

Terms of Reference:**Solar Power System for Motoia Health Centre on Tamana Island, Kiribati**

This consultancy is requested by:

Unit:	Kiribati CLO
Division:	Division of Pacific Technical Support (DPS)

Purpose of the Consultancy**1. Purpose of the Consultancy**

The purpose of this project is to install a solar power system for Motoia Health Centre on Tamana Island, enhancing its climate resilience and environmental sustainability. This TOR outlines the requirements for a contractor to design and install the solar power infrastructure.

2. Background

Healthcare facilities (HCFs) serve as the first and last line of defence against the impacts of climate change. They are vulnerable to climate-related stresses and can negatively affect the environment and community health. In Kiribati, HCFs lack functional infrastructure and a trained health workforce, making them susceptible to inadequate energy supplies, water, sanitation, and waste management services. Prioritizing improvements in these areas is essential for building resilience and promoting environmental sustainability.

The Korea International Cooperation Agency (KOICA) provided financial support for the Te-Mamauri Project in Kiribati which is managed by the World Health Organization and implemented by the Ministry of Health and Medical Services (MHMS).

Under outcome 2 of Te Mamauri project, one of the activities is to improve healthcare facilities and the selected outer island healthcare facilities and Infrastructure resilience to climate change is increased, in healthcare facilities, schools, and communities in vulnerable outer Islands, to effectively deal with climate-related shocks and stresses.

The contractor will be responsible for assisting the MHMS in the implementation of the Te Mamauri Work plan output 2.1: Healthcare facilities are better equipped to manage climate change- related hazards, including improved access to essential medical supplies and technologies for climate-resilient health system

The outer island healthcare facility requires a reliable solar power system to ensure uninterrupted electricity supply for critical medical equipment.

3. Planned timelines

Duration: 14 working days (28 April – 14 May 2025)

- The contractor shall submit a detailed project timeline, including milestones and completion dates
- The installation should be completed within a reasonable timeframe.

4. Work to be performed.

Method(s) to Carry Out the Activity:

- **Engage in discussions** with the WHO Country Office and the Ministry of Health and Medical Services (MHMS) team to confirm all requirements and timelines.
- **Prepare and submit** a detailed work plan outlining the tasks to be carried out.

Outputs/Deliverables:

Output 1: Prepared a detailed work plan for the work to be carried out.

- Deliverable 1.1. Submitted a detailed work plan specifying how to implement the activities to achieve the outputs and deliverables of the project with a budget component.

Output 2: Supplied the solar energy sets according to specifications detailed in Section 10.

- Deliverable 2.1. Supplied the solar sets according to specifications– 10 kVA battery, inverter, solar panels, and accessories.

Output 3: Installed the solar energy sets to the specified sites.

- Deliverable 3.1. Delivered and installed the solar energy sets to Motoia Health Centre on Tamana Island

Output 4: Conducted training of the staff at the clinic on how to operate and maintain the system and supplied comprehensive documentation.

- Deliverable 4.1. Training conducted on how to use the solar energy system and regular maintenance of the system according to the operations manual or standard operating procedure.
- Deliverable 4.2. Supplied comprehensive documentation, including user manual, maintenance guidelines or SOP, and warranty information for all installed components.

5. Activity coordination & Reporting

The selected Contracting organisation will work under the supervision of:

Responsible Officer & Manager:	CLO KIR	Email:	wpkirclo@who.int
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6. Specific requirements

Work Experience

Essential:

- Demonstrated experience in designing and installing solar power systems for healthcare facilities or similar structures
- Familiarity with the outer island environment, climate, and logistical challenges.
- Certifications: Relevant certifications in solar energy, electrical engineering, or renewable energy systems.
- Experience working in Kiribati including outer islands

7. Competencies

- Producing results
- Technical expertise

8. Place of assignment

- The contractor is expected to work at Motoia Health Centre on Tamana Island

9. Payment terms

1	Signing of Contract	0%
2	Provision of detailed work plan.	40%
3	Completion of deliverables 2.1 – 4.2: Supply and installation of solar energy system to the 7 clinics in Tamana Island according to specifications and conducted training to the clinic staff on its operation and maintenance.	60%
	Total	100%

10. Details of solar power system

1. The solar system should supply electricity to all the core medical equipment below.

Number	Type of facility	Type of equipment	Make / Model of Equipment	Pre-approved Wattage rating	Number of appliances	Total wattage rating	Hours of Operation in a day
1.	Health Center	Lighting	LED lamp (70-90 lm/W) 11 W	11	15	162	12
2.	Health Center	Lighting Outdoor	Security lighting, outdoors (LED) 40 W	40	5	200	12

3.	Health Center	Fan	Ceiling Fan (AC) 60 W	60	3	180	12
4.	Health Center	Medical Lights	LED light 100 W	100	1	100	6
5.	Health Center	Diagnostic Machines	Nebulizer 170 W	170	1	170	4
6.	Health Center	Diagnostic Machines	Patient/Vital Sign Monitor 100 W	100	1	100	4
7.	Health Center	Sterilizer Autoclave	Countertop autoclave (steam sterilizer) (45 L) 3500 W	3500	1	3500	4
8.	Health Center	Suction Apparatus	Suction apparatus (AC) 350 W	350	1	350	1
9.	Health Center	Suction Apparatus	Vacuum aspirator or D&C kit 70 W	70	1	70	1
10.	Health Center	Computers ICT	Laptop computer 100 W	100	1	100	3
11.	Health Center	Mobile	Mobile phone battery (charging) 5 W	5	1	5	8
12.	Health Center	Refrigerator Freezer	Refrigerator (AC) 400 Ltr 110 W	110	1	110	24
13.	Health Center	Water pump	3 HP Water Pump 2200 W	2200	1	2200	10
14	Health Center	Water purifier	UV water purifier	580	1	580	12
Total power rating						8,180	

2. Specifications:

1. Supply of 10 kVA or equivalent of solar panel (12 hours of nighttime operation), battery (24-hour back up), inverter, charge controller, and installation accessories package and warranty.
2. Transportation and delivery to the project sites
3. Cost of labour, accommodation, installation, and commissioning
4. Training clinic staff on the use and maintenance of the system as per the instructions manual or standard operating procedures (SOP).
5. Solar panels will be roof mounted.