  UETTD RRF05B; UETTD RRF06B;  UETTD RRF07B; UETTD RRF08B;  UETTD RRF09B; UETTD RRF10B</p> <p><b>The following imported units were added to UET12 Version 1:</b></p> <p>AHCARB202A; AHCARB204A;  AHCARB205A; AHCCHM201A;  AHCMMOM304A; AHCPCM201A;  BSBINM401A; BSBMGT402A;  BSBMGT403A; BSBWOR401A;  BSBWOR402A; BSBCUS501A;  BSBFIM501A; BSBINM501A;  BSBINN502A; BSBLED501A;  BSBMGT502B; BSBMGT515A;  BSBMGT516A; BSBSUS501A;  BSBWOR501A; BSBWOR502A;  CPCCCM2007A; CPCCLDG3001A;  CPCCLHS3001A; CPCCLHS3002A;  CPCCLRG3001A; CPCCLRG3002A;  CPCCLSF2001A; CPCCLSF3001A;  CPCCOHS1001A; HLTFA301B;</p>
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			<p>ICTCBL2065A; ICTCBL2068A;  MEM16012A; MEM17003A;  NWP218B; NWP261A; RIIOHS202A;  RIIOHS204A ; RIIOHS205A;  TLIC3003A; TLIC3004A; TLID3035A;  TLILIC2001A; TLILIC4011A;  TLILIC0012A; TLILIC3003A;  TLILIC2005A; TLILIC3008A;  TLILIC4009A; UEENEEC101A;  UEENEEC108A; UEENEEC110A;  UEENEEED101A; UEENEEED104A;  UEENEEED117A; UEENEEEE083A;  UEENEEEE101A; UEENEEEE102A;  UEENEEEE103A; UEENEEEE104A;  UEENEEEE105A; UEENEEEE107A;  UEENEEEE108A; UEENEEEE124A;  UEENEEEE125A; UEENEEEE126A;  UEENEEEE137A; UEENEEEE151A;  UEENEEF106A; UEENEEF107A;  UEENEEG006A; UEENEEG033A;  UEENEEG063A; UEENEEG076A;  UEENEEG101A; UEENEEG102A;  UEENEEG103A; UEENEEG104A;  UEENEEG105A; UEENEEG106A;  UEENEEG107A; UEENEEG108A;  UEENEEG109A; UEENEEG149A;  UEENEEG171A; UEENEEH102A;  UEENEEH112A; UEENEEH139A;  UEENEEI155A; UEENEEI155A;  UEENEEK101A; UEENEEK102A;  UEENEEK103A; UEENEEK104A;  UEENEEK105A; UEENEEK106A;  UEENEEK116A ; UEENEEK120A ;  UEENEEK142A; UEENEEP024A;  UEENEEP026A;</p> <p><b>The following imported units were removed from UET12 Version 1:</b></p> <p>BSBFLM303B; BSBFLM305B;  BSBFLM306B; BSBFLM309B;  BSBFLM311B; BSBFLM312A;  BSBFLM403B; BSBFLM405B;  BSBFLM406B; BSBFLM409B;  BSBFLM412A; BSBFLM501B;  BSBFLM503B; BSBFLM505B;  BSBFLM506B; BSBFLM507A;  BSBFLM509B; BSBFLM510B;  BSBFLM511B; BSBFLM512B;</p>
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			BSBFLM513A; BSBFLM514A; BSBMGT507A; ICTTC013C; ICTTC064C ; ICTTC065C; ICTTC066C; ICTTC068C; ICTTC069C; ICTTC104C; ICTTC127C; ICTTC131B; ICTTC133B; ICTTC134B; ICTTC135B; UEENEED002B; UEENEEE007B; UEENEEG001B; UEENEEG002B; UEENEEG047B; UEENEEG048B; UEENEEG049B; UEENEEH011B
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<b>UET09 Version 3</b>	<b>TBA</b>	<b>NQC</b>	<p>Version 2 of UET09 includes the following new components:</p> <p><b>New Units of Competency</b></p> <p>UETTDRIS81A</p> <p><b>New Qualification</b></p> <p>UET20510 Certificate II in National Broadband Network Cabling Installation and Maintenance</p> <p><b>New Imported Units</b></p> <p>UEENEEE037B; UEENEEK042A; UEENEEC001B; UEENEEC008B; UEENEEC010B; UEENEEE051B; UEENEEF006B; UEENEEF007B; CPCCCM2007A; TLID3507C ; TLILIC508A; CPCCOHS1001A; RIIOHS202A; RIIOHS204A ; RIIOHS205A</p>
<b>UET09 Version 2.1</b>	<b>5 August 2010</b>	<p><b>EE-Oz ISC Upgrade</b></p> <p>Authorised by NQC to meet Packaging Rule requirements and the inclusion of Sustainability Skills in qualifications.</p>	<p>Modification of the following qualifications to comply with NQC Packaging Rules.</p> <p>UET20110 Certificate II in ESI — Vegetation Control</p>
<b>UET09 Version 2.0</b>	<b>12 February 2010</b>	<b>NQC</b>	<p>Version 2 of UET09 includes the following new components:</p> <p><b>New Units of Competency</b></p> <p>UETTDRRF01A UETTDRRF02A UETTDRRF03A UETTDRRF04A UETTDRRF05A UETTDRRF06A UETTDRRF07A UETTDRRF08A UETTDRRF09A UETTDRRF10A</p>

			<p><b>New Imported Unit</b></p> <p>HLTCPR201A Perform CPR</p> <p><b>New Identified Skill Sets</b></p> <p>Apply Access Procedures to Work On or Near Electrical Network Infrastructure</p> <p>Apply ESI Safety Rules, Codes of Practice and Procedures for Work On or Near Electrical Apparatus</p> <p>Perform Pole Top Rescue</p> <p>Perform Tower Rescue</p> <p>Perform Rescue from Switchyard Structures at Heights</p> <p>Perform EWP Controlled Descent Escape</p> <p>Provide First Aid in an ESI Environment</p> <p>Perform CPR</p> <p>Perform Pole Top Rescue and CPR</p> <p>Perform EWP Rescue and CPR</p> <p>Perform Tower Rescue and Provide First Aid</p> <p>Perform Switchyard Rescue at Heights and Provide First Aid</p> <p>Perform Rescue from a Live LV Panel and CPR</p> <p>Perform Cable Pit/Trench/Excavation Rescue and CPR</p> <p>Perform Cable Pit/Trench/Excavation Rescue</p> <p>Perform Rescue from a Live LV Panel</p> <p>Perform EWP Rescue</p>
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<p><b>UET09 Version 1</b></p>	<p><b>30 October 2009</b></p>	<p><b>NQC</b></p>	<p>Reviewed under the 2008 Training Package Development and Endorsement Processes.</p> <p>The following continuous improvement changes were made to the preceding Training Package UET06 Version in developing UET09 Version 1.</p> <p>Category 2 changes made as a result of the 2007-08 Training Package Structure Review and the 2007-08 Continuous Improvement Plan. Changes and Additions made include:</p> <p><b>New Units of Competency</b></p> <p>UETTDRSO15A Operate and monitor system equipment (SCADA)  UETTDRSO16A Monitor and control the activities of field staff  UETTDRSO17A Coordinate HV transmission network  UETTDRSO18A Respond to discrete/interdependent protection operations  UETTDRSO19A Coordinate system operations in a regulated energy market  UETTDRSO20A Respond to complex protection operations  UETTDRSO21A Manage network power flows  UETTDRIS28A Analyse and develop solutions for problems in extra-low voltage, single path circuits  UETTDRIS29A Analyse and develop solutions for problems in multiple path d.c. circuits  UETTDRIS30A Analyse and develop solutions for problems in electromagnetic circuits  UETTDRIS31A Analyse and develop solutions for problems in single and three phase low voltage circuits</p> <p><b>Revised Units of Competency</b></p> <p>Changes were made to various sections of the following units including changes to Performance Criteria, Range of Variables, Critical Aspects and EKAS: UETTDRCJ05B; UETTDRCJ11B;</p>
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			<p>           UETTDRCJ12B; UETTDRCJ13B;            UETTDTRDP01B; UETTDTRDP02B;            UETTDTRDP03B; UETTDTRDP04B;            UETTDREL01B; UETTDREL02B;            UETTDREL03B; UETTDREL04B;            UETTDREL05B; UETTDTRIS02B;            UETTDTRIS03B; UETTDTRIS04B;            UETTDTRIS05B; UETTDTRIS06B;            UETTDTRIS07B; UETTDTRIS08B;            UETTDTRIS09B; UETTDTRIS10B;            UETTDTRIS11B; UETTDTRIS13B;            UETTDTRIS14B; UETTDTRIS15B;            UETTDTRIS16B; UETTDTRIS17B;            UETTDTRIS18B; UETTDTRIS19B;            UETTDTRIS20B; UETTDTRIS21B;            UETTDTRIS22B; UETTDTRIS23B;            UETTDTRIS24B; UETTDTRIS25B;            UETTDTRIS26B; UETTDTRIS27B;            UETTDTRRT11B; UETTDTRRT13B;            UETTDTRSB01B; UETTDTRSB02B;            UETTDTRSB03B ; UETTDTRSB04B ;            UETTDTRSB05B ; UETTDTRSB06B;            UETTDTRSB07B; UETTDTRSB09B;            UETTDTRSB10B; UETTDTRSB11B;            UETTDTRSB12B; UETTDTRSB13B;            UETTDTRSB14B; UETTDTRSB15B;            UETTDTRSB16B; UETTDTRSB17B;            UETTDTRSB18B; UETTDTRSO03B;            UETTDTRSO09B; UETTDTRTP02B;            UETTDTRTP03B; UETTDTRTP04B;            UETTDTRTP05B; UETTDTRTP07B;            UETTDTRTP08B; UETTDTRTP09B;            UETTDTRTP10B; UETTDTRTP11B;            UETTDTRTP12B; UETTDTRTP13B;            UETTDTRTP14B; UETTDTRTP15B;            UETTDRTS01B; UETTDRTS02B.            Changes to unit pre-requisites were made to the following units:            UETTDRCJ01B; UETTDTRDP05B;            UETTDTRDS01B; UETTDTRDS02B;            UETTDTRDS03B; UETTDTRDS04B;            UETTDTRDS05B; UETTDTRDS06B;            UETTDTRDS07B; UETTDTRDS08B;            UETTDTRDS09B; UETTDTRDS10B;            UETTDTRDS11B; UETTDTRDS12B;            UETTDTRDS13B; UETTDTRDS14B;            UETTDTRDS15B; UETTDTRDS16B;            UETTDTRDS17B; UETTDTRDS18B;         </p>
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		<p>UETTDARDS19B; UETTDARDS20B;  UETTDARDS21B; UETTDARDS22B;  UETTDARDS23B; UETTDARDS24B;  UETTDARDS25B; UETTDARDS26B;  UETTDARDS27B; UETTDARDS28B;  UETTDARIS01B; UETTDARIS12B;  UETTDARSO02B; UETTDARSO04B;  UETTDARSO05B; UETTDARSO06B;  UETTDARSO07B; UETTDARSO08B;  UETTDARSO10B; UETTDARSO11B;  UETTDARSO14B; UETTDARTP06B;  UETTDARTR03B; UETTDARTR04B;  UETTDARTR05B; UETTDARTR06B;  UETTDARTR07B; UETTDARTR08B;  UETTDARTR09B; UETTDARTR10B;  UETTDARTR11B; UETTDARTR12B;  UETTDARTR13B; UETTDARTR14B;  UETTDARTR15B; UETTDARTR16B;  UETTDARV01B; UETTDARV02B;  UETTDARV03B; UETTDARV04B;  UETTDARV05B; UETTDARV06B;  UETTDARV07B; UETTDARV08B;  UETTDARV09B; UETTDARV10B.</p> <p>Editorial changes described below were made to the above revised units and also to:</p> <p>UETTDARCJ02B; UETTDARCJ03B;  UETTDARCJ04B; UETTDARCJ06B;  UETTDARCJ07B; UETTDARCJ08B;  UETTDARCJ09B; UETTDARCJ10B;  UETTDARCJ14B; UETTDARRT01B;  UETTDARRT02B; UETTDARRT03B;  UETTDARRT04B; UETTDARRT05B;  UETTDARRT06B; UETTDARRT07B;  UETTDARRT08B; UETTDARRT09B;  UETTDARRT10B; UETTDARRT12B;  UETTDARRT14B; UETTDARRT15B;  UETTDARSO12B; UETTDARSO13B.</p> <p><b>Revised Qualifications</b></p> <p>The following qualifications have been revised:</p> <p>UET20109 Certificate II in ESI-Vegetation Control  UET20209 Certificate II in ESI-Transmission Line Assembly  UET30209 CIII in ESI – Distribution  UET30309 CIII in ESI – Rail Traction</p>
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		<p>UET30409 CIII in ESI – Cable Jointing  UET30109 CIII in ESI – Transmission  UET50109 Diploma of ESI - Power Systems  UET60109 Advanced Diploma of ESI - Power Systems</p> <p><b>Imported Units</b></p> <p>The following imported units have been included in the Training Package as updated or replacements for superseded imported units.</p> <p>UEENEED004B Use engineering applications software  UEENEED017B Install and configure internetworking systems  UEENEED027B Develop structured programs to control external devices  UEENEED028B Develop and test code for microcontroller devices  UEENEEE001B Apply OHS practices in the workplace  UEENEEE002B Dismantle, assemble and fabricate electrotechnology components  UEENEEE003B Solve problems in extra-low voltage single path circuits  UEENEEE004B Solve problems in multiple path d.c. circuits  UEENEEE005B Fix and secure equipment  UEENEEE006B Apply methods to maintain currency of industry developments  UEENEEE007B Use drawings, diagrams, schedules and manuals  UEENEEE008B Lay wiring/cabling and terminate accessories for extra-low voltage circuits  UEENEEE024B Compile and produce an electrotechnology report  UEENEEG001B Solve problems in electromagnetic circuits  UEENEEG002B Solve problems in single and three phase low voltage circuits  UEENEEG047B Provide computational solutions to power engineering problems</p>
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			<p>UEENEEG048B Solve problems in complex multiple path power circuits</p> <p>UEENEEG049B Solve problems in complex polyphase power circuits</p> <p>UEENEEH002B Carry out basic repairs to electronic apparatus by replacement of components</p> <p>UEENEEH012B Troubleshoot digital subsystems</p> <p>UEENEEH039B Troubleshoot basic amplifiers</p> <p>BSBFLM303C Contribute to effective workplace relationships</p> <p>BSBFLM305C Support operational plan</p> <p>BSBFLM306C Provide workplace information and resourcing plans</p> <p>BSBFLM309C Support continuous improvement systems and processes</p> <p>BSBFLM311C Support a workplace learning environment</p> <p>BSBFLM312B Contribute to team effectiveness</p> <p>BSBWOR401A Implement effective workplace relationships</p> <p>BSBMGT402A Implement operational plan</p> <p>BSBINM401A Implement workplace information system</p> <p>BSBMGT403A Implement continuous improvement</p> <p>BSBWOR402A Promote team effectiveness</p> <p>BSBWOR501A Manage personal work priorities and professional development</p> <p>BSBMGT502B Manage people performance</p> <p>BSBMGT515A Manage operational plan</p> <p>BSBINM501A Manage an information or knowledge management systems</p> <p>BSBCUS501A Manage quality customer service</p> <p>BSBMGT516A Facilitate continuous improvement</p> <p>BSBINN502A Build and sustain an innovative work environment</p> <p>BSBLED501A Develop a workplace learning environment</p>
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			<p>BSBWOR502A Ensure team effectiveness</p> <p>BSBFIM501A Manage budgets and financial plans</p> <p>BSBSUS501A Develop workplace policy and procedures for sustainability</p> <p>ICTTC013D Perform an accurate customer premises cable and system test</p> <p>ICTTC064D Haul underground cable</p> <p>ICTTC065D Splice carrier/service provider optic fibre cable</p> <p>ICTTC066D Joint and terminate coaxial cable</p> <p>ICTTC068D Install telecommunications service to a building</p> <p>ICTTC069D Install network cable equipment</p> <p>ICTTC104D Maintain an electronic system</p> <p>ICTTC127D Supervise worksite activities</p> <p>ICTTC131C Install an above ground equipment enclosure</p> <p>ICTTC133C Construct underground telecommunications infrastructure</p> <p>ICTTC134C Fix aerial cable</p> <p>ICTTC135C Joint metallic conductor cable Access Network</p> <p>Editorial changes to all units resulting from the 2007-08 Training Package Structure Review and this review include:</p> <p>Removal of spaces in any of the unit or qualification codes.</p> <p>Replace 'Version No. 2.1' with 'Version No. 2.1' in all footers across the whole Training Package.</p> <p>3. For all Units:</p> <p>Change all Unit suffixes for version 1 units from 'A' to 'B'</p> <p>Add '1.1 Descriptor' as a new title</p> <p>Move '3.1 License to practise' to position 1.2</p> <p>Move the sub-heading '2.1 Competencies' from the left hand column to the right hand column</p> <p>Move the sub-heading '2.2 Literacy and Numeracy skills' from the left hand</p>
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		<p>column to the right hand column          Include '3) Employability Skills' and text therein as a whole new section          Revise the numbering of all subsequent sections to accommodate the inclusion of the Employability Skills section at 3)          Include "All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies" as a new paragraph in '7) Required Skills and Knowledge'          Change all references to sections within a unit to reflect the correct section (may require change as a result of the inclusion of the Employability Skills section at 3).          Completely remove the 'Key Competencies' and 'Skills Enabling Employment' sections.</p> <p><b>Amendment of prerequisites section of the units:</b></p> <p>UETTDRCJ13B; UETTDRCJ14B;          UETTDNIS06B; UETTDNIS07B;          UETTDNIS27B; UETTDNRT14B;          UETTDNRT15B; UETTDNRSB01B;          UETTDNRSB02B; UETTDNRSB03B;          UETTDNRSB04B; UETTDNRSB05B;          UETTDNRSB06B; UETTDNRSB07B;          UETTDNRSB09B; UETTDNRSB10B;          UETTDNRSB11B; UETTDNRSB12B;          UETTDNRSB13B; UETTDNRSB14B;          UETTDNRSB15B; UETTDNRSB16B;          UETTDNRSB17B; UETTDNRSB18B;          UETTDNTP14B; UETTDNTP15B;</p> <p>To include:          Entry into this unit requires a current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.          This better reflect the fact that the ERAC requirements can be met via a number of qualifications from the UEE07 Electrotechnology Training</p>
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			Package. This statement also reduces the prerequisite chain for these units.
<b>1</b>	<b>2006</b>	<b>NQC</b>	Primary Release of Revised Training Package UET06 replacing UTT98

## Preliminary Information

### Preliminary Information

#### The Electricity Supply Industry — Transmission, Distribution and Rail

The Electricity Supply Transmission and Distribution Industry conveys electricity from the generating power stations to the consumer by means of a reticulation system that includes the following component sections:

- The distribution of electricity by means of overhead conductors and poles. This is usually reticulation in built up areas in both industrial/commercial and residential settings or rural settings.
- The distribution of electricity by means of underground cables where installation and cable jointing are specific skills. This is usually reticulation in built up areas in both industrial/commercial and residential settings.
- The transmission of electricity by means of overhead conductors suspended from towers (or larger concrete or wooden poles) at voltages substantially higher than those used for distribution
- The transmission of electricity by means of underground cables that are usually oil or gas filled requiring special skills in installation and maintenance.

In addition to mainstream linework and cable jointing functions, powerline workers are being called on, in some areas, to undertake such tasks as substation installation and maintenance, specialised testing, revenue meter installation and the like. Some electrical distributors are multi-skilling their powerline personnel with additional mainstream electrical skills, such as those held by electricians.

The industry has undergone rapid changes in work methods, staffing levels, management approaches and the sub-contracting of many work functions to external contractors. The industry has always had a commitment to training and safety and is now embracing the spirit of the National Training Reform Agenda.

The main activities of the industry are installation, service, maintenance, diagnosis and repair of electrical cabling systems, apparatus and equipment in relation to:

- Overhead lines (distribution)
- Overhead lines (transmission)
- Cable jointing
- Equipment installation.

Examples of Electricity Supply Industry – Transmission, Distribution and Rail sector vocations are Overhead powerline worker (distribution); Overhead powerline worker (transmission); Rail Traction Lineworker and Cable jointer.

Technological innovation in the range of work activities and the vocations involved in Electricity Supply Industry — Transmission and Distribution sector systems provide good career opportunities.

There are three specific areas that provide individuals with the chance to enter an exciting career in the Transmission and Distribution sector of the Electricity Supply Industry and gain a nationally recognised qualification.

### **Transmission (Powerline)**

Work in the area of Electricity Transmission involves installing and maintaining towers and associated hardware as well as stringing and maintaining overhead conductors and cables. Trainees in this program will be exposed to a range of experiences, designed to give them the expertise required for a career in this sector.

### **Distribution (Powerline)**

The distribution of electricity throughout Australia involves the installation and maintenance of underground cables, overhead conductors, associated hardware and public lighting. This program enables trainees to acquire the skills and knowledge needed for a career in power line distribution.

### **Rail Traction (Powerline)**

The distribution of electricity used for transporting of people and goods by various types of rail traction vehicles (e.g. tram and train) involves the carrying out of construction, maintenance and inspection of overhead traction wiring systems and equipment in accordance with legislative rules and regulations.

## **Industry coverage**

The formal industry coverage is under ANZSIC Code 3610 in which the sector is defined as consisting of units mainly engaged in the generation, transmission or distribution of electricity.

The sector has been characterised during the last few years by the privatisation of many enterprises and the out-sourcing of many functions and activities.

Notwithstanding these changes the Competency Standards in this Package cover approximately one third of the Electricity Supply Industry's direct workforce of 47,000 employees. The Standards may also provide coverage for the increasing contractor workforce, which is required to support sector activities.

The ESI Transmission, Distribution and Rail sector of the Industry contributes greatly to the economic and future needs of Australia.

## Regulatory arrangements

The industry is subject to a high level of legislation, regulation, codes of practice, guidelines and advisory standards related to the research, assembly, installation, construction, diagnostics, maintenance, commission, program, test or repair of; networks, systems, circuits, equipment, components, appliances, facilities and the like in the field of electricity. The regulatory requirements are typically based on the principle of operation of wiring systems and associated circuits involving equipment, apparatus and systems, public safety, safety and health of individuals who work on lines/circuits, systems and apparatus/equipment and other codes and practices related to the environment in which they operate.

Where possible, relevant and current regulatory requirements have been incorporated into this Training Package to assure outcomes are complementary to regulation. Where regulatory requirements are amended or introduced such outcomes are to be incorporated in training and assessment delivery. Continuous improvement and maintenance arrangements included in this Training Package will endeavour to maintain pace with changes.

## Statutes, regulations and codes of practice

Federal, State and Territory Electricity, Telecommunications, Anti-discrimination, Occupational Health and Safety and Work Cover Acts and Regulations typically cover the Industry. Additionally, there are many Australian/New Zealand and International Standards, codes of practices and regulations that apply and to which observance is essential for assuring life, property and commerce. Thus, relevant legislative, regulatory codes of practice, guidelines and advisory standard requirements form an integral part of the obligatory requirements in the vocational standards found in this Training Package. The following websites can be a useful starting point for the latest information:

## Other industry standards

It is recognised that the National Transmission and Distribution Sector Standards do not cover all the competencies, which are likely to be required and applied within Electricity Supply Industry workplaces. Nationally endorsed competency standards from other industries will be used where appropriate and the concept of cross-industry disciplinary standards will be encouraged. Specific rules have been included within this Training Package to address these arrangements.

## Overview

### What is a Training Package?

A Training Package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Each Training Package:



- provides a consistent and reliable set of components for recognised performance and determining training, recognising and assessing people's skills, and may also have optional support materials
- enables nationally recognised qualifications to be awarded through assessment against given industry Competency Standard Units
- encourages the development and delivery of flexible training and assessment which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable industry outcomes.

### **How do Training Packages fit within the National Training Framework?**

The National Training Framework is made up of the nationally agreed quality arrangements for the vocational education and training sector, the Australian Quality Training Framework (AQTF), and Training Packages which contain the vocational standards for industry, endorsed by the National Quality Council (NQC).

### **How are Training Packages developed?**

Training Packages are developed by Industry Skills Councils to meet the identified training needs of specific industries or industry sectors. To gain national endorsement of a Training Package, developers must provide evidence of extensive research, consultation and support within the industry area.

### **How do Training Packages encourage flexibility?**

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained. It is acknowledged that people can achieve vocational competency in many ways and Training Packages emphasise what learners can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the competency standard units, and even gain a qualification without completing a formal training program.

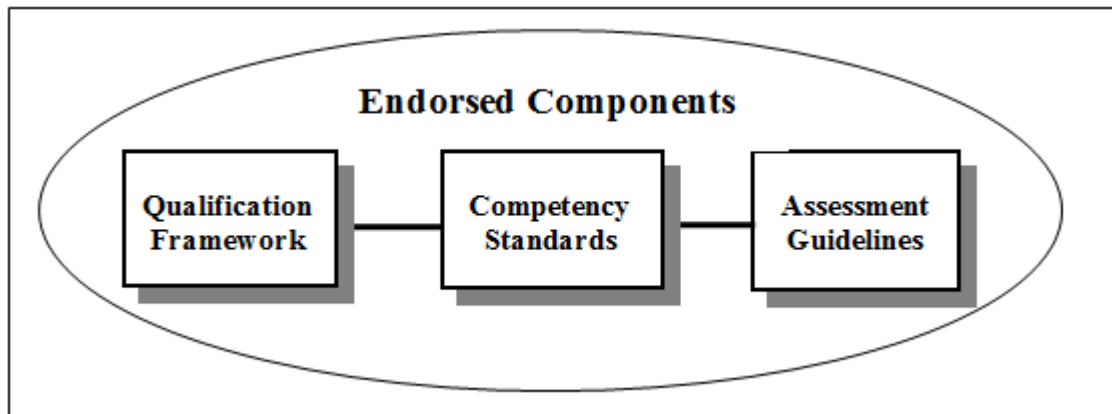
Assessment and training may be conducted at the workplace, off-the-job, at a training organisation, during regular work, or through work experience, work placement, work simulation or any combination of these.

### **Who can deliver and assess using Training Packages?**

Training and assessment, using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualifications or specific Competency Standard Units on its scope of registration, or that works in partnership with another RTO as specified in the AQTF Standards for RTOs.

### **Training Package Components**

Training Packages are made up of mandatory components endorsed by the NQC and optional support materials. The nationally endorsed components include the Qualification Framework, Competency Standard Units and Assessment Guidelines. These form the basis of training and assessment in the Training Package and must be used.



### **Qualifications Framework**

Each Training Package provides details of the competency standards that must be achieved to award AQF qualifications or Statements of Attainment for part of a qualification. The rules, which determine which Competency Standard Units can be combined to make up a valid AQF qualification in the Training Package, are known as "package rules". These packaging rules must be followed to ensure the integrity of validating recognised qualifications issued.

### **Competency Standard Units**

Each Competency Standard Unit identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy and Occupational Health and Safety requirements. The Competency Standard Units must be adhered to in training and assessment to ensure consistency of outcomes.

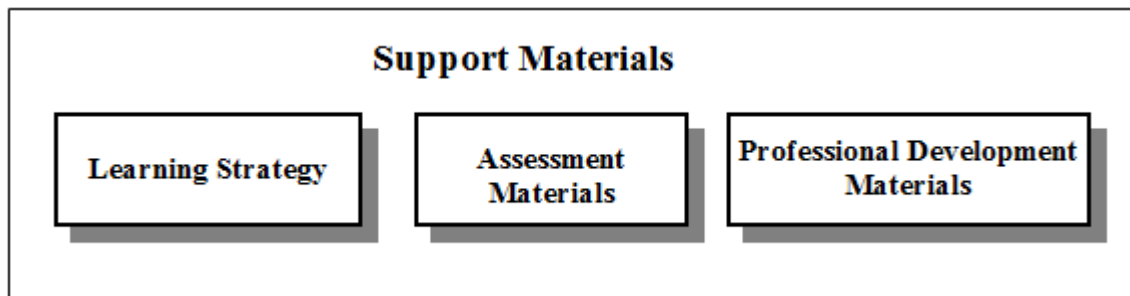
### **Assessment Guidelines**

The Assessment Guidelines provide an industry framework to ensure all assessment outcomes meet industry needs and the nationally agreed standards as expressed in the Training Package and the AQTF Standards for RTOs. The Assessment Guidelines must be followed to ensure integrity of assessment.

### **Training Package Support Materials**

The endorsed components of a Training Package are complemented and supported by optional support materials that provide for choice in the design of training and assessment to meet the needs of industry, RTOs and learners. In some instances the Industry Skills Council may have developed a Training Package and industry support material to assist RTOs in delivering the preferred industry approach. These support materials should be considered by RTOs in accordance with the relevant AQTF standard in an effort to support increased national consistency and assure industry of the quality of outcomes.

A Training Package can relate to single or multiple competency standard units, an industry sector, a qualification or the whole Training Package. They tend to fall into one or more of the categories below.



A range of stakeholders can produce a Training Package support materials, however, to ensure national consistency, partnership or collaborative approaches are preferred. Support materials developers include Industry Skills Councils, RTOs, individual trainers and assessors, private and commercial developers and government agencies.

Where support materials have been quality assured through a process of 'noting' by the NQC, they display the official logo, shown below. Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on the type of product and their availability ([www.ntis.gov.au](http://www.ntis.gov.au)).



It is not compulsory to submit support materials for noting, any resources that meet the requirements of the Training Package can be used.

### **Training Package Codes**

There are agreed conventions for the national codes used in Training Packages and their components. Always use the correct codes, exactly as they appear in the Training Package, and with the title always following the code.

Each Training Package has a unique five-character national code assigned when the Training Package which contains the vocational standards for industry is endorsed, for example UET09. The first three characters are letters identifying the Training Package which contains the vocational standards for industry coverage and the last two characters are numbers identifying the year of endorsement.

### **Qualification Codes**

Each Training Package qualification has a unique eight-character code, for example in this Training Package UET30109. In qualification codes, the:

- first three characters are letters identifying the Training Package
- fourth is a number reflecting the AQF level for the qualification
- fifth and sixth characters represent the number of the qualification for the given level. That is in the case of UET30105, it is the first qualification of currently four AQF3 qualifications on offer in the Training Package.
- seventh and eighth numbers identify the year in which the qualification was endorsed. Any subsequent amendments to the qualification result in this number changing to reflect the new year of endorsement.

### **Competency Standard Unit Codes**

Each Unit has a unique code. A typical code is made up of a maximum of 12 characters; normally a mixture of uppercase letters and numbers. For example in this Training Package the following approach has been adopted:

Unit Number										
U	E	T	T	D	R					A
Industry – EE-Oz Training Standards identifier			Training Package identifier			Discipline ← letters →		Numbers 01 to 99		Version
← 12 Characters Maximum →										

Where an amendment is made to a Competency Standard Unit the following applies:

- where changes do not affect the outcome of the unit the last character alpha identifier is incremented to indicate the new version. For example, UETTDTRIS12A is changed to UETTDTRIS12B.
- where changes alter the outcome, a new unit title and code is assigned.

#### Training Package, Qualification and Competency Standard Units Titles

There are agreed conventions for titling Training Packages and their components. Always use the correct titles, exactly as they appear in the Training Package which contains the vocational standards for industry, and with the code always placed before the title.

#### Training Package Titles

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

#### Qualification Titles

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 or Advanced Diploma
- this is followed by the words 'in' for Certificates I to IV and 'of' for Diploma and Advanced Diploma
- then the industry descriptor follows, for example Electricity Supply Industry (ESI) – Distribution, Transmission or Rail, and
- if applicable, the occupational or functional stream follows in brackets, for example (Powerline). For example Certificate III in ESI Distribution (Powerline) or Diploma of ESI Power Systems.

#### Competency Standard Unit Titles

Each competency standard unit title is unique. This title describes the competency outcome concisely, and is written in sentence case. For example:

- UETTD04A Perform high voltage field switching to a given schedule
- UETTD26A Manage an ESI OHS management system
- 

## **The Electricity Supply Industry - Transmission, Distribution and Rail Training Package**

### **The Electricity Supply Industry - Transmission, Distribution and Rail Training Package**

The revised Electricity Supply Industry – Transmission, Distribution and Rail Training Package has been developed, reviewed and validated through extensive industry consultation. It reflects the views of a wide cross-section of the industry and its key stakeholders/practitioners throughout Australia.

This Training Package for the Electricity Supply Industry – Transmission, Distribution and Rail (UET12) has been developed on behalf of the EnergyUtilities Industry and community stakeholders from all States/Territories of Australia by EE-Oz Training Standards, with the support of DEEWR. EE-Oz Training Standards operates under a charter from DEEWR as a declared National ElectroComms and EnergyUtilities Industry Skills Council for the ElectroComms and EnergyUtilities Industry. EnergyUtilities Industry practitioners, regulators, government agencies and community stakeholders contributed much effort, support and knowledge in its development.

The first Training Package for this sector of the Electricity Supply Industry was released in 1998, as the Training Package for the Electricity Supply Industry – Transmission and Distribution Sector of the Utilities Industry (UTT98). At that time it broke new ground for setting nationally recognised qualifications comprised of Competency Standard Units as they related to work performance. It assisted in benchmarking the design of training and assessment processes and practices. Since its initial release, it has undergone two version changes. The changes incorporated Certificate IV qualifications and subsequently a Rail Traction qualification as well as other minor amendments.

In its revised form the Electricity Supply Industry – Transmission, Distribution and Rail Training Package has gone even further in improving currency and relevance to industry by enhancing the range of qualifications and Competency Standard Units available with added flexibility to the industry. It includes an array of new and revised Competency Standard Units, pathways and design features.

The previous competency standard units have been revamped, reorganised and updated over 200 new Competency Standard Units across five levels of the AQF. The result is a Training Package that is more relevant to the industry. It readily responds to the needs and responsibilities of the future, both in technology and work organisation.

New skilled career pathways have also been developed that suit employment-based new entrants, as well as the existing workforce or those with pre-existing skill sets.

#### **Table 1 Summary of AQF Qualifications in this Training Package**

The AQF qualifications in the Electricity Supply Industry — Transmission, Distribution and Rail Training Package are:

<b>AQF Level</b>	<b>Qualification Code</b>	<b>Qualification Title</b>
2	UET20312	Certificate II in ESI — Vegetation Control
2	UET20412	Certificate II in ESI — Transmission Structure and Line Assembly
2	UET20511	Certificate II in National Broadband Network Cabling (Electricity Supply Industry Assets)
2	UET20612	Certificate II in ESI — Asset Inspection
3	UET30512	Certificate III in ESI — Power Systems - Transmission Overhead
3	UET30612	Certificate III in ESI — Power Systems - Distribution Overhead
3	UET30712	Certificate III in ESI — Power Systems - Rail Traction
3	UET30812	Certificate III in ESI — Power Systems - Distribution Cable Jointing
3	UET30912	Certificate III in ESI — Remote Communities Utility Worker
4	UET40412	Certificate IV in ESI — Network Systems
4	UET40512	Certificate IV in ESI — Power Systems Substations
4	UET40612	Certificate IV in ESI — Power Systems Network Infrastructure
5	UET50212	Diploma of ESI - Power Systems
6	UET60212	Advanced Diploma of ESI - Power Systems

**Table 2 — Qualifications Mapping of this Training Package UET12 -Version 1 to the former Training Package UET09 -Version 3**

<b>AQF Code</b>	<b>Certificate II Qualifications (UET12)</b>	<b>Certificate II Qualifications (UET09 – V3)</b>
UET20312	CII in ESI — Vegetation Control	UET20110 CII in ESI — Vegetation Co
UET20412	Certificate II in ESI — Transmission Structure and	UET20209 Certificate II in ESI — Tran

<b>AQF Code</b>	<b>Certificate II Qualifications (UET12)</b>	<b>Certificate II Qualifications (UET09 – V3)</b>
	Line Assembly	Line Assembly
UET20511	Certificate II in National Broadband Network Cabling (Electricity Supply Industry Assets)	Certificate II in National Broadband Network Cabling (Electricity Supply Industry Assets)
UET20612	CII in ESI — Assets Inspection	New Qualification

<b>AQF Code</b>	<b>Certificate III Qualifications (UET12)</b>	<b>Certificate III Qualifications (UET09 – V3)</b>
UET30512	CIII in ESI — Power Systems - Transmission Overhead	UET30109 CIII in ESI —Transmission Overhead
UET30612	CIII in ESI — Power Systems - Distribution Overhead	UET30209 CIII in ESI —Distribution Overhead
UET30712	CIII in ESI — Power Systems - Rail Traction	UET30309 CIII in ESI —Rail Traction
UET30812	CIII in ESI — Power Systems - Distribution Cable Jointing	UET30409 CIII in ESI — Cable Jointing
UET30912	CIII in ESI — Remote Communities Utility Worker	New Qualification

<b>AQF Code</b>	<b>Certificate IV Qualifications (UET12)</b>	<b>Certificate IV Qualifications (UET09 – V3)</b>
UET40412	CIV in ESI — Network Systems	UET40109 CIV in ESI — Power System Network
UET40512	CIV in ESI — Power Systems Substations	UET40209 CIV in ESI — Substation
UET40612	CIV in ESI — Power Systems Network Infrastructure	UET40309 CIV in ESI — Network Infrastructure

<b>AQF Code</b>	<b>Diploma Qualifications (UET12)</b>	<b>Diploma Qualifications (UET09 – V3)</b>
UET50212	Diploma of ESI - Power Systems	UET50109 Diploma of ESI - Power Systems

AQF Code	Advanced Diploma Qualifications (UET12)	Advanced Diploma Qualifications (UET09)
UET60212	Advanced Diploma of ESI - Power Systems	UET60109 Advanced Diploma of ESI - Systems

**Table 3 — Mapping Qualifications UET09 Version 3 to UET09 Version 2.1**

This Table maps the Electricity Supply Industry — Transmission and Distribution Sector Training Package (UET09) Version 2.0 to the revised Electricity Supply Industry — Transmission, Distribution and Rail Sector Training Package (UET09) Version 2.1.

Qual Code	Relates to	Nature of Relationship	E= Equivalent N – Not equivalent
UET20511	Certificate II in National Broadband Network Cabling (Electricity Supply Industry Assets)	New Qualification	

**Table 4 — Mapping Qualifications UET09 Version 2.1 to UET09 Version 2.0**

This Table maps the Electricity Supply Industry — Transmission and Distribution Sector Training Package (UET09) Version 2.0 to the revised Electricity Supply Industry — Transmission, Distribution and Rail Sector Training Package (UET09) Version 2.1.

Qual Code	Relates to	Nature of Relationship	E= Equivalent N – Not equivalent
UET20110	Certificate II in ESI — Vegetation Control.	Revised version of UET20109 to comply with NQC Packaging rules	E

**Table 5 — Mapping Qualifications UET09 Version 2.0 to UET09 Version 1**

This Table maps the Electricity Supply Industry — Transmission and Distribution Sector Training Package (UET09) Version 1 to the revised Electricity Supply Industry — Transmission, Distribution and Rail Sector Training Package (UET09) Version 2.0.

Qual Code	Relates to	Nature of Relationship	Equivalent — full, part or no
		No qualifications were amended	



Qual Code	Relates to	Nature of Relationship	Equivalent — full, part or no
		or added in UET12 Version 2	

**Table 6 — Mapping Qualifications UET06 Version 1 to UET09 Version 1**

This Table maps the Electricity Supply Industry — Transmission and Distribution Sector Training Package (UET06) Version 1 to the revised Electricity Supply Industry — Transmission, Distribution and Rail Sector Training Package (UET09) Version 1.

Qual Code	Relates to	Nature of Relationship	Equivalent — full, part or no
UET20109	Certificate II in ESI — Vegetation Control.	Revised version of UET20106 – 1 imported unit replaced	Full
UET20209	Certificate II in ESI — Transmission Line Assembly.	Revised version of UET20206 – 1 imported unit replaced	Full
UET30109	CIII in ESI – Transmission	Revised version of UET30106 – 1 Unit removed from Core	Full
UET30209	Certificate III in ESI – Distribution	Revised version of UET30206 – 1 Unit removed from Core	Full
UET30309	Certificate III in ESI – Rail Traction	Revised version of UET30306 – 1 Unit removed from Core	Full
UET30409	Certificate III in ESI – Cable Jointing	Revised version of UET30406 – 1 Unit removed from Core	Full
UET40109	Certificate IV in ESI - Power Systems	Recoded as part of review	Full
UET40209	Certificate IV in ESI - Substation	Recoded as part of review	Full
UET40309	Certificate IV in ESI - Network Infrastructure	Recoded as part of review	Full
UET50109	Diploma of ESI — Power Systems	Restructured version of UET50106	Full

Qual Code	Relates to	Nature of Relationship	Equivalent — full, part or no
UET60109	Advanced Diploma of ESI — Power Systems	Restructured version of UET60106	Full

**Table 7 — Mapping Qualifications**

This Table maps the former Electricity Supply Industry — Transmission and Distribution Sector Training Package (UTT98) to the new Electricity Supply Industry — Transmission, Distribution and Rail Sector Training Package (UET06).

Qual Code	Relates to	Nature of Relationship	Equivalent — full, part or no
UET20106	Certificate II in ESI — Vegetation Control.	Previously resided in the National Electrotechnology Training Package UTE99 Completely new structure and units.	No equivalent
UET20206	Certificate II in ESI — Transmission Line Assembly.	New Qualification	No equivalent
UET30106	Certificate III in ESI — Transmission	Updated on the previous Certificate III in ESI — Transmission (Powerline) UTT30201— Completely new structure and units.	No equivalent
UET30206	Certificate III in ESI — Distribution	Updated on the previous Certificate III in ESI — Distribution (Powerline) UTT30101— Completely new structure and units.	No equivalent
UET30306	Certificate III in ESI — Rail Traction.	Updated on the previous Certificate III in ESI — Rail Traction (Powerline) UTT30401— Completely new structure and units.	No equivalent
UET30406	Certificate III in ESI — Cable Jointing.	Updated on the previous Certificate III in ESI — Cable	No equivalent

Qual Code	Relates to	Nature of Relationship	Equivalent — full, part or no
		Jointing (Powerline) UTT30301— Completely new structure and units.	
UET40106	Certificate IV in ESI — Power Systems.	Updated on the previous qualifications with completely new structures and units. Certificate IV in ESI — Transmission (Powerline) UTT40101 Certificate IV in ESI — Distribution (Powerline) UTT40201	No equivalent
UET40206	Certificate IV in ESI — Substation.	Certificate IV in ESI — Transmission and Distribution (Substations) UTT40301	No equivalent
UET40306	Certificate IV in ESI – Network Infrastructure	New Qualification	No equivalent
UET50106	Diploma of ESI — Power Systems.	New Qualification– Version 1	No equivalent
UET60106	Advanced Diploma of ESI — Power Systems.	New Qualification – Version 1	No equivalent

## Summary of Units of Competency in the UET12 Version 1 Training Package

**Table 8 – UET12 ESI – Transmission, Distribution and Rail Sector Training Package - Competency Standard Units**

UNIT DISCIPLINE	UNIT CODE	No. of CSUs
Cable Jointing	CJ	15
Distribution	DP	6
Design	DS	28

Entry Level – Cross Discipline	EL	11
Industry Specific – Cross Discipline	IS	43
Refresher Training	RF	11
Rail Traction	RT	18
Substations	SB	18
Systems Operations	SO	20
Transmission	TP	15
Testing	TS	18
Vegetation	VC	12
<b>Total CSUs</b>		
Imported Units	N/A	110

Full details of the Competency Standards Units in this Training Package including: Unit Code, Title, Weighting Points, AQF Level, Pre-requisites and Qualification Mapping, are contained in the Index of Competency Standard Units, in Volume 1 Part 3 Competency Standards Index of this Training Package.

A mapping Competency Standard Units including the relationship between units which have been amended, added or deleted from versions of Transmission, Distribution and Rail Sector Training Package and equivalences is included in Volume 1 Part 3 Competency Standards Index of this Training Package.

**Table 9 - Imported Units of Competency in the UET12 Training Package Version 1**

<b>Training Package</b>	<b>Training Package Title</b>	<b>Version</b>	<b>No. of Units</b>
AHC10	Agriculture Horticulture, Conservation & Land Management	2	6
BSB07	Business Services Training Package	5	16
CPC08	Construction, Plumbing and Services Training Package	6	9
HLT07	Health Training Package	4	2
ICT10	Integrated Telecommunications Training Package	1	2
MEM05	Metal and Engineering Training Package	4	2

NWP07	Water Training Package	2	2
RII09	Resources and Infrastructure Industry Training Package	1	3
TLI10	Transport and Logistics Training Package	1.1	10
UEE07	Electrotechnology Training Package	4	58
<b>Total Imported CSUs</b>			<b>110</b>

Full details of the Imported Units in this Training Package including: Unit Code, Title, Weighting Points, AQF Level, Pre-requisites and Qualification Mapping, are contained in the Index of Competency Standard Units in Volume 1 Part 3 Competency Standards Index of this Training Package.

Please consult the source Training Package for information, including equivalences, in relation to new and updated imported units included in this version of the Transmission, Distribution and Rail Sector Training Package.

### **Language, Literacy, Numeracy**

The Competency Standards have been written to reflect the technical and operational needs of industry and include appropriate language and literacy requirements. A new and specific section related to literacy and numeracy skills has been included in the Competency Standard Units for the purposes of providing advice to RTOs on the entry requirements for each unit. It characterises how participants are to be best equipped to achieve the required, writing and numeracy skill levels.

A specific section for Literacy and Numeracy Skills and Employability Skills has been included in Volume 2 of this Training Package. In addition, there is an explanation of their relationship to the Performance Criteria and their assessment in accordance with the critical aspects of evidence within each Competency Standard Unit.

### **Access, Equity and Cultural Diversity**

The skills required of employees in the ESI - Transmission, Distribution and Rail Industry sector of the EnergyUtilities Industry are comprehensive, with many employment opportunities available. The Competency Standards reflect the range of knowledge and skills and their application, required in the Industry. They are written in a non-exclusive manner so as to increase the participation rates of under-represented community groups and to minimise unintentional bias.

As a matter of policy in the ESI - Transmission, Distribution and Rail Industry and in this Training Package there is no exclusion of any persons from participating in competency development, training and employment. This includes encouraging under-represented groups such as indigenous peoples, people with disabilities, women, and people from rural and remote areas or cultural diversity to join the Industry.

## Acknowledgments

The Board of Directors of the ElectroComms and Energy Utilities Industry Skills Council Ltd trading as EE-Oz Training Standards wishes to acknowledge the important developmental roles played by training advisory and delivery organisations, enterprises, employer and employee representatives, industry practitioners, regulatory authorities, individuals and community stakeholders. Without their level of commitment and support this Training Package would not exist in its current form. The Board acknowledges and thanks the following organisations and individuals:

- ESI - Transmission, Distribution and Rail Sector Training Package Training Advisory Group
- ESI - Transmission, Distribution and Rail Sector Training Package Review Technical Advisory Committees
- the Chairs, Executive Officers, and Members of the EE-Oz Training Standards State and Territory Network (ITABs) and their various sub-committees
- the State and Territory Training Authorities
- the State and Territory Regulatory Authorities
- industry sector RTOs and practitioners for contributing to and being supportive of the project
- industry sector practitioners for contributing to and being supportive of the project.

## Outline of this Training Package

### Outline of this Training Package

The endorsed components of the Training Package are contained in two volumes. Volume 1 covers the overall Package framework and completion requirements for qualifications, and Volume 2 the content details for respective parts and sub-sections of Volume 1. Both volumes form an integrated whole and are not to be used independently of each other.

### Volume 1: Structure and Overview

#### Qualification Framework

This section describes how the qualifications, scope/descriptions, composition and content are structured. Completion and issuance requirements are provided as well as advice on flexibility arrangements, with entry and exit pathways and articulation arrangements. Titles and codes of the list of qualifications to be issued are also included.

#### Competency Standards

This section describes how the competency standards were developed (in broad terms), the industry coverage they apply to, as well as the format and construction of the individual Competency Standard Units. The index of Competency Standard Units and their scope/description is included in this part. Matters related to language, literacy and numeracy, access, equity and cultural diversity and regulatory arrangements, for which the Competency Standard Units may apply, is also included. The Definitions/Glossary and Essential Knowledge and Associated Skills sections of the Training Package link directly to the Competency Standard Units and no Unit is to be used in isolation or exported without these interrelated components.

### **Part 3 – Assessment Guidelines**

This section outlines how the assessment guidelines inform a Registered Training Organisation (RTO) on the infrastructure requirements they will need to enable them to carry out training delivery assessment activities related to the Training Package. The guidelines include assessment systems, the role of RTOs, assessment pathways, recognition arrangements, assessor qualifications and sources of information.

### **Volume 2: Competency Standard Units — Content and scope**

Volume 2 contains the Competency Standard Units in their respective disciplines.

Volume 2 also contains the Essential Knowledge and Associated Skills, a Matrix mapping the essential knowledge and associated skills (EKAS) to the Unit and to the Definitions/Glossary section, which provides a description of relevant terms and vocabulary that appear in this Package. Also included are definitions relating to literacy and numeracy skills.

Note: The two volumes form an integrated whole and must not be used independently of each other.

## **Electricity Supply Industry – Transmission, Distribution and Rail Sector Training Package Layout**

The revised Electricity Supply Industry – Transmission, Distribution and Rail Sector Training Package has been developed, reviewed and validated through extensive industry consultation. It reflects the views of a wide cross-section of the industry and its key stakeholders/practitioners throughout Australia.

The Training Package has been constructed as a two volume set. Volume 1 covers the overall package framework and completion requirements for qualifications. Volume 2 includes the content details of parts and sub-sections of Volume 1. The two volumes form an integrated whole and are not to be used independently of each other.

### **Volume 1**

Preliminary Information

Current Membership of the National Transmission, Distribution and Rail Training Group

The Electricity Supply Industry

Part 1 Qualifications Framework

Part 2 Competency Standards Overview and Index

Part 3 Assessment Guidelines

Appendix A — New Apprenticeships

Appendix B — Sample Assessment Instruments

Enclosures

- Enclosure A: List of Sample Assessment Instruments
- Enclosure B: Administrative Forms
- Enclosure C: Glossary of Terms

### **Volume 2**

Preliminary Information

Part 1 Definitions/Glossary

Part 2 Competency Standards

2.1 Competency Standard Units

<b>Part Number</b>	<b>Discipline</b>	<b>Discipline Code</b>
2.1.1	Cable Jointing Competency Standard Units	CJ
2.1.2	Distribution Competency Standard Units	DP
2.1.3	Design Competency Standard Units	DS
2.1.4	Entry Level Cross Discipline Competency Standard Units	EL
2.1.5	Industry Specific Cross Discipline Competency Standard Units	IS
2.1.6	Refresher Training Units	RF
2.1.7	Rail Traction Competency Standard Units	RT
2.1.8	Substation Competency Standard Units	SB
2.1.9	System Operations Competency Standard Units	SO
2.1.10	Transmission Competency Standard Units	TP
2.1.11	Testing Competency Standard Units	TS
2.1.12	Vegetation Competency Standard Units	VC
2.1.13	Imported Competency Standard Units	Own Code
2.1.14	Possible Skill Sets CSUs	N/A
2.1.15	Identified Skill Sets	N/A

## 2.2 Essential Knowledge and Associated Skills

Volume of: Knowledge and Associated Skills — Reference Codes and Reference Names

Table of Essential Knowledge and Skills to Unit Matrix

Part 3 Language, Literacy and Numeracy

### Important Note to Users

Training Packages are not static documents; they are amended periodically to reflect the latest industry practices and are version controlled. It is essential that the latest version is always used.



**Check the version number before commencing training or assessment**

This Training Package is Version 1 – check whether this is the latest version by going to the National Training Information Service ([www.ntis.gov.au](http://www.ntis.gov.au)) and locating information about the Training Package. Alternatively, contact EE-Oz Training Standards, [www.ee-oz.com.au](http://www.ee-oz.com.au) to confirm the latest version number.

**Explanation of version number conventions**

The primary release Training Package is Version 1. When changes are made to a Training Package, sometimes the version number is changed and sometimes it is not, depending on the extent of the change. When a Training Package is reviewed it is considered to be a new Training Package for the purposes of version control, and is Version 1. Do not confuse the version number with the Training Package's national code (which remains the same during its period of endorsement).

**Explanation of the review date**

The review date (shown on the title page and in the footer of each page) indicates when the Training Package is expected to be reviewed in the light of changes such as changing technologies and circumstances. The review date is not an expiry date. Endorsed Training Packages and their components remain current until they are reviewed or replaced.

## 1.0.00 Qualification Framework

### Volume 1 Part 1

## Qualification Framework

### 1.1.00 The Australian Qualification Framework

## 1.0 The Australian Qualification Framework

### What is the Australian Qualifications Framework?

A brief overview of the Australian Qualifications Framework (AQF) follows. For a full explanation of the AQF, see the AQF Implementation Handbook.

[http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF\\_Handbook\\_07.pdf](http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf)

The 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 it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

Training Package qualifications in the VET sector must comply with the titles and guidelines of the AQF. Endorsed Training Packages provide a unique title for each AQF qualification which must always be reproduced accurately.

### Qualifications

Training Packages can incorporate the following eight AQF qualifications:

- Certificate I in ...
- Certificate II in ...
- Certificate III in ...
- Certificate IV in ...
- Diploma of ...
- Advanced Diploma of ...
- Vocational Graduate Certificate of ...
- Vocational Graduate Diploma of ...

On completion of the requirements defined in the Training Package, a Registered Training Organisation (RTO) may issue a nationally recognised AQF qualification. Issuance of AQF qualifications must comply with the advice provided in the AQF Implementation Handbook and the AQTF 2011 Essential Standards for Initial and Continuing Registration.

### Statement of Attainment

A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more units of competency from nationally recognised qualification(s)/courses(s). Issuance of Statements of Attainment must comply with the advice provided in the current AQF Implementation Handbook and the AQTF 2011 Essential Standards for Initial and Continuing Registration. Under the AQTF 2011, RTOs must recognise the achievement of competencies as recorded on a qualification or Statement of Attainment issued by other RTOs. Given this, recognised competencies can progressively build towards a full AQF qualification.

## **AQF Guidelines and Learning Outcomes**

The AQF Implementation Handbook provides a comprehensive guideline for each AQF qualification. A summary of the learning outcome characteristics and their distinguishing features for each VET related AQF qualification is provided below.

### **Certificate II**

#### **Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied.

Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

#### **Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
- assess and record information from varied sources;
- take limited responsibility for own outputs in work and learning

### **Certificate III**

#### **Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to Australian environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints. Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

### **Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge
- apply a range of well-developed skills
- apply known solutions to a variety of predictable problems
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information, using discretion and judgement
- take responsibility for own outputs in work and learning
- take limited responsibility for the output of others

## **Certificate IV**

### **Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop Australian criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills. Applications involve responsibility for, and limited organisation of, others.

### **Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources
- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others

## **Diploma**

### **Characteristics of Learning Outcomes**

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination.

The self directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may be involved.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

### **Distinguishing Features of Learning Outcomes**

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- analyse and plan approaches to technical problems or management requirements
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- evaluate information, using it to forecast for planning or research purposes
- take responsibility for own outputs in relation to broad quantity and quality parameters
- take some responsibility for the achievement of group outcomes

## **Advanced Diploma**

**Characteristics of Learning Outcomes**

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of Australian criteria or applications or knowledge or procedures.

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

**Distinguishing Features of Learning Outcomes**

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of specialised knowledge with depth in some areas
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions
- generate ideas through the analysis of information and concepts at an abstract level
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills
- demonstrate accountability for personal outputs within broad parameters
- demonstrate accountability for personal and group outcomes within broad parameters

**Regulatory Arrangements**

Competency Standard Units, Skill Sets and Qualifications in this Training Package have been developed in consultation with the relevant industry technical and business Regulators 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 Qualifications, Units or Skill Sets contained within this Training Package for respective licensing, registration or accreditation purposes. In constructing these qualifications, EE-Oz Training Standards and respective Regulators have given consideration to the link between the issuance of the qualification and the respective regulatory requirements. It is expected that the assessment and preferred training regime which meets the competency outcomes of the qualification and assessment, will therefore meet the regulatory requirements.

In recognising this interrelationship, every effort has been made to ensure currency in regulatory requirements, thus RTOs must ensure they are observed. This includes utilising any recommended industry training program designed to meet the Competency Standard Units and/or Qualification outcomes related to licensing/registration applications.

As RTO's registered under the Australian Quality Training Framework (AQTF) requirements are given full responsibility for deeming a learner/apprentice competent for the respective Competency Standard Units making up a Training Package Qualification or Skill Set, the RTO shall also provide all the necessary documentation (including results preferably percentile based) as required by the regulatory authority to support an application of eligibility for a relevant license, registration or accreditation.

It should be noted that regulatory authorities have advised that the quality of Registered Training Organisations issuing a qualification for regulatory purposes will be monitored. Where deficiencies are identified, regulators may deem it necessary to introduce appropriate actions, including an additional 'external' assessment following the issuing of the qualification to satisfy eligibility requirements for issuing the licence.

## **Exporting ESI - Transmission, Distribution and Rail Sector Industry CSUs from this Training Package**

Competency Standard Units in this Training Package are interrelated and linked with the Definitions/Glossary and Essential Knowledge and Associated Skills sections of the Volume. This also includes information related to language, literacy and numeracy, access, equity, cultural diversity and any regulatory arrangements for which the Competency Standard Units may apply. No Competency Standard Unit can be used in isolation or exported without these interrelated components.

### **1.1.01 ESI - Transmission, Distribution and Rail Sector Qualification Framework**

## **1.1 ESI – Transmission, Distribution and Rail Sector Qualification Framework**

The qualifications listed in this Training Package adhere to the advice provided in the current version of AQF Implementation Handbook. See [www.aqf.edu.au](http://www.aqf.edu.au).

The qualifications have been designed to comply with the provisions of and comply with the National Quality Council's (NQC) requirements for Flexibility of Training Package Qualifications to include:

- One Third or more of total units required to gain a VET qualification will be electives.
- The choice of Elective units can be broadened, to allow one sixth of total units to be included from other qualifications in a Training Package, other Training Packages and accredited courses.
- All units as either core or electives.

See: [http://www.nqc.tvetaustralia.com.au/\\_\\_data/assets/pdf\\_file/0006/52269/National\\_Quality\\_Council\\_communique.pdf](http://www.nqc.tvetaustralia.com.au/__data/assets/pdf_file/0006/52269/National_Quality_Council_communique.pdf)

It should be noted that under these provisions Licensed and trade occupations are exempt from these measures.

### **Application of the NQC Flexibility Formula**

Industry has obtained formal agreement to the continued use of its unit weighting system for valuing individual competency standards and the effort required to achieve a qualification under these provisions.

Thus, for the qualifications in this Training Package, the terms "total units" and "total units required to gain a qualification" and the fractions thereof referred to above are calculated using the weighting points assigned to respective Competency Standard Units (CSU) rather than by a count of individual units. The Qualification Completion Requirements table below summarises the relevant weighting points values to satisfy the packaging rules of each qualification in accordance with the NQC Policy.

To allow for the inclusion of units imported from other qualifications and other Training Packages and accredited courses under this weighting points system, industry also gained agreement to the following process for importing and valuing such imported units, as follows:

- Customisation of these qualifications is permitted in order to meet learner's individual needs, their current, intended or future work context, and a variety of possible industry environments.
- For this purpose the importation of units up to one sixth of the total points value required for completion of a qualification is permitted from either one or a combination of the following three sources:
  - Elsewhere in this Training Package
  - Other Training Packages
  - Accredited Courses
- Units selected for importation under these provisions shall be first packaged in the source Training Package or Accredited Course at the AQF level of the target qualification.
- The importation of units from these sources shall be within the boundaries of the integrity of the intended qualification outcomes, the requirements of the Australian Qualifications Framework, the Australian Quality Training Framework and all regulatory requirements applicable to the imported unit and/or the target qualification.



- Minimum points (10) will be allocated to units imported from sources other than those managed by EE-Oz Training Standards. Advice on the valuation of units selected for importation from sources other than EE-Oz Training Packages shall be sought from the relevant EE-Oz Technical Advisory Committee.

Advice shall be sought from the relevant state/territory registration and accreditation body to determine if there is a requirement for an extension to a Registered Training Organisation's scope of registration in relation to the inclusion of such imported unit/s into a qualification. Advice shall be sought from the relevant registration and accreditation body regarding the requirement to record and report the inclusion of units imported under these provisions for the purposes of awarding a qualification.

Where units have been imported under these provisions, this shall be reported to EE-Oz Training Standards so that industry is aware of such units and can consider the endorsement of these into the relevant qualification(s).

## Qualification Mapping

Please refer to Volume 1 Preliminary Information for:

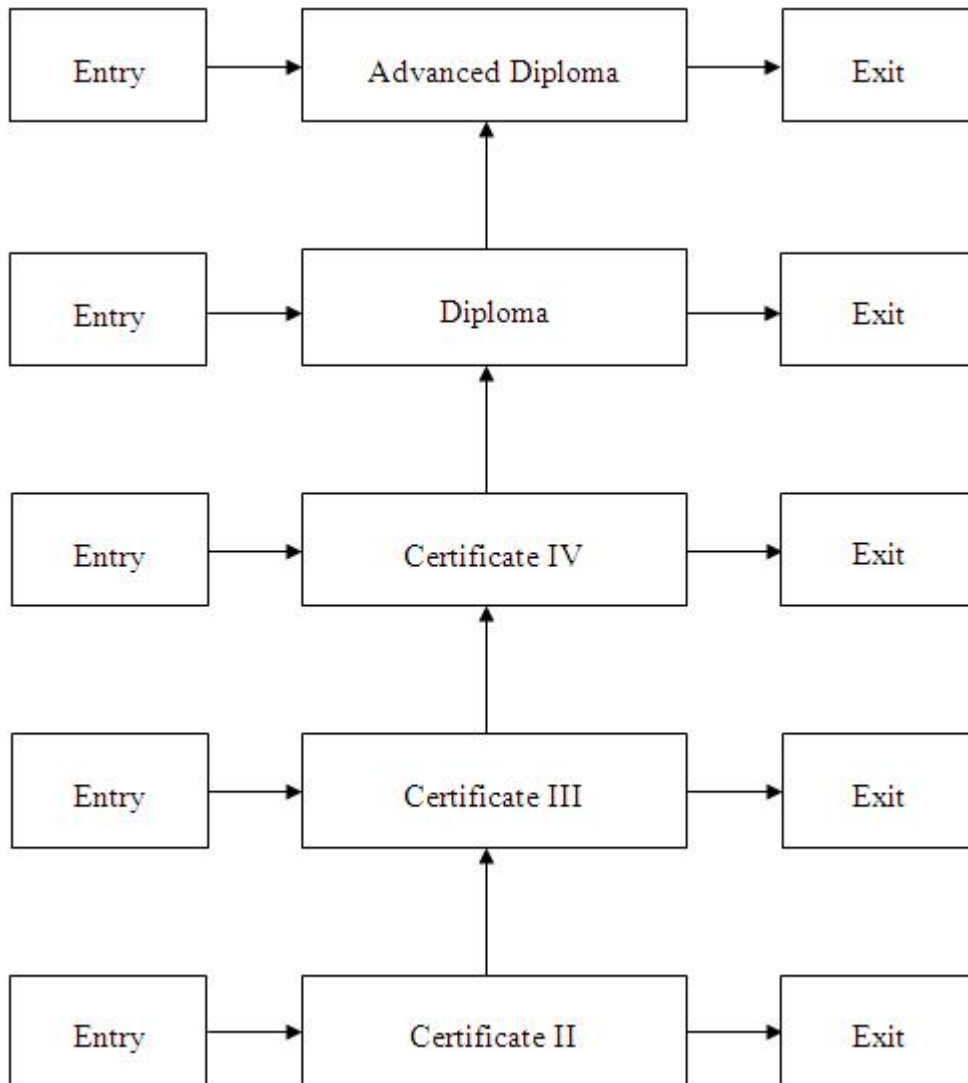
- Modifications History of Qualifications in this Training Package
- Mapping of the qualifications in this version of the ESI - Transmission, Distribution and Rail Sector Training Package to previous versions, including equivalences.

### 1.1.02 Qualification Pathways

## 1.2 Qualification Pathways

This Training Package provides open entry at each of the AQF levels. Arrows indicate the pathways that can be followed no matter at which qualification level you enter.

## Entry and Exit Points for ESI – Transmission, Distribution and Rail Sector Industry Qualifications



For more information on the latest Training Package vocational standards qualifications and qualification pathways visit ElectroComms and EnergyUtilities Industry Skills Council Ltd trading as EE-Oz Training Standards at [www.ee-oz.com.au](http://www.ee-oz.com.au)

### Articulation pathways

Qualification articulation and entry and exit arrangements are based on the specific training and education requirements endorsed by the industry. The construction of the Competency standard units and the group of units that make up an individual qualification are of particular significance to the operational, regulatory and safety arrangements of the industry. Each qualification provides a unique vocational outcome that can be used for Australian apprentices as entry-level contracted employees.

All qualifications are open entry and open exit and are available for use as Australian Apprenticeship entry-level contracted employment. Australian apprenticeship arrangements are subject to State/Territory statutory requirements, prescriptions within industrial instruments and policies of State/Territory training authorities and RTOs. Reference to what applies should therefore be made from respective statutory bodies in the first instance.

Australian Apprenticeship arrangements therefore apply to all qualifications; however, they are subject to State/Territory statutory requirements, prescriptions within industrial instruments and policies of State/Territory training authorities.

Open entry is provided into all qualifications, Open entry is available at all levels provided the prospective learner's general education and competency level is equivalent to the outcome of four to five years of secondary school. Additionally, entry levels provide an option for potential learners to choose a qualification suited to their needs while providing flexibility for recruitment action by employers. What must be satisfied for entry is that any listed prerequisite Competency Standard Unit requirements are met. Entry into all qualifications is also available through Recognised Prior Learning (RPL) arrangements.

### **School Based Australian Apprenticeships**

Australian Apprenticeships are declared in each State or Territory according to the particular processes of the jurisdiction and requirements identified by industry in the State or Territory. Declarations for particular qualifications as either Traineeships or Apprenticeships are made accordingly and therefore the same qualification may be classified differently between jurisdictions.

Whilst EE-Oz has no control over these processes and declarations, it would recommend that the following qualifications be considered when addressing School based Australian Apprenticeships:

Qualification Code	Qualification Title
Nil	Nil

### **Access, Equity and Cultural Diversity**

The skills required of employees in the ESI – Transmission, Distribution and Rail Sector are comprehensive. The qualifications in this Training Package reflect the range of competencies required and are written in a non-exclusive manner so as to increase the participation rates of all equity and disadvantaged groups and to minimise unintentional bias.

### **Language, Literacy and Numeracy**

A specific section related to language, literacy and numeracy skills has been included in each Competency standard unit to provide advice on the entry requirements for each unit. It provides Registered Training Organisations (RTOs), industry and career aspirants with relevant language, literacy and numeracy entry-level advice for each Competency standard unit that would maximise an individual's prospects for successful completion of the unit and, where appropriate, the qualification.

The language, literacy and numeracy definitions and requirements are described in more detail in Volume 2, Part 3 — Language, Literacy and Numeracy Skills. Each Competency standard unit in Volume Part 2 references the respective language, literacy and numeracy skills that apply.

## Australian Apprenticeship – Application

Australian Apprenticeships are work related competency programs designed for entry-level contracted employment for new entrants to the industry. For further information regarding Australian Apprenticeships and their application in relation to this Training Package refer to Appendix A - Australian Apprenticeship – application. Appendix A is located in Assessment Guidelines part 1.3.15

### 1.1.03 Qualification Employability Skills Statements

## 1.3 Qualification Employability Skills Statements

The Employability Skills facets for each AQF level are described below. These are broad industry requirements that may vary depending on qualification packaging rules and electives selected.

### Employability Skills Summary for all Qualifications at AQF Level 2.

The following table contains a summary of the Employability Skills required by the ESI-Transmission, Distribution and Rail Industry for all UET12-Version 1 ESI-Transmission, Distribution and Rail Training Package qualifications at AQF level 2, namely;

<b>Communication</b>
Collect, organise and understand information related to the work task and it's relevant safety procedures
Communicate ideas and information to enable confirmation of work requirement and specifications
Co-operate with other workers/customers and report outcomes and/or any problems
Access, read and comprehend safety instructions and procedures
Share information via speech and in writing
Prepare time sheets
<b>Teamwork</b>
Work with others to generate and review ideas
Work effectively as an individual and as a member of a team
Work with others and in a team to identify work needs and review ideas against those needs
Relate to people from a range of social, cultural and ethnic backgrounds and physical

and mental abilities
Contribute to a positive culture of compliance within an organisation
Develop and maintain networks for the implementation and maintenance of industry knowledge, standards and requirements
Provide feedback
<b>Problem Solving</b>
Apply lateral thinking ideas to generate solutions in response to work problems
Anticipate or clarify problems to avoid interruptions to work flows and processes
Identify, assess and prioritise work risks to maintain efficiency, quality, productivity and work place safety at all times
<b>Initiative &amp; Enterprise</b>
Identify and comply with all requirements and standards for work in the ESI-Transmission, Distribution and Rail industry
Apply enterprise best practice and quality systems
Interact effectively with both internal and external industry stakeholders
Initiate and follow through on the implementation of industry standards in the workplace
<b>Planning &amp; Organising</b>
Plan and organise activities including the maintenance and layout of own worksite and obtain equipment and materials to avoid work flow interruptions or wastage
Identify related industry compliance requirements
Maintain relevant industry and work records
Establish clear implementation goals and deliverables
Collect, analyse and organise work task information
Apply time management prioritising techniques
<b>Self Management</b>
Plan own work within given task parameters

Set, monitor and satisfy personal work goals
Accept responsibility for given tasks
Apply systematic and effective time management
<b>Learning</b>
Satisfy the competency requirements for the job
Maintain current knowledge of tools, devices, instruments, materials, work practices and systems
Seek learning opportunities
Take control and manage own learning
Adopt a open approach to new ideas and techniques
Commit to and promote a culture of continuous learning
Set realistic learning goals for self development
Monitor and respond to learning process achievements
<b>Technology</b>
Use workplace technology related to the particular work tasks including tools, devices, instruments and materials
Attain and maintain required technical accreditation/authority under the industry standards
Attain and maintain IT skills relevant to the ESI-Transmission, Distribution and Rail industry
Be willing to gain knowledge and skills relevant to new and emerging technologies

The Employability Skills described above are representative of the ESI-Transmission, Distribution and Rail Industry in general and may not reflect enterprise specific requirements or job roles.

Learning and assessment strategies for each qualification should be based on the requirements of the units of competency comprising the qualification and the Assessment Guidelines, Volume 1, Part 3.

### Employability Skills Summary for all Qualifications at AQF Level 3.

The following table contains a summary of the Employability Skills required by the ESI-Transmission, Distribution and Rail Industry for all UET12-Version 1 ESI-Transmission, Distribution and Rail Training Package qualifications at AQF level 3, namely;

<b>Communication</b>
Collect, organise and understand information related to the work task and it's relevant safety procedures
Communicate ideas and information to enable confirmation of work requirement and specifications
Communicate information using drawing, diagrams, schedules and manuals
Communicate and/or report work outcomes and/or any problems
Communicate ideas, information and advice to co-workers/clients to enable confirmation of product/work requirements and specifications
Communicate effectively in oral and written form
Access, read and comprehend safety instructions and procedures
Collect, organise and understand information related to a work task and it's relevant safety procedures
Undertake negotiations if there are conflicts in work requirements and/or priorities
Share industry information
Document work quotations and tender support schedules
Prepare time sheets
Prepare documentation on particular work tasks including evaluations, reports, timesheets and costings
Prepare and present formal reports to clients and/or co-workers
<b>Teamwork</b>
Work with others to generate ideas and review
Work effectively as an individual and as a member of a team
Work with others and in a team to identify work needs and review ideas against those needs

Work with other and in a team to evaluate and report on work tasks and outcomes
Work with others and in a team to present information to a client and/or co-worker
Relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
Influence individuals and teams
Develop and maintain networks for implementation and maintenance of industry standards in relation to workplace computer systems
Develop and maintain networks for the implementation and maintenance of industry knowledge, standards and requirements
Coach/mentor others and provide feedback
<b>Problem Solving</b>
Apply lateral thinking ideas to generate solutions in response to work problems
Apply operational research and research management skills
Clarify and identify work issues and apply processes to avoid interruptions to work flow/processes
Clarify problems and enterprise ideas to avoid interruptions to work flow/processes
Use testing techniques to anticipate or clarify problems to avoid interruptions to work flows and process
Generate ideas and alternatives
Analyse information to identify opportunities to develop solutions
Identify, assess and prioritise work risks to maintain efficiency, quality, productivity and work place safety at all times
<b>Initiative &amp; Enterprise</b>
Recognise and respond to circumstances outside instructions or personal competence
Be proactive and apply strategies to overcome work blockages
Adopt proactive relationships with clients and co-workers
Identify and comply with all requirements and standards for work in the ESI-Transmission, Distribution and Rail industry



Apply enterprise best practice and quality systems
Generate ideas and translate into workplace actions and outcomes
Interact effectively with both internal and external industry stakeholders
Initiate and follow through on the implementation of the industry standards in the workplace
Translate ideas into action
<b>Planning &amp; Organising</b>
Plan and organise activities including the maintenance and layout of own worksite and obtain equipment and materials to avoid work flow interruptions or wastage
Plan and organise activities to enable choices of maintenance methods of equipment, tools and related work documentation
Plan activities to enable choice of analysis/testing techniques of work outcomes and systems
Develop industry work plans including key performance indicators
Use mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Use computing capabilities that enable the use of mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Identify related industry compliance requirements
Identify, access and allocate required implementation resources
Maintain relevant industry and work records
Maintain relevant industry/work record systems
Maintain industry related records
Understand computer systems, their relationships and applications in the workplace
Establish clear implementation goals and deliverables
Monitor and optimise resource utilisation

<b>Self Management</b>
Plan own work within given task parameters
Set, monitor and satisfy personal work goals
Accept responsibility for given tasks
Clarify and confirm work instructions
Clarify own roles, goals, prerogatives and limitations in relation to the industry
Take responsibility for industry obligations
Evaluate and monitor own performance
Apply systematic and effective time management
<b>Learning</b>
Satisfy the competency requirements for the job
Maintain current knowledge of tools, devices, instruments, materials, work practices and systems
Seek learning opportunities
Provide technical instruction and learning assistance to assigned apprentices, trainees or other less experienced workers
Take control and manage own learning
Adopt a open approach to new ideas and techniques
Commit to and promote a culture of continuous learning
Set realistic learning goals for self development
Monitor and respond to learning process achievements
<b>Technology</b>
Use workplace technology to communicate with the client, document and present information
Use electronic information systems to communicate with co-workers and/or other related personnel
Use workplace technology related to the particular work tasks including tools,

devices, instruments and materials
Use work place technology to collate, organise and maintain work documentation and information
Attain and maintain required technical accreditation/authority under the industry standards
Attain and maintain IT skills relevant to the ESI-Transmission, Distribution and Rail industry
Be willing to learn new IT skills
Be willing gain knowledge and skills relevant to new and emerging technologies

The Employability Skills described above are representative of the ESI-Transmission, Distribution and Rail Industry in general and may not reflect enterprise specific requirements or job roles.

Learning and assessment strategies for each qualification should be based on the requirements of the units of competency comprising the qualification and the Assessment Guidelines, Volume 1, Part 3.

#### **Employability Skills Summary for all Qualifications at AQF Level 4.**

The following table contains a summary of the Employability Skills required by the ESI-Transmission, Distribution and Rail Industry for all UET12-Version 1 ESI-Transmission, Distribution and Rail Training Package qualifications at AQF level 4, namely;

<b>Communication</b>
Collect, organise and understand information related to the work task and it's relevant safety procedures
Communicate ideas and information to enable confirmation of work requirement and specifications
Communicate information using drawing, diagrams, schedules and manuals
Communicate and/or report work outcomes and/or any problems
Communicate effectively in oral and written form
Access, read and comprehend safety instructions and procedures
Undertake negotiations if there are conflicts in work requirements and/or priorities
Share industry information

Share essential business information
Document work quotations and tender support schedules
Process approvals/authorities for industry activities
Prepare time sheets
Prepare documentation on particular work tasks including evaluations, reports, timesheets and costings
Prepare and present formal reports to clients and/or co-workers or other related personnel
<b>Teamwork</b>
Work with others by recognising dependencies and using co-operative approaches to optimise work flow and productivity
Work with others to generate ideas and review
Work effectively as an individual and as a member of a team
Work with others to identify work needs and review ideas against those needs
Work with others to evaluate and report on work tasks and outcomes
Work with others to present information to a client and/or co-worker(s)
Relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
Influence individuals and teams
Develop and maintain networks for the implementation and maintenance of industry knowledge, standards and requirements
Coach/mentor others and provide feedback
<b>Problem Solving</b>
Use testing and analysis techniques to anticipate and/or clarify problems and plan around them to avoid interruptions to work flows/processes
Apply lateral thinking to generate solutions in response to work problems
Apply analytical techniques to anticipate design issues and product needs
Apply operational research and research management skills

Clarify and identify work issues and apply processes to avoid interruptions to work flow/processes
Analyse information to identify opportunities to develop solutions
Identify, assess and prioritise work risks to maintain efficiency, quality, productivity and work place safety at all times
<b>Initiative &amp; Enterprise</b>
Recognise and respond to circumstances outside instructions or personal competence
Create new opportunities for the enterprise
Be proactive and apply strategies to overcome work blockages
Adopt a proactive relationship with clients/co-workers
Identify work needs by applying research techniques
Identify and comply with all requirements and standards for work in the ESI-Transmission, Distribution and Rail industry
Apply and enterprise best practice and quality systems
Apply and enterprise the best computer systems and applications to ensure quality and efficiency of work tasks and documentation
Generate ideas and translate into workplace actions and outcomes
Interact effectively with both internal and external industry stakeholders
Initiate and follow through on the implementation of industry standards in the workplace
Translate ideas into action
<b>Planning &amp; Organising</b>
Plan and organise activities including the maintenance and layout of own worksite and obtain equipment and materials to avoid work flow interruptions or wastage
Plan and organise activities to enable choices of maintenance methods of equipment, tools and related work documentation
Plan activities to enable choice of analysis/testing techniques of work outcomes and systems
Plan and organise activities to enable the most appropriate testing/analysis procedures

to be implemented
Plan activities to enable choice of the best computer systems/programs for application on a particular work task
Develop industry work plans including key performance indicators
Use mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Use computing capabilities that enable the use of mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Identify related industry compliance requirements
Identify, access and allocate required implementation resources
Maintain relevant industry and work records
Maintain relevant industry/work record systems
Maintain industry related records
Understand computer systems, their relationships and applications in the workplace
Establish clear implementation goals and deliverables
Monitor and optimise resource utilisation
<b>Self Management</b>
Plan own work within given task parameters
Maintain current knowledge of computer systems and capabilities
Set, monitor and satisfy personal work goals
Accept responsibility for given tasks
Clarify and confirm work instructions
Clarify own roles, goals, prerogatives and limitations in relation to the industry
Take responsibility for industry obligations
Evaluate and monitor own performance
Apply systematic and effective time management

<b>Learning</b>
Satisfy the competency requirements for the job
Maintain current knowledge of tools, devices, instruments, materials, work practices and systems
Maintain current knowledge of computer systems programs and there relevant applications
Seek learning opportunities
Provide technical instruction and learning assistance to assigned apprentices, trainees or other less experienced workers
Take control and manage own learning
Adopt a open approach to new ideas and techniques
Commit to and promote a culture of continuous learning
Set realistic learning goals for self development
Monitor and respond to learning process achievements
<b>Technology</b>
Use workplace technology to document and present information
Use workplace technology to communicate with clients, co-workers and/or other related personnel
Use workplace technology related to particular work tasks including tools, equipment, devices, instruments and materials
Use workplace technology for data analysis/investigation
Attain and maintain required technical accreditation/authority under the industry standards
Attain and maintain IT skills relevant to the ESI-Transmission, Distribution and Rail industry
Be willing to learn new IT skills
Use workplace technology to collate, organise and maintain work documentation and information
Use computer applications as a management tool

The Employability Skills described above are representative of the ESI-Transmission, Distribution and Rail Industry in general and may not reflect enterprise specific requirements or job roles.

Learning and assessment strategies for each qualification should be based on the requirements of the units of competency comprising the qualification and the Assessment Guidelines, Volume 1, Part 3.

### **Employability Skills Summary for all Qualifications at AQF Level 5.**

The following table contains a summary of the Employability Skills required by the ESI-Transmission, Distribution and Rail Industry for all UET12-Version 1 ESI-Transmission, Distribution and Rail Training Package qualifications at AQF level 5, namely;

<b>Communication</b>
Collect, organise and understand information related to the work task and it's relevant safety procedures
Communicate ideas and information to enable confirmation of work requirement and specifications
Communicate information using drawing, diagrams, schedules and manuals
Communicate and/or report work outcomes and/or any problems
Communicate effectively in oral and written form
Access, read and comprehend safety instructions and procedures
Undertake negotiations if there are conflicts in work requirements and/or priorities
Share industry information
Share essential business information
Document work quotations and tender support schedules
Process approvals/authorities for industry activities
Prepare time sheets
Prepare documentation on particular work tasks including evaluations, reports, timesheets and costings
Prepare and present formal reports to clients and/or co-workers or other related personnel



Use aesthetic ideas to plan visual presentation material
<b>Teamwork</b>
Work with others by recognising dependencies and using co-operative approaches to optimise work flow and productivity
Work with others to generate ideas and review
Work effectively as an individual and as a member of a team
Work with others to identify work needs and review ideas against those needs
Work with others to evaluate and report on work tasks and outcomes
Work with others to present information to a client and/or co-worker(s)
Relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
Influence individuals and teams
Develop and maintain networks for the implementation and maintenance of industry knowledge, standards and requirements
Coach/mentor others and provide feedback
<b>Problem Solving</b>
Use testing and analysis techniques to anticipate and/or clarify problems and plan around them to avoid interruptions to work flows/processes
Apply lateral thinking to generate solutions in response to work problems
Apply analytical techniques to anticipate design issues and product needs
Apply operational research and research management skills
Apply contingency management techniques to variable circumstances
Clarify and identify work issues and apply processes to avoid interruptions to work flow/processes
Analyse information to identify opportunities to develop solutions
Identify, assess and prioritise work risks to maintain efficiency, quality, productivity and work place safety at all times

<b>Initiative &amp; Enterprise</b>
Recognise and respond to circumstances outside instructions or personal competence
Create new opportunities for the enterprise
Be proactive and apply strategies to overcome work blockages
Adopt a proactive relationship with clients/co-workers
Identify work needs by applying research techniques
Identify and comply with all requirements and standards for work in the ESI-Transmission, Distribution and Rail industry
Apply and enterprise best practice and quality systems
Apply and enterprise the best computer systems and applications to ensure quality and efficiency of work tasks and documentation
Generate ideas and translate into workplace actions and outcomes
Interact effectively with both internal and external industry stakeholders
Initiate and follow through on the implementation of industry standards in the workplace
Translate ideas into action
<b>Planning &amp; Organising</b>
Plan and organise activities including the maintenance and layout of own worksite and obtain equipment and materials to avoid work flow interruptions or wastage
Plan and organise activities to enable choices of maintenance methods of equipment, tools and related work documentation
Plan activities to enable choice of analysis/testing techniques of work outcomes and systems
Plan and organise activities to enable the most appropriate testing/analysis procedures to be implemented
Plan activities to enable choice of the best computer systems/programs for application on a particular work task
Develop industry work plans including key performance indicators
Use mathematical ideas and techniques to correctly complete measurements, calculate

quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Use computing capabilities that enable the use of mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Identify related industry compliance requirements
Identify, access and allocate required implementation resources
Maintain relevant industry and work records
Maintain relevant industry/work record systems
Maintain industry related records
Understand computer systems, their relationships and applications in the workplace
Establish clear implementation goals and deliverables
Monitor and optimise resource utilisation
<b>Self Management</b>
Plan own work within given task parameters
Set, monitor and satisfy personal work goals
Accept responsibility for given tasks
Clarify and confirm work instructions
Clarify own roles, goals, prerogatives and limitations in relation to the industry
Take responsibility for industry obligations
Evaluate and monitor own performance
Apply systematic and effective time management
<b>Learning</b>
Satisfy the competency requirements for the job
Maintain current knowledge of tools, devices, instruments, materials, work practices and systems
Maintain current knowledge of computer systems programs and there relevant applications

Seek learning opportunities
Provide technical instruction and learning assistance to assigned apprentices, trainees or other less experienced workers
Take control and manage own learning
Adopt a open approach to new ideas and techniques
Commit to and promote a culture of continuous learning
Set realistic learning goals for self development
Monitor and respond to learning process achievements
<b>Technology</b>
Use workplace technology to document and present information
Use workplace technology to communicate with clients, co-workers and/or other related personnel
Use workplace technology related to particular work tasks including tools, equipment, devices, instruments and materials
Use workplace technology for data analysis/investigation
Attain and maintain required technical accreditation/authority under the industry standards
Attain and maintain IT skills relevant to the ESI-Transmission, Distribution and Rail industry
Be willing to learn new IT skills
Use workplace technology to collate, organise and maintain work documentation and information
Use computer applications as a management tool

The Employability Skills described above are representative of the ESI-Transmission, Distribution and Rail Industry in general and may not reflect enterprise specific requirements or job roles.

Learning and assessment strategies for each qualification should be based on the requirements of the units of competency comprising the qualification and the Assessment Guidelines, Volume 1, Part 3.

### Employability Skills Summary for all Qualifications at AQF Level 6.

The following table contains a summary of the Employability Skills required by the ESI-Transmission, Distribution and Rail Industry for all UET12-Version 1 ESI-Transmission, Distribution and Rail Training Package qualifications at AQF level 6, namely;

<b>Communication</b>
Collect, organise and understand information related to the work task and it's relevant safety procedures
Communicate ideas and information to enable confirmation of work requirement and specifications
Communicate information using drawing, diagrams, schedules and manuals
Communicate and/or report work outcomes and/or any problems
Communicate effectively in oral and written form
Access, read and comprehend safety instructions and procedures
Undertake negotiations if there are conflicts in work requirements and/or priorities
Share industry information
Share essential business information
Share essential IT/Computing information
Document work quotations and tender support schedules
Process approvals/authorities for industry activities
Prepare documentation on particular work tasks including evaluations, reports, timesheets and costings
Prepare and present formal reports to clients and/or co-workers or other related personnel
Use aesthetic ideas to plan visual presentation material
<b>Teamwork</b>
Work with others by recognising dependencies and using co-operative approaches to optimise work flow and productivity
Work with others to generate ideas and review

Work effectively as an individual and as a member of a team
Work with others to identify work needs and review ideas against those needs
Work with others to evaluate and report on work tasks and outcomes
Work with others to present information to a client and/or co-worker(s)
Relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
Influence individuals and teams
Develop and maintain networks for the implementation and maintenance of industry knowledge, standards and requirements
Coach/mentor others and provide feedback
<b>Problem Solving</b>
Use testing and analysis techniques to anticipate and/or clarify problems and plan around them to avoid interruptions to work flows/processes
Apply lateral thinking to generate solutions in response to work problems
Apply analytical techniques to anticipate design issues and product needs
Apply operational research and research management skills
Apply contingency management techniques to variable circumstances
Clarify and identify work issues and apply processes to avoid interruptions to work flow/processes
Analyse information to identify opportunities to develop solutions
Identify, assess and prioritise work risks to maintain efficiency, quality, productivity and work place safety at all times
<b>Initiative &amp; Enterprise</b>
Recognise and respond to circumstances outside instructions or personal competence
Create new opportunities for the enterprise
Be proactive and apply strategies to overcome work blockages
Adopt a proactive relationship with clients/co-workers

Identify work needs by applying research techniques
Identify and comply with all requirements and standards for work in the ESI-Transmission, Distribution and Rail industry
Apply and enterprise best practice and quality systems
Apply and enterprise the best computer systems and applications to ensure quality and efficiency of work tasks and documentation
Generate ideas and translate into workplace actions and outcomes
Interact effectively with both internal and external industry stakeholders
Initiate and follow through on the implementation of industry standards in the workplace
Translate ideas into action
<b>Planning &amp; Organising</b>
Plan and organise activities including the maintenance and layout of own worksite and obtain equipment and materials to avoid work flow interruptions or wastage
Plan and organise activities to enable choices of maintenance methods of equipment, tools and related work documentation
Plan activities to enable choice of analysis/testing techniques of work outcomes and systems
Plan and organise activities to enable the most appropriate testing/analysis procedures to be implemented
Plan activities to enable choice of the best computer systems/programs for application on a particular work task
Develop industry work plans including key performance indicators
Use mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Use computing capabilities that enable the use of mathematical ideas and techniques to correctly complete measurements, calculate quantities, estimate material, labour and overhead requirements and accurately cost the product/service
Identify related industry compliance requirements
Identify, access and allocate required implementation resources

Maintain relevant industry and work records
Maintain relevant industry/work record systems
Maintain industry related records
Understand computer systems, their relationships and applications in the workplace
Understand business systems and their relationships
Establish clear implementation goals and deliverables
Monitor and optimise resource utilisation
<b>Self Management</b>
Plan own work within given task parameters
Set, monitor and satisfy personal work goals
Accept responsibility for given tasks
Clarify and confirm work instructions
Clarify own roles, goals, prerogatives and limitations in relation to the industry
Take responsibility for industry obligations
Evaluate and monitor own performance
Apply systematic and effective time management
<b>Learning</b>
Satisfy the competency requirements for the job
Maintain current knowledge of tools, devices, instruments, materials, work practices and systems
Maintain current knowledge of computer systems programs and there relevant applications
Seek learning opportunities
Provide technical instruction and learning assistance to assigned apprentices, trainees or other less experienced workers
Take control and manage own learning



Adopt a open approach to new ideas and techniques
Commit to and promote a culture of continuous learning
Set realistic learning goals for self development
Monitor and respond to learning process achievements
<b>Technology</b>
Use workplace technology to document and present information
Use workplace technology to communicate with clients, co-workers and/or other related personnel
Use workplace technology related to particular work tasks including tools, equipment, devices, instruments and materials
Use workplace technology for data analysis/investigation
Attain and maintain required technical accreditation/authority under the industry standards
Attain and maintain IT skills relevant to the ESI-Transmission, Distribution and Rail industry
Be willing to learn new IT skills
Use workplace technology to collate, organise and maintain work documentation and information
Use computer applications as a management tool

The Employability Skills described above are representative of the ESI-Transmission, Distribution and Rail Industry in general and may not reflect enterprise specific requirements or job roles.

Learning and assessment strategies for each qualification should be based on the requirements of the units of competency comprising the qualification and the Assessment Guidelines, Volume 1, Part 3.

### 1.1.04 Qualifications Scopes

## 1.4 Qualification Scopes

The qualifications described in this section of the Training Package have been designed and structured by industry in consultation with a range of stakeholders including regulators, RTOs and the community. They address identified work functions and work environments and facilitate worthwhile career pathways within the industry.

The qualification structures that follow must be read in conjunction with Part 1.2.03 — Competency Standards, Unit Construction.

## Certificate II

### Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied. Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes. Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

### Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas
- apply a defined range of skills
- apply known solutions to a limited range of predictable problems
- perform a range of tasks where choice between a limited range of options is required
- assess and record information from varied sources
- take limited responsibility for own outputs in work and learning.

## Qualification title: Certificate II in ESI — Powerline Vegetation Control UET20312

### Description of the qualification

Those gaining this qualification will be able to control the growth of vegetation near powerlines. Encompassed is compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, Industry bi-partite body – Guidelines / Codes of Practices or other related requirements for safe work and access near live electrical and mechanical apparatus.

Typical work function	Typical work environment
<p>Preparation of risk assessment control measures that encompass job safety assessment.</p> <p>Identifications of broad environmental values of sites, potential hazards, consultation and notification processes associated with sites and categorisation of sites as per legislative and regulatory codes.</p> <p>Assessment of trees for defects and hazards prior to climbing, preparation of climbing equipment and understand aerial emergency rescue procedures.</p> <p>Options available:</p>	<p>Urban and rural worksites.</p> <p>Outside work at commercial and industrial premises, such as assets owners in the Electricity Supply Industry.</p>

Typical work function	Typical work environment
<ul style="list-style-type: none"> <li>• Working from an elevated platform: determine trees natural lean, remove obstructions within the fall zone, determine felling methods, access trees to install restraints, remove trees in a safe manner and clear debris from felling site.</li> <li>• Working from the ground only: determine trees natural lean, remove obstructions within the fall zone, determine felling methods, access trees to install restraints, remove trees in a safe manner and clear debris from felling site.</li> <li>• Prepare and maintain equipment, operate equipment (e.g. EWP, woodchipper), remove stumps, control traffic.</li> </ul>	

**Qualification title: Certificate II in ESI — Transmission Structure and Line Assembly UET20412**

**Description of the qualification**

Those gaining this qualification will be able to assembly transmission towers and structures and stringing transmission overhead conductors prior to them being tensioned.

Typical work function	Typical work environment
<p>Erection of transmission towers and hardware used on towers and the pre-tension stringing of conductors. The establishment and reinstatement of the transmission tower worksite such as basic excavation work will require the use of support plant and equipment which may include back hoes, earth drilling rigs, trench excavators, heavy vehicles, wood-chippers, concrete cutters, rollers and compactor, trenching equipment and drills. Environmental concerns play a major part in this job function.</p>	<p>Outside work associated with transmission tower asset owners and the transmission tower construction industry.</p>

**Qualification title: Certificate II in National Broadband Network Cabling (Electricity Supply Industry Assets) UET20511**

**Description of the qualification**

This qualification provides competencies to support the installation of national broadband network cabling on electricity supply industry assets following prescribed procedures and installation processes.

<b>Typical work function</b>	<b>Typical work environment</b>
<p>Erection and maintenance of NBN network cabling (backbone infrastructure) including hardware used for installation of cabling and cable supports in both underground and aerial (communications corridor) environments. The stringing of cable. The establishment and reinstatement of the worksite such as basic excavation work will require the use of support plant and equipment which may include elevating work platforms. The documentation of OHS hazards and risks and the application of OHS practices, particularly in relation to working near live electrical apparatus are essential to this role. Local traffic control, working at heights and/or in confined spaces, splicing and termination of optical fibre cable and installation a telecommunications service to a building and solving problems in d.c. and data and voice circuits may form part of this job role. Addressing environmental concerns play a major part in this job function.</p>	<p>Outside work associated with the construction and maintenance of National Broadband Network Cabling</p>

**Certificate III****Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team co-ordination may be involved.

**Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge
- apply a range of well-developed skills
- apply known solutions to a variety of predictable problems
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information, using discretion and judgement
- take responsibility for own outputs in work and learning
- take limited responsibility for the output of others.

**Qualification title: Certificate III in ESI — Power Systems – Transmission Overhead UET30512****Description of the qualification**

Those gaining this qualification will be able to acquire the skills and knowledge needed for a career in power line transmission industry.

<b>Typical work function</b>	<b>Typical work environment</b>
Erection of towers, poles, structures and associated hardware including the installation and maintenance of conductors and cables. Inspection procedures for overhead structures and electrical apparatus are also included.	Outside work, assembling transmission towers and stringing and connecting transmission lines.

**Qualification title: Certificate III in ESI — Power Systems – Distribution Overhead UET30612****Description of the qualification**

Those gaining this qualification will be able to acquire the skills and knowledge needed for a career in power line distribution industry.

Typical work function	Typical work environment
Install, maintain and inspect poles, structures and associated hardware used on poles and structures. The work also encompasses the installation and maintenance of electrical equipment, conductors and cables used in the powerline industry. The use of support plant and equipment to undertake these tasks and environmental concerns also play a part in this job function.	Outside work, installing poles and structures and associated equipment, stringing overhead lines and cables.

**Qualification title: Certificate III in ESI — Power Systems - Rail Traction UET30712**

**Description of the qualification**

Those gaining this qualification will be able to acquire the skills and knowledge needed for a career in the tram and train overhead powerline sector of the Rail Industry.

Typical work function	Typical work environment
Installation, maintenance and inspection of overhead poles/structures, conductors and cables and rail traction wiring systems including associated equipment used on these structures. The installation and maintenance of the overhead traction configuration and the installation and maintenance of bonds as well as the operation of the rail traction height access equipment is also included in this job function.	Outside work, installing rail structures and associated equipment, stringing overhead lines and cables associated with the trams and trains

**Qualification title: Certificate III in ESI — Power Systems – Distribution Cable Jointing UET30812**

**Description of the qualification**

Those gaining this qualification will be able to acquire the skills and knowledge needed for a career as a cable jointer in the Distribution and Rail sectors of the Electricity Supply Industry.

Typical work function	Typical work environment
Laying, installation and maintenance of de-energised LV and HV underground polymeric cables and the installation and maintenance of electrical equipment. Options are available for skills to be obtained for energised cables and or Low and High Voltage paper insulated cables.	Outside work, installing underground cables and associated equipment for the distribution and rail industry

**Qualification title: Certificate III in ESI — Remote Communities Utility Worker UET30912****Description of the qualification**

Those gaining this qualification will be able to acquire the skills and knowledge needed for a career in inspecting and maintaining essential public utilities (excludes mine sites) within Very Remote Communities.

All work on essential electrical utilities will be undertaken in a non-energised (Dead) environment other than for testing purposes.

The use of support plant and equipment to undertake these tasks and environmental concerns also play a part in this job function.

<b>Typical work function</b>	<b>Typical work environment</b>
<p>Maintaining essential public utilities assets such as poles, structures, associated hardware and generating plant. The work also encompasses maintenance of electrical equipment, conductors and cables used in the generation and distribution of electrical energy. The use of support plant and equipment to undertake these tasks and environmental concerns also play a part in this job function.</p>	<p>Outside work, maintaining generating plant, distribution poles and structures and associated equipment, underground cables.</p>

**Certificate IV****Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills.

Applications involve responsibility for, and limited organisation of, others.

**Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources
- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others.

**Qualification title: Certificate IV in ESI — Network Systems UET40412****Description of the qualification**

Those gaining this qualification will be able to acquire additional skills and knowledge needed for a career in one of four specific fields, namely, Live Line Transmission, Live Line Distribution, Live Line Rail Traction and or installation and maintenance of Specialised Underground Cables.



Typical work function	Typical work environment
<p><b>Live Line Transmission</b></p> <p>Maintenance of energised transmission overhead lines using the stick technique, barehand technique and using barehand technique on a helicopter platform.</p> <p><b>Live Line Distribution</b></p> <p>Maintenance of energised distribution overhead lines using the stick technique and the glove and barrier technique.</p> <p><b>Live Line Rail Traction</b></p> <p>Maintenance of energised rail traction overhead wiring system and lines using the stick technique and the glove and barrier technique.</p> <p><b>Specialised Underground Cables</b></p> <p>Installation and maintenance of oil and gas filled specialised underground cables, installation and maintenance of polymeric specialised underground cable and the installation and maintenance of oil and gas pressure systems for specialised underground cables.</p>	<p>Work associated with the installation and maintenance of transmission, distribution, rail and or cable jointing overhead and or underground lines and cables which may be live.</p>

**Qualification title: Certificate IV in ESI — Power Systems Substations UET40512**

**Description of the qualification**

Those gaining this qualification will be able to acquire skills and knowledge needed for a career in installation and maintenance of substations.

Typical work function	Typical work environment
<p>Substation work associated with the maintenance of HV power system, including circuit breakers and transformers. It encompasses the carrying out of substation, switching, inspection, and the diagnosing and rectification of faults. Options are available for skills to be obtained in High Current DC switchgear and equipment, installation of HV plant and equipment and or the maintenance and commissioning of discrete protection and control systems.</p>	<p>Working on Substations associated with Transmission, Distribution and Rail sectors of the Electricity Supply Industry.</p>

**Qualification title: Certificate IV in ESI — Power Systems Network Infrastructure UET40612****Description of the qualification**

Those gaining this qualification will be able to acquire skills and knowledge needed for a career in installation and maintenance of network infrastructure in one of four specific fields, namely, Transmission, Distribution, Rail Traction or Cable Jointer in the Distribution and Rail sectors of the Electricity Supply Industry.

<b>Typical work function</b>	<b>Typical work environment</b>
<p>Installation and maintenance of apparatus and equipment belonging to electricity suppliers.</p> <p><b>Transmission</b></p> <p>Erection of towers, poles, structures and associated hardware including the installation and maintenance of conductors and cables. Inspection procedures for overhead structures and electrical apparatus are also included.</p> <p><b>Distribution</b></p> <p>Install, maintain and inspect poles, structures and associated hardware used on poles and structures. The work also encompasses the installation and maintenance of electrical equipment, conductors and cables used in the powerline industry. The use of support plant and equipment to undertake these tasks and environmental concerns also play a part in this job function.</p> <p><b>Rail Traction</b></p> <p>Installation, maintenance and inspection of overhead poles/structures, conductors and cables and rail traction wiring systems including associated equipment used on these structures. The installation and maintenance of the overhead traction configuration and the installation and maintenance of bonds as well as the operation of the rail traction height access equipment is also included in this job function.</p> <p><b>Cable Jointing</b></p> <p>Laying, installation and maintenance of de-energised LV and HV underground polymeric cables and the installation and maintenance of electrical equipment. Options are available for skills to be obtained for energised cables and or Low and High Voltage paper insulated cables.</p>	<p>Outside work, associated with the installation and maintenance of network infrastructure for transmission, distribution, rail and or cable jointing overhead and or underground lines and cables which may be live.</p> <p>Industrial workshops, substations, switchyards and premises pertaining to the electricity supplier.</p>

## Diploma

### Characteristics of Learning Outcomes

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and co-ordination.

The self directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team co-ordination may be involved.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

### Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- analyse and plan approaches to technical problems or management requirements
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- evaluate information, using it to forecast for planning or research purposes
- take responsibility for own outputs in relation to broad quantity and quality parameters
- take some responsibility for the achievement of group outcomes.

## Qualification title: Diploma of ESI — Power Systems UET50212

### Description of the qualification

Those gaining this qualification will be able to acquire skills and knowledge needed for a career in either, design, protection/testing and or system operation.

Typical work function	Typical work environment
OHS and EPA management systems and options in three specific streams:  <b>Design</b> Preparation and management of detail construction	Designing new transmission, distribution and or rail overhead and underground lines for the Electricity Supply Industry. Typically

<b>Typical work function</b>	<b>Typical work environment</b>
<p>plans for electrical system infrastructure, designing overhead, underground, substations and or public lighting systems. Development of planned outages strategies and or the investigation of quality supply issues.</p> <p><b>Protection/Testing</b></p> <p>Testing, maintaining and commissioning metering schemes and or distribution field devices, maintaining and commissioning network protection and control systems (interdependent) and, installing and maintaining power systems communication equipment.</p> <p><b>System Operation</b></p> <p>Development of LV and HV distribution switching programs and transmission switching programs. Coordinate LV distribution networks and HV distribution and subtransmission networks.</p>	<p>inside work in design/drafting facilities</p> <p>Testing transmission, distribution and or rail overhead and underground lines and equipment for the Electricity Supply Industry. Typically outside and inside work.</p> <p>System Operations- Control rooms in an industrial complex with mimic panels, video displays, chart recorders, computers switching controls.</p>

## Advanced Diploma

### Characteristics of Learning Outcomes

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures. The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

### Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of specialised knowledge with depth in some areas
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions
- generate ideas through the analysis of information and concepts at an abstract level
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills
- demonstrate accountability for personal outputs within broad parameters
- demonstrate accountability for personal and group outcomes within broad parameters.

## Qualification title: Advanced Diploma of ESI — Power Systems UET60212

### Description of the qualification

Those gaining this qualification will be able to acquire additional skills and knowledge needed for a career in either, design, testing and or system operation.

Typical work function	Typical work environment
<p>OHS and EPA management systems and options in three specific streams:</p> <p><b>Design</b></p> <p>Preparation and management of detail construction plans for electrical system infrastructure and the designing of customer substations, Analysis and appraisal of fault and outage data, the designing of</p>	<p>Higher level, managerial design, protection/testing and system operation functions. Typically inside or outside environment of the Transmission, Distribution and Rail sectors of the</p>

Typical work function	Typical work environment
<p>overhead and underground transmission systems and or the review of asset management strategies</p> <p><b>Protection/Testing</b></p> <p>Maintaining network protection control systems, conducting of evaluation of primary plant, conducting evaluations of power systems faults and or undertaking project management of substation augmentation and maintenance.</p> <p><b>System Operation</b></p> <p>Management of HV distribution and subtransmission and or transmission network demand. Development of crisis management plans, management of network faults, critical events and or control of generating plant.</p>	Electricity Supply Industry.

### 1.1.05 Qualifications and Packaging Rules

## 1.5 Qualifications and Packaging Rules

The following table details the full range of qualifications in this version of the ESI – Transmission, Distribution and Rail Sector Training Package, the completion requirements for each qualification and their respective structure and composition. These qualifications have been designed to comply with the National Quality Council’s Packing Rules for Flexibility initiative.

Each qualification is described by the number of core and elective weighted points required for completion and issue of the qualification under the AQF.

Respective qualifications have at least two Elective Groups from which elective competencies may be drawn. Where a range of weighting points is set for a group e.g. 60-120, the lower number indicates both the minimum weighting points required from that particular elective group for completion and the larger number is the maximum required weighting points which may be selected from that group for a valid qualification completion.

Where the lower number for a group is 0 no competencies are required to be selected from that group, however, sufficient weighted points must be selected from other groups to meet the required total elective weighted points for completion.

Note: Individuals may select elective units to a weighting point total greater than the maximum specified for completion from a particular group. Where this is done weighted points in excess of the specified maximum cannot be counted for completion of the qualification.

Where a Competency Standard Unit has pre-requisite Competency Standards Unit requirements, such pre-requisite units shall be completed and their weighted points counted toward qualification completion.

Full details of each qualification follow Table 1 -Qualification Completion Values, below.

**Table 1 – Qualification Completion Values**

Qualification Code	Qualification Title	Total Core	Total Elective	Elective Units Groups		
				Group A	Group B	Group C
UET20312	Certificate II in ESI — Vegetation Control	240	120	0-70	50-120	
UET20412	Certificate II in ESI — Transmission Structure and Line Assembly	160	200	0-60	140-200	
UET20511	Certificate II in National Broadband Network Cabling (Electricity Supply Industry Assets)	240	120	0-60	60-120	
UET20612	Certificate II in ESI — Assets Inspection	220	140	0-60	80-140	
UET30512	Certificate III in ESI — Power Systems - Transmission Overhead	840	220	0-60	160-220	
UET30612	Certificate III in ESI — Power Systems - Distribution Overhead	920	140	0-60	80-140	
UET30712	Certificate III in ESI — Power Systems - Rail Traction	870	190	0-60	130-190	
UET30812	Certificate III in ESI — Power Systems - Distribution Cable Jointing	780	280	0-60	220-280	
UET30912	Certificate III in ESI — Remote Communities Utility Worker	700	360	0-180	180-360	
UET40412	Certificate IV in ESI — Network Systems	540	740	0-60	0-420	320-740
UET40512	Certificate IV in ESI — Power Systems Substations	1030	250	0-50	0-120	130-250
UET40612	Certificate IV in ESI — Power Systems Network Infrastructure	940	340	0-50	0-140	200-340
UET50212	Diploma of ESI - Power Systems	700	900	0-270	0-400	0-200

UET60212	Advanced Diploma of ESI — Power Systems	820	1340	0-360	0-400	0-200
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### 1.1.06 Skill Sets

## 1.6 Skill Sets

### Definition

Skill sets are defined as single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.

Skill sets are a way of publicly identifying logical groupings of units of competency which meet an identified need or industry outcome. Skill sets are not qualifications.

Where skill sets are identified in a Training Package, the Statement of Attainment can set out the competencies a person has achieved in a way that is consistent and clear for employers and others. This is done by including the wording ‘these competencies meet [insert skill set title or identified industry area] need’ on the Statement of Attainment. This wording applies only to skill sets that are formally identified as such in the endorsed Training Package. See the 2011 edition of the AQF Implementation Handbook for advice on wording on Statements of Attainment. See:

[http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF\\_Handbook\\_07.pdf](http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf)

### Identified Skill Sets

Note: Refresher Training Skill Sets

The following Skill Sets have been developed to meet the requirements for refresher training of skills essential for gaining and maintaining access to electricity supply industry networks. The Refresher Training units in these Skill Sets are not included in any qualifications or elective schedules and are only to be accessed via the identified Skill Sets included below.



## 1.2 Competency Standards

### Volume 1 Part 2

#### 1.2.00 Competency Standards

### Competency Standards

## 2.0 Introduction

Information in this section outlines how the competency standards were developed in broad terms. The industry coverage they can apply to, as well as the format and construction of the individual Competency Standard Units provided. Matters related to language, literacy and numeracy, access and equity and the regulatory environment in which the units may apply is also covered, as is the interrelated Essential Knowledge and Associated Skills. Competency standard units in this Training Package are interrelated and linked with the Definitions/Glossary and Essential Knowledge and Associated Skills sections. Therefore, each Competency Standard Unit, found in Volume 2, must not be used in isolation or exported without these interrelated components.

There are over 200 Competency Standard Units included.

A definitions/glossary to complement the Competency Standard Units is included in Volume 2 Part 1. The glossary provides a description of those words that are used in the Competency Standard Units to define terms in more detail. It also forms an integral part of each unit. An Essential Knowledge and Associated Skills section follows the Competency Standard Units and also forms an integrated part of each unit.

Included in this section is the following:

- an index of the Competency Standard Units – Table 1 in part 1.2.09– Index of Units and Scopes/Descriptors. The units have been placed in groups that would typically relate to a particular or special area of industry need and for ease in recognition of related unit groupings. Included at the end of Table 1 part 1.2.09 are the imported units that are located within the core of the qualifications in this Training Package.
- pre-requisites of each Competency Standard Unit can be obtained from Table 1 in part 1.2.09. Reference is also given for the correlation of the units within a qualification(s).
- a list of imported Competency Standard Units — located in Table 1 in part 1.2.09.

## **1.2.01 Development of Competency Standards for the ESI - Transmission, Distribution and Rail Sector**

### **2.1 Development of Competency Standards for the ESI – Transmission, Distribution and Rail Sector**

Competency Standards were initially developed for the function of Linework and Cable-Jointing, and were endorsed in 1993, by the then National Training Board (NTB). The 1993 version Competency Standard Units were updated and incorporated into the new Training Package framework. They were endorsed in 1998 as the Training Package for the Electricity Supply Industry – Transmission and Distribution sector of the Utilities Industry (UTT98). Subsequent minor amendments were made to include an array of qualifications, variations to Competency Standard Units and the inclusion of Rail as a sector.

Consequently, these revised units make up the group of units within this Training Package. They cover a broad range of knowledge and skills applied in the Transmission, Distribution and Rail industry. The development project satisfied the following characteristics:

- National Utilities and Electrotechnology ITAB (now known as EE-OZ Training Standards) and its nationwide focus groups appropriately represented the industry throughout Australia
- Development, consultation and validation included appropriate processes with a wide range of industry employer/employee, practitioners, providers, stakeholders/community, and regulatory and government agency representatives
- The draft standards were distributed throughout the national, State and Territory ITAB network and to industry stakeholders and, feedback from other industries was actively encouraged
- The competency standards were subjected to ongoing scrutiny during the process of development.

## **1.2.02 Industry Coverage**

### **2.2 Industry Coverage**

The Australian Standard Classifications of Occupation (ASCO) defines a number of occupations served by this Training Package that describes vocational standards for the Industry.

The typical job functions for specific qualifications can be located in Volume 1 Part 1 of this Training Package and highlight the industry coverage

The formal industry coverage is under ANZSIC Code 3610 in which the sector is defined as consisting of units mainly engaged in the Generation, transmission or distribution of electricity. Most vocations in this group have an entry level of skill commensurate with an AQF Certificate III or higher qualification. In some instances relevant experience is required in addition to a formal qualification.

There have been a number of changes within the industry and the sector has characterised during the last few years by the privatisation of many enterprises and the out-sourcing of many functions and activities.

Notwithstanding these changes these Competency Standards will cover approximately one third of the Electricity Supply Industry's direct workforce of 47,000 employees. The Standards may also provide coverage for the increasing contractor workforce, which is required to support sector activities.

The ESI Transmission, Distribution and Rail sector of the Industry contributes greatly to the economic and future needs of Australia. In Volume 1 Part 1, the section 'The Electricity Supply Industry' describes the Industry in detail.

The intent of the national ESI — Transmission, Distribution and Rail Training Package is to describe the skills and knowledge, which pertain to vocations within the field of Transmission, Distribution and Rail, and to offer a choice and range of qualifications or Competency Standard Unit through appropriate training for organisations, and personnel seeking formal recognition of respective skills and knowledge. It is recognised that other training pathways may exist in the form of other Training Packages and arrangements. The prime objective of the national ESI — Transmission, Distribution and Rail Training Package is to establish the standards of performance in terms of skills and knowledge required for safe, productive and satisfying work covering a range of work activities referred to above. Registered Training Organisations (RTOs) can subsequently develop appropriate industry approved training programs to meet these objectives or indeed to meet other Training Package objectives. The determining factor will be choice, choice of Training Package, and choice of provider – RTO. Where New Apprenticeships apply choice in relation to funding to RTOs will be facilitated by policy enunciated by State and Territory Training Authorities.

### **Other industry standards**

It is recognised that the ESI - Transmission, Distribution and Rail Industry Standards do not cover all the competencies, which are likely to be required and applied within organisations and workplaces. Nationally endorsed competency standards from other industries can be used where appropriate, provided they are imported in accordance with the criteria outlined in this Training Package.

### **Language, literacy, numeracy and Employability Skills.**

The competency standards have been written to reflect the technical and operational needs of industry and include appropriate language, literacy and numeracy requirements.

In general employability skills are embedded within the technical aspects of the industry units and in some instances, the Competency Standard Units directly address the employability skills. The relationship of employability skills to industry competencies is shown in part 1.1.03.

### **Access and equity**

The knowledge and skills required of employees in the ESI — Transmission, Distribution and Rail industry are comprehensive and therefore many and varied employment opportunities are available. The Competency Standards reflect the range of knowledge and skills required and are written in a non-exclusive manner so as to increase the participation rates of under-represented groups and to minimise unintentional bias.

## Contextualisation

In the Competency Standard Units, "notes" have been placed against respective aspects that include scope, performance criteria, range statement and essential knowledge and associated skills and other related sections. The insertion of these "notes" is primarily to provide users and support material developers with examples of the form and type related to technical content principles, technology, equipment, or processes that may be used to cover the outcomes. The examples should be treated as information that adds clarity for the purposes of assisting in guidance of the depth and breadth that is to be covered.

As the type, form, process, or technique of technology and equipment may change it is therefore expected and encumbered on RTOs to continue to be current in the content of their delivery arrangements. It is therefore appropriate for RTOs to use the notes in relation to technology and equipment references as advisory information. In these instances RTOs should aim to accommodate the adoption of improved and new technologies in the scope/range and essential knowledge and associated skills of the Competency Standard Units by varying the context examples given in the referenced 'Notes:' to the Performance Criteria, Range Statement and Essential Knowledge and Associated Skills. However, the contextualisation must not be such that the outcome of the Competency Standard Units is altered in any way.

Where contextualisation of the notes varies the outcome of the Competency Standard Unit and its related content, RTOs should consult with EE-Oz Training Standards to explore options for incorporating and/or covering the new arrangements, so that currency of the Training package is maintained.

It should be noted that any need to alter a Competency Standard Units from its intended outcome requires a new or varied Competency Standard Unit. Such changes are to be undertaken through the continuous improvement processes required of Training Packages, which in relation to this Training Package is managed by EE-Oz Training Standards. Also refer to the Qualifications Framework section of this ESI - Transmission, Distribution and Rail Training Package.

### 1.2.03 Unit Construction

## 2.3 Unit Construction

Competency Standard Units that have been successfully completed by learners are to be acknowledged. Some Competency Standard Units have been constructed in a manner that will allow reporting without further explanation. However, there are units from related Utilities Industry Training Packages that have been constructed in a manner that requires further reporting of relevant transferable information, i.e. a reporting statement of information that is meaningful for maximum recognition and skills transfer. Generally this would be any endorsement or subset of the unit, as well as detailed formal advice about essential knowledge and skills.

If, in future developments of this Training Package, endorsements are included, further information will be provided. Information can be found in the Electrotechnology Training Package.

## Prerequisites

It is important to note that in relation to training delivery of prerequisites Competency Standard Units, training and formative staged assessments may be delivered for all, or part of the sequence of Competency Standard Units concurrently and at a different stage to the final assessment of each unit. However, the final assessment event and judgement for attributing competence for each unit is to follow the prerequisite sequence.

## Exporting ESI CSUs from this Training Package

No Standard Competency Unit from this Training Package is to be used in isolation or exported without including all relevant interrelated components such as definitions, glossary, essential knowledge and skills, matters related to language, literacy and numeracy, access, equity, cultural diversity or any regulatory arrangements that apply.

### 1.2.04 Assessment Guidelines

## 2.4 Assessment Guidelines

The National Transmission, Distribution and Rail Industry have developed guidelines for the assessment of these standards. The guidelines are included at Volume 1 Part 3 of this Training Package.

### 1.2.05 National Qualifications

## 2.5 National Qualifications

The National Transmission, Distribution and Rail Industry has identified qualifications, which are linked to and use these competency standards. These are included in part 1.1.05 – Qualifications Framework of this Training Package.

A list of the qualification titles contained in this Training Package is provided in Part 1.1.05. Included in this section are details of the content and composition of the qualifications, the Industry Qualifications Framework, completion requirements and the rules for structuring and flexibility arrangements and the qualifications structure for each qualification. Further, there is a full description provided for each qualification, which explains its application and gives added meaning to the group of units making up the respective qualification.

## **1.2.06 Regulatory Arrangements - ESI - Transmission, Distribution and Rail Sector**

### **2.6 Regulatory Arrangements — ESI - Transmission, Distribution and Rail Sector**

The Transmission, Distribution and Rail Industry is subject to a high level of regulation and codes of practice related to the assembly, installation and maintenance of parts, components and the control and operation of equipment, apparatus and the like. The regulations 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. Competency Standard Units in this Training Package have been developed in consultation with the relevant industry technical and business Regulators 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 Competency Standard Units contained within this Training Package for respective licensing, registration or accreditation purposes. In constructing these Competency Standard Units, EE-Oz Training Standards and respective Regulators have given consideration to the link between the delivery and assessment of Competency Standard Units and the respective regulatory requirements. It is expected that the assessment and preferred training regime which meets a Competency Standard Unit's delivery and assessment requirements will therefore meet the relevant regulatory requirements.

In recognising this interrelationship, every effort has been made to ensure currency in regulatory requirements, thus RTOs must ensure they are observed. This includes utilising any recommended industry training program designed to meet Competency Standard Units which are related to licensing/registration applications.

As RTO's registered under the Australian Quality Training Framework (AQTF) requirements are given full responsibility for deeming a learner/apprentice competent for the respective Competency Standard Units within this Training Package. The RTO shall also provide all the necessary documentation (including results preferably percentile based) as required by the regulatory authority to support an application of eligibility for a relevant license, registration or accreditation.

It should be noted that regulatory authorities have advised that the quality of Registered Training Organisations awarding Competency Standard Units for regulatory purposes will be monitored. Where deficiencies are identified, regulators may deem it necessary to introduce appropriate actions, including an additional 'external' assessment following the issuing of the qualification to satisfy eligibility requirements for issuing the licence.

#### **Statutes, regulations and codes of practice**

Federal, State and Territory Electricity, Telecommunications, Occupational Health and Safety and Work Cover Acts and Regulations typically cover the Transmission, Distribution and Rail Industry. Further, there are other statutes, regulations, industrial instruments, codes of practice, guidelines and advisory standards, Australian/New Zealand and International Standards that apply to the Transmission, Distribution and Rail Industry.

**State and Territory Regulators**

Jurisdiction	Organisation	Website	Telephone Number
Australian Capital Territory	ACT Planning and Land Authority	<a href="http://www.actpla.act.gov.au">www.actpla.act.gov.au</a>	02 6207 1923
New South Wales	Office of Fair Trading	<a href="http://www.fairtrading.nsw.gov.au">www.fairtrading.nsw.gov.au</a>	133 220
Northern Territory	NT WorkSafe	<a href="http://www.worksafe.nt.gov.au">www.worksafe.nt.gov.au</a>	1800 019 115
Queensland	Department of Mines and Energy	<a href="http://www.dme.qld.gov.au/Energy/gas.cfm">http://www.dme.qld.gov.au/Energy/gas.cfm</a>	07 3237 1626
South Australia	Office of the Technical Regulator	<a href="http://www.sa.gov.au/government/entity/959">http://www.sa.gov.au/government/entity/959</a>	08 8226 5500
South Australia	Office of Consumer and Business Affairs	<a href="http://www.ocba.sa.gov.au">www.ocba.sa.gov.au</a>	08 8204 9696
Tasmania	WorkCover Tasmania	<a href="http://www.workcover.tas.gov.au">www.workcover.tas.gov.au</a>	1300 776 572
Tasmania	Workplace Standards Tasmania	<a href="http://www.wst.tas.gov.au/industries/gas">http://www.wst.tas.gov.au/industries/gas</a>	1300 135 513
Victoria	Energy Safe Victoria	<a href="http://www.esv.vic.gov.au">www.esv.vic.gov.au</a>	03 9203 9700
Western Australia	Department of Consumer and Employment Protection - Energy Safety	<a href="http://www.energysafety.wa.gov.au">www.energysafety.wa.gov.au</a>	08 9422 5282
Western Australia	Office of Energy	<a href="http://www.energy.wa.gov.au/2/3176/64/gas.pm">http://www.energy.wa.gov.au/2/3176/64/gas.pm</a>	08 9420 5600

### Other Bodies

Organisation	Website
Standards Australia	<a href="http://www.standards.org.au">www.standards.org.au</a>
Department of Education, Employment and workplace Relations	<a href="http://www.deewr.gov.au/">http://www.deewr.gov.au/</a>
SafeWork Australia	<a href="http://safeworkaustralia.gov.au/">http://safeworkaustralia.gov.au/</a>
Training.gov.au	<a href="http://training.gov.au/">http://training.gov.au/</a>

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### 1.2.07 Maintenance of Competency Standards

## 2.7 Maintenance of Competency Standards

The Transmission, Distribution and Rail Industry Competency Standards were developed by, and are therefore owned by, the industry. However, it is acknowledged that copyright ownership with respect to this material rests with the Commonwealth.

The Competency Standards must be maintained so that they reflect the ongoing needs of the ESI — Transmission, Distribution and Rail Training Package sector and respond in a timely manner to changed technologies and circumstances.

The parties (as detailed in the Introduction to this Training Package) who constitute the ESI — Transmission, Distribution and Rail Training Package sector of the ElectroComms and EnergyUtilities Industry Skills Council share responsibility for the maintenance of the Competency Standards:

- Competency Standards maintenance will be coordinated and managed by ElectroComms and EnergyUtilities Industry Skills Council Ltd trading as EE-Oz Training Standards or its successor.
- Suggestions and proposals for changes from all parties are welcomed. These should be documented and submitted to EE-Oz Training Standards in accordance with its policies and procedures.

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### 1.2.08 What is Competency?

## 2.8 What is Competency?

The broad concept of industry competency relates to demonstrated performance of specified tasks and duties, expected in the workplace to a given standard as expressed in industry standards. Competency requires the demonstrated application of specified skills and knowledge and the ability to transfer and apply the skills and knowledge to new situations and environments, relevant to effective participation in work for an industry, industry sector or enterprise.



Competency covers all aspects of workplace performance and involves performing individual tasks; managing a range of different tasks; responding to contingencies or breakdowns; and dealing with the responsibilities of the workplace including the work environment and working with others.

Work performance competency requires the demonstrated application of specified skills, knowledge and aptitudes consistently over time and to a quality standard in the workplace, and the ability to transfer it to new situations and environments. In line with this concept of competency, Training Packages contain the vocational standards for industry and focus on what is expected of a competent individual in the workplace as an outcome of learning, rather than focussing on the learning process itself. The measure is not what the individual/learner knows, but has the individual/learner demonstrated performance to a standard, with what they know in a range of situations and range of applications.

Competency standards are determined by industry to meet identified industry skill needs. Competency standards are made up of a number of competency standard units each of which describes a key function or role in a particular job function or occupation. Each competency standard unit is usually linked to one or more AQF qualifications.

## **Contextualisation of Competency Standard Units by RTOs**

RTOs may contextualise Competency Standard Units to reflect local outcomes required, provided that no requirements and/or completion rules of the Training Package for industry are infringed. This also includes any prevailing regulatory requirements that may apply to the Competency Standard Units. Contextualisation could involve additions or amendments to suit particular delivery methods, learner profiles, specific enterprise equipment requirements, or to otherwise meet local needs. The integrity of the overall intended outcome of the Competency Standard Units must be maintained and, not reduced.

Any contextualisation of Competency Standard Units in this endorsed Training Package must be within the bounds of the following advice. In contextualising Competency Standard Units, RTOs:

- must not contravene, diminish or detract from any regulatory/licensing arrangement that may apply to the unit, or its related delivery arrangements, and
- must not remove or add to the number and content of Elements and Performance Criteria
- may add specific industry terminology to Performance Criteria where this does not distort or narrow the competency outcomes, and/or
- may make amendments and additions to the Range Statement as long as such changes do not diminish the breadth of application of the competency and reduce its portability, and/or
- may add detail to the evidence guide in areas such as the critical aspects of evidence or resources and infrastructure required where these expand the breadth of the competency but do not limit its use.

## **Components of Competency Standard Units**

The components of units of competency are summarised below, in the order in which they appear in each unit of competency.

**Unit Title**

The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency title is unique, both within and across Training Packages.

**Unit Descriptor**

The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses. Where units of competency have been contextualised from units of competency from other endorsed Training Packages, summary information is provided. There may also be a brief second paragraph that describes its relationship with other units of competency, and any licensing requirements.

**Employability Skills**

This sub-section contains a statement that the unit contains Employability skills.

**Pre-requisite Units (optional)**

If there are any units of competency that must be completed before the unit, these will be listed.

**Application of the Unit**

This sub-section fleshes out the unit of competency's scope, purpose and operation in different contexts, for example, by showing how it applies in the workplace.

**Competency Field (Optional)**

The competency field either reflects the way the units of competency are categorised in the Training Package or denotes the industry sector, specialisation or function. It is an optional component of the unit of competency.

**Sector (optional)**

The industry sector is a further categorisation of the competency field and identifies the next classification, for example an elective or supervision field.

**Elements of Competency**

The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency.

**Performance Criteria**

The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance. They are usually written in passive voice. Critical terms or phrases may be written in bold italics and then defined in range statement, in the order of their appearance in the performance criteria.

**Required Skills and Knowledge**

The essential skills and knowledge are either identified separately or combined. Knowledge identifies what a person needs to know to perform the work in an informed and effective manner. Skills describe the application of knowledge to situations where understanding is converted into a workplace outcome.

## Range Statement

The range statement provides a context for the unit of competency, describing essential operating conditions that may be present with training and assessment, depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. As applicable, the meanings of key terms used in the performance criteria will also be explained in the range statement.

## Evidence Guide

The evidence guide is critical in assessment as it provides information to the Registered Training Organisation (RTO) and assessor about how the described competency may be demonstrated. The evidence guide does this by providing a range of evidence for the assessor to make determinations, and by providing the assessment context. The evidence guide describes:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment;
- relationships with the assessment of any other units of competency;
- suitable methodologies for conducting assessment including the potential for workplace simulation;
- resource implications, for example access to particular equipment, infrastructure or situations;
- how consistency in performance can be assessed over time, various contexts and with a range of evidence; and
- the required underpinning knowledge and skills

## Employability Skills in Units of Competency

The detail and application of Employability Skills facets will vary according to the job-role requirements of each industry. In developing Training Packages, industry stakeholders are consulted to identify appropriate facets of Employability Skills which are incorporated into the relevant units of competency and qualifications.

Employability Skills are not a discrete requirement contained in units of competency (as was the case with Key Competencies). Employability Skills are specifically expressed in the context of the work outcomes described in units of competency and will appear in elements, performance criteria, range statements and evidence guides. As a result, users of Training Packages are required to review the entire unit of competency in order to accurately determine Employability Skills requirements.

## How Employability Skills relate to the Key Competencies

The eight nationally agreed Employability Skills now replace the seven Key Competencies in Training Packages. Trainers and assessors who have used Training Packages prior to the introduction of Employability Skills may find the following comparison useful.

Employability Skills	Mayer Key Competencies
Communication	Communicating ideas and information

Teamwork	Working with others and in teams
Problem solving	Solving problems Using mathematical ideas and techniques
Initiative and enterprise	
Planning and organising	Collecting, analysing and organising information Planning and organising activities
Self-management	
Learning	
Technology	Using technology

When analysing the above table it is important to consider the relationship and natural overlap of Employability Skills. For example, using technology may involve communication skills and combine the understanding of mathematical concepts.

### **Explicitly embedding Employability Skills in units of competency**

This Training Package seeks to ensure that industry-endorsed Employability Skills are explicitly embedded in units of competency. The application of each skill and the level of detail included in each part of the unit will vary according to industry requirements and the nature of the unit of competency.

Employability Skills must be both explicit and embedded within units of competency. This means that Employability Skills will be:

- embedded in units of competency as part of the other performance requirements that make up the competency as a whole
- explicitly described within units of competency to enable Training Packages users to identify accurately the performance requirements of each unit with regards to Employability Skills.

This Training Package also seeks to ensure that Employability Skills are well-defined and written into units of competency so that they are apparent, clear and can be delivered and assessed as an essential component of unit work outcomes.

### **Sample unit of competency components showing Employability Skills**

The following table shows the sequence of a unit of competency, and each cell contains text taken from a range of units. It provides examples of where and how various Employability Skills could be embedded in each component.

Please note that in the example, the bracketed Employability Skills are provided for clarification only and would not be present in units of competency within this Training Package.

Unit Title                      Give formal presentations and take part in meetings (Communication)

Unit Descriptor	This unit covers the skills and knowledge required to promote the use and implementation of innovative work practices to effect change. (Initiative and enterprise)
Element	Proactively resolve issues. (problem solving)
Performance Criteria	Information is organised in a format suitable for analysis and dissemination in accordance with organisational requirements. (Planning and organising)
Range Statement	Software applications may include email, internet, word processing, spreadsheet, database or accounting packages. (technology)
Required Skills and Knowledge	<p>Modify activities depending on differing workplace contexts, risk situations and environments. (Learning)</p> <p>Work collaboratively with others during a fire emergency. (teamwork)</p> <p>Instructions, procedures and other information relevant the maintenance of vessel and port security. (Communication)</p>
Evidence Guide	<p>Evidence of having worked constructively with a wide range of community groups and stakeholders to solve problems and adapt or design new solutions to meet identified needs in crime prevention. In particular, evidence must be obtained on the ability to:</p> <p>assess response options to identified crime-prevention needs and determine the optimal action to be implemented</p> <p>in consultation with relevant others, design an initiative to address identified issues. (Initiative and enterprise).</p>

## **Employability Skills Summaries and units of competency**

An Employability Skills Summary exists for each qualification. Summaries include broad advice on industry expectations with regard to Employability Skills at the qualification level. Summaries should be used by trainers and assessors to assist in identifying the Employability Skills requirements contained within units of competency.

## 1.2.09 Index of Competency Standard Units

### 2.9 Index of Competency Standard Units

#### 2.1.1 Cable Jointing Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDRCJ21A	Lay ESI electrical cables	20	3	UEENEEE101A UEENEEE107A UETTDREL11A UETTDREL16A
UETTDRCJ22A	Install and maintain de-energised low voltage underground paper insulated cables.	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRIS41A UETTDRIS42A UETTDRIS55A
UETTDRCJ23A	Install and maintain de-energised high voltage underground paper insulated cables.	60	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRIS41A UETTDRIS42A UETTDRIS55A
UETTDRCJ24A	Joint and maintain energised low voltage	60	3	UEENEEE101A UEENEEE102A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
	underground paper insulated cables			UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS41A UETTDNIS42A UETTDNIS55A
UETTDRCJ25A	Perform straight through high voltage paper insulated to polymeric transition joint	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS41A UETTDNIS42A UETTDNIS55A
UETTDRCJ26A	Install and maintain de-energised low voltage underground polymeric cables.	50	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UETTDRCJ21A UETTDREL11A UETTDREL16A
UETTDRCJ27A	Install and maintain de-energised high voltage underground polymeric cables.	50	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UETTDRCJ21A UETTDREL11A UETTDREL16A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDRCJ28A	Joint and maintain energised low voltage underground polymeric cables	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS41A UETTDRLS42A UETTDRLS55A
UETTDRCJ29A	Install gas and oil filled specialised underground cables	60	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ23A UETTDRCJ26A UETTDRCJ27A UETTDRCJ99A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS41A UETTDRLS42A UETTDRLS55A
UETTDRCJ30A	Maintain gas and oil filled specialised underground cables	60	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ23A UETTDRCJ26A



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDRCJ27A UETTDRCJ99A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS41A UETTDRLS42A UETTDRLS55A
UETTDRCJ31A	Install and maintain polymeric specialised underground cables	65	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ23A UETTDRCJ26A UETTDRCJ27A UETTDRCJ99A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS41A UETTDRLS42A UETTDRLS55A
UETTDRCJ32A	Install and maintain gas and oil pressure systems for specialised underground cables	65	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ23A UETTDRCJ26A UETTDRCJ27A UETTDRCJ99A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS41A UETTDRLS42A UETTDRLS55A



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDRCJ99A	Test and verify distribution cable jointing installations	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS41A UETTDNIS42A UETTDNIS55A

### 2.1.2 Distribution Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg. Pts	AQF	Prerequisites.	Qu Co
UETTDNDP11A	Inspect overhead poles/structures and electrical apparatus	50	3	UEENEEE101A UEENEEE107A UETTDREL11A UETTDREL16A	UE
UETTDNDP12A	Maintain overhead energised low voltage conductors and cables	60	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS52A UETTDNIS54A	UE
UETTDNDP13A	Maintain energised HV distribution overhead electrical apparatus (stick)	70	4	<b>Pathway 1</b> Qualified and authorised Distribution Lineworker	

UNIT CODE	UNIT TITLE	Wtg. Pts	AQF	Prerequisites.	Qu Co
				<b>Pathway 2</b> BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEED101A UEENEED102A UETTDRDP11A UETTDRDP12A UETTDREL11A UETTDREL12A UETTDREL16A UETTDREL42A UETTDREL52A UETTDREL54A UETTDREL65A	
UETTDRDP14A	Maintain energised HV distribution overhead electrical apparatus (glove)	70	4	<b>Pathway 1</b> Qualified and authorised Distribution Lineworker  <b>Pathway 2</b> BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEED101A UEENEED102A UETTDRDP11A UETTDRDP12A UETTDREL11A UETTDREL12A UETTDREL16A UETTDREL42A UETTDREL52A UETTDREL54A UETTDREL65A	

UNIT CODE	UNIT TITLE	Wtg. Pts	AQF	Prerequisites.	Qu Co
UETTD RDP15A	Inspect, maintain and restore energised low voltage overhead distribution network infrastructure	50	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTD R IS46A UETTD R IS62A UETTD R IS63A UETTD R IS67A	
UETTD R DP99A	Test and verify distribution overhead installations	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTD R DP11A UETTD R DP12A UETTDREL11A UETTDREL12A UETTDREL16A UETTD R IS41A UETTD R IS42A UETTD R IS52A UETTD R IS54A UETTD R IS56A	UE

### 2.1.3 Design Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTD RDS31A	Draft and layout a power system overhead distribution extension	60	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTD RIS62A UETTD RIS63A
UETTD RDS32A	Draft and layout a power system underground distribution extension	60	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTD RIS62A UETTD RIS63A
UETTD RDS33A	Draft and layout a power system street lighting system	60	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTD RIS62A UETTD RIS63A
UETTD RDS34A	Draft and layout a power system distribution substation minor upgrade	60	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTD RIS62A UETTD RIS63A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTD RDS35A	Design overhead distribution power systems	140	5	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE107A  UEENEEE125A  UEENEEE126A  UEENEEG101A  UEENEEG102A  UEENEEG149A  UETTDREL11A  UETTDREL16A  UETTD RIS62A  UETTD RIS63A</p> <p><b>Pathway 1</b></p> <p>UETTD RDS39A  UETTD RDS45A</p> <p><b>Pathway 2</b></p> <p>UETTD RDS43A</p>
UETTD RDS36A	Design underground distribution power systems	140	5	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE107A  UEENEEE125A  UEENEEE126A  UEENEEG101A  UEENEEG102A  UEENEEG149A  UETTDREL11A  UETTDREL16A  UETTD RIS62A  UETTD RIS63A</p> <p><b>Pathway 1</b></p> <p>UETTD RDS39A  UETTD RDS45A</p> <p><b>Pathway 2</b></p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDRDS43A
UETTDRDS37A	Design power system distribution substations	140	5	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE107A  UEENEEE125A  UEENEEE126A  UEENEEG101A  UEENEEG102A  UEENEEG149A  UETTDREL11A  UETTDREL16A  UETTD RIS62A  UETTD RIS63A</p> <p><b>Pathway 1</b></p> <p>UETTDRDS39A  UETTDRDS45A</p> <p><b>Pathway 2</b></p> <p>UETTDRDS43A</p>
UETTDRDS38A	Design power system public lighting systems	140	5	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE107A  UEENEEE125A  UEENEEE126A  UEENEEG101A  UEENEEG102A  UEENEEG149A  UETTDREL11A  UETTDREL16A  UETTD RIS62A  UETTD RIS63A</p> <p><b>Pathway1</b></p> <p>UETTDRDS39A  UETTDRDS45A</p>



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				<b>Pathway 2</b> UETTDRDS43A
UETTDRDS39A	Prepare and manage detailed construction plans for electrical power system infrastructure	140	5	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A
UETTDRDS40A	Prepare and appraise power systems financial impact statements	160	6	<b>Common Group</b> UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A <b>Testing Pathway</b> UEENEEED104A UEENEEE102A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG149A UETTDRTS21A UETTDRTS22A UETTDRTS29A UETTDRTS35A <b>Design Pathway</b> UETTDRDS39A
UETTDRDS41A	Manage electrical power systems infrastructure projects	160	6	<b>Common Group</b> UEENEEE101A UEENEEE104A UEENEEE107A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A  <b>Testing Pathway</b> UEENEEG104A UEENEEG102A UEENEEG124A UEENEEG125A UEENEEG126A UEENEEG149A UETTDRLS21A UETTDRLS22A UETTDRLS29A UETTDRLS35A  <b>Design Pathway</b> UETTDRLS39A
UETTDRLS42A	Investigate quality of power systems supply issues	140	5	<b>Common Group</b> UEENEEG101A UEENEEG102A UEENEEG104A UEENEEG107A UEENEEG125A UEENEEG126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRLS35A UETTDRLS36A  <b>Pathway 1</b> UETTDRLS39A UETTDRLS45A  <b>Pathway 2</b>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDARDS43A
UETTDARDS43A	Develop high voltage and low voltage distribution protection systems	150	5	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A
UETTDARDS44A	Design power system zone substations modifications	150	5	UEENEEE101A UEENEEE102A UEENEEE107A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A
UETTDARDS45A	Organise and implement ESI line and easement surveys	140	5	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDARDS39A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A
UETTDARDS46A	Develop planned power systems outage strategies	140	5	UEENEEE101A UEENEEG104A UETTDREL16A UETTDRLS62A
UETTDARDS47A	Review power system asset management strategies	150	6	<b>Common Goup</b> UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL16A UETTDRLS62A UETTDRLS63A  <b>Testing Pathway</b> UEENEED104A UEENEEE102A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG149A UETTDRTS21A UETTDRTS22A UETTDRTS29A UETTDRTS35A  <b>Design Pathway</b> UETTDRLS39A
UETTDRLS48A	Analyse and appraise power system fault and outage data	150	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRLS39A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A
UETTDRLS49A	Establish and manage power system geographical information systems data	140	5	UEENEEE101A UEENEED104A UEENEEE107A UETTDREL16A UETTDRLS62A
UETTDRLS50A	Design customer power system substations	140	6	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE107A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				<b>Pathway 1</b> UEENEEE104A UEENEEG101A UEENEEG102A UETTD RDS39A UETTD RDS45A  <b>Pathway 2</b> UEENEEE104A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTD RDS43A  <b>Pathway 3</b> UETTD RDS44A
UETTD RDS51A	Manage power system transmission and sub-transmission design process	150	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTD RDS39A UETTD REL11A UETTD REL16A UETTD RIS62A UETTD RIS63A
UETTD RDS52A	Design power system transmission, sub-transmission and zone substation buildings	160	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTD RDS39A UETTD RDS44A UETTD REL11A UETTD REL16A UETTD RIS62A UETTD RIS63A
UETTD RDS53A	Design power system transmission and sub-transmission substation primary plant	180	6	UEENEEE101A UEENEEE104A UEENEEE107A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEG101A UEENEEG102A UETTDNRDS39A UETTDNRDS44A UETTDREL11A UETTDREL16A UETTDNRIS62A UETTDNRIS63A
UETTDNRDS54A	Design power system transmission and sub-transmission protection and control	180	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDNRDS39A UETTDNRDS44A UETTDREL11A UETTDREL16A UETTDNRIS62A UETTDNRIS63A
UETTDNRDS55A	Design power system transmission and sub-transmission substation earthing	180	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDNRDS39A UETTDNRDS44A UETTDREL11A UETTDREL16A UETTDNRIS62A UETTDNRIS63A
UETTDNRDS56A	Design power system transmission, sub-transmission and zone substation – civil and structural components	180	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDNRDS39A UETTDNRDS44A UETTDREL11A UETTDREL16A UETTDNRIS62A UETTDNRIS63A
UETTDNRDS57A	Design power system overhead transmission systems	180	6	UEENEEE101A UEENEEE104A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEE107A UEENEEG101A UEENEEG102A UETTDARDS39A UETTDARDS45A UETTDREL11A UETTDREL16A UETTDARIS62A UETTDARIS63A
UETTDARDS58A	Design underground transmission systems	180	6	UEENEEE101A UEENEEE104A UEENEEE107A UEENEEG101A UEENEEG102A UETTDARDS39A UETTDARDS45A UETTDREL11A UETTDREL16A UETTDARIS62A UETTDARIS63A

#### 2.1.4 Entry Level Cross Discipline Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDREL11A	Apply sustainable energy and environmental procedures	20	3	Nil
UETTDREL12A	Operate plant and equipment near live electrical conductors and apparatus	40	3	UEENEEE101A UEENEEE107A UETTDREL16A
UETTDREL13A	Comply with sustainability, environmental and incidental response policies and procedures	40	2	Nil

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDREL14A	Working safely near live electrical apparatus as a non-electrical worker	40	2	Nil
UETTDREL15A	Respond to power systems technical enquiries and requests	40	3	Nil
UETTDREL16A	Working safely near live electrical apparatus	20	3	Nil
UETTDREL17A	Operate asset inspection machinery and equipment near live electrical apparatus	40	2	UEENEEE101A; UETTDREL13A; UETTDREL14A
UETTDREL18A	Inspect and treat poles and inspect electrical apparatus	40	2	UEENEEE101A; UETTDREL13A; UETTDREL14A
UETTDREL19A	Identify and interpret characteristics of electrical apparatus associated with power industry assets	40	2	UEENEEE101A; UETTDREL13A; UETTDREL14A
UETTDREL20A	Undertake minor vegetation control and routine minor maintenance of poles and electrical apparatus	40	2	UEENEEE101A; UETTDREL13A; UETTDREL14A; UETTDREL17A
UETTDREL21A	Operate specialised data information equipment near live electrical apparatus	40	2	UEENEEE101A UETTDREL13A UETTDREL14A

### 2.1.5 Industry Specific Cross Discipline Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDNIS32A	Solve electrical problems in remote community network apparatus	80	3	UEENEEE103A
UETTDNIS33A	Solve electrical problems in remote	80	3	UEENEEE103A



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
	community network systems			UETTDNIS32A
UETTDNIS34A	Install and replace energy meters and associated equipment in remote communities	50	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEK101A UEENEEK102A UETTDREL12A
UETTDNIS35A	Perform remote community network field switching to a given schedule	40	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEK101A UEENEEK102A UETTDREL12A
UETTDNIS36A	Install and maintain low voltage services in remote communities (overhead)	40	3	UEENEEE101A UEENEEE102A UEENEEE103A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEK101A UEENEEK102A UEENEEK116A UEENEEK120A UETTDREL11A UETTDREL16A UETTDNIS32A UETTDNIS33A UETTDNIS99A
UETTDNIS37A	Install and maintain low voltage services in remote communities (underground)	40	3	UEENEEE101A UEENEEE102A UEENEEE103A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEK101A UEENEEK102A UEENEEK116A UEENEEK120A UETTDREL11A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL16A UETTDRLS32A UETTDRLS33A UETTDRLS99A
UETTDRLS38A	Install and maintain public lighting systems in remote communities	40	3	UEENEEE101A UEENEEE102A UEENEEE103A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEK101A UEENEEK102A UEENEEK116A UEENEEK120A UETTDREL11A UETTDREL16A UETTDRLS32A UETTDRLS33A UETTDRLS99A
UETTDRLS39A	Reserved			
UETTDRLS40A	Reserved			
UETTDRLS41A	Install network infrastructure electrical equipment	60	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A  <b>Transmission Overhead Pathway</b> UETTDRLS54A UETTDRLTP26A UETTDRLTP27A UETTDRLTP29A  <b>Distribution Overhead Pathway</b>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTD RDP12A UETTD RIS52A UETTD RIS54A UETTD RIS56A  <b>Rail Traction Pathway</b> UETTD RIS52A UETTD RIS54A UETTD RRT21A UETTD RRT22A UETTD RRT23A UETTD RRT27A UETTD RRT28A  <b>Distribution Cable Jointi Pathway</b> UETTD RRCJ21A UETTD RRCJ26A UETTD RRCJ27A UETTD RIS55A
UETTD RIS42A	Maintain network infrastructure electrical equipment	60	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTD REL11A UETTD REL12A UETTD REL16A  <b>Transmission Overhead Pathway</b> UETTD RIS41A UETTD RIS54A UETTD RTP26A UETTD RTP27A UETTD RTP29A  <b>Distribution Overhead Pathway</b> UETTD RDP12A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDNIS41A UETTDNIS52A UETTDNIS54A UETTDNIS56A  <b>Rail Traction Pathway</b> UETTDNIS41A UETTDNIS52A UETTDNIS54A UETTDNRRT21A UETTDNRRT22A UETTDNRRT23A UETTDNRRT27A UETTDNRRT28A  <b>Distribution Cable Jointi Pathway</b> UETTDNRCJ21A UETTDNRCJ26A UETTDNRCJ27A UETTDNIS41A UETTDNIS55A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
UETTDNIS43A	Perform low voltage field switching operation to a given schedule.	50	3	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE105A  UEENEEE107A  UEENEEG101A  UEENEEG102A  UETTDREL16A</p> <p><b>Transmission Overhead Pathway</b></p> <p>UETTDREL11A  UETTDREL12A  UETTDNIS54A  UETTDNTP26A  UETTDNTP27A  UETTDNTP29A</p> <p><b>Distribution Overhead Pathway</b></p> <p>UETTDREL11A  UETTDNDP12A  UETTDREL12A  UETTDNIS41A  UETTDNIS42A  UETTDNIS52A  UETTDNIS54A  UETTDNIS56A</p> <p><b>Rail Traction Pathway</b></p> <p>UETTDREL11A  UETTDREL12A  UETTDNIS52A  UETTDNIS54A  UETTDNRT21A  UETTDNRT22A  UETTDNRT23A  UETTDNRT27A  UETTDNRT28A</p> <p><b>Distribution Cable Joint Pathway</b></p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL11A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS55A  <b>Electrical Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDNIS67A
UETTDNIS44A	Perform HV field switching operation to a given schedule	50	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A  <b>Transmission Overhead Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS54A UETTDRT26A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTD RTP27A UETTD RTP29A  <b>Distribution Overhead Pathway</b> UETTDREL11A UETTD RDP12A UETTDREL12A UETTD RIS41A UETTD RIS42A UETTD RIS52A UETTD RIS54A UETTD RIS56A  <b>Rail Traction Pathway</b> UETTDREL11A UETTDREL12A UETTD RIS52A UETTD RIS54A UETTD RRT21A UETTD RRT22A UETTD RRT23A UETTD RRT27A UETTD RRT28A  <b>Distribution Cable Joint Pathway</b> UETTD R C J21A UETTD R C J26A UETTD R C J27A UETTDREL11A UETTDREL12A UETTD RIS41A UETTD RIS42A UETTD RIS55A  <b>Electrical Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEK142A UETTDRIS67A
UETTDRIS45A	Install and maintain ESI overhead distribution network infrastructure	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTDRIS62A UETTDRIS63A
UETTDRIS46A	Install and maintain ESI network infrastructure electrical equipment	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDNIS62A UETTDNIS63A
UETTDNIS47A	Sample, test, filter and reinstate insulating oil	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEK142A UETTDREL16A
UETTDNIS48A	Develop high voltage switching schedule	60	4	<p><b>Common Group</b></p> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A UETTDNIS44A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDNIS56A  <b>Rail Traction Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS52A UETTDNIS54A UETTDNRRT21A UETTDNRRT22A UETTDNRRT23A UETTDNRRT27A UETTDNRRT28A  <b>Distribution Cable Jointi Pathway</b> UETTDNRJ21A UETTDNRJ26A UETTDNRJ27A UETTDREL11A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS55A  <b>Electrical Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDNIS67A
UETTDNIS49A	Develop low voltage switching schedule	90	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				<p>UETTDRLS43A</p> <p><b>Transmission Overhead Pathway</b></p> <p>UETTDREL11A UETTDREL12A UETTDRLS54A UETTDRLTP26A UETTDRLTP27A UETTDRLTP29A</p> <p><b>Distribution Overhead Pathway</b></p> <p>UETTDREL11A UETTDRLDP12A UETTDREL12A UETTDRLS41A UETTDRLS42A UETTDRLS52A UETTDRLS54A UETTDRLS56A</p> <p><b>Rail Traction Pathway</b></p> <p>UETTDREL11A UETTDREL12A UETTDRLS52A UETTDRLS54A UETTDRLRT21A UETTDRLRT22A UETTDRLRT23A UETTDRLRT27A UETTDRLRT28A</p> <p><b>Distribution Cable Jointi Pathway</b></p> <p>UETTDREL11A UETTDRLCJ21A UETTDRLCJ26A UETTDRLCJ27A UETTDREL12A UETTDRLS41A UETTDRLS42A UETTDRLS55A</p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				<b>Electrical Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDNIS67A
UETTDNIS50A	Coordinate power system permit procedures	60	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A  <b>Transmission Overhead Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS44A UETTDNIS54A UETTDRTTP26A UETTDRTTP27A UETTDRTTP29A  <b>Distribution Overhead Pathway</b> UETTDREL11A UETTDNDP12A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS43A UETTDNIS52A UETTDNIS54A UETTDNIS56A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				<p><b>Rail Traction Pathway</b></p> <p>UETTDREL11A            UETTDREL12A            UETTDREL13A            UETTDREL14A            UETTDREL15A            UETTDREL16A            UETTDREL17A            UETTDREL18A            UETTDREL19A            UETTDREL20A            UETTDREL21A            UETTDREL22A            UETTDREL23A            UETTDREL24A            UETTDREL25A            UETTDREL26A            UETTDREL27A            UETTDREL28A            UETTDREL29A            UETTDREL30A</p> <p><b>Distribution Cable Jointi Pathway</b></p> <p>UETTDRCJ21A            UETTDRCJ26A            UETTDRCJ27A            UETTDRCJ28A            UETTDRCJ29A            UETTDRCJ30A            UETTDRCJ31A            UETTDRCJ32A            UETTDRCJ33A            UETTDRCJ34A            UETTDRCJ35A            UETTDRCJ36A            UETTDRCJ37A            UETTDRCJ38A            UETTDRCJ39A            UETTDRCJ40A            UETTDRCJ41A            UETTDRCJ42A            UETTDRCJ43A            UETTDRCJ44A            UETTDRCJ45A            UETTDRCJ46A            UETTDRCJ47A            UETTDRCJ48A            UETTDRCJ49A            UETTDRCJ50A            UETTDRCJ51A            UETTDRCJ52A            UETTDRCJ53A            UETTDRCJ54A            UETTDRCJ55A            UETTDRCJ56A            UETTDRCJ57A            UETTDRCJ58A            UETTDRCJ59A            UETTDRCJ60A            UETTDRCJ61A            UETTDRCJ62A            UETTDRCJ63A            UETTDRCJ64A            UETTDRCJ65A            UETTDRCJ66A            UETTDRCJ67A            UETTDRCJ68A            UETTDRCJ69A            UETTDRCJ70A            UETTDRCJ71A            UETTDRCJ72A            UETTDRCJ73A            UETTDRCJ74A            UETTDRCJ75A            UETTDRCJ76A            UETTDRCJ77A            UETTDRCJ78A            UETTDRCJ79A            UETTDRCJ80A            UETTDRCJ81A            UETTDRCJ82A            UETTDRCJ83A            UETTDRCJ84A            UETTDRCJ85A            UETTDRCJ86A            UETTDRCJ87A            UETTDRCJ88A            UETTDRCJ89A            UETTDRCJ90A            UETTDRCJ91A            UETTDRCJ92A            UETTDRCJ93A            UETTDRCJ94A            UETTDRCJ95A            UETTDRCJ96A            UETTDRCJ97A            UETTDRCJ98A            UETTDRCJ99A            UETTDRCJ100A</p> <p><b>Electrical Pathway</b></p> <p>UEENEEE137A            UEENEEG006A            UEENEEG033A            UEENEEG063A            UEENEEG106A            UEENEEG108A            UEENEEG109A            UEENEEG110A            UEENEEG111A            UEENEEG112A            UEENEEG113A            UEENEEG114A            UEENEEG115A            UEENEEG116A            UEENEEG117A            UEENEEG118A            UEENEEG119A            UEENEEG120A            UEENEEG121A            UEENEEG122A            UEENEEG123A            UEENEEG124A            UEENEEG125A            UEENEEG126A            UEENEEG127A            UEENEEG128A            UEENEEG129A            UEENEEG130A            UEENEEG131A            UEENEEG132A            UEENEEG133A            UEENEEG134A            UEENEEG135A            UEENEEG136A            UEENEEG137A            UEENEEG138A            UEENEEG139A            UEENEEG140A            UEENEEG141A            UEENEEG142A            UEENEEG143A            UEENEEG144A            UEENEEG145A            UEENEEG146A            UEENEEG147A            UEENEEG148A            UEENEEG149A            UEENEEG150A            UEENEEG151A            UEENEEG152A            UEENEEG153A            UEENEEG154A            UEENEEG155A            UEENEEG156A            UEENEEG157A            UEENEEG158A            UEENEEG159A            UEENEEG160A            UEENEEG161A            UEENEEG162A            UEENEEG163A            UEENEEG164A            UEENEEG165A            UEENEEG166A            UEENEEG167A            UEENEEG168A            UEENEEG169A            UEENEEG170A            UEENEEG171A            UEENEEG172A            UEENEEG173A            UEENEEG174A            UEENEEG175A            UEENEEG176A            UEENEEG177A            UEENEEG178A            UEENEEG179A            UEENEEG180A            UEENEEG181A            UEENEEG182A            UEENEEG183A            UEENEEG184A            UEENEEG185A            UEENEEG186A            UEENEEG187A            UEENEEG188A            UEENEEG189A            UEENEEG190A            UEENEEG191A            UEENEEG192A            UEENEEG193A            UEENEEG194A            UEENEEG195A            UEENEEG196A            UEENEEG197A            UEENEEG198A            UEENEEG199A            UEENEEG200A</p>
UETTDREL51A	Coordinate and direct power system switching schedules	60	4	<p><b>Common Group</b></p> <p>UEENEEE101A            UEENEEE102A            UEENEEE103A            UEENEEE104A            UEENEEE105A            UEENEEE106A            UEENEEE107A            UEENEEE108A            UEENEEE109A            UEENEEE110A            UEENEEE111A            UEENEEE112A            UEENEEE113A            UEENEEE114A            UEENEEE115A            UEENEEE116A            UEENEEE117A            UEENEEE118A            UEENEEE119A            UEENEEE120A            UEENEEE121A            UEENEEE122A            UEENEEE123A            UEENEEE124A            UEENEEE125A            UEENEEE126A            UEENEEE127A            UEENEEE128A            UEENEEE129A            UEENEEE130A            UEENEEE131A            UEENEEE132A            UEENEEE133A            UEENEEE134A            UEENEEE135A            UEENEEE136A            UEENEEE137A            UEENEEE138A            UEENEEE139A            UEENEEE140A            UEENEEE141A            UEENEEE142A            UEENEEE143A            UEENEEE144A            UEENEEE145A            UEENEEE146A            UEENEEE147A            UEENEEE148A            UEENEEE149A            UEENEEE150A            UEENEEE151A            UEENEEE152A            UEENEEE153A            UEENEEE154A            UEENEEE155A            UEENEEE156A            UEENEEE157A            UEENEEE158A            UEENEEE159A            UEENEEE160A            UEENEEE161A            UEENEEE162A            UEENEEE163A            UEENEEE164A            UEENEEE165A            UEENEEE166A            UEENEEE167A            UEENEEE168A            UEENEEE169A            UEENEEE170A            UEENEEE171A            UEENEEE172A            UEENEEE173A            UEENEEE174A            UEENEEE175A            UEENEEE176A            UEENEEE177A            UEENEEE178A            UEENEEE179A            UEENEEE180A            UEENEEE181A            UEENEEE182A            UEENEEE183A            UEENEEE184A            UEENEEE185A            UEENEEE186A            UEENEEE187A            UEENEEE188A            UEENEEE189A            UEENEEE190A            UEENEEE191A            UEENEEE192A            UEENEEE193A            UEENEEE194A            UEENEEE195A            UEENEEE196A            UEENEEE197A            UEENEEE198A            UEENEEE199A            UEENEEE200A</p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				<p>UEENEEG102A UETTDREL16A</p> <p><b>Transmission Overhead Pathway</b></p> <p>UETTDREL11A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A</p> <p><b>Distribution Overhead Pathway</b></p> <p>UETTDREL11A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A</p> <p><b>Rail Traction Pathway</b></p> <p>UETTDREL11A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A</p> <p><b>Distribution Cable Jointi Pathway</b></p> <p>UETTDREL11A UETTDREL12A UETTDREL12A UETTDREL12A UETTDREL12A</p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDNIS41A UETTDNIS42A UETTDNIS43A UETTDNIS55A  <b>Electrical Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDNIS67A UETTDNISB39A
UETTDNIS52A	Install and maintain poles, structures and associated hardware	50	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UETTDREL11A UETTDREL16A
UETTDNIS53A	Install and maintain power system public lighting	40	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A  <b>Transmission Overhead Pathway</b> UETTDNIS54A UETTDRTTP26A UETTDRTTP27A UETTDRTTP29A  <b>Distribution Overhead Pathway</b>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDRDP12A UETTDRIS41A UETTDRIS42A UETTDRIS52A UETTDRIS54A UETTDRIS56A  <b>Rail Traction Pathway</b> UETTDRIS52A UETTDRIS54A UETTDRRT21A UETTDRRT22A UETTDRRT23A UETTDRRT27A UETTDRRT28A  <b>Distribution Cable Jointi Pathway</b> UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDRIS41A UETTDRIS42A UETTDRIS55A
UETTDRIS54A	Install and maintain poles, structures, overhead conductors and cables	60	3	UETTDRIS52A UETTDREL11A UETTDREL12A UETTDREL14A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A
UETTDRIS55A	Install and maintain low voltage underground services	40	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL16A  <b>Transmission Overhead Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS54A UETTDNTP26A UETTDNTP27A UETTDNTP29A  <b>Distribution Overhead Pathway</b> UETTDNDP12A UETTDREL11A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS52A UETTDNIS54A UETTDNIS56A  <b>Rail Traction Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS52A UETTDNIS54A UETTDNRT21A UETTDNRT22A UETTDNRT23A UETTDNRT27A UETTDNRT28A  <b>Distribution Cable Jointi Pathway</b> UETTDNCJ21A UETTDNCJ26A UETTDNCJ27A UETTDREL11A UETTDREL12A  <b>Electrotechnology Electri Pathway</b> UEENEEE137A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDNIS67A
UETTDNIS56A	Install and maintain low voltage overhead services	40	3	<p><b>Common Group</b></p> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A <p><b>Transmission Overhead Pathway</b></p> UETTDREL11A UETTDREL12A UETTDNIS54A UETTDRT26A UETTDRT27A UETTDRT29A <p><b>Distribution Overhead Pathway</b></p> UETTDNDP12A UETTDREL11A UETTDREL12A UETTDNIS52A UETTDNIS54A <p><b>Rail Traction Pathway</b></p> UETTDREL11A UETTDREL12A UETTDNIS52A UETTDNIS54A UETTDRT21A UETTDRT22A UETTDRT23A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDRRRT27A UETTDRRRT28A  <b>Distribution Cable Jointi Pathway</b>  UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDRLS41A UETTDRLS42A UETTDRLS55A  <b>Electrotechnology Electri Pathway</b>  UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEK142A UETTDRLS67A
UETTDRLS57A	Conduct visual checking and treatment of power system poles and structures	30	3	<b>Common Group</b>  UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A  <b>Transmission Overhead Pathway</b>  UETTDRLS54A UETTDRLTP26A UETTDRLTP27A UETTDRLTP29A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTD RTP30A <b>Distribution Overhead Pathway</b> UETTD RDP11A UETTD RDP12A UETTD RIS41A UETTD RIS42A UETTD RIS52A UETTD RIS54A UETTD RIS56A <b>Rail Traction Pathway</b> UETTD RIS52A UETTD RIS54A UETTD RRT21A UETTD RRT22A UETTD RRT23A UETTD RRT27A UETTD RRT28A <b>Distribution Cable Joint Pathway</b> UETTD RJC21A UETTD RJC26A UETTD RJC27A UETTD RDP11A UETTD RIS41A UETTD RIS42A UETTD RIS55A
UETTD RIS58A	Locate faults in power system underground power cables	60	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTD RJC21A UETTD RJC26A UETTD RJC27A UETTD REL11A UETTD REL12A UETTD REL16A UETTD RIS41A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDNIS42A UETTDNIS55A
UETTDNIS59A	Conduct high potential testing of power system underground power cables	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS41A UETTDNIS42A UETTDNIS55A
UETTDNIS60A	Install and replace power system energy meters and associated equipment	50	3	<p><b>Common Group</b></p> <p>UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A</p> <p><b>Distribution Overhead Pathway</b></p> <p>UETTDNDP12A UETTDREL11A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS52A UETTDNIS54A UETTDNIS56A</p> <p><b>Distribution Cable Joint Pathway</b></p> <p>UETTDRCJ21A UETTDRCJ26A</p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDRLS41A UETTDRLS42A UETTDRLS55A  <b>Electrotechnology Electri Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG103A UEENEEG104A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A
UETTDRLS61A	Install mobile Generation set for synchronised LV Genset	50	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A  <b>Transmission Overhead Pathway</b> UETTDREL11A UETTDREL12A UETTDRLS54A UETTDRTTP26A UETTDRTTP27A UETTDRTTP29A  <b>Distribution Overhead Pathway</b> UETTDRLDP12A UETTDREL11A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS52A UETTDNIS54A UETTDNIS56A  <b>Rail Traction Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS52A UETTDNIS54A UETTDNRRT21A UETTDNRRT22A UETTDNRRT23A UETTDNRRT27A UETTDNRRT28A  <b>Distribution Cable Jointi Pathway</b> UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS55A  <b>Electrotechnology Electri Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG103A UEENEEG104A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A
UETTDNIS62A	Implement and monitor the power system organisational OHS policies, procedures and	30	4	UEENEEE101A UETTDREL16A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
	programs			
UETTDNIS63A	Implement and monitor the power system environmental and sustainable energy management policies and procedures	30	4	<b>Electrotechnology Pathway</b> UEENEEK142A <b>ESI – TDR Pathway</b> UETTDREL11A
UETTDNIS64A	Install mobile Generation set for synchronised HV Genset	40	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL16A <b>Transmission Overhead Pathway</b> UETTDREL11A UETTDREL12A UETTDNIS44A UETTDNIS54A UETTDRTTP26A UETTDRTTP27A UETTDRTTP29A <b>Distribution Overhead Pathway</b> UETTDREL11A UETTDNDP12A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS43A UETTDNIS52A UETTDNIS54A UETTDNIS56A <b>Rail Traction Pathway</b>



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL11A UETTDREL12A UETTDNIS52A UETTDNIS54A UETTDNRT21A UETTDNRT22A UETTDNRT23A UETTDNRT27A UETTDNRT28A UETTDNRT30A  <b>Distribution Cable Jointi            Pathway</b> UETTDRCJ21A UETTDRCJ26A UETTDRCJ27A UETTDREL11A UETTDREL12A UETTDNIS41A UETTDNIS42A UETTDNIS43A UETTDNIS55A  <b>Electrical Pathway</b> UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDNIS67A UETTDNRSB39A
UETTDNIS65A	Contribute to coordinated HV live working	50	3	Nil
UETTDNIS66A	Manage an electricity power system OHS management system	140	5	Nil
UETTDNIS67A	Solve problems in energy supply network equipment	80	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEG102A UEENEEG006A UEENEEG106A
UETTDRIS68A	Solve problems in energy supply network protection equipment and systems	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UEENEEG006A UEENEEG106A UETTDRIS67A
UETTDRIS69A	Diagnose and rectify faults in energy supply apparatus	60	5	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UEENEEG006A UEENEEG106A UETTDRIS67A UETTDRIS68A
UETTDRIS70A	Diagnose and rectify faults in electrical energy distribution systems	60	5	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UEENEEG006A UEENEEG106A UETTDRIS67A UETTDRIS68A UETTDRIS69A
UETTDRIS71A	Diagnose and rectify faults in electrical energy supply transmission systems	60	5	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UEENEEG006A UEENEEG106A UETTDRIS67A UETTDRIS68A UETTDRIS69A
UETTDRIS72A	Diagnose and rectify faults in distributed Generation systems	60	5	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UEENEEG006A UEENEEG106A UETTDRIS67A UETTDRIS68A UETTDRIS69A
UETTDRIS73A	Develop engineering solutions for energy supply power transformer problems	60	6	<p><b>Common Group</b></p> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG006A UEENEEG106A UEENEEG149A UETTDRIS67A UETTDRIS68A UETTDRIS69A <p><b>Distribution Pathway Un</b></p> UETTDRIS70A <p><b>Transmission Pathway U</b></p> UETTDRIS71A <p><b>Distributed Generation Pathway</b></p>

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDRIS72A
UETTDRIS74A	Develop engineering solutions for energy supply system protection problems	60	6	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG006A UEENEEG106A UEENEEG149A UETTDRIS67A UETTDRIS68A UETTDRIS69A  <b>Distribution Pathway</b> UETTDRIS70A  <b>Transmission Pathway</b> UETTDRIS71A  <b>Distributed Generation Pathway</b> UETTDRIS72A
UETTDRIS81A	Install and maintain telecommunications infrastructure on electricity supply industry assets	80	2	UEENEEE101A UEENEEE102A UEENEEE105A UETTDREL14A
UETTDRIS99A	Test and verify distribution remote area installations	40	3	UEENEEE101A UEENEEE102A UEENEEE103A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEK101A UEENEEK102A UEENEEK116A UEENEEK120A UETTDREL11A

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.
				UETTDREL16A UETTDRLS32A UETTDRLS33A

### 2.1.6 Refresher Training Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETTDRRF01B	Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus	20	3	Nil	S
UETTDRRF02B	Perform pole top rescue	20	3	HLTCPR201B	S
UETTDRRF03B	Perform EWP rescue	20	3	HLTCPR201B	S
UETTDRRF04B	Perform tower rescue	20	3	HLTCPR201B	S
UETTDRRF05B	Perform rescue from switchyard structures at heights	20	3	HLTCPR201B	S
UETTDRRF06B	Perform rescue from a live LV panel	20	3	HLTCPR201B	S
UETTDRRF07B	Perform cable pit/trench/excavation rescue	20	3	HLTCPR201B	S
UETTDRRF08B	Perform EWP controlled descent escape	20	3	Nil	S
UETTDRRF09B	Apply access procedures to work on or near electrical network infrastructure	20	3	Nil	S
UETTDRRF10B	Provide first aid in an ESI environment	20	3	HLTCPR201B	S
UETTDRRF11A	Testing of connections to low voltage electricity networks	20	3	Nil	S

### 2.1.7 Rail Traction Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETTDRRRT21A	Install traction overhead wiring systems	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENE101A UEENE102A UETTDREL11A	U

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A	
UETTDRLR22A	Maintain traction overhead wiring systems	60	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A UETTDRLR21A	U
UETTDRLR23A	Install rail traction bonds	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A	
UETTDRLR24A	Maintain rail traction bonds	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A UETTDRLR21A UETTDRLR22A UETTDRLR23A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETDRRT27A UETDRRT28A	
UETDRRT25A	Install overhead rail traction configurations	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETDREL11A UETDREL12A UETDREL16A UETDRIS52A UETDRIS54A UETDRRT21A UETDRRT22A UETDRRT23A UETDRRT27A UETDRRT28A	
UETDRRT26A	Maintain overhead rail traction configurations	60	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETDREL11A UETDREL12A UETDREL16A UETDRIS52A UETDRIS54A UETDRRT21A UETDRRT22A UETDRRT23A UETDRRT25A UETDRRT27A UETDRRT28A	
UETDRRT27A	Install overhead traction components and equipment	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A	U

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A	
UETTDRT28A	Maintain overhead traction components and equipment	60	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A UETTDRT27A	U
UETTDRT29A	Operate rail road traction height access equipment.	20	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A UETTDRT21A UETTDRT22A UETTDRT27A UETTDRT28A	
UETTDRT30A	Perform to a given schedule rail traction switching operations	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A	



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDNIS52A UETTDNIS54A UETTDNRRT21A UETTDNRRT22A UETTDNRRT27A UETTDNRRT28A	
UETTDNRRT31A	Maintain energised d.c. traction overhead wiring system	60	4	<b>Pathway 1</b> Qualified and authorised Rail Traction Lineworker <b>Pathway 2</b> BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEED101A UEENEED102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS52A UETTDNIS54A UETTDNIS65A UETTDNRRT21A UETTDNRRT22A UETTDNRRT23A UETTDNRRT25A UETTDNRRT26A UETTDNRRT27A UETTDNRRT28A UETTDNRRT29A UETTDNRRT99A	
UETTDNRRT32A	Maintain energised traction overhead electrical apparatus using stick techniques	70	4	<b>Pathway 1</b> Qualified and authorised Rail Traction Lineworker	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				<p><b>Pathway 2</b></p> <p>BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A UETTDRLS65A UETTDRRRT21A UETTDRRRT22A UETTDRRRT23A UETTDRRRT25A UETTDRRRT26A UETTDRRRT27A UETTDRRRT28A UETTDRRRT29A UETTDRRRT31A UETTDRRRT99A</p>	
UETTDRRRT33A	Maintain energised traction overhead electrical apparatus using glove techniques	70	4	<p><b>Pathway 1</b></p> <p>Qualified and authorised Rail Traction Lineworker</p> <p><b>Pathway 2</b></p> <p>BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A</p>	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDNIS52A UETTDNIS54A UETTDNIS65A UETTDNRT21A UETTDNRT22A UETTDNRT23A UETTDNRT25A UETTDNRT26A UETTDNRT27A UETTDNRT28A UETTDNRT29A UETTDNRT31A UETTDNRT99A	
UETTDNRT34A	Install and maintain traction network wiring systems	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTDNIS62A UETTDNIS63A UETTDNIS67A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETDRRT35A	Install and maintain traction network equipment and components	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRLS67A UETDRRT34A	
UETDRRT36A	Maintain traction network wiring systems	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRLS62A UETTDRLS63A UETTDRLS67A	
UETTDRT37A	Maintain traction network components and equipment	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRLS67A UETTDRT36A	
UETTDRT99A	Test and verify rail traction installations	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS52A UETTDRLS54A UETTDRT21A UETTDRT22A UETTDRT27A UETTDRT28A	U

## 2.1.8 Substation Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
UETTDRSB21A	Diagnose and rectify faults in substation environment	40	4	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE105A  UEENEEE107A  UEENEEE137A  UEENEEG006A  UEENEEG033A  UEENEEG063A  UEENEEG101A  UEENEEG102A  UEENEEG106A  UEENEEG108A  UEENEEG109A  UEENEEK142A</p> <p><b>Electrician Pathway</b></p> <p>UEENEEG103A  UEENEEG104A  UEENEEG105A  UEENEEG107A</p> <p><b>Electrical Fitter Pathway</b></p> <p>UEENEEG199A</p>	
UETTDRSB22A	Carry out power systems substation inspection	60	4	<p><b>Common Group</b></p> <p>UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE105A  UEENEEE107A  UEENEEE137A  UEENEEG006A  UEENEEG033A  UEENEEG063A  UEENEEG101A  UEENEEG102A  UEENEEG106A</p>	UE

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB23A	Install and maintain substation direct current systems	30	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A	UE
UETTDRSB24A	Maintain high voltage power system circuit breakers	60	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB25A	Maintain high voltage power and instrument transformers	80	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB26A	Install high current DC equipment and switchgear	40	4	UEENEEE101A UEENEEE102A UEENEEE104A	



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A	
UETTDRSB27A	Maintain high current DC equipment and switchgear	40	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB29A	Maintain capacitor bank equipment for voltage regulation	40	3	UEENEEE101A UEENEEE102A UEENEEE104A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEK142A	
UETTDRSB30A	Maintain high voltage power system static VAR compensators (SVC)	30	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDRSB25A UETTDRSB29A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB31A	Maintain high voltage power system synchronous condensers	50	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB32A	Maintain power transformer on load tap changers (OLTC)	80	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDRSB25A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				<b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB33A	Install high voltage plant and equipment	50	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A	
UETTDRSB34A	Carry out surveys using thermovision techniques	30	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				<b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB35A	Maintain discrete control and protection systems	80	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB36A	Commission discrete control and protection systems	30	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDRSB25A UETTDRSB29A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB37A	Maintain power system distribution field devices	80	4	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
UETTDRSB38A	Commission power system distribution field devices	30	4	Common Group UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG106A UEENEEG108A UEENEEG109A UEENEEK142A UETTDRSB37  <b>Electrician Pathway</b> UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG107A  <b>Electrical Fitter Pathway</b> UEENEEG199A	
UETTDRSB39A	Perform power system substation switching operation to a given schedule	50	3	<b>Common Group</b> UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDRS16A  <b>Transmission Overhead Pathway</b> UETTDRS11A UETTDRS12A UETTDRS54A UETTDRTP26A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UETTD RTP27A UETTD RTP29A  <b>Distribution Overhead Pathway</b>  UETTD RDP12A UETTD REL11A UETTD REL12A UETTD RIS41A UETTD RIS42A UETTD RIS52A UETTD RIS54A UETTD RIS56A  <b>Rail Traction Pathway</b>  UETTD REL11A UETTD REL12A UETTD RIS52A UETTD RIS54A UETTD RRT21A UETTD RRT22A UETTD RRT23A UETTD RRT27A UETTD RRT28A  <b>Distribution Cable Jointing Pathway</b>  UETTD RCJ21A UETTD RCJ26A UETTD RCJ27A UETTD REL11A UETTD REL12A UETTD RIS41A UETTD RIS42A UETTD RIS55A  <b>Electrical Pathway</b>  UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG106A UEENEEG108A	



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Qu
				UEENEEG109A UEENEEK142A UETTDRIS67A	

### 2.1.9 System Operations Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETTDRSO32A	Manage power systems network faults	180	6	<p><b>Common Group</b></p> UEENEEG104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A UETTDRSO41A UETTDRSO48A UETTDRSO49A UETTDRSO50A	
				<p><b>Generation/Distribution and Subtransmission Pathway</b></p> UETTDRSO34A UETTDRSO37A UETTDRSO40A	
				<p><b>Generation/Transmission Pathway</b></p> UETTDRSO34A UETTDRSO38A UETTDRSO47A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				<b>Distribution and Subtransmission Pathway</b> UETTDRSO35A UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO41A UETTDRSO42A UETTDRSO47A	
UETTDRSO33A	Manage power systems critical events	180	6	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRSO32A UETTDRSO41A UETTDRSO48A UETTDRSO49A UETTDRSO50A  <b>Generation/Distribution and Subtransmission Pathway</b> UETTDRSO34A UETTDRSO37A UETTDRSO40A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				<b>Generation/Transmission Pathway</b> UETTDRSO34A UETTDRSO38A UETTDRSO47A  <b>Distribution and Subtransmission Pathway</b> UETTDRSO35A UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO41A UETTDRSO42A UETTDRSO47A	
UETTDRSO34A	Control power systems generating plant	140	6	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A UETTDRSO48A UETTDRSO49A  <b>Distribution and Subtransmission Pathway</b> UETTDRSO37A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO47A	
UETTDRSO35A	Manage high voltage distribution and subtransmission network demand	180	6	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A UETTDRSO48A UETTDRSO49A  <b>Distribution and Subtransmission</b>	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				<b>Pathway</b> UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO47A	
UETTDRSO36A	Develop low voltage distribution switching programs	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEED101A UEENEED102A UEENEED149A UETTDREL11A UETTDREL16A UETTDREL62A UETTDREL63A	
UETTDRSO37A	Develop high voltage distribution and subtransmission switching programs	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEED101A UEENEED102A UEENEED149A UETTDREL11A UETTDREL16A UETTDREL62A UETTDREL63A	
UETTDRSO38A	Develop and evaluate power systems transmission switching programs	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A UETTDNIS63A	
UETTDNRSO39A	Coordinate low voltage distribution networks	150	5	UEENEEG104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A UETTDNIS63A UETTDNRSO36A	
UETTDNRSO40A	Coordinate high voltage distribution and subtransmission networks	150	5	UEENEEG104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A UETTDNIS63A UETTDNRSO37A	
UETTDNRSO41A	Manage power systems transmission networks	180	6	<b>Common Group</b>	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A UETTDNIS63A UETTDNRSO48A UETTDNRSO49A  <b>Distribution and Subtransmission Pathway</b> UETTDNRSO37A UETTDNRSO40A  <b>Transmission Pathway</b> UETTDNRSO38A UETTDNRSO47A	
UETTDNRSO42A	Manage power systems transmission network demand	180	6	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRIS63A UETTDRSO41A UETTDRSO48A UETTDRSO49A  <b>Distribution and Subtransmission Pathway</b> UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO47A	
UETTDRSO43A	Coordinate low voltage distribution network demand	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A UETTDRSO36A UETTDRSO39A	
UETTDRSO44A	Develop crisis power systems management plans	140	6	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A	



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEG149A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A UETTDRSO32A UETTDRSO33A UETTDRSO41A UETTDRSO48A UETTDRSO49A UETTDRSO50A  <b>Generation/Distribution and Subtransmission Pathway</b> UETTDRSO34A UETTDRSO37A UETTDRSO40A  <b>Generation/Transmission Pathway</b> UETTDRSO34A UETTDRSO38A UETTDRSO47A  <b>Distribution and Subtransmission Pathway</b> UETTDRSO35A UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO41A UETTDRSO42A UETTDRSO47A	
UETTDRSO45A	Operate and monitor system SCADA equipment	150	5	UETTDREL15A	
UETTDRSO46A	Monitor and control the field staff activities	150	5	CIII or equivalent	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETTDRSO47A	Coordinate high voltage transmission network	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A UETTDNIS63A UETTDRSO38A	
UETTDRSO48A	Respond to discrete and interdependent protection operations	150	5	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDNIS62A UETTDNIS63A  <b>Distribution and Subtransmission Pathway</b> UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO47A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETTDRSO49A	Coordinate power system operations in a regulated energy market	150	5	<p><b>Common Group</b></p> <p>UEENEED104A  UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE107A  UEENEEE124A  UEENEEE125A  UEENEEE126A  UEENEEG101A  UEENEEG102A  UEENEEG149A  UETTDREL11A  UETTDREL16A  UETTDRLS62A  UETTDRLS63A</p> <p><b>Distribution and Subtransmission Pathway</b></p> <p>UETTDRSO37A  UETTDRSO40A</p> <p><b>Transmission Pathway</b></p> <p>UETTDRSO38A  UETTDRSO47A</p>	
UETTDRSO50A	Respond to complex power system protection operations	180	6	<p><b>Common Group</b></p> <p>UEENEED104A  UEENEEE101A  UEENEEE102A  UEENEEE104A  UEENEEE107A  UEENEEE124A  UEENEEE125A  UEENEEE126A  UEENEEG101A  UEENEEG102A  UEENEEG149A  UETTDREL11A  UETTDREL16A  UETTDRLS62A</p>	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRIS63A UETTDRSO41A UETTDRSO48A UETTDRSO49A  <b>Generation/Distribution and Subtransmission Pathway</b> UETTDRSO34A UETTDRSO37A UETTDRSO40A Generation/Transmission Pathway UETTDRSO34A UETTDRSO38A UETTDRSO47A  <b>Distribution and Subtransmission Pathway</b> UETTDRSO35A UETTDRSO37A UETTDRSO40A  <b>Transmission Pathway</b> UETTDRSO38A UETTDRSO41A UETTDRSO42A UETTDRSO47A	
UETTDRSO51A	Manage network systems power flows	180	6	<b>Common Group</b> UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRLSO32A UETTDRLSO41A UETTDRLSO48A UETTDRLSO49A UETTDRLSO50A  <b>Generation/Distribution and Subtransmission Pathway</b> UETTDRLSO34A UETTDRLSO37A UETTDRLSO40A  <b>Generation/Transmission Pathway</b> UETTDRLSO34A UETTDRLSO38A UETTDRLSO47A  <b>Distribution and Subtransmission Pathway</b> UETTDRLSO35A UETTDRLSO37A UETTDRLSO40A  <b>Transmission Pathway</b> UETTDRLSO38A UETTDRLSO41A UETTDRLSO42A UETTDRLSO47A	

### 2.1.10 Transmission Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg. Points	AQF	Prerequisites.	Q C

UNIT CODE	UNIT TITLE	Wtg. Points	AQF	Prerequisites.	C
UETTD RTP22A	Establish and reinstate a power systems transmission structure work site	80	2	UEENEEE101A UETTDREL13A	C
UETTD RTP23A	Erect power systems transmission structures	100	2	UEENEEE101A UETTDREL13A	U
UETTD RTP24A	Erect power systems transmission structure hardware	60	2	UEENEEE101A UETTDREL13A UETTD RTP23A	
UETTD RTP25A	Pre-tension stringing overhead transmission conductors and cables	80	2	UEENEEE101A UETTDREL13A UETTD RTP23A UETTD RTP24A	
UETTD RTP26A	Install transmission structures and associated hardware	60	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UETTDREL11A UETTDREL16A	U
UETTD RTP27A	Maintain transmission structures and associated hardware	60	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UETTDREL11A UETTDREL16A UETTD RTP26A	U
UETTD RTP28A	Set-up and install transmission structure stubs	40	3	UEENEEE101A UETTDREL16A	
UETTD RTP29A	Install and maintain transmission overhead conductors and cables	60	3	UEENEEE101A UEENEEE102A UEENEEE105A UEENEEE107A UETTDREL11A UETTDREL16A UETTD RTP26A UETTD RTP27A	U
UETTD RTP30A	Inspect transmission overhead structures and electrical apparatus	40	3	UEENEEE101A UEENEEE107A UETTDREL11A UETTDREL16A	U
UETTD RTP31A	Maintain energised transmission lines using high voltage live work stick method	70	4	<b>Pathway 1</b> Qualified and	

UNIT CODE	UNIT TITLE	Wtg. Points	AQF	Prerequisites.
				authorised Transmission Lineworker  <b>Pathway 2</b> BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS54A UETTDNIS65A UETTDNTP26A UETTDNTP27A UETTDNTP29A UETTDNTP30A UETTDNTP99A
UETTDNTP32A	Maintain energised transmission lines using high voltage live work Barehand method	70	4	<b>Pathway 1</b> Qualified and authorised Transmission Lineworker  <b>Pathway 2</b> BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDNIS54A UETTDNIS65A

UNIT CODE	UNIT TITLE	Wtg. Points	AQF	Prerequisites.
				UETTD RTP26A UETTD RTP27A UETTD RTP29A UETTD RTP30A UETTD RTP31A UETTD RTP99A
UETTD RTP33A	Maintain energised transmission lines using Barehand Technique on a helicopter platform	60	4	<b>Pathway 1</b> Qualified and authorised Transmission Lineworker <b>Pathway 2</b> BSBWOR402A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTD RIS54A UETTD RIS65A UETTD RTP26A UETTD RTP27A UETTD RTP29A UETTD RTP30A UETTD RTP31A UETTD RTP32A UETTD RTP99A
UETTD RTP34A	Install/maintain overhead transmission network infrastructure	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A



UNIT CODE	UNIT TITLE	Wtg. Points	AQF	Prerequisites.	C
				UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRLS67A	C
UETTDRTTP35A	Install/maintain transmission network infrastructure electrical equipment	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEK142A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRLS67A UETTDRTTP34A	U
UETTDRTTP99A	Test and verify transmission overhead installations	40	3	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A	U

UNIT CODE	UNIT TITLE	Wtg. Points	AQF	Prerequisites.	C
				UETTDREL11A UETTDREL12A UETTDREL16A UETTDRLS54A UETTDRTTP26A UETTDRTTP27A UETTDRTTP29A UETTDRTTP30A	

### 2.1.11 Testing Competency Standard Units

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	C
UETTDRTS21A	Maintain interdependent network protection and control systems	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRTS29A	
UETTDRTS22A	Commission interdependent network protection and control systems	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRLS63A UETTDRTS21A UETTDRTS29A	
UETTDRTS23A	Conduct evaluation of power system substation faults	140	6	UEENEEED104A UEENEEEE101A UEENEEEE102A UEENEEEE104A UEENEEEE107A UEENEEEE124A UEENEEEE125A UEENEEEE126A UEENEEEG101A UEENEEEG102A UEENEEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
UETTDRTS24A	Design testing and commissioning procedures for field devices and substations	140	6	<p><b>Common Group</b></p> UEENEEED104A UEENEEEE101A UEENEEEE102A UEENEEEE104A UEENEEEE107A UEENEEEE124A UEENEEEE125A UEENEEEE126A UEENEEEG101A UEENEEEG102A UEENEEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
				<p><b>Protection Relays and Meters Pathway</b></p> UETTDRTS28A	
				<p><b>Metering Pathway</b></p> UETTDRTS25A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRTS26A UETTDRTS29A  <b>Primary Plant Pathway</b> UETTDRTS29A UETTDRTS32A  <b>Protection Systems Pathway</b> UETTDRTS21A UETTDRTS29A UETTDRTS35A	
UETTDRTS25A	Maintain and test and metering schemes	140	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRI62A UETTDRI63A UETTDRTS29A	
UETTDRTS26A	Commission power systems metering schemes	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRI62A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRLS63A UETTDRTS25A UETTDRTS29A	
UETTDRTS27A	Perform accuracy checks on power systems instrument transformers	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
UETTDRTS28A	Repair, test and calibrate protection relays and meters	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
UETTDRTS29A	Develop power systems secondary isolation instructional documents	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
UETTDRTS30A	Design power systems secondary isolation instructional documents	160	6	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
UETTDRTS31A	Maintain, test and commission power systems voltage regulating equipment	150	5	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A	
UETTDRTS32A	Conduct evaluation of power systems primary plant	160	6	UEENEED104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRTS29A	
UETTDRTS33A	Undertake power systems project management of substation augmentation and maintenance	180	6	<b>Common Group</b> UEENEEG104A UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE107A UEENEEE124A UEENEEE125A UEENEEE126A UEENEEG101A UEENEEG102A UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A  <b>Protection Relays and Meters Pathway</b> UETTDRTS28A  <b>Metering Pathway</b> UETTDRTS25A UETTDRTS26A UETTDRTS29A  <b>Primary Plant Pathway</b> UETTDRTS29A UETTDRTS32A  <b>Protection Systems Pathway</b> UETTDRTS21A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRTS29A UETTDRTS35A	
UETTDRTS34A	Install and maintain power system communication equipment	150	5	UEENEEED104A UEENEEEEE101A UEENEEEEE102A UEENEEEEE104A UEENEEEEE107A UEENEEEEE124A UEENEEEEE125A UEENEEEEE126A UEENEEEG101A UEENEEEG102A UEENEEEG149A UETTDREL11A UETTDREL16A UETTDRTS62A UETTDRTS63A	
UETTDRTS35A	Maintain complex network protection and control systems	180	6	UEENEEED104A UEENEEEEE101A UEENEEEEE102A UEENEEEEE104A UEENEEEEE107A UEENEEEEE124A UEENEEEEE125A UEENEEEEE126A UEENEEEG101A UEENEEEG102A UEENEEEG149A UETTDREL11A UETTDREL16A UETTDRTS62A UETTDRTS63A UETTDRTS21A UETTDRTS29A	
UETTDRTS36A	Commission complex network protection and control systems	180	6	UEENEEED104A UEENEEEEE101A UEENEEEEE102A UEENEEEEE104A UEENEEEEE107A UEENEEEEE124A UEENEEEEE125A UEENEEEEE126A UEENEEEG101A UEENEEEG102A	



UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEG149A UETTDREL11A UETTDREL16A UETTDRLS62A UETTDRLS63A UETTDRTS21A UETTDRTS22A UETTDRTS29A UETTDRTS35A	
UETTDRTS37A	Perform current injection testing using phantom load	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A	
UETTDRTS38A	Install and replace high voltage metering and associated equipment	40	4	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL16A UETTDRTS37A	
UETTDRTS39A	Maintain compliance with national electricity market metrology practices and procedures	5	30	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A	
UETTDRTS40A	Test and maintain energy/revenue metering schemes	5	30	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A	
UETTDRTS41A	Install and replace complex energy/revenue metering schemes and associated equipment	5	30	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A	
UETTDRTS42A	Management of energy registration data errors for revenue billing purposes	5	30	UEENEEE101A UEENEEE102A UEENEEE104A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A	
UETTDRTS43A	Commission energy/revenue metering schemes	5	30	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A UETTDRTS41A UETTDRTS42A	
UETTDRTS44A	Test and maintain energy/revenue metering schemes (complex)	6	40	UEENEEED104A UEENEEEE101A UEENEEEE102A UEENEEEE104A UEENEEEE105A UEENEEEE107A UEENEEEE124A UEENEEEE125A UEENEEEE126A UEENEEEE137A UEENEEEG006A UEENEEEG033A UEENEEEG063A UEENEEEG076A UEENEEEG101A UEENEEEG102A UEENEEEG103A UEENEEEG104A UEENEEEG105A UEENEEEG106A UEENEEEG107A UEENEEEG108A UEENEEEG109A UEENEEEG149A UEENEEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS62A UETTDRTS63A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A UETTDRTS41A UETTDRTS42A UETTDRTS43A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
UETTDRTS45A	Manage compliance with national electricity market metrology practices and procedures	6	40	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A UETTDRTS41A UETTDRTS42A UETTDRTS43A	
UETTDRTS46A	Verification and certification of revenue metering/energy measurement instruments	6	40	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEE137A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A UETTDRTS41A UETTDRTS42A UETTDRTS43A	
UETTDRTS47A	Commission energy/revenue metering schemes (complex)	6	40	UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A UETTDRTS41A UETTDRTS42A UETTDRTS43A UEENEEG006A UEENEEG033A UEENEEG063A UEENEEG076A UEENEEG101A UEENEEG102A UEENEEG103A UEENEEG104A UEENEEG105A UEENEEG106A UEENEEG107A UEENEEG108A UEENEEG109A UEENEEG149A UEENEEG171A UETTDREL11A UETTDREL15A UETTDREL16A UETTDRTS62A UETTDRTS63A	

UNIT CODE	UNIT TITLE	Wtg Pts	AQF	Prerequisites.	Q C
				UETTDRTS37A UETTDRTS38A UETTDRTS39A UETTDRTS40A UETTDRTS41A UETTDRTS42A UETTDRTS43A UETTDRTS44A	

### 2.1.12 Vegetation Competency Standard Units

UNIT CODE	UNIT TITLE	AQF	Wtg Pts	Prerequisites.	Q C
UETTDRVC21A	Use climbing techniques to cut vegetation above ground near live electrical apparatus	2	30	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A UETTDRVC33A UETTDRVC34A	
UETTDRVC22A	Reserved				
UETTDRVC23A	Plan the removal of vegetation up to vegetation exclusion zone near live electrical apparatus	2	60	UEENEEE101A UETTDREL13A UETTDREL14A	U
UETTDRVC24A	Assess vegetation and recommend control measures in an ESI environment	2	80	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A	
UETTDRVC25A	Use elevated platform to cut vegetation above ground level near live electrical apparatus	2	30	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A UETTDRVC33A	
UETTDRVC26A	Cut vegetation at ground level near live electrical apparatus	2	60	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A	
UETTDRVC27A	Monitor safety compliance of vegetation	2	60	UEENEEE101A	U



UNIT CODE	UNIT TITLE	AQF	Wtg Pts	Prerequisites.	Q C
	control work in an ESI environment			UETTDREL13A UETTDREL14A UETTDRVC23A	
UETTDRVC28A	Reserved				
UETTDRVC29A	Control vegetation whilst performing linework	3	40	UEENEEE101A UEENEEE102A UEENEEE104A UEENEEE105A UEENEEE107A UEENEEG101A UEENEEG102A UETTDREL11A UETTDREL12A UETTDREL16A UETTDRIS52A UETTDRIS54A	
UETTDRVC30A	Coordinate vegetation control operations	4		UEENEEE101A UETTDREL11A UETTDREL16A UETTDRIS62A UETTDRIS63A	
UETTDRVC31A	Operate specialist equipment at ground level near live electrical apparatus	2	60	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A	
UETTDRVC32A	Use specialised plant to cut vegetation above ground level near live electrical apparatus	2	30	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A UETTDRVC33A	
UETTDRVC33A	Apply pruning techniques to vegetation control near live electrical apparatus	2	50	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A	
UETTDRVC34A	Undertake release and rescue from a tree near live electrical apparatus	2	20	UEENEEE101A UETTDREL13A UETTDREL14A UETTDRVC23A UETTDRVC27A	

## Discipline – Imported Units

Information on Imported Units including those used as Electives in any Qualification in this Training Package can be found in – Imported Units.

The list of Imported Units is included in Table 6, below.

### AHC10 Agriculture Horticulture, Conservation & Land Management

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
AHCARB202A	Fell Small Trees	30	2	Nil	
AHCARB204A	Undertake standard climbing techniques	20	2	Nil	
AHCARB205A	Operate and maintain chainsaws	20	2	Nil	UET UET UET
AHCCHM201A	Apply chemicals under supervision	30	2	Nil	
AHCMOM304A	Operate machinery and equipment	40	3	Nil	
AHCPCM201A	Recognise Plants	40	2	Nil	

### BSB07 Business Services Training Package

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
BSBINM401A	Implement workplace information system	40	4	Nil	
BSBMGT402A	Implement operational plan	40	4	Nil	
BSBMGT403A	Implement continuous improvement	40	4	Nil	
BSBWOR401A	Establish effective workplace relationships	50	4	Nil	
BSBWOR402A	Promote team effectiveness	50	4	Nil	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
BSBCUS501C	Manage quality customer service	40	5	Nil	
BSBFIM501A	Manage budgets and financial plans	70	5	Nil	
BSBINM501A	Manage an information or knowledge management system	50	5	Nil	
BSBINN502A	Build and sustain an innovative work environment	50	5	Nil	
BSBLED501A	Develop a workplace learning environment	60	5	Nil	
BSBMGT502B	Manage people performance	70	5	Nil	
BSBMGT515A	Manage operational plan	60	5	Nil	
BSBMGT516A	Facilitate continuous improvement	60	5	Nil	
BSBSUS501A	Develop workplace policy and procedures for sustainability	50	5	Nil	
BSBWOR501B	Manage personal work priorities and professional development	60	5	Nil	
BSBWOR502B	Ensure team effectiveness	60	5	Nil	

### CPC08 Construction, Plumbing and Services Integrated Framework Training Package

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
CPCCCM2007A	Use explosive power tools	15	3	Nil	
CPCCLDG3001A	Licence to perform dogging	30	3	Nil	UET UET UET UET
CPCCLHS3001A	Licence to operate a personnel and materials hoist	30	3	Nil	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
CPCCLHS3002A	Licence to operate a materials hoist	20	3	Nil	
CPCCLRG3001A	Licence to perform rigging basic level	40	3	CPCCLRG3001A	UET
CPCCLRG3002A	Licence to perform rigging intermediate level	40	3	Nil	
CPCCLSF2001A	Licence to erect, alter and dismantle scaffolding basic level	40	3	Nil	
CPCCLSF3001A	Licence to erect, alter and dismantle scaffolding intermediate level	40	3	Nil	
CPCCOHS1001A	Work safely in the construction industry	10	2	Nil	

### HLT07 Health Training Package

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
HLTCPR201B	Perform CPR	10	2	Nil	
HLTFA301C	Apply first aid	10	3	Nil	

### ICT10 Integrated Telecommunications Training Package

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
ICTCBL2065A	Splice and terminate optical fibre cable for carriers and service providers	40	2	Nil	
ICTCBL2068A	Install a telecommunications service to a	60	2	Nil	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
	building				

**MEM05 Metal and Engineering Training Package**

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
MEM16012A	Interpret technical specification and manuals	40	2	Nil	
MEM17003A	Assist in the provision of on the job training	20	2	Nil	

**NWP07 Water Training Package**

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
NWP218B	Perform and record sampling	20	2	Nil	
NWP261A	Operate and maintain water treatment plant and equipment	30	2	Nil	

**RII09 Resources and Infrastructure Industry Training Package**

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
RIIOHS202A	Enter and work in confined spaces	30	2	Nil	
RIIOHS204A	Work safely at heights	20	2	Nil	
RIIOHS205A	Control traffic with stop-slow bat	10	2	Nil	

**TLI10 Transport and Logistics Training Package**

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
TLIC3003A	Drive medium rigid vehicle	20	3	Nil	
TLIC3004A	Drive heavy rigid vehicle	20	3	Nil	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
TLID3035A	Operate a boom type elevating work platform	30	3	Nil	
TLILIC2001A	Licence to operate a forklift truck	40	3	Nil	
TLILIC4011A	Licence to operate a slewing mobile crane (over 100 tonnes)	70	3	Nil	
TLILIC0012A	License to operate a vehicle loading crane (Capacity 10 metre tonnes and above)	40	3	Nil	
TLILIC3003A	Licence to operate a bridge and gantry crane	70	3	Nil	
TLILIC2005A	License to Operate a Boom Type Elevating Work Platform (Boom Length 11 Metres or more)	40	3	Nil	UET UET UET UET UET
TLILIC3008A	Licence to operate a slewing mobile crane (up to 20 tonnes)	70	3	Nil	
TLILIC4009A	Licence to operate a slewing mobile crane (up to 60 tonnes)	70	3	Nil	

### UEE11 Electrotechnology Training Package

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
UEENECC001B	Maintain documentation	20	3	Nil	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
UEENEEC008B	Receive and store equipment and materials for electrotechnology work	20	2	Nil	
UEENEEC010B	Deliver a service to customers	20	2	Nil	
UEENEED101A	Use basic computer applications relevant to a electrotechnology workplace	20	2	Nil	
UEENEED104A	Use software for engineering applications	40	3	Nil	UET UET
UEENEED117A	Install and configure Internetworking systems	120	4	Nil	
UEENEEE083A	Establish and follow a competency development plan in an electrotechnology engineering discipline	120	6	Nil	UET
UEENEEE101A	Apply Occupational Health Safety regulations, codes and practices in the workplace	20	2	Nil	UET UET UET UET UET UET UET UET UET UET UET UET
UEENEEE102A	Fabricate, dismantle, assemble of utilities industry components	40	2	UEENEEE101A	UET UET UET UET UET UET UET UET UET
UEENEEE103A	Solve problems in ELV single path circuits	40	2	Nil	UET
UEENEEE104A	Solve problems in d.c. circuits	80	3	UEENEEE101A	UET UET

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
					UET UET UET UET UET UET
UEENEEE105A	Fix and secure electrotechnology equipment	20	2	UEENEEE101A	UET UET UET UET UET UET
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40	3	UEENEEE101A	UET UET UET UET UET UET UET
UEENEEE108A	Lay wiring/cablings and terminate accessories for ELV circuits	40	2	UEENEEE105A UEENEEE107A	
UEENEEE124A	Compile and produce an electrotechnology/utilities report	60	4	Nil	UET UET
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits problems	60	5	UEENEEE126A	UET UET
UEENEEE126A	Provide solutions to basic engineering computational problems	60	5	UEENEEE102A	UET UET
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20	2	UEENEEE101A	UET UET UET
UEENEEE151A	Transport apparatus, equipment and materials	60	2	Nil	



Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
UEENEEF106A	Solve problems in voice and data communications circuits	40	2	UEENEEE101A	
UEENEEF107A	Set up and configure the wireless capabilities of communications and data storage devices	40	2	UEENEEE101A	
UEENEEG006A	Solve problems in single and three phase low voltage machines	80	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A; UEENEEE107A; UEENEEG101A; UEENEEG102A; UEENEEG106A	UET UET
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60	3	UEENEEG102A	UET UET
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40	3	UEENEEG102A	UET UET
UEENEEG076A	Install and replace low voltage current transformer metering	20	4	UEENEEG105A	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60	3	UEENEEE104A	UET UET UET UET UET UET UET UET
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	3	UEENEEG101A	UET UET UET UET UET UET UET UET
UEENEEG103A	Install low voltage wiring and accessories	20	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A;	UET UET

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
				UEENEEE107A; UEENEEE137A; UEENEEG006A; UEENEEG033A; UEENEEG063A; UEENEEG101A; UEENEEG102A; UEENEEG106A; UEENEEG107A; UEENEEG108A; UEENEEG109A	
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A; UEENEEE107A; UEENEEE137A; UEENEEG006A; UEENEEG033A; UEENEEG063A; UEENEEG101A; UEENEEG102A; UEENEEG106A; UEENEEG107A; UEENEEG108A; UEENEEG109A	UET UET
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A; UEENEEE107A; UEENEEE137A; UEENEEG006A; UEENEEG033A; UEENEEG063A; UEENEEG101A; UEENEEG102A; UEENEEG103A UEENEEG104A UEENEEG106A; UEENEEG107A; UEENEEG108A; UEENEEG109A	UET UET

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40	3	UEENEEE101A; UEENEEE102A; UEENEEE105A; UEENEEE107A	UET UET
UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A; UEENEEE107A; UEENEEG006A; UEENEEG033A; UEENEEG063A; UEENEEG101A; UEENEEG102A; UEENEEG106A	UET UET
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A; UEENEEE107A; UEENEEG006A; UEENEEG033A; UEENEEG063A; UEENEEG101A; UEENEEG102A; UEENEEG106A	UET UET
UEENEEG109A	Develop and connect electrical control circuits	80	3	UEENEEE101A; UEENEEE102A; UEENEEE104A; UEENEEE105A; UEENEEE107A; UEENEEG006A; UEENEEG063A; UEENEEG101A; UEENEEG102A; UEENEEG106A	UET UET
UEENEEG149A	Provide engineering solutions to problems in complex polyphase power circuits	60	5	UEENEEE125A; UEENEEG102A	UET UET
UEENEEG171A	Install, set up and commission interval metering	20	3	UEENEEG104A	
UEENEEH102A	Repair basic electronic apparatus faults by	40	2	UEENEEE101A;	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
	replacement of components			UEENEEE102A	
UEENEEH112A	Troubleshoot digital sub-systems	80	3	UEENEEE101A; UEENEEH102A	
UEENEEH139A	Troubleshoot basic amplifier circuits	40	3	UEENEEH102A; UEENEEH114A; UEENEEE101A UEENEEE102A; UEENEEE104A OR UEENEEH169A OR UEENEEG102A; UEENEEE101A; UEENEEE104A	
UEENEEI155A	Develop structured programs to control external devices	40	4	UEENEEE101A	
UEENEEI156A	Develop and test code for microcontroller devices	60	5	UEENEEE101A	
UEENEEK101A	Maintain safety and tidiness of remote area power supply systems	20	2	UEENEEE101A; UEENEEK102A	UET
UEENEEK102A	Work safely with remote area power supply systems	20	2	UEENEEE101A	UET
UEENEEK103A	Conduct periodic maintenance of remote area power supply battery banks	40	2	UEENEEE101A; UEENEEE102A; UEENEEE103A; UEENEEE107A; UEENEEK101A; UEENEEK102A	
UEENEEK104A	Conduct periodic maintenance of remote area power supply generator sets	40	2	UEENEEE101A; UEENEEE102A; UEENEEE103A; UEENEEE107A; UEENEEK101A; UEENEEK102A	
UEENEEK105A	Conduct periodic maintenance of remote area power supply photo voltaic arrays	40	2	UEENEEE101A; UEENEEE102A; UEENEEE103A; UEENEEE107A; UEENEEK101A; UEENEEK102A	

Unit Code	Unit Title	Wtg Pts	AQF Level	Prerequisite/s	Qual Core
UEENEEK106A	Conduct periodic maintenance of remote area power supply wind generators	40	2	UEENEEE101A; UEENEEE102A; UEENEEE103A; UEENEEE107A; UEENEEK101A; UEENEEK102A	
UEENEEK116A	Maintain and monitor remote area power Generation facilities	80	2	UEENEEE101A; UEENEEE102A; UEENEEE103A; UEENEEE107A; UEENEEK101A; UEENEEK102A; UEENEEK104A	UET
UEENEEK120A	Maintain operation of remote area power Generation plant	120	2	UEENEEE101A; UEENEEE102A; UEENEEE103A; UEENEEK116A	UET
UEENEEK142A	Apply environmental and sustainable procedures in the energy sector	20	2	Nil	UET UET UET
UEENEOP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20	2	UEENEEE101A	
UEENEOP026A	Conduct in-service safety testing of electrical cord assemblies and cord connected appliances/equipment	20	2	UEENEEE101A	

### 1.2.10 Unit Relationships

## 2.10 Unit Relationships

Prerequisites and co requisites of each Competency Standard Unit can be obtained from the following Table 2. The correlation of the units within a qualification(s) can be found in flowcharts diagrams located in Volume 1 Part 1 Qualification Framework

The units in Table 2 are listed in alphabetical order and include their relationship to the previous Training Package and their prerequisite and co requisite requirements.

### CSU relationship to former Training Package and prerequisites

Included in this Training Package is a summary of:

- Competency Standard Units in the Electricity Supply Industry - Transmission, Distribution and Rail Training Package;
- The relationship to former Competency Standard Units
- Comments to units in the former Training Package;
- AQF alignment and weighting points of each Competency Standard Unit; and
- the Pre-requisite requirements.

Note:

1. The following is a guide to assist RTOs in granting equivalent units when implementing this Training Package.
2. The alignment of more than one UET unit to a UTT unit does not necessarily mean that the one UTT unit is equivalent to all aligned UET units.
3. RTOs shall ensure appropriate analysis of all the skills and knowledge specified in the respective Competency Standard Units in this Training Package is undertaken with that of the former Training Package (UTT98), in determining equivalence.
4. In granting an equivalence of UET unit for a UTT unit;
5. the prerequisite units specified for the UET unit shall be included, and the critical aspects of evidence of the UET unit and its specified prerequisite units shall be at least equal to that of the UTT unit.

**Table 1 — Mapping Units of Standard Competency UET12 ESI – Transmission, Distribution and Rail Sector Training Package Version 1 and UET09 ESI - Transmission, Distribution and Rail Sector Training Package Version 3**

**2.1.1 Cable Jointing Competency Standard Units**

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDRCJ21A	Lay ESI electrical cables	UETTDRCJ01B	Lay electrical cables
UETTDRCJ22A	Install and maintain de-energised low voltage underground paper insulated cables.	UETTDRCJ02B	Install and maintain de-energised low voltage underground paper insulated cables.
UETTDRCJ23A	Install and maintain de-energised high voltage underground paper insulated cables.	UETTDRCJ03B	Install and maintain de-energised high voltage underground paper insulated cables.
UETTDRCJ24A	Joint and maintain energised low voltage underground paper insulated cables	UETTDRCJ04B	Joint and maintain energised low voltage underground paper insulated cables
UETTDRCJ25A	Perform straight through high voltage paper insulated to polymeric transition joint	UETTDRCJ05B	Perform straight through high voltage paper insulated to polymeric transition joint
UETTDRCJ26A	Install and maintain de-energised low voltage underground polymeric cables.	UETTDRCJ06B	Install and maintain de-energised low voltage underground polymeric cables.

UETTDRCJ27 A	Install and maintain de-energised high voltage underground polymeric cables.	UETTDRCJ07B	Install and maintain de-energised high voltage underground polymeric cables.
UETTDRCJ28 A	Joint and maintain energised low voltage underground polymeric cables	UETTDRCJ08B	Joint and maintain energised low voltage underground polymeric cables
UETTDRCJ29 A	Install gas and oil filled specialised underground cables	UETTDRCJ09B	Install oil and gas filled specialised underground cables
UETTDRCJ30 A	Maintain gas and oil filled specialised underground cables	UETTDRCJ10B	Maintain oil and gas filled specialised underground cables
UETTDRCJ31 A	Install and maintain specialised polymeric underground cables	UETTDRCJ11B	Install and maintain specialised polymeric underground cables
UETTDRCJ32 A	Install and maintain gas and oil pressure systems for specialised underground cables	UETTDRCJ12B	Install and maintain oil & gas pressure systems for specialised underground cables
UETTDRCJ33 A	Install and maintain network infrastructure low voltage underground cables	UETTDRCJ13B	Install and maintain network infrastructure LV underground cables
UETTDRCJ34 A	Install and maintain network infrastructure high voltage underground cables	UETTDRCJ14B	Install and maintain network infrastructure HV underground cables
UETTDRCJ99 A	Test and verify distribution cable jointing installations	New Unit	New Unit

### 2.1.2 Distribution Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDNDP1 1A	Inspect overhead poles/structures and electrical apparatus	UETTDNDP01B	Inspect overhead structure and electrical apparatus (poles /structures)
UETTDNDP1 2A	Maintain overhead energised low voltage conductors and cables	UETTDNDP02B	Maintain overhead energised low voltage conductors and cables
UETTDNDP1 3A	Maintain energised HV distribution overhead electrical apparatus (stick)	UETTDNDP03B	Maintain energised high voltage distribution overhead electrical apparatus (stick)
UETTDNDP1 4A	Maintain energised HV distribution overhead electrical apparatus (glove)	UETTDNDP04B	Maintain energised high voltage distribution overhead electrical apparatus (glove)
UETTDNDP1 5A	Inspect, maintain and restore energised low voltage overhead distribution network infrastructure	UETTDNDP05B	Inspect, maintain and restore energised low voltage overhead distribution network infrastructure
UETTDNDP9 9A	Test and verify distribution overhead installations	New Unit	New Unit

### 2.1.3 Design Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDRDS31 A	Draft and layout an power system overhead distribution extension	UETTDRDS01B	Draft and layout an overhead extension
UETTDRDS32 A	Draft and layout an power system underground distribution extension	UETTDRDS02B	Draft and layout an underground distribution extension
UETTDRDS33 A	Draft and layout a power system street lighting system	UETTDRDS03B	Draft and layout a street lighting system
UETTDRDS34 A	Draft and layout a power system distribution substation minor upgrade	UETTDRDS04B	Draft and layout a distribution substation minor upgrade
UETTDRDS35 A	Design overhead distribution power systems	UETTDRDS05B	Design overhead distribution power systems
UETTDRDS36 A	Design underground distribution power systems	UETTDRDS06B	Design underground distribution power systems
UETTDRDS37 A	Design power system distribution substations	UETTDRDS07B	Design distribution substations
UETTDRDS38 A	Design power system public lighting systems	UETTDRDS08B	Design public lighting systems
UETTDRDS39 A	Prepare and manage detailed construction plans for electrical power system infrastructure	UETTDRDS09B	Prepare and manage detailed construction plans for electrical power system infrastructure
UETTDRDS40 A	Prepare and appraise power systems financial impact statements	UETTDRDS10B	Prepare and appraise financial impact statements
UETTDRDS41 A	Manage electrical power systems infrastructure projects	UETTDRDS11B	Manage electrical power systems infrastructure projects
UETTDRDS42 A	Investigate quality of power systems supply issues	UETTDRDS12B	Investigate quality of power systems supply issues
UETTDRDS43 A	Develop high voltage and low voltage distribution protection systems	UETTDRDS13B	Develop HV and LV distribution protection systems
UETTDRDS44 A	Design power system zone substations modifications	UETTDRDS14B	Design zone substations modifications
UETTDRDS45 A	Organise and implement ESI line and easement surveys	UETTDRDS15B	Organise and implement ESI line and easement surveys
UETTDRDS46	Develop planned power systems outage	UETTDRDS16B	Develop planned power systems outage



A	strategies		
UETTDNRDS47 A	Review power system asset management strategies	UETTDNRDS17B	Review asset management
UETTDNRDS48 A	Analyse and appraise power system fault and outage data	UETTDNRDS18B	Analyse and appraise fault
UETTDNRDS49 A	Establish and manage power system geographical information systems data	UETTDNRDS19B	Establish and manage geo information systems data
UETTDNRDS50 A	Design customer power system substations	UETTDNRDS20B	Design customer substation
UETTDNRDS51 A	Manage power system transmission and sub-transmission design process	UETTDNRDS21B	Manage transmission and design process
UETTDNRDS52 A	Design power system transmission, sub-transmission and zone substation buildings	UETTDNRDS22B	Design transmission, sub- zone substation buildings
UETTDNRDS53 A	Design power system transmission and sub-transmission substation primary plant	UETTDNRDS23B	Design transmission and s substation primary plant
UETTDNRDS54 A	Design power system transmission and sub-transmission protection and control	UETTDNRDS24B	Design transmission and s protection and control
UETTDNRDS55 A	Design power system transmission and sub-transmission substation earthing	UETTDNRDS25B	Design transmission and s substation earthing
UETTDNRDS56 A	Design power system transmission, sub-transmission and zone substation – civil and structural components	UETTDNRDS26B	Design transmission, sub- zone substation – civil and components
UETTDNRDS57 A	Design power system overhead transmission systems	UETTDNRDS27B	Design overhead transmis
UETTDNRDS58 A	Design underground transmission systems	UETTDNRDS28B	Design underground trans

### 2.1.4 Entry Level Cross Discipline Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDREL1 1A	Apply sustainable energy and environmental procedures	UETTDREL01B	Apply environmental and energy procedures
UETTDREL1 2A	Operate plant and equipment near live electrical conductors and apparatus	UETTDREL02B	Operate plant and equipment electrical conductors/appa
UETTDREL1 3A	Comply with sustainability, environmental and incidental response policies and	UETTDREL03B	Comply with environment response procedures

	procedures		
UETTDREL1 4A	Working safely near live electrical apparatus as a non-electrical worker	UETTDREL04B	Working safely near live electrical apparatus as non electrical
UETTDREL1 5A	Respond to power systems technical enquiries and requests	UETTDREL05B	Respond to technical enquiries
UETTDREL1 6A	Working safely near live electrical apparatus	New Unit	New Unit
UETTDREL1 7A	Operate asset inspection machinery and equipment near live electrical apparatus	New Unit	New Unit
UETTDREL1 8A	Inspect and treat poles and inspect electrical apparatus	New Unit	New Unit
UETTDREL1 9A	Identify and interpret characteristics of electrical apparatus associated with power industry assets	New Unit	New Unit
UETTDREL2 0A	Undertake minor vegetation control and routine minor maintenance of poles and electrical apparatus	New Unit	New Unit
UETTDREL2 1A	Operate specialised data information equipment near live electrical apparatus	New Unit	New Unit

### 2.1.5 Industry Specific Cross Discipline Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDNIS32 A	Solve electrical problems in remote community network apparatus	New Unit	New Unit
UETTDNIS33 A	Solve electrical problems in remote community network systems	New Unit	New Unit
UETTDNIS34 A	Install and replace energy meters and associated equipment in remote communities	New Unit	New Unit
UETTDNIS35 A	Perform remote community network field switching to a given schedule	New Unit	New Unit
UETTDNIS36 A	Install and maintain low voltage services in remote communities (overhead)	New Unit	New Unit
UETTDNIS37 A	Install and maintain low voltage services in remote communities (underground)	New Unit	New Unit
UETTDNIS38	Install and maintain public lighting systems	New Unit	New Unit

A	in remote communities		
UETTDRIS41 A	Install network infrastructure electrical equipment	UETTDRIS01B	Install electrical equipment (infrastructure).
UETTDRIS42 A	Maintain network infrastructure electrical equipment	UETTDRIS02B	Maintain electrical equipment (Infrastructure).
UETTDRIS43 A	Perform low voltage field switching operation to a given schedule.	UETTDRIS03B	Perform LV field switching to a given schedule.
UETTDRIS44 A	Perform HV field switching operation to a given schedule	UETTDRIS04B	Perform high voltage field switching operation to a given schedule.
UETTDRIS45 A	Install and maintain ESI overhead distribution network infrastructure	UETTDRIS27B	Install and maintain overhead distribution network infrastructure
UETTDRIS46 A	Install and maintain ESI network infrastructure electrical equipment	UETTDRIS06B	Install and maintain network infrastructure electrical equipment
UETTDRIS47 A	Sample, filter, test and reinstate insulating oil	UETTDRIS07B	Sample, test, filter, and reinstate insulating oil
UETTDRIS48 A	Develop high voltage switching schedule	UETTDRIS08B	Develop HV switching schedule
UETTDRIS49 A	Develop low voltage switching schedule	UETTDRIS09B	Develop LV switching schedule
UETTDRIS50 A	Coordinate power system permit procedures	UETTDRIS10B	Coordinate permit procedures
UETTDRIS51 A	Coordinate and direct power system switching schedules	UETTDRIS11B	Coordinate and direct switching schedules
UETTDRIS52 A	Install and maintain poles, structures and associated hardware	UETTDRIS12B	Install and maintain poles/structures and associated hardware
UETTDRIS53 A	Install and maintain power system public lighting	UETTDRIS13B	Install and maintain public lighting
UETTDRIS54 A	Install and maintain poles, structures, overhead conductors and cables	UETTDRIS14B	Install and maintain overhead conductors and cables (poles and structures)
UETTDRIS55 A	Install and maintain low voltage underground services	UETTDRIS15B	Install and maintain low voltage underground services (underground)
UETTDRIS56 A	Install and maintain low voltage overhead services	UETTDRIS16B	Install and maintain low voltage overhead services (overhead)
UETTDRIS57 A	Conduct visual checking and treatment of power system poles and structures	UETTDRIS17B	Conduct visual checking and treatment of power system poles and structures
UETTDRIS58 A	Locate faults in power system underground power cables	UETTDRIS18B	Locate faults in underground power cables
UETTDRIS59 A	Conduct high potential testing of power system underground power cables	UETTDRIS19B	Conduct high potential testing of power system underground power cables

UETTD60 A	Install and replace power system energy meters and associated equipment	UETTD20B	Install and replace energy meters and associated equipment
UETTD61 A	Install mobile Generation set for synchronised LV Genset	UETTD21B	Install mobile Generation set for synchronised Genset LV
UETTD62 A	Implement and monitor the power system organisational OHS policies, procedures and programs	UETTD22B	Implement and monitor the power system OHS policies, procedures and programs
UETTD63 A	Implement and monitor the power system environmental and sustainable energy management policies and procedures	UETTD23B	Implement and monitor the power system environmental and sustainable energy management procedures
UETTD64 A	Install mobile Generation set for synchronised HV Genset	UETTD24B	Install mobile Generation set for synchronised genset HV
UETTD65 A	Contribute to coordinated HV live working	UETTD25B	Contribute to coordinated HV live line work
UETTD66 A	Manage an electricity power system OHS management system	UETTD26B	Manage an electricity supply system management system
UETTD67 A	Solve problems in energy supply network equipment	New Unit	New Unit
UETTD68 A	Solve problems in energy supply network protection equipment and systems	New Unit	New Unit
UETTD69 A	Diagnose and rectify faults in energy supply apparatus	New Unit	New Unit
UETTD70 A	Diagnose and rectify faults in electrical energy distribution systems	New Unit	New Unit
UETTD71 A	Diagnose and rectify faults in electrical energy supply transmission systems	New Unit	New Unit
UETTD72 A	Diagnose and rectify faults in distributed Generation systems	New Unit	New Unit
UETTD73 A	Develop engineering solutions for energy supply power transformer problems	New Unit	New Unit
UETTD74 A	Develop engineering solutions for energy supply system protection problems	New Unit	New Unit
UETTD99 A	Test and verify distribution remote area installations	New Unit	New Unit

### 2.1.6 Refresher Training Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDRRF01B	Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus	UETTDRRF01A	Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus
UETTDRRF02B	Perform pole top rescue	UETTDRRF02A	Perform pole top rescue
UETTDRRF03B	Perform EWP rescue	UETTDRRF03A	Perform EWP rescue
UETTDRRF04B	Perform tower rescue	UETTDRRF04A	Perform tower rescue
UETTDRRF05B	Perform rescue from switchyard structures at heights	UETTDRRF05A	Perform rescue from switchyard structures at heights
UETTDRRF06B	Perform rescue from a live LV panel	UETTDRRF06A	Perform rescue from a live LV panel
UETTDRRF07B	Perform cable pit/trench/excavation rescue	UETTDRRF07A	Perform cable pit/trench/excavation rescue
UETTDRRF08B	Perform EWP controlled descent escape	UETTDRRF08A	Perform EWP controlled descent escape
UETTDRRF09B	Apply access procedures to work on or near electrical network infrastructure	UETTDRRF09A	Apply access procedures to work on or near electrical network infrastructure
UETTDRRF10B	Provide first aid in an ESI environment	UETTDRRF10A	Provide first aid in an ESI environment
UETTDRRF11A	Testing of connections to low voltage electricity networks	New Unit	New Unit

### 2.1.7 Rail Traction Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDRT21A	Install traction overhead wiring systems	UETTDRT201B	Install overhead traction wiring systems
UETTDRT22A	Maintain traction overhead wiring systems	UETTDRT202B	Maintain overhead traction wiring systems

UETDRRT2 3A	Install rail traction bonds	UETDRRT03B	Install traction bonds
UETDRRT2 4A	Maintain rail traction bonds	UETDRRT04B	Maintain traction bonds
UETDRRT2 5A	Install overhead rail traction configurations	UETDRRT05B	Install overhead traction c
UETDRRT2 6A	Maintain overhead rail traction configurations	UETDRRT06B	Maintain overhead traction
UETDRRT2 7A	Install overhead traction components and equipment	UETDRRT07B	Install overhead traction e components
UETDRRT2 8A	Maintain overhead traction components and equipment	UETDRRT08B	Maintain overhead traction components
UETDRRT2 9A	Operate rail road traction height access equipment.	UETDRRT09B	Operate road rail traction equipment.
UETDRRT3 0A	Perform to a given schedule rail traction switching operations	UETDRRT10B	Perform rail traction switch to a given schedule
UETDRRT3 1A	Maintain energised d.c. traction overhead wiring system	UETDRRT11B	Maintain energised direct overhead wiring system
UETDRRT3 2A	Maintain energised traction overhead electrical apparatus using stick techniques	UETDRRT12B	Maintain energised traction electrical apparatus (stick)
UETDRRT3 3A	Maintain energised traction overhead electrical apparatus using glove techniques	UETDRRT13B	Maintain energised traction electrical apparatus (glove)
UETDRRT3 4A	Install and maintain traction network wiring systems	UETDRRT14B	Install and maintain traction systems
UETDRRT3 5A	Install and maintain traction network equipment and components	UETDRRT15B	Install and maintain traction equipment and componen
UETDRRT3 6A	Maintain traction network wiring systems	New Unit	New Unit
UETDRRT3 7A	Maintain traction network components and equipment	New Unit	New Unit
UETDRRT9 9A	Test and verify rail traction installations	New Unit	New Unit

### 2.1.8 Substation Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDRSB2 1A	Diagnose and rectify faults in substation environment	UETTDRSB01B	Diagnose and rectify faults in substation environment
UETTDRSB2 2A	Carry out power systems substation inspection	UETTDRSB02B	Carry out substation inspection
UETTDRSB2 3A	Install and maintain substation direct current systems	UETTDRSB03B	Install and maintain substation direct current systems
UETTDRSB2 4A	Maintain high voltage power system circuit breakers	UETTDRSB04B	Maintain HV power system circuit breakers
UETTDRSB2 5A	Maintain high voltage power and instrument transformers	UETTDRSB05B	Maintain HV power system circuit breakers and instrument transformers
UETTDRSB2 6A	Install high current DC equipment and switchgear	UETTDRSB06B	Install high current DC switchgear equipment
UETTDRSB2 7A	Maintain high current DC equipment and switchgear	UETTDRSB07B	Maintain high current DC switchgear equipment
UETTDRSB2 9A	Maintain capacitor bank equipment for voltage regulation	UETTDRSB09B	Maintain voltage regulating capacitor banks
UETTDRSB3 0A	Maintain high voltage power system static VAR compensators (SVC)	UETTDRSB10B	Maintain HV power system static VAR compensators
UETTDRSB3 1A	Maintain high voltage power system synchronous condensers	UETTDRSB11B	Maintain HV power system synchronous condensers
UETTDRSB3 2A	Maintain power transformer on load tap changers (OLTC)	UETTDRSB12B	Maintain voltage regulating load tapchangers
UETTDRSB3 3A	Install high voltage plant and equipment	UETTDRSB13B	Install HV plant and equipment
UETTDRSB3 4A	Carry out surveys using thermovision techniques	UETTDRSB14B	Carry out Thermovision surveys
UETTDRSB3 5A	Maintain discrete control and protection systems	UETTDRSB15B	Maintain discrete protection systems
UETTDRSB3 6A	Commission discrete control and protection systems	UETTDRSB16B	Commission discrete protection systems
UETTDRSB3 7A	Maintain power system distribution field devices	UETTDRSB17B	Maintain distribution field devices
UETTDRSB3	Commission power system distribution	UETTDRSB18B	Commission distribution field devices

8A	field devices		
UETTDRSB3 9A	Perform power system substation switching operation to a given schedule	UETTDRIS45A	Perform power system substation switching operation to a given schedule

### 2.1.9 System Operations Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTDRSO3 2A	Manage power systems network faults	UETTDRSO02B	Manage network faults
UETTDRSO3 3A	Manage power systems critical events	UETTDRSO03B	Manage critical events
UETTDRSO3 4A	Control power systems generating plant	UETTDRSO04B	Control generating plant
UETTDRSO3 5A	Manage high voltage distribution and subtransmission network demand	UETTDRSO05B	Manage HV distribution and subtransmission network demand
UETTDRSO3 6A	Develop low voltage distribution switching programs	UETTDRSO06B	Develop LV distribution switching programs
UETTDRSO3 7A	Develop high voltage distribution and subtransmission switching programs	UETTDRSO07B	Develop HV distribution and subtransmission switching programs
UETTDRSO3 8A	Develop and evaluate power systems transmission switching programs	UETTDRSO08B	Develop and evaluate transmission switching programs
UETTDRSO3 9A	Coordinate low voltage distribution networks	UETTDRSO09B	Coordinate LV distribution networks
UETTDRSO4 0A	Coordinate high voltage distribution and subtransmission networks	UETTDRSO10B	Coordinate HV distribution and subtransmission networks
UETTDRSO4 1A	Manage power systems transmission networks	UETTDRSO11B	Manage transmission networks
UETTDRSO4 2A	Manage power systems transmission network demand	UETTDRSO12B	Manage transmission network demand
UETTDRSO4 3A	Coordinate low voltage distribution network demand	UETTDRSO13B	Coordinate LV distribution network demand
UETTDRSO4 4A	Develop crisis power systems management plans	UETTDRSO14B	Develop crisis management plans
UETTDRSO4 5A	Operate and monitor system SCADA equipment	UETTDRSO15A	Operate and monitor system SCADA (SCADA)
UETTDRSO4	Monitor and control the field staff activities	UETTDRSO16A	Monitor and control the field staff activities



6A			staff
UETTDRSO4 7A	Coordinate high voltage transmission network	UETTDRSO17A	Coordinate HV transmissi
UETTDRSO4 8A	Respond to discrete and interdependent protection operations	UETTDRSO18A	Respond to discrete/ inter protection operations
UETTDRSO4 9A	Coordinate power system operations in a regulated energy market	UETTDRSO19A	Coordinate system operati energy market
UETTDRSO5 0A	Respond to complex power system protection operations	UETTDRSO20A	Respond to complex prote
UETTDRSO5 1A	Manage network systems power flows	UETTDRSO21A	Manage network power fl

### 2.1.10 Transmission Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTD RTP22 A	Establish and reinstate a power systems transmission structure work site	UETTD RTP02B	Establish and reinstate a tra work site
UETTD RTP23 A	Erect power systems transmission structures	UETTD RTP03B	Erect transmission towers
UETTD RTP24 A	Erect power systems transmission structure hardware	UETTD RTP04B	Erect transmission tower ha
UETTD RTP25 A	Pre-tension stringing overhead transmission conductors and cables	UETTD RTP05B	Pre-tension stringing transm conductors and cables
UETTD RTP26 A	Install transmission structures and associated hardware	UETTD RTP06B	Erect transmission towers a hardware
UETTD RTP27 A	Maintain transmission structures and associated hardware	UETTD RTP07B	Maintain transmission towe hardware
UETTD RTP28 A	Set-up and install transmission structure stubs	UETTD RTP08B	Transmission tower stub se
UETTD RTP29 A	Install and maintain transmission overhead conductors and cables	UETTD RTP09B	Install and maintain overhe cables (towers)
UETTD RTP30 A	Inspect transmission overhead structures and electrical apparatus	UETTD RTP10B	Inspect overhead structures apparatus (towers)
UETTD RTP31 A	Maintain energised transmission lines using high voltage live work stick method	UETTD RTP11B	Maintain energised lines (tr live line stick technique
UETTD RTP32	Maintain energised transmission lines using	UETTD RTP12B	Maintain energised lines (tr

A	high voltage live work Barehand method		Barehand Technique
UETTD RTP33 A	Maintain energised transmission lines using Barehand Technique on a helicopter platform	UETTD RTP13B	Maintain energised lines (tr Barehand Technique on a h
UETTD RTP34 A	Install/maintain overhead transmission network infrastructure	UETTD RTP14B	Install and maintain overhea network infrastructure
UETTD RTP35 A	Install/maintain transmission network infrastructure electrical equipment	UETTD RTP15B	Install and maintain transm infrastructure electrical equ
UETTD RTP99 A	Test and verify transmission overhead installations	New Unit	New Unit

### 2.1.11 Testing Competency Standard Units

UET12 Unit Code	UET12 Unit Title	UET09 Unit Code – V3	UET09 Unit Title – V3
UETTD RSTS21 A	Maintain interdependent network protection and control systems	UETTD RSTS01B	Maintain network protection systems (interdependent)
UETTD RSTS22 A	Commission interdependent network protection and control systems	UETTD RSTS02B	Commission network prote systems (interdependent)
UETTD RSTS23 A	Conduct evaluation of power system substation faults	UETTD RSTS03B	Conduct evaluation of pow within a substation
UETTD RSTS24 A	Design testing and commissioning procedures for field devices and substations	UETTD RSTS04B	Design testing and commiss procedures for substation a
UETTD RSTS25 A	Maintain and test and metering schemes	UETTD RSTS05B	Test and maintain metering
UETTD RSTS26 A	Commission power systems metering schemes	UETTD RSTS06B	Commission metering sche
UETTD RSTS27 A	Perform accuracy checks on power systems instrument transformers	UETTD RSTS07B	Perform accuracy checks on transformers
UETTD RSTS28 A	Repair, test and calibrate protection relays and meters	UETTD RSTS08B	Test, repair and calibrate pr and meters
UETTD RSTS29 A	Develop power systems secondary isolation instructional documents	UETTD RSTS09B	Develop secondary isolation documents
UETTD RSTS30 A	Design power systems secondary isolation instructional documents	UETTD RSTS10B	Design secondary isolation documents
UETTD RSTS31 A	Maintain, test and commission power systems voltage regulating equipment	UETTD RSTS11B	Maintain, test and commiss regulating equipment

UETTDRTS32 A	Conduct evaluation of power systems primary plant	UETTDRTS12B	Conduct evaluation of prim
UETTDRTS33 A	Undertake power systems project management of substation augmentation and maintenance	UETTDRTS13B	Undertake project managen augmentation and maintena
UETTDRTS34 A	Install and maintain power system communication equipment	UETTDRTS14B	Install and maintain power communication equipment
UETTDRTS35 A	Maintain complex network protection and control systems	UETTDRTS15B	Maintain network protection systems (Complex)
UETTDRTS36 A	Commission complex network protection and control systems	UETTDRTS16B	Commission network prote systems (complex)
UETTDRTS37 A	Perform current injection testing using phantom load	New Unit	New Unit
UETTDRTS38 A	Install and replace high voltage metering and associated equipment	New Unit	New Unit
UETTDRTS39 A	Maintain compliance with national electricity market metrology practices and procedures	New Unit	New Unit
UETTDRTS40 A	Test and maintain energy/revenue metering schemes	New Unit	New Unit
UETTDRTS41 A	Install and replace complex energy/revenue metering schemes and associated equipment	New Unit	New Unit
UETTDRTS42 A	Management of energy registration data errors for revenue billing purposes	New Unit	New Unit
UETTDRTS43 A	Commission energy/revenue metering schemes	New Unit	New Unit
UETTDRTS44 A	Test and maintain energy/revenue metering schemes (complex)	New Unit	New Unit
UETTDRTS45 A	Manage compliance with national electricity market metrology practices and procedures	New Unit	New Unit
UETTDRTS46 A	Verification and certification of revenue metering/energy measurement instruments	New Unit	New Unit
UETTDRTS47 A	Commission energy/revenue metering schemes (complex)	New Unit	New Unit

**2.1.12 Vegetation Competency Standard Units**

<b>UET12 Unit Code</b>	<b>UET12 Unit Title</b>	<b>UET09 Unit Code – V3</b>	<b>UET09 Unit Title – V3</b>
UETDRVC2 1A	Use climbing techniques to cut vegetation above ground near live electrical apparatus	UETDRVC01B	Cut vegetation above ground work zone near live electrical apparatus (climbing)
	Removed	UETDRVC02B	Operate vegetation control equipment and equipment near live electrical apparatus
UETDRVC2 3A	Plan the removal of vegetation up to vegetation exclusion zone near live electrical apparatus	UETDRVC03B	Plan for the removal of vegetation exclusion zone near live electrical apparatus
UETDRVC2 4A	Assess vegetation and recommend control measures in an ESI environment	UETDRVC04B	Assess vegetation and recommend control measures for work near live electrical apparatus
UETDRVC2 5A	Use elevated platform to cut vegetation above ground level near live electrical apparatus	UETDRVC05B	Cut vegetation above ground work zone near live electrical apparatus (platform)
UETDRVC2 6A	Cut vegetation at ground level near live electrical apparatus	UETDRVC06B	Cut vegetation at ground level near live electrical apparatus 'vegetation exclusion zone' near live electrical apparatus
UETDRVC2 7A	Monitor safety compliance of vegetation control work in an ESI environment	UETDRVC07B	Monitor safety compliance of vegetation control work near live electrical apparatus
	Removed	UETDRVC08B	Safe use of Elevating Work Platform (EWP) near live electrical apparatus
UETDRVC2 9A	Control vegetation whilst performing linework	UETDRVC09B	Control vegetation (linework)
UETDRVC3 0A	Coordinate vegetation control operations	UETDRVC10B	Coordinate vegetation control operations
UETDRVC3 1A	Operate specialist equipment at ground level near live electrical apparatus	New Unit	New Unit
UETDRVC3 2A	Use specialised plant to cut vegetation above ground level near live electrical apparatus	New Unit	New Unit
UETDRVC3 3A	Apply pruning techniques to vegetation control near live electrical apparatus	New Unit	New Unit
UETDRVC3 4A	Undertake release and rescue from a tree near live electrical apparatus	New Unit	New Unit

## Table 2 Relationship between UET09 Version 3 Units and UET09 Version 2.1 Units

Full prerequisite chains for unit prerequisites are listed where applicable in italicised text.

UET09 Version 3 CSU Code	Unit Title	UET09 Version 2.1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
UETTDNIS81 A	Install telecommunications infrastructure on electricity supply	New Unit	New Unit	UETTDRELO4B; UEENEEE001B; UEENEEE002B; UEENEEE005B

## Table 3 Relationship between UET09 Version 2.1 Units and UET09 Version 2.0 Units

Full prerequisite chains for unit prerequisites are listed where applicable in italicised text.

UET09 Version 2.1 CSU Code	Unit Title	UET09 Version 2.0 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
		All existing Units in all disciplines	No change in existing units. Please refer to the mapping Tables 4 and 5 above.	No change in existing units. Please refer to the mapping Tables 4 and 5 above.

## Table 4 Relationship between UET09 Version 2 Units and UET09 Version 1 Units

Full prerequisite chains for unit prerequisites are listed where applicable in italicised text.

**All Other Disciplines in the UET12 Training Package**

<b>UET09 Version 2 CSU Code</b>	<b>Unit Title</b>	<b>UET09 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
		All existing Units in all disciplines	No change in existing units. Please refer to the mapping for UET12 version 1 see Table 4 above.	No change in existing units. Please refer to the mapping for UET12 version 1 see table 4 above.

**Discipline - Refresher Training**

<b>UET09 Version 2 CSU Code</b>	<b>Unit Title</b>	<b>UET09 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRRF 01A	Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus	New Unit	New Unit	Nil
UETTDRRF 02A	Perform pole top rescue	New Unit	New Unit	Nil
UETTDRRF 03A	Perform EWP rescue	New Unit	New Unit	HLTCPR201A

<b>UET09 Version 2 CSU Code</b>	<b>Unit Title</b>	<b>UET09 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETDRRF 04A	Perform tower rescue	New Unit	New Unit	Nil
UETDRRF 05A	Perform rescue from switchyard structures at heights	New Unit	New Unit	Nil
UETDRRF 06A	Perform rescue from a live LV panel	New Unit	New Unit	HLTCPR201A
UETDRRF 07A	Perform cable pit/trench/excavation rescue	New Unit	New Unit	HLTCPR201A
UETDRRF 08A	Perform EWP controlled descent escape	New Unit	New Unit	Nil

<b>UET09 Version 2 CSU Code</b>	<b>Unit Title</b>	<b>UET09 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETDTRRF 09A	Apply access procedures to work on or near electrical network infrastructure	New Unit	New Unit	Nil
UETDTRRF 10A	Provide first aid in an ESI environment	New Unit	New Unit	Nil

**Table 5 Relationship between UET09 Version 1 Units and UET06 Version 1 Units**

Full prerequisite chains for unit prerequisites are listed where applicable in italicised text.



**Discipline – Cable Jointing**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRCJ01B	Lay electrical cables	UETTDRCJ01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL01B & UETTDREL02B & UETTDREL04B & UEENEEEE001B & UEENEEEE002B & UEENEEEE004B & UEENEEEE005B & UEENEEEE007B & UEENEEG001B & UEENEEG002B  UEENEEEE003B
UETTDRCJ02B	Install and maintain de-energised LV underground paper insulated cables	UETTDRCJ02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ01B  UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ03B	Install and maintain de-energised HV underground paper insulated cables.	UETTDRCJ03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ01B  UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG001B UEENEEG002B
UETTDRCJ04B	Joint and maintain energised LV underground paper insulated cables	UETTDRCJ04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ02B  UETTDRCJ01B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ05B	Perform straight through HV paper insulated to polymeric transition joint	UETTDRCJ05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ07B  UETTDRCJ01B UETTDRCJ06B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ06B	Install and maintain de-energised LV underground polymeric cables	UETTDRCJ06A	Revised Unit includes editorial changes, reformatted unit layout and updated	UETTDRCJ01B  UETTDREL01B UETTDREL02B UETTDREL04B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
			pre-requisites	UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B
UETTDRCJ07B	Install and maintain de-energised HV underground polymeric cables	UETTDRCJ07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ06B  UETTDRCJ01B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ08B	Joint and maintain energised LV underground polymeric cables	UETTDRCJ08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ06B  UETTDRCJ01B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRCJ09B	Install oil and gas filled specialised underground cables	UETTDRCJ09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ03B & UETTDRCJ07B  UETTDRCJ01B UETTDRCJ06B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ10B	Maintain oil and gas filled specialised underground cables	UETTDRCJ10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ09B  UETTDRCJ01B UETTDRCJ03B UETTDRCJ06B UETTDRCJ07B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
UETTDRCJ11B	Install and maintain polymeric specialised underground cables	UETTDRCJ11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ03B & UETTDRCJ07B  UETTDRCJ01B UETTDRCJ06B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ12B	Install and maintain oil & gas pressure systems for specialised underground cables	UETTDRCJ12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ03B & UETTDRCJ07B  UETTDRCJ01B UETTDRCJ06B UETTDREL01B UETTDREL02B UETTDREL04B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B
UETTDRCJ13B	Install and maintain network infrastructure LV underground cables	UETTDRCJ13A	Revised Unit includes editorial changes, reformatted unit layout and updated	UETTDRCJ06B  A current 'Unrestricted Electrician's Licence' or

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
			pre-requisites	equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence. & UETTDREL02B UETTDRLS22B UETTDRLS23B UEENEEE001B UETTDREL01B UETTDREL04B
UETTDRCJ14B	Install and maintain network infrastructure HV underground cables	UETTDRCJ14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ13B  A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence. & UETTDRLS06B UETTDREL02B UETTDRLS22B UETTDRLS23B UEENEEE001B UETTDREL01B UETTDREL04B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>

**Discipline - Distribution**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRDP01B	Inspect overhead structures and electrical apparatus (poles /structures)	UETTDRDP01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS12B UETTDREL01B UETTDREL02B UETTDREL04B UEUNEEEE001B UEUNEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEEG001B
UETTDRDP02B	Maintain overhead energised LV conductors and cables	UETTDRDP02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS14B UETTDREL01B UETTDREL02B UETTDREL04B UETTDRIS12B UEUNEEEE001B UEUNEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEEG001B
UETTDRDP03B	Maintain energised high voltage distribution	UETTDRDP03A	Revised Unit includes editorial	BSBWOR402A &

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
	overhead electrical apparatus (stick)		changes, reformatted unit layout and updated pre-requisites	UETTDRDP02B & UETTDRIS02B & UETTDRIS25B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDRIS01B UETTDRIS12B UETTDRIS14B UEENEEEE001B UEENEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B UEENEEG001B UEENEEG002B
UETTDRDP04B	Maintain energised high voltage distribution overhead electrical apparatus (glove)	UETTDRDP04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	BSBWOR402A & UETTDRDP02B & UETTDRIS02B & UETTDRIS25B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDRIS01B UETTDRIS12B UETTDRIS14B UEUNEEEE001B UEUNEEEE002B UEENEEEE003B UEENEEEE004B UEENEEEE005B UEENEEEE007B



<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UEENEEG001B UEENEEG002B
UETTD RDP05B	Inspect, maintain and restore energised LV overhead distribution network infrastructure	UETTD RDP05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RDRIS06B UETTD RDRIS27B  A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence. & UETTD RREL02B UETTD RDRIS22B UETTD RDRIS23B UEENEEEE001B UETTD RREL01B UETTD RREL04B

**Discipline - Design**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRDS01B	Draft and layout an overhead distribution extension	UETTDRDS01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS22B & UETTDRIS23B & UEENEEEE002B & UEENEEEE007B & UEENEEG002B  UETTDREL01B UETTDREL04B UEENEEEE001B
UETTDRDS02B	Draft and layout an underground distribution extension	UETTDRDS02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS22B & UETTDRIS23B & UEENEEEE002B & UEENEEEE007B & UEENEEG002B  UETTDREL01B UETTDREL04B UEENEEEE001B
UETTDRDS03B	Draft and layout a street lighting system	UETTDRDS03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS22B & UETTDRIS23B & UEENEEEE002B & UEENEEEE007B & UEENEEG002B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UETTDREL01B UETTDREL04B UEENEEEE001B
UETTD RDS04B	Draft and layout a distribution substation minor upgrade	UETTD RDS04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RIS22B & UETTD RIS23B & UEENEEEE002B & UEENEEEE007B & UEENEEG002B  UETTD REL01B UETTD REL04B UEENEEEE001B
UETTD RDS05B	Design overhead distribution systems	UETTD RDS05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RDS13B & UETTD RDS15B  UETTD RDS09B UETTD REL01B UETTD REL04B UETTD RIS22B UETTD RIS23B UEENEEEE001B UEENEEEE007B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTD RDS06B	Design underground distribution systems	UETTD RDS06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RDS13B & UETTD RDS15B  UETTD RDS09B UETTD REL01B UETTD REL04B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UETTDRIS22B UETTDRIS23B UEENEEEE001B UEENEEEE007B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRDS07B	Design distribution substations	UETTDRDS07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS13B & UETTDRDS15B  UETTDRDS09B UETTDRDS01B UETTDRDS04B UETTDRIS22B UETTDRIS23B UEENEEEE001B UEENEEEE007B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRDS08B	Design public lighting systems	UETTDRDS08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS13B & UETTDRDS15B  UETTDRDS09B UETTDRDS01B UETTDRDS04B UETTDRIS22B UETTDRIS23B UEENEEEE001B UEENEEEE007B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRDS09B	Prepare and manage detailed construction plans for electrical system infrastructure	UETTDRDS09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG002B & UETTDRIS23B  UETTDREL01B
UETTDRDS10B	Prepare and appraise financial impact statements	UETTDRDS10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B OR UETTDRTS16B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRTS01B UETTDRTS02B UETTDRTS09B UETTDRTS15B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEED004B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRDS11B	Manage electrical infrastructure projects	UETTDRDS11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS10B  UETTDREL01B UETTDREL04B UETTDRDS09B UETTDRIS22B UETTDRIS23B UETTDRTS01B UETTDRTS02B UETTDRTS09B UETTDRTS15B UETTDRTS16B UEENEEE001B UEENEEED004B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETDRDS12B	Investigate quality of supply issues	UETDRDS12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRDS05B & UETDRDS06B  UETDRDS09B UETDRDS13B UETDRDS15B UETDREL01B UETDREL04B UETDRIS22B UETDRIS23B UEENEEE001B UEENEEE007B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETDRDS13B	Develop HV and LV distribution protection systems	UETDRDS13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG049B & UEENEEE007B & UETDRIS22B & UETDRIS23B  UETDREL01B UETDREL04B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEE001B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRDS14B	Design zone substations modifications	UETTDRDS14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEE002B & UEENEEE007B & UETTDRIS22B & UETTDRIS23B  UETTDREL01B UETTDREL04B UEENEEE001B
UETTDRDS15B	Organise and implement line and easement surveys	UETTDRDS15A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B  UEENEEG002B UETTDRIS23B UETTDREL01B
UETTDRDS16B	Develop planned outage strategies	UETTDRDS16A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEED004B OR UETTDRIS22B  UETTDREL04B UEENEEE001B
UETTDRDS17B	Review asset management strategies	UETTDRDS17A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B OR UETTDRIS16B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEED004B UEENEEE001B UEENEEG002B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRDS18B	Analyse and appraise fault and outage data	UETTDRDS18A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B UEENEEG002B UETTDRIS23B UETTDRREL01B
UETTDRDS19B	Establish and manage geographical information systems data	UETTDRDS19A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG004B & UEENEEG007B & UETTDRIS22B  UETTDRREL04B UEENEEG001B
UETTDRDS20B	Design customer substations	UETTDRDS20A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS07B  UETTDRDS09B UETTDRREL01B UETTDRREL04B UETTDRIS22B UETTDRIS23B UEENEEG001B UEENEEG007B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRDS21B	Manage transmission and sub-transmission design process	UETTDRDS21A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B  UEENEEG002B UETTDRIS23B UETTDRREL01B
UETTDRDS22B	Design transmission, sub-transmission and zone substation buildings	UETTDRDS22A	Revised Unit includes editorial changes,	UETTDRDS09B & UETTDRDS14B



<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
			reformatted unit layout and updated pre-requisites	UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEG002B UEENEEE001B UEENEEE002B UEENEEE007B
UETTDRDS23B	Design transmission and sub-transmission substation primary plant	UETTDRDS23A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B & UETTDRDS14B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEG002B UEENEEE001B UEENEEE002B UEENEEE007B
UETTDRDS24B	Design transmission and sub-transmission protection and control	UETTDRDS24A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B & UETTDRDS14B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEG002B UEENEEE001B UEENEEE002B UEENEEE007B
UETTDRDS25B	Design transmission and sub-transmission substation earthing	UETTDRDS25A	Revised Unit includes editorial changes, reformatted unit layout and updated	UETTDRDS09B & UETTDRDS14B  UETTDREL01B UETTDREL04B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
			pre-requisites	UETTDRIS22B UETTDRIS23B UEENEEG002B UEENEEE001B UEENEEE002B UEENEEE007B
UETTDRDS26B	Design transmission, sub-transmission and zone substation – civil and structural components	UETTDRDS26A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS09B & UETTDRDS14B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEG002B UEENEEE001B UEENEEE002B UEENEEE007B
UETTDRDS27B	Design overhead transmission systems	UETTDRDS27A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS15B  UETTDRDS09B UEENEEG002B UETTDRIS23B UETTDREL01B
UETTDRDS28B	Design underground transmission systems	UETTDRDS28A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRDS15B  UETTDRDS09B UEENEEG002B UETTDRIS23B UETTDREL01B

**Discipline – Entry Level Cross Discipline**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDREL01B	Apply environmental and sustainable energy procedures	UETTDREL01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTDREL02B	Operate plant and equipment near live electrical conductors/apparatus	UETTDREL02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTDREL03B	Comply with environmental and incidental response procedures	UETTDREL03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTDREL04B	Working safely near live electrical apparatus as non electrical worker	UETTDREL04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTDREL05B	Respond to technical enquiries and requests	UETTDREL05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil

**Discipline – Industry Specific**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)</b>
UETTDNIS01B	Install electrical equipment (network infrastructure)	UETTDNIS01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL01B & UETTDREL02B & UETTDREL04B & UEENEEE001B & UEENEEE002B & UEENEEE004B & UEENEEE005B & UEENEEE007B & UEENEEG001B & UEENEEG002B  UEENEEE003B
UETTDNIS02B	Maintain electrical equipment (network infrastructure)	UETTDNIS02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS01B  UETTDREL01B UETTDREL02B UETTDREL04B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
UETTDNIS03B	Perform LV field switching operation to a given schedule	UETTDNIS03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS07B or UETTDNIS02B or UETTDNIS14B or UETTDNTP09B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS12B UETTDNTP06B UETTDNTP07B UENEEEE001B UENEEEE002B UENEEEE003B UENEEEE004B UENEEEE005B UENEEEE007B UENEEEG001B UENEEEG002B
UETTDNIS04B	Perform high voltage field switching operation to a given schedule	UETTDNIS04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS07B or UETTDNIS02B or UETTDNIS14B or UETTDNTP09B  UETTDREL01B UETTDREL02B UETTDREL04B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
				UETTDRCJ01B UETTDRCJ06B UETTDRCJ07B UETTDRCJ12B UETTDRCJ14B UETTDRCJ15B UETTDRCJ16B UETTDRCJ17B UETTDRCJ18B UETTDRCJ19B UETTDRCJ20B UETTDRCJ21B UETTDRCJ22B UETTDRCJ23B UETTDRCJ24B UETTDRCJ25B UETTDRCJ26B UETTDRCJ27B UETTDRCJ28B UETTDRCJ29B UETTDRCJ30B UETTDRCJ31B UETTDRCJ32B UETTDRCJ33B UETTDRCJ34B UETTDRCJ35B UETTDRCJ36B UETTDRCJ37B UETTDRCJ38B UETTDRCJ39B UETTDRCJ40B UETTDRCJ41B UETTDRCJ42B UETTDRCJ43B UETTDRCJ44B UETTDRCJ45B UETTDRCJ46B UETTDRCJ47B UETTDRCJ48B UETTDRCJ49B UETTDRCJ50B UETTDRCJ51B UETTDRCJ52B UETTDRCJ53B UETTDRCJ54B UETTDRCJ55B UETTDRCJ56B UETTDRCJ57B UETTDRCJ58B UETTDRCJ59B UETTDRCJ60B UETTDRCJ61B UETTDRCJ62B UETTDRCJ63B UETTDRCJ64B UETTDRCJ65B UETTDRCJ66B UETTDRCJ67B UETTDRCJ68B UETTDRCJ69B UETTDRCJ70B UETTDRCJ71B UETTDRCJ72B UETTDRCJ73B UETTDRCJ74B UETTDRCJ75B UETTDRCJ76B UETTDRCJ77B UETTDRCJ78B UETTDRCJ79B UETTDRCJ80B UETTDRCJ81B UETTDRCJ82B UETTDRCJ83B UETTDRCJ84B UETTDRCJ85B UETTDRCJ86B UETTDRCJ87B UETTDRCJ88B UETTDRCJ89B UETTDRCJ90B UETTDRCJ91B UETTDRCJ92B UETTDRCJ93B UETTDRCJ94B UETTDRCJ95B UETTDRCJ96B UETTDRCJ97B UETTDRCJ98B UETTDRCJ99B UETTDRCJ00B
UETTDRCJ03B	Perform substation switching operation to a given schedule	UETTDRCJ05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ03B or UETTDRCJ07B or UETTDRCJ12B or UETTDRCJ14B or UETTDRCJ15B or UETTDRCJ16B or UETTDRCJ17B or UETTDRCJ18B or UETTDRCJ19B or UETTDRCJ20B or UETTDRCJ21B or UETTDRCJ22B or UETTDRCJ23B or UETTDRCJ24B or UETTDRCJ25B or UETTDRCJ26B or UETTDRCJ27B or UETTDRCJ28B or UETTDRCJ29B or UETTDRCJ30B or UETTDRCJ31B or UETTDRCJ32B or UETTDRCJ33B or UETTDRCJ34B or UETTDRCJ35B or UETTDRCJ36B or UETTDRCJ37B or UETTDRCJ38B or UETTDRCJ39B or UETTDRCJ40B or UETTDRCJ41B or UETTDRCJ42B or UETTDRCJ43B or UETTDRCJ44B or UETTDRCJ45B or UETTDRCJ46B or UETTDRCJ47B or UETTDRCJ48B or UETTDRCJ49B or UETTDRCJ50B or UETTDRCJ51B or UETTDRCJ52B or UETTDRCJ53B or UETTDRCJ54B or UETTDRCJ55B or UETTDRCJ56B or UETTDRCJ57B or UETTDRCJ58B or UETTDRCJ59B or UETTDRCJ60B or UETTDRCJ61B or UETTDRCJ62B or UETTDRCJ63B or UETTDRCJ64B or UETTDRCJ65B or UETTDRCJ66B or UETTDRCJ67B or UETTDRCJ68B or UETTDRCJ69B or UETTDRCJ70B or UETTDRCJ71B or UETTDRCJ72B or UETTDRCJ73B or UETTDRCJ74B or UETTDRCJ75B or UETTDRCJ76B or UETTDRCJ77B or UETTDRCJ78B or UETTDRCJ79B or UETTDRCJ80B or UETTDRCJ81B or UETTDRCJ82B or UETTDRCJ83B or UETTDRCJ84B or UETTDRCJ85B or UETTDRCJ86B or UETTDRCJ87B or UETTDRCJ88B or UETTDRCJ89B or UETTDRCJ90B or UETTDRCJ91B or UETTDRCJ92B or UETTDRCJ93B or UETTDRCJ94B or UETTDRCJ95B or UETTDRCJ96B or UETTDRCJ97B or UETTDRCJ98B or UETTDRCJ99B or UETTDRCJ00B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
UETTDNIS06B	Install and maintain network infrastructure electrical equipment	UETTDNIS06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL02B & UETTDNIS22B & UETTDNIS23B & A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.  UEENEEE001B UETTDREL01B UETTDREL04B
UETTDNIS07B	Sample, test, filter and reinstate insulating oil	UETTDNIS07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
UETTDRIS08B	Develop HV switching schedule	UETTDRIS08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS03B or UETTDRIS04B or UETTDRIS05B or UETTDRRT10B  UETTDRCJ01B UETTDRCJ03B UETTDRCJ06B UETTDRCJ07B UETTDREL01B UETTDREL02B UETTDREL04B UETTDRIS01B UETTDRIS02B UETTDRIS12B UETTDRIS14B UETTDRTTP06B UETTDRTTP07B UETTDRTTP09B UETTDRRT01B UETTDRRT02B UETTDRRT08B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDRIS09B	Develop LV switching schedule	UETTDRIS09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS03B or UETTDRIS04B or UETTDRIS05B or UETTDRRT10B



UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
				UETTDRCJ01B UETTDRCJ03B UETTDRCJ06B UETTDRCJ07B UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS02B UETTDNIS12B UETTDNIS14B UETTDRT06B UETTDRT07B UETTDRT09B UETTDRT01B UETTDRT02B UETTDRT08B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDNIS10B	Coordinate permit procedures	UETTDNIS10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS04B or UETTDNIS05B or UETTDRT10B  UETTDRCJ01B UETTDRCJ03B UETTDRCJ06B UETTDRCJ07B UETTDREL01B UETTDREL02B UETTDREL04B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
				UETTDNIS01B UETTDNIS02B UETTDNIS12B UETTDNIS14B UETTDNTP06B UETTDNTP07B UETTDNTP09B UETTDNRT01B UETTDNRT02B UETTDNRT08B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDNIS11B	Coordinate and direct switching schedules	UETTDNIS11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS04B or UETTDNIS05B or UETTDNRT10B  UETTDRCJ01B UETTDRCJ03B UETTDRCJ06B UETTDRCJ07B UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS02B UETTDNIS12B UETTDNIS14B UETTDNTP06B UETTDNTP07B UETTDNTP09B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
				UETTD RRT01B UETTD RRT02B UETTD RRT08B UEEN EEE001B UEEN EEE002B UEEN EEE003B UEEN EEE004B UEEN EEE005B UEEN EEE007B UEEN EEG001B UEEN EEG002B
UETTD RIS12B	Install and maintain poles/structures and associated hardware	UETTD RIS12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD REL01B & UETTD REL02B & UETTD REL04B & UEEN EEE001B & UEEN EEE002B & UEEN EEE004B & UEEN EEE005B & UEEN EEE007B & UEEN EEG001B  UEEN EEE003B
UETTD RIS13B	Install and maintain public lighting systems	UETTD RIS13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RCJ03B or UETTD RCJ07B or UETTD RIS02B or UETTD RIS14B or UETTD RTP09B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
UETTDNIS14B	Install and maintain overhead conductors and cables (poles and structures)	UETTDNIS14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS12B UETTDREL01B UETTDREL02B UETTDREL04B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETTDNIS15B	Install and maintain low voltage services (underground)	UETTDNIS15A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ03B or UETTDRCJ07B or UETTDNIS02B or UETTDNIS14B or UETTDRTTP09B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDRCJ01B UETTDRCJ06B UETTDNIS01B UETTDNIS12B UETTDRTTP06B UETTDRTTP07B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
UETTDNIS16B	Install and maintain low voltage services (overhead)	UETTDNIS16A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS07B or UETTDNIS02B or UETTDNIS14B or UETTDNIS09B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS12B UETTDNIS06B UETTDNIS07B UETTDNIS001B UETTDNIS002B UETTDNIS003B UETTDNIS004B UETTDNIS005B UETTDNIS007B UETTDNIS001B UETTDNIS002B
UETTDNIS17B	Conduct visual checking and treatment of poles and structures	UETTDNIS17A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS12B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS001B UETTDNIS002B UETTDNIS003B UETTDNIS004B UETTDNIS005B UETTDNIS007B UETTDNIS001B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
UETTDNIS18B	Locate faults in underground power cables	UETTDNIS18A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS07B or UETTDNIS02B or UETTDNIS14B or UETTDNIS09B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS12B UETTDNIS06B UETTDNIS07B UETTDNIS08B UETTDNIS09B UETTDNIS10B UETTDNIS11B UETTDNIS13B UETTDNIS15B UETTDNIS16B UETTDNIS17B UETTDNIS18A UETTDNIS19A UETTDNIS20B UETTDNIS21B UETTDNIS22B UETTDNIS23B UETTDNIS24B UETTDNIS25B UETTDNIS26B UETTDNIS27B UETTDNIS28B UETTDNIS29B UETTDNIS30B UETTDNIS31B UETTDNIS32B UETTDNIS33B UETTDNIS34B UETTDNIS35B UETTDNIS36B UETTDNIS37B UETTDNIS38B UETTDNIS39B UETTDNIS40B UETTDNIS41B UETTDNIS42B UETTDNIS43B UETTDNIS44B UETTDNIS45B UETTDNIS46B UETTDNIS47B UETTDNIS48B UETTDNIS49B UETTDNIS50B UETTDNIS51B UETTDNIS52B UETTDNIS53B UETTDNIS54B UETTDNIS55B UETTDNIS56B UETTDNIS57B UETTDNIS58B UETTDNIS59B UETTDNIS60B UETTDNIS61B UETTDNIS62B UETTDNIS63B UETTDNIS64B UETTDNIS65B UETTDNIS66B UETTDNIS67B UETTDNIS68B UETTDNIS69B UETTDNIS70B UETTDNIS71B UETTDNIS72B UETTDNIS73B UETTDNIS74B UETTDNIS75B UETTDNIS76B UETTDNIS77B UETTDNIS78B UETTDNIS79B UETTDNIS80B UETTDNIS81B UETTDNIS82B UETTDNIS83B UETTDNIS84B UETTDNIS85B UETTDNIS86B UETTDNIS87B UETTDNIS88B UETTDNIS89B UETTDNIS90B UETTDNIS91B UETTDNIS92B UETTDNIS93B UETTDNIS94B UETTDNIS95B UETTDNIS96B UETTDNIS97B UETTDNIS98B UETTDNIS99B UETTDNIS00B
UETTDNIS19B	Conduct high potential testing of underground power cables	UETTDNIS19A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS07B or UETTDNIS02B or UETTDNIS14B or UETTDNIS09B  UETTDREL01B UETTDREL02B UETTDREL04B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
				UETTDRCJ01B UETTDRCJ06B UETTDRCJ07B UETTDRIS01B UETTDRIS12B UETTDRTTP06B UETTDRTTP07B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDRIS20B	Install and replace energy meters and associated equipment	UETTDRIS20A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRCJ03B or UETTDRCJ07B or UETTDRIS02B or UETTDRIS14B or UETTDRTTP09B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDRCJ01B UETTDRCJ06B UETTDRIS01B UETTDRIS12B UETTDRTTP06B UETTDRTTP07B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
				UEENEEG002B
UETTDNIS21B	Install mobile Generation set for synchronised Genset LV	UETTDNIS21A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS07B or UETTDNIS02B or UETTDNIS14B or UETTDNIS09B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS06B UETTDNIS01B UETTDNIS12B UETTDNIS06B UETTDNIS07B UENEEEE001B UENEEEE002B UENEEEE003B UENEEEE004B UENEEEE005B UENEEEE007B UENEEG001B UENEEG002B
UETTDNIS22B	Implement and monitor the organisational OHS policies, procedures and programs	UETTDNIS22A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UENEEEE001B & UETTDREL04B



UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
UETTDNIS23B	Implement and monitor environmental and sustainable energy management policies and procedures	UETTDNIS23A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL01B
UETTDNIS24B	Install mobile Generation set for synchronised genset HV	UETTDNIS24A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDNIS03B or UETTDNIS04B or UETTDNIS05B or UETTDNRT10B & UETTDNIS21B  UETTDRCJ01B UETTDRCJ03B UETTDRCJ06B UETTDRCJ07B UETTDREL01B UETTDREL02B UETTDREL04B UETTDNIS01B UETTDNIS02B UETTDNIS12B UETTDNIS14B UETTDNRT01B UETTDNRT02B UETTDNRT07B UETTDNRT08B UETTDRTTP06B UETTDRTTP07B UETTDRTTP09B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant prerequisite or co-requisite refer respective unit)
				UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTDRIS25B	Contribute to coordinated high voltage live line work	UETTDRIS25A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTDRIS26B	Manage an electricity supply industry OHS management system	UETTDRIS26A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTDRIS27B	Install and maintain overhead distribution network infrastructure	UETTDRIS27A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL02B & UETTDRIS22B & UETTDRIS23B & A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre-requisite or co-requisite refer respective unit)
				<p>or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.</p> <p>UETTDREL01B UETTDREL04B UEENEEE001B</p>
UETTDNIS28A	Analyse and develop solutions for problems in extra-low voltage, single path circuits	New Unit – Version 2	New Unit	Nil
UETTDNIS29A	Analyse and develop solutions for problems in multiple path d.c. circuits	New Unit – Version 2	New Unit	UETTDNIS28A
UETTDNIS30A	Analyse and develop solutions for problems in electromagnetic circuits	New Unit – Version 2	New Unit	Nil
UETTDNIS31A	Analyse and develop solutions for problems in single and three phase low voltage circuits	New Unit – Version 2	New Unit	Nil

**Discipline – Rail Traction**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETDRRT01B	Install overhead traction wiring systems	UETDRRT01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRIS14B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT02B	Maintain overhead traction wiring systems	UETDRRT02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT01B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT03B	Install traction bonds	UETDRRT03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRIS14B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UEUNEEE001B UEUNEEE002B UEENEEE003B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT04B	Maintain traction bonds	UETDRRT04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT03B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT05B	Install overhead traction configurations	UETDRRT05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT02B & UETDRRT08B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRRT01B UETDRRT07B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETDRRT06B	Maintain overhead traction configurations	UETDRRT06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT05B UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRRT01B UETDRRT02B UETDRRT07B UETDRRT08B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT07B	Install overhead traction equipment and components	UETDRRT07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRIS14B UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT08B	Maintain overhead traction equipment and components	UETDRRT08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT07B UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UEUNEEE001B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT09B	Operate road rail traction height access equipment	UETDRRT09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT02B & UETDRRT08B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRRT01B UETDRRT07B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT10B	Perform rail traction switching operations to a given schedule	UETDRRT10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT02B & UETDRRT08B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRRT01B UETDRRT07B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEE007B UEENEEG001B
UETDRRT11B	Maintain energised direct current traction overhead wiring system	UETDRRT11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	BSBWOR402A & UETDRIS25B & UETDRRT06B & UETDRRT09B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRRT01B UETDRRT02B UETDRRT05B UETDRRT07B UETDRRT08B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B
UETDRRT12B	Maintain energised traction overhead electrical apparatus (stick)	UETDRRT12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT11B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRIS25B UETDRRT01B UETDRRT02B UETDRRT05B UETDRRT06B UETDRRT07B UETDRRT08B UETDRRT09B



UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B BSBWOR402A
UETDRRT13B	Maintain energised traction overhead electrical apparatus (glove)	UETDRRT13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRRT11B  UETDREL01B UETDREL02B UETDREL04B UETDRIS12B UETDRIS14B UETDRIS25B UETDRRT01B UETDRRT02B UETDRRT05B UETDRRT06B UETDRRT07B UETDRRT08B UETDRRT09B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B BSBWOR402A
UETDRRT14B	Install and maintain traction network wiring systems	UETDRRT14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETDRIS27B & A current 'Unrestricted Electrician's Licence' or

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				<p>equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.</p> <p>UETTDREL02B UETTDRLS22B UETTDRLS23B UEENEEE001B UETTDREL01B UETTDREL04B</p>
UETDRRT15B	Install and maintain traction network equipment and components	UETDRRT15A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	<p>UETDRRT14B &amp; A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.</p> <p>UETDRRT11B UETTDREL01B UETTDREL02B UETTDREL04B UETTDRLS12B UETTDRLS14B</p>

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UETTDRIS25B UETTDRRT01B UETTDRRT02B UETTDRRT05B UETTDRRT06B UETTDRRT07B UETTDRRT08B UETTDRRT09B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B BSBWOR402A

**Discipline – Substation**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRSB01B	Diagnose and rectify faults in power system substation environment	UETTDRSB01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				licence.
UETTDRSB02B	Carry out substation inspection	UETTDRSB02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB03B	Install and maintain substation DC system	UETTDRSB03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB04B	Maintain HV power system breakers	UETTDRSB04A	Revised Unit includes editorial changes, reformatted unit layout and updated	A current 'Unrestricted Electrician's Licence' or equivalent issued

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
			pre-requisites	in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB05B	Maintain HV power system – transformers and instrument transformers	UETTDRSB05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB06B	Install high current DC switchgear and equipment	UETTDRSB06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRSB07B	Maintain high current DC switchgear and equipment	UETTDRSB07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB08A	RESERVED			
UETTDRSB09B	Maintain voltage regulating equipment – capacitor banks	UETTDRSB09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB10B	Maintain HV power system static VAR compensators	UETTDRSB10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB11B	Maintain HV power system synchronous condensers	UETTDRSB11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB12B	Maintain voltage regulating equipment – on load tapchangers	UETTDRSB12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRSB13B	Install HV plant and equipment	UETTDRSB13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB14B	Carry out thermovision surveys	UETTDRSB14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB15B	Maintain discrete protection and control systems	UETTDRSB15A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an



<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				unrestricted electrician's licence.
UETTDRSB16B	Commission discrete protection and control systems	UETTDRSB16A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSB15B & A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB17B	Maintain distribution field devices	UETTDRSB17A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of the ERAC requirements for the issue of an unrestricted electrician's licence.
UETTDRSB18B	Commission distribution field devices	UETTDRSB18A	Revised Unit includes editorial changes, reformatted unit layout and updated	A current 'Unrestricted Electrician's Licence' or equivalent issued



UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO03B	Manage critical events	UETTDRSO03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO02B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO04B UETTDRSO05B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO11B UETTDRSO12B UETTDRSO17A UETTDRSO18A UETTDRSO19A UETTDRSO20A UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO04B	Control generating plant	UETTDRSO04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO18A & UETTDRSO19A  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO07B UETTDRSO08B UETTDRSO10B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UETTDRSO17A UEENEEED004B UEENEEEE001B UEENEEEE007B UEENEEEE024B UEENEEEG002B UEENEEEG047B UEENEEEG048B UEENEEEG049B
UETTDRSO05B	Manage HV distribution and subtransmission network demand	UETTDRSO05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO18A & UETTDRSO19A  UETTDRREL01B UETTDRREL04B UETTDRIS22B UETTDRIS23B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO17A UEENEEED004B UEENEEEE001B UEENEEEE007B UEENEEEE024B UEENEEEG002B UEENEEEG047B UEENEEEG048B UEENEEEG049B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRSO06B	Develop LV distribution switching programs	UETTDRSO06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEED004B & UEENEEE007B & UEENEEE024B & UEENEEOG049B & UETTDRIS22B & UETTDRIS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEOG002B UEENEEOG047B UEENEEOG048B
UETTDRSO07B	Develop HV distribution and subtransmission switching programs	UETTDRSO07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEED004B & UEENEEE007B & UEENEEE024B & UEENEEOG049B & UETTDRIS22B & UETTDRIS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEOG002B UEENEEOG047B UEENEEOG048B
UETTDRSO08B	Develop and evaluate transmission switching programs	UETTDRSO08A	Revised Unit includes editorial changes,	UEENEED004B & UEENEEE007B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
			reformatted unit layout and updated pre-requisites	& UEENEEE024B & UEENEEG049B & UETTDRIS22B & UETTDRIS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRSO09B	Coordinate LV distribution networks	UETTDRSO09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO06B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO10B	Coordinate HV distribution and subtransmission networks	UETTDRSO10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO07B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO11B	Manage transmission networks	UETTDRSO11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO18A & UETTDRSO19A  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO17A UEENEEED004B UEENEEEE001B UEENEEEE007B UEENEEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO12B	Manage transmission network demand	UETTDRSO12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO11B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO17A UETTDRSO18A UETTDRSO19A UEENEEED004B UEENEEEE001B UEENEEEE007B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO13B	Coordinate LV distribution network demand	UETTDRSO13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO09B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO06B UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO14B	Develop crisis management plans	UETTDRSO14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRSO03B  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO02B UETTDRSO04B UETTDRSO05B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO11B UETTDRSO12B UETTDRSO17A UETTDRSO18A UETTDRSO19A UETTDRSO20A UEENEEG004B



UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO15A	Operate and monitor system equipment (SCADA)	New Unit – Version 2	New Unit	UETTDREL05B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO17A UETTDRSO18A UETTDRSO19A UEENEEED004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO16A	Monitor and control the activities of field staff	New Unit – Version 2	New Unit	Nil
UETTDRSO17A	Coordinate HV transmission network	New Unit – Version 2	New Unit	UETTDRSO08B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UEENEEED004B UEENEEE001B UEENEEE007B UEENEEE024B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO18A	Respond to discrete/ interdependent protection operations	New Unit – Version 2	New Unit	UETTDRSO10B OR UETTDRSO17A  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO07B UETTDRSO08B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRSO19A	Coordinate system operations in a regulated energy market	New Unit – Version 2	New Unit	UETTDRSO10B OR UETTDRSO17A  UETTDREL01B UETTDREL04B UETTDRIS22B UETTDRIS23B UETTDRSO07B UETTDRSO08B UEENEEG002B UEENEEG047B UEENEEG048B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG049B
UETTDRSO20A	Respond to complex protection operations	New Unit – Version 2	New Unit	UETTDRSO04B Or UETTDRSO05B Or UETTDRSO12B  UETTDREL01B UETTDREL04B UETTDRLIS22B UETTDRLIS23B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO11B UETTDRSO17A UETTDRSO18A UETTDRSO19A UEENEEED004B UEENEEEE001B UEENEEEE007B UEENEEEE024B UEENEEEG002B UEENEEEG047B UEENEEEG048B UEENEEEG049B
UETTDRSO21A	Manage network power flows	New Unit – Version 2	New Unit	UETTDRSO02B  UETTDREL01B UETTDREL04B UETTDRLIS22B UETTDRLIS23B UETTDRSO04B UETTDRSO05B UETTDRSO07B UETTDRSO08B UETTDRSO10B UETTDRSO11B UETTDRSO12B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UETTDRSO17A UETTDRSO18A UETTDRSO19A

**Discipline – Transmission**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRTTP02B	Establish and reinstate a transmission tower work site	UETTDRTTP02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEE001B & UETTDREL03B
UETTDRTTP03B	Erect transmission towers	UETTDRTTP03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEE001B & UETTDREL03B
UETTDRTTP04B	Erect transmission tower hardware	UETTDRTTP04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTTP03B  UETTDREL03B UEENEEE001B
UETTDRTTP05B	Pre-tension stringing transmission overhead conductors and cables	UETTDRTTP05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTTP04B  UETTDREL03B UETTDRTTP03B UEENEEE001B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTD RTP06B	Erect transmission towers and associated hardware	UETTD RTP06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL01B & UETTDREL02B & UETTDREL04B & UEENEEE001B & UEENEEE002B & UEENEEE004B & UEENEEE005B & UEENEEE007B & UEENEEG001B & UEENEEG002B  UEENEEE003B
UETTD RTP07B	Maintain transmission towers and associated hardware	UETTD RTP07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RTP06B  UETTDREL01B UETTDREL02B UETTDREL04B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTD RTP08B	Transmission tower stub setting	UETTD RTP08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	Nil
UETTD RTP09B	Install and maintain overhead conductors and cables (towers).	UETTD RTP09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RTP07B UETTD REL01B UETTD REL02B UETTD REL04B UETTD RTP06B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTD RTP10B	Inspect overhead structures and electrical apparatus (towers)	UETTD RTP10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RTP07B UETTD REL01B UETTD REL02B UETTD REL04B UETTD RTP06B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG002B
UETTD RTP11B	Maintain energised lines (transmission) using live line stick technique	UETTD RTP11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	BSBWOR402A & UETTD RIS25B & UETTD RTP09B  UETTD REL01B UETTD REL02B UETTD REL04B UETTD RTP06B UETTD RTP07B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B
UETTD RTP12B	Maintain energised lines (transmission) using Barehand Technique	UETTD RTP12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RTP11B  UETTD REL01B UETTD REL02B UETTD REL04B UETTD RIS25B UETTD RTP06B UETTD RTP07B UETTD RTP09B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG002B BSBWOR402A
UETTD RTP13B	Maintain energised lines (transmission) using Barehand Technique on a helicopter platform	UETTD RTP13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTD RTP12B  UETTDREL01B UETTDREL02B UETTDREL04B UETTD RIS25B UETTD RTP06B UETTD RTP07B UETTD RTP09B UETTD RTP11B UEENEEE001B UEENEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B UEENEEG001B UEENEEG002B BSBWOR402A
UETTD RTP14B	Install and maintain overhead transmission network infrastructure	UETTD RTP14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDREL02B & UETTD RIS22B & UETTD RIS23B & A current 'Unrestricted Electrician's Licence' or equivalent issued in an Australian State or Territory or satisfaction of





**Discipline – Protection/Testing**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDRTS01B	Maintain network protection and control systems (interdependent)	UETTDRTS01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS09B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UEENEEED004B UEENEEEE001B UEENEEEE007B UEENEEEE024B UEENEEEG002B UEENEEEG047B UEENEEEG048B UEENEEEG049B
UETTDRTS02B	Commission network protection and control systems (Interdependent)	UETTDRTS02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS01B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UETTDRTS09B UEENEEED004B UEENEEEE001B UEENEEEE007B UEENEEEE024B UEENEEEG002B UEENEEEG047B UEENEEEG048B UEENEEEG049B
UETTDRTS03B	Conduct evaluation of power system faults within a substation	UETTDRTS03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEED004B & UEENEEEE007B & UEENEEEE024B & UEENEEEG049B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				& UETTDRLS22B & UETTDRLS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRTS04B	Design testing and commissioning procedures for substation and field devices	UETTDRTS04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS06B or UETTDRTS08B or UETTDRTS12B or UETTDRTS15B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UETTDRTS01B UETTDRTS05B UETTDRTS09B UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRTS05B	Test and maintain metering schemes	UETTDRTS05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS09B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEED004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRTS06B	Commission metering schemes	UETTDRTS06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS05B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UETTDRTS09B UEENEED004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRTS07B	Perform accuracy checks on instrument transformers	UETTDRTS07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEED004B & UEENEEE007B & UEENEEE024B & UEENEEG049B & UETTDRLS22B & UETTDRLS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UEENEEG047B UEENEEG048B
UETTDRTS08B	Test, repair and calibrate protection relays and meters	UETTDRTS08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG004B & UEENEEE007B & UEENEEE024B & UEENEEG049B & UETTDRTS22B & UETTDRTS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRTS09B	Develop secondary isolation instructional documents	UETTDRTS09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG004B & UEENEEE007B & UEENEEE024B & UEENEEG049B & UETTDRTS22B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				& UETTDRTS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRTS10B	Design secondary isolation instructional documents	UETTDRTS10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG004B & UEENEEE007B & UEENEEE024B & UEENEEG049B & UETTDRTS22B & UETTDRTS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRTS11B	Maintain, test and commission voltage regulating equipment	UETTDRTS11A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEG004B & UEENEEE007B & UEENEEE024B & UEENEEG049B & UETTDRTS22B & UETTDRTS23B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRTS12B	Conduct evaluation of primary plant	UETTDRTS12A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS09B  UETTDREL01B UETTDREL04B UETTDRTS22B UETTDRTS23B UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRTS13B	Undertake project management of substation augmentation and maintenance	UETTDRTS13A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS06B or UETTDRTS08B or UETTDRTS12B or UETTDRTS15B  UETTDREL01B UETTDREL04B UETTDRTS22B UETTDRTS23B UETTDRTS01B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UETTDRTS05B UETTDRTS09B UEENEE004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRTS14B	Install and maintain power system communication equipment	UETTDRTS14A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEE004B & UEENEEE007B & UEENEEE024B & UEENEEG049B & UETTDRTS22B & UETTDRTS23B  UETTDREL01B UETTDREL04B UEENEEE001B UEENEEG002B UEENEEG047B UEENEEG048B
UETTDRTS15B	Maintain network protection and control systems (Complex)	UETTDRTS15A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS01B  UETTDREL01B UETTDREL04B UETTDRTS22B UETTDRTS23B UETTDRTS09B UEENEE004B UEENEEE001B UEENEEE007B UEENEEE024B



<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B
UETTDRTS16B	Commission network protection and control systems (complex)	UETTDRTS16A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRTS02B & UETTDRTS15B  UETTDREL01B UETTDREL04B UETTDRLS22B UETTDRLS23B UETTDRTS01B UETTDRTS09B UEENEEG004B UEENEEE001B UEENEEE007B UEENEEE024B UEENEEG002B UEENEEG047B UEENEEG048B UEENEEG049B

**Discipline – Vegetation**

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
UETTDTRVC01B	Cut vegetation above ground outside live work zone near live electrical apparatus (climbing)	UETTDTRVC01A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDTRVC07B  UETTDREL03B UETTDREL04B UETTDTRVC02B UETTDTRVC03B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEE001B
UETTDRVC02B	Operate vegetation control plant, machinery and equipment near live electrical apparatus	UETTDRVC02A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRVC03B  UETTDREL03B UETTDREL04B UEENEEE001B
UETTDRVC03B	Plan for the removal of vegetation up to vegetation exclusion zone near live electrical apparatus	UETTDRVC03A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UEENEEE001B & UETTDREL03B & UETTDREL04B
UETTDRVC04B	Assess vegetation and recommend control measures for work near live electrical apparatus	UETTDRVC04A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRVC01B OR UETTDRVC05B OR UETTDRVC06B OR UETTDRVC08B  UETTDREL03B UETTDREL04B UETTDRVC02B UETTDRVC03B UETTDRVC07B UEENEEE001B
UETTDRVC05B	Cut vegetation above ground outside live work zone near live electrical apparatus (platform)	UETTDRVC05A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRVC07B  UETTDREL03B UETTDREL04B UETTDRVC02B UETTDRVC03B

<b>UET09 Version 1 CSU Code</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)</b>
				UEENEEE001B
UETTDRVC06B	Cut vegetation at ground level outside 'vegetation exclusion zone' near live electrical apparatus	UETTDRVC06A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRVC07B  UETTDREL03B UETTDREL04B UETTDRVC02B UETTDRVC03B UEENEEE001B
UETTDRVC07B	Monitor safety compliance for vegetation work near live electrical apparatus	UETTDRVC07A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRVC02B  UETTDREL03B UETTDREL04B UETTDRVC03B UEENEEE001B
UETTDRVC08B	Safe use of Elevating Work Platform (EWP) near live electrical apparatus	UETTDRVC08A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRVC07B  UETTDREL03B UETTDREL04B UETTDRVC02B UETTDRVC03B UEENEEE001B
UETTDRVC09B	Control vegetation (linework)	UETTDRVC09A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS14B  UETTDREL01B UETTDREL02B UETTDREL04B UETTDRIS12B UEUNEEE001B UEUNEEE002B UEENEEE003B UEENEEE004B UEENEEE005B UEENEEE007B

UET09 Version 1 CSU Code	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequisite requirements (for relevant pre- requisite or co- requisite refer respective unit)
				UEENEEG001B
UETTDRVC10B	Coordinate vegetation control work	UETTDRVC10A	Revised Unit includes editorial changes, reformatted unit layout and updated pre-requisites	UETTDRIS22B & UETTDRIS23B UETTDRREL01B  UETTDRREL04B UEENEEE001B

**Table 4 — Replacement of Universal Electrotechnology Units with Imported Units**

The Universal Electrotechnology (UEU) Units have been replaced with units imported from UEE07 Electrotechnology Training Package. This table indicates relevant equivalences and points weightings for the imported units.

Unit Imported to Replace UEU Unit in UET09 Version 1	Unit Title	UET06 Version 1 Competency Standard Unit Code	Relationship to units in the former Training Package	Prerequisite requirements of Imported Unit
		UEUNEEED002A	Unit Deleted from UET09 V1	
UEENEEED004B	Use engineering applications software	UEUNEEED004A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEED017B	Install and configure internetworking systems	UEUNEEED017A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEED027B	Develop structured programs to control external devices	UEUNEEED027A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEED028B	Develop and test code for microcontroller devices	UEUNEEED028A	Unit Deleted from UET09 V1 and replaced by	Nil

<b>Unit Imported to Replace UEU Unit in UET09 Version 1</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship to units in the former Training Package</b>	<b>Prerequisite requirements of Imported Unit</b>
			imported unit	
UEENEEE001B	Apply OHS practices in the work place	UEUNEEE001A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEE002B	Dismantle, assemble and fabricate electrotechnology components	UEUNEEE002A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEE003B	Solve problems in extra-low voltage single path circuits	UEUNEEE003A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEE004B	Solve problems in multiple path d.c. circuits	UEUNEEE004A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEE003B
UEENEEE005B	Fix and secure equipment	UEUNEEE005A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEE007B	Use drawings, diagrams, schedules and manuals	UEUNEEE007A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEE008B	Lay wiring/cabling and terminate accessories for extra-low voltage circuits	UEUNEEE008A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEE005B & UEENEEE007B
UEENEEG001B	Solve problems in electromagnetic circuits	UEUNEEG001A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil
UEENEEG002B	Solve problems in single and three phase low voltage circuits	UEUNEEG002A	Unit Deleted from UET09 V1 and replaced by imported unit	Nil

<b>Unit Imported to Replace UEU Unit in UET09 Version 1</b>	<b>Unit Title</b>	<b>UET06 Version 1 Competency Standard Unit Code</b>	<b>Relationship to units in the former Training Package</b>	<b>Prerequisite requirements of Imported Unit</b>
UEENEEG047B	Provide computational solutions to power engineering problems	UEUNEEG047A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEG002B
UEENEEG048B	Solve problems in complex multiple path power circuits	UEUNEEG048A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEG047B
UEENEEG049B	Solve problems in complex polyphase power circuits	UEUNEEG049A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEG048B
UEENEEH002B	Carry out basic repairs to electronic apparatus by replacement of components	UEUNEEH002A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEH002B
		UEUNEEH011A	Unit Deleted from UET09 V1	
UEENEEH012B	Troubleshoot digital subsystems	UEUNEEH012A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEH002B
UEENEEH039B	Troubleshoot basic amplifiers	UEUNEEH039A	Unit Deleted from UET09 V1 and replaced by imported unit	UEENEEH002B & UEENEEH014B or UEENEEG002B
		UEUNEEH070A	Unit Deleted from UET09 V1	

**Table 6 Relationship between UET06 Version 1 Units and UTT98 Version 3 Units**

This table includes the relationship of UET06 Version 1 units to units in the former Training Package UTT98 Version 3 and Unit weighting points

**Discipline – Cable Jointing**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTDRCJ01 A	Lay electrical cables	New Unit – Version 1	New Unit	UET UET UET UEE UEE UEE UEE
UETTDRCJ02 A	Install and maintain de-energised LV underground paper insulated cables	UTTNTD307A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRCJ03 A	Install and maintain de-energised HV underground paper insulated cables.	UTTNTD307A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRCJ04 A	Joint and maintain energised LV underground paper insulated cables	UTTNTD307A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRCJ05 A	Perform straight through HV paper insulated to polymeric transition joint	New Unit	New Unit	UET
UETTDRCJ06 A	Install and maintain de-energised LV underground polymeric cables	UTTNTD320A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRCJ07 A	Install and maintain de-energised HV underground polymeric cables	UTTNTD320A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRCJ08 A	Joint and maintain energised LV underground polymeric cables	UTTNTD320A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRCJ09	Install oil and gas filled specialised	UTTNTD405A	Minor resemblance to	UET

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
A	underground cables		previous unit. Unit has been updated, realigned and reformatted.	& UET
UETTDRCJ10 A	Maintain oil and gas filled specialised underground cables	New Unit	New Unit	UET
UETTDRCJ11 A	Install and maintain polymeric specialised underground cables	UTTNTD405A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET & UET
UETTDRCJ12 A	Install and maintain oil and gas pressure systems for specialised underground cables	UTTNTD405A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET & UET
UETTDRCJ13 A	Install and maintain network infrastructure LV underground cables	New Unit	New Unit	UET
UETTDRCJ14 A	Install and maintain network infrastructure HV underground cables	New Unit	New Unit	UET

### Discipline – Distribution

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTDSDP01 A	Inspect overhead structures and electrical apparatus (poles and structures)	UTTNTD303A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDSDP02 A	Maintain overhead energised LV conductors and cables	UTTNTD306A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET



<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTDRDP03 A	Maintain energised high voltage distribution overhead electrical apparatus (Stick)	UTTNTD404A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	BSB UET UET UET
UETTDRDP04 A	Maintain energised high voltage distribution overhead electrical apparatus (Glove)	UTTNTD404A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	BSB UET UET UET
UETTDRDP05 A	Inspect, maintain and restore energised LV overhead distribution network infrastructure	New Unit	New Unit	UET UET

**Discipline – Design**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTDRDS01 A	Draft and layout an overhead distribution extension	UTTNTD402A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET UEE UEE UEE
UETTDRDS02 A	Draft and layout an underground distribution extension	UTTNTD403A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET UEE UEE UEE
UETTDRDS03 A	Draft and layout a street Lighting system	UTTNTD421A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET UEE UEE UEE
UETTDRDS04	Draft and layout a distribution		Minor resemblance to	UET

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
A	substation minor upgrade	UTTNTD403A	previous unit. Unit has been updated, realigned and reformatted.	UET UEE UEE UEE
UETTDRDS05 A	Design overhead distribution systems	New Unit	New Unit	UET UET
UETTDRDS06 A	Design underground distribution systems	New Unit	New Unit	UET UET
UETTDRDS07 A	Design distribution substations	New Unit	New Unit	UET UET
UETTDRDS08 A	Design public lighting systems	New Unit	New Unit	UET UET
UETTDRDS09 A	Prepare and manage detailed construction plans for electrical system infrastructure	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRDS10 A	Prepare and appraise financial impact statements	New Unit	New Unit	UET UET UET UET UET UET UET UET
UETTDRDS11 A	Manage electrical infrastructure projects	New Unit	New Unit	UET
UETTDRDS12 A	Investigate quality of supply issues	New Unit	New Unit	BSB UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq requi (for n requi requi respe
				UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETDRDS13 A	Develop HV and LV distribution protection systems	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETDRDS14 A	Design zone substations modifications	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETDRDS15 A	Organise and implement line and easement surveys	New Unit	New Unit	UET UET
UETDRDS16 A	Develop planned outage strategies	New Unit	New Unit	BSB UEE UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prerequi (for n requi requi respe
				UEE UEE UEE UEE UEE UEE UEE UET
UETDRDS17 A	Review asset management strategies	New Unit	New Unit	UET
UETDRDS18 A	Analyse and appraise fault and outage data	New Unit	New Unit	UET
UETDRDS19 A	Establish and manage geographical information systems data	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UET
UETDRDS20 A	Design customer substations	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq requi (for n requi requi respe
UETDRDS21 A	Manage transmission and subtransmission design process	New Unit	New Unit	UET BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET UET UET
UETDRDS22 A	Design transmission, subtransmission and zone substation buildings	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET UET UET
UETDRDS23 A	Design transmission and subtransmission substation primary plant	New Unit	New Unit	BSB UEE UEE UEE UEE UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq requi (for n requi requi respe
				UEE UEE UEE UEE UEE UEE UET UET UET
UETDRDS24 A	Design transmission and subtransmission protection and control	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET UET UET
UETDRDS25 A	Design transmission and subtransmission substation earthing	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET UET

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq requi (for n requi requi respe
UETTDRDS26 A	Design transmission, subtransmission and zone substation – civil and structural components	New Unit	New Unit	UET BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET UET UET
UETTDRDS27 A	Design overhead transmission systems	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET UET
UETTDRDS28 A	Design underground transmission systems	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
				UEE UEE UEE UEE UEE UET UET

**Discipline – Entry Level Cross Discipline**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTDREL01 A	Apply environment and sustainable energy procedures	UTTNTD321A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	Nil
UETTDREL02 A	Operate plant and equipment near live electrical conductors/apparatus	UTTNTD202A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	Nil
UETTDREL03 A	Comply with environmental and incidence response procedures	UTTNTD321A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	Nil
UETTDREL04 A	Working safely near live electrical apparatus as non electrical worker	New Unit	New Unit	Nil



**Discipline – Industry Specific**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prereq require (for re requisi requisi respec</b>
UETTDRIS01 A	Install electrical equipment (Network Infrastructure)	UTTNTD308A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UEEN UEEN UEEN UEEN
UETTDRIS02 A	Maintain electrical equipment (Network Infrastructure)	UTTNTD308A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT
UETTDRIS03 A	Perform LV field switching operation to a given schedule	UTTNTD309A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UETT UETT
UETTDRIS04 A	Perform HV field switching operations to a given schedule	UTTNTD310A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UETT UETT
UETTDRIS05 A	Perform substation switching operation to a given schedule	New Unit	New Unit	UETT UETT UETT UETT UETT
UETTDRIS06 A	Install and maintain network infrastructure electrical equipment	New Unit	New Unit	UETT UETT UETT UETT UEEN
UETTDRIS07 A	Sample, test, filter, and reinstate insulating oil	UTTNTD204A	Minor resemblance to previous unit.	UEEN

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prereq require (for re requisi requisi respec</b>
			Unit has been updated, realigned and reformatted.	
UETTDRIS08 A	Develop HV switching schedule	New Unit	New Unit	UETT UETT UETT UETT
UETTDRIS09 A	Develop LV switching schedule	New Unit	New Unit	UETT UETT UETT UETT
UETTDRIS10 A	Coordinate permit procedures	New Unit	New Unit	UETT UETT UETT UETT
UETTDRIS11 A	Coordinate and direct switching schedules	New Unit	New Unit	UETT UETT UETT UETT
UETTDRIS12 A	Install and maintain poles/structures and associated hardware	UTTNTD301A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UEEN UEEN UEEN
UETTDRIS13 A	Install and maintain public lighting systems	UTTNTD304A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UETT
UETTDRIS14 A	Install & maintain overhead conductors and cables (Poles and Structures)	UTTNTD305A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT
UETTDRIS15 A	Install and maintain low voltage services (Underground)	New Unit	New Unit	UETT UETT UETT

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq require (for re requisi requisi respec
				UETT UETT
UETTDRIS16 A	Install and maintain low voltage services (overhead)	New Unit	New Unit	UETT UETT UETT UETT UETT
UETTDRIS17 A	Conduct visual checking and treatment of poles and structures	UTTNTD206A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT
UETTDRIS18 A	Locate faults in underground power cables	UTTNTD322A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UETT UETT
UETTDRIS19 A	Conduct high potential testing of underground power cables	New Unit	New Unit	UETT UETT UETT UETT UETT
UETTDRIS20 A	Install and replace energy meters and associated equipment	UTTNTD311A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT UETT UETT UETT UETT
UETTDRIS21 A	Install mobile Generation set for synchronised Genset LV	New Unit	New Unit	UETT UETT UETT UETT UETT
UETTDRIS22 A	Implement and monitor the organisational OHS policies, procedures and programs	UTTNTD413A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UEEN UETT
UETTDRIS23 A	Implement and monitor environmental and	UTTNTD414A	Minor resemblance to previous unit.	UETT

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq require (for re requisi requisi respec
	sustainable energy management policies and procedures		Unit has been updated, realigned and reformatted.	
UETTDRIS24 A	Install mobile Generation set for synchronised genset HV	New Unit	New Unit	UETT UETT UETT UETT UETT
UETTDRIS25 A	Contribute to coordinated High Voltage live line work	New Unit	New Unit	Nil
UETTDRIS26 A	Manage an electricity supply industry OHS management system	New Unit	New Unit	Nil
UETTDRIS27 A	Install and maintain network infrastructure electrical equipment	New Unit	New Unit	UETT UETT UETT UETT UETT UEEN

### Discipline – Rail Traction

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prereq require (for r requisi requisi respe
UETTDRRT01 A	Install overhead traction wiring systems	UTTNTD323A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UETT
UETTDRRT02 A	Maintain overhead traction wiring systems	UTTNTD323A	Minor resemblance to previous unit. Unit has been updated,	UETT

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
			realigned and reformatted.	
UETDRRT03 A	Install traction bonds	UTTNTD324A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETDRRT04 A	Maintain traction bonds	UTTNTD324A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETDRRT05 A	Install overhead traction configurations	UTTNTD325A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET
UETDRRT06 A	Maintain overhead traction configurations	UTTNTD325A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETDRRT07 A	Install overhead traction equipment and components	UTTNTD326A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETDRRT08 A	Maintain overhead traction equipment and components	UTTNTD326A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETDRRT09 A	Operate road rail traction height access equipment	UTTNTD327A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET
UETDRRT10 A	Perform rail traction switching operation to a given schedule	New Unit	New Unit	UET UET
UETDRRT11 A	Maintain energised DC traction overhead wiring system	New Unit	New Unit	BSB UET UET UET
UETDRRT12	Maintain energised traction overhead			UET

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequ (for r requi requi respe</b>
A	electrical apparatus (Stick)	New Unit	New Unit	
UETDRRT13 A	Maintain energised traction overhead electrical apparatus (Glove)	New Unit	New Unit	UET
UETDRRT14 A	Install and maintain traction network wiring systems	New Unit	New Unit	UET
UETDRRT15 A	Install and maintain traction network equipment & components	New Unit	New Unit	UET

**Discipline – Substation**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequ (for r requi requi respe</b>
UETDRSB01 A	Diagnose and rectify faults in power systems substation environment	New Unit	New Unit	UEEN
UETDRSB02 A	Carry out substation inspections	New Unit	New Unit	UEEN
UETDRSB03 A	Install and maintain substation DC systems	New Unit	New Unit	UEEN
UETDRSB04 A	Maintain HV power system circuit breakers	New Unit	New Unit	UEEN
UETDRSB05 A	Maintain HV power system – transformers & instrument transformers	New Unit	New Unit	UEEN
UETDRSB06 A	Install high current DC switchgear & equipment	New Unit	New Unit	UEEN
UETDRSB07 A	Maintain high current DC switchgear & equipment	New Unit	New Unit	UEEN
UETDRSB08 A	RESERVED			

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prereq requi (for r requi requi respec</b>
UETTDRSB09 A	Maintain HV regulating equipment – capacitor banks	New Unit	New Unit	UEEN
UETTDRSB10 A	Maintain HV power system static VAR compensators	New Unit	New Unit	UEEN
UETTDRSB11 A	Maintain HV power system synchronous condensers	New Unit	New Unit	UEEN
UETTDRSB12 A	Maintain voltage regulating equipment – on load Tapchangers	New Unit	New Unit	UEEN
UETTDRSB13 A	Install HV plant and equipment	New Unit	New Unit	UEEN
UETTDRSB14 A	Carry out thermovision surveys	New Unit	New Unit	UEEN
UETTDRSB15 A	Maintain discrete protection and control systems	New Unit	New Unit	UEEN
UETTDRSB16 A	Commission discrete protection and control systems	New Unit	New Unit	UEEN
UETTDRSB17 A	Maintain distribution field devices	New Unit	New Unit	UEEN
UETTDRSB18 A	Commission distribution field devices	New Unit	New Unit	UEEN

**Discipline – Systems Operations**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTDRSO02 A	Manage network faults	New Unit	New Unit	UET UET UET
UETTDRSO03 A	Manage critical events	New Unit	New Unit	UET
UETTDRSO04 A	Control generating plant	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRSO05 A	Manage HV distribution and subtransmission network demand	New Unit	New Unit	UET
UETTDRSO06 A	Develop LV distribution switching programs	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET



UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
UETTDRSO07 A	Develop HV distribution and subtransmission switching programs	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRSO08 A	Develop and evaluate transmission switching programs	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRSO09 A	Coordinate LV distribution networks	New Unit	New Unit	UET
UETTDRSO10 A	Coordinate HV distribution and subtransmission networks	New Unit	New Unit	UET
UETTDRSO11 A	Manage transmission networks	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
				UEE UEE UEE UEE UET UET
UETTDRSO12 A	Manage transmission network demand	New Unit	New Unit	UET
UETTDRSO13 A	Coordinate LV distribution network demand	New Unit	New Unit	UET
UETTDRSO14 A	Develop crisis management plans	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET

### Discipline – Transmission

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
UETTDRTP02 A	Establish and reinstate a transmission tower work site	New Unit	New Unit	UET UEE
UETTDRTP03 A	Erect transmission towers	UTTNTD208A	Minor resemblance to previous unit.	UET UEE

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for n requi requi respe</b>
			Unit has been updated, realigned and reformatted.	
UETTD RTP04 A	Erect transmission tower hardware	UTTNTD208A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTD RTP05 A	Pre-tension stringing transmission overhead conductors and cables	UTTNTD211A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTD RTP06 A	Erect transmission towers and associated hardware	UTTNTD208A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET UET UEE UEE UEE UEE
UETTD RTP07 A	Maintain transmission towers and associated hardware	UTTNTD302A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTD RTP08 A	Transmission tower stub setting	New Unit	New Unit	Nil
UETTD RTP09 A	Install and maintain overhead conductors and cables (Towers).	UTTNTD305A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTD RTP10 A	Inspect overhead structures and electrical apparatus (Towers)	UTTNTD303A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTD RTP11 A	Maintain energised lines (Transmission) using live line stick technique	UTTNTD444A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	BSB UET UET
UETTD RTP12 A	Maintain energised lines (Transmission) using Barehand	UTTNTD444A	Minor resemblance to previous unit.	UET

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
	Technique		Unit has been updated, realigned and reformatted.	
UETTD RTP13 A	Maintain energised lines (Transmission) using Barehand Technique on a helicopter platform	UTTNTD444A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTD RTP14 A	Install and maintain overhead transmission network infrastructure	New Unit	New Unit	UET UET UET UET UET UEE
UETTD RTP15 A	Install and maintain transmission network infrastructure electrical equipment	New Unit	New Unit	UET

**Discipline – Protection/Testing**

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for r requi requi respe</b>
UETTD RTS01 A	Maintain network protection and control systems (Interdependent)	New Unit	New Unit	UET
UETTD RTS02 A	Commission network protection and control systems (Interdependent)	New Unit	New Unit	UET
UETTD RTS03 A	Conduct evaluation of power system faults within a substation	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
				UEE UEE UEE UEE UEE UET
UETTDRTS04 A	Design testing and commissioning procedures for substation and field devices	New Unit	New Unit	UET UET UET UET
UETTDRTS05 A	Test and maintain metering schemes	New Unit	New Unit	UET
UETTDRTS06 A	Commission metering schemes	New Unit	New Unit	UET
UETTDRTS07 A	Perform accuracy checks on instrument transformers	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRTS08 A	Test, repair and calibrate protection relays and meters	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
UETTDRTS09 A	Develop secondary isolation instructional documents	New Unit	New Unit	UET BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRTS10 A	Design secondary isolation instructional documents	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRTS11 A	Maintain, test and commission voltage regulating equipment	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
				UEE UET
UETTDRTS12 A	Conduct evaluation of primary plant	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRTS13 A	Undertake project management of substation augmentation and maintenance	New Unit	New Unit	UET UET UET UET
UETTDRTS14 A	Install and maintain power system communication equipment	New Unit	New Unit	BSB UEE UEE UEE UEE UEE UEE UEE UEE UET
UETTDRTS15 A	Maintain network protection and control systems (Complex)	New Unit	New Unit	BSB UEE UEE UEE UEE

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for n requi requi respe</b>
				UEE UEE UEE UEE UEE UEE UET UET
UETTDRTS16 A	Commission network protection and control systems (complex)	New Unit	New Unit	UET UET

### Discipline – Vegetation

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prere requi (for n requi requi respe</b>
UETTDTRVC01 A	Cut vegetation above ground outside live work zone near live electrical apparatus (Climbing)	New Unit	New Unit	UET
UETTDTRVC02 A	Operate vegetation control plant, machinery and equipment near live electrical apparatus	New Unit	New Unit	UET
UETTDTRVC03 A	Plan for the removal of vegetation up to vegetation exclusion zone near live electrical apparatus	New Unit	New Unit	UET UET UEE
UETTDTRVC04 A	Assess vegetation and recommend control measures for work near live electrical apparatus	New Unit	New Unit	UET UET UET UET
UETTDTRVC05 A	Cut vegetation above ground outside live work zone near live electrical apparatus (Platform)	New Unit	New Unit	UET



<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequi (for n requi requi respe</b>
UETTDRVC06 A	Cut vegetation at ground level outside vegetation exclusion zone near live electrical apparatus	New Unit	New Unit	UET
UETTDRVC07 A	Monitor safety compliance for vegetation work near live electrical apparatus	New Unit	New Unit	UET
UETTDRVC08 A	Safe use of elevating work platform (EWP) near live electrical apparatus	New Unit	New Unit	UET
UETTDRVC09 A	Control vegetation (Linework)	UTTNTD318A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET
UETTDRVC10 A	Coordinate vegetation control work	UTTNTD406A	Minor resemblance to previous unit. Unit has been updated, realigned and reformatted.	UET UET

### Discipline – Universal Electrotechnology Units

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prerequi (for n requi requi respe</b>
UEUNEEED002 A	Assemble, set-up and test personal computers	New Unit	New Unit	UEU UEU
UEUNEEED004 A	Use engineering applications software	New Unit	New Unit	Nil
UEUNEEED017 A	Install and configure internetworking systems	New Unit	New Unit	Nil
UEUNEEED027 A	Develop structured programs for control sub systems to access external devices	New Unit	New Unit	Nil
UEUNEEED028	Develop and test basic specification	New Unit	New Unit	Nil

<b>UET06 Version 1 CSU Code</b>	<b>Title</b>	<b>UTT98 Competency Standard Unit Code</b>	<b>Relationship and comments to units in the former Training Package</b>	<b>Prereq requi (for n requi requi respe</b>
A	for microcontroller equipped devices			
UEUNEEE001 A	Apply OHS practices in the work place	New Unit	New Unit	Nil
UEUNEEE002 A	Dismantle, assemble and fabricate electrotechnology components	New Unit	New Unit	Nil
UEUNEEE003 A	Solve problems in extra-low voltage single path circuits	New Unit	New Unit	Nil
UEUNEEE004 A	Solve problems in multiple path d.c. circuits	New Unit	New Unit	UEU
UEUNEEE005 A	Fix and secure equipment	New Unit	New Unit	Nil
UEUNEEE007 A	Use drawings, diagrams, schedules and manuals	New Unit	New Unit	Nil
UEUNEEE008 A	Lay wiring/cabling and terminate accessories for extra-low voltage circuits	New Unit	New Unit	UEU UEU & UEU
UEUNEEG001 A	Solve problems in electromagnetic circuits	New Unit	New Unit	UEU
UEUNEEG002 A	Solve problems in single and three phase low voltage circuits	New Unit	New Unit	UEU
UEUNEEG047 A	Provide computational solutions to power engineering problems	New Unit	New Unit	UEU
UEUNEEG048 A	Solve problems in complex multiple path power circuits	New Unit	New Unit	UEU
UEUNEEG049 A	Solve problems in complex polyphase power circuits	New Unit	New Unit	UEU
UEUNEEH011 A	Solve problems in d.c. power supplies with single phase input.	New Unit	New Unit	UEU & UEU
UEUNEEH012 A	Solve problems in digital components of electronic apparatus	New Unit	New Unit	UEU or UEU

UET06 Version 1 CSU Code	Title	UTT98 Competency Standard Unit Code	Relationship and comments to units in the former Training Package	Prere requi (for n requi requi respe
UEUNEEH039 A	Solve problems in basic amplifier circuits	New Unit	New Unit	UEU or UEU & UEU or UEE
UEUNEEH070 A	Terminate and connect components, conductors, wiring and cables for electronic circuits	New Unit	New Unit	UEU & UEU & UEU or UEU

### 1.3.00 Assessment Guidelines

## Volume 1 Part 3

### Assessment Guidelines

#### 1.3.01 Introduction

### 3.1 Introduction

These Assessment Guidelines provide the endorsed framework for assessment of the Competency Standard Units in this Training Package. They are designed to ensure that assessment is consistent with the Australian Quality Training Framework (AQTF 2007). Assessments against the Competency Standard Units in this Training Package must be carried out in accordance with these Assessment Guidelines.

<b>Note:</b>
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- 1. Using this guideline to support any assessment strategy or process does not remove the responsibility of employers and employees to ensure appropriate ‘duty of care’ arrangements are maintained under relevant occupational health and safety legislation, and any other prevailing legislation, regulation, standard or code. RTOs should recognise this in their assessment processes and provide requisite advice.
- 2. In the assessment process it should be acknowledged that State/Territory regulatory requirements and/or Codes of Practice may vary. Therefore there may be a requirement for the demonstration of a greater range of items to those specified in respective Competency Standard Units. RTOs should incorporate this in their assessment processes and practices.

### **1.3.02 Assessment System Overview**

## **3.2 Assessment System Overview**

This section provides an overview of the requirements for assessment when using this Training Package, including a summary of the AQTF 2007 requirements; licensing/registration requirements; and assessment pathways. By way of supporting, and reinforcing, both the concept of competency and the Competency Standard Unit, the Electricity Supply Industry – Transmission, Distribution and Rail Sector embraces the following tenets:

- Wherever practicable, summative (or final) assessment is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with any approved industry and, Regulatory policy in this regard.
- All persons may claim formal recognition for an assessment of an individual Competency Standard Unit, or a group of units (Skill Sets).
- All persons have the right to have relevant competencies recognised through the most expeditious assessment system and method.

### **Benchmarks for Assessment**

Assessment within the National Skills Framework is the process of collecting evidence and making judgements about whether competency has been achieved. Competency is something that is inferred rather than proven. The purpose of assessment is to confirm through evidence whether an individual can perform to the standards expected in the Electricity Supply Industry – Transmission, Distribution and Rail Sector workplace, as expressed in the relevant endorsed Competency Standard Unit.

In the areas of work covered by this Training Package the competency standard units are the benchmarks for assessment in the Electricity Supply Industry – Transmission, Distribution and Rail Sector. They are the basis for nationally recognised Australian Qualifications Framework (AQF) qualifications and Statements of Attainment issued by Registered Training Organisations (RTOs).

The Competency Standard Units in this Training Package include:

- National Electricity Supply Industry – Transmission, Distribution and Rail Sector (UET) Competency Standards, Edition 1, 2005 and subsequent endorsed revisions.
- Imported Competency Standard Units from other endorsed Training Packages that have been valued by the Electricity Supply Industry – Transmission, Distribution and Rail Sector Competency Advisory Council (ESI-TD&R CAC) for inclusion in Qualifications in this Training Package.

An index of the developed Competency Standard Units is contained in Volume 1 Part 2.

## **Australian Quality Training Framework Assessment Requirements**

Assessment leading to nationally recognised AQF qualifications and Statements of Attainment in the vocational education and training sector must meet the requirement of the AQTF as expressed in the AQTF 2007 *Essential Standards for Registration*.

The AQTF 2007 *Essential Standards for Registration* can be downloaded from [www.training.com.au/aqtf2007](http://www.training.com.au/aqtf2007). The following points summarise assessment requirements.

### **Registration of Training Organisations**

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering/Course Accrediting Body in accordance with the AQTF 2007 *Essential Standards for Registration*. The RTO must have the specific Competency Standard Units and/or AQF qualifications on its scope of registration.

The Registered Training Organisation is to be responsible for all aspects of assessment. The assessment must cover the critical aspects of evidence (assessment) detailed in each Competency Standard Unit. In addressing these critical aspects, and ensuring reasonable consistency, the assessment is to ensure that:

- the individual satisfies the requirements in terms of underpinning/essential knowledge and associated skills so that their ability to transfer the competency to differing circumstances may reasonably be inferred
- the individual is competent to safely perform all the practical applications required.

The RTO is also responsible for the issue of formal recognition in the form of National Qualifications or Statements of Attainment and where regulatory requirements apply provide additional information so required, and enter, where applicable and preferred by industry relevant information into an individual Industry Skills Passport, or other industry approved instrument. The RTO will therefore:

- issue the National Qualification based on individuals having been assessed as competent for the qualification and all the Competency Standard Units which constitute the qualification. (See Part 1 of this Training Package), **and/or**
- issue formal recognition (Statements of Attainment) in respect of individual or clusters of Competency Standard Units for which candidates have been assessed and found competent, **and/or**
- where required for regulated or industry purposes, issue additional formal information as specified by the industry and relevant regulator.

### **Quality Training and Assessment**

Each RTO must provide quality training and assessment across all its operations. See AQTF 2007 *Essential Standards for Registration*, Standard 1.

### **Assessor Competency Requirements**

Each person involved in training, assessment or client service must be competent for the functions they perform. See the AQTF 2007 *Essential Standards for Registration* Standard 1, for assessor (trainer) competency requirements.

### **Assessment Requirements**

The RTOs assessments, including RPL, must meet the requirements of the relevant endorsed Training Package. See AQTF 2007 *Essential Standards for Registration* Standard 1.

### **Assessment Strategies**

Each RTO must strategies that meet the requirements of the relevant Training Package or accredited course and are developed in consultation with industry stakeholders. See the AQTF 2007 *Essential Standards for Registration*, Standard 1.

### **National Recognition**

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See the AQTF 2007 *Essential Standards for Registration*, Condition of Registration 7: Recognition of qualifications issued by other RTOs.

Registered Training Organisations may contact the EE-Oz Training Standards as the declared National Industry Skills Council for the ElectroComms and EnergyUtilities Industry, for assistance mutual recognition.

### **Access and Equity and Client Outcomes**

Each RTO must adhere to the principles of access and equity and maximise outcomes for its clients. See AQTF 2007 *Essential Standards for Registration*, Standard 2.

### **Partnership Arrangements**

RTOs must have, and comply with, written agreements with each organisation providing training and/or assessment on its behalf. See Standard 1.6 of the *Standards for Registered Training Organisations*.

### **Recording Assessment Outcomes**

Each RTO must manage records to ensure their accuracy and integrity. See the AQTF 2007 *Essential Standards for Registration*, Standard 3.

### **Issuing AQF Qualifications and Statements of Attainment**

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the *AQF Implementation Handbook* and the endorsed Training Packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified in the nationally endorsed Training Package are met. A Statement of Attainment is issued where the individual has completed one or more units of competency from nationally recognised qualification(s)/course(s). See the AQTF2007 and the 2007 edition of the AQF Implementation Handbook - available on the AQFAB website [www.aqf.edu.au](http://www.aqf.edu.au).

### **Licensing/Registration Arrangements**

It is a requirement that Training Package Developers consider licensing/registration requirements in the development of the respective Industry Training Package. Generally licensing/registration requirements will be incorporated in relevant Competency Standard Units/qualifications.

Where licensing/registration applies, RTOs are to ensure that assessment against relevant Competency Standard Units is consistent with regulated requirements. Evidence of achievement should be gathered and recorded in such a way as to allow RTOs to report on such achievement that is consistent with regulated requirements.

The latest information on licensing/registration requirements may be obtained by visiting the Industry Skills Council/Training Package Developer's website. In the case of this Training Package it is EE-Oz Training Standards. Refer to the following website for more information: [www.ee-oz.com.au](http://www.ee-oz.com.au)

RTOs, are responsible for the implementation of the quality assurance arrangements included in these guidelines. However, where competency development occurs in regulated/licensed areas RTOs are to incorporate any additionally and prevailing regulatory authority requirements typically called up in these Guidelines into their quality assurance arrangements. In some instances, in order to conduct assessments for statutory licensing or other industry registration requirements, assessors must also meet any additional requirements that may also be established by the regulatory body/agency. Respective regulators should be contacted directly to obtain information in this regard.

#### Requirements for Assessors

In order to conduct assessment for statutory licensing or other industry registration requirements assessors must meet the requirements established by regulatory agencies and respective nominees, in addition to the AQTF requirements. Assessors are to liaise with respective agencies to ensure respective requirements are followed and met.

#### Requirements for RTOs

Selected Competency Standard Units and qualifications in this Training Package provide the basis for a range of statutory licensing and industry registration arrangements. To satisfy these licensing and registration arrangements, RTOs are to keep abreast of developments and any additional requirements detailed by such bodies and their respective nominees. RTOs and their assessors are therefore required to liaise with the Training Package developer and respective agencies to ensure requirements are known and met.

#### Requirements for Candidates

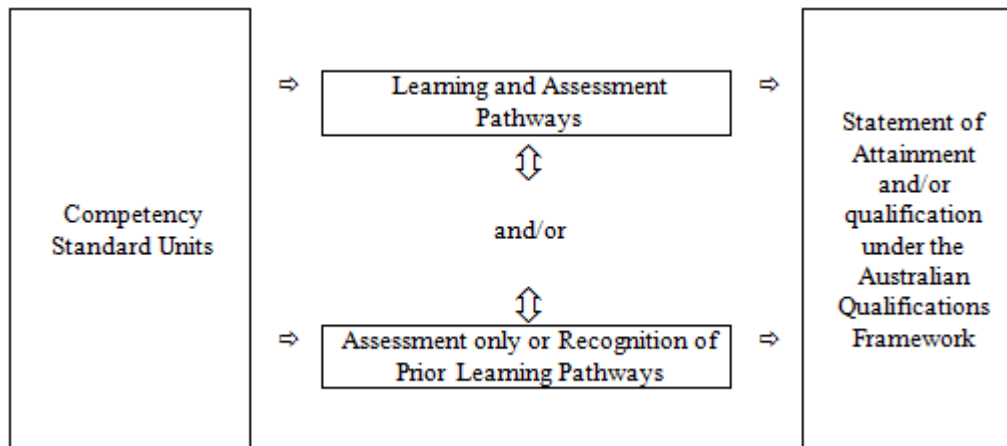
Individuals being assessed under statutory licensing and industry registration systems may be required to comply with training and experience requirements additional to any minimum requirements identified in this Training Package. These additional requirements are to be formally advised by the RTOs to individuals prior to the delivery of the Training Package outcomes.

## Pathways

Competencies in Training Packages may be attained in a number of ways including through:

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

Assessment under this Training Packages leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated below.



Each of these assessment pathways leads to full recognition of competencies held – the critical issue is that the candidate is competent, not how the competency was acquired. Assessment, by any pathway, must comply with the assessment requirements set out in the Assessment Guidelines of the Training Package and the AQTF 2007.

## Learning and Assessment Pathways

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment process.

Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action learning-based, conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit Australian Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

### Assessment-only Pathway or Recognition of Prior Learning Pathway

Competencies already held by individuals can be formally assessed against the Competency Standard Units in this Training Package and should be recognised regardless of how, when or where they were achieved.

In an assessment-only or Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency. This process may be directed by the candidate and verified by the assessor, such as in the compilation of portfolios; or directed by the assessor, such as through observation of workplace performance and skills application, and oral and/or written assessment. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of the AQTF 2007 must be met (Standard 1).



As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed competency standard unit(s). This evidence may take a variety of forms and might include certification, Industry Skills Council equivalence mapping declarations, references from past employers, testimonials from clients and work samples. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence is:

- authentic (the candidate's own work)
- valid (directly related to the current version of the relevant endorsed Competency Standard Unit)
- reliable (a range of test instruments will provide the same result for a given candidate)
- current (reflect the candidate's current capacity to perform the aspect of the work covered by the endorsed Competency Standard Unit), and
- sufficient (covers the full range of elements and performance criteria in the relevant Competency Standard Unit and addresses the four dimensions of competency, namely task skills, task management skills, con tangency management skills, and job/role environment skills).

An assessment-only or recognition of prior learning pathway is likely to be most appropriate in the following scenarios:

- candidates participating/enrolling in qualifications who want recognition for prior learning or current competencies
- existing workers
- individuals with overseas qualifications
- recent migrants with established work histories
- people returning to the workplace
- people with disabilities or injuries requiring a change in career, and
- people with existing competencies from allied industry Training Packages.

#### Combination of Pathways

Where candidates have gained competencies through work and life experience and gaps in their competence are identified, or where they require training in new areas, a combination of approaches may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competence. Once current competence is identified, a structured training and assessment program ensures that the candidate acquires the required additional competencies identified as gaps. These would be achieved through a 'training and assessment pathway'.

#### **Assessor Requirements**

This section identifies the mandatory competencies for assessors, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

#### **Assessor Competencies**

The AQTF 2007 specifies mandatory competency requirements for assessors. For information, Standard 1, Element 1.4 from the AQTF 2007 *Essential Standards for Registration* follows:

*"1.4 Training and assessment is delivered by trainers and assessors who:*

- a) *have the necessary training and assessment competencies as determined by the National Quality Council or its successors*
- b) *have the relevant vocational competencies at least to the level being delivered or assessed*
- continue developing their vocational and training and assessment competencies to support continuous improvements in the delivery of the RTO's services."*

7.3 a The RTO must ensure that assessments are conducted by a person who has:

i the following competencies<sup>1</sup> from the Training Package for Assessment and Workplace Training, or demonstrated equivalent competencies:

- a TAAASS401A Plan and organise assessment;
- b TAAASS402A Assess competence;
- c TAAASS404A Participate in assessment validation;

ii relevant vocational competencies, at least to the level being assessed.

b However, if a person does not have all of the competencies in Standards 7.3 a (i) and the vocational competencies as defined in 7.3 a (ii), one person with the competencies listed in Standard 7.3 a (i), and one or more persons who have the competencies listed in Standard 7.3 a (ii) may work together to conduct assessments.

## **Designing Assessment Tools**

This section provides an overview on the use and development of assessment tools.

### **Use of Assessment Tools**

Assessment tools provide a means of collecting the evidence that assessors use in making judgements about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.

### **Using Prepared Assessment Tools**

If using prepared assessment tools, assessors should ensure that these tools are benchmarked or mapped against the current version of the relevant competency standard unit(s) and any industry-preferred model, and supported by the industry. This can be done by checking that the materials are listed on the National Training Information Service (<http://www.ntis.gov.au>) or EE-Oz Training Standards ([www.ee-oz.com.au](http://www.ee-oz.com.au)). Materials on the list have been noted by the National Quality Council (NQC), as meeting the quality criteria for Training Packages support materials.

### **Developing Assessment Tools**

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant competency standard unit(s)
- are benchmarked against the industry-preferred competency assessment model
- are reviewed as part of the continuous improvement of assessment strategies as required under Standard 1 of the AQTF 2007.
- meet the assessment requirements expressed in Standard 1 of the AQTF 2007.

A key reference for assessors developing assessment tools is TAA04 Training and Assessment Training Package and the unit of competency TAAASS403A *Develop assessment tools*. There is no set format or process for the design, production or development of assessment materials.

### **Conducting Assessment**

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

### **Mandatory Assessment Requirements**

Assessments must meet the criteria set out in the AQTF 2007 Essential Standards for Registration.

For information, the mandatory assessment requirements from Standard 1 from the AQTF 2007 *Essential Standards for Registration* are as follows:

- "1.  
5      *Assessment, including Recognition of Prior Learning:*
- a)      *meets the requirements of the relevant Training Package or accredited course,*
  - b)      *is conducted in accordance with the principles of assessment and the rules of evidence, and*
  - c)      *meets workplace and, where relevant, regulatory requirements."*

**8. RTO Assessments**

The RTO's assessments meet the requirements of the endorsed components of Training Packages and the outcomes specified in accredited courses within the scope of its registration.

**8.1. The RTO must ensure that assessments (including RPL):**

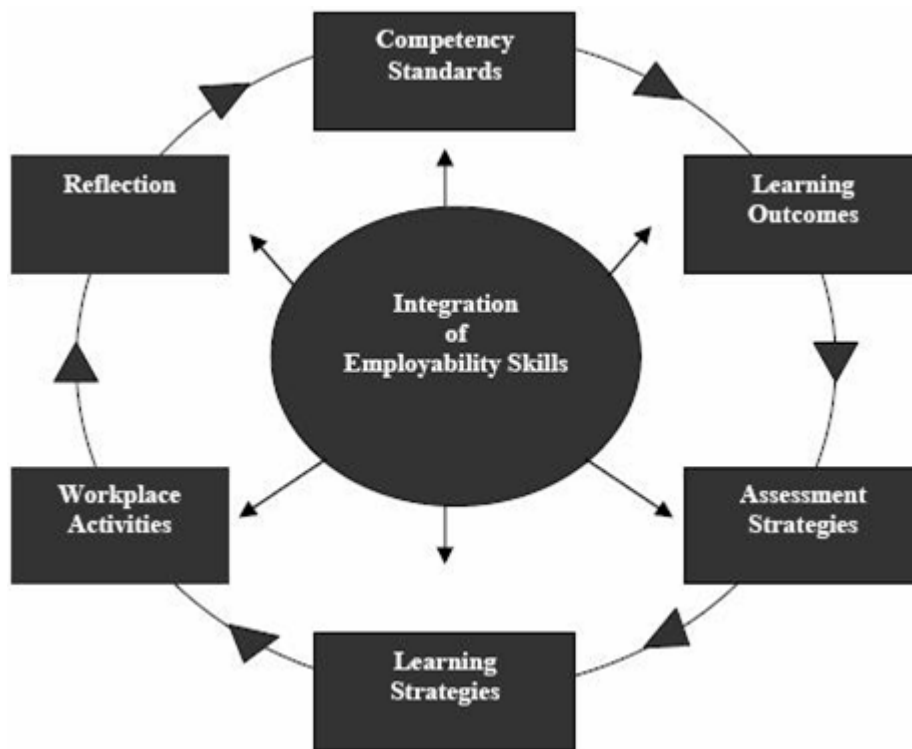
- i. comply with the assessment guidelines included in the applicable nationally endorsed Training Packages or the assessment requirements specified in accredited courses;
- ii. lead to the issuing of a statement of attainment or qualification under the AQF when a person is assessed as competent against nationally endorsed unit(s) of competency in the applicable Training Package or modules specified in the applicable accredited course;
- iii. are valid, reliable, fair and flexible;
- iv. provide for applicants to be informed of the context and purpose of the assessment and the assessment process;
- v. where relevant, focus on the application of knowledge and skill to the standard of performance required in the workplace and cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills;
- vi. involve the evaluation of sufficient evidence to enable judgements to be made about whether competency has been attained;
- vii. provide for feedback to the applicant about the outcomes of the assessment process and guidance on future options in relation to those outcomes;
- viii. are equitable for all persons, taking account of individual needs relevant to the assessment; and
- ix. provide for reassessment on appeal.

**8.2. a The RTO must ensure RPL is offered to all applicants on enrolment.****b The RTO must have an RPL process that:**

- i. is structured to minimise the time and cost to applicants; and
- ii. provides adequate information, support and opportunities for participants to engage in the RPL process.

**Assessment of Employability Skills**

Employability Skills are integral to workplace competency. As such they must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.



Employability Skills are embedded and explicit within each unit of competency. Training providers must use Employability Skills information in order to design valid and reliable training and assessment strategies. This analysis could include:

- reviewing units of competency to locate relevant Employability Skills and determine how they are applied within the unit
- analysing the Employability Skills Summary for the qualification in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of Employability Skills at that qualification outcome
- designing training and assessment to address Employability Skills requirements.

For more information on Employability Skills in the ElectroComms and Energy Utilities Training Packages go to the EE-Oz website at [www.ee-oz.com.au](http://www.ee-oz.com.au)

### Access and Equity

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package: training and assessment must be bias-free.

Under the rules for their development, Training Packages must reflect and cater for the increasing diversity of Australia's VET clients and Australia's current and future workforce. The flexibilities offered by Training Packages should enhance opportunities and potential outcomes for all people so that we can all benefit from a wider national skills base and a shared contribution to Australia's economic development and social and cultural life.

### Reasonable Adjustments

It is important that education providers take meaningful, transparent and reasonable steps to consult, consider and implement reasonable adjustments for students with disability.

Under the *Disability Standards for Education 2005*, education providers must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While ‘reasonable adjustment’ and ‘unjustifiable hardship’ are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of students with and without disability.

An adjustment is any measure or action that a student requires because of their disability, and which has the effect of assisting the student to access and participate in education and training on the same basis as students without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the student’s disability, the views of the student, the potential effect of the adjustment on the student and others who might be affected, and the costs and benefits of making the adjustment.

An education provider is also entitled to maintain the academic integrity of a course or program and to consider the requirements or components that are inherent or essential to its nature when assessing whether an adjustment is reasonable. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship. See Part 4, Chapter 2 of the *Training Package Development Handbook* (DEST, September 2007) for more information on reasonable adjustment, including examples of adjustments.

### 3.12 Further Sources of Information

The section provides a listing of useful contacts and resources to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package.

Contacts:

Unit 2, 48 Mort Street  
Braddon, ACT, 2612  
PO Box 1202  
Dickson, ACT, 2602  
Ph: 02 6241 2155  
Fax: 02 6241 2177  
Email: ee-oz@ee-oz.com.au  
Web: www.ee-oz.com.au

Technical and Vocational Education and Training (TVET) Australia Limited  
Level 21, 390 St Kilda Road, Melbourne VIC 3150  
PO Box 12211, A’Beckett Street Post Office  
MELBOURNE VICTORIA 8006  
Ph: +61 3 9832 8100  
Fax: +61 3 9832 8198  
Email: sales@tvetaustralia.com.au  
Web: www.tvetaustralia.com.au

For information on the TAA04 Training and Assessment Training Package contact:

Innovation & Business Skills Australia

Level 11, 176 Wellington Pde  
EAST MELBOURNE VIC 3002  
Telephone: (03) 9815 7000  
Facsimile: (03) 9815 7001  
Web: [www.ibsa.org.au](http://www.ibsa.org.au)  
Email: [reception@ibsa.org.au](mailto:reception@ibsa.org.au)

### General Resources

Refer to <http://antapubs.dest.gov.au/publications/search.asp> to locate the following publications.

AQF Implementation Handbook, third Edition. Australian Qualifications Framework Advisory Board, 2010, [www.aqf.edu.au](http://www.aqf.edu.au)

Australian Quality Training Framework 2007 (AQTF 2010) - for information and resources go to [www.training.com.au/aqtf2010](http://www.training.com.au/aqtf2010)

AQTF 2010 Essential Standards for Registration. Training organisations must meet these standards in order to deliver and assess nationally recognised training and issue nationally recognised qualifications. They include three standards, a requirement for registered training organisations to gather information on their performance against three quality indicators, and nine conditions of registration

AQTF 2010 User's Guide to the Essential Standards for Registration. A Users' Guide for training organisations who must meet these standards in order to deliver and assess nationally recognised training and issue nationally recognised qualifications.

AQTF 2010 Standards for Accredited Courses. State and Territory accrediting bodies are responsible for accrediting courses. This standard provides a national operating framework and template for the accreditation of courses.

TAE10 Training and Assessment Training Package. This is available from the Innovation and Innovation & Business Skills Australia (IBSA) Industry Skills Council and can be viewed, and components downloaded, from [Training.gov.au](http://Training.gov.au) (TGA).

[Training.gov.au](http://Training.gov.au), an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - [www.tga.gov.au](http://www.tga.gov.au)

Training Package Development Handbook (DEEWR, 2010). Can be downloaded from [www.deewr.gov.au](http://www.deewr.gov.au)

### Assessment Resources

*Training Package Assessment Guides* - is a range of resources to assist RTOs in developing Training Package assessment materials developed by ANTA/DEEWR with funding from the DEEWR (formerly Department of Education, Science and Training), made up of 10 separate titles, as described at [www.deewr.gov.au/project/tpAssessment/](http://www.deewr.gov.au/project/tpAssessment/). Go to [www.resourcegenerator.gov.au/loadpage.asp?TPOAG.htm](http://www.resourcegenerator.gov.au/loadpage.asp?TPOAG.htm)

Printed and/or CD ROM versions of the Guides can be purchased from Australian Training Products (ATP). The resource includes the following guides:

1. Training Package Assessment Materials Kit
2. Assessing Competencies in Higher Qualifications
3. Recognition Resource
4. Kit to Support Assessor Training
5. Candidate's Kit: Guide to Assessment in Australian Apprenticeships
6. Assessment Approaches for Small Workplaces
7. Assessment Using Partnership Arrangements

8. Strategies for ensuring Consistency in Assessment
9. Networking for Assessors
10. Quality Assurance Guide for Assessment

An additional guide "Delivery and Assessment Strategies" has been developed to complement these resources.

### **Assessment Tool Design and Conducting Assessment**

VETASSESS & Western Australian Department of Training and Employment 2000, *Designing Tests – Guidelines for designing knowledge based tests for Training Packages*. Vocational Education and Assessment Centre 1997, *Designing Workplace Assessment Tools, A self-directed learning program*, NSW TAFE.

Manufacturing Learning Australia 2000, *Assessment Solutions*, Australian Training Products, Melbourne.

Rumsey, David 1994, *Assessment practical guide*, Australian Government Publishing Service, Canberra.

### **Assessor Training**

Australian Committee on Training Curriculum (ACTRAC), 1994, Assessor training program - learning materials, Australian Training products, Melbourne.

Australian National Training Authority, A Guide for Professional Development, ANTA, Brisbane or its replacement – contact DEEWR for more information on [www.deewr.gov.au](http://www.deewr.gov.au)  
Australian National Training Authority, Facilitator Packs for Certificate IV in Training and Assessment or its replacement – contact DEEWR for more information on [www.deewr.gov.au](http://www.deewr.gov.au)

Australian National Training Authority, Facilitator's Pack for Train Small Groups and Assessment or its replacement – contact DEEWR for more information on [www.deewr.gov.au](http://www.deewr.gov.au)

Australian Training Products Ltd *Assessment and Workplace Training, Training Package - Toolbox*, ATPL Melbourne (available from TVET).

Green, M., Moritz, R., Moyle, K. and Vale, K., 1997, *Key competencies professional development Package*, Department for Education and Children's Services, South Australia.  
Victorian TAFE Association, 2000, *The professional development CD: A learning tool*, VTA, Melbourne.



### 1.3.03 ESI - Transmission, Distribution & Rail, Learning and Assessment pathways

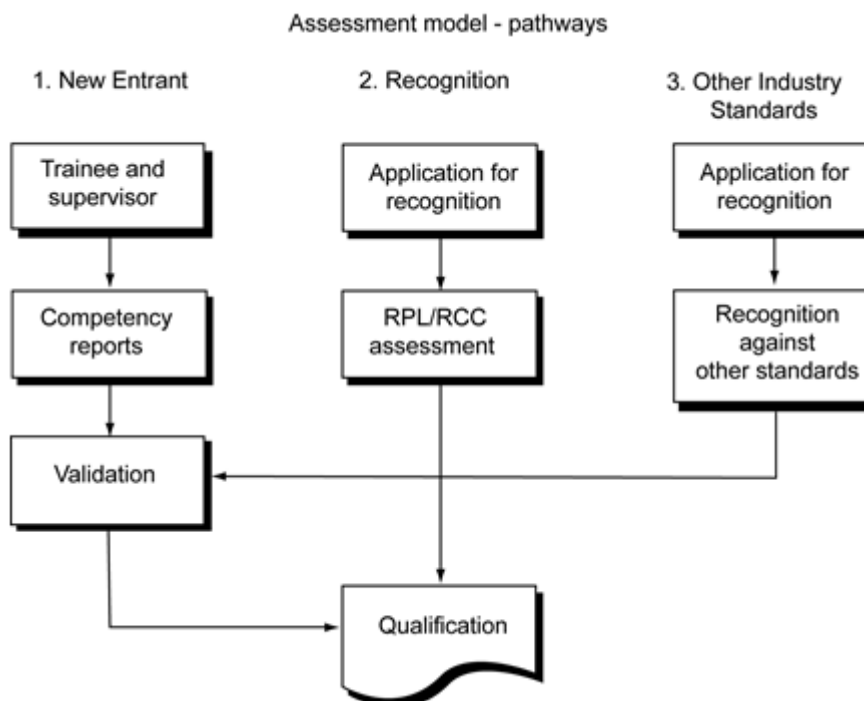
## 3.3 ESI – Transmission, Distribution & Rail, Learning and Assessment pathways

Within the general Training Package Pathways continuum framework, referred to in the previous section, three distinct Assessment Pathways have been identified for use within the Electricity Supply Industry – Transmission, Distribution and Rail Sector. Although not exclusive, the three pathways provide typical recognition processes for individual Competency Standard Units or groups of units that make up Qualifications or Statements of Attainment. From an industry perspective, assessment is to lead to formal recognition of the Industry's benchmark competencies or formal recognition of competencies from other industries. Formal recognition may be for individual competencies or for groups of competencies, which may be combined to satisfy the requirements of a National Qualification.

**Pathway 1: New entrant competency development**

**Pathway 2: Recognition of currently held competencies or prior learning and workplace experience**

**Pathway 3: Recognition of other currently held competencies (other industry standards)**



### Pathway 1: New Entrant Competency Development

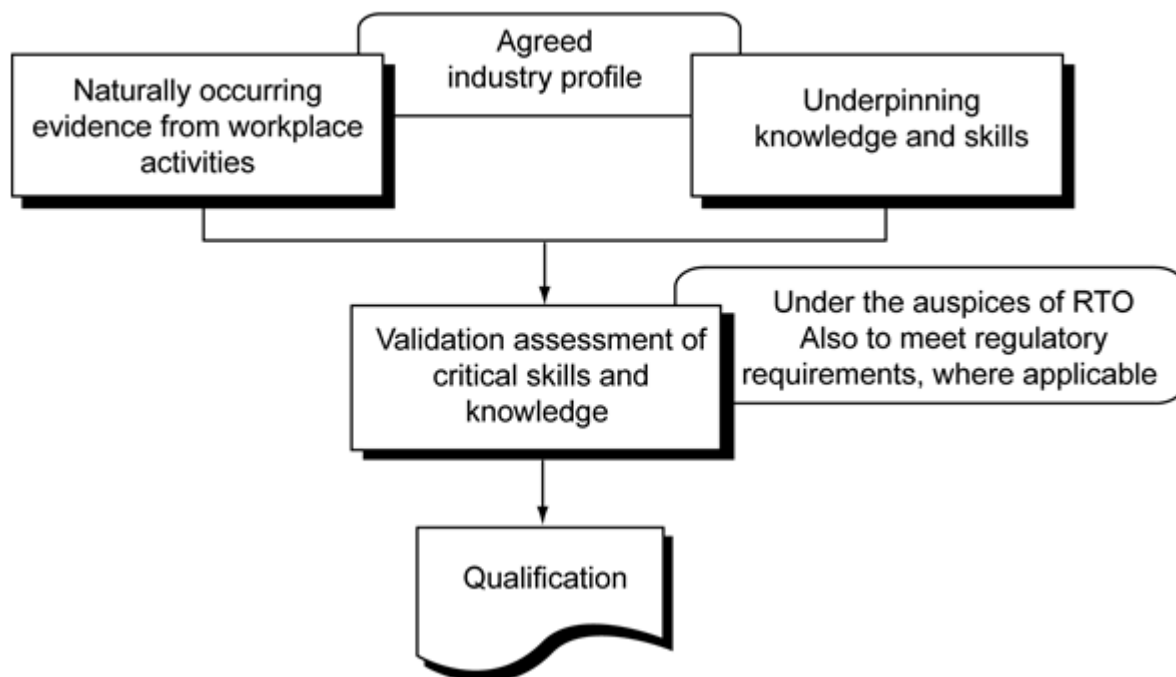
This pathway is for individuals who are undertaking an industry preferred competency development plan. The users of this pathway may be:

- contracted employment based employees who are generally new apprentices and who undertake an approved training program that supports a competency development plan, **or**
- those that undertake an approved structured training program in an institutional environment to achieve competency outcomes.

### Evidence of Competency

In this pathway evidence required to determine competence for the issuance of the qualification or Statement of Attainment is to be in accordance with **3.4 Assessment principles within the Electricity Supply Industry – Transmission, Distribution and Rail Sector** contained herein. The evidence however, must be sufficient in quality, quantity and type and be gathered in an on-going basis in a timely and accurate manner from several sources, such as, workplace and educational experiences based on the approved industry training program and related competency development plan in which individuals are involved.

#### Pathway 1. Evidence of competency (New entrant)



### Pathway 2: Recognition of prior learning/current competencies (RPL/RCC)

This pathway is for those who may have acquired skills and knowledge in relevant Competency Standard Units outside formally recognised processes. The users of this pathway will include applicants from overseas and also applicants who have developed skills in allied industries but who have no formal recognition in respect of industry standards or qualifications. In using this pathway RTOs should also identify if any equivalence mapping document exists as per Pathway 3.

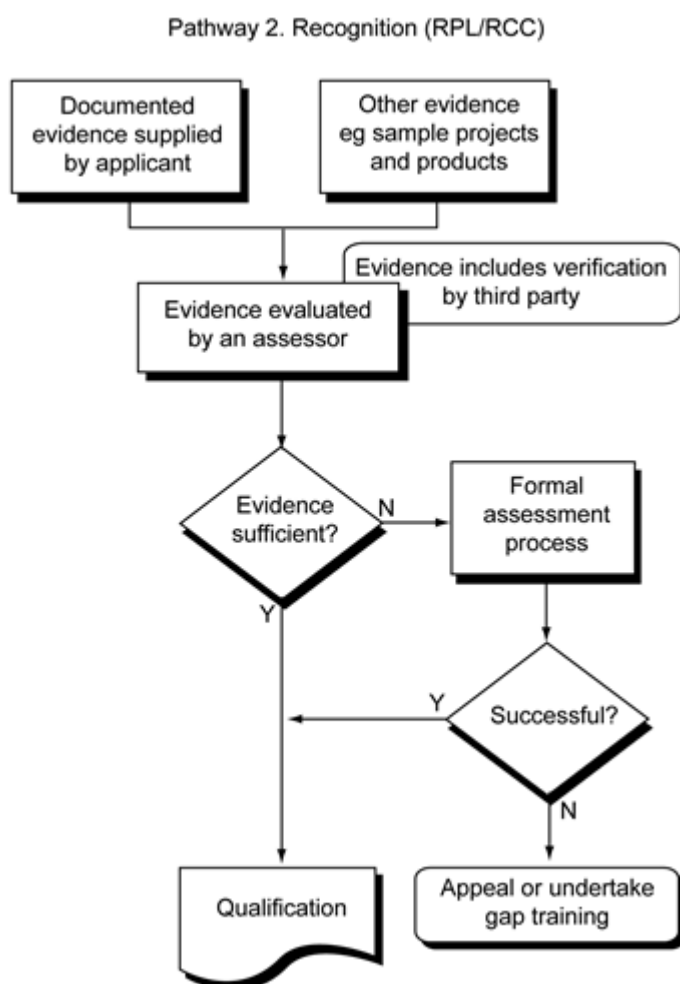
Additionally, an existing national mechanism for the recognition as a tradesperson is through the Tradesmen's Rights Regulation Act, which is administered by Trades Recognition Australia (TRA), which is part of the Commonwealth Department of Industrial Relations. TRA grants recognition for the purposes of migration but further analysis of the applicant's knowledge and skills is often needed before competency can be attributed.

The Trades Recognition Australia process mainly operates to provide formal recognition of the knowledge and skills of migrants, which have been developed by structured training and or work experience in overseas countries. However, it is also an important mechanism for the assessment and recognition of the competencies of people who may not have had access to the industry preferred new entrant model of competency development for trade vocations in Australia. For more information visit:  
<http://www.workplace.gov.au/workplace/Category/SchemesInitiatives/TRA/TRA-TradeClassificationsAssessed.htm>

### **Evidence of Competency**

In Pathway 2 many types of evidence can be used to determine competency for the issuance of qualifications or Statements of Attainment. The evidence may come from records of previous relevant work experience. This type of evidence will need endorsement by a supervisor/mentor skilled in the units for which recognition is sought. Evidence may consist of portfolios such as projects or products completed for other purposes, or from non-registered training programs or ad hoc prior experience, or from overseas programs of a similar nature.

Industry would expect this evidence to be assessed by the RTO (or its nominee – a qualified industry assessor). The result will be that the applicant is judged competent for the competency standard unit(s) or gaps are identified and noted. Where a gap is identified, the applicant can either accept the judgement and pursue gap training or elect to appeal the decision. Evidence used in the appeal process may include a personal portfolio, relevant work history, interview, comments by peers or employers, and challenge tests.



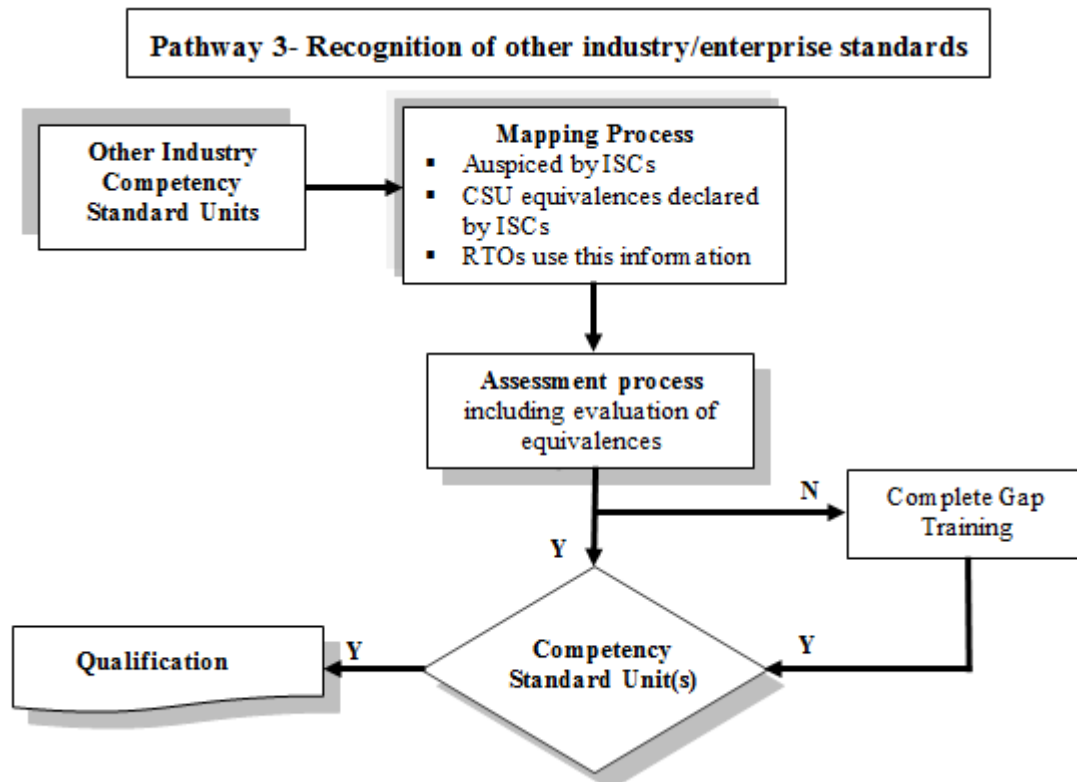
### Pathway 3: Recognition of Other Industry/Enterprise Standards

This pathway is for individuals who have developed skills based on other nationally recognised industry or enterprise competency standards and who have received formal recognition in Competency Standards Unit(s) from these areas. Recognition of equivalence of Competency Standard Units between industries is through an agreed and formal mapping process. Equivalence of outcomes are declared by Industry Skills Councils for respective Training Packages. The recognition of Units, as part of any mapping arrangements is the responsibility of the parties who maintain the competency standards, in this instance EE-Oz Training Standards. RTOs should investigate whether any mapping agreements are in place by contacting the relevant Industry Skills Councils.

#### Evidence of Competency

In this pathway, evidence will be based on formally agreed mapping declaration(s) of Competency Standards Unit(s) of other Industry Competency Standards against the unit(s) in the Electricity Supply Industry – Transmission, Distribution and Rail Sector Training Package for which formal recognition is sought. The equivalence mapping declaration agreement would be formalised between Industry Skills Councils.

The applicant would be required to supply details of the unit(s) held including any currency, and the unit(s) sought in consultation with the RTO, including submitting any assessment reports to the RTO for a determination. This equivalence evidence will be reviewed against the mapping advice obtained by the RTO (or their nominee) and a judgement made. The result will be either that the applicant is deemed competent for the unit(s) and a Statement of Attainment issued, or gaps are identified, advised and noted. Where a gap has been identified the applicant can consider the judgement, pursue gap training or appeal the decision. Evidence used in the judgement process is based on the individual's records of achievement relative to the Competency Standard Units for which recognition is sought.



### 1.3.04 Assessment Principles within the Electricity Supply Industry - Transmission, Distribution and Rail Sector

## 3.4 Assessment Principles within the Electricity Supply Industry – Transmission, Distribution and Rail Sector

These assessment practices must satisfy the principles of assessment:

### Assessment Principles

#### *Validity*

The assessment instruments and tasks must be designed, implemented and administered in a manner which ensures they measure the intended essential knowledge and associated skills with workplace performance requirement, and the evidence gathered relates directly to the Competency Standard Unit(s) being assessed.

Validity includes the need to involve others with expertise in the assessments being implemented in the development, selection and review of the instruments and methods used in the assessment process.

To be valid the assessment judgements need to be based on more than one task with evidence gathered on a number of occasions and in a variety of contexts or situations.

### ***Reliability***

Assessment practices should be in accord with *AQTF Standard 9.2* and undergo constant monitoring and review to ensure consistency in the application of process and interpretation of evidence.

RTOs will ensure clear guidelines are available to Assessors to ensure consistent judgements are made based on the evidence provided. Where industry and/or regulatory endorsed training support materials are available, it is recommended that this material is used to support and increase the reliability of assessment. This approach will assist in establishing and maintaining consistency of performance of the essential knowledge and skills and work performance requirements specified in the Competency Standard Units.

### ***Flexibility***

The assessment approach should be developed to meet the needs of potential candidates and where appropriate negotiated between the candidate and assessor.

Assessments are to cover both the skill and knowledge components of competency as described in the Competency Standard Units without any one-assessment method being prescribed.

A range of assessment instruments and items should be made available, and where appropriate, the time and place of assessment should be determined to suit the availability of resources, assessors and candidates. However, where supported by the Industry for the purposes of enhancing consistency, the preferred assessment arrangements should be adopted and used.

### ***Fairness***

Assessment methods and practices shall be equitable to all individuals.

Candidates will be made aware of the assessment methods and procedures together with details of the criteria against which they are to be assessed.

Specific needs of individual candidates will be accommodated as is practicable and reasonable adjustment is made while maintaining the integrity of the assessment outcomes based on the Competency Standard Unit(s) being assessed.

### ***Currency***

The principle to be applied in the Electricity Supply Industry – Transmission, Distribution and Rail Sector for currency of evidence is that claims are to be fully substantiated through both direct and supporting assessment processes.

Assessment processes must satisfy the requirement for currency in terms of:

1. technology and/or processes
2. recency of application

## Regulatory/Context of Assessment

Competency is to be determined on evidence of having consistently performed across a representative range of specified equipment, processes and activities for the scope of work and/or endorsement for which competency is being sought; autonomously and to requirements. Equivalent evidence from other sources, e.g., formal assessment, is also acceptable.

With respect to the essential knowledge and associated skills component of each competency standard unit, assessment activities shall be in accordance with the approach required by the regulatory environment. This may include the use of industry-supported essential knowledge and associated skills learning specifications structured in a conducive learning environment to facilitate the development of depth and breadth of learning, aid in retention and enhance transferability. For this component where graded assessment is a regulatory requirement, it will apply to the underpinning knowledge off-the-job component and not the competency standard unit as a whole. The Industry preference is for a percentile based graded assessment system to be used. Also, although it is preferred that assessing competency be carried out in the workplace, it can be undertaken in a simulated work environment approved for that purpose by the industry. Refer to any Industry policy that may apply in this regard.

## Assessment Judgments

### *Attributing Competency*

The deeming of competency shall be based on evidence that is sufficient, current and authentic, so that a quality low risk judgment can be made based on the assessment principles outlined herein.

Competencies shall be attributed on evidence showing that the person deemed to be competent is able to undertake the responsibilities for all safety measures, care of technology, plant and equipment, use of standards, manuals and procedures, and care of the environment, directly related to the work function for which such competencies are required.

#### **Note:**

1. Where the consequences of unjustifiably or mistakenly deeming a person competent carries a risk of injury to persons, commerce, or damage to property and/or the environment, the level of evidence required for sufficiency is higher than where there is little risk. The risk of attributing competence to an individual should, therefore, form a critical part of the assessment process and methodology. Consideration should be given as to whether all pre-requisites and/or co requisites have been appropriately achieved.

2. The decision to attribute competence differs from training effort and delivery. The decision to attribute competence is based on evidence being present for an assessor to attribute such and not a person in learning. Learners, however, can undertake training in Competency Standard Units without being awarded the Competency Standard Units even when they may not have acquired in the required sequence any of the pre-requisite Competency Standard Units. However, they cannot be attributed the Competency Standard Unit until they have acquired the pre-requisite.

3. For more detailed information refer to Section 3.9 Guide to Assessment Methods and Items.

### *Sufficiency of Evidence*

In all instances competency is to be attributed on evidence sufficient to show that a person has the necessary skills required for the scope of work. This includes:

- **Task skills — performing individual tasks**
- **Task management skills** — managing a number of different tasks
- **Contingency management skills** — responding to irregularities and breakdowns in routines
- **Job/role environment skills** — dealing with the responsibilities and expectations of the work environment including working with others.

Evidence must demonstrate that an individual can perform competently across the specified range of activities and has the essential knowledge, understanding and associated skills underpinning competency.

#### ***Currency of Evidence***

Evidence must be relevant to what is outlined in Competency Standard Units and not outdated or irrelevant.

**Note:** The deeming of competence at a point in time does not mean that competence exists for all time; competency must be maintained by use and/or retraining. Also refer to Section 3.9 Guide to Assessment Methods and Items for more detailed information on currency.

If there has been a recent change in technology, then evidence of actions before such change is unlikely to reflect the required currency. Similarly, if the individual claiming competency has not performed/applied that competency for extensive periods of time then documentary evidence would not suffice as a basis of assessment.

#### ***Authenticity***

Evidence is to be genuine and relate to the person being assessed, and no one else.

- By way of supporting and reinforcing both the concept of competency and the Competency Standard Units as the currency for the Vocational Education **and** Training (VET) system, the Electricity Supply Industry – Transmission, Distribution and Rail Sector embraces the following tenets:
- Assessment (summative or final) is to include the application of the competency in the normal work environment, or at a minimum, the application of the competency in a realistically simulated work environment.
- Simulation must be in accord with any prevailing Industry policy. It is recognised that in some circumstances, assessment may occur outside the workplace, however this should only occur where necessary and in accord with any Industry policy. In relation to this Training Package the Industry Skills Council for ElectroComms and EnergyUtilities, EE-Oz Training Standards, has developed an industry Simulation Policy. This can be accessed from the EE-Oz Training Standards website at: [www.ee-oz.com.au](http://www.ee-oz.com.au).
- All **persons** may claim formal recognition for an assessment of an individual Competency Standard Unit or a group of units.
- All **persons** have the right to have relevant competencies recognised through the most expeditious assessment system and method.
- Under-**represented** groups are not biased from participation and access.



## 1.3.05 Assessment Processes

### 3.5 Assessment Processes

Within the Electricity Supply Industry – Transmission, Distribution and Rail Sector **sampling, profiling** and **portfolio** are recognised as the three main methods of collecting evidence to assist the assessment processes and, while they are not mandatory, they have become accepted and the preferred industry practice. It is not the purpose of these Guidelines to provide an extensive technical description of each of these methods; however, it is important to recognise the impact each will have on the management of assessment practices. Profiling, however, is the Industry-preferred model for new entrant contracted entry-level employment, e.g. apprenticeships. Therefore, an overview of each is provided in this Guideline along with sample templates to assist Registered Training Organisations (RTOs) in planning, managing and administering training and assessment delivery.

#### 1. Sampling

Sampling requires evidence of competence to be derived from a limited sample of performance event(s). Technical/application skills are normally assessed by practical measures, and knowledge underpinning performance is assessed, typically in conducive learning environments like classrooms, by conventional written or oral questioning.

#### 2. Profiling

Profiling requires the progressive collection of many samples through structured documentation and progress summative reporting. Progressive monitoring of direct and possibly indirect evidence, over an extended period of time is used to assist in intervention and, making judgements about the developing competency profile of the candidate/learner. The focus of evidence collection is set against the Elements; Range Statement; and critical aspects detailed in the competency standard units and complemented with the level of supervision applied. The evidence collection process is staged against known and predefined work performance outcomes as specified in the Competency standard units. Profiling will assist in obtaining a series of periodical audit assessments and/or a final holistic assessment event where regulatory/licensing requirements apply. Profiling is the preferred industry model that assists with assessment for entry-level contracted employment. Technical educational achievements may be incorporated in the Profiling Model or augment information gathered directly from the workplace into the profile. In the latter case it is preferred that a final summative and holistic assessment event be applied prior to the issuance of the qualification or relevant Statement of Attainment.

#### 3. Portfolio

The Portfolio approach is best suited to assessment conducted as Recognition of Prior Learning (RPL) and is to be in accord with AQTF Standard 8.2 or its replacement/equivalent. It requires the collection or build-up of indirect evidence as to an individual's competence. The Portfolio of evidence could include Statements of Attainment issued by other RTOs (Mutual Recognition AQTF Standard 5), suitably focused references and testimonials, formal project appraisals, work records and any other evidence which is current and relevant to the competencies sought.

## Opportunities for Combined Approaches

The assessment processes described above are not mutually exclusive and a combination of approaches may be implemented. The process selected will be acceptable to the industry if the outcome is valid, the approach supports industry-wide consistency, the requirements of the Competency Standard Units are satisfied and in accordance with the preferred industry approach and costs are acceptable to the industry.

## Assessors, Technical Experts and Workplace Supervisors

### Single assessor – Single arrangement

Where an individual assessor conducts the assessment the assessor is required to:

- hold formal recognition of competence in the relevant units in the Training Package for Training and Assessment
- be deemed competent and, where possible, hold formal recognition of competence in the specific Competency Standard Units in this Training Package, at least to the level being assessed.

In addition, it is recommended by the Industry that the assessor can:

- demonstrate current knowledge of the Electricity Supply Industry – Transmission, Distribution and Rail Sector, industry practices, and the job or role against which performance is being assessed;
- demonstrate current knowledge and skill in assessing against this Training Package which contains the vocational standards for industry in a range of contexts.
- demonstrate the necessary interpersonal and communication skills required in the assessment process.
- continue to meet the requirements of the industry;
- ensure assessment is consistent with the Australian Quality Training Framework Standards for Registered Training Organisations;
- promote confidence in the system and the assessment outcomes on the part of industry, employers, enterprises, unions, employees, trainees, assessors and trainers;
- ensure assessment processes and outcomes are valid, reliable, fair and flexible;
- support RTOs in effectively carrying out their responsibilities.
- participate in professional development;
- have relevant work experience;
- participate in professional/industry networks and assessor programs;
- have recent planning and review of assessment activities;
- participate in assessment validation processes;
- have recent assessment and/or workplace training activities.

## Partnership Arrangement

### Option 1 – Working with a Technical Expert

An assessor works with a technical expert to conduct the assessment. The Assessor is required to hold formal recognition of competence in the relevant units in the Training Package for Training and Assessment.

In addition, it is recommended that the assessor is able to:

- demonstrate current knowledge and skill in assessing against this Training Package which contains the vocational standards for industry in a range of contexts;
- demonstrate capability to assess with a technical expert;
- demonstrate the interpersonal and communications skills required in the assessment process.

A technical expert is one that is required to be deemed currently competent and, where possible, hold formal recognition of competence in the specific Competency Standard Units from this Training Package which contains the vocational standards for industry, at least to the level being assessed.

In addition, it is recommended that the Technical Expert is able to:

- demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed;
- communicate and liaise with the assessor throughout the assessment process.

### **Option 2 – Working with a Workplace Supervisor**

An assessor works with workplace supervisor in collecting evidence for valid assessment.

An assessor is required to:

- hold formal recognition of competence in training and assessment in the relevant units in the Training and Assessment Training Package
- make the assessment decision.

In addition, it is recommended that the assessor is able to:

- demonstrate current knowledge and skill in assessing against this Training Package in a range of contexts
- demonstrate a capability to assess using a Workplace Supervisor as a valid and reliable source of evidence collaboration
- demonstrate the interpersonal and communication skills required in the assessment process
- communicate and liaise, where appropriate, with the workplace supervisor throughout the assessment process.

A workplace supervisor is required to be deemed currently competent and, where possible, is to hold formal recognition of competence in the specific Competency Standard Units from this Training Package at least to the level being assessed.

In addition, it is recommended that the Workplace supervisor is able to:

- demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed
- communicate and liaise, where appropriate, with the assessor throughout the assessment process
- use agreed practices to gather and record evidence for the assessor to use in making a valid judgement on competency.

### **Assessment Team/Panel**

A team working together to conduct the assessment

Members of an assessment team or panel that comprises assessment and industry experience and expertise works together in the collection of evidence and in making judgements about competency. The members of the team must include at least one person who:

- holds formal recognition of competence in training and assessment in the relevant units in the Training and Assessment Training Package
- is deemed competent and, where possible, holds formal recognition of competence in the specific Competency Standard Units from this Training Package at least to the level being assessed, and where not technically competent use team/panel members with current technical competence in requisite units;

In addition, it is recommended that members of the team/panel involved in the assessment are able to:

- at least one member be currently competent in the specific competency standards units under assessment
- demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed
- demonstrate current knowledge and skill in assessing against this Training Package in a range of contexts
- demonstrate the interpersonal and communication skills required in the assessment process and liaise with other team/panel members throughout the assessment process.

Assessments against the competencies in the Training Package will be carried out in accordance with these endorsed guidelines. The guidelines include the necessary qualifications for those conducting assessments and provide for those situations where more than one person may contribute to the assessment and where the required technical and assessment competencies may not be held by any one person.

### **1.3.07 Assessment Tools**

## **3.7 Assessment Tools**

This section provides an overview of assessment tools and their suggested use in the industry.

### **Use of Assessment Tools**

Assessment resources provide a means of collecting the evidence that assessors use in making judgements about whether candidates have achieved competency.

In some cases, assessors may use prepared assessment materials, such as those specifically developed to support this Training Package - Training and Assessment Advice Manual for the Electricity Supply Industry – Transmission, Distribution and Rail Sector Training Package UET06, available from EE-Oz Training Standards. Visit the website: ([www.ee-oz.com.au](http://www.ee-oz.com.au)).

Alternatively they may develop their own assessment materials to meet the needs of their clients by utilising pre-developed training and assessment instruments included in Section 3.8 Electricity Supply Industry – Transmission, Distribution and Rail Sector Guidelines for designing assessment materials.

## Using Prepared Assessment Tools

If using prepared assessment materials, assessors should ensure that the materials are benchmarked, or mapped, against the current version of the relevant Competency Standard Unit(s) and any industry preferred model and supported by the industry. This can be done by checking that the materials are listed on the National Training Information Service (<http://www.ntis.gov.au>) or EE-Oz Training Standards ([www.ee-oz.com.au](http://www.ee-oz.com.au)). Specific materials on the list have been noted by the National Quality Council (NQC), as meeting the quality criteria for Training Packages.

## Developing Assessment Tools

When developing their own assessment materials, assessors must ensure that the tools:

- are benchmarked against the selected Competency Standard Unit(s)
- are benchmarked against the industry-preferred competency assessment model
- are reviewed as part of the validation of assessment strategies as required under AQTF Standard 9.2i of the *Standards for Registered Training Organisations*
- meet the assessment requirements expressed in the *Standards for Registered Training Organisations*, particularly AQTF Standards 8 and 9.

A key reference for assessors engaged in developing assessment materials is the Training Package for Training and Assessment [TAA04] and Develop assessment tools [TAAASS403A].

## Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

## Mandatory Assessment Requirements

Assessments must meet, at minimum, the criteria set out in Standard 8 from the *Standards for Registered Training Organisations* which is reproduced below.

### 8 RTO Assessments

The RTOs assessments meet the requirements of the endorsed components of Training Package and the outcomes specified in accredited courses within the scope of its registration.

8.1 The RTO must ensure that assessments, regardless of whether through a training and assessment pathway or an assessment-only pathway:

- i comply with the Assessment Guidelines included in the applicable nationally endorsed Training Package or the assessment requirements specified in accredited courses;
- ii lead to the issuing of a Statement of Attainment or qualification under the AQF when a person is assessed as competent against nationally endorsed Competency Standard Units in the applicable Training Package or any additional information related to knowledge and skills specifications (e.g. modules)

- prescribed in the applicable accredited course;
- iii comply with the principles of validity, reliability, fairness and flexibility;
  - iv provide for applicants to be informed of the context and purpose of the assessment and the assessment process;
  - v where relevant, focus on the application of knowledge and skill to the standard of performance required in the workplace and cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills, and include transferable knowledge and skills to new situations and environments;
  - vi involve the evaluation of sufficient evidence to enable judgements to be made about whether competency has been attained;
  - vii identify issues related to techniques, OHS, language and literacy, cultural diversity, under-represented groups, and employability skills.
  - viii provide for feedback to the applicant about the outcomes of the assessment process and guidance on future options;
  - ix are equitable for all persons, taking account of cultural and linguistic needs; and
  - x provide for reassessment on appeal.

8.2 a The RTO must ensure that RPL is offered to all applicants on enrolment.

b The RTO must have a RPL process that:

- i is structured to minimise the time and cost to applicants; and
- ii provides adequate information and support to enable applicants to gather reliable evidence to support their claim for recognition of competencies currently held, regardless of how, when or where the learning occurred.

## Access and Equity

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package.

Reasonable adjustments can be made to ensure equity in assessment for people with disabilities. Adjustments include any changes to the assessment process or context that meets means the individual needs of the person with a disability, but do not change competency outcomes. Such adjustments are considered 'reasonable' if they do not impose an unjustifiable hardship on a training organisation or employer. When assessing people with disabilities, assessors are encouraged to apply good practice assessment methods with sensitivity and flexibility.

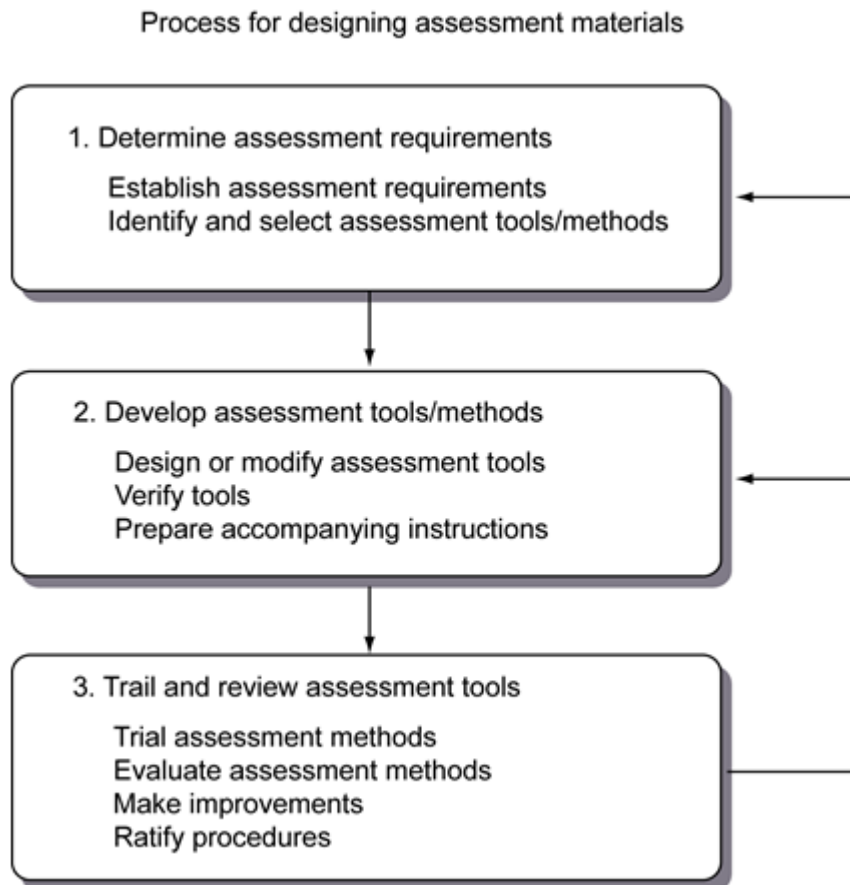
### 1.3.08 Guidelines for Designing Assessment Materials

## 3.8 Guidelines for Designing Assessment Materials

Assessment Materials are developed, designed and implemented by appropriately authorised and competent assessors. The materials may range from relatively straight forward questions/answers and task tests to quite elaborate simulations for assessing concepts and values. Assessment materials for the Electricity Supply Industry – Transmission, Distribution and Rail Sector need to facilitate the process of assessment by:

- detailing the personnel and material preparations required to support the **assessment** process.
- establishing and/or confirming the circumstances under which the assessment is to take place.
- detailing the evidence to be collected and the method(s) to be used to do this.
- providing for the systematic review/analysis of the evidence and for the making of logical and supportable judgments.
- providing the means for the recording of the process and the judgments as required and in accordance with any regulatory and/or industry preferred arrangement
- providing a basis for post-assessment.
- providing **counselling** and guidance for the candidate.
- identify specialist technical advice related to such things as OHS, LLN, **environmental** and equity matters.

## Assessment Material Design Process



### *a) Determine assessment requirements*

**Establish assessment requirements.** In the development of tools and methods of assessment, the assessor will need to determine the range of methods appropriate to the assessment context and the characteristics of the person being assessed. The assessor may use the following questions when designing the assessment method:

1. Is the data **gathering** process sufficient, timely, valid and reliable to ensure the decision about competence relates to the overall requirements of the Unit?
2. Do you always need to assess real work?
3. How is the **critical** evidence specified?
4. How many **assessment** tasks are required to collect the critical evidence of competency?
5. Which **assessment** tasks will provide broad coverage of the Range Statement?
6. Are there any skills that the candidate should have or can develop before they are assessed for the Unit?

**Identify and select assessment tools/methods.** The assessor will be required to identify and select the assessment methods consistent with Electricity Supply Industry – Transmission, Distribution and Rail Sector assessment guidelines and procedures.

### *b) Develop assessment tools/methods*



**Design or modify assessment tools.** The assessor will be required to design or modify existing assessment tools so that their format, language, literacy and numeracy requirements are appropriate to the characteristics of the assessment context and the person being assessed.

**Verify tools.** The assessor will need to verify the assessment tools, which maintain validity but are easy to administer, and allow sufficient flexibility to meet the range of possible assessment contexts.

**Prepare accompanying instructions.** The assessment system/process must be comprehensively and clearly documented so that the stages of assessment and their constituent parts may be observed and evaluated. The assessment materials must relate directly to the Competency Standard Unit or group of units making up a qualification and address the totality of competency in a realistic, holistic and effective way.

#### ***c) Trial and review assessment tools***

**Trial and validate assessment tools.** The assessor will be required to trial and validate the assessment methods with a representative group of people similar to those who will ultimately be assessed. Once trials are conducted the assessor will need to seek responses from all parties and compile and analyse these responses.

**Evaluate assessment methods.** The assessor will evaluate the assessment methods and tools for clarity, reliability, validity, fairness and cost-effectiveness.

**Make improvements.** The assessor will modify the assessment tools based on the responses to the trials.

**Ratify procedures.** The assessor ratifies, with relevant people in the Electricity Supply Industry – Transmission, Distribution and Rail Sector, procedures of the evidence requirements, assessment methods and assessment tools and the processes used in developing them.

## **Assessment Material Requirements**

Essential requirements to be met by assessment materials include the following:

**Assessment of Competency Standard Units.** Assessment must directly address the Competency Standard Unit or group of units making up a qualification or skills cluster and, within this, satisfy the *critical aspects of evidence* including the related performance criteria, Range Statement and essential knowledge and associated skills.

**Assessment of practical applications.** Summative assessment of practical applications should, whenever possible and practicable, be conducted in a real work environment or in a realistically simulated work environment. Removal of the summative assessment from the real work environment should occur only to the extent necessitated by circumstances such as safety, noise, excessive cost and disruption to equipment operation, and access to the required work.

**Learning Outcomes or other curricula documents.** Outcomes are not to be the primary focus of summative assessment unless their direct relationship to the Competency Standard Unit(s) is formally approved by industry and recorded.

**Assessment of essential theory.** Summative assessment of the theory (essential knowledge and associated skills) underpinning competent performance is to be sufficiently rigorous and searching to ensure that individuals comprehend why they are doing something, the options they may use to achieve the required goal, and the fact that they can recall and/or locate and, interpret and transfer this information in varying contexts if it is needed at some other time. Typically, the specific level of depth and breadth the individual is required achieve is contained in industry and RTO sponsored essential knowledge and associated skills learning specifications that are aligned to respective Competency Standard Units.

**Assessment of learners with low language/literacy/numeracy skills/under-represented groups.** Assessment systems need to be capable of being applied in cases of low language/literacy/numeracy skills/under-represented groups. Reasonable adjustment strategies to address assessment of those with low language, literacy and numeracy skills and under-represented groups should be included in any Assessment Materials used by Registered Training Organisations, and be consistent with the quality assurance requirements of State Training Authorities for registration.

## Range of assessment methods and their uses

### *Types of assessment*

A variety of assessment types apply and can be used individual or in combination. These are:  
**Direct observation.** Observe the learner carrying out their usual practical tasks in the workplace. This may be accompanied by questions. Direct observation is probably the easiest and most convenient method of assessment.

**Third party reports.** Information provided from immediate supervisory or other appropriate persons. An external assessor may not have the opportunity to make multiple observations of a candidate over a period of time, unlike an internal (in-house) assessor. The external assessor may obtain third party reports to supplement an assessment.

**Demonstration and questioning.** Candidate gives a demonstration of a practical task. If there is no opportunity to observe this competency in the standard work environment, the assessor may ask the candidate to provide a practical demonstration. The assessor can see both the process and the finished product.

**Pen and paper tests and essays.** These are used to measure the extent of knowledge or may test problem-solving capability. They can compliment practical demonstration.

**Oral tests.** These can be an adjunct to practical demonstration.

**Projects.** These tend to be unsupervised. The assessor uses the final product on which to base a judgement.

**Simulation.** This may involve an off-site practical test. The actual tasks and conditions are similar to real life situations and are in accord with prevailing industry policy enunciated by the Industry Skills Council for the industry. A Simulation Policy has been developed and can be obtained at [www.ee-oz.com](http://www.ee-oz.com).

**Portfolios.** These are used for assessing skills achieved in the past. They can include work samples.

**Profiling.** Information gathered over time from a structured profiled data entry card and resultant report.

## Assessment Methods

Assessment methods must be appropriate to the situation. Learners can be encouraged to use these methods for self-assessment. Combinations of these methods will be required for most situations (e.g. observations and oral questioning).

The recommended assessment methods outlined above, to collect the various kinds of evidence required to determine the candidate's competency, are:

- A — oral questioning
- B — structured observation of work
- C — indirect supporting evidence (supervisor's reports)

Not all the methods need to be used. For example, during the assessment period the assessor may find that they don't need all three methods to collect sufficient evidence. The assessor may also plan to use other, equally valid, combinations of assessment methods. It is recommended that assessors use open questions in conjunction with direct observations to assess the candidate's ability to:

- apply relevant knowledge to the particular task.
- perform the required tasks safely and efficiently.
- handle unforeseen contingencies and circumstances.
- recognise and solve problems associated with the whole job (which may not necessarily occur during the assessment).

It is recommended that supervisor's reports or verified calculations are used to confirm that workplace job activities have been completed on time and meet the required specifications. This is particularly relevant when the assessor may not be present for the total duration of the workplace job activity and/or the learner/candidate works as part of a team. More information is also contained in section 3.10 Guide to assessment methods and items.

### **1.3.09 Sample assessment instruments to support training and assessment material design**

## **3.9 Sample assessment instruments to support training and assessment material design**

Information related to assessment material design, training and assessment activities, and sample assessment materials against competency standard units in this Training Package is included in Appendix B — Sample assessment instruments to support training and assessment material design.

### **1.3.10 Guide to Assessment Methods and Items**

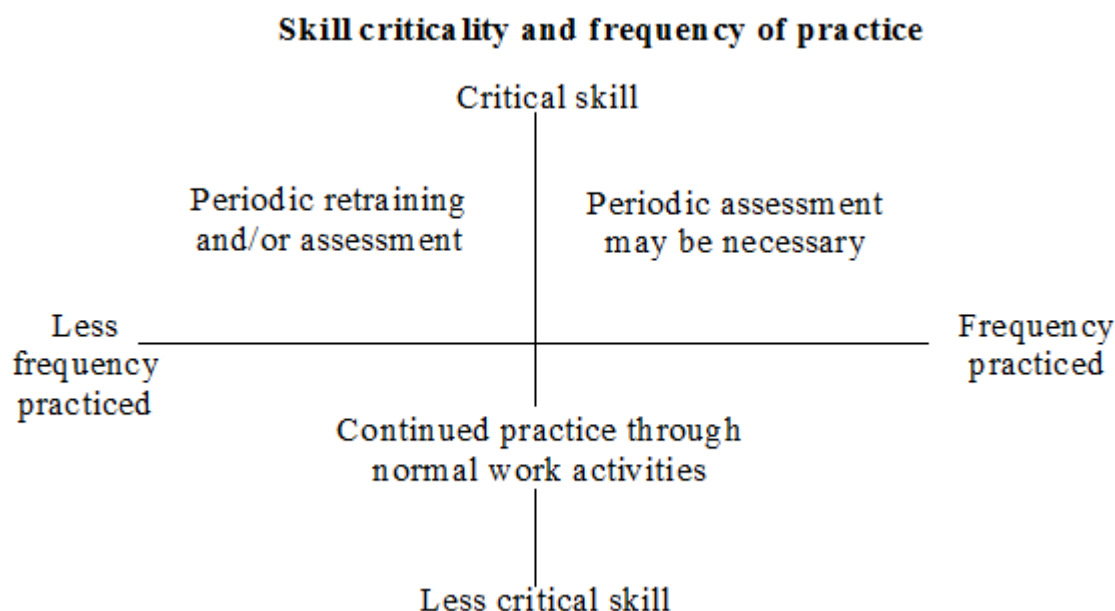
## **3.10 Guide to Assessment Methods and Items**

(Informative)

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity and electrical equipment carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment.

Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. These considerations can be summarised as follows:



Irrespective of these considerations the assessment methods and instruments used should satisfy the conditions associated with sufficiency, currency, authenticity, validity, reliability, and be holistic in nature.

The following *Table F.1 – Guide to Assessment Methods and Items* provides a summary of assessment methods in common use and the situations in which they may apply.

**Table F.1 Guide to Assessment Methods and Items**

Assessment method	Appropriate instruments	Valid purposes or use	Conditions and numbers
<b>Written objective tests</b>	True/false Multiple choice Matching Completion	Confirming essential factual knowledge, principles Assessing deduction, transfer of knowledge Complementing other methods	Controlled classroom High level supervision Large numbers
<b>Written responses, short and extended answers</b>	Calculations Definitions, explanations Essays	Assessing use of information Application of knowledge General ideas and solutions Research, organization and expression of concepts or ideas	Test condition as above or Minimal supervision, and assistance
<b>Oral test/technical interview</b>	Set question Scenarios	Assessing depth and breadth of knowledge Application of knowledge	Interview condition One to one

		Relative to experience	
<b>On job or workplace assessment</b>	Observation, checklist Product assessment Questioning to complement observations	Identifying mastery or competence of practical task, technical skill or interpersonal skill in real or simulated setting Identifying gaps in education and training	Normal working conditions Moderate level supervision One to one Avoid expensive or hazardous situations
<b>Practical/ Exercises</b>	Stimulated work exercises Structured practical exercises Fault finding exercises	Checking mastery or competence of a practical task, technical skill, or subset of performance in a simulated work setting	Controlled laboratory or field setting High level supervision 10 to 15
<b>Practical projects</b>	Research task or investigation Product or process development Individual learning contract	Assessing integration and application of a number of work related skills to solve a given problem Assessing individual approaches, innovation, creativity Assessing interaction with others	Access to laboratory, workshop or workplace Little supervision 10 to 15
<b>Assignments</b>	Resource life Case studied Poster presentation Reports of video or speaker presentations Reports of laboratory/field work, excursions Individual learning contracts Writing simple manuals or procedures	Confirming competence to research, analyse and synthesise information Assessment of application of knowledge, skills and attitudes where practical testing is not feasible Assessment of communication skills	Moderate level of control Non-test conditions Little supervision 10 to 15
<b>Personal appraisal</b>	Checklists or criteria which enable peer or self assessment	Establishing readiness for summative assessments Assessment of an individual's performance within a team effort	Non-test conditions Little supervision Small numbers
<b>Verbal assessment</b>	Oral exposition or lecture Seminar, presentation and group discussion Oral/aural tests Interviews	Confirming understanding of principles underpinning performance Supplement to other assessment methods Verification of learner's submitted work.	Moderate level of control High level of supervision One to one
<b>Profiling<sup>1</sup></b>	Structure manual or	Tracks competency development against the industry standard	<sup>2</sup> Real work conditions under workplace supervision.

	computer-based log.	profile specified by CSUs. Identifies when remedial action is required during development period.	Off-job assessment events Any number
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<sup>1</sup>A valid profile is based on periodic collection of relevant data over the duration of a competency development training program.

<sup>2</sup>A complete profile is constructed from all required evidence of competency, however where a profile of only workplace performance is used it must be supplemented with other methods such as those outlined in this table.

### 1.3.11 Guidelines for Conducting Assessments

## 3.11 Guidelines for Conducting Assessments

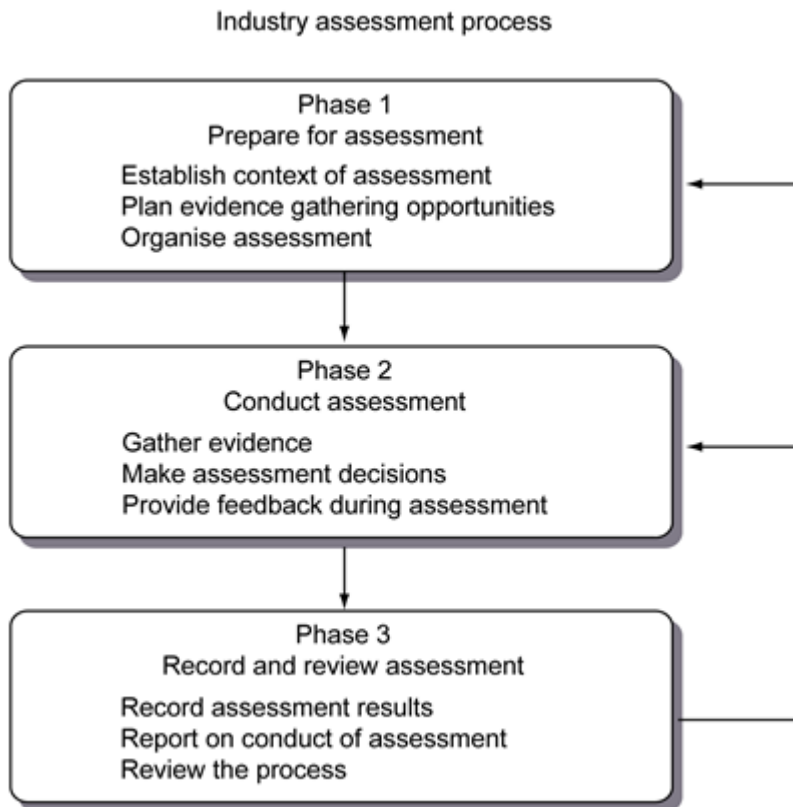
The following describes the industry-preferred process for conducting assessments against the Competency Standard Unit(s) in this Training Package. This process applies to all assessments conducted for the purposes of national recognition in both institutional and workplace contexts.

Assessment within the Electricity Supply Industry – Transmission, Distribution and Rail Sector is to be carried out by a Qualified Assessor who will have been trained in the conduct of assessment. The main issues to be satisfied during the conduct of assessment include the following:

- Assessment should be planned, arranged and organised well in advance of the event/process.
- The candidate should be involved in the planning and preparation so that their readiness and availability is assured, and their advice on evidence collection opportunities may be considered.
- The environment within which assessment is to occur is acceptable to the parties and conducive to the assessment process.
- The Assessor's actions throughout the process are firm, fair, friendly and unambiguous.
- Specific rulings on safety breaches are explained up-front and acted on in accordance with the assessment materials.
- The assessment process should contain no surprises for any party.
- Feedback is provided as required throughout the assessment process.
- Post assessment activities including recording, reporting, counselling etc. are finalised promptly.
- Candidates will invariably be accepting of the outcomes of an assessment process in which:
  - they consider they were treated fairly, consistently and with dignity.
  - they were given the full opportunity to demonstrate their capabilities.
  - the reasons for the assessment decisions were appropriate, logical and constructively explained.
  - the assessment judgements are conveyed in a sensitive and constructive manner.

The following provides an overview for assessment within the Electricity Supply Industry – Transmission, Distribution and Rail Sector. It outlines the process involved in conducting assessment in both the institutional and workplace context, and consists of three major components that each assessor will need to do:

## Prepare for Assessment



### The assessor:

- establishes the context and purpose of the assessment
- identifies the relevant Competency Standard Unit(s), assessment guidelines and qualification framework in this Training Package which contains the vocational standards for industry including the relevant performance measures applying to assessment
- identifies any NTQC noted support materials that have been developed to facilitate the assessment process
- analyses the competency standards and identifies the evidence requirements
- identifies potential evidence collection methods
- identifies issues related to techniques, OHS, language and literacy, cultural diversity, under-represented groups and employability skills. Prepare the Candidate

The assessor meets with the candidate to:



- discuss and confirm the purpose of assessment with the candidate and where appropriate, the employer
- explain the context and purpose of the assessment and the assessment process;
- explain the competency standards to be assessed and the evidence to be collected and ensure the candidate has access to the relevant competency standards and other relevant information;
- explain and obtain agreement to the assessment procedure
- advise on self-assessment, including processes and criteria;
- outline the assessment procedure, the preparation the candidate should undertake, and answer any questions.
- assess the needs of the candidate and, where applicable, negotiate reasonable adjustment for assessing people with disabilities without compromising the integrity of the competencies;
- seek feedback regarding the candidate's understanding of the Competency Standard Unit(s), evidence requirements and assessment process;
- determine if the candidate is ready for assessment and, in consultation with the candidate, decide on the time and place of the assessment;
- develop an assessment plan.
- discusses the Electricity Supply Industry – Transmission, Distribution and Rail Sector and enterprise assessment policy with the candidate (they need to understand how the competencies to be assessed will fit in with the Industry training policy and preferred framework or enterprise arrangements for training and assessment. The assessor should also understand what the candidate has done to acquire the knowledge and skills).

### **Plan and Prepare Evidence-Gathering Process**

Practical assessment should preferably be conducted on site. However, if on-site practical assessment is not possible then off-site assessment at a mutually agreeable site could be appropriate. It can be part of the current work (i.e. observation of current tasks) or a demonstration (i.e. a simulated task).

The assessor must:

- establish a plan for gathering sufficient quality evidence about the candidate's performance in order to make the assessment decision (and involve industry representatives in the development of plans for the validation of assessment)
- identify opportunities to gather evidence of competence which occurs as part of the workplace activities;
- ensure the planned approach to gathering evidence will provide sufficient, reliable, valid and fair evidence of competence
- source or develop assessment materials to assist in the evidence gathering process.
- choose the techniques that will be used to assess the candidate's knowledge and skill;
- organise equipment or resources required to support the evidence gathering process.
- check the assessment environment permits fair, valid and reliable assessment and that it is safe and accessible;
- inform other relevant people of assessment plans, coordinate and brief other personnel involved in the evidence gathering process;
- identify the need to gather additional evidence which may not occur as part of workplace activities; and
- considers issues related to techniques, OHS, language and literacy, cultural diversity, under-represented groups and employability skills..

### **Collect the Evidence and Make Assessment Decisions**

The assessor must:

- establish and oversee the evidence gathering process to ensure its validity, reliability, fairness, flexibility and consistency.;
- collect appropriate evidence and assess this against the Elements, Performance Criteria, Range Statement and Evidence Guide in the relevant Competency Standard Unit(s)
- evaluate evidence in terms of the four dimensions of competency - task skills, task management skills, contingency management skills, and job/role environment skills
- incorporate allowable adjustments to the assessment procedure without compromising the integrity of the competencies;
- evaluate the evidence in terms of validity, consistency, currency, equity, authenticity and sufficiency;
- gathers evidence related to techniques, OHS, language and literacy, cultural diversity, under-represented groups, key competencies and skills enabling employment;
- consult and work with other staff, assessment panel members or technical experts involved in the assessment process;
- document the evidence gathered in accordance with the assessment procedure and record details of evidence collected;
- make a judgement about the candidate's competency based on the evidence and the relevant Competency Standard Unit(s) and the criteria specified in the assessment procedure.

### **Provide Feedback on the Assessment**

The assessor must provide advice to the candidate about the outcomes of the assessment process. This includes providing the candidate with:

- clear and constructive feedback on the assessment decision
- information on ways of overcoming any identified gaps in competency revealed by the assessment
- the opportunity to discuss the assessment process and outcome
- information on reassessment and the appeals process.

### **Record and Report Results**

The assessor must:

- record the assessment outcome according to the policies and procedures of the RTO
- maintain records of the assessment procedure, evidence collected and the outcome according to the policies and procedures of the RTO
- maintain the confidentiality of the assessment outcome
- organise the issuing of qualifications and/or Statements of Attainment according to the policies and procedures of the RTO.

### **Review Assessment Process**

On completion of the assessment process, the assessor must:

- review the assessment process
- report on the positive and negative features of the assessment to those responsible for the assessment procedures
- if necessary, suggest to appropriate personnel in the RTO ways of improving the assessment procedures.

### **Participate in the Reassessment and Appeals Process**

The assessor must:

- provide feedback and counsel the candidate, if required, regarding the assessment outcome or process, including guidance on further options
- provide the candidate with information on the reassessment and appeals process
- report any disputed assessment decision to the appropriate personnel in the RTO
- participate in the reassessment or appeal according to the policies and procedures of the RTO.

### **Review and Maintenance of the Assessment System**

The developer and custodian, EE-Oz Training Standards of this Training Package which contains the vocational standards for industry is responsible for the ongoing monitoring and review of these Assessment Guidelines. This process will be incorporated in the general review and maintenance of this Training Package.

## **1.3.12 Maintenance of Assessment Guidelines**

## **3.12 Maintenance of Assessment Guidelines**

The Electricity Supply Industry – Transmission, Distribution and Rail Sector Assessment Guidelines were developed by, and are therefore owned by the industry.

The Assessment Guidelines must be maintained so that it reflects the ongoing needs of the Industry sector and responds in a timely manner to changed technologies, work organisation, skills development and related circumstances.

Responsibility for maintaining of the Assessment Guidelines is shared by the parties who constitute the sector:

- Assessment Guidelines maintenance will be coordinated and managed by EE-Oz Training Standards in its role as a declared Industry Skills Council for ElectroComms and EnergyUtilities
- Suggestions and proposals for changes from all parties are welcome. These should be documented and submitted to EE-Oz Training Standards the DEEWR declared Industry Skills Council for the ElectroComms and EnergyUtilities Industry.

### 1.3.13 General Resources

## 3.13 General Resources

*AQF Implementation Handbook, Third Edition.* Australian Qualifications Framework Advisory Board, 2002 <http://www.aqf.edu.au>

Australian Quality Training Framework (AQTF) – for general information go to:  
<http://www.DEEWR.gov.au/aqtfWhat.asp>

Australian Quality Training Framework (AQTF) – for resources and information go to:  
(<http://www.DEEWR.gov.au/pubBundle.asp?qsID=10>)

*Australian Quality Training Framework Standards for Registered Training Organisations*, Australian National Training Authority, Melbourne, 2001. Available in hard copy from DEEWR or can be downloaded from <http://www.DEEWR.gov.au/pubBundle.asp?qsID=10>  
*BSZ98 Training Package for Training and Assessment*. This is available from the following organisations and can be viewed, and components downloaded, from the National Training Information Service (NTIS). National Training Information Service, an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses. (<http://www.ntis.gov.au/>)

*Training Package Development Handbook*, Australian National Training Authority, Melbourne, 2001. Available in hard copy from DEEWR or can be downloaded from <http://www.DEEWR.gov.au/publication.asp?qsID=213>

Style Manual for Training Package Endorsed Components, Australian National Training Authority, Melbourne, December, 2003. Available in hard copy from DEEWR or can be downloaded from <http://www.DEEWR.gov.au>

### Assessment Resources

Training Package Assessment Guides a range of resources to assist RTOs in developing Training Package assessment materials developed by DEEWR with funding from the Department of Education, Training and Youth Affairs. It is made up of 10 separate titles, as described at [www.DEEWR.gov.au/project/tpAssessment/](http://www.DEEWR.gov.au/project/tpAssessment/). Go to [www.resourcegenerator.gov.au/loadpage.asp?TPOAG.htm](http://www.resourcegenerator.gov.au/loadpage.asp?TPOAG.htm)

Printed and / or CD ROM versions of the Guides can be purchased from Australian Training Products (ATP). The resource includes the following guides:

1. Training Package Assessment Materials Kit
2. Assessing Competencies in Higher Qualifications
3. Recognition Resource
4. Kit to Support Assessor Training
5. Candidate's Kit: Guide to Assessment in Australian Apprenticeships
6. Assessment Approaches for Small Workplaces
7. Assessment Using Partnership Arrangements

8. Strategies for ensuring Consistency in Assessment
9. Networking for Assessors
10. Quality Assurance Guide for Assessment
11. Delivery and Assessment Strategies.

### **Assessment Tool Design and Conducting Assessment**

VETASSESS and Western Australian Department of Training and Employment, 2000, *Designing Tests - Guidelines for designing knowledge based tests for Training Packages*, Vocational Education and Assessment Centre 1997, *Designing Workplace Assessment Tools*, A self-directed learning program, NSW TAFE.

Manufacturing Learning Australia, 2000, *Assessment solutions*, Australian Training products, Melbourne.

Rumsey, David 1994, *Assessment practical guide*, Australian Government Publishing Service, Canberra.

### **Assessor Training**

Australian Committee on Training Curriculum (ACTRAC), 1994, *Assessor training program - learning materials*, Australian Training products, Melbourne.

Australian National Training Authority, *A Guide for Professional Development*, DEEWR, Brisbane.

Australian National Training Authority, *Facilitator Packs for Certificate IV in Training and Assessment*.

Australian National Training Authority, *Facilitator's Pack for Train Small Groups and Assessment*.

Australian Training Products Ltd, *Training and Assessment, Training Package — Toolbox*.

Green, M., Moritz, R., Moyle, K. and Vale, K., 1997, *Key competencies professional development Package*, Department for Education and Children's Services, South Australia.

Victorian TAFE Association, 2000, *The professional development CD: A learning tool*, VTA, Melbourne.

### **Conducting Assessments**

Bloch, B. and Thomson, P., 1994, *Working Towards Best Practice in Assessment: A case study approach to some issues concerning competency-based assessment in the vocational education and training sector*, NCVER, Adelaide.

Docking, R., 1991, *An A-Z of Assessment Myths and Assessment in the Workplace*, *Competence assessment briefing series*, No. 4, Employment Department, Perth, Western Australia.

Hawke, Geoff, 1996, *Integrating Assessment of Learning Outcomes*, Assessment Centre for Vocational Education, Sydney.

Hawke, Geoff, 1995, *Work-based Learning: Advice From Literature*, Assessment Centre for Vocational Education, Sydney.

National Assessors and Workplace Trainers Body, *Putting it into practice* [Training Package implementation Guide].

Parsloe, E., 1992, *Coaching, Mentoring and Assessing: A practical guide to developing competence*, Kogan Page, London.

Rumsey, David, 1993, "*Practical issues in Workplace Assessment*" in National Assessment Research Forum: A forum for research into competency-based assessment. [VEETAC Competency Based Training Working party Assessment Steering Group], NSW TAFE Commission, Sydney.

Rumsey, David, 1994, *Assessment Practical Guide*, Australian Government Publishing Service, Canberra.

### **Evidence-Gathering Methods**

Australian National Training Authority, 1998, *A new assessment tool*, DEEWR, Melbourne.

Gonczi, A. (ed.), 1992, *Developing a competent workforce: adult learning strategies for vocational education and training*, TAFE National Centre for Research and Development, Adelaide.

Kearney, Paul, 1992, *Collaborative assessment techniques*, Artemis, Tasmania.

National Assessors and Workplace Trainers Body, *The evidence resource kit - containing language, literacy and numeracy video and CD ROM* -

National Assessors and Workplace Trainers Body, *The evidence workbooks*

### **Assessment System Design and Management**

Office of Training and Further Education 1998, *Demonstrating best practice in VET project – assessment systems and processes*, OTFE Victoria.

Toop, L., Gibb, J and Worsnop, P, *Assessment system designs*, Australian Government Publishing Service, Canberra.

Western Australia Department of Training and VETASSESS 1998, *Kit for Skills Recognition Organisations*, WADOT, Perth

National Centre for Vocational Education and Research, 1996, *Integrating assessment: removing the on the job/off the job gap*, Conference papers from 4-6 June, Western Australian Department of Training.

OTFE, 1998, *Demonstrating best practice in VET project - assessment systems and processes*, Victoria.

Wilson, P., 1993, *Integrating workplace and training system assessments*, Testing Times Conference, NCVER, Sydney.

Field, I., 1995, *Managing organisational learning*, Longman, Melbourne.

Recognition of Current Competency/ Recognition of Prior Learning

Recognition and Assessment Centre, 1994, *New place: Same Skills. A guide for people from non-English speaking backgrounds*, Office of Multicultural Affairs, DEET.

Recognition and Assessment Centre, *A Flexible Approach to Recognition Practices: RPL as a Framework*, Melbourne Recognition and Assessment Centre, PO Box 299, Somerton, Vic 3062, Telephone (03) 9254 3000.

### **1.3.14 Further Sources of Information**

## **3.14 Further Sources of Information**

This section provides a listing of useful contacts and resources to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package which contains the vocational standards for industry.

<b>Contact</b>	<b>Details</b>
<b>National Industry Skills Council (ISC) for the ElectroComms and EnergyUtilities Industry</b>	<b>EE-OZ Training Standards</b> PO Box 1202 DICKSON ACT 2602 Telephone: 02 6241 2155 Fax: 02 6241 2177 Email: ee-oz@ee-oz.com.au Website: www.ee-oz.com.au

**Contact****Details****Contact****Details****Western Australia ITC****WA IEU ITC Inc**

PO Box 597  
 BALCATTWA WA 6021  
 Tel: 08 9240 2688  
 Fax: 08 9240 2930  
 E-mail: [info@ieu.com.au](mailto:info@ieu.com.au)

**New South Wales ITAB****NSW U&E ITAB**

PO Box 615  
 DARLINGHURST NSW 1300  
 Tel: 02 9266 0001  
 Fax: 02 9261 5511  
 Email: <mailto:naomi@uensw.com.au>

**Victoria****EPIC Industry Training**

29 Drummond St  
 CARLTON VIC 3053  
 Tel: 03 9654 1299  
 Fax: 03 9654 3299  
 Email: [epicitb@epicitb.com](mailto:epicitb@epicitb.com)

**Contact****Details****South Australia****Electrical, Electrotechnology, Energy & Water Skills Board**

PO Box 2584  
 REGENCY PARK SA 5010  
 Tel: (08) 8347-4008  
 Fax: (08) 8219-0015  
 Email: [admin@eeewsb.com.au](mailto:admin@eeewsb.com.au)

**Queensland****Energy Skills Queensland**

PO Box 273  
 SALISBURY QLD 4107  
 Tel: 07 3277 1333  
 Fax: 07 3276 8252  
 Email: [energyskillsqld@energyskillsqld.com.au](mailto:energyskillsqld@energyskillsqld.com.au)

**Northern Territory****Major Industries Training Advisory Council**

GPO Box 1610

DARWIN NT 0801

Tel: 08 8981 0077

Fax: 08 8941 7470

Email: mitac@mitac.org.au

**Access to Assessment Resources****Learning Resources****EE-OZ Training Standards**

PO Box 1202

DICKSON ACT 2602

Telephone: 02 6241 2155 Fax: 02 6241 2177

Email: ee-oz@ee-oz.com.au

Website: www.ee-oz.com.au

**Australian Training Products Ltd**

Level 25, 150 Lonsdale Street

MELBOURNE VIC 3000

PO Box 5347BB

MELBOURNE VIC 3001

Telephone: (03) 9655 0600

Fax: (03) 9639 4684

Website: <http://www.atpl.net.au>

Email: sales@atpl.net.au

**1.3.15 Appendix A - Australian Apprenticeships****Appendix A — Australian Apprenticeships**

New Apprenticeships are work related competency programs designed for entry-level contracted employment for new entrants to the industry. All qualifications in this Training Package could be open to use as New Apprenticeships and are governed by State/Territory Training Authority arrangements and their limitations.

New Apprenticeships offer both employers and employees:

- relevant training
- a range of support service arrangements.

They typically involve paid work and structured training and are underpinned by a training contract, which is registered with the relevant State/Territory Training Authority. Completion of the competency development program leads to an AQF qualification.



In some instances, and subject to any relevant State/Territory Training Authority arrangements, existing non-apprenticed workers may be eligible for New Apprenticeship opportunities. Inquiries with the relevant State/Territory Training Authority should be made in this regard.

Like traditional apprenticeships, Australian Apprenticeships involve a commitment from:

- the employer to provide an environment for systematic training of the Australian Apprentice
- the Australian Apprentices to apply themselves to learning the requirements of their vocation
- a Registered Training Organisation (RTO)<sup>1</sup> to be responsible for providing the vocational education, training and assessment support services and the eventual issuing of a national qualification

<sup>1</sup> For more information on RTOs see DEST's 2005 Australian Quality Training Framework Standards for Registered Training Organisations, effective from 1 July 2005 publication.

In the Electricity Supply Industry - Transmission, Distribution and Rail Sector, Australian Apprenticeships are available for all the qualifications outlined in this Training Package. Australian Apprentices seeking one of the national qualifications will be required to undergo a training program or course of study that involves learning and assessment activities. The related learning and assessment activities are documented and involve:

- the employer
- the employee
- the RTO.<sup>2</sup>

<sup>2</sup> TAFE Institutions, Universities with TAFE sectors, Skills Centres and similar enterprises that can deliver vocational training are eligible to become RTOs.

On successful completion of the training program or course of study an RTO will issue the Australian Apprentice a national qualification.

### **Entry Requirement**

Under Australian Apprenticeships, the employer is able to determine the relevant employment criteria for recruiting a new entrant into the Electricity Supply Industry. The choice, however, is usually dependent on enterprise employment practices and needs including requirements that may be imposed by relevant regulations and codes of practice.

There is, however, a common set of attributes/profiles that are industry preferred for the recruiting of Australian Apprentices. Some of the more common ones are:

- Any person aged 15 years or more can apply for a Australian Apprenticeship.
- Most employers require applicants who have completed at least Year 10 of a secondary school education program.
- Employers customarily prefer applicants who have successfully completed Years 11 or 12 of a secondary school education program or a post secondary education pre-employment course.

Potential entrants should be aware that employers are looking for the following personal attributes:

- effective numeracy and literacy skills
- effective communications skills
- acceptable presentation
- punctuality
- a positive attitude
- interest in the industry as a career
- ability to work at heights or in confined spaces and around moving machinery
- ability to distinguish between colours.

For entry-level employment based contracted training Australian Apprenticeships the composition of the relevant qualification needs to be determined in accordance with the completion requirements detailed here and be subsequently agreed to between the respective parties.

General principles regarding the composition of qualifications are as follows:

- Competency Standard Units making up a qualification must be appropriate to the work being performed and be performed by the person seeking the qualification
- Competency Standard Units making up a qualification must be appropriate to the level and integrity of the qualification sought.

The terms and conditions for employment based entry-level contracted training require a training agreement or contract, which will be provided by State or Territory Training Authorities. Such an agreement is called an Apprenticeship/Traineeship Training Contract, which requires parties to the contract to select the appropriate qualification, Competency Standard Units and to adopt an industry-preferred model or design a new training plan/program. Additionally, the responsibilities of the parties to the contract will be contained therein.

The employment of an Apprentice (sometimes also called a Trainee) by an Employer is subject to the relevant legislation and any applicable industrial instrument, order or determination made under that related Statutory Act. Appropriate information should be obtained from relevant authorities in this regard.

### **General principles governing the Competency Development Program**

Consultation between the RTO, the employer and apprentice/trainee will have occurred and agreement reached on the Competency Development Program that will be delivered.

Typically the RTO will adopt the industry-preferred approach where regulatory arrangements are in place or design an appropriate program in concert with the Industry. The apprentice/trainee would be expected to undertake the Competency Development Program in order to attain competence in the given qualification.

### **The Competency Development Program**

A training contract provides a description of the process for undertaking training during the life of the program. This is developed in consultation with the RTOs.

### **The Training Program**

#### **1. Expected duration of workplace program in hours**

The training program will detail the anticipated duration in hours that the apprentice/trainee is expected to undertake in order to gain the necessary competencies. Information regarding the suggested nominal duration for respective AQF levels of Australian Apprenticeships is available from respective parties and includes EE-Oz Training Standards. The training plan will outline the requisite on and off-the-job arrangements that apply to it.

## **2. On-the-job skills development program**

In consultation with the apprentice/trainee and employer, the RTO would outline how it intends to monitor the on-the-job component, i.e. providing advice on how evidence is to be gathered when the apprentice/trainee is in the workplace. Apprentices/trainees are expected to assist RTOs in gathering and submitting workplace evidence as per the industry-preferred approach. This is particularly important where regulatory arrangements are in place. RTOs in turn monitor the performance of the apprentice/trainee and provide appropriate feedback to them and the employer.

## **3. Off-the-job skills development program**

The training contract will detail, where applicable, the off-the-job (technical education) program the RTO will deliver in order to gain the necessary underpinning skills and knowledge. This is typically a program preferred by the industry undertaken by the apprentice/trainee. For example where modules or essential knowledge and associated skills strategies apply, the number, title and duration of each will generally be advised. This will also include the expected duration of the technical educational program in hours.

### **Typical duration — Australian Apprenticeships**

In developing this Training Package due regard has been given, by industry, to a range of influencing factors associated with the typical period of employment and related training for individuals seeking a qualification, using the Australian Qualification Framework (AQF). In developing such, regard has also been given to the NTQC policy on providing industry advice on this matter.

As a general rule it is expected, that by employing the respective techniques and processes detailed in the preferred and adopted industry training model, those employed and undertaking training to satisfy the outcomes of Competency Standard Units, as new entry-level recruits, will take a "nominal duration" of employment to complete. EE-Oz Training Standards has developed industry advice in relation to the nominal duration of employment to assist users in their activities. Detailed information on typical new apprentice durations, at each of the AQF levels is available from EE-Oz Training Standards. This detail can be obtained directly from EE-Oz Training Standards or found on the EE-Oz Training Standards website at [www.ee-oz.com.au](http://www.ee-oz.com.au). Additionally, more specific information may be contained within any related support materials that may exist as non-endorsed components of this Training Package and in particular the industry-preferred training plan applicable to each qualification.

Nominal duration of training is generally defined by State, Territory and Federal Training Authorities policies and/or regulations. Typically these are set out in State/Territory Training Package Implementation Guides. Interested State/Territory parties should ensure they refer to the relevant Training Package Implementation Guide. These can be accessed via the respective State/Territory Training Authority websites.

## **1.3.16 Appendix B - Sample Assessment Instruments**

### **Appendix B — Sample Assessment Instruments**

These instruments are designed to Support Training and Assessment Material Design

This Appendix provides advisory and sample information for assessment material design against Competency Standard Units in this Training Package. It is principally about training and assessment activities that can be used to benchmark quality outcomes.

It provides information about assessment material design and other resources available to support implementation of the Training Package. The information contained herein shows how these resources relate to the workplace and where they can be obtained. It includes sample assessment tools (sample instruments) developed to assist those involved in benchmarking their activities for gathering evidence about workplace activities and workplace experiences for training and assessment purposes.

Sample assessment instruments included were developed for documenting workplace experiences related to the requirements of this Training Package. The assessment strategies and instruments are primarily for use as advisory information for workplace assessors and/or their agents (workplace supervisors or technical experts) who may be employees of Registered Training Organisations or enterprises.

A number of terms used refer to aspects of implementing the Training Package. A Glossary of Terms (*see* Appendix A) is included to clarify the specific meaning of these terms.

This Appendix should be read in conjunction with the following publications:

- The respective volumes of this Training Package
- Training Package for Training and Assessment TAA04
- Training Acts and Regulations in the relevant Australian State or Territory
- Policies of the Registered Training Organisation (RTO) involved with training and assessment for the Industry.

### **Sources of Education, Training and Assessment Information**

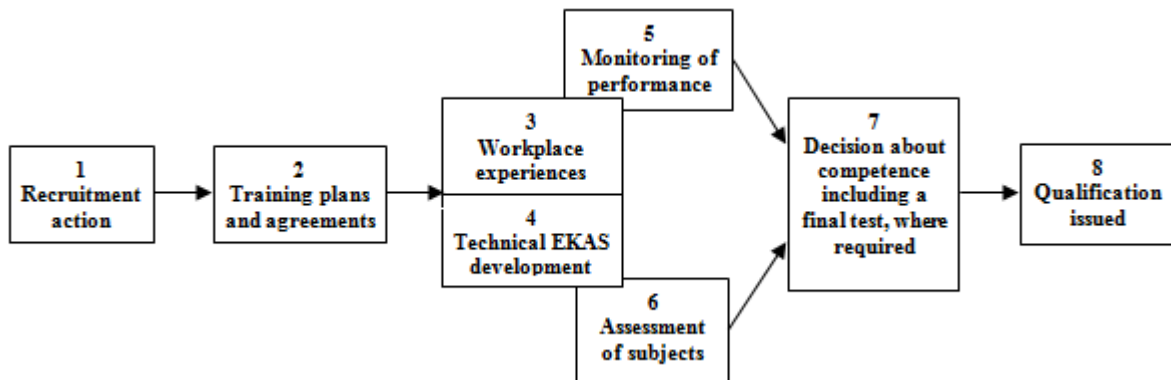
This section shows how the Training Package and associated resources relate to recruitment, training, assessment and recognition activities which may be undertaken by Industry, enterprises and/or Registered Training Organisations.

This section also introduces a competency development and/or recognition model based on combined on and off-the-job training, as well as a model that allows individuals to have previous learning and work experience recognised.

### **Combined on and off-the-job competency development model**

The model shown below is a simplified version of the detailed contracted new entry level industry-preferred competency development model which combines on and off-the-job education, training and assessment leading to competent performance. A detailed copy of the model is available from EE-Oz Training Standards website at [www.ee-oz.com](http://www.ee-oz.com). This model recognises that learning occurs as a result of:

- experience in recurring workplace events
- directed workplace learning activities
- structured off-the-job essential knowledge and associate skills technical educational activities.



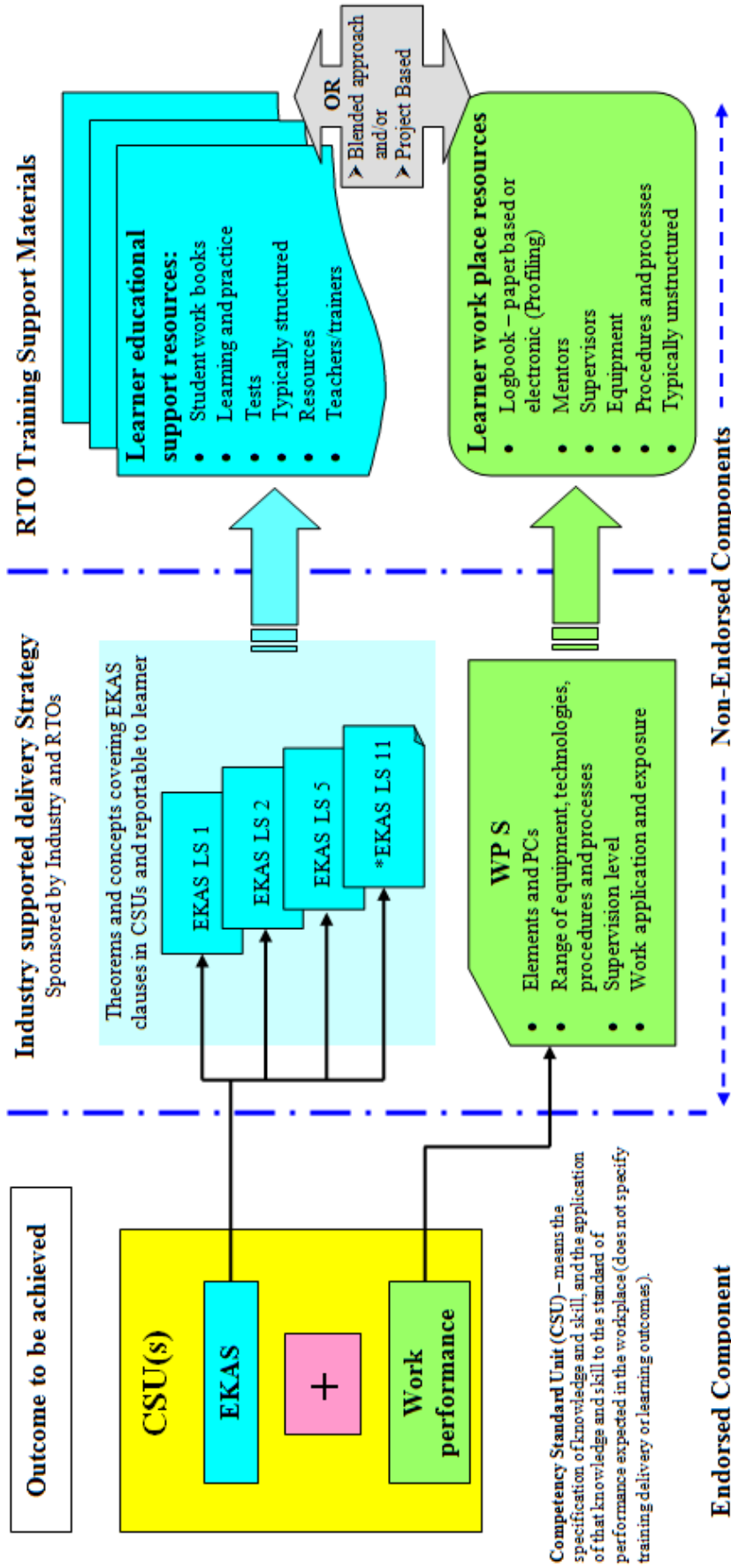
### Competency Development Model

This model is structured around a new entry level learner undertaking a full competency development program. The model can also accommodate the assessment of prior learning within the continuum of new entrant to competent. In this way it is consistent with the Assessment Pathways outlined in this Assessment Guidelines part of the Training Package.

**New Entrant Training and Assessment Materials and Resource Design and Development**

In designing training and assessment materials and resources to support new entrant competency development consideration should be given to the preferred Industry approach to learner development. The concept model detailed on the next page explores how training and assessment materials and resources may be best developed for one or many Competency Standard Units. RTOs using this approach ensure increased consistency in meeting the specifications in learning and work performance against the Competency Standard Units, and in developing the learner in a cost effective way with little disruption to the day-to-day operation of the workplace. It also assures that a learner having completed aspects of, but not the full array of, Competency Standard Unit(s), can be accorded information that is sufficient to warrant recognition for learning content (Essential Knowledge and Associated Skills) that is transferable to other environments in the Industry.

**RTO competency development training design model for new entrants using one CSU as an example**



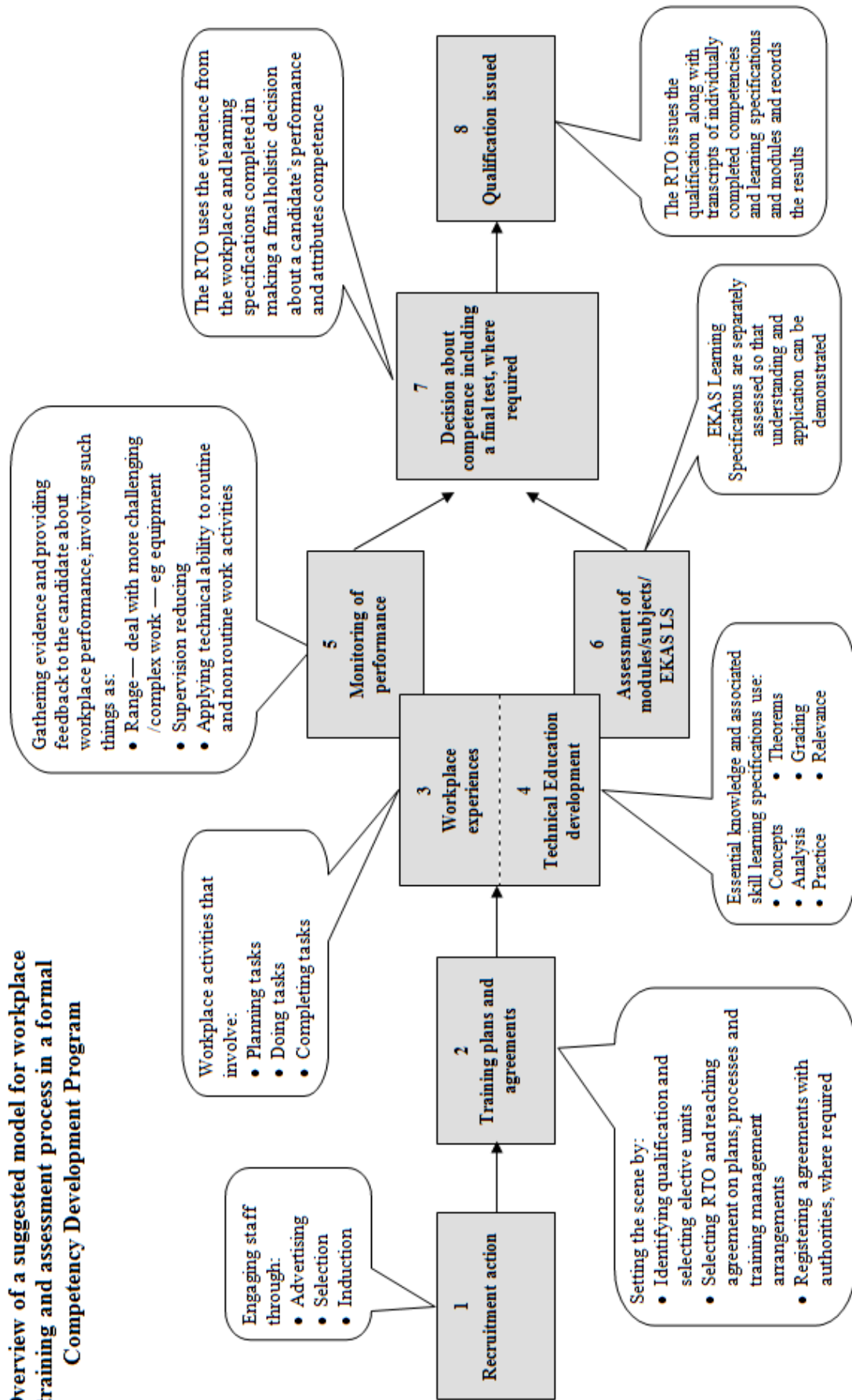
**Competency Standard Unit (CSU)** – means the specification of knowledge and skill, and the application of that knowledge and skill to the standard of performance expected in the workplace (does not specify training delivery or learning outcomes).

*EKAS LS – Essential Knowledge and Associated Skills Learning Specifications = where EKAS LS 1 – may cover many units, EKAS LS 2 – may cover a number of units, EKAS LS 5 – may cover several units, and/or EKAS LS 11 – may be unique to the unit (refer to Volume 1 Part 2 and Volume 2 Part 2 for more detail)*



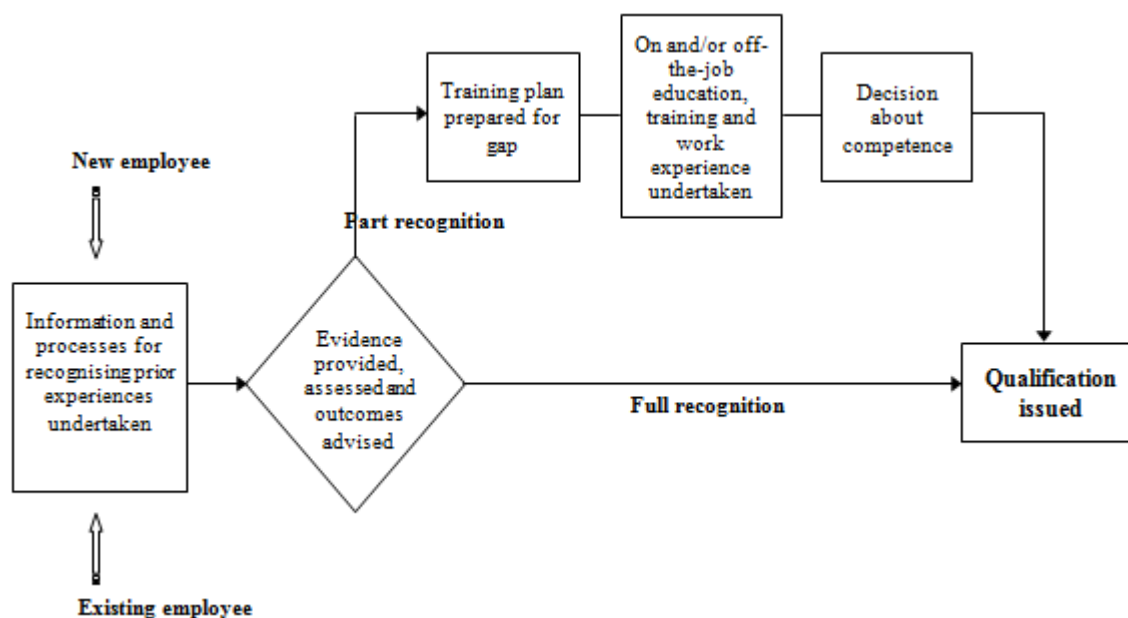


**Overview of a suggested model for workplace training and assessment process in a formal Competency Development Program**



## Recognition of Prior Learning/Experience Model

A typical process for candidates seeking to have their prior experiences recognised within the model is shown in the following diagram.



## Learning and Assessment strategies

The skills and knowledge required by a competent worker are described in terms of Competency Standard Units. To be assessed as 'competent', against competency standards, individuals need to demonstrate they have achieved the requisite workplace functions and have also acquired the specified essential knowledge and associated skills (EKAS) underpinning performance.

A candidate wishing to be assessed against a specific competency standard unit(s) must be assessed by a qualified assessor. The assessor must use assessment processes, methods and tools which are in line with this Training Package.

Assessment involves gathering evidence to demonstrate that an individual has the necessary essential knowledge and associated skills required by the specified competency standard(s) together with requisite work performance. This may include assessment of knowledge and skills obtained through educational courses as well as through application of knowledge and skills in the workplace using workplace processes, equipment and activities.

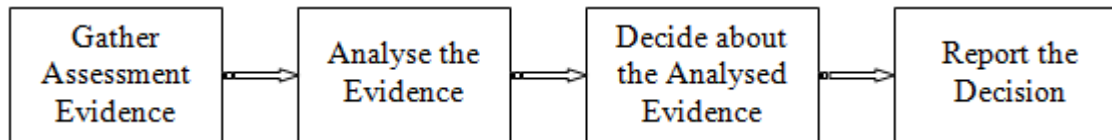
## Assessment Planning

Good planning of workplace assessment is most important. The plan is to be based on a suitable process that is in line with the Competency Unit — TAAASS401A Plan and organise assessment from the Training and Assessment Training Package. Assessors need to address the following components of competence in Training Package TAA04, which cover:

- establishing evidence requirements for a specific context
- establishing suitable assessment methods
- developing assessment tools appropriate to a specific assessment context
- trialling assessment procedure.

### The Assessment Process

The general process for assessing competence is shown in the following diagram.

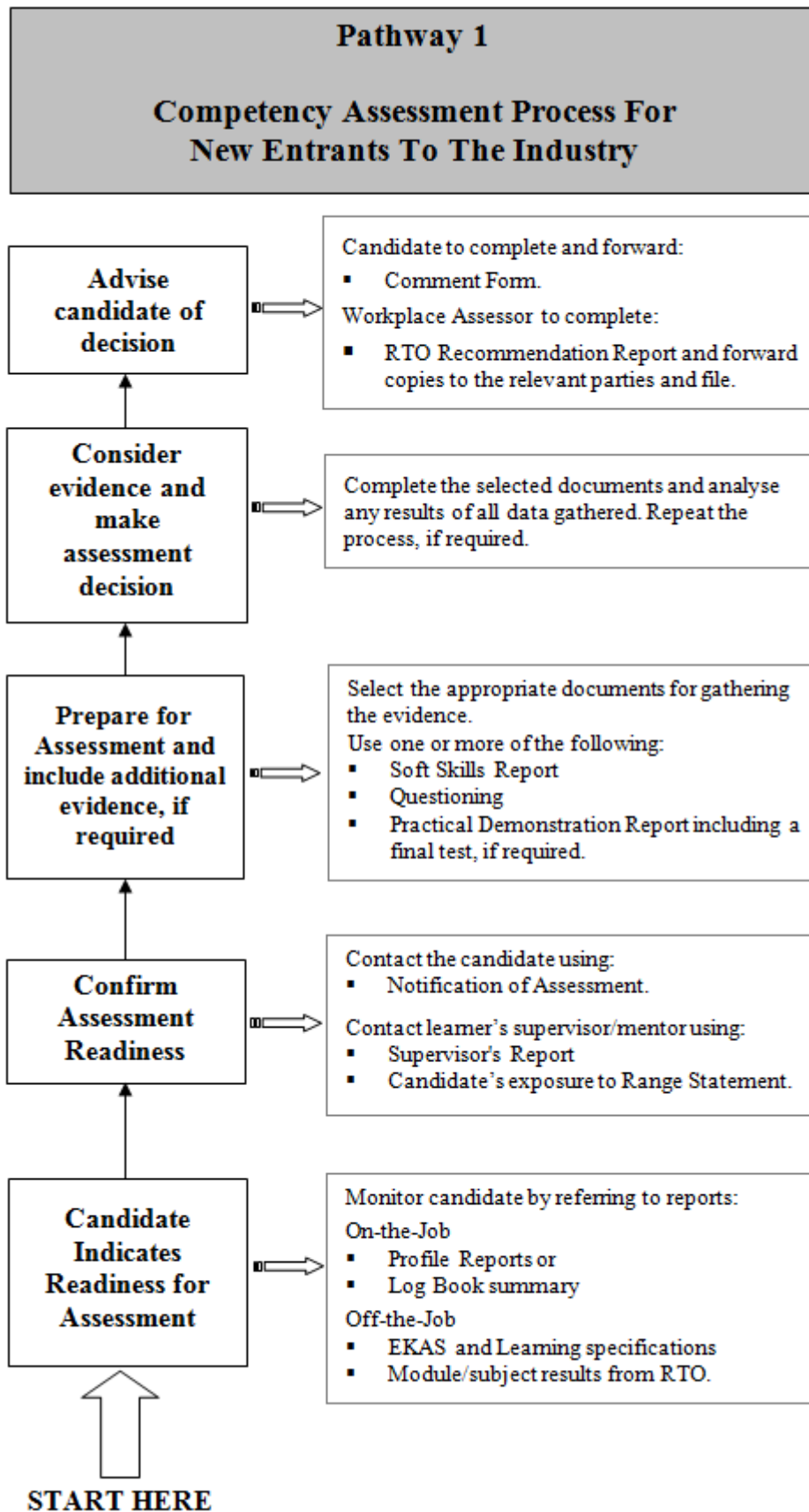


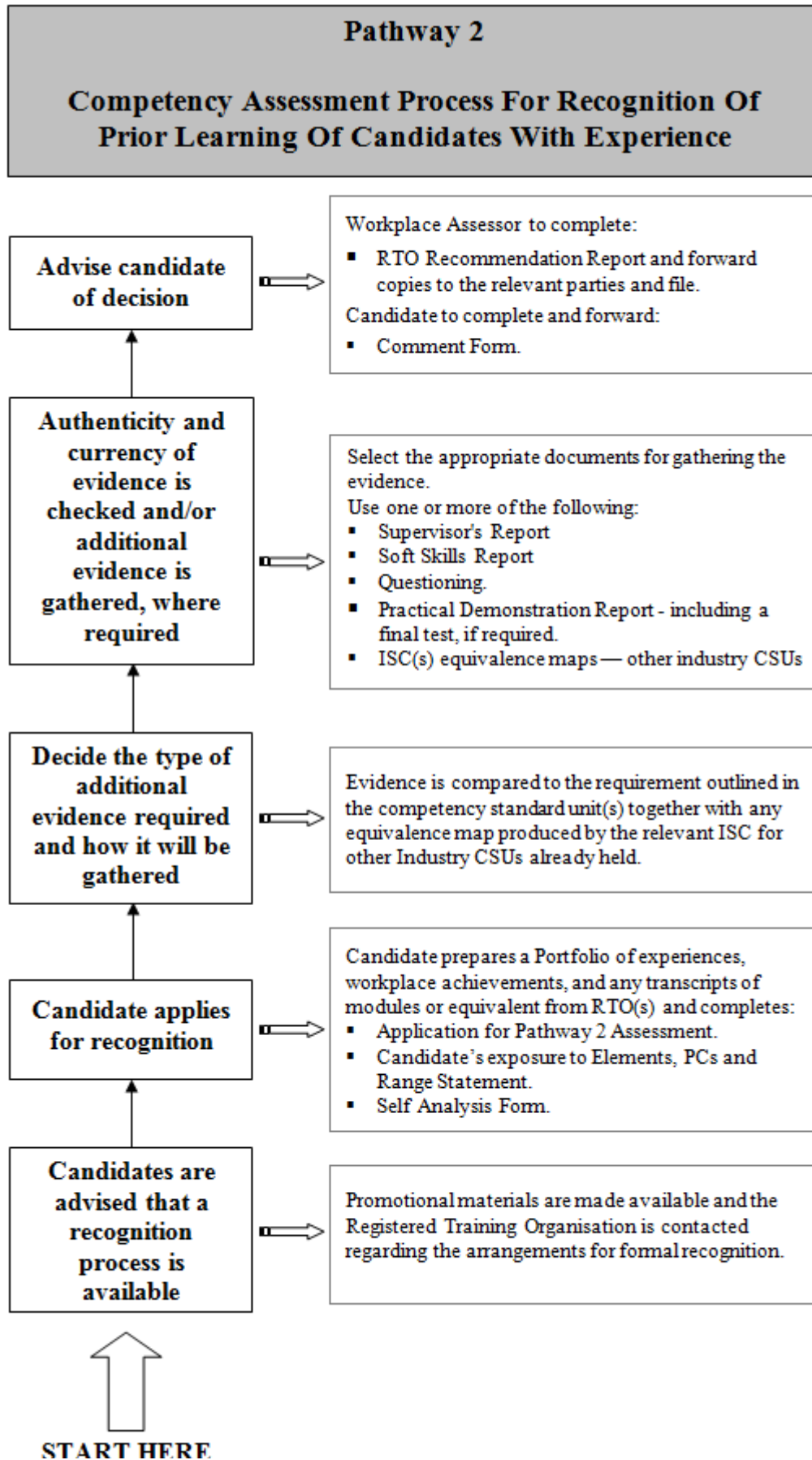
Assessors need to adapt the process to take account of physical and operational conditions as well as the characteristics and background of the candidate being assessed. Once the process has been finalised, the candidate should be advised.

The Assessment Guidelines of this Training Package identify three assessment pathways for the Industry, as follows:

- Pathway 1: For new entrants to the industry
- Pathway 2: Recognition of prior learning of those with experience in the Industry
- Pathway 3: Recognition of equivalent Competency Standards Units from other Industry Training Packages

Pathway 3 can be incorporated within the Pathway 2 processes and activities.





## Establishing the Evidence Requirements

The Training Packages provides a clear statement regarding the evidence requirements in the Evidence Guide and in particular the critical aspects of evidence of each competency standard unit. The following is an extract from one competency standard unit.

### ***‘Critical aspects of evidence***

*Before the critical aspects of evidence are considered all pre-requisites shall be met. Evidence for competence in this unit shall be considered holistically. Each element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the ‘Assessment Guidelines – UET09’. Evidence shall also comprise: A representative body of performance criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:*

Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the performance criteria and range

Apply sustainable energy principles and practices as specified in the performance criteria and range

Demonstrate an understanding of the essential knowledge and associated skills as described in this unit to such an extent that the learner’s performance outcome is reported on the preferred approach; namely a percentile graded result.

Demonstrate an appropriate level of employability skills.

Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures and

- Demonstrated performance across a representative range of contexts from the prescribed items below: (Example shown)

A — Selecting correct tools and testing equipment.

B — Identifying visual non-compliance defects

C — Using effective methods for conducting mandatory and optional tests

D — Identifying non-compliance from test results.

E — Identifying causes of non-compliance.

F — Completing mandatory reporting.

G — Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items’

The evidence on which competency in this unit is deemed shall be considered holistically.

‘Items’ of evidence that industry has deemed critical and that also relate directly to the Performance Criteria and Range Statements could include:

- Specific tools, plant and equipment.
- Specific testing techniques
- Any advice limiting assessment to actual workplaces, for example because of licensing, regulatory or unique infrastructure requirements
- Specific licensing and regulatory requirements.
- Any advice dealing with unexpected and non-routine contingencies by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment.

### **Assessment Methods**

Assessment involves determining whether a candidate has provided sufficient evidence to demonstrate that they have a specified level of skills and knowledge which they can apply in their work environment.

The evidence provided may include, for example:

- work activity records
- a transcript of training outcomes
- a portfolio of learning experiences
- a self-assessment by the candidate against the relevant competency standard(s).
- supervisor's report(s), addressing requirements of the identified competency standard(s).
- practical demonstration.
- details of training undertaken linked to requirements of the identified competency standard(s), such as a profiling or 'many samples' reports
- outcomes of a challenge test.

The assessor may use a variety of assessment methods to gather evidence. Appropriate methods for documenting workplace experiences related to this Training Package are:

- on-the-job work observation
- practical exercises in the workplace or under simulated workplace conditions
- appraisal and report by a supervisor/trainer or colleague
- questioning and discussion with the candidate
- written/practical test
- any Industry Skills Council equivalence mapping declaration for Competency Standard Units held from other Industry Training Packages

### **Develop the Assessment Tools**

The assessment tools include:

- instruments for gathering evidence — samples included as Enclosure A in Appendix A
- forms for administrating the process — samples included as Enclosure B in Appendix A
- assessment design materials Glossary of Terms — included Enclosure C in Appendix A.

### **Trial the Assessment Procedure**

It is very important to trial the assessment strategy. There is a need to make sure it is appropriate to the context in which the assessment is conducted. This will involve such things as:



- Focus on the specific requirements of the competency standard unit being assessed.
- Consideration of the characteristics and background of the person being assessed to make sure the assessor supports the candidate in their understanding of the process and the skills and knowledge that need to be demonstrated.
- Use of assessment methods and instruments to make sure the evidence gathered:
  - - addresses the conditions required to meet the Critical Aspects of Evidence as outlined in this Training Package and related Competency Standard Units
  - - is drawn from a variety of sources and reflects the required range of work circumstances
  - - provides reasonable certainty that the evidence submitted is sufficient, current and authentic.

The selection and application of assessment tools is a decision made by assessors. There is no standard answer, however the following is provided as general guidance.

- Assessors need only gather enough evidence so they can make a judgment that competence has been demonstrated. Too much evidence may be difficult to analyse in a consistent manner, whereas insufficient evidence fails to satisfy the assessment criteria.
- Assessors need to adjust or modify the assessment processes and tools as required, within the constraints of achieving a valid, reliable and fair outcome.
- Assessors need to make sure assessment procedures satisfy the principles of assessment (validity; reliability; flexibility; fairness).
- Assessors need to be cognisant and use the industry-preferred assessment approach, as a first option.

### 1.3.17 Enclosures

## Enclosures

Enclosure A: List of Sample Assessment Instruments

<b>Enclosure A1</b>	<b>Work activity records</b>
<b>Enclosure A2</b>	<b>Transcript of training outcomes</b>
<b>Enclosure A3</b>	<b>Portfolio</b>
<b>Enclosure A4</b>	<b>Self analysis</b>
<b>Enclosure A5</b>	<b>Candidates exposure to Range Statement</b>
<b>Enclosure A6</b>	<b>Supervisor's report</b>
<b>Enclosure A7</b>	<b>Supporting skills report</b>
<b>Enclosure A8</b>	<b>Questioning</b>
<b>Enclosure A9</b>	<b>Practical demonstration</b>
<b>Enclosure A10</b>	<b>Final/challenge test</b>
<b>Enclosure A11</b>	<b>Contracted entry level Profiling Model</b>

### Enclosure A1 — Work Activity Records

Work Activity Records may be produced in paper-based or in electronic form. Each Work Activity Record may relate to a group of Competency Standards or if need be a Competency Standard Unit.

The activities and experiences recorded in this mode mostly relate to recurring workplace events associated with elements of performance involving exposure to a range of plant, tools, equipment, components and operating systems that are representative of normal work activities. Activities such as these, under appropriate levels of supervision, are important to a candidate's development.

Such records provide valuable data for:

- Candidates and their supervisor's to track progress in acquiring work-based competencies.
- Assessors to make decisions about a candidate's level of competence.

Work Activity Records summarise:

- relevant activities – (elements) and jobs/tasks undertaken at work
- associated resources used (such as tools, plant/equipment, procedures, and operating systems)
- the period of exposure to each type of task
- the level of supervision provided in the workplace.

This type of record is completed by the Candidate in conjunction with their Supervisor and signed by this Supervisor. It is important that workplace experiences are documented by candidates to help them see how their work experience is developing respective skills and knowledge specified in the relevant Competency Standard Units. Assessors, as a result of the records, can easily analyse them to determine if:

- exposure to the desired workplace activities has occurred
- the level of supervision is in keeping with the degree of autonomy required by the Competency Standard Unit
- the learner is able to perform 'whole of job' activities.

The ElectroComms and EnergyUtilities Industry Skills Council trading as EE-Oz Training Standards has a model paper based document that candidates can use to record their workplace activities and experiences. The document is called a User Guide. It is formatted in a way that links workplace activities to Competency Standard Units.

More information, including User Guides and techniques for recording workplace experiences electronically are available from the EE-Oz Training Standards at website: [www.ee-oz.com.au](http://www.ee-oz.com.au).

### **Enclosure A2 — Transcript of Training Outcomes**

Essential Knowledge and Associated Skills (EKAS) Learning Specifications and related results using training modules/topics/subjects that are completed off-the-job develop an individual's technical underpinning knowledge and skill. This may apply where the Industry expects such due to the regulated or preferred nature of work.

These learning specifications provide the learner with the essential underpinning knowledge and associated skills required to:

- deal with both routine and non-routine technical activities
- readily adapt their skills when new technologies are introduced
- transfer skills to new work environments.

The Registered Training Organisation (RTO) who is issuing the credential can generally provide current information about an individual's progress in the essential knowledge and associated skills or mapped modules/topics/subjects.

Learners that have undertaken a recognised structured training program with an RTO should submit a formal transcript – "Statement of Results" (training outcomes) from the issuing RTO as evidence, for inclusion in the process of competency assessment.

Candidates seeking recognition of prior learning need to provide evidence of knowledge and skills equivalent to the content of the essential knowledge and associated skills specifications (modules/topics/subjects), detailed in the Competency Standard Units in which they are being assessed as well as their workplace experiences if competence is sought in the Competency Standard Unit(s). Applicants for recognition of prior learning may also seek advice from the Registered Training Organisation about the equivalence status of available evidence of their acquired knowledge and skills.

The ElectroComms and EnergyUtilities Industry Skills Council trading as EE-Oz Training Standards at [www.ee-oz.com.au](http://www.ee-oz.com.au) can provide advice in regard to the availability of the essential knowledge and associated skills learning specifications for training modules/topics/subjects, which have been aligned to respective Competency Standard Units and essential knowledge and associated skills clauses.

### **Enclosure A3 — Portfolio**

A portfolio is a collection of documents that demonstrate an individual's professional experiences and achievements in relation to identified competency standards. Typically, portfolios include information from a variety of sources including academic achievements, employment record, work activities, supervisor reports and references.

The candidate should prepare their own portfolio as an accurate reflection of their work and academic history and achievements.

Assessors advise candidates about the amount, type and format of evidence they should submit for assessment against identified Competency Standard Units.

The use of a Portfolio as an assessment instrument can be enhanced by the use of the Self-analysis form included as Enclosure A4.

### **Enclosure A4 — Self Analysis**

A self-analysis involves the candidate in assessing their own level of skills and knowledge acquired through work experience and relevant training programs.

Candidates should complete a Self-Analysis Form in relation to each competency standard being assessed, identifying the evidence they can provide to demonstrate each required component of their skills and knowledge.

Assessors can check the references to determine if the evidence provided links directly or indirectly to the requirements outlined in Competency Standard Units and use this data as part of the overall assessment process.

Typically, the self-analysis form would be used for a Pathway 2 Assessment, however, it could have application in a Pathway 1 Assessment in certain circumstances.

### **Self-Analysis Application Form**

This form allows the candidate to summarise their vocational experiences in relation to a particular Competency Standard Unit or a group of Competency Standard Units. The information provided is used to identify the list of competencies sought for assessment. They will need to support their responses to questions, claims and/or comments with authentic evidence. To do this, it is recommended that they develop a portfolio of evidence to be submitted with this self-analysis application form. They should be advised to cross reference the information they provide with the information provided in their Portfolio.

They must however, be provided with clear instructions about the information required before they complete each respective form. They also need to view and understand the detailed requirements of the Competency Standard Unit(s) against which they are seeking assessment. A workplace assessor should assist them with the instructions and details.

They may need to submit a separate Self-Analysis Form for each Competency Standard Unit(s) for which they are seeking recognition. The Self-Analysis Application Form could be like the sample provided below.

### Sample — Self-Analysis Application Form

**Enter the codes and title of the National Qualification and title and codes the Competency Standard Unit(s) from qualification for which you are seeking recognition.**

Title of National Qualification	Title and code of Competency Standard Unit(s) (For which recognition is being sought)
	•
	•
	•
	•
	•
	•
	•

Enter the codes and titles of Certificates, Qualifications, Transcripts of Academic achievement, or Licences that you believe to be supporting evidence.

(Remember to include these documents in your portfolio. You must be able to demonstrate how each document relates to the respective competency standards.)

Code and name of Certificate, Qualification, Transcript of academic record or Licence	Year Achieved

**Note:** For all Certificates, Qualification and associated transcripts of academic records identified above, a certified copy must be provided.

- Approximately how many jobs have you been involved in that relates to each of the respective Competency Standard Unit(s)?

- Competency Standard Unit 1 \_\_\_\_\_ Jobs
- Competency Standard Unit 2 \_\_\_\_\_ Jobs
- Competency Standard Unit 3 \_\_\_\_\_ Jobs
- Competency Standard Unit 4 \_\_\_\_\_ Jobs
- Competency Standard Unit 5 \_\_\_\_\_ Jobs
- Competency Standard Unit 6 \_\_\_\_\_ Jobs
- Competency Standard Unit 7 \_\_\_\_\_ Jobs

- Give details about the **largest** job you have been involved with. Briefly describe the job and where it was carried out. (Portfolio Ref \_\_\_\_\_)
- Estimate the total amount of time (for all similar job mentioned above of all size) you have been involved with - tick box. (Portfolio Ref \_\_\_\_\_)

	Less than 1 week	1 to 4 weeks	4 to 10 weeks	10 weeks to ½ year	More than ½ year
1					
2					

3					
4					
5					
6					
7					

- Describe the level of involvement you have had in this type of work - tick box. (Portfolio Ref \_\_\_\_\_)

	Carrying out jobs organised by others	Carrying out jobs organised by others and completing all tests and/or writing of reports	Planning the job from the beginning, carrying out the work and completing all tests and writing of reports
1			
2			
3			
4			
5			
6			
7			

- To what extent were you involved in this type of work? - tick box. (Portfolio Ref \_\_\_\_\_)

	Carrying out routine tasks	Carrying out and manage several routine tasks at one time	Deal with non routine tasks including diagnosing and rectifying faults	Organising others you work with and dealing with clients
1				
2				
3				

4				
5				
6				
7				

- How much training did you require to perform the work? - tick box.  
(Portfolio Ref \_\_\_\_\_)

	Self taught skills	Basic technical knowledge and skills	Analytical technical knowledge and skills	People and customer skills
1				
2				
3				
4				
5				
6				
7				

- To what degree were you supervised when performing the work? - tick box.

	Constant supervision	General supervision	Self supervision
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7




- Describe any special features or circumstances about the type of work you have been involved with. (Portfolio Ref \_\_\_\_\_)

- List as many different types of equipment items you used when you carried out the work associated with the Competency Standard Units. Make the list under headings such as plant, tools, components, systems and the like. A workplace assessor can assist you with the headings. A separate form may be provided for supplying this information. (Portfolio Ref \_\_\_\_\_)

Unit code	Unit title	Items	




- For the Competency Standard Units, have you completed a whole job using the equipment items listed above? Also indicate the number of times you have done so.

CSU - 1	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

CSU - 2	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

CSU - 3	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

CSU - 4	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

CSU - 5	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

CSU - 6	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

CSU - 7	Involvement (circle yes or no)			Number of times
	Planned the work	Yes	No	
	Carried out the work	Yes	No	
	Completed the work	Yes	No	

**Declaration by Candidate**

All the information provided is entirely factual:

**Name:** .....

**Signed** ..... **Date:** .....

**Enclosure A5 — Candidates Exposure to Range Statement**

This assessment instrument augments other information needed for judging competence and, where required, should be completed by the candidate to provide a list of components, tools, systems, plant, test equipment and associated items outlined in the Range Statement in individual Competency Standard Units. As the Range Statement is a component part of the whole Competency Standard Unit(s) assessors should ensure the gathering of evidence by the candidate is considered a formative part of the assessment process and that once the evidence is presented a holistic approach to judging and attributing competence is exercised in conjunction with other related data.

A separate form is required for each Competency Standard Unit to be assessed. The assessor should complete the following parts of this form in conjunction with the candidate to make sure they are clear about what is required:

- Competency standard units Title and Unit Number
- Candidate's Name
- Date
- Range Statement - Item Group:  
Please consult the Range Statement as described in section *Establishing the evidence requirements* of this Document. Each group alpha character is to represent an appropriate 'group' of variables, such as 'components', 'tools', 'system', 'plant', 'processes', 'equipment' etc, as required by the particular competency standard.
- Range Statement Items Involved:  
Please list the particular items that have been predetermined as being 'Critical' from the critical aspects of evidence section when the evidence requirements were established (see *Establishing the evidence requirements*).

The candidate is to place a tick in the column against those items they have been exposed to in a work environment. Candidate should add to the list of items involved, where appropriate. Here is an example.

Competency standard unit – _____ <i>*(Assessor to complete this section)</i>		Candidate to Complete Identify the items you have worked on
*Range Statement Item Group	*Range Statement Items Involved	
A Personal protective equipment	Goggles	4
	Gas mask	4
	Boots	
	Gloves	4
B Wiring types	Aluminium	
	Copper	4

**Candidate's work experience with items in the  
Range Statement listed in this Competency Standard Unit**

<b>Competency standard unit title:</b>		<b>Unit no:</b>
<b>Candidate's name:</b>		<b>Date:</b>
<b>Range Statement Item Group</b>	<b>Range Statement Items Involved</b>	<b>Candidate to Complete Identify the items you have worked on</b>
<b>A</b>		
<b>B</b>		
<b>C</b>		
<b>D</b>		


### Declaration by Candidate

All the information provided is entirely factual:

**Name:** .....

**Signed** ..... **Date:** .....

### Enclosure A6 — Supervisor's Report

Typically, the 'supervisor' (mentor) approached to provide a report for competency assessment will have spent considerable time guiding or monitoring the candidate in his/her development by providing supervised workplace learning experiences, appropriate to the candidate's ability.

Supervisors should be asked to comment on the candidate's demonstrated ability to:

- Demonstrate specific skills as described in the respective aspects of the Competency Standard Units under assessment.
- Apply required essential underpinning knowledge and associated skills (e.g. as learnt in their technical studies) to the work undertaken.
- Work in a team or independently in a way that is productive and safe.

Comments made by the candidate's supervisor/mentor are an important source of evidence for assessors.

The Supervisor's Report can be completed as part of the pre-assessment planning process or during any other part of the process. More than one supervisor can provide information.

Assessors should make sure supervisors are clear about the specific detailed requirements of the Electricity Supply Industry – Transmission, Distribution and Rail Sector Competency Standards targeted for assessment.

<b>Supervisor's Report on _____ (Learner's Name)</b>	
Name of Supervisor/Assessor: _____	<b>Date:</b> ___/___/___
Position in organisation: _____ Contact number: _____	
Approximate time (cumulative) providing guidance to the candidate _____ days / hrs	

in Unit(s): _____ _____			
Responses made by supervisors/mentors are for the purpose of providing information to a workplace assessor. The supervisor is <b>not</b> making a decision about competence. The assessor will include the information with other data in the decision making process.			
Question asked of the supervisor/mentor		Responses	
		<b>Yes</b>	<b>Requires further training</b>
Taking into consideration the candidate technical development and work experiences, can they:			<b>No</b>
Carry out duties with confidence			
Work in a safe manner with care for self and others			
Perform tasks with the minimal amount of waste or rework			
Complete tasks within a reasonable time			
Identify ways of improving how jobs are done			
Initiate action to improve processes or practices			
Work with others to achieve the work outputs of the group			
Work independently to achieve work outputs			
Resolve non-routine work functions			
Other comments:			
Supervisor's/Assessor's Signature:		Date: / /	

## **Enclosure A7 — ‘Supporting Skills’ Report**

‘Supporting Skills’ refer to non-technical skills, candidates must demonstrate this as part of their competency assessment.

They include, for example:

- The ability to work independently or in teams while dealing with customers.
- Knowledge of and ability to follow enterprise policies.
- Communication skills used in following and issuing instructions.
- Knowledge of and ability to address quality assurance requirements.
- Personal management and development skills.
- Knowledge of and ability to address environmental protection and sustainable energy policies issues.

Candidates must demonstrate these important attributes which are embedded in all Competency Standard Units in the Training Package.

Any Supporting Skills Report may be completed by an assessor, the candidate’s supervisor or another third party. Following on this page is a brief description of what the various aspects of Supporting Skills cover.

### **Supporting Skills — What do they cover?**

#### **1. Enterprise Instructions**

##### **Technical manuals**

Using enterprise or manufacturers’ technical manuals to ensure equipment and parts are installed to manufacturer’s specifications.

##### **Quality systems**

Plan, apply and contribute to quality systems.

##### **Computers systems**

Use enterprise documentation and record systems including, where appropriate the use data capture equipment such as; computers, information systems and technologies.

##### **Environmental and sustainable energy requirements**

The safe disposal of used oil, grease and chemicals and the reduction of electrical energy by turning of the lights and heating devices and the like minimise the impact that engineering practices have on the environment.

##### **Occupational health and safety (OHS) requirements**

Follow OHS and standard operating procedures in a manner that is safe to the individual and others.

##### **Equal opportunity / Ethical practice / Cultural diversity.**

Familiar with the enterprise, equal employment opportunity policies, ethical practices and principles and awareness of cultural diversity.

#### **Enterprise vehicles**

Vehicle log book details are completed accurately, ensure the vehicle is kept clean, secured and fuel and liquid levels are maintained.

#### **2. Customer relations**

##### **Public**

Provide courteous and informative advice during construction, maintenance or service activities.

##### **Workers providing other services**

Cooperate with workers providing other construction, maintenance or service activities.

**Clients and land owners**

Recognise the responsibilities and rights of clients and land owners.

**Authorities**

Recognise the responsibilities and rights of statutory and other authorities.

**3. Self development****Systematic problem solving**

Solve problems using technical literature, exploring theories, performing calculations and by making enquiries.

**Personal well being**

Maintain and promote personal well being in the workplace through fitness and by avoiding excessive use of alcohol, tobacco and other substances.

**Time management**

Being punctual, the timely completion of work activities, and the sequencing of activities to maximise the use of available time.

**Professional development**

Seek to improve technical ability by discussions with others or by technical research and on-going competency development.

**4. Team work****Communications**

Communicate plans, information, intentions and safety criteria to others using appropriate means.

**Team involvement**

Contribute positively to the work-team environment.

**Competency Enhancement**

Participates in the training of others by sharing ideas, explanation of operating systems and detailing the working arrangements of components and equipment.

**Instructions for Completing the Supporting Skills Report**

The supporting skills report on the next page provides a means of recording information about a candidate's skills. A workplace assessor (or nominee) does this by referring to documentation, asking the candidate questions and/or seeking advice from the candidate's supervisor/mentor.

Complete the form in the following way.



**Step 1**

Place a cross (X) in the box to indicate areas from where evidence has been sourced.

Supporting Skills Report		
<b>Candidate's name</b>		<b>Date</b>
<b>Supervisor's/Assessor's name</b>		//
<b>Enterprise instructions</b> 1. Applies correctly without constantly making reference to them. 2. Refers to them regularly and applies information correctly. 3. Awareness of their existence but not referred to or used.		<b>Rating</b> ① 2 3
Technical manuals	X	Identify a minimum of three.
Quality systems	X	
Computer systems	X	
Environmental requirements	X	

**Step 2**

Review documentation and/or ask questions of the learner or their mentor/ supervisor.

**Step 3**

For each area, establish the appropriate level (1, 2 or 3) that reflects the capability of the learner. Place a circle around the corresponding number. Evidence should be collected from a number of sources before rating the candidate.

**Note:** A rating of 2 or 3 indicates further training or experience is required. A rating of 1 indicates the candidate has demonstrated their competence in this area.

Supporting Skills Report	
<b>Candidate's name</b>	<b>Date</b>
<b>Supervisor's/Assessor's name</b>	//
<b>Enterprise instructions</b> 1. Applies correctly without constantly making reference to them. 2. Refers to them regularly and applies information correctly.	<b>Rating (circle #)</b> 1 2

3. Awareness of their existence but not referred to or used.	<b>3</b>	
Technical manuals		Identify a minimum of three.
Quality systems		
Computer systems		
Environmental and sustainable energy requirements		
Occupational health and safety requirements		
Equal opportunity/Ethical practice/Cultural diversity		
Enterprise vehicles		
<b>Customer relations</b> 1. Customers are included in discussion effecting operational issues 2. Knowledge of but limited application of customer relations. 3. Requires more understanding of customer needs.	<b>Rating</b> <b>1</b> <b>2</b> <b>3</b>	
Public		Identify a minimum of two.
Workers providing other services		
Clients and land owners		
Authorities		
<b>Self development</b> 1. Desire to expand beyond the present job role. 2. Keeps abreast of new products and services. 3. Requires more understanding of the job role.	<b>Rating</b> <b>1</b> <b>2</b> <b>3</b>	
Systematic problem solving		Identify a minimum of two.
Personal well being		
Time management		
Professional development		
<b>Team Work</b> 1. Shares ideas, assists and accepts assistance from others 2. Accepts ideas and assistance from others. 3. Prefers not to assist or accept assistance from others	<b>Rating</b> <b>1</b> <b>2</b> <b>3</b>	

Communications		Identify a minimum of two.
Team involvement		
Competency enhancement		

### Enclosure A8 — Questioning

It may be necessary as part of the assessment process, to gather additional evidence to clarify specific aspects of competence, especially in relation to the associated performance criteria. The RTO Assessor (or their nominee) may need to ask questions of the candidate, their supervisor or their trainer. A form is provided in this enclosure for documenting their responses.

The form provides guidelines for questioning a candidate about the performance criteria related to each element of competence. Typically, the elements in each of the Competency Standard Units in this Training Package follow a similar structure. Principally they generally cover *planning for*, *carrying out* and *completing* the job function.

In this section of the Document you will also find two tables which provide guidelines for assessing a candidate's response to these questions.

If the assessment is formative (as part of a training process) then the response given by the candidate should be consistent with the 'Appropriate coverage to questions – level 1'.

If the assessment is summative (final) the responses should be consistent with the 'Appropriate coverage to questions – level 2'.

Note to assessors:

1. As Competency Standard Units are typically structured around PLAN ⇐ CARRY OUT ⇐ COMPLETE jobs in the workplace, the form for recording responses is generic.
2. Please make reasonable adjustments to the form as required to accommodate particular aspects of individual Competency Standard Units.

### Level 1 - Appropriate Coverage of Responses to Questions

#### Element 1 – Planning for job/task functions (L1)

Issues about involvement of personnel, enterprises operational requirements and the requirements of regulators would not normally be expected.

Coverage should involve such things as:

#### **OHS:**

- Clarifying instructions given if any doubt exists as to what is required.
- Checking with others involved if any personal protective equipment is needed.
- Identifying hazards and risks associated with the work, including any first aid and other similar requirements

#### **Tools, equipment etc:**

- Identifying the tools and equipment that are required.
- Explaining where any special equipment is located and how arrangements will be made to have them available, if required.

**Element 1 – Planning for job/task functions (L1)****The Work Schedule:**

- Identifying the work and relevant processes, procedures and personnel required.
- Identifying the process of work to be undertaken.
- Identifying the work site activities and issues to be attended to.
- Identifying the authorities associated with the work.
- Identifying any isolation procedures/permits that may apply.

**Element 2 – Carrying out job/task functions (L1)**

Coverage should involve such things as:

**OHS:**

- Keeping the immediate work area clear of debris.
- Keeping tools clean and organised when not in use.
- Keeping clear of such things as moving parts, live electrical conductors, hazards, and obstacles.
- Wearing work clothes and personal protective equipment when required.
- Performing the technical work required.
- Applying the relevant knowledge and skills underpinning performance.

**Tasks:**

- Following instructions given by others.
- Observing what is occurring, listening to explanations about why tasks are performed in certain ways and asking questions when required.

**Element 3 – Completing job/task functions (L1)**

Coverage should involve such things as:

- Cleaning tools and equipment.
- Returning tools and equipment to their normal storage place.

**Level 2 - Appropriate Coverage of Responses to Questions****Element 1 – Planning for job/task functions (L2)**

Coverage should involve, but not limited to, such things as:

**OHS:**

- Clarifying instructions given if any doubt exists as to what is required.
- Arranging for any special personal protective equipment to be available.
- Checking to see if the work site is accessible.

**Personnel:**

**Element 1 – Planning for job/task functions (L2)**

- Identifying other personnel involved in the work and coordinating proposed activities.

**Regulatory requirements:**

- Arranging for relevant work instructions and installation specifications to be available, if required.
- Arranging work permits/isolation, etc.

**Tools, equipment etc:**

- Arranging the tools and equipment that are required.
- Coordinating where any special equipment is located and how arrangements will be made to have them available, if required.

**The Work Schedule:**

- Confirming the plan and process of work to be undertaken.
- Confirming the work and relevant processes, procedures and personnel required.
- Confirming the work site activities and issues to be attended to.
- Confirming the authorities associated with the work.
- Confirming isolation or work permits authorities.

**Element 2 – Carrying out job/task functions (L2)**

Coverage should involve, but not limited to, such things as:

**OHS:**

- Keeping the immediate work area clear of debris.
- Keeping tools clean and organised when not in use.
- Keeping clear of such things as moving parts, live electrical conductors and obstacles.
- Wearing work clothes and personal protective equipment when required.
- Having barriers in place to exclude public access to the work place, as required.
- Ensuring all personnel involved are alerted to work activities and communications are established and maintained.
- Keeping alert to the working environment while watching for unexpected occurrences.
- Confirming appropriate competence of first aid and persons, including other requirements such as confined space and the like, where appropriate.

**Engineering tasks – specific actions should be included that are additional to the following:**

- Performing tasks independently with reference to enterprise instructions.
- Accept and act on initial advice and feedback provided by others.
- Observing what is occurring, listening to explanations about why tasks are performed in certain ways and asking questions when required.

- Applying essential knowledge and associated skills and providing solutions to "what if" scenarios.

**Technical assistance:**

- Further reference to enterprise instructions.
- Reference to the requirements of regulations, work instructions or other relevant standard.
- Recall of theory or application.
- Involvement of others with greater experience.

**Element 3 – Completing job/task functions (L2)**

Coverage should involve, but not limited to, such things as:

**Performance checks:**

- Checking that all guards & covers removed during the activities are replaced & adjusted.
- Check that all temporary arrangements required during the process work have been removed.
- Carrying out any tests required by regulation or work instructions.
- Operating the installed/repaired parts or system to ensure it functions as specified.

**Notification:**

- Informing all immediate personnel involved that the work is completed.
- Informing clients and others that the work is completed.
- Removing all signs and barriers, as necessary.
- Reporting any damaged tools and equipment and arrange replacement.

**Paperwork:**

- Completing store/inventory paperwork.
- Completing the work log or management reports precisely by recording what occurred and providing recommendations/solutions to be followed up in point form.

**Instruction for Recording Responses to Questions****Step 1**

Identify the elements of competence on which questions will be asked.

**Step 2**

Identify if the response expected is to be typical of a candidate who undergoing a formative assessment (level 1) or summative assessment (level 2). This may be different for each element involved.

**Step 3**

Ask the main question and indicate (Y or N) whether the candidate's response addresses the coverage required.

**Step 4**

Ask follow up questions to probe any areas not recorded as Y in Step 3. Record Y or N to the response given in the space provided.

From all the evidence presented a holistic judgement is then made.

**Questions**

<b>Unit Title:</b>					
<b>No.</b>					
<b>Candidate's name:</b>					
<b>Assessors name:</b>					
<b>Main Question for the 'Planning Work' Element</b> <b>What are the main things you would</b>	<b>Expected Response Level</b>			<b>Not used</b>	
	<b>(circle)</b>	<b>1</b>	<b>2</b>	<b>(tick)</b>	
<i>consider when you are planning and preparing for work?</i>					
<b>Issues to be cover in response to the main question – and – Follow up questions, if required</b>					<b>Coverage (Y or N)</b>
What occupational health and safety issues do you consider?					
Who are the personnel you would involve?					
What enterprise requirements need to be taken into account?					
What regulatory requirements need to be taken into account?					
What tools, equipment and other items need to be arranged to do this job, where will you get them from and how will you arrange to have them made available when you need them?					
What work schedule will be followed?					
<b>Main Question for the 'Carry-Out Work' Element</b> <b>What are the main things you will do</b>	<b>Expected Response Level</b>			<b>Not used</b>	
	<b>(circle)</b>	<b>1</b>	<b>2</b>	<b>(tick)</b>	
<i>to ensure the work you carry out is done productively?</i>					
<b>Issues to be cover in response to the main question – and - Follow up questions, if required</b>					<b>Coverage (Y or N)</b>

<b>Unit Title:</b> <b>No.</b>	
<b>Candidate's name:</b> <b>Assessors name:</b>	
What are the main OHS practices and precautions that are specific to this work function?	
What are the main engineering tasks involved in carrying out this job?	
What would you do if the work you were undertaking became technically difficult and you could not complete it to requirements?	
What essential knowledge and associated skills would support a response to providing solutions to "what if" scenarios?	

<b>Unit Title: (Cont.)</b> <b>No.</b>					
<b>Main Question for the 'Completing Work' Element</b> <b>What are the main things you will do</b> <b>What are the main things you will do</b>	<b>Expected Response Level</b>			<b>Not used</b>	
	(circle)	1	2	(tick)	
<i>What needs to be done to finalise the job?</i>					
<b>Issues to be cover in response to the main question – and – Follow up questions, if required</b>					<b>Coverage (Y or N)</b>
What checks need to be made to insure the work you undertook meets specified performance requirements?					
Who do you notify that the work has been completed?					
What paperwork needs to be completed and what will you write about?					

### Enclosure A9 — Practical Demonstration

As part of evidence provided to demonstrate competence against detailed competency standards, you, the assessor, may need to observe the candidate demonstrating practical tasks. The Engineering Practical Skills Form is provided here to help assessors record these work-based observations. The notes taken are analysed and from this a rating is given for the candidates engineering skills.

Note to assessors:



- The form for recording responses is generic to all Competency Standard Units.
- Make reasonable adjustments to the form as required to accommodate particular aspects of individual Competency Standard Units.
- You may only need to observe candidates on particular (not all) elements of competence.
- If the assessment is formative (for feedback purposes), then the level of supervision that applies during work activities should apply during the assessment activity.

### **Instructions for Completing the Engineering Practical Skills Form**

The form provides a means of recording information about a learner's engineering practice. A workplace assessor (or nominee) does this by an observation of pre-arranged activities and determining an engineering skills rating.

#### **Step 1**

Enter the title of the Competency Standard Unit and the Unit Number in the space provided.

#### **Step 2**

Enter the learner's name in the space provided.

#### **Step 3**

Enter the name of the person who is completing the form (this may be the assessor or someone who the assessor nominates to gather the information).

#### **Step 4**

Enter the date on which the evidence is gathered.

#### **Step 5**

Determine the elements of competence being observed (circle yes or no).

#### **Step 6**

Determine the level of supervision that is to apply to the Elements being observed. Use the Supervision Level code from the bottom left of the form (A, B or C) and enter in the second column.

#### **Step 7**

Observe the learner perform tasks related to the element(s) being assessed, checking that they address the required Performance Criteria. Record in the first column of the table under the heading 'Notes from Observation' key points to indicate whether the learner:  
Has acted in a way that meets specifications required by manufacturers, regulations or client specifications.

- Has followed established enterprise procedures.
- Met the requirements of the Competency Standard being assessed.
- Needed to be shown or told how to perform tasks beyond what is reasonably expected given his/her level of experience and therefore requires further training.

#### **Step 8**

Using the Engineering Skills Rating codes at the bottom right of the table, enter the appropriate letter in the space provided to indicate the level of competence demonstrated in relation to the Competency Standard being assessed.

From all the evidence presented a holistic judgement is then made.



<b>Engineering Practical Skills Form</b>		
<b>Competency Standard Unit title:</b> _____	<b>Date:</b> ____/____/____	
<i>Candidate's name:</i> _____	<i>Assessor's Name:</i> _____	
Notes from observation	Supervision Enter A, B or C	Engineering Practice Enter D, E, F, G
<i>Plan activities:</i> Yes or No (circle to indicate if evidence is being gathered)		
<i>Carry out activities:</i> Yes or No (circle to indicate if evidence is being gathered)		
<i>Complete activities:</i> Yes or No (circle to indicate if evidence is being gathered)		
Supervision - Level		Engineering Skills - Rating
A	The learner is working under direct supervision.	D Met required specifications.
B	The learner is working under limited supervision	E Followed established enterprise procedures.
C	The learner is working under general supervision with a high degree of autonomy	F Met competency standard requirements
Learner's Signature .....		G Further training required
Assessor's Signature .....		

**Enclosure A10 — Final/Challenge Test**

A test may be required if the assessment process does not provide:

- sufficient, authentic or current evidence
- particular aspects of evidence related to equipment operation
- particular aspects related to safety
- all the requirements related to the influence of external bodies such as regulatory authorities

A final test should:

- cover the conditions associated with the 'Critical Aspects of Evidence' statement in Competency Standard Units
- take into account the principles of assessment and be sufficiently rigorous
- be consistent with the policies and practices of the Registered Training Organisation who is providing the recognition.

**Enclosure A11 — Contracted Entry Level Profiling Model — Sample assessment instruments that support a profiling model**

In relation to the industry preferred assessment model for contract entry-level competency development programs (Australian Apprenticeships), longitudinal approaches to assessment activities are considered more efficient and effective. This is best achieved by implementing a process of frequently gathering reliable data from the workplace by the learner and having it verified in a form that can be easily used and consistently interpreted.

One option is to use a machine-readable data scan card or direct web entry process, operating in conjunction with a sophisticated computer software program to achieve this result. The design of the system known as Profiling reflects the key requirements outlined in the relevant Competency Standard Units making up the competency development plan/program. Learners report directly on their exposure to required work experiences in a structured way. Additional to the off-the-job technical training required for contracted entry level learners Profiling gathers specific workplace information reliably and systematically.

Data gathered frequently from the workplace accumulates over the competency development period and is reported graphically at given periods. This approach encourages self review and participation in the system and eliminates bias and minimises the effects of low levels of literacy (see over the page for an example).

The information gathered under Profiling, forms one component of a two part, in some cases three part, Training Program that supports competency development in a way preferred by the industry. The components are:

- off-the-job training (technical subjects/topics), and
- on-the-job training (workplace activities), and
- a specific final "safety systems (capstone)" test, where applicable

Typically, the off-the-job component requires the successful completion of technical subjects/topics of training against essential knowledge and associated skills (EKAS) clauses included in the respective Competency Standard Units. More often than not the EKAS are aligned to EKAS Learning Specifications that expand on the essential knowledge and associated skills clauses; providing more detailed information on depth and breadth of learning required, for RTOs. The on-the-job component requires a profile to develop from workplace experiences/exposures. Finally, a specific safety assessment test is conducted, where applicable, for regulatory and industry requirements.

In relation to the on-the-job workplace data (experiences/exposures) is gathered and reported on against the respective aspects of industry determined competency standards, using predefined industry norms. Typically the information gathered pertains to the:

- activity against each element of competency and indirect information against the performance criteria
- quality, breadth and range of equipment, processes, techniques and applications experienced and worked with/on in the workplace
- level of supervision of a learner's workplace experiences
- hours of exposure (recording hours only is not generally considered Profiling)

Entry against the prescribed criteria is completed regularly (e.g. weekly) by the learner, the software program calculates the data against industry predefined norms and regular reports are produced (typically quarterly) for the use and information of RTOs, employers and the learner. Assessors use this information in a holistic way to identify and analyse trends and anomalies against the predefined industry norms.

The advantage of Profiling over many other mediums such as manually based log-books which require extensive and laborious analysis is that it is simple and directly reflective of the workplace experiences undertaken at the time. It provides evidence for:

- managing workplace skill development/ performance of competency required to produce quality work
- progressive assessment and supporting the attainment of a national qualification
- the attainment of an electrical workers' licence/regulated registrations, where appropriate
- the need for job rotation
- allocating work
- RTOs — in this way reducing the demand for an array of workplace assessors.

To gain an appreciation of what a data card and a report may look like a sample of each is included over the page.

### **Sample Data Card and Quarterly Report– Provided over the page**

Note: details of fields determined by Industry to accommodate enterprise requirements
---

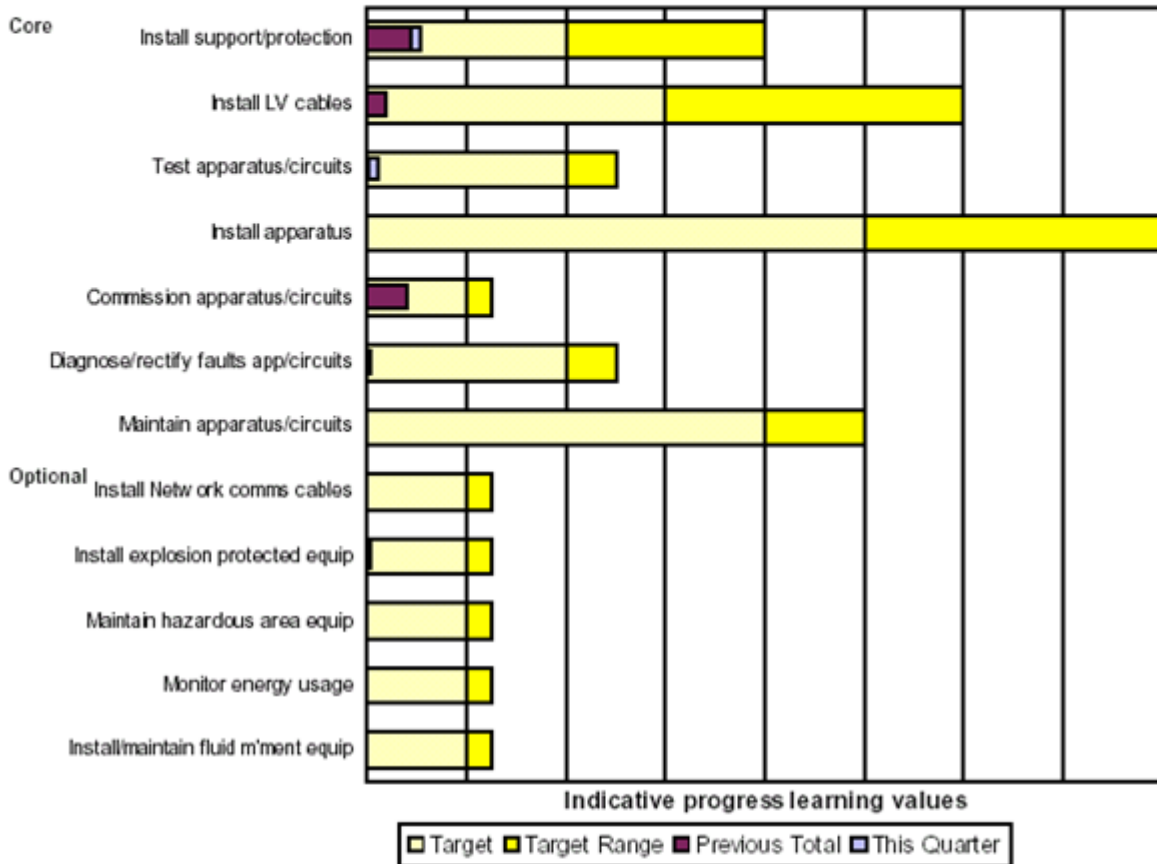




**Sample Profiling Report**

**First Zzsample (999999)**

**Apprentice On Job Experience Profile - Progressive and Benchmarks Points  
Systems Electrician - Quarterly Report, May 2002**



\* indicates Optional competency selected by the learner in Schedule C

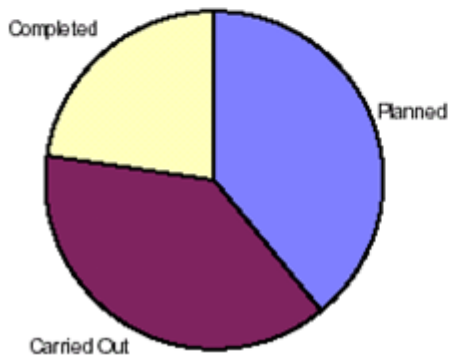
Apprentice Signature ..... Date .....

Employer Signature ..... Date .....

Host Signature (if applicable) ..... Date .....

**Apprentice role**

**Supervision level**

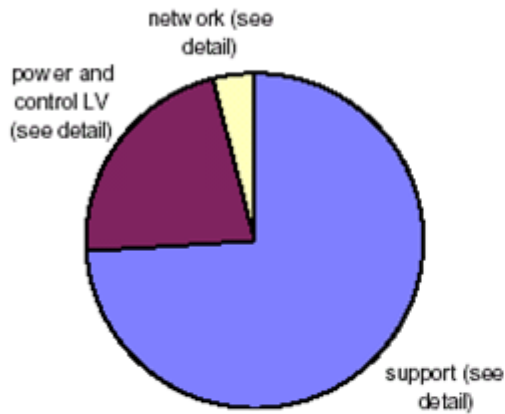




**Sample Profiling Report (cont.)**

First Zzsample (999999)

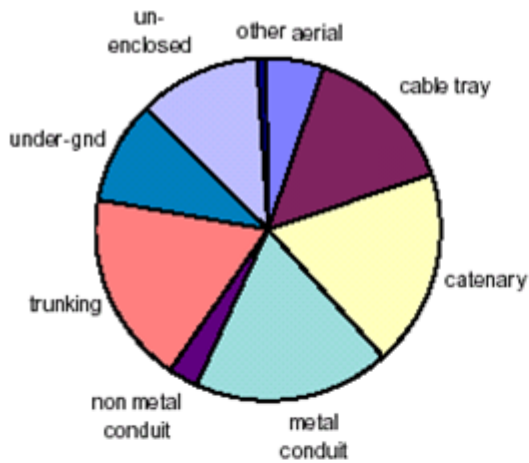
**Electrical wiring system type**



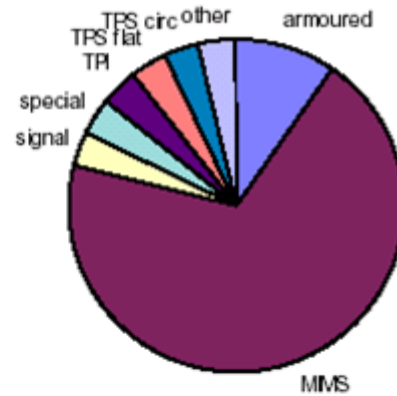
**Electrical wiring detail: Network communications**



**Electrical wiring detail: Support and protection**



**Electrical wiring detail: Power & control - LV**



**Testing techniques used**



Enclosure B: Administrative forms

**Enclosure B1 Notification of workplace assessment**

**Enclosure B2 Application for recognition of prior learning/ current competence**

**Enclosure B3 Assessee comment/feedback**

**Enclosure B4 Candidates competency achievement report to a Registered Training Organisation**

**Enclosure B1 — Notification of workplace assessment**

This form is used to notify a learner about their assessment. The learner is advised of the type of evidence being sought, the Competency Standard Unit(s) of competence being considered, who will be involved and the time and place of the activity.

**Enclosure B2 — Application for recognition of prior learning/ current competence**

Candidates should use this form to apply for recognition. The applicant needs to provide their personal details, the Competency Standard Unit(s) for which they seek recognition, the type of evidence being provided and the names of referees.

**Enclosure B3 — Assessee comment/feedback**

This form is used by the learner (or RPL applicant) to make comments about the workplace assessment process and/or decision. It should be distributed prior to an assessment event being conducted. The workplace assessor should be sent a copy of each form completed and should retain completed forms in case of any future review and/or inquiry.

**Enclosure B4 — Candidates competency achievement report to an RTO**

This form summaries a workplace assessment process and allows workplace assessors to make recommendations to an RTO about deeming competence of a learner or RPL applicant.

**Enclosure B1 — Notification of a Workplace Assessment**

**Learners Name:** \_\_\_\_\_ **Date of notification:** / /

**Assessors Name:** \_\_\_\_\_ **Tel:** \_\_\_\_\_

**Qualification Title:** \_\_\_\_\_

The workplace assessment will be carried out on the following Competency standard units		For the following reason (tick)	
Unit No.	Unit Title	Advice	Completion

**Location** \_\_\_\_\_ **Date:** / / **Time:** \_\_\_\_\_

Information has already been gathered from or is to be gathered from the following sources indicated below.

No	Source of Information	Already Gathered (tick)	To be Gathered (tick)
1	<b>Work Activity Records</b> - experiences mostly relate to re-occurring workplace events.	Paper Based	
		Electronic	
2	<b>Technical Results</b> (i.e. modules) – part of the program that develops your technical knowledge and skill		
3	<b>Portfolio</b> – personal and academic detail, employment and work achievements, references and the like		
4	<b>Self Analysis</b> – provides guidance on the type of evidence required and guides reference to other information		
5	<b>Item Range</b> - list of components, tools, systems, plant, test equipment, etc on which experience is gained		
6	<b>Supervisor's Report</b> - general comments about applying technical skills, being safe and productive		
7	<b>Soft Skills Report</b> - your ability to follow instructions, deal with clients and work in teams		
8	<b>Questioning</b> - covers issues related to your performance when planning, carrying out and completing work		
9	<b>Practical Demonstration</b> - a demonstration of your ability to perform tasks in a actual or simulated situation		
10	<b>Final Test</b> – evidence related to critical aspects of what is required by you to demonstrate competence		
11	<b>Other</b> (list)		

Note: Once all the information is collected and the data analysed the results about your progress towards or achievement of competence will be forwarded to you for your comments. If you require any additional information you should contact the assessor (above telephone number) or your nominated supervisor/mentor.

Name \_\_\_\_\_ Signature \_\_\_\_\_

**Enclosure B2 — Application for Recognition of Prior Learning/ Current Competence**

Name: \_\_\_\_\_ Date of Birth: / /

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Mobile \_\_\_\_\_ e-mail \_\_\_\_\_

**Recognition Sought** \_\_\_\_\_**Training Package** \_\_\_\_\_**Qualification No. and Title** \_\_\_\_\_**Competency Standard Units (Candidate to List)**

Unit Title	Unit No.

**Evidence Provided**

Type	Tick if Attached
<b>Certificates</b>	
<b>Curriculum Vitae</b>	
<b>Transcript of Academic Record – modules completed/equivalent</b>	
<b>References</b>	
<b>(other)</b>	

**Referees**

Name	Organisation and Title of Referees	Contact Number of Referees

Candidate's Signature: \_\_\_\_\_ Date: / /

**Enclosure B3 — Assessee comment/feedback**

**To be completed by the candidate following an assessment event**

**Location:** \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_ **Time:** \_\_\_\_\_

**Assessor's Name:** \_\_\_\_\_

Please complete the following and return it to the Assessor.

**Candidates' Name:** \_\_\_\_\_

**Contact N°:** \_\_\_\_\_

I have read the Final Report for this assessment event and,  
(tick)

**Agree with the outcome**

**or**

**Disagree with the outcome**

Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Candidate's Signature: \_\_\_\_\_ **Date:** \_\_\_/\_\_\_/\_\_\_

**Enclosure B4 — Candidates competency achievement report to RTO**

**This recommendation is made to (enter RTO name)** \_\_\_\_\_

It is recommended that (learner's name) \_\_\_\_\_ (contact and identification details) \_\_\_\_\_

\_\_\_\_\_ be attributed competence in the following Competency standard units.

**These Units are from the Qualification (Title and No.)**

<b>Unit No.</b>	<b>Competency standard unit Title</b>	<b>Assessors Initials</b>

<b>The recommendation was made based on analysed evidence taken from the following sources</b>	<b>Tick</b>
Work Activity Records	
Module (Learning Specification) Results	
Portfolio	
Self Analysis	
Item Range – Learner’s Report	
Supervisor’s Report	
Soft Skills Report	
Questioning	
Practical Demonstration	
Final Test	
Other (enter)	

**Statement**

The recommendation to attribute competence to the above mentioned individual is based on the evidence requirements outlined in Competency Standard Units from the

\_\_\_\_\_ (Enter the Number and Title of the Training Package.)

**Assessor's Name** \_\_\_\_\_

Signature \_\_\_\_\_

Date: / /

## Enclosure C: Glossary of Terms

Definitions of all terms used in this section are set out below.

Term	Definition/Explanation
<b>Appeal process</b>	A process whereby the person being assessed or other interested party, such as an employer, may dispute the outcome of an assessment and seek reassessment.
<b>Assessment</b>	The process of collecting evidence and making judgements on whether competency has been achieved to confirm that an individual can perform to the standard expected in the workplace as expressed in the relevant endorsed industry/enterprise competency standards or outcomes of accredited courses.
<b>Assessment context</b>	The environment in which the assessment will be carried out. This will include physical and operational factors, the assessment system within which assessment is carried out, opportunities for gathering evidence in a number of situations, the purpose of the assessment, who carries out the assessment and the period of time during which it takes place.
<b>Assessment guidelines</b>	Assessment guidelines are the endorsed component of a Training Package which underpins assessment and which sets out the industry approach to valid, reliable, flexible and fair assessment. Assessment guidelines include the assessment system overview, assessor requirements, designing assessment resources, conducting assessment and sources of information on assessment.
<b>Assessment judgement</b>	Assessment judgement involves the assessor evaluating whether the evidence gathered is valid and authentic, and whether there is sufficient and reliable evidence to make the assessment decision. The assessment judgement will involve the assessor in using professional judgement in evaluating the evidence available.
<b>Assessment materials</b>	Assessment materials are any resources that assist in any part of the assessment process. They may include information for the candidate, assessment tools or resources for the quality assurance arrangements of the assessment system.

Term	Definition/Explanation
<b>Assessment plan</b>	An assessment plan is a document developed by an assessor that includes the elements and Competency Standard Units to be assessed, when the assessment will occur, how the assessment will occur, the assessment methods to be used and the criteria for the assessment decision.
<b>Assessment process</b>	The assessment process is the agreed series of steps that the candidate undertakes within the enrolment, assessment, recording and reporting cycle. The process must suit the needs of all stakeholders and be both efficient and cost-effective. The agreed assessment process is often expressed as a flow chart.
<b>Assessment strategy</b>	Assessment strategy means the approach to assessment and evidence gathering used by the assessor or RTO. It encompasses the assessment process, methods and assessment tools.
<b>Assessment system</b>	An assessment system is a controlled and ordered process designed to ensure that assessment decisions made in relation to many individuals, by many assessors, in many situations are consistent, fair, valid and reliable.
<b>Assessment tool</b>	<p>An assessment tool contains both the instrument and the instructions for gathering and interpreting evidence:</p> <ul style="list-style-type: none"> <li>• Instrument[s] — the specific questions or activity developed from the selected assessment method[s] to be used for the assessment. A profile of acceptable performance and the decision making rules for the assessor may also be included.</li> <li>• Procedures — the information/instructions given to the candidate and/or the assessor regarding conditions under which the assessment should be conducted and recorded.</li> </ul>
<b>Candidate</b>	<p>A candidate is any person presenting for assessment. The candidate may be:</p> <ul style="list-style-type: none"> <li>• a learner undertaking training in an institutional setting</li> <li>• a learner/worker undertaking training in a workplace</li> <li>• an experienced worker wanting their skills recognised</li> <li>• any combination of the above.</li> </ul>



Term	Definition/Explanation
<b>Competency</b>	The specification of knowledge and skill and the application of that knowledge and skill to the standards of performance required in the workplace.
<b>Competency standard</b>	Competency standards define the competencies required for effective performance in the workplace. Standards are expressed in outcome terms and have a standard format comprising of Unit title, Unit descriptor, Elements of Competency, Performance Criteria, Range Statement and Evidence Guide. See also Unit[s] of Competency.
<b>Competency standard unit</b>	Also see Unit of Competency
<b>Critical aspects of competency</b>	A statement in a Unit of Competency that provides clear meaning as to what is to be achieved in the assessment process.
<b>Currency of evidence</b>	Evidence that is relevant to what is outlined in competency units and not outdated or irrelevant.
<b>Dimensions of competency</b>	<p>The concept of competency includes all aspects of work performance and not only narrow task skills. The four components of competency are:</p> <ul style="list-style-type: none"> <li>• task skills</li> <li>• task management skills</li> <li>• contingency management skills</li> <li>• job/role environment skills.</li> </ul>
<b>Electronic Profiling</b>	An innovative electronic based logbook system used by apprentices to record, and report on their workplace activities. A specially designed data entry card is used to capture work experiences (e.g. weekly) against industry approved competency standards and reported against industry-defined benchmarks. <i>See</i> Section 3.5 Assessment Processes within the Electrotechnology Industry and section Appendix A — Enclosure A11 Contracted entry level Profiling Model.
<b>Element of</b>	The basic building block of the Competency Standard Unit. Elements describe the tasks that make up the broader function or job described

Term	Definition/Explanation
<b>Competency</b>	by the unit.
<b>Essential Knowledge and Associated Skills clauses</b>	EKAS clauses provide the content specifications that must be achieved by learners in terms of the body of essential knowledge and associated skills.
<b>Essential Knowledge and Associated Skills learning specification</b>	EKAS learning specification is specific learning content that is complete in itself and expands on the Competency Standard Units EKAS clauses in terms of depth and breath. It may underpin many, few or one Competency Standard Unit(s). It covers one or more aspects of knowledge and skills. An EKAS LS can be separately delivered and assessed with percentage achievement reporting, and may be linked with other EKAS LSs for delivery purposes in the same discipline area.
<b>Evidence / quality evidence</b>	<p>Evidence is information gathered which, when matched against the performance criteria, provides proof of competency. Evidence can take many forms and be gathered from a number of sources. Assessors often categorise evidence in different ways for example:</p> <ul style="list-style-type: none"> <li>• direct, indirect and supplementary sources of evidence</li> <li>• evidence collected by the candidate or evidence collected by the assessor</li> <li>• historical and recent evidence collected by the candidate and current evidence collected by the assessor.</li> </ul> <p>Quality evidence is valid, authentic, sufficient and current. It enables the assessor to make the assessment judgement.</p>
<b>Evidence gathering techniques</b>	Evidence gathering technique means the particular technique or method used to gather different types of evidence. This may include methods or techniques such as questioning, observation, third party reports, interviews, simulations and portfolios.
<b>Evidence Guide</b>	Evidence Guide is part of a Competency Standard Unit. Its purpose is to guide assessment of the unit in the workplace and/or a training environment. The Evidence Guide specifies the context of assessment, the critical aspects of evidence and the required or underpinning knowledge and skills. The Evidence Guide relates directly to the Performance Criteria and Range Statement defined in the Competency Standard Unit.

Term	Definition/Explanation
<b>Fairness</b>	See section 3.4.1 Assessment Principles
<b>Flexibility</b>	See section 3.4.1 Assessment Principles
<b>Holistic / integrated assessment</b>	An approach to assessment that covers the clustering of multiple units/elements from relevant competency standards. This approach focuses on the assessment of a ‘whole of job’ role or function that draws on a number of units/elements of competence. This assessment approach also integrates the assessment of the application of knowledge, technical skills, problem solving and demonstration of attitudes and ethics.
<b>Industry Skills Council/Industry Training Advisory Bodies (ITABs)</b>	National bodies comprising representation from the industry parties responsible for the development, review, implementation, and providing advice on qualifications scopes and competency standards in given industries.
<b>Module</b>	A specific learning segment that is complete in itself. It deals with one or more aspects of knowledge and skills. A module is separately delivered and assessed and may be linked with other modules in the same study area and aligned to a competency standard unit(s).
<b>Australian Apprenticeship Centre</b>	An organisation who provides information on apprenticeships, traineeships and the related qualifications and processes.
<b>Portfolio</b>	See section 3.5 Assessment Processes in the Electrotechnology Industry.
<b>Profiling</b>	See section 3.5 Assessment Processes in the Electrotechnology Industry.
<b>Performance Criteria</b>	Evaluative statements which specify what is to be assessed and the required level of performance. The Performance Criteria specify the activities, skills, knowledge and understanding that provide evidence of competent performance for each Element Of Competency.

Term	Definition/Explanation
<b>Qualification</b>	Qualification means, in the vocational education and training sector, the formal certification, issued by a Registered Training Organisation under the Australian Qualifications Framework, that a person has achieved all the requirements for a qualification as specified in an endorsed Training Package or in an Australian Qualifications Framework accredited course where no relevant Training Package exists.
<b>Range Statement</b>	Part of a competency standard, which sets out a range of contexts in which performance can take place. The range helps the assessor to identify the specific industry or enterprise application of the Competency Standard Unit.
<b>Reasonable adjustment</b>	The nature and range of adjustment to an assessment tool or assessment method which will ensure valid and reliable assessment decisions but also meet the characteristics and background of the person(s) being assessed.
<b>Recognition [Recognition of Prior Learning, Recognition of Current Competency and Skills Recognition]</b>	Recognition is a term that covers Recognition of Prior Learning, Recognition of Current Competency and Skills Recognition. All terms refer to recognition of competencies currently held, regardless of how, when or where the learning occurred. Under the Australian Recognition Framework, competencies may be attained in a number of ways. This includes through any combination of formal or informal training and education, work experience or general life experience. In order to grant recognition of prior learning/current competency the assessor must be confident that the candidate can present evidence that he or she is currently competent against the endorsed industry or enterprise competency standards or outcomes specified in Australian Recognition Framework accredited courses. The evidence may take a variety of forms and could include certification, references from past employers, testimonials from clients and work samples. The assessor must ensure that the evidence is authentic, valid, reliable, current and sufficient.
<b>Records of assessment</b>	The information of assessment outcomes that is retained by the Organisation that is responsible for issuing the nationally recognised Statement of Attainment or qualification.
<b>Registered Training Organisation</b>	Registered Training Organisation (RTO) means a training organisation registered in accordance with the Australian Recognition Framework, within a defined scope of registration (refer definition

Term	Definition/Explanation
<b>(RTO)</b>	Scope of Registration).
<b>Reliability</b>	See section 3.4.1 Assessment Principles
<b>Sampling</b>	See section 3.5 Assessment Processes in the Electrotechnology Industry.
<b>Statement of Attainment</b>	Statement of Attainment means a record of learning, recognised under the AQF, which although falling short of an AQF qualification, may contribute towards a qualification outcome, either as attainment of competencies within a Training Package, partial completion of an AQF accredited course leading to a qualification, or completion of a nationally accredited short course which may accumulate towards a qualification through Recognition of Prior Learning processes.
<b>Sufficiency of evidence</b>	See section 3.4.3 Assessment Judgments
<b>Training Package</b>	Training Package means an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework qualifications for a specific industry, industry sector or enterprise.
<b>Training Agreement</b>	An agreement outlining the training and assessment which forms part of an Australian Apprenticeship Training Contract and is registered with the relevant State or Territory Training Authority.
<b>Training Plan</b>	Training Plan means a program of training and assessment which forms part of an Australian Apprenticeship/traineeship Training Contract and is registered with the relevant State or Territory Training Authority.
<b>Transcript of results — statement</b>	List of candidate's modules/subjects/ EKAS learning specifications completed as part of a Competency Standard Unit(s) or qualification.
<b>Unit(s) of Competency / Competency standard units</b>	Competency Standard Unit means the specification of knowledge and skill and the application of that knowledge and skill to the standard of performance required in the workplace. Competency Standard Units define the outcomes for training delivery and assessment and lead to

Term	Definition/Explanation
	the issuing of Australian Qualifications Framework qualifications and Statements of Attainment. See also <i>Competency Standard</i> .
<b>Validity</b>	See section 3.4.1 Assessment Principles
<b>Validation</b>	Validation involves reviewing, comparing and evaluating assessment processes, tools and evidence contributing to judgements made by a range of assessors against the same standards. Validation strategies may be internal processes with stakeholder involvement or external validations with other providers and/or stakeholders.

## 2.1 Preliminary Information and Glossaries

### Preliminary Information

Qualifications and Competency Standard Units in this Training Package are found within Volume 1 and Volume 2. The parts however must all be read in conjunction with each other for the purposes of developing learning and assessment resources. Users should refer to Volume 1, Part 1 for Qualification Frameworks and structures.

The Competency Standard Units for the Electricity Supply Industry (ESI) Transmission, Distribution and Rail sectors are found in Volume 2, Part 2. To fully apply the Competency Standard Units, other relevant parts of the Training Package must be applied as well. These are the:

- Glossary of ESI Terms (Volume 2, Part 1)
- Essential Knowledge and Associated Skills (Volume 2, Part 2)

The Definitions/Glossary of Terms is a major section of the Electricity Supply Industry (ESI) Training Package and is to be used in conjunction with the Competency Standard Units. Section 7 of each Competency Standard Unit lists a range of variables — the Range Statement. These, as well as other Electricity Supply Industry (ESI) terms, are explained in the Glossary of Terms.

In addition, the National Occupational Health and Safety Commission Glossary of Terms has been included. Users will find definitions here that clarify any Occupational Health and Safety specific terms. Where a term in the glossary is followed by a number, e.g. *Tools and equipment (2)*, the number indicates the AQF level.

Volume 2, Part 2 contains Competency Standard Units and the Essential Knowledge and Associated Skills (EKAS). The Competency Standard Units refer to the Knowledge and Associated Skills in the respective section of each Competency Standard Unit. As with the Definitions/Glossary, users should apply the requirements found in the Essential Knowledge and Associated Skills section for an outline of what is defined.

The Essential Knowledge and Associated Skills are detailed separately from the Competency Standard Units make the package easier to interpret and apply. Each Competency Standard Unit has listed within its Essential Knowledge and Associated Skills section a unique clause number and title. Further specific information to be covered is elaborated in Volume 2, Part 2.2.1. This separate Essential Knowledge and Associated Skills forms an integral part of each Competency Standard Unit, and all assessment evidence activities and reporting processes are to incorporate this specification.

## 1.1 Definitions/Glossary

### Scope

The Competency Standard Unit described in this Part of the Training Package covers Competency Standard Units for the ESI – Transmission, Distribution and Rail sector. The terms are not to be considered a definitive list but should give a clearer understanding of the meaning of the term and the range of a Unit of Competency in which the term is contained. These terminologies do not necessarily reside in States/Territories and can vary between States/Territories.

### Application

The information contained in each Competency Standard Unit includes the intended use of the unit for assessment and a training program(s).

### Regulations

The work functions described by Competency Standard Units in this Training Package may be subject to statutory regulations. Where this is the case the particular regulations will depend on local jurisdictions and knowledge, and application of such regulations within the scope of the unit will be an aspect of evidence in deeming a person competent.

### Reference documents

Each part of the Training Package will include a list of reference documents. These are a component of competency, which assist in developing training programs, and assessing competency. Reference documents include relevant legislation, regulation, industrial instruments, codes of practice, guidelines and advisory standards and policies. Examples may include industry preferred training and assessment models, anti-discrimination and equal employment opportunity statutes encompassing application of access, equity and cultural diversity principles associated with under-represented groups.

### Definitions of ESI – Transmission, Distribution and Rail Sector Terms

The definitions of terms form an integral part of respective parts of this Training Package.

Term	Definition/Explanation
<b>Analyse</b>	To examine and investigate data on information
<b>Anchor</b>	Rail traction specific term. Has the catenary and/or contact wire/trolley wire anchored to it, which is secured by guys or specially designed to withstand the load of the wires.
<b>Anchor arrangement</b>	Rail traction specific term. Equipment used to terminate and tension conductors. Includes anchor guy arrangements.
<b>Appropriate and relevant</b>	Organisation employees, contractors, consultants, maintenance persons, appropriately experienced and qualified

<b>Term</b>	<b>Definition/Explanation</b>
<b>persons (see Personnel)</b>	persons, drivers, cleaners, grounds and site security persons, other managers, other supervisors, inter-company departments, other utilities, council representatives, producers, transporters/shippers, consultants, government bodies/agencies, refinery persons, customers, land owners.
<b>Access Authority</b>	Means any form of authorisation, which allows access to work on or near, or for the testing of, apparatus. Refer to NENS 03-2003
<b>Appropriate authorities</b>	May include local councils; road authority; sewage and stormwater authorities; providers of service such as electricity, water and telephones.
<b>Appropriate work platform</b>	Work may be performed from elevating work platform, ladder, portable pole platform, ground or structures.
<b>AQF</b>	Australian Qualifications Framework which describes qualifications in terms of levels characterised by the outcomes of vocational education and training.
<b>Arrangements for dealing with emergency situations</b>	Procedures for dealing with emergency or hazardous situations include evacuation, chemical containment and first aid procedures. Hazardous events include accidents, fire and emergencies such as chemical spills or bomb scares.
<b>Assessing risk</b>	Determining the likelihood and severity of adverse consequences from hazards by means of OHS audits; workplace inspections; maintenance of plant and equipment; purchasing of materials and equipment; planning or implementing alterations to site, operations or work systems; and analysis of relevant records and reports, e.g. injuries and incidents, hazardous substances inventories/registers, audit and environmental monitoring reports and OHS committee records. It also includes hazard and incident reports; workplace inspections; consulting work team members; housekeeping; daily informal team consultation and regular formal team meetings; internal and external audits; industry information such as journal, newsletters and networking.
<b>Assessment</b>	Refers to the process of collecting evidence and making judgements on the extent and nature of progress towards the performance requirements set out in a standard and at the appropriate point making the judgement whether competency has been achieved.
<b>Authorisation</b>	Responsibility assigned for the application of relevant



Term	Definition/Explanation
	management practices to approve measures according to company policies, procedures and processes, legislative and/or regulatory requirements.
<b>Auxiliary feeder/Side Feeder</b>	Rail traction specific term. Feeder conductors that provide for additional current carrying capacity to the overhead wiring.
<b>Cable</b>	A single cable core, or two or more cable cores laid up together, either with or without filings, reinforcements, or protective coverings. Refer to AS/NZS 3000:2000
<b>Cantilever</b>	Rail traction specific term. Rectangular or triangular shaped frames/assemblies consisting of tubes, chains and other hardware to support and register the catenary and contact wires.
<b>Cantilever mast</b>	Rail traction specific term. A mast which supports the tubes, chains and other cantilever components.
<b>Cardiopulmonary Resuscitation (CPR)</b>	CPR (cardiopulmonary resuscitation) — an emergency life-support procedure using a combination of expired air resuscitation and external cardiac compression.
<b>Catenary wire</b>	Rail traction specific term. Multi-stranded copper/steel/aluminium conductor located above the contact wire. It supports the contact wire(s) via droppers.
<b>Circuit breaker</b>	A switch suitable for opening a circuit automatically, as a result of predetermined conditions, such as those of overcurrent or undervoltage, or by some form of external control. Refer to AS/NZS 3000:2000
<b>Communication equipment.</b>	Equipment may include: Fixed radio; Mobile radio; Satellite; SACS controllers; Computer hardware and software; Programmable controllers; Modems; Digital line drivers (low and high speed); Fibre optic line drivers (low and high speed); Radio links including voice link and digital bearer; Wave trap.
<b>Competency Standard Unit(s) see also Unit(s) of competency</b>	Competency standards are made up of a number of Competency Standard Units. These units describe a key function or role in a particular job function or occupation. Each unit identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency, as well as language, literacy and numeracy and Occupational

Term	Definition/Explanation
	Health and Safety requirements. A competency standard unit is usually linked to one or more AQF qualifications.
<b>Complex testing</b>	Complex testing refers to dielectric dissipation factors tests, partial discharge, applied and induced HV tests, CT and VT accuracy tests (calibration), watts loss, ratio confirmation tests, tests on interconnected equipment, sf6 tests.
<b>Compound catenary system</b>	Rail traction specific term. A system which consists of a main catenary, an auxiliary catenary, and a contact wire.
<b>Computerised test equipment work</b>	Computerised test equipment work may include, for example: Secondary injection test sets, primary test sets, insulation test sets, timing test sets, Circuit breaker test sets, magnetic test sets.
<b>Conductor</b>	A wire or other form of conducting material suitable for carrying current, but not including wire or other metallic parts directly employed in converting electrical energy into another form. Refer to AS/NZS 3000:2000
<b>Contact /Trolley wire</b>	Rail traction specific term. A grooved solid copper or copper alloy conductor. Its functions are: To carry current to the vehicle pantographs To provide a mechanically continuous path for pantograph running and current collection.
<b>Contact/Trolley wire only system</b>	Rail traction specific term. A system which consists of a single contact/trolley wire with no catenary wire.
<b>Contributions to OHS</b>	Includes listening to the ideas and opinions of others in the team; sharing opinions, views, knowledge and skills; identifying and reporting risks and hazards; using equipment according to guidelines and operating manuals; behaviour that contributes to a safe working environment which includes following OHS procedures.
<b>Controlling risks</b>	Assessing the OHS consequences of materials, plant or equipment prior to purchase; obtaining expert advice; appropriate application of measures according to the hierarchy of control, and eliminating risk by means of: engineering and administrative controls and personal protective equipment; designing safe operations and systems of work; including new OHS information into procedures; and checking enterprise compliance with regulatory requirements.

Term	Definition/Explanation
<b>Control measures</b>	May include elimination of hazards, work procedures, Standard Operating Procedures, personal protective equipment, fire safety, plant and equipment isolation, training and supervision of appropriate persons, communications with appropriate persons.
<b>Crossing Pan</b>	Tram traction (including heritage) specific term and relates to gunmetal device used to direct a tram collector shoe at locations of crossing trolley wire, and can range from 15-90 degrees.
<b>Current collector shoe</b>	Tram traction (including heritage) specific term and relates to current collecting device fitted to a pole on top of a tram vehicle
<b>De-energised</b>	Means not connected to any source of energy but not necessarily isolated Refer to NENS 03-2003
<b>Diagnostic, testing and restoration</b>	May involve appropriate documentation relating to the protection device; voltage, current and resistance measuring instruments; microprocessor based diagnostic test equipment; laptop computer and diagnostic software; loop control test instruments.
<b>Documenting detail work events, record keeping and or storage of information</b>	All forms of documenting information including, paper based, and electronic (computer) based Related to tasks includes time sheets; requisitions; work sheet/job cards; organisational forms/electronic templates. May include standard operating procedures; OHS and environmental legislative requirements; manufacturer's specifications; Australian Standards; maintenance records; standard operating procedures; OHS and environmental legislative requirements; manufacturers' specifications; codes. May also include coordinated maintenance plans and/or strategies, maintenance scheduling documents, budgets, reports, submissions, cost benefit risk assessments and work plans and/or other developments
<b>Down Track</b>	Rail traction specific term. This is the track on which the normal train/tram running is away from a specified datum station or location.
<b>Drawings and specifications</b>	May include instrument electrical drawings; circuit diagrams; component charts; wiring diagrams; site layout drawings.

<b>Term</b>	<b>Definition/Explanation</b>
<b>Droppers</b>	Rail traction specific term. Support the contact/trolley wire(s) from the catenary at set intervals
<b>Ear</b>	Tram traction (including heritage) specific term and relates to support the trolley wire at a span and allows the collector shoe to pass unhindered.
<b>Earthed</b>	Means connected to the general mass of earth by a conductor to ensure and maintain the effective dissipation of electrical energy. Refer to NENS 03-2003
<b>Elastic/Resilient fitting</b>	Tram traction (including heritage) specific term and relates to trolley wire support fittings designed to provide a resilient passage to the collector shoe or pantograph and can be single or double pendulums, steady arms, delta suspension or similar.
<b>Electrical equipment</b>	Wiring systems, switchgear, controlgear, accessories, appliances, luminaries and fittings used for such purposes as generation, conversion, storage, transmission or utilisation of electrical energy. Refer to AS/NZS 3000:2000
<b>Electrical infrastructure</b>	Equipment and systems for supplying and distributing electricity.
<b>Electrical operating work</b>	Means work involving the operation of switching devices, links, fuses or other connections intended for ready removal or replacement, proving electrical conductors de-energised, earthing and short-circuiting, locking and tagging of electrical apparatus and erection of barriers and signs. Refer to NENS 03-2003
<b>Energised</b>	Means connected to any source of energy. Refer to NENS 03-2003
<b>ERAC</b>	Electrical Regulatory Authorities Council ERAC is the council responsible for the liaison between the technical and safety electrical regulatory authorities of eight Australian States/Territories and New Zealand. Website <a href="http://www.erac.gov.au/">http://www.erac.gov.au/</a>
<b>Environmental and Sustainable Energy Procedures</b>	Environmental and Sustainable Energy procedures as laid out in the appropriate environmental legislation and may include relevant federal legislation; relevant state/territory legislation; relevant local government by-laws; relevant government or

Term	Definition/Explanation
	<p>quasi government policies and regulations; relevant community planning and development agreements, e.g. land care agreements.</p> <p>Sustainable Energy Practice refers to workplace actions that contribute to the reduction of greenhouse gases. Sustainable Energy Practice is closely related to the 'environment'.</p> <p>Sustainable energy practice aims to reduce the amount of wastage in electricity and other forms of energy that lead to the production of greenhouse gases. Many of the principles and practices that apply in the workplace also apply in the home and the general environment. These include:</p> <ul style="list-style-type: none"> <li>• examining work practices that may use excessive electrical energy;</li> <li>• reducing energy by using energy efficient machines and appliances (e.g. star ratings);</li> <li>• switching off devices such as lights, machines and computers when not in use;</li> <li>• using power-save devices, such as those incorporated in photocopiers, business machines;</li> <li>• replacing incandescent lamps with compact fluorescent lamps;</li> <li>• using natural light to replace artificial light;</li> <li>• regularly cleaning air conditioner filters;</li> <li>• closing windows and doors when climate control units are used;</li> <li>• insulating dwellings, offices and workplaces and preventing draughts;</li> <li>• using reflective curtains to control heat; using natural or artificial shade to control sunlight;</li> <li>• using solar water heating;</li> <li>• using automatic processes to manage energy usage;</li> <li>• reusing materials used in construction, engineering and manufacturing;</li> <li>• recycling waste materials;</li> <li>• driving motor vehicles and other machines with care;</li> <li>• using natural gas for heating rather than oil or coal based fuels;</li> <li>• using devices to reduce water usage;</li> <li>• checking for leakage in hot water system pressure relief valves and elsewhere in plumbing systems;</li> <li>• sharing information about energy conservation with other workers.</li> </ul>

Term	Definition/Explanation
<b>Environmental legislation</b>	Environmental legislation may include Relevant federal legislation; relevant state/territory legislation; relevant local government by-laws; relevant government or quasi government policies and regulations; relevant community planning and development agreements (e.g. land care agreements)
<b>Environmental management documentation</b>	Environmental management documentation may include information on applicable environmental laws or other requirements; complaint records; training records; process information; process operational log books; inspection, maintenance and calibration records; relevant contractor and supplier information; incident reports; information on emergency preparedness and response; records of significant environmental impacts; audit results; management reviews
<b>Equipotential bonding</b>	Special electrical connections intended to bring exposed conductive parts or extraneous conductive parts to the same or approximately the same potential, but not intended to carry current in normal service. Refer to AS/NZS 3000:2000
<b>Established procedures</b>	May include formal arrangements of an organisation, enterprise or statutory authority of how work and safe systems of work are to be done. These may include quality assurance systems such as manufacturers' manual/specifications, requirements and procedures, work orders/instructions reporting procedures; improvement mechanisms; technical standards; compliance requirements; safety management. Work clearance systems such as work permits and/or access authorisation permits; monitoring and clearance procedures; isolation procedures; authorisation; OHS practices and emergency response and evacuation procedures; Procedures for operating safety systems, operating plant and equipment and reporting work activities; Maintenance, modification or supply of relevant schematic drawings and technical data; Arrangements for dealing with emergency situations.
<b>Essential knowledge and associated skills (EKAS) learning specification (LS)</b>	Provide specific advice in facilitating consistency and reliability in resource development and delivery. The learning specifications are premised on the separate content of the

Term	Definition/Explanation
	<p>essential knowledge and associated skills section of the expanded Volume 2 - Essential Knowledge and Associated Skills clauses, which are referred to in each Competency Standard Unit.</p> <p>The specifications are designed to:</p> <ul style="list-style-type: none"> <li>• Provide the depth and breadth of essential knowledge and associated skills to be learned</li> <li>• Ensure they support the needs of the workplace</li> <li>• Contain assessment strategies, including a table of specifications, to increase validity, reliability and fairness</li> <li>• Detail the resources required for satisfactory delivery in the learning environment</li> <li>• Provide clarification regarding the type and quantity of evidence needed for assessment purposes</li> <li>• Support a variety of delivery modes (e.g.: face-to-face, distance, computer assisted learning or other)</li> <li>• Provide content and structure that maximizes learning retention</li> <li>• Provide a clear purpose statement about their relationship to the overall educational program</li> </ul>
<b>Exposed conductor</b>	<p>Means an electrical conductor, approach to which is not prevented by a barrier of rigid material or by insulation that is adequate under a relevant Australian Standard specification for the voltage concerned.</p> <p>Refer to NENS 03-2003</p>
<b>Fall Prevention</b>	<p>Safe Work Practices that effectively control all access to, egress from, transfer between structures and working at height where the fall potential is greater than 2 metres either above or below ground level.</p> <p>Assurance that the risk of someone falling from a height is controlled by at least one of the following measures: scaffolding (securely fenced work platform) physical barriers such as perimeter screens or fencing physical restraints such as catch platforms or safety nets fall arrest devices.</p> <p>Assurance that objects do not fall on people. An employer must provide a safe way of raising and lowering debris, materials and plant.</p> <p>Secure physical barriers must be used to prevent objects falling from buildings or structures. If it is not possible to provide a secure physical barrier, the employer must provide something which arrests the fall of an object. Safety helmets must be provided if there is no secure physical barrier.</p> <p>Assurance that scaffolding is erected and dismantled in</p>

Term	Definition/Explanation
	<p>accordance with Australian Standard AS 1576.1 - 1995. Access must be prevented if the scaffold is incomplete or unattended. If a person could fall more than 4 metres from a scaffold, an employer must ensure that a competent person inspects the scaffold before it is used. Unsafe scaffold must be repaired or altered before use. The scaffold must be reinspected every 30 days, or whenever it has been repaired, or whenever there are changes that may affect the scaffold - such as severe storms. These provisions are based on the National Standard for Plant.</p> <p>Assurance that a person working in a lift well is protected from objects and movement of the lift car. This includes providing a safe working platform, adequate protection decking and a suitable means of access to the work. These provisions are based on the National Standard for Plant.</p> <p>An employer must ensure that permanent walkways are provided on brittle or fragile roofs to protect someone from falling. If this is not possible, they must provide temporary walkways or other methods of fall prevention.</p> <p>Assurance that people maintaining buildings, including when cleaning windows, are protected from falls. This includes providing safe access and appropriate fall arrest devices.</p>
<b>Feeder</b>	Rail traction specific term. Provide traction supply from substations and section huts/tie stations.
<b>First Aid</b>	Initial care or treatment of an injured or sick person, given as an emergency measure until the services of medically qualified personnel can be obtained. First aid measures are designed to preserve life, promote recovery and prevent the injury or illness from becoming worse. Occupational Health and Safety legislation usually covers first aid requirements in employment. For the purpose of the Electricity Supply Industry, First Aid includes cardiopulmonary resuscitation or CPR.
<b>Floating</b>	Rail traction specific term. Insulated from earth, rail and all sources of supply but where failure of such insulation may result in becoming live.
<b>Frog</b>	Tram traction (including heritage) specific term and relates to gunmetal device used to direct a tram collector shoe at locations of diverging trolley wire at track turnouts
<b>Frog leg</b>	Tram traction (including heritage) specific term and relates to span or leg used to provide tension to the trolley wire anchoring at the frog. Also provides registration and



Term	Definition/Explanation
	alignment for the frog
<b>Hanger</b>	Tram traction (including heritage) specific term and relates to supports the trolley wire ear to the span wire
<b>Height measuring stick</b>	Insulated stick, approved & tested, for measuring the height of aerial conductors or equipment. They are usually telescopic with the lower section being hollow.
<b>Hazards</b>	<p>Something with the potential to cause injury and disease to persons, property or disruption to productivity. Hazards arise from workplace environment; use of equipment; poor work design; inappropriate systems, procedures and or human behaviour.</p> <p>May include confined spaces, electricity, gas, manual handling, noise, plant and equipment, infected blood, chemicals, temperature extremes, lightning and radiation. Making inventories of, and inspecting, high risk operations; and inspecting systems and operations associated with potentially hazardous events, for example, emergency communications, links to emergency services, fire fighting, chemical spill containment, bomb alerts and first aid services. Confined spaces, gas, electricity, manual handling, noise, plant and equipment, infected blood, chemicals, temperature, lighting, radiation.</p>
<b>Identifying hazards</b>	Workplace inspections, including plant and equipment; audits; maintaining and analysing Occupational Health and Safety records, including environmental monitoring and health surveillance reports; maintenance of plant and equipment; reviews of materials and equipment purchases, including manufacturers and suppliers information; and employee reporting of Occupational Health and Safety issues.
<b>Impedance bond</b>	Rail traction specific term. May be found in the train electrified rail system in both single or double rail arrangements and is there to provide DC traction return current path around insulated rail joints of the signalling track circuits.
<b>Incidents of environmental impact</b>	Incidents of environmental impact may include 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; extraction of water; changes to water temperature; changes to water salinity; regulation of flow; land use; and may involve the implementation of emergency

Term	Definition/Explanation
	responses
<b>Inspan Feeder</b>	Rail traction specific term. Carry current between the catenary and contact wires and minimise the current flow in droppers by providing a low resistance path between the wires.
<b>Inspect</b>	To examine or check a system, assembly, component or part by visual or physical means, for the purpose of identifying defects or limits
<b>Insulated</b>	Separated from adjacent conducting material by a non-conducting substance or airspace permanently providing resistance to the passage of current, or to disrupt discharge through or over the surface of the substance or space, to obviate danger of shock or injurious leakage current. Refer to AS/NZS 3000:2000
<b>Isolated</b>	Means disconnected from all possible sources of energy by means that prevent unintentional energisation of the apparatus of the apparatus and that are assessed as a suitable step in the process of making safe for access purposes. Refer to NENS 03-2003
<b>Learning Specification (LS)</b>	See Essential knowledge and associated skills (EKAS) learning specification (LS)
<b>Jumpers</b>	Provide electrical connection between two wires.
<b>Knuckles</b>	OHW components to positively locate or position two adjacent conductors relative to each other.
<b>Legislation</b>	Includes relevant sections of Federal and State OHS and Environmental Protection Acts. Government acts and regulations; Australian Standards and Codes of Practice; environmental legislative requirements. May also include; State or Territory acts and regulations; workers compensation legislation; employee code of conduct; anti discrimination legislation; equal employment opportunity legislation; disability legislation; trade practices legislation; native title legislation; related regulations; common law.
<b>Life Plan evaluations</b>	Life Plan evaluations usually relate to systems involving: Manufacturer's recommendations; reliability performance profiles; knowledge of local history and experience; consultation with other Authorities; environmental influences; present practices.

<b>Term</b>	<b>Definition/Explanation</b>
<b>Live</b>	Means energised or subjected to hazardous induced or capacitive voltages. Refer to NENS 03-2003
<b>Live work</b>	Means all work performed on components of electrical apparatus, not isolated, proved de-energised and earthed. Refer to NENS 03-2003
<b>MSDS</b>	Material Safety Data Sheets Information and handling of chemicals/flammable liquids are involved.
<b>Maintenance and or modification procedures</b>	Maintenance is performed at defined intervals to retain a system, component or part in a serviceable condition by systematic inspection, detection, replacement of worn-out items, adjustment, calibration or cleaning, etc Maintenance may include: Warranty inspections and repairs; routine inspections/examinations; preventative maintenance; condition monitoring processes and procedures; minor/major overhauls requirements; retirement/scraping evaluations; diagnosis and repair of faults. Maintenance tasks will generally be carried out under access permits and in proximity to energised HV and LV conductors and equipment.
<b>Management of projects</b>	Projects may include: the modification to existing equipment and associated circuits, for example: existing secondary circuits and or installation/replacement of primary and secondary apparatus
<b>Mast Labels</b>	Used to identify overhead wiring structures by showing an alpha &/or numeric code which indicates the location of the structure. It can indicate the Line and the distance of the structure from a nominated datum point.
<b>Mast/Pole</b>	Rail traction specific term. A vertical structure that supports the overhead traction wiring. They are normally galvanised rolled steel section, but can be fabricated steel, concrete or timber.
<b>Near</b>	Means a situation where there is a reasonable possibility of a person, either directly or through any conducting medium, coming within the relevant safe approach distances. Refer to NENS 03-2003

Term	Definition/Explanation
<b>Negative bus</b>	A metal bar, insulated from earth, for the termination of negative cables.
<b>Notification</b>	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 established procedures.
<b>OHS practices</b>	In accordance with all relevant OHS legislation, particularly: general duty of care; requirements for maintenance and confidentiality of records of occupational injury and disease; provision of information and training; regulations and codes of practice relating to hazards present in work area; health and safety representatives and OHS committees; issue resolution.
<b>OHS issues</b>	<p>That could be raised by workers or designated persons include hazards identified; problems encountered in managing risks associated with hazards; clarification on understanding of OHS policies and procedures; communication and consultation processes; follow up to reports and feedback; effectiveness of risk controls; training needs.</p> <p>Issues can also be raised at Occupational Health and Safety committees and other committees, for example, consultative, planning and purchasing; health and safety representatives; employee and supervisor involvement in Occupational Health and Safety management activities, for example, Occupational Health and Safety inspections, audits, environmental monitoring, risk assessment and risk control; procedures for reporting hazards, risks and Occupational Health and Safety issues by managers and employees; and inclusion of Occupational Health and Safety in consultative or other meetings and processes.</p>
<b>OHW rail connection stick</b>	Rail traction specific term. A specific type of operating stick used for rail connecting, testing and bridging both live and isolated traction overhead wiring conductors or equipment. With regards to trams this item would possibly be associated with Contract/Trolley – Rail Short-circuit using standard clamps and operating sticks.
<b>Operational environment.</b>	An operational environment may include the area where work is carried out or an area remote from the plant and equipment; Operation may be assisted by remote indicators of plant and apparatus status; Operation may be affected by inclement or otherwise harsh weather conditions and/or during night periods.

Term	Definition/Explanation
<b>Operating Stick (Rod)</b>	An insulated stick, approved & tested, used for operating or working on live high voltage conductors, traction conductors or equipment.
<b>Out of Commission</b>	Means the condition of electrical apparatus which is not electrically connected and declared to be so in writing to the operating authority responsible for the electrical apparatus.
<b>Overhead line (or aerial line)</b>	Means any aerial conductor or conductors with associated supports, insulators and other apparatus erected, or in the course of erection, for the purpose of the conveyance of electrical energy. Refer to NENS 03-2003
<b>Overhead wiring (OHW)</b>	Rail traction specific term. All traction overhead wires and associated equipment that normally conducts, isolates or may be energised including contact/trolley wires, catenary, feeders and switching, tensioning and support equipment.
<b>Overlap arrangements/air gaps</b>	Rail traction specific term. The OHW arrangement between two anchor structures, where two adjoining OHW runs overlap and terminate.
<b>Over-run protection</b>	Rail traction specific term. Arrangements for minimising damage to pantographs when a train/tram enters an unwired section from a wired section.
<b>Pantograph</b>	Rail traction specific term. An apparatus fixed to the roof of electrical traction vehicles to draw current from the overhead supply. In Victoria heritage trams have pole and current collector shoe for the same purpose.
<b>Pennant insulator</b>	Rail traction specific term. Installed in catenary and contact wires in out-of-running locations between wires of different sections. This term is not used in all States/Territories.
<b>Permits and/or permits to work</b>	The permit to work is an authorisation for an individual to work to a schedule or in required activities and functions associated with the Electricity Supply Industry. Include any documents or forms approved for use by enterprise safety rules and permit to work procedures. Permits include electrical access permits, vicinity authorities, contractors' authorities, clearances and testing authorities, trip isolation sheets, statement of condition of equipment and plant (SCAP), permit to work and work plans.

Term	Definition/Explanation
<b>Personnel</b>	May include individuals with responsibilities for coordination, design, installation, maintenance, production or servicing activities such as: site managers, project managers, engineers and technicians, technical experts, line managers/supervisors, regulatory personnel, team leaders, other personnel designated by an organisation or enterprise.
<b>Personal protective equipment</b>	Means protective clothing, equipment or a combination thereof that is worn by a person for protection against electrical hazards. Refer to NENS 09 - 2004
<b>Pre-commissioning</b>	Refers to the installation, maintenance, fault finding and/or repair to a new or existing electricity network equipment, where a new section is being added and is de-energised, or has been de-energised by appropriate personnel for augmentation to an existing Network, to be undertaken in accordance with requirements and established procedures. It includes the checking and testing of the equipment or circuits for integrity and performance at the completion of the work before it is handed over for re-energisation/energisation. Conducting full commissioning or return to service procedures of the equipment or circuits to the Network must be undertaken by appropriate personnel, authorised to undertake this function according to requirements and established procedures.
<b>Primary equipment</b>	Primary equipment may include: transformers, switchgear, secondary circuits, SCADA remote terminals, Programmable Logic Controllers (PLC), electrical control and meter/alarm circuits, protection control equipment, secondary electronic equipment and communication systems.
<b>Procedures for operating safety systems, operating plant and equipment and reporting work activities.</b>	In accordance with workplace procedures for: risk assessment and management; inspection; housekeeping; consultation processes, either general or specific to OHS training and assessment; specific hazard policies and procedures; OHS information; OHS record keeping; maintenance of plant and equipment; purchasing of supplies and equipment counselling/disciplinary processes.
<b>Pull Off arrangements</b>	Rail traction specific term. Arrangements that hold the catenary and contact wires in their horizontal position, but are not intended to support the weight of wires.
<b>Pull Off Mast</b>	Rail traction specific term. Does not support the wiring, but

Term	Definition/Explanation
	pulls the wires to the correct location with respect to the track.
<b>Quality assurance systems</b>	Examples: specifications, requirements and procedures, work orders/instructions, reporting procedures, improvement mechanisms, compliance requirements and or safety management.
<b>Rail bond</b>	Rail traction specific term. A cable fixed across a break or joint in one rail, or between two rails &/or tracks to provide a path for traction return current or track circuits.
<b>Rail connected or rail connection</b>	Rail traction specific term. An approved connection of the traction OHW to the negative return rail (traction rail), to ensure the immediate effective discharge of electrical energy from the traction OHW equipment to rail in the event of equipment concerned being, or becoming, live.
<b>Refresher Training</b>	A competency confirmation event which may include training, the purpose of which is to compensate for or prevent deterioration in a previously achieved standard of performance.
<b>Relevant switching programs</b>	May include operations where HV and LV isolations are required to isolate a work area, operations where switching involves multiple and interconnecting network feeders, commissioning isolating/paralleling zone and/or terminal substation equipment, transmission and/or distribution systems, bus sections, and transformers.
<b>Requirements</b>	Requirements relate to that to which equipment and procedures and their outcomes must conform and include statutory obligations and regulations and standards called-up by legislation or regulations. Requirements may also include: statutory regulations, codes of practice, job specifications, transport documentation, standards called-up in specifications be they Australian/New Zealand or International, procedures and work instructions, quality assurance systems, manufacturers' specifications, maintenance manuals, schedules and specifications/standards for network distribution systems, substation schedules, switching schedules, circuit/cable schedules, design specifications including resource estimating models, customer/client requirements, and specifications, specified essential knowledge and skills as stated under clause 6.1 in a unit's Evidence Guide, street survey plans and relevant maps.

Term	Definition/Explanation
<b>Safe approach distance</b>	Means the minimum separation in air from an exposed conductor that shall be maintained by a person, or any object (other than insulated objects designed for contact with live conductors) held by or in contact with that person. Refer to NENS 03-2003
<b>Safety observer</b>	Means a person competent for the task and specifically assigned the duty of observing and warning against unsafe approach to electrical apparatus or other unsafe conditions. Refer to NENS 03-2003
<b>Safe Design Principles</b>	<p>Safe Design principles encompassing:</p> <ul style="list-style-type: none"> <li>• Safe Design Duty related information</li> <li>• This information provides the legal motivation for engagement in the safe design process. Some examples include legislative obligations of ‘designers’, application of relevant national standards and codes of practice for ESI, upstream obligation bearer prosecution cases, and common law cases.</li> <li>• Safe Design Process (or problem specific) related information</li> </ul> <p>This information should include material that provides guidance about how generally to go about the safe design process. It is expected that some examples will be available from workplace safety including some specific industries. Parallel examples might be available on other fields such as product safety.</p> <ul style="list-style-type: none"> <li>• Safe Design evaluations</li> </ul> <p>From a preliminary review of industry stakeholder, client and customer feedback, evaluations of safe design initiatives are likely to be important in order to provide justification for safe design. This material may also provide examples of financial effects, cost benefit analysis etc of safe design.</p> <p>Note: A useful resource in this area will be the proposed <i>NOHSC Safe Design Guide</i> due out in late 2004.’</p>
<b>Section hut or tie station (also known as track section cabin)</b>	Rail traction specific term. A building generally located between substations containing circuit breakers providing protection and sectioning of the overhead traction supply system and, on multiple tracks, for improving voltage regulation.



<b>Term</b>	<b>Definition/Explanation</b>
<b>Section insulator</b>	Rail traction specific term. Separates two electrical sections in a contact/trolley wire run, while maintaining smooth and secure passage of vehicle pantographs.
<b>Short-circuit, short-circuited</b>	The connection by a low resistance path between two or more points in an electrical circuit. In the DC traction system a connection by an approved device between the positive conductor of traction voltage apparatus to rail or rail-connected negative conductor of the apparatus.
<b>Simple catenary system</b>	Rail traction specific term. A system which consists of one or two catenary wire(s) supporting one or two contact wire(s).
<b>Span/Span network</b>	Tram traction (including heritage) specific term and relates to steel or insulated rope (parafil) support wire or wire network to provide support and registration for the trolley wire
<b>Specialist tools</b>	LV detectors, LV polarity testers and LV phase rotation indicators, HV phasing sticks, HV link sticks, HV line clamp operating sticks, HV ground transformer isolating handles and associated earths, HV operating earths, HV detectors and voltmeters.
<b>Substation</b>	Means a switchyard, terminal station or place at which high voltage supply is switched, converted or transformed. Substations include the following – traction substations, transformer rooms, switch rooms, section huts, pole-mounted or pad-mounted transformers which contain high-voltage electrical equipment Refer to NENS 03-2003
<b>Superelevation (or cant)</b>	Rail traction specific term. Where curves occur on the track the rail on the outside of the curve may be higher than the inside rail to counteract the centrifugal force of the vehicle on the bend. This difference in the rail height is called superelevation. The amount of superelevation depends on the radius of the curve and the usual speed of the vehicles and constraints such as road profiles for street based rail systems.
<b>Support and registration arrangements</b>	Equipment that supports and holds the conductors in their designed positions.
<b>Support structures/spans or networks</b>	Structures/spans or networks on which the support and registration arrangements are mounted.
<b>Surge arresters/diverters</b>	Equipment for suppressing electrical surges travelling along

Term	Definition/Explanation
<b>or Lightning arresters</b>	the OHW conductors.
<b>Switchgear</b>	<p>Equipment for controlling the distribution of electrical energy or for controlling or protecting circuits, machines, transformers, or other equipment.</p> <p>Includes: HV/LV fuses, LV links and bridges; HV reclosers, ring main units, circuit breakers, isolators, earth switches, sectionalisers, HV links, air break switches, capacitor banks, transformer tap changes (on and off load) metering and protection equipment and data communication systems, voltage regulators, reclosers.</p> <p>Refer to AS/NZS 3000:2000</p>
<b>Tension regulator</b>	<p>An arrangement for maintaining constant tension in the overhead wiring conductors. It can do this by attaching the conductor, via a galvanised wire rope through a pulley system, to a track of steel or concrete weights at the end of the wire run. Tension regulation can also be achieved using spring systems.</p>
<b>Testing and recording equipment</b>	<p>Testing and recording equipment could include: Digital bearer test equipment; Voice frequency analysers; RF mounting equipment; RF spectrum equipment; Multimeters; Communication testers; Transmission measuring sets; Directional couplers; Laptop computers. Or</p> <p>Infrascan equipment; Phasing equipment; Recording meters; Trend monitoring equipment; Condition monitoring equipment; Diagnostic testing devices using computer hardware and software; Taplon sticks; Insulation and continuity test instruments; Voltage, resistance and current testers; Ductors; Ratio meters; Earth systems testing devices; Capacitor bridge meters; Doble Test sets devices; High voltage alternating current test sets; Scope meters; Clip on ammeters; Test plans for automatic relay testing SCADA systems used for developing and evaluating voltage regulation systems, circuit breaker reclosing systems, VAR's monitoring and similar computer controlled diagnostic testing and recording. Or AC/DC test sets; IR testers; earth resistance meters; cable fault location equipment; circuit breaker timers; recording equipment; devices utilising computer hardware and software; oil dielectric strength equipment; trend monitoring equipment; infrared thermographic equipment; schering bridge; partial discharge test equipment; double insulation test set; primary injection test sets; CT and VT calibration equipment and SF6 leakage testers.</p>

Term	Definition/Explanation
<b>Testing procedures</b>	Tests may include: DC/AC measurements, error, continuity, noise level, return loss, spectrum analysis, radio on receiver sensibility, surveys - mobile phones/pager, end to end, line levels both in and out, transmitter power, transmitter frequency, transmitter deviation, receiver frequency and sensitivity, level and quality of demodulated output - audio/bit error rate, antenna sweep measurements, power and environmental conditions including emergency power plant.
<b>Terminal insulator</b>	Installed between a catenary or contact wire and an anchor structure.
<b>Traction rail/Power rail</b>	Rail traction specific term. Rail that conducts the traction return current. May include multiple rails or may be just one rail, depending on the type of signalling system used in the section and the number of tracks.
<b>Traction return current</b>	Rail traction specific term. The electric current returning from the overhead traction supply to substations.
<b>Transmission medium</b>	Transmission medium may be: Copper cables; Coaxial cables; Optical fibre cables; Radio; Satellite; Microwave.
<b>Unit(s) of competency</b>	See competency standard unit(s).
<b>Up Track</b>	Rail traction specific term. The normal train/tram running towards a specified datum station or location.
<b>Voltage</b>	Differences of potential normally existing between conductors and between conductors and earth as follows: Extra-low voltage: Not exceeding 50V ac or 120V ripple-free dc. Low voltage: Exceeding extra-low voltage, but not exceeding 1000V ac or 1500V dc. High voltage: Exceeding low voltage. Refer to AS/NZS 3000:2000
<b>Vicinity</b>	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.
<b>Work clearance systems</b>	Example: work permits monitoring and clearance procedures and or isolation procedures.
<b>Working earth</b>	Means approved earthing and short-circuiting equipment applied to electrical apparatus, additional to access authority earths, following the issue of an access authority.

Term	Definition/Explanation
	Refer to NENS 03-2003

## 1.2 Glossary of Terms Related to Occupational Health and Safety

This Glossary of Occupational Health and Safety (OHS) Terms has been developed to assist competency developers and writers, reviewers of training packages and those developing any training specification or learning materials for the Vocational Education and Training environment.

In Australia we consider that the rate of workplace fatality, injury and ill-health is far too high. To reduce this toll we need to make some changes in the work place and this requires training to enable business and workers to effectively manage safety.

We must get OHS right in the competency so that the resultant learning contributes to improving the capacity of those in the workplace to manage safety. This applies not only to the 'designated' OHS units but to the integration of OHS, as appropriate, into all competencies, learning programs and learning resources.

The Competency Standard Unit TAADES505A *Research and develop competency standards* specifies the outcomes and the knowledge and skills required to research and develop documents which outline competency requirements for a particular job function, work process, work role or specific vocational outcome. This competency cites four phases in developing a competency:

1. Research the competency area
2. Formulate competency specifications
3. Validate competency specifications
4. Finalise competency specifications.

OHS is a critical aspect of research into the competency area, and also an important aspect of work performance to be integrated within a competency.

As in many technical areas, OHS has its own language. OHS affects all of us, however key words and terms are not always used in a consistent manner and this can lead to confusion. To maximise the effectiveness of our training and education we need to ensure that our use of the OHS language is as consistent and clear as possible.

This glossary is not intended as a definitive dictionary of OHS terms but is designed to be used in the second phase of competency development, formulate the competency specifications. It is also an invaluable tool for those involved in the design and development of learning resources.

Further information on OHS hazards, practical guidance material, standards and codes of practice is available at the National Occupational Health and Safety Commission website at [www.nohsc.gov.au](http://www.nohsc.gov.au)

The glossary is intended to be an evolving and dynamic document and those wishing to comment on the terms or suggest additions or modifications should email the Team Leader of the OHS Skills Development Team at NOHSC.

<b>NOHSC term</b>	<b>Definition/Explanation</b>
<b>Accident</b>	A term that is now considered out of date. Preferred term is <i>incident</i> .
<b>Accountability</b>	The process by which a person with OHS responsibilities is answerable to a higher authority.
<b>Action level</b>	The level at which a risk is considered to be unacceptable and action is required to reduce the level of risk. May be specific such as a noise level at which hearing protection must be worn, a concentration of chemical or more generic.
<b>Action plans</b>	Documented plans developed within the workplace to implement OHS management, which include allocated responsibilities and time frames.
<b>Administrative controls</b>	Management practices that aim to control employees' exposure to specific hazards, and generally improve health and safety – examples include the use of job rotation, job enlargement
<b>ALARA (As Low As Reasonably Achievable)</b>	A basic concept where risks are kept as low as is reasonably achievable. ALARA is determined by reference to established codes and standards and consultation with groups impacted by the decision outcomes including those exposed to the risk.
<b>Anthropometry</b>	The science dealing with the comparative measurement of the size and proportions of the human body, the range of movement of limbs, as used in ergonomics.
<b>Audit</b>	A systematic examination against an agreed benchmark of the approach to managing safety to evaluate an organisation's arrangements for identifying hazards, assessing and controlling risks, and monitoring and improving the effectiveness of the management of OHS and compliance. (Note a workplace inspection is NOT an audit.)
<b>Audit tools</b>	The instruments for collecting evidence and conducting the analysis and evaluation (they are not the same as the audit criteria or benchmark), they may be: <ul style="list-style-type: none"> <li>• developed specifically for the purpose</li> <li>• adapted from existing tools</li> <li>• purchased or accessed from existing tools.</li> </ul>

NOHSC term	Definition/Explanation
	<p>They include:</p> <ul style="list-style-type: none"> <li>• performance checklists</li> <li>• sets of questions to be asked</li> <li>• descriptions of required characteristics to be checked</li> <li>• limitations and instructions for use.</li> </ul>
<b>Authorisation of permit</b>	Signing of permit by competent person.
<b>Biomechanics</b>	The application of mechanics (forces and motion) to analyse body movement and the stresses involved in body posture during movement.
<b>Causative event</b>	Key event that resulted in the particular outcome(s) of injury or damage.
<b>Circumstance</b>	Short-term situation that is relatively unusual, such as a storm or when a key person is absent.
<b>Certification</b>	Refer <i>operator certification</i> .
<b>Common law</b>	Law that is derived from the English legal system and has evolved through judicial decision and practice (case law) that establishes and follows precedent. Note difference to ‘statute law’.
<b>Condition</b>	Permanent situation such as type of equipment, work practice, design of work environment (often different to detect or identify) that may contribute to risk.
<b>Consequence</b>	The injury or damage outcome of an event, which may be expressed quantitatively or qualitatively, there may be a range of possible outcomes for a specific event or scenario.
<b>Confined space</b>	<p>An enclosed or partially enclosed space which:  is at atmospheric pressure during occupancy  is not intended or designed primarily as a place of work, and is liable at any time to:</p> <ul style="list-style-type: none"> <li>- have an atmosphere which contains potentially harmful levels of contaminant</li> <li>- not have a safe oxygen level or</li> <li>- cause engulfment</li> <li>- may have restricted means for entry and exit.</li> </ul> <p>A confined space is determined in part by the hazards associated with a defined set of circumstances (restricted entry or hazardous atmosphere, risk of engulfment) and not just with work performed in a restricted space. Examples include but may not be limited to:</p>

NOHSC term	Definition/Explanation
	<ul style="list-style-type: none"> <li>• storage tanks, tank cars, process vessels, boilers, pressure vessels, silos and other tank-like compartments</li> <li>• open-topped spaces such as pits or degreasers</li> <li>• pipes, sewers, shafts, ducts and similar structures</li> <li>• shipboard spaces entered through a small hatchway or access point, cargo tanks, cellular double bottom tanks, duct keels, ballast and oil tanks and void spaces (but not including dry cargo holds).</li> </ul> <p>A person is deemed to have entered a confined space when their head (i.e. the breathing zone) or upper part of the body is within the boundary of the confined space. (Note that inserting an arm for atmospheric testing is not considered an entry to a confined space).</p> <p>References:  AS/NZS 2865:2001 <i>Safe working in a confined space</i>  Handbook – HB 213:2003 <i>Guidelines for safe working in a confined space</i></p>
<b>Consultative arrangements</b>	<p>State and Territory OHS legislation specifies obligations for workplace consultation. The workplace arrangements to meet these obligations may include:</p> <ul style="list-style-type: none"> <li>• OHS and other consultative and planning committees</li> <li>• health and safety and other employee representatives</li> <li>• employee and supervisor involvement in OHS activities such as inspections and audits</li> <li>• procedures for reporting hazards, and raising and addressing OHS issues</li> <li>• employee and workgroup meetings.</li> </ul> <p>When developing consultative arrangements, consider:</p> <ul style="list-style-type: none"> <li>• language</li> <li>• shift work and rostering arrangements</li> <li>• timing of information and data provision</li> <li>• literacy and numeracy levels</li> <li>• workers with special needs</li> <li>• workplace organisational structures (for example, size of organisation, geographic, hierarchical)</li> <li>• cultural diversity</li> <li>• management approach</li> <li>• workplace culture and approach to OHS by managers, supervisors and employees.</li> </ul>
<b>Controls</b> See also Hierarchy of	<p>The devices and methods of controlling the effect of the hazard so that the risk of injury is minimised. The ‘quality’ of the control is the level and reliability of the control compared with the level of</p>

NOHSC term	Definition/Explanation
control	<p>risk. The quality of the controls is determined by the best available technology or approach which:</p> <ul style="list-style-type: none"> <li>• should be applied when the most probable outcome is death or serious injury</li> <li>• may be applied where the most probable outcome is less serious.</li> </ul> <p>Refer also <i>Hierarchy of control</i>.</p> <p>Workplace factors that impact on the controls selected and the implementation include:</p> <ul style="list-style-type: none"> <li>• language</li> <li>• shift work and rostering arrangements</li> <li>• literacy and numeracy</li> <li>• workplace organisational structures (e.g. geographic, hierarchical)</li> <li>• cultural diversity</li> <li>• training required</li> <li>• workplace culture related to OHS, including commitment by managers and supervisors and compliance with procedures and training.</li> </ul>
<b>Control measures</b>	Devices, systems (including work methods) or approaches that reduce exposure to workplace hazards.
<b>Crisis management plan</b>	<p>A flexible document that can cope with a broad range of crisis types and:</p> <ul style="list-style-type: none"> <li>• is approved at the highest levels of the organisation</li> <li>• focuses on management control</li> <li>• identifies responsibilities for decision making</li> <li>• details communication processes and psychological support</li> <li>• addresses arrangements with any contractors or shared tenancy</li> <li>• integrates the emergency response plans as well as recovery</li> <li>• incorporates dealing with external agencies and support</li> <li>• addresses planning for recovery before crisis occurs.</li> </ul> <p>Documentation for crisis management plan may include:</p> <ul style="list-style-type: none"> <li>• policy, emergency response structure, initial response instructions for various roles/areas, responsibility and authority of individual roles, warning systems, training requirements, resource inventory for response and recovery, program review and monitoring processes</li> <li>• crisis risk management documentation, such as risk management team lists, communications strategies, identification of issues, risk assessments/evaluations, vulnerability profiles, risk registers and treatment strategies.</li> </ul>



NOHSC term	Definition/Explanation
	The term <i>emergency management</i> may also apply but <i>crisis management</i> infers a more holistic approach encompassing the full range of business affairs.
<b>Dangerous Goods (DG)</b>	Those gases, liquids and solids identified and classified under the internationally agreed system which is followed in Australia and that are subject of so called 'dangerous goods' standards and legislation. The objective of the Dangerous Goods legislation is to control the storage, handling and transport of DGs to protect the safety of workers, the public, property and the environment. While dangerous goods may also be hazardous the terms should not be confused.
<b>Dangerous parts of plant</b>	Potential contact or entrapment points to which the operator may be exposed during: <ul style="list-style-type: none"> <li>• operation</li> <li>• examination</li> <li>• lubrication</li> <li>• adjustment</li> <li>• maintenance.</li> </ul>
<b>Design</b>	The process of bringing together innovation, aesthetics, and functionality to plan and create a product, process or system to meet the artistic, industrial or performance requirement of an individual or group. The design process involves a series of activities where an idea is conceived, shaped, developed, produced and then acted upon to produce a designed-product. It also includes any subsequent alteration (redesign or retrofit).
<b>Design process</b>	There are two stages of the design process: <ul style="list-style-type: none"> <li>• The concept design phase considers preliminary design options, which are assessed against product specifications to determine the best preliminary design to be developed. This phase includes concept design, research and development, feasibility and risk management (including OHS risks).</li> <li>• The detailed design phase develops the selected design to its final state. It includes research and development, feasibility studies, concept and detail design, technical and functional specifications, plans and drawings, operational systems, construct/manufacture options and detailed quantities, cost and risk analysis (including analysis of OHS risks).</li> </ul>
<b>Designed product</b>	The item to be designed, including a built environment, structure, an item of plant or equipment, chemical, work system or process or any other physical attribute or system associated with either the work or

NOHSC term	Definition/Explanation
	its interface with people.
<b>Duty of care</b>	<p>Arises from common law but is enshrined in OHS statute law and that places into a legal form a moral duty to anticipate possible causes of injury and illness and to do everything reasonably practicable to remove or minimise these possible causes of harm. The key factors relating to duty of care are that:</p> <ul style="list-style-type: none"> <li>• duty of care applies wherever there is special relationship (employer – employee, employer – contractor, supervisor – work team member, tradesperson – apprentice)</li> <li>• duty of care applies to all circumstances of the relationship</li> <li>• individual duty of care cannot be delegated (but roles and functions may be delegated)</li> <li>• applies personally to individuals</li> <li>• applies to all risks that are foreseeable and preventable</li> <li>• includes the concept of <i>reasonable</i>.</li> </ul>
<b>Elements of systematic approaches to managing OHS including OHSMSs</b>	A list of key requirements or major principles that are combined in a methodical and ordered manner to minimise the risk of injury or ill health in the workplace; and may include processes of OHS planning, allocation of resources, communication and consultation, hazard management, record keeping and reporting, training and competency, and review and evaluation for ongoing improvement of OHS.
<b>Emergency</b>	<p>Events such as:</p> <ul style="list-style-type: none"> <li>• serious injury events</li> <li>• emergencies requiring evacuation</li> <li>• fires and explosions</li> <li>• hazardous substance and chemical spills</li> <li>• explosion and bomb alerts</li> <li>• security emergencies — armed robberies, intruders</li> <li>• internal emergencies, such as loss of power or water supply and structural collapse</li> <li>• external emergencies and natural disasters, such as flood, storm and traffic accident impacting on the organisation.</li> </ul> <p>May also be referred to as a <i>hazardous event</i>.</p>
<b>Emergency agency</b>	Includes fire, police, ambulance, relevant government departments, hazardous materials response teams (HAZMAT) and OHS authorities.
<b>Emergency control</b>	Structured group within the organisation that includes roles such as emergency controller, communications recorder, media liaison and

<b>NOHSC term</b>	<b>Definition/Explanation</b>
<b>organisation (ECO)</b>	employee support.
<b>Emergency equipment</b>	Includes: <ul style="list-style-type: none"> <li>• First Aid equipment</li> <li>• eye wash shower or portable eye washes</li> <li>• fire extinguishers and equipment</li> <li>• communication equipment</li> <li>• evacuation alarms</li> <li>• evacuation equipment, especially that for disabled persons</li> <li>• torches</li> <li>• clothing items such as coloured hats and vests.</li> </ul>
<b>Emergency stops and warning devices</b>	Are fitted to plant and equipment that have a risk of entrapment or other hazard and must be: <ul style="list-style-type: none"> <li>• prominently, clearly and durably marked</li> <li>• coloured red (push buttons, bars or handles)</li> <li>• unable to be affected by electrical or electronic circuit malfunction</li> <li>• fitted where risk assessment identifies a need.</li> </ul>
<b>Enforcement</b>	Processes and instruments available to the OHS regulator under legislation may include: <ul style="list-style-type: none"> <li>• prosecution</li> <li>• prohibition notices</li> <li>• improvement notices</li> <li>• on-the-spot fines</li> <li>• provisional improvement notices.</li> </ul>
<b>Epidemiology</b>	The study of the distribution and determinants of disease within human populations. Patterns of injury or illness in groups of people are studied to determine causes, identify groups at risk and to identify and evaluate methods of treatment and prevention.
<b>Ergonomics</b>	The study of the relationship between people, the equipment they use and their physical and social work environment.
<b>Ergonomic interventions</b>	Includes: <ul style="list-style-type: none"> <li>• design of tools</li> <li>• design of workplaces</li> <li>• design of products</li> <li>• design of equipment</li> <li>• design of work systems, processes or organisation including work flow, planning and control</li> </ul>

<b>NOHSC term</b>	<b>Definition/Explanation</b>
	<ul style="list-style-type: none"> <li>• job design</li> <li>• development of new decision making processes</li> <li>• new forms and organisations of work.</li> </ul>
<b>Ergonomic tools and databases</b>	<p>May include:</p> <ul style="list-style-type: none"> <li>• engineering models</li> <li>• Australian and International Standards</li> <li>• Australian and International anthropometric databases</li> </ul>
<b>Explosive substance</b>	Substance that explodes if it comes into contact with heat, flame, an ignition source or incompatible substance.
<b>Fail-to-safe</b>	Design feature of equipment that ensures if there is a failure or defect in the product, or another factor such as loss of power, then the product is left in a safe condition.
<b>Functional areas and management systems</b>	<p>Other than OHS but that impact on the management of OHS may include:</p> <ul style="list-style-type: none"> <li>• strategic planning</li> <li>• purchasing, procurement and contracting</li> <li>• logistics</li> <li>• HR, IR and personnel management, including payroll</li> <li>• engineering and maintenance</li> <li>• information, data and records management</li> <li>• finance and auditing</li> <li>• environmental management</li> <li>• quality management.</li> </ul>
<b>Guarding</b>	<p>Devices fitted to machinery to separate the operator from dangerous parts of the machine. Devices may include:</p> <ul style="list-style-type: none"> <li>• permanently fixed physical barriers where no access of any part of a person is required</li> <li>• interlocking physical barriers where access to dangerous areas is required during operation</li> <li>• physical barriers securely fixed by means of fasteners or devices</li> <li>• presence-sensing safeguarding systems.</li> </ul>
<b>Hazard</b>	A source or a situation with a potential for harm in terms of human injury or ill health, damage to property, damage to the environment, or a combination of these.
<b>Hazards of long latency</b>	Conditions, illnesses and other health risks that result from longer term exposure to specific triggers such as chemicals, noise, radiation and psychosocial factors.

NOHSC term	Definition/Explanation
<b>Hazards of low frequency/high consequence</b>	High impact events that occur rarely such as explosions, fires and building collapses but may result in very serious injury, death or multiple death situations.
<b>Hazard identification</b>	<p>The process of identifying sources of harm. Hazard identification may be required:</p> <ul style="list-style-type: none"> <li>• at design or pre purchase of buildings, equipment and materials</li> <li>• at commissioning or pre-implementation of new processes or practices</li> <li>• before new forms of work and organisation of work are implemented</li> <li>• before changes are made to workplace, equipment, work processes or work arrangements</li> <li>• as part of planning major tasks or activities, such as equipment shutdowns</li> <li>• following an incident report</li> <li>• when new knowledge becomes available</li> <li>• at regular intervals during normal operations</li> <li>• prior to disposal of equipment, buildings or materials.</li> </ul> <p>Different methods may be used to identify hazards including observation; consultation with workers, clients or other users; trial of models or prototypes; review of technical standards and other information sources; monitoring and measurement.</p>
<b>Hazard identification tools and processes</b>	<p>Include:</p> <ul style="list-style-type: none"> <li>• analysis of incident investigations</li> <li>• analysis of incident, injury and claims statistics</li> <li>• workplace inspections</li> <li>• job safety analysis (JSA)</li> <li>• audits</li> <li>• cause and effect diagrams</li> <li>• surveys</li> <li>• review of research and industry literature.</li> </ul>
<b>Hazardous event(s)</b>	Includes incidents with the potential to seriously harm life, health, property, the environment or a combination. May also be referred to as <i>emergencies</i> .
<b>Hazardous substance</b>	A substance that is listed on the National Commission's List of Designated Hazardous Substances (NOHSC:10005) or has been classified as a hazardous substance by the manufacturer or importer in accordance with the National Commission's Approved Criteria for Classifying Hazardous Substances (NOHSC:1008).

NOHSC term	Definition/Explanation
<b>Hazardous substance register</b>	Listing of all the hazardous substances that are used or produced in a workplace together with a current Material Safety Data Sheet for each substance. May also contain risk assessments for individual hazardous substances.
<b>HAZCHEM</b>	An initial response emergency action code that provides information vital to emergency services to enable them to stabilise the incident scene during the early stages of a HAZMAT incident. The Code is displayed on emergency information panels on transport vehicles and on signs on buildings. HAZCHEM codes are assigned to chemicals on the basis of their flammability, toxicity, reactivity and other relevant chemical and physical properties.
<b>HAZMAT</b>	A contraction of the words <i>hazardous materials</i> and may be used in a range of circumstances including HAZMAT emergency response units, HAZMAT emergency response equipment and HAZMAT registers of hazardous substances.
<b>HAZOP (Hazard and Operability Study)</b>	An advanced risk analysis technique that involves a systematic review of a process to determine risks and risk minimisation strategies.
<b>Health and safety representative</b>	An employee, elected by the workgroup, who represents the OHS interests of the people with whom they work. The function is carried out in addition to the normal work role. Processes for election of health and safety representatives, their role and rights are specified in State and Territory legislation.
<b>Health promotion</b>	The promotion of health, especially as a workplace program, designed to improve and enhance employee health undertaken as a complementary activity to the prevention of work-related injury and disease. Also called <i>wellness</i> .
<b>Health surveillance</b>	Monitoring or checking individuals for the purpose of identifying changes due to exposure to hazards in the workplace. May include biological monitoring.
<b>Hierarchy of control</b>	The priority order in which hazard and risk controls should be considered with the eventual outcome often being a combination of measures. The prime emphasis is on: <ul style="list-style-type: none"> <li>• elimination, and where this is not practicable, minimisation of risk by:</li> <li>• substitution</li> <li>• isolating the hazard from personnel</li> </ul>

NOHSC term	Definition/Explanation
	<ul style="list-style-type: none"> <li>• engineering controls</li> <li>• administrative controls, eg procedures, training</li> <li>• personal protective equipment (PPE).</li> </ul>
<b>Hot work</b>	<p>Involves using equipment that generates heat, sparks, flames or any other sources of ignition in an atmosphere that may be flammable. Includes work with welders, cutters including oxygen cutters, power tools, grinding, mobile phones.</p> <p>Hot work can also include breaking into 'live' equipment or performing work on live equipment that has the potential to release its contents (e.g. hot tap in chemical plants).</p>
<b>Housekeeping</b>	<p>Describes workplace and personal routines designed to improve hygiene and safety, for example, cleaning up spills and keeping walkways, exits and traffic areas clear.</p>
<b>Incident</b>	<p>An event that has caused or has the potential for injury, ill health or damage. (<i>Incident</i> is the preferred term rather than <i>accident</i>)</p>
<b>(Sources of OHS) Information</b>	<p>May be <b>internal</b> and include:</p> <ul style="list-style-type: none"> <li>• hazard, incident and investigation reports</li> <li>• workplace inspections</li> <li>• incident investigations</li> <li>• minutes of meetings</li> <li>• Job Safety Analyses (JSA's) and risk assessments</li> <li>• organisational data such as insurance records, enforcement notices and actions, workers compensation data, OHS performance data</li> <li>• reports and audits</li> <li>• material safety data sheets (MSDSs) and registers</li> <li>• employees handbooks</li> <li>• employees including questionnaire results</li> <li>• OHS advisors</li> <li>• manufacturers' manuals and specifications.</li> </ul>
<b>(Sources of OHS) Information</b>	<p>May be <b>external</b>, including:</p> <ul style="list-style-type: none"> <li>• regulatory bodies and OHS Acts regulations, codes and guidance material</li> <li>• other relevant legislation</li> <li>• National Occupational Health and Safety Commission (NOHSC) and Australian Bureau of Statistics</li> <li>• databases such as national and state injury data and NICNAS (National Industrial Chemicals Notification and Assessment Scheme)</li> </ul>

NOHSC term	Definition/Explanation
	<ul style="list-style-type: none"> <li>• OHS specialists and consultants</li> <li>• newspapers and journals, trade/industry publications</li> <li>• Internet sites</li> <li>• industry networks and associations including unions and employer groups</li> <li>• OHS professional bodies</li> <li>• research information.</li> </ul>
<b>Isolation</b>	<p>A safety device system that includes devices such as isolating switches, locks, safety bars, shields, full pressure blanks, spectacle blanks to lock controls, especially moving parts, equipment, systems or devices with stored energy, to an 'off' position while a worker is in a vulnerable position such as carrying out maintenance on rotating equipment, and electrical and hydraulic systems.</p> <p>Isolation systems generally use locking switches that need keys to open the lock and are used in conjunction with a danger tag system that promotes greater safety consciousness amongst the workforce for all situations in which danger to persons could arise from:</p> <ul style="list-style-type: none"> <li>• the operation of machinery, plant or equipment</li> <li>• the flow of steam, electricity, gases or liquids</li> <li>• the use of faulty or unsafe plant and equipment</li> <li>• include multiple locking systems and involve written authorisation by a competent person.</li> </ul> <p>Also called <i>lock-out</i> and <i>tag-out</i>.</p>
<b>Job Safety Analysis (JSA)</b>	<p>Process of examining all aspects of a task to identify hazards and conditions with a potential for injury or ill health with the objective of developing risk controls including written job instructions.</p>
<b>Legislation relevant to OHS</b>	<p>Includes Commonwealth and relevant State/Territory OHS specific acts and regulations as well as:</p> <ul style="list-style-type: none"> <li>• workers compensation</li> <li>• privacy legislation</li> <li>• contract law</li> <li>• trade practices</li> <li>• criminal law</li> <li>• common law</li> <li>• industrial relations law</li> <li>• equal employment opportunity and anti-discrimination law.</li> </ul>
<b>Life cycle</b>	<p>All phases in the life of a product. Specific phases depend on the type of product but may include design, development, manufacture, construction, assembly, import, supply, distribution, sale, hire, lease, storage, transport, installation, erection, commissioning, use or</p>



NOHSC term	Definition/Explanation
	operation, consumption, maintenance, servicing, cleaning, adjustment, inspection, repair, modification, refurbishment, renovation, recycling, resale, decommissioning, dismantling, demolition, discontinuance, disposal.
<b>Likelihood</b>	The likelihood of the occurrence of the consequence, not the likelihood of the hazard or the particular scenario.
<b>Locked out</b>	Equipment, which is not to be operated for any reason, may be padlocked, or otherwise prevented from operation using a keyed lock. A lockout may be accompanied by a tag out, or a lock out system may incorporate a tag. Lockout means the isolation by a mechanical device, generally a lock, which, when applied at the source, physically prevents the control to any electrical or mechanical equipment being turned on. Refer also to <i>Isolation</i> .
<b>Manual handling</b>	The use of force applied by a person to lift, move, carry, push, pull or otherwise move or restrain an animate or inanimate object.
<b>Material Safety Data Sheet (MSDS)</b>	Document describing the properties and hazards of a material or substance including statements about its chemical and physical properties, health hazards, precautions for use and safe handling instructions. All manufacturers and suppliers of chemicals are obliged to produce an MSDS for each hazardous chemical.
<b>Monitoring</b>	Involves the use of valid and suitable techniques to estimate the exposure of employees to a hazard.
<b>Musculoskeletal disorder (MSD)</b>	An injury, illness or disease that arises in whole or part from manual handling in the workplace, whether occurring suddenly or over a prolonged period of time. (Does not include injuries caused by crushing, entrapment or cut resulting primarily from the mechanical operation of plant.
<b>Occupational Overuse Syndrome (OOS)</b>	Previously called RSI and refers to arrange of conditions characterised by persistent discomfort and pain in and around joints and associated with repeated movement of the joint. Recent State and Territory legislation tends to group these conditions with those arising from manual handling as Musculoskeletal Disorders.
<b>OHS inspection</b>	The process of physically examining and evaluating the extent to which hazards and risks exist, and/or particular OHS requirements, procedures or standards are being met. Refer also to <i>workplace inspection</i> .
<b>OHS specialists</b>	Include:

NOHSC term	Definition/Explanation
	<ul style="list-style-type: none"> <li>• safety professionals</li> <li>• ergonomists</li> <li>• occupational hygienists</li> <li>• safety engineers</li> <li>• injury management advisors</li> <li>• health professionals.</li> </ul>
<b>Operator certification</b>	The process by which a certificate to use or operate industrial equipment is issued by a certifying authority.
<b>OHS management system (OHSMS)</b>	<p>That part of the organisation's overall management system that covers developing, implementing, reviewing and maintaining the activities for managing OHS. It is NOT a standard, a commercial package or folders on the shelf; however it may involve use of OHS management systems developed in the workplace to meet the OHS situation in that particular workplace.</p> <p>Also referred to in broader context as systematic approaches to managing OHS.</p>
<b>Operational controls for plant and equipment</b>	<p>Should:</p> <ul style="list-style-type: none"> <li>• be suitability identified</li> <li>• have nature and function clearly indicated</li> <li>• be readily and conveniently located</li> <li>• be guarded to prevent unintentional activation</li> <li>• be capable of locking in 'off' position to enable disconnection of all motive power and forces</li> <li>• be of 'fail safe' type.</li> </ul>
<b>Participative arrangements</b>	Are those arrangements that inform employees and other stakeholders of OHS matters, seek their input and offer opportunity for stakeholders to participate in decisions that may impact on their OHS. May also be referred to as <i>consultative arrangements</i> , however <i>participation</i> implies a higher level of involvement.
<b>Permit to work</b>	<p>A written authority document such as hot work and confined space entry that:</p> <ul style="list-style-type: none"> <li>• includes approval to undertake work and activities including tests, measurements and monitoring</li> <li>• is authorised by a responsible or designated person directly in control of the work</li> <li>• certifies appropriate precautions and controls to be followed</li> <li>• incorporates checklists, conditions and actions such as the frequency and duration of the work and atmospheric tests</li> <li>• follows recognised industry standard recording practices.</li> </ul>

<b>NOHSC term</b>	<b>Definition/Explanation</b>
<b>Plant</b>	<p>As defined in National Standard for Plant includes:</p> <ul style="list-style-type: none"> <li>• machinery, equipment (including scaffolding), appliance, implement or tool and any other component, fitting or accessory</li> <li>• fixed and or specified plant as cited in commonwealth, state and territory OHS legislation</li> <li>• mobile plant and load shifting equipment</li> <li>• pressure equipment such as boilers, pressure vessels and pressure piping</li> <li>• electrical installation and plant such as wiring, accessories, fittings, consuming devices, control and protective gear, converters and generators.</li> </ul>
<b>Plant Registration</b>	<p>The administrative process by which a certifying authority or state OHS regulator requires an organisation or industry to register plant, machinery and equipment.</p>
<b>Personal protective equipment (PPE)</b>	<p>Equipment designed to be worn to provide protection from hazards, and may include:</p> <ul style="list-style-type: none"> <li>• head protection</li> <li>• face and eye protection</li> <li>• respiratory protection</li> <li>• hearing protection</li> <li>• hand protection</li> <li>• clothing and footwear.</li> <li>• PPE is considered the least satisfactory control measure.</li> </ul>
<b>Policies and procedures</b>	<p>Relevant to OHS include:</p> <ul style="list-style-type: none"> <li>• policies and procedures underpinning OHS including those for hazard and incident reporting, OHS communication, consultation, issue resolution and risk management</li> <li>• quality system documentation</li> <li>• purchasing and contracting procedures</li> <li>• documents describing how tasks, projects, inspections, jobs and processes are to be undertaken</li> <li>• standard operating procedures, work instructions</li> <li>• job or batch sheets, recipes</li> <li>• operators manuals</li> <li>• employee and contractor handbooks</li> <li>• job/task statements.</li> </ul>
<b>Positive performance indicators</b>	<p>Focus on assessing how successfully a workplace is performing through measuring OHS processes.</p>

<b>NOHSC term</b>	<b>Definition/Explanation</b>
<b>(OHS) Records</b>	<p>Requirements for OHS record keeping may be defined in:</p> <ul style="list-style-type: none"> <li>• OHS legislation and regulations governing reporting of incidents and maintenance of records related to specific hazards, including chemical registers and material safety data sheets (MSDSs)</li> <li>• privacy legislation</li> <li>• organisational procedures</li> </ul> <p>OHS records may include:</p> <ul style="list-style-type: none"> <li>• hazard and incident reports, First Aid records</li> <li>• risk assessments</li> <li>• hazardous substances and dangerous good registers, MSDSs</li> <li>• risk registers</li> <li>• OHS audit and inspection reports</li> <li>• maintenance and testing records</li> <li>• OHS training records</li> <li>• outcomes of health surveillance and environmental monitoring</li> <li>• workers compensation claims and return to work records.</li> </ul> <p>OHS records must be stored taking account of:</p> <ul style="list-style-type: none"> <li>• privacy</li> <li>• confidentiality</li> <li>• enabling access to personal records, within legislative requirements</li> <li>• commercial in confidence issues as appropriate.</li> </ul>
<b>(OHS) Reporting requirements</b>	Under legislation include serious injury and serious incident reporting to OHS authorities.
<b>(OHS) Responsibilities</b>	<p>Those with legislated OHS responsibilities include:</p> <ul style="list-style-type: none"> <li>• company director</li> <li>• manager</li> <li>• supervisors</li> <li>• OHS representatives</li> <li>• employees and contractors</li> <li>• designers, manufacturers, installers, suppliers.</li> </ul>
<b>Residual risk</b>	That risk that is unable to be designed out of a product or process.
<b>Risk</b>	<p>The chance of something occurring that will result in injury or damage. It is measured in terms of consequences (injury or damage) and likelihood of the consequence.</p> <p>Refer also to <i>Consequence</i> and <i>Likelihood</i>.</p>

NOHSC term	Definition/Explanation
<b>Risk analysis</b>	<p>Analysing the risk to:</p> <ul style="list-style-type: none"> <li>• identify factors influencing the risk and the range of potential consequences</li> <li>• effectiveness of existing controls</li> <li>• likelihood of each consequence considering exposure and hazard level</li> <li>• combining these in some way to obtain a level of risk.</li> <li>• Factors influencing the risk may be associated with: <ul style="list-style-type: none"> <li>• equipment</li> <li>• work environment/organisation</li> <li>• task</li> <li>• the individual/operator</li> <li>• frequency and duration of exposure</li> <li>• number of people exposed/involved.</li> </ul> </li> </ul>
<b>Risk assessment</b>	<p>Risk assessment is a two-step process that involves risk analysis and risk evaluation. Risk assessment as required under various OHS legislation does not necessarily require this second step of evaluation. Refer also to <i>Risk Analysis</i> and <i>Risk evaluation</i>.</p>
<b>Risk evaluation</b>	<p>Comparison of risk with pre-established criteria for tolerance (or as low as reasonably achievable) and the subsequent ranking of risks requiring control. This activity will usually be carried out by or in conjunction with others with advanced OHS skills and knowledge.</p>
<b>Risk management</b>	<p>The whole systematic process directed towards identifying hazards, assessing the risk and developing controls to minimise the risk and monitoring the effectiveness of the controls (and taking further action as required).</p>
<b>Risk ranking</b>	<p>A process of rating risks according to their severity and likelihood. Common systems are based on matrices or nomograms but are usually highly subjective.</p>
<b>Risk register</b>	<p>Includes:</p> <ul style="list-style-type: none"> <li>• a list of hazards, their location and people exposed</li> <li>• a range of possible scenarios or circumstances under which these hazards may cause injury or damage</li> <li>• the results of the risk assessment, and may also include;</li> <li>• possible control measures and dates for implementation.</li> </ul> <p>May also be referred to as <i>Hazard Register</i>.</p>

<b>NOHSC term</b>	<b>Definition/Explanation</b>
<b>Safe Design</b>	A design process that generates options to eliminate hazards, or minimise potential risk to health and safety of those who make the product and those that use it by involving decision makers and considering OHS risks throughout the life cycle of the designed product.
<b>Stakeholders</b>	In workplace OHS include: <ul style="list-style-type: none"> <li>• managers</li> <li>• supervisors</li> <li>• health and safety and other employee representatives</li> <li>• OHS committees</li> <li>• employees and contractors</li> <li>• the community.</li> </ul>
<b>Standards</b>	Relevant to OHS include: <ul style="list-style-type: none"> <li>• OHS regulations and standards developed by OHS regulators</li> <li>• national standards (NOHSC)</li> <li>• Australian standards</li> <li>• International national standards</li> <li>• industry standards</li> <li>• codes of practice</li> <li>• exposure standards</li> <li>• guidance notes.</li> </ul>
<b>Statute Law</b>	Law created by legislation passed by government (acts and regulations) as distinct from common law.
<b>(OHS) plan</b>	A document that: <ul style="list-style-type: none"> <li>• is usually developed annually but may be developed for a shorter or longer period</li> <li>• is reviewed regularly</li> <li>• has OHS performance indicators (i.e. objectives and targets that are achievable and practical) reflecting systematic approaches to managing OHS.</li> </ul>
<b>System of work</b>	The overall process of work including: <ul style="list-style-type: none"> <li>• method by which the work is carried out</li> <li>• organisation of the work</li> <li>• selection and maintenance of tools and equipment</li> <li>• supervision and training</li> <li>• selection of workers</li> <li>• allocation of tasks and responsibilities.</li> </ul>

NOHSC term	Definition/Explanation
<b>Systemic approach to managing OHS</b>	<p>Requires:</p> <ul style="list-style-type: none"> <li>• comprehensive processes that are combined in a methodical and ordered manner to minimise the risk of injury or ill health in the workplace</li> <li>• processes of planning, allocation of resources, communication and consultation, hazard management, record keeping and reporting, training and competency, and review and evaluation for ongoing improvement.</li> </ul> <p>Factors that may impact on the implementation of a systematic approach to managing OHS may include:</p> <ul style="list-style-type: none"> <li>• barriers to communication, such as language/literacy</li> <li>• workplace culture issues, such as management commitment, supervisors' approach to compliance and general acceptance of the priority of safety</li> <li>• diversity of workers</li> <li>• structural factors, such as multiple locations, shift work and supervisory arrangements.</li> </ul>
<b>Tag out</b>	Refer to <i>Isolation</i> .
<b>Technical advisors</b>	<p>To the OHS function may include:</p> <ul style="list-style-type: none"> <li>• legal practitioners</li> <li>• engineers (such as design, acoustic, mechanical, civil)</li> <li>• security and emergency response personnel</li> <li>• workplace trainers and assessors</li> <li>• maintenance and trade persons.</li> </ul>
<b>Wellness</b>	Refer to <i>Health promotion</i> .
<b>Workplace policies</b>	Comprise written statements of employer's intentions and how the employers will action those intentions in the workplace. For example: OHS, access and equity, discrimination and manual handling.
<b>Workplace inspection</b>	Process of examining the workplace, usually with the aid of a checklist, to identify hazards and level of compliance with workplace procedures.

*Some terms in the glossary have been taken from, or modified from the CCH Occupational Health and Safety Glossary, 1992 and National Guidelines for Integrating OHS Competencies into National Industry Competency Standards [NOHSC: 7025*

## 2.2.01 Contextualisation

### Contextualisation

In the competency standard units, "notes" have been placed against respective aspects that include scope, Performance Criteria, Range Statement and essential knowledge and associated skills and other related sections. The insertion of these "notes" is primarily to provide users and support material developers with examples of the form and type related to technical content principles, technology, equipment, or processes that may be used to cover the outcomes. The examples should be treated as information that adds clarity for the purposes of assisting in guidance of the depth and breadth that is to be covered.

As the type, form, process, or technique of technology and equipment may change it is therefore expected and encumbered on RTOs to continue to be current in the content of their delivery arrangements.

It is therefore appropriate for RTOs to use the notes in relation to technology and equipment references as advisory information. In these instances RTOs should aim to accommodate the adoption of improved and new technologies in the scope/range and essential knowledge and associated skills of the competency standard units by varying the context examples given in the referenced 'Notes:' to the Performance criteria, Range statement and Essential knowledge and associated skills. However, the contextualisation must not be such that the outcome of the competency standard units is altered in any way.

Where contextualisation of the notes varies the outcome of the competency standard units and its related content, RTOs should consult with EE-Oz Training Standards to explore options for incorporating and/or covering the new arrangements, so that currency of the Training package is maintained.

It should be noted that any need to alter the competency standard units from its intended outcome requires a new or varied competency standard unit. Such changes are to be undertaken through the continuous improvement processes required of Training Packages, which in relation to this Training Package is managed by EE-Oz Training Standards.

## 2.3.1 Language, Literacy and Numeracy

### Volume 2 Part 3

#### 3.1 Language, Literacy and Numeracy

The reading, writing and numeracy skills/competencies in each Competency Standard Unit describe the recommended pre-requisite entry requirements typically needed to successfully achieve the competency. A nationally-recognised language, literacy and numeracy framework has been used to provide advice as to the relevant entry level required.

The information has been derived from the National Reporting System report, *A mechanism for reporting outcomes of adult English language, literacy and numeracy programs*. The Australian National Training Authority (ANTA) and the Department of Employment Education and Training (DEET), 1994-5, jointly funded the report. Australian Training Products Ltd (ATP) distributes it for and on behalf of Language Australia Victorian Office. Stock code 3010A, ISBN: 0 7306 7493 2, April 1999.

The report:



- identifies adult English language, literacy and numeracy competencies in industry
- facilitates student pathways
- generates ideas for curriculum and assessment.

The report identifies a national framework of five vertical levels of competence related to complexity of language, literacy and numeracy competence. Six interrelated horizontal aspects of communication were found to apply in relation to differing orientations of social activity involving reading, writing, speaking, listening and/or numeracy. These were categorised as:

- procedural communication for performing tasks
- technical communication for using technology
- personal communication for expressing identity
- cooperative communication for interacting in groups
- systems communication for interacting in organisations
- public communication for interacting in the wider community.

The National Reporting System report should be referred to at all times for clarification, more detailed information and advice.

For the purposes of this Training Package writing, reading and numeracy competencies, have been selected from the five-level competence structure (using the Technical Communication aspect of the national framework), as a means of providing relevant entry-level advice. Registered Training Organisations should use this information to assist them in developing appropriate entry-level learning strategies and to assist learners to meet the entry-level requirements of respective Competency Standard Units.

## Table 6 – Reading, Writing and Numeracy: Indicators of Competence

Note: It is important to note what the five levels of competence interrelated with six aspects of communication of the National Reporting System is not intended to be. It is not an assessment system. It is not curriculum. It is not a model of language acquisition. It is not a means for categorising students by a simple "level", nor is it a set of broad competency statements. It is not a recruitment instrument for employers. The NRS suggests that the *"report of a person's competence derives from the interplay between the chosen activity, the features of the text/task, and the context and level of support under which the activity is performed"*.

## Reading

Scale	IoC*	Indicators of Competence	Technical Communication
5	5.1	Reads and interprets structurally intricate texts in chosen fields of knowledge and across a number of genres, which involve complex	Defines the purpose and objectives for the use of a report, which includes a detailed analysis of techn workplace or environment.
	5.2	relationship between pieces of	Draws on prior knowledge of the application of tec of a new system, e.g. writes a briefing and recomm

Scale	IoC*	Indicators of Competence	Technical Communication
	5.3	<p>information and/or propositions. Interprets subtle nuances, infers purpose of author and makes judgements about the quality of an argument. Reads and critically evaluates texts containing data which includes some abstraction, symbolism, and technicality presented in graphic, diagrammatic, formatted or visual form.</p>	<p>system. Uses technological principles to reduce constraints of physical capacity, e.g. writes a report, which compares of manual and computerised record management systems. Prepares a written or oral report, which critically evaluates purpose of technical texts including graphic, diagrams. Adapts task instructions to suit changes in technology. Writes instructions for the operation of a new machine based on instructions. Draws from a number of sources and uses computerised systems in a resume and job application letter.</p>
4	4.1 4.2	<p>Reads and interprets structurally intricate texts in chosen fields of knowledge which require integration of several pieces of information for generating meaning. Interprets texts, which include ambiguity, and inexplicitness where reader needs to distinguish fact from opinion and infer purpose. Interprets and extrapolates from texts containing data which includes some abstraction, symbolism, and technicality presented in graphic, diagrammatic, formatted or visual form.</p>	<p>Compares and contrasts views on technology in news articles. Interprets the purposes and objectives for the use of technology in a brochure or manual. Selects technological practices to conform with the environmental impact and ethical practice, and uses them in a report. Uses guidelines to ensure technological equipment is used safely. Uses a computer to prepare a typed report from a handwritten report. Compares and contrasts different technologies and identifies new practices when using new technologies, reports on the use of new machinery. Writes a report on the impact of a particular technology on the environment. Manages management committees, tri-partite committees. Reads a complex diagram to identify components and diagnose a technical fault or breakdown.</p>
3	3.1 3.2 3.3	<p>Reads and interprets texts of some complexity, integrating (where relevant) a number of pieces of information in order to generate meaning. Displays awareness of purpose of text, including unstated meaning. Interprets and extrapolates from texts containing data which is unambiguously presented in graphic, diagrammatic, formatted or visual form.</p>	<p>Reads a technical manual where the information is presented in a way that is well to be able to locate and comprehend particular information. Operates a VCR to record two programs in advance. Uses the author, title, key word and other search information to find a program. Comprehends short summary information on computer software and chooses a relevant package to suit own needs. Uses the word processing program on a computer to prepare a report. Writes simple instructions for using familiar technology. Completes a formatted workplace test, e.g. damage assessment. Writes a brief report on uses of technology, e.g. for a community purposes.</p>
2	2.1 2.2	<p>Reads and interprets short simple texts on a personally relevant topic. Locates specific information relating to familiar contexts in a text which may contain data in simple graphic,</p>	<p>Reads short, relevant, explicit, clearly formatted text. Uses the author and title index of a library computer. Chooses a computer assisted learning package, having consulted a list of two programs, to acquire a defined skill or area of knowledge. Writes a short description, e.g. describes a damage assessment.</p>

Scale	IoC*	Indicators of Competence	Technical Communication
		diagrammatic, formatted or visual form.	repair. Extracts information from a list with language and lists of components for computer systems. Records simple and routine information using the t message, on a form designed for this purpose. Interprets instructions, which combine pictorial and on how to operate a piece of machinery safely.
1	1.1 1.2	Reads and identifies letter of the alphabet in the context of whole words, numbers, signs and symbols relating to personal details and immediate environment. Identifies specific information in a personally relevant text with familiar content, which may include personal details, location or calendar information in simple graphic, diagrammatic, formatted or visual form.	Recognisees very short, explicit, pictorial texts, e.g. worker safety before using a piece of machinery, r Reads graphic instructions accompanying a new pi information or skills about a technology or medium machine by following instructions given graphically Types own name or single words into a computer-a

Note: IoC\* - Indicators of Competency sub-level

## Writing

Scale	IoC*	Indicators of Competence	Technical Communication
5	5.4 5.5	Demonstrates well-developed writing skills by selecting stylistic devices to express complex relationships between ideas and purposes. Generates complex written texts with control over generic structure.	Defines the purpose and objectives for the use of a report, which includes a detailed analysis of techno workplace or environment. Draws on prior knowledge of the application of tec of a new system, e.g. writes a briefing and recomm system. Uses technological principles to reduce constraints physical capacity, e.g. writes a report, which comp of manual and computerised record management sy Prepares a written or oral report, which critically ex purpose of technical texts including graphic, diagra Adapts task instructions to suit changes in technolo instructions for the operation of a new machine bas instructions. Draws from a number of sources and uses compute and job application letter.

Scale	IoC*	Indicators of Competence	Technical Communication
4	4.4 4.5	Communicates complex relationships between ideas by matching style of writing to purpose and audience. Generates written texts reflecting a range of genres and using appropriate structure and layout.	Compares and contrasts views on technology in news articles. Interprets the purposes and objectives for the use of technology in a brochure or manual. Selects technological practices to conform with the environmental impact and ethical practice, and use of resources. Uses guidelines to ensure technological equipment is used safely. Uses a computer to prepare a typed report from a handwritten note. Compares and contrasts different technologies and their uses. Adopts new practices when using new technologies, reports on the use of new machinery. Writes a report on the impact of a particular technology on the environment, management committees, tri-partite committees. Reads a complex diagram to identify components and diagnose a technical fault or breakdown.

Note: IoC\* - Indicators of Competency sub-level

#### Writing - continued

Scale	IoC*	Indicators of Competence	Technical Communication
3	3.4 3.5	Communicates relationships between ideas through selecting and using grammatical structures and notations, which are appropriate to the purpose. Produces and sequences paragraphs according to purpose of text.	Reads a technical manual where the information is presented in a way well to be able to locate and comprehend particular information. Operates a VCR to record two programs in advance. Uses the author, title, key-word and other search information to find a program. Comprehends short summary information on computer software and chooses a relevant package to suit own needs. Uses the word processing program on a computer to produce a document. Writes simple instructions for using familiar technology, e.g. an automatic teller machine. Completes a formatted workplace test, e.g. damage report. Writes a brief report on uses of technology, e.g. for a community or community purposes.
2	2.3 2.4	Writes about a familiar topic using simple sentence structure and joining ideas through conjunctive links where appropriate. Completes forms or writes notes using factual or personal information relating to familiar contexts.	Reads short, relevant, explicit, clearly formatted text, e.g. an author and title index of a library computer. Chooses a computer assisted learning package, having consulted a list of two programs, to acquire a defined skill or area of knowledge. Writes a short description, e.g. describes a damage report for a repair. Extracts information from a list with language and symbols, e.g. lists of components for computer systems. Records simple and routine information using the telephone, e.g. a message, on a form designed for this purpose. Interprets instructions, which combine pictorial and written information.

Scale	IoC*	Indicators of Competence	Technical Communication
			on how to operate a piece of machinery safely.
1	1.3 1.4 1.5	Copies letters of the alphabet, numbers, and dates in order to convey personal details such as name, address, telephone number. Writes basic personal details about self or others such as name, address, and signature. Writes one or two phrases/simple sentences conveying an idea, message or opinion drawing from a modelled text.	Recognises very short, explicit, pictorial texts, e.g. worker safety before using a piece of machinery, road signs. Reads graphic instructions accompanying a new piece of machinery or information or skills about a technology or medium. Operates a piece of machinery or machine by following instructions given graphically. Types own name or single words into a computer-aided design program.
Note: IoC* - Indicators of Competency sub-level			

## Numeracy

Scale	IoC*	Indicators of Competence	Technical Communication
5	5.10 5.11 5.12	Interprets, selects and investigates appropriate mathematical information and relationships highly embedded in an activity, item or text. Selects and applies a wide range of mathematical strategies flexibly to generate solutions to problems across a broad range of contexts. Uses a wide range of oral and written informal and formal language and representation including symbols, diagrams and charts to communicate mathematically.	Calculates distance, length and location using the trigonometry of right-angled triangles in relevant situations, e.g. locates grid reference on a given bearing with time and speed specified; calculates the area of a scaled plan of a roof to find the pitch or slope of the roof; selects materials to tile the roof applying a 4% allowance for waste. Plans and gathers information on a negotiated topic from a range of sources: government, industry and media about relevant contexts. Organises information by grouping. Graphically represents information for a particular purpose. Presents, individually or in a group, a viewpoint, which is substantiated by discussion of relevant evidence. Interprets and applies metric quantities and number relationships. Calculates the amount of oil in litres spilled from a tanker of capacity 1200 m <sup>3</sup> of water of approximately 1200 hectares (1.2 x 10 <sup>7</sup> m <sup>2</sup> ). Uses financial formulae, e.g. simple and compound interest, to calculate the interest incurred in borrowing money from financial institutions.
4	4.10 4.11 4.12	Selects and investigates appropriate mathematical information and relationships embedded in an activity, item or text. Selects and applies an expanding range of mathematical strategies flexibly to solve problems in a variety of contexts. Examines and questions the appropriateness, possible	Uses ratio and scale to interpret dimensions on a blueprint. Applies similarity and ratio to estimate and calculate the height of a building, a tree. Compares quality and costs of using imported vs Australian-made paints. Presents information in appropriate graphical form and interprets the data and influences, e.g. analysis of government spending patterns. Applies formulae and interprets results relevant to a range of contexts, e.g. measuring the dimensions needed and substituting

Scale	IoC*	Indicators of Competence	Technical Communication
	4.13	interpretations and implications of aspects of a mathematical activity. Uses a range of oral and written informal and formal language and representation including symbols, diagrams and charts to communicate mathematically.	units where necessary, e.g. length of edging for circular water tank or bath. Uses area and perimeter to calculate a range of options for fencing, plan a range of options for paddock dimensions to meet requirements. Calculates and contrasts monthly income from average options involving retainers and commission rates.

Note: IoC\* - Indicators of Competency sub-level

### Numeracy - continued

Scale	IoC*	Indicators of Competence	Technical Communication
3	3.10 3.11 3.12 3.13	Selects appropriate mathematical information embedded in a real life activity, item or text. Selects and applies a range of mathematical strategies to solve problems in a number of contexts which are familiar and may be interrelated. Reflects on and questions reasonableness and appropriateness of the purpose, process and outcomes of a mathematical activity. Uses oral and written informal and formal language and representation including symbols and diagrams to communicate mathematically.	Uses a distance scale to find the shortest route between two points, considers road terrain conditions in deciding preferred route. Expresses and calculates with metric quantities, e.g. 350g, 0.35kg, 1.5m. Measures common three-dimensional shapes, e.g. rectangular prism, on an appropriate diagram drawn to scale. Calculates with common, fractions and metric measurements in a recipe by halving or doubling to obtain the required amount. Uses a variety of methods to analyse advertising by comparing different items, e.g. at 12% off, 15% off, 1/3 off, per cent. Compares casual and permanent rates of pay over a period of the same nature.
2	2.9 2.10 2.11 2.12	Locates relevant mathematical information in a familiar real life activity text. Selects and uses straightforward mathematical actions in familiar and predictable contexts. Uses estimation and prior experience to examine purpose and check reasonableness of the process and outcomes of a mathematical activity. Uses oral and written informal and formal language and representation including some symbols and diagrams to communicate mathematically.	Compares measurements taken with estimated lengths and estimates and measures storeroom dimensions.

Scale	IoC*	Indicators of Competence	Technical Communication
1	1.10 1.11 1.12 1.13	Locates simple key mathematical information in a familiar real life activity text. Recognises and uses straightforward mathematical actions which relate to immediate contexts. Uses rough estimation and prior experience to identify purpose and check reasonableness of the process and outcomes of a mathematical activity. Uses everyday informal oral language and representation including familiar symbols and diagrams to communicate mathematically.	Estimates lengths of familiar objects using metric u doorway.