

Metering Qualification

TOPIC 1. UEEEL0013/ UEEEL0078/UEEENEED171A

Elements and Performance Criteria

ELEMENTS		PERFORMANCE CRITERIA			Lesson
Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.			
1	Prepare to install whole current meter	1.1	Scope of work activity is confirmed from the work order / instruction, in consultation with supervisor / authorised person	Lesson 1 T1- Reasons for metering and the regulated market +Assessment 1	Refer TechGuide-Energy-metering-monitoring-guide Read Page 3 to 5
		1.2	Appropriate electricity meter and enclosure are identified and confirmed in accordance with workplace procedures	Lesson 1 T1- Reasons for metering and the regulated market +Assessment 1	Refer TechGuide-Energy-metering-monitoring-guide Read Appendix C Type of meters Page 46
		1.3	Customer is advised of proposed work and scheduling in accordance with job requirements/specifications and workplace procedures	Lesson 1 T1- Reasons for metering and the regulated market +Assessment 1	Refer TechGuide-Energy-metering-monitoring-guide Read Page 38 People and Responsibility
		1.4	Work Health and Safety (WHS) / Occupational Health and Safety (OHS) requirements and relevant workplace procedures including de-energising, isolation and energising are identified and implemented	CD0007	
		1.5	Hazards are identified, risks assessed, and risk control measures and Safe Work Method Statements (SWMS) applied	CD0007	

		1.6	Switchboard on which the meter is to be installed is inspected and evaluated for compliance with safety and functionality requirements and industry standards	Lesson 3-Interval metering +Assessment 3	Read What is interval metering Read Interval metering and Interval Data Read EL0078-Bi-directional-meters-explained Read EL0078-What is Bidirectional Meter_ - Energy Theory Read Block-diagram-for-the-metering-system Read Smart Meter Circuit Design & Block Diagram » Electronics Notes
		1.7	Approval to rectify safety and/or functionality defects identified by visual inspection of the switchboard is sought from relevant person/s in accordance with workplace procedures	Lesson 3-Interval metering +Assessment 3	Read What are the metering parameters Read Type of meters – Ausgrid Read ACE 3000 Type 520 Residential Polyphase Single_Multi-Rate Electronic Meter Read What does import and export mean on electricity meter Read Single phase export import meter
		1.8	Installation and any rectification work is planned and sequenced appropriately in consultation with relevant person/s and in accordance legislative framework	Lesson 4 Meter Installations +Assessment 4	Lesson 4-EL0078 1.8 Meter Installations Read Section 3 Installation and Section 4 Wiring

		1.9	Confirmation that safe isolation of the installation, access to a communication's connection and implementation of any relevant safeguards to associated metering services can be completed in accordance with job requirements is obtained	Lesson 5-Safe Isolation +Assessment 5	Read Lesson 5-EL0078-1.9 Safe Isolation Procedures _ Fluke
		1.10	Resources, materials, tools, equipment and testing devices are obtained and checked for correct operation and safety and against job requirements and specifications in accordance with workplace procedures	Lesson 2-T2-Metering layouts and requirements +Assessment 2	Refer Metering-Installations Read Page 11 (6.2.1, 6.2.2) Refer 2018_07_NSW_Annexure ToServiceAndInstallationRules Of NSW Read Section 2 METERING EQUIPMENT Refer Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity-Metering-Manual-QEMM Read Electrical Contractor's LV CT Metering Check Sheet
		1.11	Personal Protective Equipment (PPE) is selected, checked and used accordance with workplace procedures	CD0007	
2	Install whole current electricity meter	2.1	Need to test or measure live work is determined in accordance with WHS/OHS requirements, workplace procedures and SWMS	Lesson 11 Safe Isolation +Assessment 11	View Isolation procedure Videos for Single Phase and Three Phase
		2.2	Pre installation tests and assessments are carried out, correct meter to be replaced confirmed and information documented in accordance with workplace procedures	Lesson 6-LV Testing +Assessment 6	Refer Lesson 6-EL0078 -2.2 Page 25 - low-voltage-testing-manual Read 5.1 Pre-test visual inspection

		2.3	Approval to rectify safety and/or functionality defects identified by testing and assessment is sought from relevant person/s in accordance with workplace procedures	Lesson 12 Working near power lines +Assessment 12	Refer Lesson 12-EL0078 (2.3)Working near power lines Read all
		2.4	Work activities outside of the limits of own authority and/or qualification are identified, and assistance sought if required in accordance with operating instructions and workplace procedures	Lesson 2-T2- Metering layouts and requirements +Assessment 2	Refer Metering-Installations Read Page 11 (6.2.1, 6.2.2) Refer 2018_07_NSW_Annexure ToServiceAndInstallationRules Of NSW Read Section 2 METERING EQUIPMENT Refer Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity- Metering-Manual-QEMM Read Electrical Contractor's LV CT Metering Check Sheet
		2.5	Existing meter is isolated by authorised person and checked and tested to confirm 'deenergised' in accordance with workplace procedures and WHS/OHS requirements	Lesson 5 Safe Isolation +Assessment 5	Read Lesson 5-EL0078-1.9 Safe Isolation Procedures _ Fluke
		2.6	Approved rectification work is carried out to comply with industry standards and in accordance with workplace procedures	Lesson 7- Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity- Metering-Manual-QEMM Read Section 2+3+4
		2.7	Meter is installed to comply with relevant technical industry standards, job specifications and workplace procedures and requirements	Lesson 7- Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity- Metering-Manual-QEMM Read Section 2+3+4

		2.8	Meter power and communication connections, and where required communications technology device installation, are made in accordance with manufacturer and job specifications and workplace procedures	Lesson 7-Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity-Metering-Manual-QEMM Read Section 2+3+4
		2.9	Meter is configured and functionality confirmed in accordance with manufacturer specifications and workplace procedures	Lesson 7-Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity-Metering-Manual-QEMM Read Section 2+3+4
		2.10	Work progress is monitored against the approved pre-start risk assessment (workplan) and adjustments to the plan made, as required, in accordance with workplace procedures	Lesson 7-Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity-Metering-Manual-QEMM Read Section 2+3+4
		2.11	Test procedures are performed to establish and confirm a neutral integrity test point (NITP), integrity of MEN, phase rotation where applicable, and main earth connections in accordance with workplace procedures	Lesson 7-Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity-Metering-Manual-QEMM Read Section 2+3+4
		2.12	Ongoing checks of the quality of installation are undertaken in accordance with workplace procedures	Lesson 7-Metering Manual Applications +Assessment 7	Lesson 7-EL0078-2.6 to 2.13 Queensland-Electricity-Metering-Manual-QEMM Read Section 2+3+4
		2.13	Installation is carried out efficiently without unnecessary waste of materials or damage to apparatus circuits, the surrounding environment or services using sustainable energy principles	Lesson 2-T2-Metering layouts and requirements +Assessment 2	Refer CMIG Meter Installation Requirements Read Page 11 to 21

		2.14	Unplanned situations are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment	CD0007	
3	Complete meter installation activity and report completion of work	3.1	WHS/OHS work completion risk control measures and workplace procedures are followed	CD0007	
		3.2	Supply is reinstated 'energised' to the installation in accordance with workplace procedures	Lesson 8-Power restoration +Assessment 8	Refer Lesson 8-EL0078-3.2 How Power is Restored – Pioneer Electric Read all
		3.3	Final inspection and tests are made to ensure the installation conforms to job requirements and workplace procedures	Lesson 9 Electrical Testing +Assessment 9	Refer Lesson 9-EL0078-3.3 Electrical Testing Sequence Read all
		3.4	Worksite and tools are cleaned and made safe, and waste disposed of, in accordance with workplace procedures	Lesson 9 Electrical Testing +Assessment 9	Refer Lesson 9-EL0078-3.3 Electrical Testing Sequence Read all
		3.5	Where required, hazardous waste is removed and disposed of in accordance with regulatory requirements and workplace procedures	Lesson 9 Electrical Testing +Assessment 9	Refer Lesson 9-EL0078-3.3 Electrical Testing Sequence Read all
		3.6	Final visual inspection of installation and work area is performed to ensure the work site is left clean of any hazardous materials or substances in accordance with workplace procedures	Lesson 6 LV Testing +Assessment 6	Refer Lesson 6-EL0078 -2.2 Page 25 - low-voltage-testing-manual Read 5.2 Post-test visual inspection
		3.7	'As-installed' meter or rectification work is documented, and appropriate person/s notified in accordance with workplace procedures	Lesson 3-T3-Interval metering +Assessment 3	Read What are the metering parameters Read Type of meters – Ausgrid Read

					<p>ACE 3000 Type 520 Residential Polyphase Single_Multi-Rate Electronic Meter</p> <p>Read</p> <p>What does import and export mean on electricity meter</p> <p>Read</p> <p>Single phase export import meter</p>
		3.8	Installation and certification compliance report/s and other documentation is updated and submitted, as required, in accordance with workplace procedures	Lesson 10 Metering Documentations +Assessment 10	<p>Refer</p> <p>Lesson 10-EL0078 -3.8 to 3.10- Metering Documentations</p> <p>Read Section 2</p> <p>B1- SINGLE PHASE ACCUMULATION (FLAT RATE) METERS</p>
		3.9	Work supervisor or authorised person/s notified of completion of work and the completion of activity is documented in accordance with the pre-start risk assessment (workplan)	Lesson 10 Metering Documentations +Assessment 10	<p>Refer</p> <p>Lesson 10-EL0078 -3.8 to 3.10- Metering Documentations</p> <p>Read Section 3</p> <p>B3 – THREE PHASE ACCUMULATION (FLAT RATE) METERS</p>
		3.10	Metering installation work outcomes, configurations and completion of work is communicated to the customer in accordance with workplace procedures	Lesson 10 Metering Documentations +Assessment 10	<p>Refer</p> <p>Lesson 10-EL0078 -3.8 to 3.10- Metering Documentations</p> <p>6.4.4 Wiring Configuration</p> <p>Page 133</p>