



**Australian Government**

# **UEERE0045 Solve basic problems in micro-hydro systems**

**Release: 1**

# **UEERE0045 Solve basic problems in micro-hydro systems**

## **Modification History**

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

## **Application**

This unit involves the skills and knowledge required to solve basic problems in micro-hydro systems.

It includes preparing to work on micro-hydro systems, solving problems in micro-hydro systems and completing work and documenting problem-solving activities.

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

Note: Those holding an 'Unrestricted Electrician's Licence' or equivalent issued in an Australian state or territory meet the prerequisite requirements of this unit.

## **Pre-requisite Unit**

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEEEL0019 Solve problems in direct current (d.c.) machines

UEEEL0021 Solve problems in electromagnetic devices

and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

## **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 work on micro-hydro systems**

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) processes and procedures for relevant work area are identified and applied in accordance with workplace procedures
- 1.2** Risk control measures are applied in accordance with workplace procedures prior to commencing work
- 1.3** Nature of the apparatus problem is obtained from documentation or from relevant person/s to determine the scope of work
- 1.4** Instructions for coordinating work with others is obtained from relevant person/s and applied
- 1.5** Materials required for the work are identified and accessed in accordance with workplace procedures
- 1.6** Tools, equipment and testing devices required for work are obtained and checked for correct operation and safety

#### **2 Solve problems in micro-hydro systems**

- 2.1** Workplace risk control measures and procedures are applied
- 2.2** Need to test or measure live electrical work is determined in accordance with WHS/OHS requirements and conducted in accordance with workplace procedures
- 2.3** Circuits are isolated in accordance with WHS/OHS requirements and workplace procedures
- 2.4** Micro-hydro problems are solved using measured and calculated values of apparatus operating parameters and in accordance with workplace procedures
- 2.5** Problems are solved without damage to apparatus, circuits, the surrounding environment and services applying sustainable energy practices

#### **3 Complete work and document problem-solving**

- 3.1** Workplace risk control measures and procedures are applied

## activities

- 3.2 Worksite is cleaned and made safe in accordance with workplace procedures
- 3.3 Justification for solutions used to solve micro-hydro problems is documented
- 3.4 Work completion is documented and relevant person/s notified in accordance with workplace procedures

## 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.

Solving problems in micro-hydro systems must include at least the following:

- problems related to:
  - installation
  - fault finding
  - maintenance or development work functions in relation to the following:
    - determining the operating parameters of an existing apparatus/system
    - identifying and locating electrical faults
    - identifying and locating mechanical faults

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEK124A Solve basic problems in micro hydro systems.

## Links

Companion Volume implementation guides are found in VETNet - -

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

