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## **Terms of Reference**

**Ref: PN/FJ/019/19**

**Consultancy Title:** Renewable Energy and Energy Efficiency Technology Applications Specialist

**Project Name:** Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN).

**Duty Station:** Nauru and homebased.

### **Duration of the Contract**

- Number of working days: 56
- Commencement date (tentative): 8<sup>th</sup> April 2019
- Completion date (tentative): 24<sup>th</sup> June 2019

Consultancy Proposal should be sent via email to [etenderbox.pacific@undp.org](mailto:etenderbox.pacific@undp.org) no later than **2<sup>nd</sup> April 2019 (Fiji Time)** clearly stating the title of consultancy applied for. Any proposals received after this date/time will not be accepted. Any request for clarification must be sent in writing, or by standard electronic communication to [procurement.fj@undp.org](mailto:procurement.fj@undp.org). UNDP will respond in writing or by standard electronic mail and will send written copies of the response, including an explanation of the query without identifying the source of inquiry, to all consultants. Incomplete, late and joint proposals will not be considered and only offers for which there is further interest will be contacted. **Failure to submit your application as stated as per the application submission guide (Procurement Notice) on the above link will be considered incomplete and therefore application will not be considered.**

### **Objectives**

1. To assess the most realistic share of RE electricity in the national power generation mix by 2025
2. To assess (technical and financial) and recommend appropriate renewable energy and energy efficiency technologies for application in Nauru.
3. To assess (technical and financial) and recommend appropriate energy storage options for the electric power system in Nauru.
4. To design in detail the Promotion of Renewable Energy & Energy Efficiency Technologies Applications component of the planned Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN) project.
5. To design in detail the Energy Sector Capacity component of the planned SMARTEN project.

### **Background**

The United Nations Development Programme (UNDP), acting as an Implementing Agency of the Global Environment Facility (GEF), has been requested by the Government of Nauru (GoN) through the Department of Commerce, Industry & Environment (DCIE) to support with the development and implementation the planned GEF Full Size Project (FSP) Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN). The objective of the planned project is enabling the increased applications of feasible renewable energy and energy efficiency technologies for supporting socio-economic development in Nauru in accordance with the country's energy roadmap targets. The project consists of four substantial components, namely: 1) Energy Policy & Regulatory Framework Strengthening; 2) Supporting Renewable Energy & Energy Efficiency Initiatives; 3) Promotion of Renewable Energy & Energy Efficiency Technologies Applications; and, 4) Improvement of Energy Sector Capacity. The project concept, including a project preparation grant (PPG), was approved by the GEF in June 2018,<sup>1</sup> a logical framework analysis (LFA) workshop was conducted in August 2018, and, in November 2018 the PPG Team Leader - Project Development Specialist visited Nauru for the first time. As part of the detailed project design, inputs from a renewable energy/energy efficiency technology and capacity development specialist are required to prepare the UNDP-GEF Project Document and the GEF CEO Endorsement Request Document.

### **Scope of Work**

The expected outputs of the consultancy are:

<sup>1</sup> [https://www.thegef.org/sites/default/files/project\\_documents/Revised\\_PIF\\_document.pdf](https://www.thegef.org/sites/default/files/project_documents/Revised_PIF_document.pdf)

1. Assessment report on the most realistic level of contribution of RE electricity in the national power generation by 2025; including comparative features of installed and planned RE-based energy systems; potential innovation approaches for enhancing the share of RE-based electricity in the national power generation; and potential fossil fuel savings and GHG emission reductions from the increased utilization of RE resources in energy generation.
2. Report on the potential solutions and how to implement such solutions to the identified barriers to the achievement of the %RE electricity target of the country, including budget needed.
3. Report on biomass resource assessment and cost benefit analysis of biomass-based power generation.
4. Report on the assessment (technical and financial) of applicable energy storage options for the electric power system in Nauru
5. Report on the assessment of potential improvements in the current applications of RE and EE technologies in Nauru; and design of a national program for the promotion of RE and EE technology applications as feasible investment options in the electricity and energy end-use sectors in Nauru; including recommendations for feasible information dissemination systems on RE and EE technologies to be promoted under the project; including design of project activities leading to the introduction of business models for sustainable RE resource production, processing and supply and pricing for RE-based power generation systems, and activities leading to the establishment of businesses (productive and social services) that make use of electricity supplied from RE-based power systems.
6. Design of feasible RE and EE technology application demonstrations to be implemented under the project; including the design and implementation plans for the replication of demonstrated RE and EE technology application projects, including those in the NDC of the country.
7. Report on the technical and financial viability of renewable energy and energy efficiency technologies that can be recommended for application in Nauru.
8. Documented detailed design of the SMARTEN Project's Promotion of Renewable Energy & Energy Efficiency Technologies Applications and Energy Sector Capacity components.

Activities for the consultancy will include, but not necessarily be limited to the following (in relation to specific deliverables):

#### **INCEPTION NOTE**

- Write-up a note comprising: a) the successful Contractor's understanding of the consultancy and associated tasks; b) final proposed work plan for the consultancy; c) identification of issues crucial to the viability of the consultancy; and d) comments on this TOR (subsequently, if required and approved by the UNDP Pacific – Fiji Office, the Department of Commerce, Industry & Environment (DCIE), Government of Nauru and NUC, activities can be elaborated, modified, etc.).

#### **DEBRIEFING NOTES**

- Write-up a note for all missions to Nauru summarizing key findings and recommendations vis-à-vis successful completion of this consultancy.

#### **ASSESSMENT REPORT OF RENEWABLE ENERGY AND ENERGY EFFICIENCY TECHNOLOGIES AND IN NAURU**

- Consult relevant national and local level stakeholders from the public and private sectors and civil society, including DCIE, Nauru Utility Corporation (NUC), Department of Justice and Border Control (DJBC), Planning and Aid Division, Republic of Nauru Phosphate Company (RONPHOS), etc.
- Consult relevant external stakeholders providing ongoing or planned low carbon technology support to energy sector interventions in Nauru, such as the Global Environment Facility (GEF), Asian Development Bank (ADB), Green Climate Fund (GCF), Government of Australia, etc.
- Identify and read relevant background documents on Nauru's energy sector, including the Pacific Regional Energy Assessment 2004 – Nauru National Report (2005), Renewable Energy Technology Support Programme for the Pacific Islands (2005), Feasibility Study: Solar Photovoltaics for Replacing up to 50% of Diesel Generation in Nauru (2013), Nauru Energy Sector Overview (2013), Pacific Lighthouses - Renewable Energy Opportunities and Challenges in the Pacific Islands Region: Nauru (2013), European Union's Pacific Technical and Vocational Education and Training Project - Nauru Training Needs and Gap Analysis (2016), Review of the Nauru Energy Road Map 2014–2020 (2018), Nauru Energy Road Map 2018-2020 (2018), and, available deliverables as part of the ongoing UNFCCC's Technology Needs Assessment for Climate Change (TNA) supported by the United Nations Environment Programme (UNEP).

- If available review national energy balance tables, otherwise collect and analyze available energy supply and demand data, including establish the baseline for renewable energy supply overall, and, renewable energy-based electricity generation specifically.
- Regarding installed and planned renewable energy and energy efficiency systems (power and non-power applications), compare relevant technical aspects and estimate the level of contribution of renewable energy-based electricity generation by 2025 and associated fossil fuel savings and GHG emission reductions.
- Assess and summarize existing in-country capabilities related to renewable energy and energy efficiency technologies (power and non-power applications) and summarize planned capacity development measures.
- Conduct of research and provision of technical advice and the relevant data/information needed for the assessment of: (a) baseline %RE electricity; (b) most realistic level of contribution of RE electricity in the national power generation by 2025;
- Assessment of the comparative features of installed and planned RE-based energy systems (power and non-power applications) in Nauru;
- Evaluation of potential innovation approaches for enhancing the share of RE-based electricity in the national power generation;
- Estimation of the potential fossil fuel savings and GHG emission reductions from the increased utilization of RE resources in energy generation (power and non-power applications).
- Identify potential improvements, including innovative approaches, in the current and planned application of renewable energy and energy efficient technologies and capacity development measures vis-à-vis significantly increasing the utilization of Nauru's renewable energy resources and improving energy efficiency, meeting the Government's energy and greenhouse gas emissions (GHGs) reduction targets, and, developing and implementing renewable energy and energy efficiency technology projects for power and non-power applications, including for social and productive uses.
- Identify and describe technical and capacity development related barriers to the potential improvements in the current and planned application of renewable energy and energy efficient technologies (power and non-power applications).
- Recommend specific solutions, and how to implement such, to remove the identified technical and capacity development related barriers, including the budget needed.
- Assessment of potential improvements in the current applications of RE and EE technologies in Nauru, particularly biomass resource assessment and cost benefit analysis of biomass-based power generation;
- Design of a national program for the promotion of RE and EE technology applications as feasible investment options in the electricity and energy end-use sectors in Nauru; including recommendations for feasible information dissemination systems on RE and EE technologies to be promoted under the project;
- Design project activities leading to the introduction of business models for sustainable RE resource production, processing and supply and pricing for RE-based power generation systems;
- Conduct of research and provision of other available data and information that are pertinent in the design of appropriate interventions to reduce if not eliminate the barriers to the cost-effective and reliable applications of RE in the energy generation and RE/EE in the energy end-use sectors.
- Assessment on the feasibility of the establishment and operation of a local RET supply and service provision business in Nauru;
- Design of project activities leading to the establishment of businesses (productive and social services) that make use of electricity supplied from RE-based power systems;
- Assist in the design of selected feasible RE and EE technology application demonstrations to be implemented under the project;
- Estimation of potential energy savings and CO2 emission reductions (using the GEF prescribed estimation procedures) from the RE and EE technology demonstrations;
- Assist in the design and implementation plans for the replication of demonstrated RE and EE technology application projects, including those mentioned in the NDC of the country.

**DOCUMENT DETAILING THE SMARTEN RENEWABLE ENERGY AND ENERGY EFFICIENCY TECHNOLOGIES AND IMPROVEMENT OF ENERGY SECTOR CAPACITY COMPONENTS**

- Consult with the PPG Team Leader - Project Development Specialist, DCIE, UNDP-Pacific Office in Fiji,

and, the UNDP-GEF Senior Technical Advisor (STA) from the UNDP-GEF Asia-Pacific Energy, Infrastructure, Transport and Technology (EITT) team based at the UNDP Bangkok Regional Hub (UNDP BRH).

- Review the SMARTEN Project Identification Form (PIF), specifically the Promotion of Renewable Energy & Energy Efficiency Technologies Applications and the Improvement of Energy Sector Capacity components, including barriers, baseline, and initially planned SMARTEN outputs, activities, work-plan and budget, success indicators and targets, means of verification, and assumptions/risks.
- Assess the technical and economic feasibility of the initially planned renewable energy and energy efficiency technology application demonstrations under the SMARTEN project and estimate potential energy savings and CO2 emission reductions (using the GEF prescribed estimation procedures) from those that are assessed as feasible renewable energy and energy efficiency technology application demonstrations under the SMARTEN project.
- Compare the results of the review and feasibility assessments done with the findings and recommendations from the Assessment Report of Renewable Energy and Energy Efficiency Technologies in Nauru to identify any gaps that can be addressed in the Promotion of Renewable Energy & Energy Efficiency Technologies Applications and the Improvement of Energy Sector Capacity components of SMARTEN.
- Based on the results from the reviews and assessments, design in detail the activities and outputs of the Promotion of Renewable Energy & Energy Efficiency Technologies Applications and the Improvement of Energy Sector Capacity components of the SMARTEN Project
- Assist the PPG Team Leader - Project Development Specialist (PDS) prepare adequate and satisfactorily responses to any relevant comments raised by the GEF Secretariat, GEF Council and GEF Scientific and Technical Advisory Panel (STAP) on issues related to renewable energy and energy efficiency technologies and capacity development in Nauru, and, suggest necessary changes to the UNDP-GEF Project Document, including annexes.

#### **Resources Provided**

PPG Team Leader - Project Development Specialist

- Managing the PPG Team, including coordinating the various consultants work.
- Reviewing draft deliverables, including checking that UNDP-GEF requirements are met.

Department of Commerce, Industry & Environment, Government of Nauru

- Desk space and access to phone (local calls).
- Assisting setting up meetings.
- Providing relevant information, including documents.
- Commenting on draft deliverables.

UNDP

- Providing background information, including documents.
- Reviewing draft deliverables, including checking that UNDP-GEF requirements are met.

#### **Supervision/Reporting**

The consultant will be contracted by UNDP and report to the Team Leader, Resilience and Sustainable Development (RSD), UNDP Pacific – Fiji Office (or his/her designate) and the International Consultant – Project Development Specialist (GEF PPG Team Leader).

#### **Requirement for Qualifications & Experience**

- Minimum University degree (or equivalent) in Sustainable Energy Technologies, Engineering, or a field relevant to the tasks required.
- Minimum 10 years of relevant and practical working experience with renewable energy and/or energy efficiency technologies and capacity development.
- Substantial, relevant and practical working experience in UNDP/GEF project development, including design.
- Substantial, relevant and practical working experience in Small Island Developing States (SIDS) and/or

- other developing countries. Working experience in Nauru is an asset.
- Excellent working knowledge of English.

#### Payment Schedule

Deliverable	Percentage of Total Price (Weight for payment)	Due Date
Final version of the Inception Note	10	15 <sup>th</sup> April 2019
Final version of the Assessment Report of Renewable Energy and Energy Efficiency Technologies in Nauru	40	31 <sup>st</sup> May
Final version of the Document Detailing the Promotion of Renewable Energy & Energy Efficiency Technologies Applications and the Improvement of Energy Sector Capacity components	50	17 <sup>th</sup> June 2019
<b>Total</b>	<b>100%</b>	

#### Evaluation

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:

- Responsive/compliant/acceptable, and
- Having received the highest score out of the pre-determined set of weighted technical and financial criteria specific to the solicitation.

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.

	Points	Percentage
<b>Qualifications</b>		10%
Minimum university degree (or equivalent) in Sustainable Energy Technologies, Engineering, or a field relevant to the tasks required.	10	
<b>Experience</b>		40%
Minimum 10 years of relevant experience with renewable energy and/or energy efficiency technologies and capacity development	15	
Extent of experience with UNDP/GEF project development, including design	15	
Extent of experience in Nauru, Small Island Developing States (SIDS) and/or other developing countries	10	
<b>Quality of Proposal</b>		20%
Quality and soundness of the proposed approach/methodology	10	
Realistic work plan, including time schedule	10	
<b>Technical Criteria</b>		70%

**If necessary, interviews shall also be conducted as part of the technical evaluation to ascertain best value for money.		
<b>Financial Criteria – Lowest Price</b>		30%
<b>Total</b>		<b>100%</b>

**Proposal Requirements**

Technical Proposal

- A statement of how the applicant meets the qualifications and experience requirements.
- A Detailed CV with contact details of minimum 3 referees
- Proposed methodology/approach including preliminary work plan (covering deliverables, key activities and due dates).

Financial Proposal

- A completed Offeror’s Letter to UNDP Confirming Interest and Availability for the Individual Contractor (IC) Assignment including Annex A: Breakdown of Cost by Components.

Consultant must send a financial proposal based on a **Lump Sum Amount**. The total amount quoted shall be all-inclusive and include all costs components required to perform the deliverables identified in the TOR, including professional fee, travel costs, living allowance (if any work is to be done outside the Individual Consultants (IC’s) duty station) and any other applicable cost to be incurred by the IC in completing the assignment. The contract price will be fixed output-based price regardless of extension of the herein specified duration. Payments will be done upon completion of the deliverables/outputs. In general, UNDP shall not accept travel costs exceeding those of an economy class ticket. Should the IC wish to travel on a higher class he/she should do so using their own resources. In the event of unforeseeable travel not anticipated in this TOR, payment of travel costs including tickets, lodging and terminal expenses should be agreed upon, between the respective business unit and the IC, prior to travel and will be reimbursed

*Template for confirmation of interest and Submission of Financial Proposal is available under the procurement section of UNDP Pacific Office in Fiji website ([www.pacific.undp.org](http://www.pacific.undp.org))*

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**Women candidates are encouraged to apply**

**Interested Candidates must accept UNDP General Terms and Conditions for Individual Consultants**