

## **UEERE0021Y Provide basic sustainable energy solutions for energy management in residential premises**

### **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 UEERE0021 Provide basic sustainable energy solutions for energy reduction in residential premises. Modifications include:

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

### **Application**

This unit involves the skills and knowledge required to provide sustainable energy solutions for energy management in residential premises.

It includes preparing for and conducting monitoring of energy usage, analysing data from monitoring, and providing solutions for energy management. It also includes completing monitoring activities and reporting.

This unit is intended as an entry level introduction to energy efficiency principles through completing a basic energy efficiency assessment and compiling recommendations for potential energy management solutions.

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

### **Pre-requisite Unit**

Not applicable

### **Competency Field**

Renewable Energy

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare to monitor energy usage**

### PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

**1.1** Determine purpose, scope and nature of monitoring activities

**1.2** Monitoring activities are, planned in accordance with stakeholder expectations and site requirements

**1.3** Relevant work health and safety (WHS)/occupational health and safety (OHS) policies and workplace procedures are identified and applied

**1.4** Relevant personnel are consulted to ensure work is coordinated effectively with others

**1.5** Equipment and materials required for monitoring are identified, obtained and checked in accordance with requirements

#### **2 Undertake monitoring of energy usage and provide solutions for energy management**

**2.1** Monitoring activities are conducted in accordance with requirements without damage or disruption to the surrounding environment or services

**2.2** An energy use, loss and generation inventories are compiled from monitoring activities

**2.3** Monitoring data is collated, analysed, compared against baseline, and performance determined in accordance with industry practice/standards

**2.4** Energy performance is considered against installed equipment, appliance use and site conditions

**2.5** Relevant Government initiatives are identified and considered in development of recommendations

- 2.6** Energy management recommendations are determined based on analysis, and documented including justification for, and potential benefits from, each recommendation
- 2.7** Energy management recommendations are provided to stakeholders, options discussed, and agreed recommendation/s confirmed
- 2.8** Final recommendations are documented including implementation advice

## **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 UEE Electrotechnology Training Package Companion Volume Implementation Guide.

## **Unit Mapping Information**

This unit replaces and is not equivalent to UEERE0021 Provide basic sustainable energy solutions for energy reduction in residential premises.

## **Links**

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

# **Assessment Requirements for UEERE0021Y Provide basic sustainable energy solutions for energy management in residential premises**

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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 occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices
- planning monitoring activities based on stakeholder needs/expectations and site requirements
- conducted monitoring activities in accordance with agreed plan
- compiling energy use, loss and generation inventories
- collating and analysing monitoring data and comparing performance against baseline
- identifying relevant government initiatives that can contribute to solution/s
- determining, documenting and justifying energy management recommendations based on analysis
- completing required reporting.

## **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:

- concepts of renewable energy (RE), including:
  - non-technical issues including current economic, social, environmental and political issues impacting on RE technology

- energy services/demand for domestic dwellings including:
  - terminology
  - energy, power, temperature, symbols and units
  - energy generation, grid types and storage
  - sustainability of different energy sources
  - energy conversion and efficiency
  - energy consuming equipment:
    - types
    - energy rating schemes and labelling
- emerging technologies renewable energy technologies including:
  - types
  - applications
  - benefits and limitations
  - generation resource
- stand-alone power system configuration including:
  - basic configuration series systems
  - components: functions, efficiencies, regulators, inverters, battery chargers and generators
- relevant industry standard energy consumption measurements and calculations
- sustainable energy solutions for energy reduction in residential premises
- relevant manufacturer specifications
- relevant WHS/OHS 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 suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable 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
- resources that reflect current industry practices in relation to providing basic sustainable energy solutions for energy reduction in residential premises

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

## Links

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

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