



**Australian Government**

# **UET40512 Certificate IV in ESI - Power Systems Substations**

**Release: 2**

## UET40512 Certificate IV in ESI — Power Systems Substations

### Modification History

Release	Action	Core/Elective	Details	Points
2	Update	Core	Update name of unit UEENEEE102A Fabricate, assemble and dismantle utilities industry components	40

### Description

#### Scope:

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain electrical systems and equipment in building and premises. It includes ERAC requirements for an 'Electrician's licence'. It also provides a career in installation and maintenance of substations such as 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 d.c. switchgear and equipment, installation of HV plant and equipment and or the maintenance and commissioning of discrete protection and control systems.

### Pathways Information

Not applicable.

### Licensing/Regulatory Information

Not applicable.

### Entry Requirements

Not applicable.

### Employability Skills Summary

Not applicable.

## Packaging Rules

### Completion requirements:

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 250 points in accordance with the Elective Competency Standard Units table below.
- All the required prerequisite competency standard units have been met.

Core Units — All to be completed		Weighting Points
UEENEEE101A	Apply Occupational Health Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, cords and specifications	40
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG103A	Install low voltage wiring and accessories	20
UEENEEG104A	Install appliances, switchgear and associated accessories for low voltage electrical installations	20
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40

UEENEEG107A	Select wiring systems and cables for low voltage general electrical installations	60
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
UETTDREL16A	Working safely near live electrical apparatus	20
UETTDNIS62A	Implement and monitor the power systems organisational OHS policies, procedures and programs	30
UETTDNIS63A	Implement and monitor power systems environmental and sustainable energy management policies and procedures	30
UETTDNIS22A	Carry out power systems substation inspection	60
UETTDNIS23A	Install and maintain substation direct current systems	30
<b>Total points in core</b>		<b>1030</b>

### Elective Competency Standard Units

At least a weighting of 250 points to be achieved. Must achieve at least 130 points from Group C

Group	Rules	Minimum points	Maximum points
<b>A</b>	<b>Imported and Common Elective Units</b> Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	<b>0</b>	<b>50</b>
<b>B</b>	<b>Qualification Electives</b> You may select units from this group to a maximum weighting of 120 points	<b>0</b>	<b>120</b>
<b>C</b>	<b>Qualification Electives</b>	<b>130</b>	<b>250</b>

**Elective Competency Standard Units**

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<b>B</b>	<b>Qualification Electives</b> You may select units from this group to a maximum weighting of 120 points	<b>0</b>	<b>120</b>
	At least 130 points to be achieved from this group. You may select all your elective units from this Group.		

**Group A Imported and Common Elective Units**

You may select units from this group to a maximum weighting of 50 points

		<b>Weighting Points</b>
BSBWOR401A	Implement effective workplace relationships	50
BSBMGT402A	Implement operational plan	40
BSBINM401A	Implement workplace information system	40
BSBMGT403A	Implement continuous improvement	40
BSBWOR402A	Promote team effectiveness	50
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.  Note: For further information see Application of the NQC Flexibility Formula, Page 10, UET12 Electricity Supply Industry – Transmission,	Up to 50 Points

	Distribution and Rail Sector Training Package, Version 1, Volume 1 Qualification Framework.	
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<b>Group B You may select units from this group to a maximum weighting of 120 points</b>		<b>Weighting Points</b>
UETTDNIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDNIS67A	Solve problems in energy supply network equipment	80
UETTDNIS68A	Solve problems in energy supply network protection equipment and systems	40
UETTDNISB29A	Maintain capacitor bank equipment for voltage regulation	40
UETTDNISB33A	Install high voltage plant and equipment	50
UETTDNISB39A	Perform power system substation switching operation to a given schedule	50

<b>Group C At least 130 points to be achieved from this group.</b> You may select all your elective units from this Group.		<b>Weighting Points</b>
UETTDNISB21A	Diagnose and rectify faults in substation environment	40
UETTDNISB24A	Maintain high voltage power system circuit breakers	60
UETTDNISB25A	Maintain high voltage power and instrument transformers	80
UETTDNISB26A	Install high current d.c. switchgear and equipment	40
UETTDNISB27A	Maintain high current d.c. equipment and switchgear	40
UETTDNISB30A	Maintain high voltage power system static VAR compensators (SVC)	30
UETTDNISB31A	Maintain high voltage power system synchronous condensers	50
UETTDNISB32A	Maintain power transformer on load tap changers (OLTC)	80
UETTDNISB34A	Carry out surveys using thermovision techniques	30
UETTDNISB35A	Maintain discrete control and protection systems	80
UETTDNISB36A	Commission discrete control and protection systems	30
UETTDNISB37A	Maintain power systems distribution field devices	80

<b>Group C At least 130 points to be achieved from this group.</b> You may select all your elective units from this Group.		<b>Weighting Points</b>
UETTDRSB38A	Commission power systems distribution field devices	30

Note:

1. Prerequisite pathways shall be identified and met for all elective units selected.

**END OF QUALIFICATION**

## **Custom Content Section**

Not applicable.