



**Australian Government**

# **UEP50322 Diploma of ESI Generation (Maintenance)**

**Release 1**

# UEP50322 Diploma of ESI Generation (Maintenance)

## Modification History

Release 1. This is the first release of this qualification in the UEP Electricity Supply Industry - Generation Sector Training Package.

## Qualification Description

This qualification covers the skills and knowledge required to manage functions in the electrical supply industry (ESI). Functions include the development of maintenance schedules, operational procedures, systems and the implementation of safe working practices. It also includes the management of projects, supervision of others and the coordination of work activities.

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

## Entry Requirements

There are no entry requirements for this qualification.

## Packaging Rules

A total **1870 weighting points** comprising:

- **530 core weighting points**; plus
- **1340 elective weighting points from the general elective units** listed below.

Choose a total of 1340 weighting point from the general elective unit list below of which:

- between 0 and 270 weighting points can be taken from Group A
- a total of 770 weighting points can be selected from Group B
- between 300 and 1340 weighting points may be taken from Group C, you may select all your elective units from this group.

Up to 270 weighting points of the general elective units Group A may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in UEP Electricity Supply Industry - Generation Sector Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points unless directed from the ESI Generation Industry Reference Committee (IRC). The general elective units must contribute to the vocational outcomes of the qualification.

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

Where a prerequisite unit is attached to a unit, it is identified by this symbol ⊏.

Core Units		Weighting points
MEM09002	Interpret technical drawing	40
	⊏ MEM12023 Perform engineering measurements	
	⊏ MEM12024 Perform Computations	
	⊏ MEM13015 Work safely and effectively in manufacturing and engineering	
	⊏ MEM16006 Organise and communicate information	
MEM12023	Perform engineering measurements	50
	⊏ MEM13015 Work safely and effectively in manufacturing and engineering	
	⊏ MEM16006 Organise and communicate information	
MEM18001	Use hand tools	20
	⊏ MEM11011 Undertake Manual Handling	
	⊏ MEM13015 Work safely and effectively in manufacturing and engineering	
	⊏ MEM16006 Organise and communicate information	
MEM18002	Use power tools/hand held operations	20
	⊏ MEM11011 Undertake Manual Handling	
	⊏ MEM13015 Work safely and effectively in manufacturing and engineering	
	⊏ MEM16006 Organise and communicate information	
UEPMNT421	Conduct technical inspection of process plant and equipment	60
	⊏ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	⊏ UEECD0020 Fix and secure electrotechnology equipment	
	⊏ UEECD0043 Solve problems in direct current circuits	
	⊏ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	⊏ UEEEL0003 Arrange circuits, control and protection for general electrical installations	
	⊏ UEEEL0011 Evaluate performance of low voltage	

	electrical apparatus	
	└ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	└ UEEEL0020 Solve problems in low voltage a.c. circuits	
	└ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	└ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
	└ UEEEL0025 Test and Connect Transformers	
	└ UEPMNT351 Test and commission electrical equipment	
UEPMNT351	Test and commission electrical equipment	40
	└ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	└ UEECD0020 Fix and secure electrotechnology equipment	
	└ UEECD0043 Solve problems in direct current circuits	
	└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEEEL0003 Arrange circuits, control and protection for general electrical installations	
	└ UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	└ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	└ UEEEL0020 Solve problems in low voltage a.c. circuits	
	└ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	└ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
	└ UEEEL0025 Test and Connect Transformers	
UEEEL0014	Isolate, test and troubleshoot low voltage electrical circuits	40
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0019 Fabricate, assemble and dismantle	

utilities industry components

└ UEECD0020 Fix and secure electrotechnology equipment

└ UEECD0043 Solve problems in direct current circuits

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

└ UEEEL0003 Arrange circuits, control and protection for general electrical installations

└ UEEEL0019 Solve problems in direct current (d.c.) machines

└ UEEEL0020 Solve problems in low voltage a.c. circuits

└ UEEEL0021 Solve problems in magnetic and electromagnetic devices

└ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits

└ UEEEL0024 Test and connect alternating current (a.c.) rotating machines

└ UEEEL0025 Test and connect transformers

└ UEEEL0047 Identify, shut down and restart systems with alternate supplies

UEECD0019	Fabricate, assemble and dismantle utilities industry components └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	40
UEECD0043	Solve problems in direct current circuits └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	80
UEECD0020	Fix and secure electrotechnology equipment └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	40

UEEEL0024	Test and connect alternating current (a.c.) rotating machines	80
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	└ UEECD0020 Fix and secure electrotechnology equipment	
	└ UEECD0043 Solve problems in direct current circuits	
	└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEEEL0019 Solve problems in direct current (d.c.) machines	
	└ UEEEL0020 Solve problems in low voltage a.c. circuits	
	└ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	└ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
UEEEL0011	Evaluate performance of low voltage electrical apparatus	60
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
UEEEL0003	Arrange circuits, control and protection for general electrical installations	40
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	└ UEECD0020 Fix and secure electrotechnology equipment	
	└ UEECD0043 Solve problems in direct current circuits	
	└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEEEL0020 Solve problems in low voltage a.c. circuits	
	└ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	└ UEEEL0023 Terminate cables, cords and accessories	

	for low voltage circuits	
UEEEL0021	Solve problems in magnetic and electromagnetic devices	60
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0043 Solve problems in direct current circuits	
UEEEL0020	Solve problems in low voltage a.c. circuits	80
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0043 Solve problems in direct current circuits	
	└ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
UEEEL0023	Terminate cables, cords and accessories for low voltage circuits	80
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	└ UEECD0020 Fix and secure electrotechnology equipment	
	└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEPOPS003	Apply quality systems to work	20
UEPOPS015	Conduct project management	60
UEPOPS021	Control permit to work operations	20
UEPOPS032	Coordinate team activities	30
UEPOPS041	Facilitate workplace communication	20
UEPOPS047	Maintain quality systems within the team	20

└ UEPOPS003 Apply quality systems to work

UEPOPS058	Manage Work Health and Safety policy and procedures	40
	└ UEECD0024 Implement and monitor energy sector WHS policies and procedures	
UEPOPS061	Monitor and implement environmental site plans and procedures	20
UEPOPS065	Monitor implementation of quality control for production and maintenance	20
	└ UEPOPS047 Maintain quality systems within the team	
UEPOPS127	Plan and organise work	30
UEPOPS128	Produce maintenance plans for generation production plant	40
UEPOPS129	Produce maintenance strategies for generation production plant	40
	└ UEPOPS128 Produce maintenance plans for generation production plant	

#### Group A Elective units

#### Weighting points

BSBOPS505	Manage organisational customer service	40
BSBINS501	Implement information and knowledge management systems	50
BSBSTR501	Establish innovative work environments	50
BSBHRM523	Coordinate the learning and development of teams and individuals	60
BSBLDR522	Manage people performance	70
BSBOPS502	Manage business operational plans	60
BSBSTR502	Facilitate continuous improvement	60
BSBWHS521	Ensure a safe workplace for a work area	60
BSBPEF501	Manage personal and professional development	60



BSBTWK502	Lead and manage team effectiveness	60
<b>Group B Elective units</b>		<b>Weighting points</b>
MEM05007	Perform manual heating and thermal cutting	20
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	
MEM05012	Perform routine manual metal arc welding	20
	<ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	
MEM05015	Weld using manual metal arc welding process	40
	<ul style="list-style-type: none"> <li>└ MEM05012 Perform routine manual metal arc welding</li> <li>└ MEM05051 Select welding processes</li> <li>└ MEM05052 Apply safe welding practices</li> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> </ul>	
MEM05017	Weld using gas metal arc welding process	40
	<ul style="list-style-type: none"> <li>└ MEM05050 Perform routine gas metal arc welding</li> <li>└ MEM05051 Select welding processes</li> <li>└ MEM05052 Apply safe welding practices</li> </ul>	

	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> </ul>	
MEM05026	Apply welding principles <ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	40
MEM05050	Perform routine gas metal arc welding <ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	20
MEM05051	Select welding processes <ul style="list-style-type: none"> <li>└ MEM05015 Weld using manual metal arc welding process</li> <li>└ MEM05017 Weld using gas metal arc welding process</li> <li>└ MEM05019 Weld using gas tungsten arc welding process</li> <li>└ MEM05023 Weld using submerged arc welding process</li> <li>└ MEM05047 Weld using flux core arc welding process</li> <li>└ MEM05055 Weld using oxy fuel gas welding process</li> </ul>	20

MEM05052	Apply safe welding practices	40
	└ MEM05015 Weld using manual metal arc welding process	
	└ MEM05017 Weld using gas metal arc welding process	
	└ MEM05019 Weld using gas tungsten arc welding process	
	└ MEM05023 Weld using submerged arc welding process	
	└ MEM05047 Weld using flux core arc welding process	
	└ MEM05055 Weld using oxy fuel gas welding process	
MEM07005	Perform general machining	80
	└ MEM09002 Interpret technical drawing	
	└ MEM11011 Undertake Manual Handling	
	└ MEM12023 Perform engineering measurements	
	└ MEM12024 Perform Computations	
	└ MEM13015 Work safely and effectively in manufacturing and engineering	
	└ MEM14006 Plan work activities	
	└ MEM16006 Organise and communicate information	
	└ MEM18001 Use hand tools	
MEM07006	Perform lathe operations	40
	└ MEM07005 Perform general machining	
	└ MEM09002 Interpret technical drawing	
	└ MEM11011 Undertake Manual Handling	
	└ MEM12023 Perform engineering measurements	
	└ MEM12024 Perform Computations	
	└ MEM13015 Work safely and effectively in manufacturing and engineering	
	└ MEM14006 Plan work activities	
	└ MEM16006 Organise and communicate information	
	└ MEM18001 Use hand tools	
MEM07007	Perform milling operations	40
	└ MEM07005 Perform general machining	
	└ MEM09002 Interpret technical drawing	

	<ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> </ul>	
MEM07008	Perform grinding operations	40
	<ul style="list-style-type: none"> <li>└ MEM07005 Perform general machining</li> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> </ul>	
MEM12003	Perform precision mechanical measurement	20
	<ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	
MEM12024	Perform computations	30
	<ul style="list-style-type: none"> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	
MEM18003	Use tools for precision work	40
	<ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> </ul>	

	<ul style="list-style-type: none"> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> </ul>	
MEM18006	Repair and fit engineering components <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	60
MEM18007	Maintain and repair mechanical drives and mechanical transmission assemblies <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Perform precision fitting of engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	40
MEM18009	Perform levelling and alignment of machines and	40

	engineering components	
	└ MEM09002 Interpret technical drawing	
	└ MEM11011 Undertake Manual Handling	
	└ MEM12023 Perform engineering measurements	
	└ MEM12024 Perform Computations	
	└ MEM13015 Work safely and effectively in manufacturing and engineering	
	└ MEM14006 Plan work activities	
	└ MEM16006 Organise and communicate information	
	└ MEM18001 Use hand tools	
	└ MEM18002 Use power tools/hand held operations	
	└ MEM18003 Use tools for precision work	
	└ MEM18006 Perform precision fitting of engineering components	
	└ MEM18055 Dismantle, replace and assemble engineering components	
MEM18010	Perform equipment condition monitoring and recording	40
	└ MEM09002 Interpret technical drawing	
	└ MEM11011 Undertake Manual Handling	
	└ MEM12023 Perform engineering measurements	
	└ MEM13015 Work safely and effectively in manufacturing and engineering	
	└ MEM16006 Organise and communicate information	
	└ MEM18001 Use hand tools	
	└ MEM18002 Use power tools/hand held operations	
	└ MEM18055 Dismantle, replace and assemble engineering components	
MEM18055	Dismantle, replace and assemble engineering components	30
	└ MEM09002 Interpret technical drawing	
	└ MEM11011 Undertake Manual Handling	
	└ MEM12023 Perform engineering measurements	
	└ MEM13015 Work safely and effectively in manufacturing and engineering	
	└ MEM16006 Organise and communicate information	
	└ MEM18001 Use hand tools	

	<ul style="list-style-type: none"> <li>└ MEM18002 Use power tools/hand held operations</li> </ul>	
UEPMNT302	Install and maintain industrial pipe work <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	40
UEPMNT303	Maintain mechanical valves <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	40
UEPMNT304	Maintain mechanical pumps <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	40
UEPMNT305	Maintain industrial fans <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> </ul>	40

	<ul style="list-style-type: none"> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT307	Maintain industrial screens, strainers and filters	20
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT308	Maintain conveyors and associated equipment	40
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT309	Maintain material feeders	40
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT310	Maintain material crushers	40
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> </ul>	



	<ul style="list-style-type: none"> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT312	Maintain industrial pressure vessels	80
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT314	Maintain hydro turbines	100
UEPMNT317	Diagnose and repair faults in mechanical equipment	40
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	
UEPMNT318	Conduct generator mechanical maintenance	80
	<ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble</li> </ul>	

engineering components

UEPOPS017 Conduct single energy source isolation procedures for permit to work 40

### Group C Elective units

### Weighting points

MEM05016 Perform advanced welding using manual metal arc welding process 40

☐ MEM05007 Perform manual heating and thermal cutting

☐ MEM05012 Perform routine manual metal arc welding

☐ MEM05015 Weld using manual metal arc welding process

☐ MEM05051 Select welding processes

☐ MEM05052 Apply safe welding practices

☐ MEM09002 Interpret technical drawing

☐ MEM11011 Undertake manual handling

☐ MEM12023 Perform engineering measurements

☐ MEM12024 Perform Computations

☐ MEM13015 Work safely and effectively in manufacturing and engineering

☐ MEM14006 Plan work activities

☐ MEM16006 Organise and communicate information

☐ MEM18001 Use hand tools

☐ MEM18002 Use power tools/hand held operations

MEM05018 Perform advanced welding using gas metal arc welding process 40

☐ MEM05007 Perform manual heating and thermal cutting

☐ MEM05017 Weld using gas metal arc welding process

☐ MEM05050 Perform routine gas metal arc welding

☐ MEM05051 Select welding processes

☐ MEM05052 Apply safe welding practices

☐ MEM09002 Interpret technical drawing

	<ul style="list-style-type: none"> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> </ul>	
MEM05024	Perform welding supervision <ul style="list-style-type: none"> <li>└ MEM05026 Apply welding principles</li> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> </ul>	120
MEM07011	Perform complex milling operations <ul style="list-style-type: none"> <li>└ MEM07005 Perform general machining</li> <li>└ MEM07007 Perform milling operations</li> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12003 Perform precision mechanical measurements</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> </ul>	40
MEM07012	Perform complex grinding operations	40

	<ul style="list-style-type: none"> <li>└ MEM07005 Perform general machining</li> <li>└ MEM07008 Perform grinding operations</li> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12003 Perform precision mechanical measurements</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> </ul>	
MEM07021	Perform complex lathe operations <ul style="list-style-type: none"> <li>└ MEM07005 Perform general machining</li> <li>└ MEM07006 Perform lathe operations</li> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM11011 Undertake Manual Handling</li> <li>└ MEM12003 Perform precision mechanical measurements</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM12024 Perform Computations</li> <li>└ MEM13015 Work safely and effectively in manufacturing and engineering</li> <li>└ MEM14006 Plan work activities</li> <li>└ MEM16006 Organise and communicate information</li> <li>└ MEM18001 Use hand tools</li> </ul>	40
UEPMNT401	Install and maintain complex mechanical seals <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> </ul>	40

	<ul style="list-style-type: none"> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> <li>└ UEPMNT30 Maintain mechanical pumps</li> </ul>	
UEPMNT402	Conduct complex levelling and alignment <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM1800B Perform levelling and alignment of machines and engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> </ul>	40
UEPMNT403	Maintain complex mechanical valves <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> <li>└ UEPMNT30 Maintain mechanical valves</li> </ul>	40
UEPMNT404	Maintain complex mechanical pumps <ul style="list-style-type: none"> <li>└ MEM09002 Interpret technical drawing</li> <li>└ MEM12023 Perform engineering measurements</li> <li>└ MEM18001 Use hand tools</li> <li>└ MEM18002 Use power tools/hand held operations</li> <li>└ MEM18003 Use tools for precision work</li> <li>└ MEM18006 Repair and fit engineering components</li> <li>└ MEM18055 Dismantle, replace and assemble engineering components</li> <li>└ UEPMNT304 Maintain mechanical pumps</li> </ul>	40

UEPMNT408	Install hydro turbines └ MEM09002 Interpret technical drawing └ MEM12023 Perform engineering measurements └ MEM18001 Use hand tools └ MEM18002 Use power tools/hand held operations └ MEM18003 Use tools for precision work └ MEM18006 Repair and fit engineering components └ MEM18009 Perform levelling and alignment of machines and engineering components └ MEM18055 Dismantle, replace and assemble engineering components └ UEPMNT402 Conduct complex levelling and alignment	100
UEPMNT419	Perform civil drafting └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications └ MEM09002B Interpret technical drawing	60
UEPMNT422	Conduct performance testing on process plant and equipment └ UEECD0019 Fabricate, assemble and dismantle utilities industry components └ UEECD0020 Fix and secure electrotechnology equipment └ UEECD0043 Solve problems in direct current circuits └ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications └ UEEEL0003 Arrange circuits, control and protection for general electrical installations └ UEEEL0011 Evaluate performance of low voltage electrical apparatus └ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits └ UEEEL0020 Solve problems in low voltage a.c. circuits └ UEEEL0021 Solve problems in magnetic and electromagnetic devices └ UEEEL0023 Terminate cables, cords and accessories	60

	for low voltage circuits	
	└ UEEEL0025 Test and Connect Transformers	
	└ UEPMNT351 Test and commission electrical equipment	
UEPOPS011	Conduct multiple energy source isolation procedures for permit to work	40
	└ UEPOPS017 Conduct single energy source isolation procedures for permit to work	

**Group D Elective units****Weighting points**

UEEEL0025	Test and connect transformers	80
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	└ UEECD0020 Fix and secure electrotechnology equipment	
	└ UEECD0043 Solve problems in direct current circuits	
	└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEEEL0019 Solve problems in direct current (d.c.) machines	
	└ UEEEL0020 Solve problems in low voltage a.c. circuits	
	└ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	└ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
UEEEL0047	Identify, shut down and restart systems with alternate supplies	
	└ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	└ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	└ UEECD0020 Fix and secure electrotechnology equipment	
	└ UEECD0043 Solve problems in direct current circuits	

	<ul style="list-style-type: none"> <li>└ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications</li> <li>└ UEEEL0003 Arrange circuits, control and protection for general electrical installations</li> <li>└ UEEEL0019 Solve problems in direct current (d.c.) machines</li> <li>└ UEEEL0020 Solve problems in low voltage a.c. circuits</li> <li>└ UEEEL0021 Solve problems in magnetic and electromagnetic devices</li> <li>└ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits</li> </ul>	
UEPOPS022	Coordinate and direct switching program	60
	<ul style="list-style-type: none"> <li>└ UEPOPS124 Perform switching to a switching program</li> </ul>	
UEPOPS023	Coordinate electrical energy production	60
	<ul style="list-style-type: none"> <li>└ UEPOPS019 Control electrical energy production</li> </ul>	
UEPOPS030	Coordinate power generation	40
UEPOPS038	Evaluate cost estimations and initiate appropriate solutions	40
	<ul style="list-style-type: none"> <li>└ UEECO0001 Estimate electrotechnology projects</li> </ul>	
UEPOPS039	Evaluate scheduling of generation plant	60
	<ul style="list-style-type: none"> <li>└ UEPOPS132 Schedule generation</li> </ul>	
UEPOPS048	Manage commissioning and decommissioning	60
UEPOPS049	Manage critical incidents	60
	<ul style="list-style-type: none"> <li>└ UEPOPS031 Coordinate response to critical incidents</li> <li>└ UEPOPS130 Respond to a critical incident</li> </ul>	
UEPOPS050	Manage environmental management systems	40
UEPOPS051	Manage first response team	40
	<ul style="list-style-type: none"> <li>└ UEPOPS024 Coordinate first response team operation</li> </ul>	
UEPOPS052	Manage high voltage network system	80
	<ul style="list-style-type: none"> <li>└ UEPOPS026 Coordinate network/system</li> </ul>	



UEPOPS053	Manage operational crisis to maintain or restore power system integrity	60
UEPOPS054	Manage operational strategies for power production	80
UEPOPS055	Manage permit to work system └ UEPOPS011 Conduct multiple energy source isolation procedures for permit to work └ UEPOPS028 Coordinate permit to work system	40
UEPOPS056	Manage quality control procedures	40
UEPOPS066	Monitor power generation plant reliability	60
UEPOPS143	Tune process plant and equipment	60

## Qualification Mapping Information

This qualification replaces and is equivalent to UEP50318 Diploma of ESI Generation (Maintenance)

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>