



Australian Government

Department of Education, Employment and Workplace Relations

UETDRDS40A Prepare and appraise power systems financial impact statements

Release: 1

UETTDRDS40A Prepare and appraise power systems financial impact statements

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This Competency Standard Unit covers the creation, interpretation and application of financial impact statements in electricity network infrastructure augmentations, maintenance and construction activities. It includes project scoping, cost estimating, providing economic justifications and cost benefit analysis and the use of guarantee and capital contribution arrangements with customers.

Application of the Unit

Application of the Unit 2)

This Competency Standard Unit is intended to augment formally acquired competencies. It is suitable for employment-based programs under an approved contract of training.

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit may require a licence/registration to practice in the work place subject to regulations for undertaking of electrical work. Practice in workplace and during training is also subject to regulations directly related to Occupational Health and Safety, electricity/telecommunications/gas/water industry

License to practice**3)**

safety and compliance, industrial relations, environmental protection, anti discrimination and training.
Commonwealth, State/Territory or Local Government legislation and regulations may exist that limits the age of operating certain equipment.

Pre-Requisites**Prerequisite Unit(s)****4)****Competencies****4.1)**

Granting of competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

Where pre-requisite pathways have been identified. All competencies in the Common Unit Group must be have been completed plus all the competencies in one (1) of the identified Pathway Unit Group(s):

Common Unit Group

Unit Code	Unit Title
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace
UEENEEE104A	Solve problems in d.c. Circuits
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications
UEENEEG101A	Solve problems in electromagnetic devices and related circuits
UEENEEG102A	Solve problems in electromagnetic devices and related circuits
UETTDREL11A	Apply sustainable energy and environmental procedures
UETTDREL16A	Working safely near live electrical apparatus

Prerequisite Unit(s)**4)**

UETTDRI62A	Implement and monitor the power system organisational OHS policies, procedures and programs
UETTDRI63A	Implement and monitor the power system environmental and sustainable energy management policies and procedures

Testing Pathway Unit Group

UEENEED104A	Use engineering applications software on personal computers
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components
UEENEEE124A	Compile and produce an energy sector detailed report
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits problems
UEENEEE126A	Provide solutions to basic engineering computational problems
UEENEEG149A	Provide engineering solutions to problems in complex polyphase power circuits
UETTDRTS21A	Maintain interdependent network protection and control systems
UETTDRTS22A	Commission interdependent network protection and control systems
UETTDRTS29A	Develop power systems secondary isolation instructional documents
UETTDRTS35A	Maintain complex network protection and control systems

Design Pathway Unit Group

UETTDARDS39A	Prepare and manage detailed construction plans for electrical
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Prerequisite Unit(s) 4)

power system infrastructure

Literacy and numeracy skills 4.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 “Literacy and Numeracy”

Reading 5 Writing 5 Numeracy 5

Employability Skills Information**Employability Skills 5)**

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit

Performance Criteria describe the required performance needed to demonstrate achievement of the element.
Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Plan for and coordinate the preparation and appraisal of financial impact statements	1.1 OHS practices/procedures and environmental and sustainable energy procedures which may influence the preparation and appraisal of financial impact statements are reviewed and determined.
	1.2 Purpose of the financial statement is established and expected outcomes of the work are confirmed with the appropriate personnel.
	1.3 Established procedures, policies and specifications for financial impact statement preparation and appraisal are obtained or established with the appropriate personnel.
	1.4 Work is prioritised and sequenced for the most efficient and effective outcome following consultation with others for completion within acceptable timeframes, to a quality standard and in accordance with established procedures.
	1.5 Risk control measures are identified, prioritised and evaluated against the work schedule.
	1.6 Liaison and communication issues with other/authorised personnel, authorities, clients and land owners are resolved and activities coordinated to carry out work.
	1.7 Personnel participating in the work are fully briefed and respective responsibilities coordinated and authorised where applicable in accordance with established procedures.
2 Carry out and coordinate the preparation and appraisal of financial impact statements	2.1 Circuit system modelling is used to evaluate alternative proposals as per established procedures.
	2.2 OHS and sustainable energy principles, functionality and practices to reduce the incidence of accidents and minimise waste are incorporated into the project in accordance with requirements and/or established procedures.
	2.3 Quality of work is monitored against personal

ELEMENT**PERFORMANCE CRITERIA**

		performance agreement and/or established organisational and professional standards.
	2.4	Technical advice is given to potential hazards, safety risks and control measures so that monitoring and preventative action can be undertaken and/or appropriate authorities consulted, where necessary, in accordance with requirements and established procedures.
	2.5	Essential knowledge and associated skills are applied to analyse specific data and compare it with compliance specifications to ensure completion of the project within an agreed timeframe according to requirements.
3	Complete and coordinate the preparation and appraisal of financial impact statements	
	3.1	Final inspections of the financial impact statement are undertaken to ensure they comply with all requirements and include all specifications and documentations needed to complete the appraisal brief.
	3.2	Appropriate personnel are notified of completion and reports and/or completion documents are finalised.
	3.3	Reports and/or completion documents are submitted to relevant personnel/organisations for approval and, where applicable, statutory or regulatory approval.
	3.4	Approved copies of financial impact statement documents are issued and records are updated in accordance with established procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

8) Essential Knowledge and Associated Skills (EKAS): This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of preparing and appraising financial impact statements.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

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Evidence shall show an understanding of the preparation and appraisal of power systems financial impact statements to an extent indicated by the following aspects:

T1 Principles of safe design to an extent indicated by the following aspects:

- Commonwealth/State/Territory legislation, standards, codes, supply authority regulations and or enterprise requirements associated with safe design principles
- Particular reference to state and territory regulations regarding: working near energised conductors, electrical access, heights, confined space, testing procedures and licensing rules
- Application of safe design principles - safe design duty related information, safe design process related information and safe design evaluations

T2 Methodology used in writing enterprise specific management reports to an extent indicated by the following aspects:

- Commonwealth, State/Territory and local government legislation, supply authority regulations Standards, codes, and or enterprise requirements applicable to the writing enterprise specific management reports
- Techniques in researching, collating and analysing information for the report - recording, filing, retrieving systems and storing and retrieving data from computer systems
- Relationship of management reports to enterprise policies and procedures - enterprise structure and resources, Workplace OHS and risk management enterprise data, financial and operational data
- Environmental enterprise policies and procedures
- Industrial relations policies and procedures
- Anti-discrimination policies and procedures:
- Techniques in writing enterprise specific management reports - methods used to disseminate information and facilitate enterprise requirements, document proformas and compliance and legislative requirements to produce effective reports in the appropriate format

T3 Evidence shall show an understanding of financial impact statements encompassing:

- Techniques in budgeting and tracking project progress
- Preparation and analysis of budget figures

REQUIRED SKILLS AND KNOWLEDGE

- Techniques in the co-ordination of contingencies and risks that have a budget effect
- Techniques in dealing with problems that have a budget effect
- Examples of forms of recording project status and costings
- Application of relevant computer software packages
- Methods of prepare proposals encompassing: prepare specifications, tender and evaluation and letting of tenders
- Techniques in estimating - contract documents, drawings, specifications, general conditions, special conditions
- Resources costs - hourly rates (labour, plant, material, subcontractors), direct and indirect costs, contingency costs, project margin, cost of money, budget, preliminary tender, labour costing, equipment costing, economic comparisons and contract variations
- Techniques in prepare and interpret proposals and tender documents
- Techniques in preparing tender documents
- Techniques in interpret tender documents
- Techniques in preparing cost estimates for a project from relevant data
- Techniques in preparing financial impact statements

T4 Project management encompassing:

- Commonwealth, State and local government legislation, standards, codes, supply authority regulations and or enterprise requirements including relevant certification and licensing applicable to the duties and responsibilities for management a project
- Analyse functions of project management to determine achievement of project objectives
- Relationship of stakeholders to the project
- Techniques in development of project plan - project integration, scope, timelines, cost, quality, resources, communication/protocol requirements, risk/uncertainties and procurement and contacting
- Relationship between project processes, project life and project phases
- Planning and control procedures, resource management and risk management
- Techniques, methodologies and tools available to project managers
- Types of internal and external environmental factors that may affect the project

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit of competency and must be read in conjunction with the Performance Criteria and the range statement of the unit of competency and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this Competency Standard Unit and shall be used in conjunction with all component parts of this unit and, performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with Industry and, Regulatory policy in this regard.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment.

Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

**Critical aspects
of evidence
required to
demonstrate
competency in
this unit** 9.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the “Assessment Guidelines – UET12UET12”. Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the Performance Criteria and range; and
 - Apply sustainable energy principles and practices as specified in the Performance Criteria and range; and
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit to such an extent that the learner’s performance outcome is reported in accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment; and
 - Demonstrate an appropriate level of employability skills; and
- Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures; and
- Demonstrated performance across a representative range of contexts from the prescribed items below:

Range of tools/equipment/materials/procedures/workplaces/other variables		
Group No	The minimum number of items on which skill is to be	Item List

	demonstrated	
A	Completion of six (6) designs in total drawn from at least two (2) of the following project types:	Overhead line designs Underground line designs Distribution substations designs Customer substations designs Transmission substations designs Sub-transmission substations designs Public lighting designs Zone substation designs Substation secondary systems – Commissioning. Substation secondary systems –Maintenance and augmentation. Generation secondary systems –Commissioning. Generation secondary systems –Maintenance and augmentation. HV Primary plant –Commissioning. HV Primary plant –Maintenance and augmentation
B	Financial Impact Statements shall also include:	Activities that address the correction of errors in the process.
C	At least one occasion	Dealing with an unplanned event by drawing on essential knowledge and associated skills to

		provide appropriate solutions incorporated in the holistic assessment with the above listed items.
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Context of and specific resources for assessment

9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual preparation and appraisal of financial impact statements

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency working realistic environment and a variety of conditions.

Method of assessment

9.4)

This Competency Standard Unit shall be assessed by methods given in Volume 1, Part 3 “Assessment Guidelines”.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this Competency Standard Unit applies. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and associated skills described in this unit.

**Concurrent
assessment and
relationship with
other units**

9.5)

There are no recommended concurrencies for this unit.

Range Statement

RANGE STATEMENT

10) This relates to the unit of competency as a whole providing the range of contexts and conditions to which the Performance Criteria apply. It allows for different work environments and situations that will affect performance.

This Competency Standard Unit shall be demonstrated in relation to the preparation and appraisal of financial impact statements and may include the following equipment:

Financial software, Computer hardware, Design sketches.

The following constants and variables included in the element/Performance Criteria in this unit are fully described in the Definitions Section 1 of this volume and form an integral part of the Range Statement of this unit:

- Appropriate and relevant persons (see Personnel)
- Appropriate authorities
- Appropriate work platform
- Assessing risk
- Assessment
- Authorisation
- Confined space
- Diagnostic, testing and restoration
- Documenting detail work events, record keeping and or storage of information
- Drawings and specifications
- Emergency
- Environmental and sustainable energy procedures
- Environmental legislation
- Environmental management documentation
- Established procedures
- Fall prevention
- Hazards
- Identifying hazards
- Inspect
- Legislation
- MSDS
- Notification
- OHS practices
- OHS issues
- Permits and/or permits to work
- Personnel

RANGE STATEMENT

- Quality assurance systems
- Requirements
- Safe design principles
- Testing procedures
- Work clearance systems

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**
Design.