Australian Government

UETTDRIS73 Develop engineering solutions for energy supply power transformer problems

Release: 1

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Modification History

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

Application

This unit covers developing engineering solutions to resolve problems with energy supply system protection. It encompasses working safely, applying extensive knowledge of energy supply power transformer operation and their application, gathering and analysing data, applying problem-solving techniques, and developing and documenting solutions and alternatives.

Typical transformer problems are those encountered in meeting performance requirements and compliance standards, revising a transformer operating parameters and dealing with transformer malfunctions

The application of the skills and knowledge described in this unit requires a licence/registration to practice in the workplace subject to regulations for undertaking of electrical work.

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

Pre-requisite Unit

All competencies in the Common Unit Group must have been completed, plus all competencies in one (1) of the identified Pathway Unit Group(s).

Common Unit Group

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UEENEEE102A Fabricate, assemble and dismantle utilities industry components

UEENEEE104A Solve problems in d.c. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

UEENEEE126A Provide solutions to basic engineering computational problems

UEENEEG101A Solve problems in electromagnetic devices and related circuits

UEENEEG102A Solve problems in low voltage a.c. circuits

UEENEEG006A Solve problems in single and three phase low voltage machines

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits

UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

UETTDRIS67 Solve problems in energy supply network equipment

UETTDRIS68 Solve problems in energy supply network protection equipment and systems

UETTDRIS69 Diagnose and rectify faults in energy supply apparatus

Distribution Pathway Unit Group

UETTDRIS70 Diagnose and rectify faults in electrical energy distribution systems

Transmission Pathway Unit Group

UETTDRIS71 Diagnose and rectify faults in electrical energy supply transmission systems

Distributed Generation Pathway Unit Group

UETTDRIS72 Diagnose and rectify faults in distributed generation systems

Competency Field

Industry Specific Cross Discipline

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Prepare to develop engineering solution for energy supply power transformer problems	**1.1** Work health and safety (WHS)/occupational health and safety (OHS) processes and procedures for a given work area are identified, obtained and understood
	1.2 Established WHS/OHS risk control measures and procedures in preparation for the work are followed
	1.3 The extent of the transformer problem is determined from performance specifications and situation reports and in consultation with relevant personnel
	1.4 Activities are planned to meet scheduled timelines in consultation with others involved in the work

	1.5	Effective strategies are formed to ensure solution development and implementation is carried out efficiently
2 Develop engineering solutions for energy supply power transformer problems	**2.1**	WHS/OHS risk control measures and procedures for carrying out the work are followed
	2.2	Knowledge of supply power transformer arrangements, operation, device characteristics and applications are applied to developing solutions to supply power transformer problems
	2.3	Parameters, specifications and performance requirements in relation to each transformer problem are obtained in accordance with established procedures
	2.4	Approaches to resolving supply power transformer problems are analysed to provide most effective solutions
	2.5	Unplanned events are dealt with safely and effectively consistent with regulatory requirements and enterprise policies
	2.6	Quality of work is monitored against personal performance agreement and/or established organisational or professional standards
3 Test, document and implement engineering solution for energy supply power transformer problems	**3.1**	Solutions to transformer problems are tested to determine their effectiveness and modified where necessary
	3.2	Adopted solutions are documented, including instruction for their implementation that incorporates risk control measures to be followed
	3.3	Appropriately competent and qualified person/s) required to implement solutions to supply power transformer problems is coordinated in accordance with regulatory requirements and enterprise policy
	3.4	Justification for solutions used to solve supply power transformer problems is documented for inclusion in work/project development records in accordance with professional standards

Note: A license to practice in the workplace is required for work involving direct access to plant and equipment connected to installation wiring at voltages above 50 V a.c. or 120 V d.c

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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRIS73A Develop engineering solutions for energy supply power transformer problems.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7