Australian Government

Assessment Requirements for UEERE0071 Fault find and repair off-grid photovoltaic/generating set systems to an electrical installation

Release: 1

Assessment Requirements for UEERE0071 Fault find and repair off-grid photovoltaic/generating set systems to an electrical installation

Modification History

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

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) procedures
- finding and repairing faults/issues in off-grid PV/genset systems including:
  - verifying the reported faults/issues
  - diagnosing fault/issue based on measured and expected values
  - determining and implementing solution
  - documenting issue and justification for the solution used.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- off-grid PV/genset systems maintenance processes including:
  - correct isolation and shutdown procedures prior to carrying out maintenance tasks
  - appropriate maintenance methods for the various system components using appropriate safety procedures
  - maintenance schedule for the system
  - problem-solving techniques, including measuring and calculating value requirements
- off-grid PV/genset systems fault finding:
  - procedures for individual equipment
  - procedures for interconnected systems
- off-grid PV/genset systems maintenance procedures including:
  - requirements for individual equipment
  - requirements for interconnected systems.
  - requirements including relevant industry standards, regulations and manufacturer

requirements

- off-grid PV/genset systems testing and commissioning procedures including:
  - safe testing of equipment
  - safe testing of system operation
- system configurations including multiple energy sources including:
  - systems with d.c. loads only
  - systems with d.c. and ac. loads
  - systems with a.c. loads
  - renewable energy only systems including PV, wind and micro-hydro
  - hybrid systems comprising one or more RE system with fuel generator
- electrical installation requirements including:
  - methods used in wiring and connecting the following in accordance with relevant Australian Standards and manufacturers requirements:
    - multiple PCEs and associated control equipment
    - PCEs with generating sets
    - PCEs and fuel generators directly with loads or with switchboards or distributions board
  - selection and locating the associated protection and isolating devices in accordance with relevant Australian standards and industry guidelines
  - wiring diagrams for the off-grid RE system showing the general circuit layout and protection between the various system components
- system control installation including:
  - control and monitoring equipment
  - associated cabling
  - control programming
- system testing and commissioning
- system documentation
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes.

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
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to fault finding and repair of PV/genset systems
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6