UEERE9996Y Inspect micro grid renewable energy systems

Modification History

Release 1. This is the first release of this unit of competency in the Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to conduct compliance inspection of micro-grid renewable energy systems.

It includes reviewing relevant industry/regulatory standards that must be complied with, preparing inspection checklist, conducting compliance inspection, and actioning and reporting on findings.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

UEEEL0039 Design, install and verify compliance and functionality of general electrical installations

UEERE9998Y Inspect grid connected renewable energy systems

UEERE9997Y Inspect off-grid renewable energy systems

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare to conduct micro-grid system compliance inspection	**1.1** WHS/OHS processes and procedures for work are identified and applied in accordance with workplace procedures
	1.2 Installation documentation and relevant industry/regulatory standards are reviewed and applied
	1.3 Inspection checklists are prepared in accordance with relevant industry standards and regulatory requirements
	1.4 Appropriate person/s is consulted to ensure the work is coordinated effectively with others
	1.5 Tools, equipment and testing devices to verify compliance are obtained and checked for operation and safety in accordance with workplace procedures
	1.6 Need to test and measure live electrical work is determined in accordance with WHS/OHS requirements and workplace procedures
2 Conduct compliance inspection of micro-grid renewable energy system	**2.1** Circuits/machines/plant are checked and isolated in accordance with WHS/OHS requirements and workplace procedures
	2.2 Inspection of the system is conducted against checklist in accordance with relevant industry standards and regulatory requirements
	2.3 Electrical equipment compliance with relevant safety requirements and industry standards is obtained from appropriate person/s
	2.4 Areas of compliance are verified, and non-compliance identified in accordance with relevant industry standards and regulatory requirements
3 Act and report on micro-grid system inspection findings	**3.1** Inspection findings are documented in accordance with relevant industry standards and regulatory requirements

3.2 Actions for non-compliance within the scope of inspection responsibilities are determined in accordance with relevant industry standards and regulatory requirements

3.3 Inspection report is completed and issued to appropriate person/s in accordance with relevant industry standards and regulatory requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Electrotechnology Training Package Companion Volume Implementation Guide.

Inspection of micro-grid renewable energy systems must include:	• two different types of systems • energy generation equipment • energy storage equipment • power conversion equipment • micro-grid control system

Unit Mapping Information

This is a new unit.

Links

UEE - Electrotechnology Training Package Companion Volume Implementation Guide at: [sector webpage link here]

Assessment Requirements for UEERE9996Y Inspect micro grid renewable energy systems

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- obtaining required information and documentation in preparation for the inspection
- preparing micro-grid system inspection checklists based on industry standards and regulatory requirements
- conducting detailed inspections and testing of micro-grid system
- verifying micro-grid system compliance, and identifying non-compliance, with industry/regulatory standards
- acting within the inspection authority when dealing with non-compliance
- documenting and reporting inspection findings.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of the following. Additional advice and definitions for some items is provided in the UEE Training Package Companion Volume Implementation Guide (CVIG):

- inspections and safety compliance audits of micro-grid renewable energy systems, including:
  - inspection types and their scope
  - scope of inspection responsibilities
  - inspection methods and procedures
  - inspection documentation
  - installation, fault finding and repair of micro grid systems
  - relevant industry standards
  - relevant regulatory requirements
  - relevant manufacturer specifications
  - considerations when inspecting different types of installations
  - processes for confirming that performance standards have been met

- actions and procedures for dealing with non-compliance defect
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS and legislated requirements

- relevant workplace documentation, policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

a range of relevant exercises, case studies and/or other simulations

relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry

applicable documentation, including workplace procedures, equipment specifications, industry standards, regulations, codes of practice and operation manuals.

Links

UEE - Electrotechnology Training Package Companion Volume Implementation Guide at: [sector webpage link here]

Companion Volume Implementation Guide (CVIG) Content

Installation, fault finding and repair of micro grid systems should include knowledge to the level of:	UEERE9986X Coordinate the installation, fault finding and repair of micro grid systems