



Australian Government

UEERE0034 Diagnose and rectify faults in renewable energy (RE) control systems

Release: 1

UEERE0034 Diagnose and rectify faults in renewable energy (RE) control 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 diagnose and rectify faults in renewable energy (RE) control systems.

It includes preparing to diagnose and rectify faults, diagnosing and rectifying faults in RE control systems, and completing and reporting fault-finding and repair activities.

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

Pre-requisite Unit

UEERE0022 Solve basic problems in photovoltaic energy apparatus and systems

Competency Field

Renewable Energy

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to diagnose and rectify faults

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 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 Extent of work to be undertaken is determined from fault/breakdown reports and/or discussions with relevant person/s
- 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 to locate faults are obtained in accordance with workplace procedures and checked for correct operation and safety

2 Diagnose and rectify faults in RE control 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/machines/plant are isolated in accordance with WHS/OHS requirements and workplace procedures
- 2.4 Safety hazards resulting from the fault or breakdown are documented and risk control measures identified and implemented in consultation with relevant person/s
- 2.5 Fault finding of RE systems and interconnecting circuits is approached methodically using measured and calculated values of circuit/apparatus parameters
- 2.6 Circuit/apparatus components are dismantled, as required, and parts stored to protect against loss or damage
- 2.7 Faulty circuits/components are rechecked and their fault status confirmed
- 2.8 Materials/replacement parts required to rectify faults are sourced and obtained in accordance with workplace procedures
- 2.9 Effectiveness of repair is tested in accordance with workplace procedures
- 2.10 Apparatus is reassembled, tested and prepared for return

to service

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| | 2.11 | Unexpected events are dealt with safely and with approval of authorised person/s |
| | 2.12 | Fault-finding and repair activities are completed without damage to apparatus, circuits, the surrounding environment and services using sustainable energy practices |
| 3 Complete and report fault-finding and repair activities | 3.1 | Workplace risk control measures and procedures are applied |
| | 3.2 | Work area is cleaned and made safe in accordance with workplace procedures |
| | 3.3 | Justification for repairs to apparatus is documented in accordance with workplace procedures |
| | 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.

RE system fault finding and repairing must include at least four of the following:

- open circuit
- short circuit
- incorrect connections
- insulation failure
- unsafe condition
- apparatus/component failure
- related mechanical failure

Unit Mapping Information

This unit replaces and is equivalent to UEENEEK127A Diagnose and rectify faults in renewable

energy control systems.

Links

Companion Volume implementation guides are found in VETNet - -

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