



Australian Government

Assessment Requirements for UEERE0014 Develop strategies to address sustainability issues for electrical installations

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.

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 one occasion and include:

- understanding the extent of the electrical installation energy problem/s
- forming effective strategies for solution development and implementation
- obtaining energy system/component parameters, specifications and performance requirements appropriate to each problem
- testing solutions to energy problems
- documenting instruction for implementation of solutions that incorporate risk control measure to be followed
- documenting justification of solutions implemented in accordance with professional standards
- dealing with unplanned events
- analysing and selecting solutions for sustainability issues
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including implementing risk control measures
- applying sustainable energy principles and practices
- consulting authorised person/s qualified in implementing solutions for sustainability issues
- identifying, developing and documenting strategies to address sustainability issues
- meeting scheduled timeframes.

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:

- electrical installation energy sustainability strategies, including:
 - energy management, legislation and regulation encompassing:
 - energy management
 - climate change
 - greenhouse effect/greenhouse gases
 - standards and codes

- legislation and regulations
- energy audits
- electrical motors, pumps and fans encompassing:
 - motor construction, components and losses
 - motor efficiency (AS/NZS 1359.5 Rotating electrical machines - General requirements - Three-phase cage induction motors - High efficiency and minimum energy performance standards requirements)
- appliances encompassing:
 - energy star ratings
 - washing machines
 - clothes dryers
 - dishwashers
 - televisions and computers
 - standby management strategies
- energy efficient lighting encompassing:
 - lighting efficiency
 - efficient lighting design
 - ballasts
 - lighting controls
- water heating encompassing:
 - water heating systems and losses
 - electric, gas, oil, heat pump and solar water heater design
 - control strategies
- space heating and cooling encompassing:
 - space heating systems and losses
 - space cooling systems and losses
 - heating - electric, gas, oil, heat pump and solar heater design
 - cooling – direct expansion, chilled water and ventilation
 - control strategies
- solar energy encompassing:
 - system design fundamentals
 - solar photovoltaic (PV) design elements
 - solar PV system performance
 - analysis of system capital and operating cost performance
- quality assurance
- relevant job safety assessments or risk mitigation processes, including risk control measures
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures

- solution development and implementation techniques and strategies
- sustainable energy principles and practices.

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, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

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