



REGISTERED NATIONAL STANDARD

UNIT OF COMPETENCY

Title:	Carry out simple project activities in sustainable energy		
Note:	<ol style="list-style-type: none"> 1. Due to safety issues inherent in working with electricity and combustible substances, all training and assessment activities must be in accordance with local industry and regulatory requirements; 2. This unit of competency has been adapted from the Pacific regional unit standard CG3002 <i>Carry out simple project activities in Sustainable Energy</i>. 		
TQF Level:	3	Credits:	6
Version:	1		
National standard code:	NS081-03		
Associated qualification (and code):	<ol style="list-style-type: none"> 1. National Certificate in Sustainable Energy (Hybrid-wind) Level 3; 2. National Certificate in Sustainable (Biomass) Level 3; 3. National Certificate in Sustainable Energy (Solar) Level 3; 4. National Certificate in Sustainable Energy (Energy Efficiency) Level 3; 		
Approval date:	31 st August 2023	Review date:	31 st August 2028
Purpose:	<p>This unit describes skills and knowledge required to carry out simple project activities in renewable energy. This work is typically undertaken by person working as part of a project team. In practice, carrying out project work overlaps with other generalist and specialist work activities such as acting ethically, applying government or development partner processes, using resources, developing work plans, and gathering information.</p> <p>This unit standard applies to individuals who work under the supervision of an experienced project manager. Persons credited with this unit standard are able to:</p> <ol style="list-style-type: none"> 1. Identify techniques for reviewing and confirming the components of the project design document; 2. Monitor and maintain progress for a project; 3. Review and measure outcomes for a project; 4. Prepare clear and effective written communications for a project 5. Review and confirm project risk management and exit strategies 		

Learning Outcome 1 (LO1)	Review and confirm the project design document
Performance standards	<ul style="list-style-type: none"> 1.1 Project information and supporting materials are obtained; 1.2 Project design document is clarified in accordance with the project plan, schedule and organizational policy and procedures; 1.3 Project plan is analysed and requirements, timeframes, roles, responsibilities risk management, exit strategy and stakeholder involvement are confirmed; 1.4 Project management procedures and controls are confirmed in accordance with the project plan, and any required changes are negotiated according to the project plan change management strategy; 1.5 The project plan is updated with confirmed information for milestones, resources, other team members and steering committee details.
Learning Outcome 2 (LO2)	Undertake project activities
Performance Standards	<ul style="list-style-type: none"> 2.1 Professional or technical skills are provided to accomplish project tasks in accordance with the project objectives, indicators, outcomes and schedule; 2.2 Project data is captured and recorded in accordance with project requirements; 2.3 Specialist advice and support are provided to the project manager, steering committee and stakeholders as required to achieve project objectives; 2.4 Measurable indicators are identified.
Learning Outcome 3 (LO3)	Monitor and maintain progress of the project
Performance standards	<ul style="list-style-type: none"> 3.1 Project management tools are used for integration and timing of project activities and achievement of project deliverables/indicators/key result areas; 3.2 Risks to progress and achievement of project objectives are anticipated and related to the project manager for action in accordance with the risk management plan outlined in the project design document; 3.3 Completion of project activities and progress against targets and milestones are monitored and corrective action is taken if needed, in accordance with

	<p>project plans and in consultation with management/project governance personnel;</p> <p>3.4 Problem solving to find innovative solutions to project problems or unplanned for contingencies is undertaken in consultation with project management;</p> <p>3.5 Progress reports are provided as required to the required standard, using agreed style.</p>
Learning Outcome 4 (LO4)	Prepare clear and effective written project communications
Performance standards	<p>4.1 Clarify communication objectives, identify stakeholders and determine appropriate format</p> <p>4.2 Use spelling, punctuation and grammar for workplace documents at level of workplace responsibility and project requirements</p> <p>4.3 Identify key messages and plan written documents for communicating project information</p> <p>4.4 Collect and organise subject matter, with structure and logical sequence</p> <p>4.5 Seek feedback from others on document effectiveness for the purpose intended, assess outcomes, and use feedback to underpin future writing.</p>
Pre-requisites	N/A
Co-requisites	N/A
Underpinning skills and knowledge	<p>The following knowledge and skills underpin this unit standard:</p> <ul style="list-style-type: none"> a) Skills in accessing/preparing relevant project information electronically or in hard copy; b) Skills in using project management tools; c) Skills in recording information, writing recommendations, preparing reports using complex language structures; d) Time-management and organizational skills; e) Communication skills using a range of communication styles to suit different audiences and purposes for stakeholders f) Skills to perform calculations necessary to carry out project activities g) Preparing written communications using language structures, tone, format

	<p>and logic that influence the interpretation of written communication, Knowledge of legislation that may affect aspects of carrying out project activities;</p> <p>h) Knowledge and skills of project planning tools to suit the project being carried out</p> <p>i) Knowledge of risk management strategies for carrying out single projects</p>
<p>Assessment requirements</p>	<p><u>Methods of assessment:</u></p> <p>A range of assessment methods should be used to assess students’ knowledge and application of skills. These shall include but not restricted to the following:</p> <p>a) Direct observation of students performing certain tasks stated under context of assessment</p> <p>b) Oral questions to test relevant skills and knowledge during observation (e.g. Interviews)</p> <p>c) Written assessment such as:</p> <ol style="list-style-type: none"> 1) Reports on specific projects- e.g. providing quotations for installation or service jobs; 2) Student Portfolios – containing other activities that demonstrate what a student can do – e.g. annotated photographs, video records, completed Activity logs, marked quizzes and assignments, etc., etc. 3) Reviews of workplace attachment reports (e.g. Supervisor/third party reports; testimonials from Project manager or supervisor) <p><u>Context of assessment:</u></p> <p>To show that a learner has acquired the unit competencies, he/she will need to:</p> <ol style="list-style-type: none"> 1. Demonstrate knowledge and skills in the workplace (or in an environment that closely resembles the workplace) in relation to: <ol style="list-style-type: none"> a) Reviewing and confirming a project design document (LO1) b) Undertaking project activities (LO2); c) Monitoring and maintaining project progress (LO3) d) Preparing clear and effective written project communications (LO4) 2. Apply knowledge in the workplace (or in an environment that closely resembles the workplace), by: <ol style="list-style-type: none"> a) Using a project design document (construction drawings and

	<p>specifications) and the project schedule for an renewable energy (RE) installation site to determine the following;</p> <ul style="list-style-type: none"> i) Construction proceeding according to the project timeframe; ii) Verifying if construction is according to the design document; iii) Identify discrepancies (if any) in construction; iv) Using special conventions and symbols to prepare a detailed description of discrepancies in the form of a drawing. <ul style="list-style-type: none"> b) Verifying a construction schedule (Gantt chart) to determine work completed; c) Onsite inspection of work completed; d) Creating an <i>activity log</i> for use in project work; e) Collecting data from observation and daily activity logs; f) Analyzing project data; g) Reporting on progress of project using a standard format
<p>Resource requirements</p>	<ul style="list-style-type: none"> 1) Project management tools – such as <i>Project in a box</i> or <i>Microsoft Project</i> or <i>Smartsheet</i> or any other at the discretion of the trainer; 2) Printed resources (e.g. Text book or handouts) for carrying out project activities in SE, at the discretion of the course or unit coordinator or trainer, 3) Student computers with internet access; 4) Computers installed with at least one Project management tool at the discretion of the training provider or trainer; 5) Facility for whole-class video sessions (e.g. dark-room with video projection facility such as screen and projector) 6) Whiteboard and markers (or black board and chalk) 7) Learner desks and chairs 8) A well-lit standard classroom
<p>Moderation arrangements</p>	<ul style="list-style-type: none"> 1. Training providers must have their own moderation system approved by TNQAB before accreditation is granted; <ul style="list-style-type: none"> a. Relevant internal moderation processes are documented; b. Assessment is planned for each unit, and moderation processes are integrated into such plan 2. External moderation is conducted by the national qualifications unit of TNQAB for

	<p>all unit components of national qualifications;</p> <ol style="list-style-type: none"> a. Samples of assessed activities are submitted for moderation; b. Moderation (external) forms are available on request from the National qualifications unit of TNQAB.
<p>Requirements to complete this unit</p>	<p>There are four (4) Learning Outcomes and nineteen (19) Performance Standards to measure competence.</p> <p>To satisfy this requirement for competency, the person studying this unit is:</p> <ol style="list-style-type: none"> 1. Required to demonstrate ALL learning outcomes to the expected standards; 2. Required to attain an <i>Achieved Grade</i> (Competent) to fulfil the requirements of the Unit Standard. 3. Eligible to three (3) attempts to achieve the required competency within 14 days of the first attempt. <p>Failure to achieve the required competency level after three (3) attempts of the exam or specific part of the assessment will require the person studying this Unit to re-enrol for the same Unit.</p>
<p>Important notes and definitions</p>	<p><u>Notes:</u></p> <ol style="list-style-type: none"> 1. All activities associated with this unit standard must comply with the requirements of national codes of practice, regulations and legislation for workplace health, safety, and environmental protection and any subsequent amendments. 2. Assessors must comply with Tonga national assessment and moderation requirements. 3. If relevant legislations or policies are not available locally, those of New Zealand and Australia shall be used for training. <p><u>Definitions:</u></p> <ol style="list-style-type: none"> 1. <i>Activity log</i> – is a written record of how a person spends his/her time. 2. <i>Gantt chart</i> - is a bar chart that illustrates a project schedule. 3. <i>Program evaluation and review technique (PERT) charts</i> - is a graphical representation of a project's timeline that displays all of the individual tasks necessary to complete the project. A PERT chart is often preferred to the Gantt chart because it clearly identifies task dependencies. However, a PERT chart can be more difficult to interpret. 4. <i>Project design document</i> refers to an outline of expectations, tasks,

	<p>deliverables, etc. that are to be achieved by the project officer.</p> <ol style="list-style-type: none"> 5. <i>Project management tools</i> may include the following: project management software and other tools such as <i>Gantt</i> charts, PERT charts, spreadsheets, cost analysis. 6. <i>Project data</i> may include: financial data including costs, expenditure, income generated, purchases, test results, records of time spent on the project and progress in completing project activities, correspondence, project outcomes. 7. <i>Project plan</i> will include some or all of the following: budget and cost estimates, expected outcomes which are measurable benefits of the project, inclusions and exclusions from the project, milestones, objectives, purpose, performance criteria/indicators, human and physical resources, project implementation strategy, quality standards for the project, risk management strategy, schedule/timeline. 8. <i>Solutions to problems</i> may include: reducing costs, researching and applying more efficient methods of completing project tasks, seeking further resources to meet deadlines, negotiating an extension of deadline or redefining completion or quantities of quality of outcomes, sharing of ideas to gain improvements to work undertaken within the project, outsourcing aspects of the project, changing roles and responsibilities within the project team. 9. <i>Stakeholders</i> may include the following: project sponsors/funding bodies/development partners, industry, government agencies, Ministers, general public, steering committee members, organisational management and team members.
<p>Public comments on unit</p>	<p>Please contact TNQAB National Qualifications Unit (email EnquireNQ@tnqab.to or Telephone 28136) if you like to discuss or suggest changes to the details of this unit.</p>