



# REGISTERED NATIONAL STANDARD

## UNIT OF COMPETENCY

<b>Title:</b>	<b>Provide quotations for installation or service jobs</b>		
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>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;</li> <li>2. This unit of competency has been adapted from the Pacific regional unit standard CG3001 <i>Provide quotations for installation or service jobs</i>.</li> </ol>		
<b>TQF Level:</b>	3	<b>Credits:</b>	4
		<b>Version:</b>	1
<b>National standard code:</b>		NS080-03	
<b>Associated qualification (and code):</b>	<ol style="list-style-type: none"> <li>1. National Certificate in Sustainable Energy (Energy Efficiency) Level 3;</li> <li>2. National Certificate in Sustainable Energy (Biomass) Level 3;</li> <li>3. National Certificate in Sustainable Energy (Hybrid wind) Level 3;</li> <li>4. National Certificate in Sustainable Energy (Solar) Level 3</li> </ol>		
<b>Approval date:</b>	31 August 2023		<b>Review date:</b> 31 August 2028
<b>Purpose:</b>	<p>This unit describes the skills and knowledge required to develop quotations for minor<sup>1</sup> installation and service work in the energy sector. It encompasses following job specifications, using manufacturer catalogues, making telephone, internet or email enquiries, selecting compliance materials, pricing materials and labour costs and completing necessary quotation documentation and applying the necessary customer relations protocols.</p> <p>This unit standard is appropriate for people who are currently in the workforce in the energy sector.</p>		

<sup>1</sup> Major installations involve delivery structures and specialised supervision up to \$TOP200,000.00

	<p>Persons credited with this unit standard are able to:</p> <ol style="list-style-type: none"> <li>1. Provide quotations for installation and service jobs</li> <li>2. Establish the extent of work on which the quotation is to be based</li> <li>3. Select and take materials accurately</li> <li>4. Cost a job appropriately</li> <li>5. Check a quotation for accuracy</li> <li>6. Document a quotation clearly</li> </ol>
<p><b>Learning Outcome 1 (LO1)</b></p>	<p><b>Establish the extent of the work</b></p>
<p><b>Performance standards</b></p>	<ol style="list-style-type: none"> <li>1.1 <i>Occupational health and safety (OHS)</i> procedures for a given work area are identified, obtained and understood</li> <li>1.2 Established <i>OHS risk control measures</i> and procedures are followed</li> <li>1.3 The extent of installation or service work is determined from job specifications and discussions with customer and/or other appropriate person(s)</li> <li>1.4 The extent of installation or service work on which a quotation is to be given is documented as a job specification and agreement sought with customer or other appropriate person(s)</li> <li>1.5 OHS and other regulatory requirements are incorporated in the work on which the quotation is based</li> <li>1.6 Requests for alterations to the job specification are negotiated with customer or other appropriate person(s) and within the constraints imposed by regulatory requirements</li> <li>1.7 A date by which the quotation is to be submitted is agreed with the customer and/or other appropriate person(s)</li> </ol>
<p><b>Learning Outcome 2 (LO2)</b></p>	<p><b>Develop quotations</b></p>
<p><b>Performance standards</b></p>	<ol style="list-style-type: none"> <li>2.1 <i>Material take-offs</i> are performed accurately and checked against job specification(s);</li> <li>2.2 Materials, labour and other costs are determined from industry standard labour rates, enterprise costing arrangements and/or material suppliers;</li> <li>2.3 Quotation are checked for accuracy in costing and against job specification;</li> <li>2.4 Cost breakdown of items are shown on quotation</li> </ol>

<b>Learning Outcome 3 (LO3)</b>	<b>Document and submit quotation</b>
<b>Performance standards</b>	<p>3.1 Relevant policies and procedures for preparing quotations are obtained and referred to;</p> <p>3.2 Quotation is documented in accordance with established policies and procedures;</p> <p>3.3 Quotation is reviewed and approved by a delegated person in accordance with workplace procedures;</p> <p>3.4 Quotation is submitted to customer within an agreed date.</p>
<b>Pre-requisites</b>	N/A
<b>Co-requisites</b>	N/A
<b>Underpinning skills and knowledge</b>	<p>The following knowledge and skill underpin this unit standard;</p> <ul style="list-style-type: none"> <li>• Technical literacy and communication skills sufficient to interpret and apply common industry terminology (energy sector) to apply to factors for quotations for installation or service jobs</li> <li>• Skills in preparing quotations accurately</li> <li>• Skills and knowledge in different costing methods</li> <li>• Knowledge on appropriate methods of access to information required to prepare quotations</li> <li>• Customer relations skills;</li> <li>• Methods for recording and maintaining work records</li> </ul>
<b>Assessment requirements</b>	<p><b><u>Methods of assessment:</u></b></p> <p>A range of assessment methods should be used to assess students' knowledge and application of skills. These include but not restricted to the following:</p> <ol style="list-style-type: none"> <li>1. Direct observation of students performing certain tasks stated below under <i>Context of assessment</i>;</li> <li>2. Oral questions to test or ascertain relevant skills and knowledge during observation;</li> <li>3. Written, as in: <ol style="list-style-type: none"> <li>a. Reports (e.g. Review report) based on sample quotations for installations or service jobs;</li> <li>b. Practice quotations for installation or service jobs</li> </ol> </li> </ol>

- c. Student Portfolio
- d. Review of workplace attachment reports (e.g. Supervisor/third party reports)

**Context of assessment:**

1. To show that an individual has the required competence, learners will need to demonstrate their competence in the workplace (or in an environment that closely resembles the workplace);
2. Assessment activities must be relevant to the Learning outcomes and performance standards of the unit.
3. Activities in which learners can be engaged in for assessment purposes, include but not limited to:
  - a) Providing quotations to supply and install renewable energy systems (stand-alone/hybrid) upon customer request;
  - b) Establishing the extent of work based on system component specifications and system capacity;
  - c) Accommodating safety measures in a quotation;
  - d) Laying out the schematic drawing of a system outlining major components required and how the system may be installed (e.g. position/location of solar panels and wind turbines) to establish the extent of materials required on the jobsite;
  - e) Using best judgement to determine RE system size (e.g. Solar and wind) to complement each other in a hybrid system;
  - f) Developing quotation using appropriate format for a client;
    - i. quantify materials that will be required and estimate the cost;
    - ii. calculate the hourly labor costs based on local hourly rates and add charges and taxes applicable;
  - g) Developing comprehensive proposal outlining;
    - i. details of the models of components proposed
    - ii. past company experience doing similar project
    - iii. details about qualified personnel in your company
    - iv. breakdown or lump sum of your fees
  - h) Using policies and procedures for document handling such as:
    - i. Issuing unique number for all tenders or proposals or quotations.

	<p>This number will be used to communicate with clients as well as internally.</p> <ol style="list-style-type: none"> <li>ii. Determining number of copies of quotation to be printed and where it should be filed. Quotation are emailed and also copied to work superior.</li> <li>iii. Storing of electronic copy of the quotation such as in a server which is regularly backed up.</li> <li>iv. Discussing policies and procedures for better management of documenting of quotations.</li> <li>v. Delivering of proposals or quotations before the due date and time either through hardcopy (hand delivery) or electronic copy via email.</li> </ol>
<p><b>Moderation arrangements</b></p>	<ol style="list-style-type: none"> <li>1. Training providers must have their own moderation system approved by TNQAB before accreditation is granted: <ol style="list-style-type: none"> <li>a) Relevant internal moderation processes are documented;</li> <li>b) Assessment is planned for each unit, and moderation processes are integrated into such plan</li> </ol> </li> <li>2. Unless specified elsewhere, external moderation is conducted by the National qualifications unit of TNQAB for all unit components of a national qualification; <ol style="list-style-type: none"> <li>a) Samples of assessed activities are submitted for moderation;</li> <li>b) Moderation (external) forms are available on request</li> </ol> </li> </ol>
<p><b>Resource requirements</b></p>	<ol style="list-style-type: none"> <li>1. Learner desks and chairs</li> <li>2. A well-lit classroom with adjustable lighting;</li> <li>3. Computers for learners to access internet, read notes, do research and watch videos.</li> <li>4. Laptop/ computer and projection to play videos to the whole class.</li> <li>5. A textbook or printed resources for providing quotations for installation or service jobs at the discretion of the course/unit coordinator or trainer;</li> <li>6. Whiteboard and markers (or black board and chalk) to allow both facilitator and learner to state a point</li> <li>7. Blank sheets of paper/brown paper/Sticky notes to facilitate note taking and conceptualizing during learner group discussions</li> </ol>

	<p>8. Markers/ Pen/ pencil to facilitate note taking and conceptualizing during learner group discussions</p>
<p><b>Requirements to complete this unit</b></p>	<p>There are three (3) Learning outcomes and fifteen (15) Performance standards to measure competence.</p> <p>To demonstrate competence, the person studying this unit is:</p> <ol style="list-style-type: none"> <li>a. Required to demonstrate all LOs to the expected standards;</li> <li>b. Required to attain an <i>Achieved</i> Grade (Competent) to fulfil the requirements of the Unit Standard;</li> <li>c. Eligible to three (3) attempts to achieve the required competency within 14 days of the first attempt.</li> </ol> <p>Failure to achieve the required competency after three (3) attempts on the exam or specific part of the assessment will require the person studying this Unit to re-enrol for the same Unit</p>
<p><b>Important notes and definitions</b></p>	<p><u>Notes:</u></p> <ol style="list-style-type: none"> <li>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.</li> <li>2. Assessors must comply with Tonga national assessment and moderation requirements.</li> <li>3. If relevant legislations or policies are not available locally, those from New Zealand and Australia should be used for training.</li> </ol> <p><u>Definitions:</u></p> <ol style="list-style-type: none"> <li>1. <i>Control measures (or OHS controls or risk controls)</i> procedures which are put in place to decrease the likelihood or consequences from an unwanted event</li> <li>2. <i>Customer relations protocols</i> refers to purpose of customer relations, procedures for dealing with customers, dealing with customers issues.</li> <li>3. <i>Costing methods</i> refers to costing policy of an organisation, purchase prices and discounts for materials, labour charge out rates, margins.</li> <li>4. <i>Hazard</i> is a potential source of harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.</li> <li>5. <i>Material take-off</i> - At a basic level, a material takeoff seeks to provide two</li> </ol>

	<p>types of information. First, it intends to provide a comprehensive list of materials required to complete a project. Second, it provides detailed cost estimates for each material required for a project. These cost estimates are combined into a total material cost for the project.</p> <p>6. <i>Occupational health and safety (OHS)</i> - is an area of public medicine that primarily focuses on the safety, health, and welfare of employees at work; also referred to a <i>Workplace health and safety (or WHS)</i>.</p> <p>7. <i>Risk</i> refers to the chance of something happening that will have a negative effect.</p>
<p><b>Public comments on unit</b></p>	<p>Please contact TNQAB National Qualifications Unit (email <a href="mailto:EnquireNQ@tnqab.to">EnquireNQ@tnqab.to</a> or Telephone 28136) if you like to discuss or suggest changes to the details of this unit.</p>