

Terms of Reference
Consultancy for Two National Individual Consultants
Renewable Energy Expert for the Installation of Solar PVs Power Systems -
IC/PNG/054-2021

Location:	Wewak, Papua New Guinea (with travel to the Project Target Provinces and Port Moresby as and when required based on the needs).
Type of contract:	Individual Consultant
Project:	Support to Rural Entrepreneurship, Investment and Trade (STREIT) in Papua New Guinea
Languages Required:	English
Starting Date:	13 October 2021
End Date	31 August, 2022

Background

The Government of Papua New Guinea (PNG) aims to achieve 70% nationwide electrification in the country by 2030 and 100% by 2050 as outlined in the Development Strategic Plan (2010-2030). About 13% of PNG's total population has electricity mainly from the current grid services that the government provides. As such, the government has developed the National Electricity Roll-Out Plan (NEROP) to achieve government's target. To achieve this, the plan would require improved investment in energy development including renewable energy (RE) sources and energy efficiency (EE) technologies which will reduce reliance on fossil fuels as these contributes to greenhouse gas emissions which ultimately affect the global climate.

In this context, the Government of Papua New Guinea, represented by the Department of National Planning and Monitoring, the United Nations Development Programme and in partnerships with the Food and Agriculture Organization of the United Nations (FAO) is providing technical assistance to improve access for renewable energy for rural communities under the European Union funded "Support to Rural Entrepreneurship, Investment and Trade in Papua New Guinea" (STREIT) Action.

STREIT's overall objective is to increase sustainable and inclusive economic development of rural areas. The Project will support investments in climate resilience and improved value chains by facilitating access to renewable energy technologies. It will deliver a range of activities under output 2.3 – Increased production of and access to, renewable energy systems. It will do this by delivering activities that:

- Support policy and regulatory reform which will among things, promote the inclusion of food and agriculture in renewable energy development.
- Determine the feasibility of investment options for renewable energy generation systems.
- Establish renewable energy generation systems in Project areas and advocate for their up-take.
- Support the generation of electricity generated from renewable sources installed.

UNDP is implementing the Project as part of its current portfolio of environment, energy, and climate change projects. It will leverage off existing renewable sector activities and existing partnerships with key relevant players including the East Sepik Provincial Administration, PNG Power Limited, the Department of Petroleum and Energy, the Climate Change and Development Authority, the Independent Consumer and Competition Commission and other development partners. The Project will operate for four years.

Objective

The objective of this consultancy is to support sustainable and inclusive economic development of rural areas in Papua New Guinea by increasing the use of renewable energy for selected end users in East and West Sepik Provinces. The Renewable Energy Experts will support project oversight by conducting a review of the technical specifications for the selected sites for solar installation identified in feasibility assessments. They will also support the installation of the Solar PVs in selected sites.

Duties and Responsibilities

The Renewable Energy experts will work closely with the UNDP STREIT Project Management Unit as well as other key Government stakeholders and United Nations agencies on a daily basis to ensure the project activities are implemented in a consultative and coordinated manner.

The Renewable Energy experts will be responsible for delivering the following outputs by completing a number of activities outlined under the outputs.

- Review criteria for site selection and suitability assessment for solar installation for East and West Sepik Provinces and identify gaps for improvement. Ensure the criteria includes security, infrastructural needs and sustainability of the Solar PV power system.
- Conduct stakeholder information sharing workshop with provincial authorities and other key stakeholders to inform them of the Project's selected sites and the selection criteria and to gather stakeholder feedback.
- Conduct physical site surveys and suitability assessments for at least a minimum of seven (7) pre-selected and where relevant to improve the criteria for selection.
- Identify sites for potential renewable energy installations by,
 - i. Completing a desktop analysis of all investigative work done for renewable energy development in East Sepik and West Sepik Provinces.
 - ii. Consulting provincial, district and local level government plans and officials.
 - iii. Applying the criteria developed in point 2 above to each site to finalise a list of potential sites in East Sepik and West Sepik Provinces.
- Conduct pre-feasibility studies for at least eight sites on the list of potential sites in consultation with UNDP and respective governments.
- Prepare terms of reference for full feasibility studies for the eight sites.
- Provide technical oversight of the full feasibility studies.
- Design technical specifications for at least 8 selected sites. The design should include technical specifications, not limited to measurement of user peak period, energy efficiency and operations and maintenance.
- Assist the project management unit with current work in particular to review technical designs in the feasibility assessment and determine the infrastructural needs and energy requirements of each facility identified including for new sites. The preferable sites are Vocational Education Training centres (TVET), schools, health centres and hospitals.

2. Installations completed in selected sites

- Assist the project management unit to ensure that current and future systems designed are procured, installed and commissioned as soon as designs are confirmed.

Key deliverable and schedule of payment:

Reporting period and key milestones	Report due	Payment Percentage	Review and Approvals
1. Payment upon submission and acceptance of inception report and implementation plan.	20 October	10	Head of Programme
2. Payment upon submission and acceptance of report gap analysis conducted for criteria for site selection and suitability assessment for selected installation sites.	20 November 2021	10	Head of Programme
3. Payment upon submission and acceptance of report outlining validating technical specifications and infrastructural needs of selected public facilities.	20 December, 2021	10	Head of Programme
4. Payment upon submission and acceptance of report outlining stakeholder outreach for key stakeholders.	20 January, 2022	10	Head of Programme
5. Payment upon submission and acceptance of report outlining the additionally power generation capacity needs and for selected sites of installations.	20 February, 2022	10	Head of Programme
6. Payment upon submission and acceptance of progress report outlining rapid pre-assessment of environmental and waste impacts of solar PV installations.	20 March, 2022	10	Head of Programme
7. Payment upon submission and acceptance of progress report outlining the commissioning of solar PVs.	20 April, 2022	10	Head of Programme
8. Payment upon submission and acceptance of report outlining technical and structural lessons learnt and areas of improvement from onsite installation	20 May, 2022	10	Head of Programme
9. Payment upon submission and acceptance of a user-friendly operations and maintenance manual.	20 June, 2022	10	Head of Programme
10. Payment upon submission and acceptance of a guide to preparing a proposal for solar PV for public facilities.	20 July 2022	10	Head of Programme

Institutional Arrangements

UNDP will integrate this project into its current portfolio of environment, energy and climate change projects. It will leverage off existing renewable sector activities and existing partnerships with key relevant players including the East Sepik Provincial Administration, PNG Power Limited, the Department of Petroleum and Energy, the Climate Change and Development Authority, the Independent Consumer and Competition Commission and other development partners.

Resources Provided

UNDP STREIT Project PMU is based in Wewak will provide logistical support to the IC to conduct site assessments and other identified tasks.

Duration of the Assignment and reporting lines

The duration of the assignment is from September 2021 to June 2022. In accordance with expected outputs and deliverables, the Individual Consultant will submit reports to the UNDP STREIT Chief Technical Advisor for review of outputs, provide comments and to certify for approval/acceptance. Should there be delays achieving the expected outputs, the Contractor should notify the Chief Technical Advisor in advance to take necessary steps.

Duty Station

The duty station for this assignment is Wewak, East Sepik province. The consultant will be expected to liaise directly with the UNDP PMU team based in the Wewak office as well as conduct extensive field missions in East and West Sepik provinces.

Education and Experience

Education

- Hold a Bachelor level qualification in energy related disciplines, engineering, or an associated field. A Master level qualification is preferred

Work Experience:

- Demonstrate at least 5 years' experience working on energy sector installations, particularly in relation to energy efficiency and/or renewable energy most preferably solar PV power systems.
- Successfully demonstrate at least 10 years delivering energy sector or energy related initiatives in developing countries and/or emerging economies.
- A demonstrated strong track record of at least 7 years of similar experience and, knowledge in developing selection criteria and conducting suitability assessments for off-grid solar solutions.
- At least 7 years of Technical solar power capability, including feasibility and design capability and proven track record for setting up solar power project.
- At least 7 years of experience of working with community groups on energy efficiency and renewable energy related projects.
- Ability to successfully communicate complex concepts, proposals and plans clearly to a range of stakeholders.
- A reference (and contact details) should be provided for a minimum of three examples.

Competencies

- Fluency in written and spoken English.
- Strong inter-personal skills, in particular, demonstrated team leadership qualities and excellent oral communication skills.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- High level planning, organizational and time management skills, including flexibility, attention to detail and the ability to work under pressure to meet challenging deadlines;
- Ability to quickly adapt to change, and to remain calm under pressure;

EVALUATION

Cumulative analysis

The proposals will be evaluated using the cumulative analysis method with a split 70% technical and 30% financial scoring. The proposal with the highest cumulative scoring will be awarded the contract. Applications will be evaluated technically, and points are attributed based on how well the proposal meets the requirements of the Terms of Reference using the guidelines detailed in the table below:

When using this weighted scoring method, the award of the contract may be made to the individual consultant whose offer has been evaluated and determined as:

a) Responsive/compliant/acceptable, and

b) Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

* Technical Criteria weighting; 70%

* Financial Criteria weighting; 30%

Only candidates obtaining a minimum of 49 points in the Technical Evaluation would be considered for the Financial Evaluation. Interviews may be conducted as part of technical assessment for shortlisted proposals.

Criteria	Points	Percentage
Qualification		10%
<ul style="list-style-type: none"> ▪ Bachelor level qualification in energy related disciplines, engineering, or an associated field. A Master level qualification is preferred 	10	
Experience		55%
<ul style="list-style-type: none"> • Demonstrate at least 5 years' experience working on energy sector installations, particularly in relation to energy efficiency and/or renewable energy most preferably solar PV power systems. 	30	

<ul style="list-style-type: none"> • Successfully demonstrate at least 10 years delivering energy sector or energy related initiatives in developing countries and/or emerging economies. • A demonstrated strong track record of at least 7 years of similar experience and, knowledge in developing selection criteria and conducting suitability assessments for off-grid solar solutions. • 		
<ul style="list-style-type: none"> • At least 7 years of Technical solar power capability, including feasibility and design capability and proven track record for setting up solar power project. • At least 7 years of experience of working with community groups on energy efficiency and renewable energy related projects. • Ability to successfully communicate complex concepts, proposals and plans clearly to a range of stakeholders. • A reference (and contact details) should be provided for a minimum of three examples. 	25	
Competencies		5%
<ul style="list-style-type: none"> • Fluency in written and spoken English. • Strong inter-personal skills, in particular, demonstrated team leadership qualities and excellent oral communication skills. • Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability; • High level planning, organizational and time management skills, including flexibility, attention to detail and the ability to work under pressure to meet challenging deadlines; • Ability to quickly adapt to change, and to remain calm under pressure; 	1 1 1 1 1	
Technical Criteria		70%
**If necessary interviews shall also be conducted as part of the technical evaluation to ascertain best value for money.		
Financial Criteria – Lowest Price		30%
Total		100%

Documents to be included when submitting Consultancy Proposals

The following documents may be requested:

- Duly executed **Letter of Confirmation of Interest and Availability** using the template provided by UNDP.

- b) **Signed P11**, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references;
- c) **Brief description** of why the individual considers him/herself as the most suitable for the assignment, and a methodology, on how they will approach and complete the assignment. Please paste the letter into the "Resume and Motivation" section of the electronic application.
- d) **Financial Proposal** that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs, as per template provided. If an Offeror is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the Offeror must stipulate that arrangement at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

Lump-sum contracts

The financial proposal shall specify a total lump-sum amount, and payment terms around specific and measurable (qualitative and quantitative) deliverables (i.e. whether payments fall in instalments or upon completion of the entire contract). Payments are based upon output, i.e. upon delivery of the services specified in the TOR. In order to assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump-sum amount (including travel, living expenses, and number of anticipated working days).

Travel

All envisaged travel costs must be included in the financial proposal. This includes all travel to join duty station/repatriation travel. In general, UNDP should not accept travel costs exceeding those of an economy class ticket; should the IC wish to travel on a higher class, they should do so using their own resources.

In the case of unforeseeable travel, payment of travel costs including tickets, lodging, and terminal expenses should be agreed upon, between the respective business unit and Individual Consultant, prior to travel and will be reimbursed.

Submission Instructions

Proposals may be submitted on or before the deadline as indicated below. Proposals must be submitted using this generic email procurement.png@undp.org address only.

Incomplete proposals and failure to comply with proposal submission instruction may not be considered or may result in disqualification of proposal.

Completed proposals should be submitted using no later **than 19 October 2021**.

For any clarification regarding this assignment please write to Lynette Migile on procurement.pg@undp.org

UNDP looks forward to receiving your Proposal and thank you in advance for your interest in UNDP procurement opportunities.

Approved by:

Signature:

Name: Edward Vrkic, Deputy Resident Representative