



Australian Government

UEERE0029 Design micro-hydro systems rated to 6.4 kW

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.

Application

This unit involves the skills and knowledge required to design micro-hydro systems rated to 6.4 kilowatt (kW) and its installation.

It includes determining and developing micro-hydro system design, following design briefs, documenting design calculations and criteria, and obtaining design approval for micro-hydro system.

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

Pre-requisite Unit

UEERE0045 Solve basic problems in micro-hydro systems

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to design micro-hydro system

PERFORMANCE CRITERIA

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

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) processes and workplace procedures for a given work area are identified, obtained and applied
- 1.2** Scope of the micro-hydro system electrical installation is determined from design brief

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| | 1.3 | Safety and regulatory requirements to which the electrical installation must comply are identified, obtained and applied |
| | 1.4 | Design development work is planned to meet scheduled timelines in consultation with relevant person/s involved in the micro-hydro system installation or associated work |
| 2 | Develop micro-hydro system design | |
| | 2.1 | Micro-hydro system performance standards and compliance methods are applied to the design |
| | 2.2 | Alternative micro-hybrid power system designs are considered in accordance with the design brief |
| | 2.3 | Safety, functionality and budgetary considerations are incorporated in the micro-hydro system design |
| | 2.4 | Micro-hydro system design is drafted and checked for compliance with the design brief and regulatory requirements |
| | 2.5 | Micro-hydro system design is documented for submission to relevant person/s for acceptance and approval |
| | 2.6 | Unplanned situations are dealt with safely and effectively in accordance with workplace procedures |
| 3 | Obtain design approval for micro-hydro system | |
| | 3.1 | Micro-hydro system design is presented for approval and any issues clarified with client representative and/or relevant person/s |
| | 3.2 | Requests for alterations to the design are negotiated with relevant person/s within the constraints of workplace policies |
| | 3.3 | Final design is documented and approval obtained from relevant person/s |
| | 3.4 | Quality of work is monitored in accordance with relevant performance agreement and/or workplace procedures or industry standards |

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.

Designing micro-hydro systems rated to 6.4 kW must include at least the following:

- two micro-hydro system designs each using different technologies

Unit Mapping Information

This unit replaces and is equivalent to UEENEEK138A Design micro-hydro systems rated to 6.4 kW.

Links

Companion Volume implementation guides are found in VETNet - -

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