



Australian Government

Assessment Requirements for UEERE0075 Install and maintain micro hydro energy systems to power conversion equipment

Release: 1

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Modification History

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

This unit replaces and is not equivalent to:

- UEERE0037 Install, configure and commission LV micro-hydro systems rated up to 6.4 kW, and
- UEERE0039 Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW

Modifications include:

- Unit title changed
- Unit application updated
- Prerequisites changed
- Significant amendments made to Elements and Performance Criteria
- Range of conditions updated
- Significant amendments to Performance and Knowledge Evidence.

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 occasions and include:

- installing and maintaining micro-hydro systems, including:
 - applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
 - verifying design and resolving any issues with designer
 - coordinating work with relevant person/s
 - determining and applying live testing, measurement and isolation requirements
 - reading and interpreting drawings/diagrams related to apparatus locations and circuit connections
 - applying appropriate installation methods for micro-hydro system
 - testing and verification micro-hydro system safely
 - connecting and commissioning in accordance with industry standards and regulations
 - completing maintenance of micro hydro systems
 - completing documentation according to regulatory and industry standards.

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:

- micro-hydro systems installation and maintenance processes, including:
 - micro-hydro systems installation processes including:
 - selection of an appropriate micro-hydro system taking into account the topology of the site, local council approvals, environmental considerations, site access and transport of equipment, water and power transmission distances
 - appropriate methods and safety procedures for dam or weir construction, watercourse construction and/or penstock installation, and turbine installation
 - appropriate installation, testing, commissioning, fault diagnosis and rectification procedures using appropriate safety procedures
 - schematic and wiring diagrams for the micro-hydro system showing the general circuit layout and protection between the micro-hydro system and PCE in accordance with relevant Australian standards
 - safety procedures for the installation, commissioning, fault diagnosis of system components
 - micro-hydro systems maintenance processes encompassing:
 - appropriate maintenance methods using appropriate safety procedures
 - maintenance schedule for the system
 - safety procedures for the maintenance of system components
 - relevant manufacturer specifications
 - relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
 - relevant workplace documentation
 - relevant workplace 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
- an operational micro-hydro unit used to:
 - demonstrate the installation of a micro-hydro system

- facilitate the electrical interconnection to the PCE
- demonstrate the maintenance of a micro-hydro system

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>