BACKGROUND

The **Facilitation of the Achievement of Sustainable National Energy Targets of Tuvalu (FASNETT)** Project is aimed at facilitating the development and utilization of feasible renewable energy resources and application of energy efficiency technologies for achieving the Government of Tuvalu’s updated target of reducing emissions of greenhouse gases from the electricity generation (power) sector by 100% by 2025 based on the country’s INDC in November 2015. According to the NDC Registry, Tuvalu is listed as having submitted a first NDC (which was its iNDC) effective when the Government of Tuvalu became a Party to the Paris Agreement based on Decision 1/CP.21. Currently, Tuvalu plans to enhance its NDC including updating the timeframe for achieving the target from 2025 to 2030. The facilitation or enabling objective is meant to address, i.e., eliminate the identified barriers to the cost-effective application of RE technologies using the country’s indigenous RE resources, as well in the effective and extensive application of EE measures and techniques. The overall project goal will be achieved through the implementation of:

- Component 1: Awareness Raising on Renewable Energy and Energy Efficiency Applications of the Project. The other components are:
- Components 2 (Energy Policy Improvement and Institutional Capacity Building);
- Component 3 (Applications of Renewable Energy & Energy Efficiency Technologies & Techniques) and

This TOR covers the implementation of remaining activities and outputs towards achieving **Outcome 3.1: Enhanced energy utilization efficiency and development and application of feasible renewable energy resources in support of national economic development and Outcome 3.2: Increased application of viable climate resilient renewable energy and energy efficiency technology applications in the country**. These two (2) Outcomes are under **Component 3: Applications of Renewable Energy & Energy Efficiency Technologies & Techniques** as defined in the FASNETT ProDoc. The Project is implementing the following RE/EE technology demonstrations in the context of Tuvalu’s needs and program expansion to achieve the energy goals of increased RE/EE technology applications though the following:
1) 100 kWp Floating Solar Photovoltaic (FSPV) Power Generation Demo
2) Solar Powered Capacitive De-Ionization (Solar/CDI) Water Purification Demo
3) Demand Management and Response System (DMRS) Energy Efficiency Demo
4) Solar Home Systems (SASH) for Funaota Village Electrification Improvement Demo supported by India-UN Development Partnership Fund Project.

These FASNETT-supported RE/EE demo projects are implemented through engineering, procurements and construction (EPC) contractors and need to be assessed in terms of their energy generation and saving potential and performance towards reducing GHG emissions. This TOR defines the tasks necessary to complete the assessments regarding operation and maintenance experience and theirreplication possibilities in augmenting the RE/EE capacities in support of the sustainable 100% RE goal of the country in the coming years. The FASNETT project is targeted to be completed by February 2023 in an extended period.

The Project is financially supported through the GEF (USD 2,639,725) and co-financed by the UNDP (USD 250,000), the Government of Tuvalu (USD 8,250,000) and Tuvalu Electricity Corporation (USD 7,400,000).

**DUTIES AND RESPONSIBILITIES**

**Scope of Work and Expected Outputs**

The scope of work of this TOR for National Consultant I includes providing inputs and support in the remaining activities and outputs under Outcomes 3.1 and 3.2, particularly, Outputs 3.1.3 to 3.1.6 and Output 3.2.2 as defined in the FASNETT Project Document (ProDoc). These will be done with guidance and direction by the International Consultant (IC) for Outcomes 3.1 and 3.2 covered by the IC Contract/TOR.

- **Output 3.1.3:** Successful demonstration of approved EE and RE technologies that promote and support Low Carbon (LC) development in the country and comparative evaluation report from monitoring with other existing RE/EE installations

  This Output will involve the implementation of the following Activities:

  - Activity 3.1.3.1: Development and establishment of a computer-based M&E system for performance, maintenance and energy contributions of RE/EE project demonstrations and other existing RE/EE installations
  - Activity 3.1.3.2: Evaluation of the design and operating performance and experiences in all demonstration and other existing RE/EE installations

- **Output 3.1.4:** Published energy performance and impact reports on implemented LC projects; including action plan for community-supported LC energy initiatives in island communities

  This Output will involve the documentation and dissemination of results and impacts of the RE/EE project demonstrations and the recommended action plan in promoting and replicating RE/EE projects for community-supported LC initiatives in island communities (Activity 3.1.4). The results of
the monitoring and evaluation of all RE/EE projects gathered in Activity 3.1.3 will be published and shared via internet-based website (Output 1.6) for the project. This task will entail coordination with the EPC contractors of the demos and with TEC and DOE regarding the existing and planned RE/EE installations in the country to come up with a comprehensive report at the national level.

- **Output 3.1.5: Completed technical information packages and guidelines based on RE/EE project implementation experience for use in the capacity development program**

  This Output will involve the development and production of technical information packages and guidelines as inputs to the implementation of training workshops, strategic planning and execution of plans for national government authorities and local leaders in Component 2. This task will include inputs and coordination with the respective EPC contractors on the demos as well as TEC and DOE on the other types of RE/EE technologies applied in the country.

- **Output 3.1.6: Completed design and implementation plans for the replication of demonstrated successful LC energy projects**

  This Output will involve the implementation of the following Activities:

  - Activity 3.1.6.1: Development of standard design for replication of RE/EE applications in other areas of the country
  
  - Activity 3.1.6.2: Development of technical inputs to the establishment and enforcement of basic design and operating guidance manuals for the RE/EE replication program and policy to be developed in Component 2.

  This task will involve inputs and coordination with the respective EPC contractors on the demos as well as TEC and DOE regarding typical designs and implementation plans of the other feasible and practical types of RE/EE technologies to be applied in the country. To top the result of this assessment and technology designs, an Action Plan for the implementation of the replication of these selected RE/EE technologies will be submitted to be used as inputs to the formulation of the Tuvalu National Energy Plan (2023 – 2028) in Component 2. Close coordination with the IC and NC hired for Component 2 is required in order to synchronize plans at the national level.

- **Output 3.2.1: Completed and operational LC development technology application demonstrations in accordance to established quality standards in pilot tropical coastal communities enhancing market opportunities for RE/EE applications**

  This Output will involve the integration of the results of the FASNETT demos and of the required documentation by the EPC Contractors of the various experiences on procurement, delivery, installation, initial operation and debugging of the RE/EE facility as well as the associated technical services and training for the RE/EE demonstration projects. This task will also involve inputs and coordination with the respective EPC contractors on the demos as well as TEC and DOE regarding enhancing market opportunities of the feasible and practical types of RE/EE technologies to be applied in the country.

- **Output 3.2.2: Implemented LC projects in selected communities**
This Output will involve the implementation of the following Activities:

- Activity 3.2.2.1: Formulation and implementation of a technology development and application program for RE/EE in government, community-based and private business projects for selected island communities.

- Activity 3.2.2.2: Development and implementation of a technical assistance scheme for individual commercial and residential RE and EE project investment proposals from national government agencies, local community leaders and private entrepreneurs.

- A draft technology development and application plan for RE/EE in government, community-based and private business projects for selected island communities shall be developed and endorsed before the project ends in February 2023. However, a draft technology development and application plan shall be submitted by end November 2022 in line with the Terminal Evaluation of the Project. **Output 3.1.3: Successful demonstration of approved EE and RE technologies that promote and support LC development in the country and comparative evaluation report from monitoring with other existing RE/EE installations**

This Output will involve the implementation of the following Activities:

- Activity 3.1.3.1: Development and establishment of a computer-based M&E system for performance, maintenance and energy contributions of RE/EE project demonstrations and other existing RE/EE installations.

- Activity 3.1.3.2: Evaluation of the design and operating performance and experiences in all demonstration and other existing RE/EE installations.

**Deliverables**

The Activities under the above-mentioned Outputs, shall be implemented according to a proposed Activity Work Plan in order to optimize the time involved so that all outputs will be delivered within the duration of the Project as indicated in the approved time table:

**Deliverable #1: Inception Report**
- Overall approach and Activity Work Plan

**Deliverable #2: Outputs 3.1.3 and 3.1.4**
- Computer-based M&E system for performance, maintenance and energy contributions of RE/EE project demonstrations and other existing RE/EE installations.
- Evaluation report on the design and operating performance and experiences in all demonstration and other existing RE/EE installations.

**Deliverable #3: Outputs 3.1.5 and 3.1.6**
- Developed and produced technical information packages and guidelines on FASNETT demo projects.
- Developed standard design for replication of RE/EE applications in other areas of the country.
- Developed technical inputs to the establishment and enforcement of basic design and...
operating guidance manuals for the RE/EE replication program and policy

**Deliverable #4: Outputs 3.2.1 and 3.2.2**

- Report on completed and operational FASNETT demos in accordance to established quality standards for enhancing market opportunities for RE/EE applications
- Report on a technology development and application program for RE/EE in government, community–based and private business projects for selected island communities
- Developed and facilitate approval of a technical assistance framework and scheme for individual commercial and residential RE and EE project investment proposals from national government agencies, local community leaders and private entrepreneurs.

**Institutional Arrangement**

In close consultation with the DOE Director (acting as the FASNET National Project Director), the TEC General Manager and the PMU Project Manager and other government counterparts, UNDP and other relevant stakeholders, the National Consultant will perform and take responsibility for the following tasks to be done on-site with guidance and advisorship by the IC for Outcomes 3.1 and 3.2: The National Consultant will work in close coordination with the Project Implementation Support Officer on the day-to-day matters.

- Gather data and information and provide inputs and reports to the International Consultant in the implementation of the activities that will result to the abovementioned Outputs
- Draft reports, news articles and provide photographs and documents for dissemination of information in multimedia on the RE/EE Demos and other ongoing and planned RE/EE projects in the country
- Other related tasks by the Consultants that may be identified as lacking by PMU relative to this TOR during the conduct of the activities and regular oversight meeting and monitoring.
- Assist the PMU in arranging meetings with DOE, TEC, IC and stakeholders via internet-based communications and conference platforms, e.g. Zoom, Google meet, etc. for the conduct of the related activities in producing the Outputs
- Document all outputs and activities with pictures and reports including recommendations on areas for improvement and best practices for sustainability and post-project planning.
- All other tasks as maybe assigned by the IC for the successful implementation of the consultancy services.

**Duration of the Work**

- The consultancy duration is for five (3) months and is expected to commence from 1 November 2022;
- The Consultants shall be engaged to undertake the consultancy according to an approved Time Schedule/Activity Work Plan and is expected to complete the work by 31 January 2023.

**Duty Station**

Because of the prevailing pandemic travel restriction and protocols, the IC will work as home-based assignment in providing the leadership, direction and overall responsibility in the accomplishment of the tasks and the expected deliverables, while the NC, to be based in Funafuti, Tuvalu, will provide the data/info gathering, direct support, material inputs and local facilitation, until the IC is possibly
permitted to travel to Tuvalu within the duration of the Contract. If any local travel needed, the cost will be reimbursed by the FASNET Project as per actual basis.

COMPETENCIES

- Demonstration integrity and commitment to UNDP and Government of Tuvalu principles and values and ethical standards
- Strong interpersonal and communication skills
- Ability to work well as part of a multi-cultural team and display gender, religion, race, nationality and age sensitivity and adaptability.
- Ability for team working
- Self-management, emotional intelligence and conflict management;
- Analytical and strategic thinking/results orientation;
- Knowledge sharing.
- Experience in managing and coordinating teams
- Experience in participating and following the project cycle, creative capacity solving problems
- Computer literacy (e.g., Microsoft Word, Excel, and Power Point) is a pre-requisite.

REQUIRED SKILLS AND EXPERIENCE

Educational Qualifications:

- Minimum of a Bachelor’s Degree or equivalent in Development Management, Business Management, Energy, Environmental Science, Economics, Public Administration/Management with background in Renewable Energy/Energy Efficiency, or related field.

Experience

- Minimum of 5 years working experience/familiarity in RE/EE technology designs, application and performance assessment in Renewable Energy and Energy Efficiency and Development and related field, particularly in the floating Solar PV power generation, various solar PV applications such as in water purification, demand management and response systems in RE/EE configurations, solar PV village electrification and roof-mounted solar PV systems, and other RE/EE technologies applicable in south Pacific islands.
- Proven experience and understanding of policies and regulations on RE and EE applications as well as Climate Change (mitigation and adaptation)
- Proven experience working with UNDP Projects and local communities on matters concerning energy policy and regulations
- Ability to communicate in English is essential
- Proven track record of project team experience working with government, NGOs, and other key stakeholders
- Previous experience in formulation of energy development and utilization projects and undertaking similar consultancies are an advantage.

Language requirements

- Fluency of English language is required;

Price Proposal and Schedule of Payments
The Consultant must send a financial proposal based on **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 IC’s duty station) and any other applicable cost to be incurred by the IC in completing the assignment.

The contract price will fixed output-based price regardless of extension of the herein specified duration. Payments will be done upon completion of the deliverables/outputs as listed above with the following percentages:

- Deliverable #1: Submission of the inception report and Activity Work Plan - 10% of total contract amount
- Deliverable #2: Outputs 3.1.3 and 3.1.4 – 30% of total contract amount
- Deliverable #3: Outputs 3.1.5 and 3.1.6 – 30% of total contract amount
- Deliverable #4: Outputs 3.2.1 and 3.2.2 - 30% of total contract amount.

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 Individual Consultant, prior to travel and will be reimbursed.

**Evaluation Method and Criteria**

Individual consultants will be evaluated based on the following **Cumulative analysis** methodology. The award of the contract shall 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 set of weighted technical criteria (70%). and financial criteria (30%). Financial score shall be computed as a ratio of the proposal being evaluated and the lowest priced proposal received by UNDP for the assignment.

**Technical Criteria for Evaluation (Maximum 70 points)**

- **Criteria 1:** Bachelor’s Degree or equivalent in Development Management, Business Management, Energy, Environmental Science, Economics, Public Administration/Management with background in Renewable Energy/Energy Efficiency, or related field. – Max 10 points

- **Criteria 2:** Minimum of 5 years working experience experience/familiarity in RE/EE technology designs, application and performance assessment in Renewable Energy and Energy Efficiency and Development and related field, particularly in the floating Solar PV power generation, various solar PV applications such as in water purification, demand management and response systems in RE/EE configurations, solar PV village electrification and roof-mounted solar PV systems, and other RE/EE technologies applicable in south Pacific islands - Max 20 Points

- **Criteria 3:** Proven experience and understanding of policies and regulations on RE and EE applications as well as Climate Change (mitigation and adaptation)- Max 10 points
Criteria 4: Proven experience working with UNDP Projects and local communities on matters concerning energy policy and regulation–Max 10 Points

Criteria 5: Previous experience in formulation of energy development and utilization projects and undertaking similar consultancies are an advantage. – Max 10 Points

Criteria 6: Assessment of approach/methodology described in technical proposal to conduct the assignment– Max 10 Points

Only candidates obtaining a minimum of 49 points (70% of the total technical points) would be considered for the Financial Evaluation.

Shortlisted candidates shall be called for an interview that will be used to confirm and/or adjust the technical scores awarded based on documentation submitted.

Documentation required
Interested individual consultants must submit the following documents/information to demonstrate their qualifications. Please group them into one (1) single PDF document as the application only allows to upload maximum one document:

- Letter of Confirmation of Interest and Availability using the template provided in Annex II.
- Personal CV, 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.
- Technical proposal, including a) a brief description of why the individual considers him/herself as the most suitable for the assignment; and b) a methodology, on how they will approach and complete the assignment.
- Financial proposal, as per template provided in Annex II. Note: National consultants must quote prices in United States Dollars (USD).

Note: Successful individual will be required to provide proof of medical insurance coverage before commencement of contract for the duration of the assignment.

Incomplete and joint proposals may not be considered. Consultants with whom there is further interest will be contacted. The successful consultant shall opt to sign an Individual Contract or a Reimbursable Loan Agreement (RLA) through its company/employer with UNDP.

Annexes
- Annex I - Individual IC General Terms and Conditions
- Annex II – Offeror’s Letter to UNDP Confirming Interest and Availability for the Individual IC, including Financial Proposal Template

For any clarification regarding this assignment please write to pts.fj@undp.org