



Australian Government

UETDRDS015 Assess distributed energy resource connections to a distribution network

Release: 1

UETDRDS015 Assess distributed energy resource connections to a distribution network

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

Application

This unit includes the skills and knowledge required to assess distributed energy resource (DER) connections to a distribution network in the electricity supply industry (ESI).

It includes knowledge of grid connected distributed energy resources including types, sustainability and potential impacts on existing networks.

It also includes procedures for validating DER connections, and documenting and reporting recommended solutions for identified generation, supply and load issues.

The application of the skills and knowledge described in this unit may require a licence/registration to practice in the workplace.

Other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing this unit.

Pre-requisite Unit

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

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0021 Solve problems in magnetic and electromagnetic devices

UETDRDS027 Investigate quality of supply issues

UETDREL005 Work safely in the vicinity of live electrical apparatus

Competency Field

Design

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to assess DER connections to a distribution network

PERFORMANCE CRITERIA

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

1.1 Project requirements are determined

1.2 Assessment specifications are determined in accordance with workplace requirements

1.3 Tools, equipment and personal protective equipment (PPE) required for site inspections are determined, obtained and confirmed in working order

1.4 Requirements for site inspections are determined in accordance with workplace requirements

1.5 Work is prioritised and sequenced for completion in accordance with workplace requirements

2 Assess DER connections to a distribution network

2.1 Site inspection is performed

2.2 DER connection is assessed in accordance with workplace requirements

2.3 Sustainable energy principles are used to evaluate and determine best outcomes in accordance with workplace requirements

2.4 Assessment is checked for compliance against legislation, regulations, standards and codes of practice

2.5 Health and safety risks are identified and minimised or eliminated by using safety and control measures in the design process

2.6 Quality checks of work are undertaken in accordance with workplace requirements

3 Complete work and documentation

- 3.1** Completed work is checked against project and workplace requirements
- 3.2** Work records, reports and documentation are completed, approved and appropriate personnel notified in accordance with workplace 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 UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a newly created unit.

Links

Companion Volume Implementation Guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETDRDS015 Assess distributed energy resource connections to a distribution network

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 4.0.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two (2) separate occasions and include:

- determining project requirements
- determining design specifications
- obtaining, inspecting and using relevant personal protective equipment (PPE) for site inspection
- determining requirements for site inspections in accordance with workplace requirements
- prioritising and sequencing work for completion in accordance with workplace requirements
- performing at least one site inspection
- applying sustainable energy principles and practices
- checking connection assessment for compliance against legislation, regulations, standards and codes of practice
- identifying, and minimising or eliminating health and safety risks by using safety and control measures
- performing ongoing quality checks of work in accordance with workplace requirements
- checking final design against project and workplace requirements
- completing relevant work records, reports and documentation
- using engineering applications software to assess impact of distributed energy resource (DER) on the network
- completing three (3) assessments of a DER connection using at least two (2) of the following project types:
 - solar
 - wind
 - hydro
 - hydrogen
 - wave
 - battery
- completing the following checks for each of the assessments:
 - voltage rise test
 - phase balance test

- accredited DER equipment is used
- network suitability
- single line diagram
- reverse power flow
- recommending solutions for each of the assessments on identified generation, supply and load issues.

Knowledge Evidence

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

- grid connected distributed energy resources, including:
 - types
 - sustainability
 - impacts on existing network
- procedures for validating DER connections to a distribution network
- procedures for documenting and reporting recommended solutions for identified generation, supply and load issues
- types and application of PPE for site inspection
- manuals, diagrams and drawings.

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 workplace operational situations where it is appropriate to do so.

Where this is not appropriate, assessment must occur in simulated conditions involving realistic and authentic activities that replicate operational 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:

- relevant and appropriate materials, tools, facilities, equipment and PPE currently used in industry
- applicable documentation, including workplace requirements, relevant industry standards, 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=229bace1-b7bc-4653-9300-dffb13ecfad7>