



Australian Government

UEERE0051 Apply electrical principles to renewable energy design

Release: 1

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Modification History

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

Application

This unit involves the skills and knowledge required to apply electrical principles to renewable energy design.

It includes: working safely; determining the extent and nature of the installation; applying regulation/legislation, industry standards, and codes; reading and interpreting drawings; identifying expertise required for design and installation; calculating cabling, isolation and protection devices; verifying compliance of equipment selected; and completing necessary documentation and record keeping.

This unit supports individuals other than electricians from other electrotechnology disciplines or education pathways to demonstrate the skills and knowledge required to undertake the design of renewable energy systems.

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.

PERFORMANCE CRITERIA

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

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| 1 Prepare to contribute to renewable energy installation design | 1.1 WHS/OHS processes and procedures are identified and applied in accordance with workplace procedures |
| | 1.2 Drawings and diagrams are interpreted to determine the apparatus, cables and isolation device sizes and types |
| | 1.3 Renewable energy system regulations / legislation, Industry Standards, and Codes are identified, interpreted and applied |
| | 1.4 Additional expertise or approval required for execution of design is identified |
| 2 Apply electrical principles to development of renewable energy design | 2.1 System energy production/yield is calculated in accordance with industry practice |
| | 2.2 Cable sizes are calculated in accordance with job requirements and industry standards |
| | 2.3 Isolator sizes are calculated in accordance with job requirements and industry standards |
| | 2.4 Protection device sizes are calculated in accordance with job requirements and industry standards |
| | 2.5 Calculated component sizes are checked against verified designs |
| | 2.6 Renewable energy system designs are reviewed to check compliance with Industry Standards, guidelines and codes |
| | 2.7 Documentation and record keeping is completed in accordance with workplace procedures and regulatory requirements |

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 Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit

Links

Companion Volume Implementation Guides are found in VETNet -

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