



Republic of Kiribati

Procurement of Goods

Request for Quotations

Date: 15th May 2019

Invitation to Quote (ITQ)

Project Title: Sustainable Water Supply for Vulnerable Rural Community

Contract Name: Supply of Reverse Osmosis (RO) Desalination System and PV Solar Power system to Vulnerable Rural Community.

Date of Issue of Invitation: 15th May 2019

To:

Dear Supplier,

1. The Ministry of Infrastructure and Sustainable Energy (MISE) hereinafter called “the Purchaser” hereby invites you to submit a quotation for the following tenders: (Lot 1) **2 x 15 kWp, 1 x 8 kWp and 1 x 6 kWp Solar PV off grid systems** and (Lot 2) **3 x RO Desalination plant with a minimum production capacity of 250 liters per hour.**
2. You are invited to submit your price quotation for the RO desalination plant and a bundled PV solar power system in the table below:

| Contract Reference | Lot No | Description | Quantity |
|--------------------|--------|---------------------|----------|
| MISE/1 | Lot 1 | 15kW | 2 |
| | | 8 kW | 1 |
| | | 6 kW | 1 |
| | Lot 2 | 250 Liters per hour | 3 |

(Information on technical specifications and required quantities are attached)

3. You must quote for one lot (not together but separately for each lot) under this Invitation. Price quotations will be evaluated for all the items together and contract awarded to the firm offering the lowest evaluated cost for each lot.
4. Your price quotation in the form attached may be submitted by hand delivery, surface mail, courier service and facsimile or electronically at the following address:

Name: Mr. Kireua B Kaiea

Title: Energy Planner

Office: Energy Planning Unit, Ministry of Infrastructure and Sustainable Energy

E-mail address: kbkaiea@mise.gov.ki

Where forms are required to be signed, scanned copies of the signed forms should be attached in the email.

5. The deadline for receipt of your quotation(s) by the Purchaser at the address indicated in Paragraph 3 is 14th June 2019 at 1600 hrs Kiribati time.
6. Your quotation in English Language only should be accompanied by adequate technical documentation and catalogue(s) and other printed material or pertinent. Information for each item quoted, including names and addresses of firms providing services facilities in Kiribati or any other country in the Pacific region.

7. Your quotation(s) should be submitted as per the following instructions and in accordance with the attached contract. The attached Terms and Conditions of Supply in an integral part of the Contract. Incomplete or partial Quotations will not be considered. Alternative quotations/options are not allowed.

Your quotation should include the following:

- I. Completed and signed Form of Quotation and Price and Completion Schedule (Section 2) and
 - II. Completed and signed Terms and Delivery Schedule (Section 4); and
 - III. Completed and signed Technical Specifications and Statement of Compliance (Section 3) demonstrating substantial responsiveness of the goods including incidental services offered to the technical specification required, along with any technical documentation and/or catalogues of proposed products; and
 - IV. Original copy for Certificate of Business registration and Tax registration; and
 - V. Business/Supplier background information.
- A. Prices: The prices should be quoted in Australian Dollars currency, for the total cost at Tarawa which shall include transportation, insurances, and any other local costs for delivery of the goods up to final destination (MISE Office Betio, Tarawa) but shall exclude all customs duties and sales and other taxes; Prices quoted shall be fixed and not subject to any adjustment during contract performance.
- B. Evaluation of Quotation: The evaluation of the price quotations will be conducted through Kiribati Government procurement procedures.

Offers determined to be substantially responsive to the technical specifications will be evaluated by comparing the evaluated price. The Purchaser will determine for each item the evaluated price, by adjusting the price quotation by making any correction for any arithmetical errors as follows:

- a) Where there is a discrepancy between amounts in figures and in words, the amount in words will govern;
- b) Where is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern;
- c) If a Supplier refuses to accept the correction, his quotations will be rejected.

Price quoted will be evaluated for each lot and the contract awarded to the bidder offering the lowest evaluated price for each lot.

- C. Award of Contract: A Contract will be awarded to the bidder offering the lowest evaluated price for each lot, and which is technically compliant with the required specifications. The successful participant will sign a Contract as per attached *Form of Contract* and *Terms and Conditions of Supply*.
- D. Validity of the Offer: Your quotation should be valid for a period of sixty (60) days from the deadline for receipt of quotation(s) indicated in Paragraph 4 of this Invitation to Quote.

8. Further information can be obtained from:

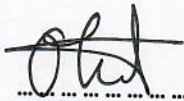
| | |
|---|--------------------------------------|
| Name: Mr. Buriti Tokam | Name: Mr. Tiaon Aukitino |
| Title: Ag. Assistant Energy Economist | Title: Urban Energy Planner |
| Email: brist0459@gmail.com | Email: t.aukitino@mise.gov.ki |
| Office: Ministry of Infrastructure and Sustainable Energy - EPU. | |

9. Inspection Audits

a. The supplier shall carry out all instructions of the Purchaser, which comply with the applicable laws where the destination is located.

10. Please confirm by email the receipt of this invitation and whether or not you will submit the price quotation(s).

Your Sincerely,



.....

Ms. Maati Oten
Conventional Energy Planner,
Energy Planning Unit,
Ministry of Infrastructure and Sustainable Energy.

SECTION 2

*To be submitted on Letterhead of
Supplier*

TECHNICAL REQUIREMENT and SPECIFICATIONS FOR TENDER – Sustainable Water Supply for Vulnerable Rural Community (SWSVRC) PROJECT

| Item | Specifications Required | Specifications Offered | Notes, Remarks, References | Evaluation Committee Notes |
|--------------|---|------------------------|----------------------------|----------------------------|
| 1.0 | Solar PV System Specification | | | |
| 1.1.0 | <p>General Requirements</p> <p>The Solar mini off-grid project under this Terms of Reference (TOR) must include but not necessarily be limited to the following job activities;</p> | | | |
| 1.1.1 | <p>Design a Standalone Solar Systems with Generator Backup to be installed by Kiribati Ministry of Infrastructure and Sustainable Energy to supply power to the identified site. The Solar PV unit has to continuously supply 415 V AC for Banaba Island and North Tarawa, 240V AC for Maiana Island and Abaiang Island, 50Hz balanced sine wave electricity to the mini-grid systems. The Solar PV unit shall be of the modular type to allow for further expansion of the installed capacity. There are 4 Islands to be covered under this Solar project with a capacity listed below.</p> <p>15kW Banaba Island (3-phase) 15kW North Tarawa (3-phase) 8kW Abaiang Island (single phase) 6kW Maiana Island (single phase)</p> <p>From the above-mentioned islands, Abaiang Island and North Tarawa Island will be in a roof top mounted structure while Maiana and Banaba Island will be ground mounted structure.</p> | | | |
| 1.1.2 | Supply of Major System Components for the system in clause (1) above. | | | |

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| 1.1.3 | Design should incorporate 3-phase diesel generator for Banaba Island and North Tarawa Island, and single phase diesel generators for Maiana Island and Abaiang Islands, use as back up. Design should aim to reduce the run time of the generator to a minimum to reduce fuel costs and CO2 emissions. | | | |
| 1.1.4 | All wiring and system designs must Conform to Australia & New Zealand standards. | | | |
| 1.1.5 | System Performance Figures as per item 3.0 | | | |
| 1.2 | Photovoltaic System | | | |
| 1.2.1 | General terms and conditions where the PV Arrays will be installed include; A minimum Array size of 3-phase 15kWp for Banaba Island A minimum Array size of 3-phase 15kWp for North Tarawa Island A minimum Array size of single phase 8kWp for Abaiang Island A minimum Array size of single phase 6kWp for Maiana Island | | | |
| 1.2.2 | Photovoltaic cells shall be of a mono-crystalline or poly-crystalline silicon type. Amorphous and thin film type cells are not acceptable under this tender. Cells shall be fitted on overhead mounting structure. | | | |
| 1.2.3 | Suitable for an environment of high ambient temperature, high humidity and high level of atmospheric salt. | | | |
| 1.2.4 | Solar modules shall have minimum capacity of 300 Wp | | | |
| 1.2.5 | The system must be designed to suit tropical costal conditions. All system components are to be fully integrated and compatible | | | |
| 1.2.6 | Area occupied by PV Array installation must be minimized as much as possible | | | |
| 1.2.7 | Lifetime The equipment shall be designed to last at least 20 years of outdoor exposure under the local conditions. | | | |

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| 1.2.8 | <p>Information required from the Tenderer</p> <p>Performance of equipment</p> <p>Tenders must include details of prior qualifying service, a statement attesting that the materials offered are identical to those used in prior service and the names and addresses of at least two users not affiliated with the manufacturer or Tenderer who are willing to corroborate the stated field experience.</p> <p>Detailed drawings of the array structures and the module arrangement shall be provided. This shall include the angle of tilt of 15°C as well as the foundation details for the structure proposed. The drawings shall state the thickness of the material and clearly indicate the structural soundness of the structure.</p> <p>Structures with panels installed shall be rated for winds up to 80 km/h.</p> | | | |
| 1.2.9 | <p>Warranty</p> <p>The required module shall have a manufacturing warranty of 10 years and a performance warranty of 25 years</p> | | | |
| 1.3 | Photovoltaic Support Structure (Rack) | | | |
| 1.3.1 | <p>PV modules need to be supported on a suitable Ground Mounted and On-roof Support Structure</p> <ul style="list-style-type: none"> • Maiana Island and Banaba island shall include Ground mounted and Car Port Solar Frames respectively that could withstand corrosive, heavy load and strong wind • Abaiang island and North Tarawa Island shall include roof mounted structures that could withstand corrosive and strong wind | | | |

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| 1.3.2 | The aluminum rails shall be of a 6005-T5 aluminum alloy and have an ultimate tensile strength of 19.9kN/m ² . The rail must have the section modulus of 5.78cm ³ or larger. All bolts and screws will be made of stainless steel (316SS). All clamps that attach directly to the roof should be S-5 brand or approved equal with proper roof sealant at clamp to roof connection. All exposed materials shall be non-toxic to allow for collection of potable rainwater | | | |
| 1.3.3 | A carport structure and post shall build to withstand heavy load, strong wind of 150 km/hr and suitable for an environment of high ambient temperature, high humidity and high level of atmospheric salt. | | | |
| 1.3.4 | Tilt angle shall be adjustable between 10-30 degrees and suitable to the design of system as outlined in item 3.0 | | | |
| 1.3.5 | Adjustable leg for roof mounting structure to be provided | | | |
| 1.3.6 | The material of rack and mounting brackets of the solar arrays must be designed to withstand corrosive maritime climate and strong winds in excess of 150km/hour. All support structure components including brackets and fasteners must be able to resist at least 15 years of outdoor exposure without any appreciable corrosion | | | |
| 1.3.7 | Provide security wall for Maiana Island ground mounted PV Arrays. | | | |
| 1.3.8 | A manual containing construction and assembly of the mounting structures and mounting of modules must be provided with tender | | | |
| 1.3.9 | Engineering Diagrams for foundations and Framing should be supplied with tender | | | |
| 1.4 | Battery Bank | | | |
| 1.4.1 | A battery bank design shall meet the daily depth of discharge to meet the daily watt hour requirement of the site and can continue supply the load for at least 1.5 autonomous days to a DOD of 50%. | | | |
| 1.4.2 | Batteries at C10 shall be <ul style="list-style-type: none"> • 48V, 2917 Ah (Abaiang) • 48V, 2000 Ah (Maiana) • 48V, 3000 Ah (Banaba) • 48V, 3000 Ah (North Tarawa) | | | |
| 1.4.3 | Battery designs shall have no more than 12V (6 x 2V) series | | | |

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| 1.4.4 | Batteries should have a life expectancy of 8 years or more | | | |
| 1.4.5 | Battery design specified should be OPzV or OpzS | | | |
| 1.4.6 | The batteries shall be designed to operate in a tropical, marine environment subject to intermittent salt spray, continuous exposure to high ambient temperature (25-35 °C) and humidity approaching 100%. | | | |
| 1.4.7 | Battery bank voltage shall be 48V nominal voltage | | | |
| 1.4.8 | <p>Battery accessories</p> <p>The following accessories shall be delivered as part of the battery set: Insulated series connectors,</p> <ul style="list-style-type: none"> • Battery lugs and fuses, • DC busbars for the positive and negative terminals, with PVC cover to avoid accidental short circuits, • DC busbar set (positive and negative) for systems operating off a single busbar. • Busbars designed to allow for the connection of the two or three battery sets, the inverters and the charge controllers. • Battery racks per battery set per system, • Insulated torque wrench with correct socket for torqueing the connector bolts at the battery terminals, • Conduit for cables | | | |
| 1.4.9 | <p>Lifetime and warranties</p> <p>The design lifetime of the batteries shall be for at least 8 years without losing more than 20% of the nominal capacity. The Tenderer has to provide a replacement warranty for at least 3 years.</p> | | | |
| 1.5 | Solar Inverters | | | |
| 1.5.1 | The Solar Inverters required for the project should meet the following requirements using SMA Inverters. | | | |

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| 1.5.2 | <ul style="list-style-type: none"> • Minimum Capacity of 3-phase 15 kWp for Banaba Island • Minimum Capacity of 3-phase 15 kWp for North Tarawa Island • Minimum Capacity of single phase 6 kWp for Maiana Island • Minimum Capacity of single phase 8 kWp for Abaiang Island | | | |
| 1.5.3 | Be able to supply 3 phase 415 V Power for Banaba and North Tarawa, and single phase 240V Power for Maiana Island and Abaiang Islands to the micro grid. | | | |
| 1.5.4 | Shall have 2 independent MPPT inputs | | | |
| 1.5.5 | 3 strings per MPP input | | | |
| 1.5.6 | Minimum efficiency of 98 % | | | |
| 1.5.7 | Integrated monitoring and management features | | | |
| 1.5.8 | IP 65 Rating or above | | | |
| 1.5.9 | <p>The inverter shall be labelled with the following information</p> <ul style="list-style-type: none"> Manufacturer; Serial number; Nominal output power at 15°C; Manufacturing date; Country of origin; Clear indication of the positive and negative connection on the battery cable; Safety warnings as needed. | | | |
| 1.5.10 | <p>Warranties</p> <p>Tenderers must include a statement of warranties in effect, including what specifically is covered under warranty and requirements for obtaining compensation for inverters which have failed under warranty. If as a result of the failure of one inverter (or any related equipment) the inverter is not available for a period of longer than three (3) consecutive months the warranty period shall be extended for that period of non-availability.</p> | | | |
| 1.6 | Battery Inverter/Chargers | | | |
| 1.6.1 | The Battery Inverters required for the project should meet the following requirements using SMA Inverters. | | | |
| 1.6.2 | A bi-directional inverter/Charger system with input voltage of 48VDC | | | |
| 1.6.3 | Output of 3 phase 415 V AC for Banaba Island and North Tarawa, and single phase 240V AC for Maiana and Abaiang Islands at 50Hz | | | |
| 1.6.4 | Pure sine wave | | | |

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| 1.6.5 | Minimum IP 54 Enclosure | | | |
| 1.6.6 | Min Continuous AC power of 6 kW, 8 kW over single –phase and 15kW over 3-phase, @ 25-degree C | | | |
| 1.6.7 | Minimum of 50 Amp internal transfer switch for generation connection. | | | |
| 1.6.8 | Integrated 2 wire Generator Control Load Shedding Control Capability | | | |
| 1.6.9 | <p>Labelling</p> <p>The battery inverter charger shall be labelled with the following information</p> <p>Manufacturer; Serial number; Nominal output power at 25°; Manufacturing date; Country of origin; Clear indication of the connection; Safety warnings as needed.</p> | | | |
| 1.6.10 | <p>Lifetime and warranties</p> <p>Tenderers must include a statement of warranties in effect, including what specifically is covered under warranty and requirements for obtaining compensation for inverters which have failed under warranty. If as a result of the failure of one inverter (or any related equipment) the inverter is not available for a period of longer than three (3) consecutive months the warranty period shall be extended for that period of non-availability</p> | | | |
| 1.7 | Other Components | | | |
| 1.7.1 | Other components include but not limited to; Salt Resistant DC Junction Box containing DC circuit breaker, Isolating fuses (with spares)/circuit breakers for DC inputs from all strings of the solar array, Isolating circuit breakers from inverters/charge controllers, positive and negative buses for the termination of all dc sources and MC4 connectors. | | | |
| 1.7.2 | Salt Resistant AC Junction Box with all integrated Circuitry and fusing for connection of solar inverters, Battery Inverters Generator and Load Prewired AC box | | | |
| 1.7.3 | <p>AC Load Shedding Contactors</p> <p>All Battery Cabling and Fusing</p> <p>Single Phase Change Over Switch</p> | | | |

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| 1.7.4 | <p>Cables for DC and AC circuit from;</p> <ul style="list-style-type: none"> a. PV array to DC Junction Box b. DC Junction Box to solar inverters c. Solar inverters to AC Junction Box d. AC Junction Box to Battery Inverters e. Battery inverters to battery bank and cell interconnects | | | |
| 1.7.5 | Web based Data Logger/ Metering | | | |
| 1.7.6 | Suppliers shall commit to provide back-up online technical support during installation when required. | | | |
| 1.7.7 | Design and electrical diagram shall be provided by suppliers | | | |
| 1.7.8 | <p>Distribution network components to be provided for</p> <ul style="list-style-type: none"> • Banaba Island – Cable wire 3-phase 16 mm sq x 150 meters • North Tarawa – Cable wire 3-phase 16 mm sq x 210 meters • 3 meters A-shape ladder x 4 pcs • Please refer to Material list attached to this tender document for Maiana Island and Nuotaea Island. | | | |
| 1.7.10 | <p>Services</p> <p>As part of the tender the Kiribati Ministry of Infrastructure and Sustainable Energy requires a daily schedule of rates from the contractor for the following Services.</p> | | | |
| 1.8 | Other Requirement | | | |
| 1.8.1 | <p>Technical specifications</p> <p>Full technical specifications shall be provided by the Tenderer. These shall include:</p> <ul style="list-style-type: none"> Nominal output current rating; Input voltage range for the MPPT; Efficiency; Indicators/display Protective class; Physical size and weight | | | |
| 1.8.2 | <p>Information required from the Tenderer</p> <p>Technical specifications for the change-over switch board, the wire insulation and the accessories shall be provided. A 200mm sample of the wire being proposed shall be included with the tender</p> | | | |

| 1.8.3 | <p>Additional documentation</p> <p>The Tenderers shall provide the following additional documentation:</p> <p style="padding-left: 40px;">Safety warning and advice how to handle batteries; Filling if liquid battery used and commissioning procedure; Maintenance and replacement procedure; Range of operating temperature and storage temperature.</p> | | | | | | | | | | | | | | | |
|---------|--|------------------------|------------------|------------------------|--------|--------------------|---------|---------|--------------------|---------|--------|----------|---------|--|--|--|
| 2.0 | Reverse Osmosis Desalination Specification | | | | | | | | | | | | | | | |
| 2.1 | <p>General Specification</p> <p>The Reverse Osmosis Desalination project under this Terms of Reference (TOR) must include but not necessarily be limited to the following job activities;</p> | | | | | | | | | | | | | | | |
| 2.1.1 | <p>Design a RO Desalination system to be installed by Kiribati Ministry of Infrastructure and Sustainable Energy to supply fresh water to the identified site. The RO unit has to continuously supply 250 liters of permeate water per hour. There are 3 Islands to be covered under this project with a RO system daily capacity output production listed below.</p> <p>250 liters/hour – Abaiang Island 250 liters/hour – Maiana Island 250 liters/hour – Banaba Island</p> <p>Refer to Annex 1-1 below for RO operation schematic diagram</p> | | | | | | | | | | | | | | | |
| 2.1.2 | <p>Robust, durable, uncomplicated and easy to maintain equipment is required.</p> <p>Minimum design operation life is 15 years in a humid, tropical, coastal marine environment.</p> | | | | | | | | | | | | | | | |
| 2.1.3 | Permeate water produced by the desalination plants shall comply with World Health Organisation (WHO) water quality standards. | | | | | | | | | | | | | | | |
| 2.1.4 | <p>RO Desalination system designed has to meet specified salinity range provided. Feed waters has different salinity range for the identified site as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Island</th> <th style="text-align: left;">Feedwater Source</th> <th style="text-align: left;">Salinity Range (uS/cm)</th> </tr> </thead> <tbody> <tr> <td>Maiana</td> <td>Brackish open well</td> <td>>10,000</td> </tr> <tr> <td>Abaiang</td> <td>Brackish open well</td> <td>>10,000</td> </tr> <tr> <td>Banaba</td> <td>Seawater</td> <td>>50,000</td> </tr> </tbody> </table> <p>Refer to Annex 1-2 below for Water background information on Nuotaea and Maiana</p> | Island | Feedwater Source | Salinity Range (uS/cm) | Maiana | Brackish open well | >10,000 | Abaiang | Brackish open well | >10,000 | Banaba | Seawater | >50,000 | | | |
| Island | Feedwater Source | Salinity Range (uS/cm) | | | | | | | | | | | | | | |
| Maiana | Brackish open well | >10,000 | | | | | | | | | | | | | | |
| Abaiang | Brackish open well | >10,000 | | | | | | | | | | | | | | |
| Banaba | Seawater | >50,000 | | | | | | | | | | | | | | |
| 2.1.6 | All wiring and system designs must Conform to Australia & New Zealand standards. | | | | | | | | | | | | | | | |
| 2.1.7 | Provide total power consumption for RO desalination system. | | | | | | | | | | | | | | | |

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| 2.1.8 | Provide installation training and remote support to Kiribati Ministry of Infrastructure and Sustainable Energy technical staff during installation of the Desalination system | | | |
| 2.2 | Materials | | | |
| 2.2.1 | Skids and Frame to be 316 stainless steel or metallic with clear poly urethane coating Frame must be adequately braced and engineered for shipping loads | | | |
| 2.2.2 | Control panels to be non-corrosive material such as ABS | | | |
| 2.2.3 | All pressure pipework and fittings (wetted parts) 2507 stainless steel (super-duplex) | | | |
| 2.2.4 | Low pressure pipeworks to be HDPE-imperial as commonly used in Australia | | | |
| 2.2.5 | RO membranes and filters that are interchangeable with suitable non-proprietary units for example Filmtec, Hydranautics sizes to be 4040 or 2540. Particle filters to be double open ended "standard size" filters. Proprietary membranes or filters shall not be accepted. | | | |
| 2.2.6 | Required pipework and fittings for the RO system operation to be provided by supplier. | | | |
| 2.3 | Pumps | | | |
| 2.3.1 | Feed pump and HP pump to be duplex construction or cast 316 – Feed pump may be combination of composite plastic and duplex. Pump should be a broadly available brand – not a "special proprietary" pump only available from supplier. | | | |
| 2.3.2 | Pump motors to be 240VAC single phase | | | |
| 2.3.3 | Is pump a proprietary product or generally available from multiple pump suppliers? | | | |
| 2.4 | Others requirements | | | |
| 2.4.1 | The control panel shall be of reinforced plastic or similar. | | | |
| 2.4.2 | LED lamp illumination of operating, pumps and valves on control panel | | | |
| 2.4.3 | 240VAC operation of RO with a maximum power consumption of at least 3 kWp | | | |
| 2.4.4 | Unit must be able to be run off a Genset if required. Thus unit should be 240VAC | | | |
| 2.4.5 | 12V or 24V operation of any electric valve – higher voltage not acceptable | | | |
| 2.4.6 | Unit must flush with fresh permeate on shut down | | | |

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| 2.4.7 | Level switch control on/off for permeate tank and sea water feed tank | | | |
| 2.4.8 | Pre-filter cartridge type? Size, is it interchangeable with generic brands on the market | | | |
| 2.4.9 | Redundancy requirements: These should be priced as options / shelf to have them fitted on RO can be uneconomical over multiple units | | | |
| 2.4.10 | Membrane flux calculation to be submitted | | | |
| 2.5 | Other Components | | | |
| 2.5.1 | Country of manufacturer and Desalination system warranty: <ul style="list-style-type: none"> • Country of Manufacture: Desalination system • Desalination plant must have a warranty of a minimum 3 years • Maintenance warranty of 12 months from the time of practical completion | | | |
| 2.5.2 | Priced critical spares list and consumables | | | |
| 2.5.3 | A pricing schedule to be supplied for; <p>Membranes: 1 x set of membranes as boxed spares. b. Filters: 1 x set of filters as boxed spares.</p> | | | |
| 2.5.4 | References of RO installation on Pacific Islands by entity responding to tender | | | |
| 2.5.5 | Distribution Network to be provided by supplier <ol style="list-style-type: none"> 1. PE Pipe 63mm x 150meters (3 sets) 2. PE Pipe 25mm x 150meters (1 set) | | | |
| 2.5.6 | Provision of company background information (i.e. when it was created, number of employers, etc) | | | |

| Service | Description | Daily Rate |
|-----------------------|--|-------------------|
| Design Services | Remote customized project design services for project | |
| Installation Training | Technical Training of Installers in Kiribati by accredited RO installer. | |
| Operator Training | Operator Training of staff in Kiribati by Cert 4 accredited RO trainer. | |

**SECTION 4
TERMS AND DELIVERY SCHEDULE**

| | |
|---------------------------|--|
| Project Title | Sustainable Water Supply for Vulnerable Rural Community. |
| Contract Name | Supply of Reverse Osmosis (RO) Desalination System and PV Solar Power system to Vulnerable Rural Community |
| Contract Reference | |

1. Prices and Delivery Schedules.

| No. | Lot No. | Description of Goods | Quantity | Unit Price | Total Price at final destination | Delivery Date |
|-----|---------|----------------------|----------|------------|----------------------------------|--------------------------------------|
| 1 | Lot 1 | 15Kw | | | | Max 12 weeks from Contract signature |
| | | 8Kw | | | | Max 12 weeks from Contract signature |
| | | 6Kw | | | | Max 12 weeks from Contract signature |
| 2 | Lot 2 | 250 liters/hour | | | | Max 12 weeks from Contract signature |
| 3 | | Freight | LS | | | |
| | | TOTAL | | | | |

(Note: In case of discrepancy between unit price and total derived from unit price, the unit price shall prevail)

2. Fixed Price: The prices indicated above are firm and fixed and not subject to any adjustment during contract performance.

3. The Purchaser reserves the right at the time of contract finalization to increase or decrease by up to **15%** the quantity of goods and services originally specified without any change in unit prices as other terms and conditions.

4. DELIVERY SCHEDULE

The delivery should be completed but not exceeding 4 calendar weeks from the date the contract is signed.

5. INSURANCE

The supplier is responsible for all kinds of insurance until the goods are delivered to the port of destination of the Purchaser.

6. APPLICABLE LAW

The Contract shall be interpreted in accordance with the laws of Kiribati.

7. RESOLUTION OF DISPUTES

7.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute between them under or in connection with the Contract.

In the case of a dispute between the Purchaser and the Supplier, the dispute shall be settled in accordance with the provisions of the Kiribati Laws.

8. DELIVERY OF DOCUMENTS

Upon shipment, the Supplier shall notify the Purchaser and the Insurance Company in writing the full details of the shipment, including purchase order number, description of goods, quantity, the vessel, the Shipping and Forwarding Receipt from freight Company showing full details, port of loading, date of shipment, port of discharge, etc. The Supplier shall mail the following documents to the Purchaser, with a copy to the Insurance Company:

- (i) Copies of the Supplier's invoice showing goods' description, quantity, unit price, and total amount;
- (ii) Duplicate air/ truck transport document and/ or duplicate of railway transport document, and/or duplicate FCR (Forwarders Certificate of Receipt) in 1 Original and 2 Copies marked freight prepaid;
- (iii) Copies of the packing list identifying contents of each package;
- (iv) Manufacturer's or supplier's warranty certificate;
- (v) Certificate of origin; and
- (vi) Certificate of quality.

The above documents shall be received by the Purchaser at least one week before the arrival of the goods at the port of place of arrival and, if not received, the Supplier shall be responsible for any consequent expenses.

9. REQUIRED TECHNICAL SPECIFICATIONS

Required Technical Specifications

- (i) General Description
- (ii) Specific details and technical standards
- (iii) Performance Parameters

Supplier confirms compliance with above specifications (In case of deviations supplier to list all such deviations).

10. PROGRESS REPORTS

The Supplier must provide a progress report and relevant documentation, through the form of communication as agreed by the parties, on each of the following:

- a. Purchase of the Goods;
- b. delivery to ship, departure;
- c. expected date of arrival; and
- d. delivery at of final destination.

11. PAYMENT

11.1 The Purchaser hereby covenants to pay in consideration of the goods supply and acceptance of Contract and remedying of defects therein, the Contract Price in accordance with the Payment Conditions prescribed by Contract.

(i) First Payment

The Purchaser shall pay the Supplier the portion of **30%** of the total contract price on confirmation of the order and after the signing of this agreement by both Parties.

(ii) Final Payment

The Purchaser shall pay to the Supplier the remaining **70%** of the total contract price (landed in Tarawa) for all the Goods specified in Clause 4 after they have been delivered to the port of destination of the Purchaser and accepted by the Purchaser.

11.2 The Purchaser shall make the payments to the Supplier within 5 working days from the date of signing and due acceptance of the Goods to the bank account of the Supplier as indicated below;

| | |
|---|--|
| Account name: | |
| Account number & Bank Address: | |
| Bank name and address: | |
| Swift/BIC code | |

12. DEFECTS

All defects experienced during the Warranty period will be corrected by the Supplier without any cost to the Purchaser within 30 days from the date of notice by Purchaser. Name and address of service facility at which the defects are to be corrected by the Supplier within the warranty period:

| | |
|-------------------------------------|--|
| Name of Services Facility | |
| Address of Services Facility | |

13. FORCE-MAJEURE

The supplier shall not be liable for penalties or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

For purposes of this clause, "Force-Majeure" means an events beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but not restricted to, act of Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

If a Force-Majeure situation arises, the Supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by Force-Majeure event

14. WARRANTY

14.1 With respect to the Goods purchased from the Supplier, the Supplier expressly warrants as follows:

- i. The Goods offered should be covered by the manufacturer's warranty according to each specified warranty period shown in Section 2 from the date of acceptance by the Purchaser.
- ii. the goods shall strictly conform to all specifications, drawings, instructions, advertisements, statements on containers or labels, descriptions and samples;
- iii. the Goods shall be free from defects in workmanship and material and shall be new and of the highest quality;
- iv. the Buyer shall receive title to the Goods that is free and clear of any liens, encumbrances and any actual or claimed patent, copyright or trademark infringement; and
- v. the Goods shall be merchantable, safe and fit for the Buyer's intended purposes, which purposes have been communicated to the Supplier.

15. PACKAGING AND MARKING INSTRUCTIONS

The Supplier shall provide standard packing of the Goods as required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract.

16. DELAY

16.1 Delay in delivery shall render the Supplier liable for liquidated damages provided in Sub-clause

16.1.1 unless the Purchaser extends the time of performance or when the Purchaser determines that the delay was due to Force Majeure, as defined in Clause 18.

16.2 If the Supplier fails to deliver the Goods on the Delivery date(s), the Purchaser may deduct from the Contract amount, liquidated damages equivalent to 1% of the Contract amount for every week of delay or part thereof until the actual delivery of the Goods or performance. The maximum allowable deduction for such liquidated damages shall be 10% of the Contract Amount.

16.3 Once the maximum allowable deduction for liquidated damages provided above is reached, the Buyer may terminate the Contract.

| | |
|----------------------|--|
| NAME OF SUPPLIER | |
| Authorized Signature | |
| Address | |
| Date | |

Section 5
Form of Contract

CONTRACT FOR SUSTAINABLE WATER SUPPLY FOR VULNERABLE RURAL COMMUNITY

This Agreement is made on the (day) of(month), (year). Between the Government of Kiribati represented by the Ministry of Infrastructure and Sustainable Energy with its office at Betio, Tarawa (hereinafter referred to as the “Purchaser”) and (name of supplier) with its office address (hereinafter referred to as the “Supplier”)

RECITAL

WHEREAS the Purchaser has invited quotation for the **“Supply of RO Desalination System and PV Solar Power System to Vulnerable Rural Community viz. Contract MISE/1,** (hereinafter called “Contract”) and has accepted the Bid by the Supplier for the supply of the Goods including incidental services under the Contract at the sum of **(Total cost in AUD currency)** hereinafter called “the Contract Price”;

WHEREAS the Purchaser wishes to purchase from the Supplier and the Supplier is willing to supply to the Purchaser the Goods as more fully defined hereinafter; and

WHEREAS the Supplier is ready and willing to accept this Contract with the Purchaser on the said terms and conditions.

NOW, THEREFORE, the Parties hereby agree as follows:

1. The following documents shall be deemed to form and be read and construed as part of this agreement, viz:
 - a) Invitation to Quote;
 - b) Signed Form of Quotation
 - c) Signed Terms and Delivery Schedule,
 - d) Priced and signed Bill of Quantities and Technical Requirements;
 - e) Addendum (if applicable);
2. Taking into account payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby concludes an Agreement with the Purchaser to execute and complete the supply of Contract and remedy any defects therein in conformity with the provisions of Contract.
3. The Purchaser hereby covenants to pay in consideration of the goods supply and acceptance of Contract and remedying of defects therein, the Contract Price in accordance with Payment Conditions prescribed by Contract.

4. Termination

4.1) Termination for Default

- a. The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - i. if the Supplier fails to deliver any or all of the Goods including incidental services within the period specified in the Contract, or within any extension thereof granted.
 - i. if the Supplier fails to perform any other obligation under the Contract;or
 - ii. if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in Clause 5 below, in competing for or in executing the Contract.
- b. In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods and Incidental Services similar to those undelivered or not performed and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

4.2) Termination for Insolvency

- a. The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

4.3) Termination for Convenience.

- a. The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

- b. The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - i. to have any portion completed and delivered at the Contract terms and prices; and/or
 - ii. to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Incidental Services and for materials and parts previously procured by the Supplier

5. Fraud and Corruption

5.1. If the Purchaser determines that the Supplier and/or any of its personnel, or its agents, or its Subcontractors, consultants, service providers, suppliers and/or their employees has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices (as defined in the prevailing Bank's sanctions procedures), in competing for or in executing the Contract, then the Purchaser may, after giving 14-day notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract, and the provisions of Clause 4 shall apply as if such expulsion had been made under Sub-Clause 4.1.

6. Inspections and Audits

6.1. The Supplier shall carry out all instructions of the Purchaser which comply with the applicable laws where the destination is located

Signature and seal of the Purchaser:
FOR AND ON BEHALF OF

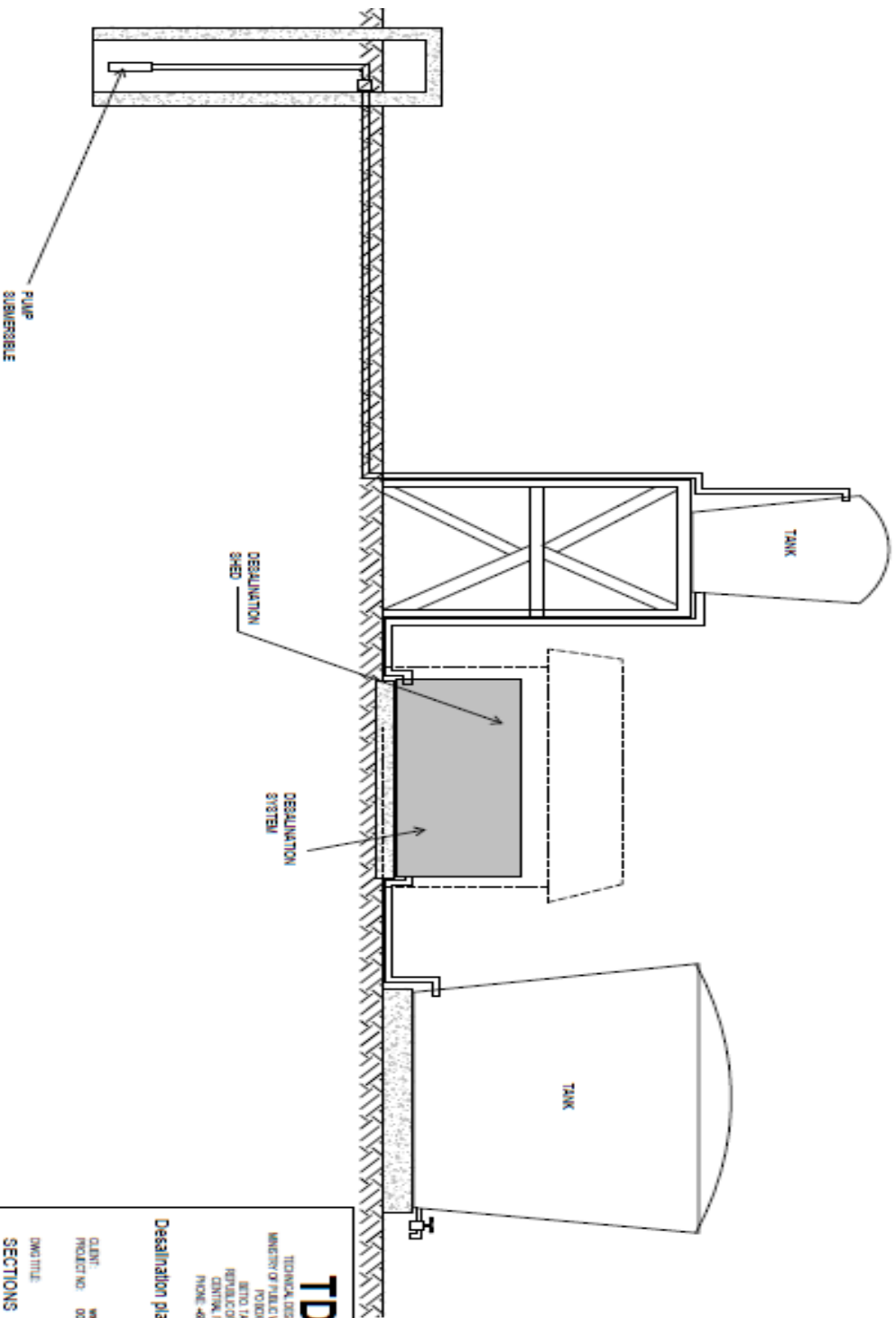
Name of Authorized Representative.

Signature and seal of the Supplier:
FOR AND ON BEHALF OF

Name of Authorized Representative.

Annex 1-1

DESALINATION PLANT SITE LAYOUT



| | |
|--|------------|
| TDS | |
| TECHNICAL DESIGN SECTION MINISTRY OF PUBLIC WORKS & UTILITIES | |
| PROJECT NO. 0000 | |
| SHEET NO. 0000 | |
| REPUBLIC OF KENYA CENTRAL OFFICE PHONE: 498 2932 | |
| Desalination plant site layout | |
| CLIENT: | NAME |
| PROJECT NO: | 0000 |
| SHEET TITLE | |
| SECTIONS | |
| DRAWN BY: | K. KADUNA |
| REVIEWED BY: | T. KIMANI |
| DATE: | 28/02/2019 |
| SCALE: | 1:20 |
| DRAWING NUMBER: | SCALE |
| A30 | |

Annex 1-2

| ABAIANG | | | | | | | | | |
|---------|----------------|------|---------|----------------|-------|---------|----------------|------|--|
| Dec-17 | | | Jun-18 | | | Nov-18 | | | |
| Nuotaea | Primary School | 4200 | Nuotaea | last hh South | 3170 | Nuotaea | Primary sch | 1098 | |
| Nuotaea | Clinic well | 4450 | Nuotaea | hh1 | 3100 | Nuotaea | Community well | 816 | |
| Nuotaea | CM Nuotaea | 2950 | Nuotaea | hh2 | 2363 | Nuotaea | Takabwea | 1400 | |
| Nuotaea | Community well | 610 | Nuotaea | hh4 | 3600 | | | | |
| Nuotaea | Teroutaki | 788 | Nuotaea | hh5 | 2950 | Dec-18 | | | |
| Nuotaea | Kaburia | 1044 | Nuotaea | hh7 | 18680 | Nuotaea | Primary sch | 902 | |
| Nuotaea | Ekerā | 800 | Nuotaea | clinic | 14950 | Nuotaea | Community well | 609 | |
| Nuotaea | Atawana | 979 | Nuotaea | solar pump | 777 | Nuotaea | Takabwea | 1014 | |
| Nuotaea | Butonga | 645 | Nuotaea | hh8 | 1744 | | | | |
| Nuotaea | Rereia | 789 | | | | Jan-19 | | | |
| Nuotaea | Takabwea | 1401 | Aug-18 | | | Nuotaea | Primary sch | 1419 | |
| Nuotaea | Tebwebwe | 1240 | Nuotaea | Primary sch | 6780 | Nuotaea | Community well | 410 | |
| Nuotaea | Matetuna | 1304 | Nuotaea | Community well | 863 | Nuotaea | Takabwea | 509 | |
| Nuotaea | Teiti | 1970 | Nuotaea | Takabwea | 1720 | | | | |
| | | | | | | | | | |
| Apr-17 | | | Sep-18 | | | | | | |
| Nuotaea | Primary School | | Nuotaea | Primary sch | 10420 | | | | |
| Nuotaea | Clinic well | 2600 | Nuotaea | Community well | 1867 | | | | |
| Nuotaea | CM Nuotaea | 748 | Nuotaea | Takabwea | 1720 | | | | |
| Nuotaea | Community well | 614 | | | | | | | |
| Nuotaea | Teroutaki | 750 | Oct-18 | | | | | | |
| Nuotaea | Kaburea | 1035 | Nuotaea | Primary sch | 8450 | | | | |
| Nuotaea | Ekerā | 725 | Nuotaea | Community well | 886 | | | | |
| Nuotaea | Atawana | 907 | Nuotaea | Takabwea | 1920 | | | | |
| Nuotaea | Butonga | 671 | | | | | | | |
| Nuotaea | Rereia | 760 | Oct-18 | | | | | | |
| Nuotaea | Takabwea | 870 | Nuotaea | Primary sch | 608 | | | | |
| Nuotaea | Tebwebwe | 1084 | Nuotaea | Community well | 512 | | | | |
| Nuotaea | Matetuna | 1210 | Nuotaea | Takabwea | 620 | | | | |
| Nuotaea | Teiti | 630 | | | | | | | |

In the year late 2017 to 2018 Kiribati experienced drought and the monthly rainfall were below normal average. Identified in the table are the conductivity for wells monitored by the outer island water technician. The database only considers Electrical Conductivity of wells as a parameter to determine the condition of the well water.

Nuotaea Islet of Abaiang monitoring results indicated that the majority of wells have electrical conductivity (EC) of <1000uS/cm, which are fresh wells despite the dry condition. However, there brackish wells are also present and this is not surprising due to the less recharge from less rainfall. Brackish wells during dry periods limits the freshwater source available on the islet, however the major issue is the overtopping as few wells are prone to overtopping, hence is the worst case scenario, considering the islet vulnerability.

For islets during dry periods conductivity range from 2500 – 10,000uS/cm, prolonged drought >10,000

| MAIANA | | |
|---------------|--------------------|--------|
| Mar-18 | | |
| Tebikerai | KPC | 1912 |
| Tebikerai | Kateinging | 1836 |
| Tebikerai | Community | 1828 |
| Tebikerai | Iotaake | 3400 |
| Tebikerai | Catholic Community | 2162 |
| May-18 | | |
| Tebikerai | KPC | 2290 |
| Tebikerai | Kateinang | buried |
| Tebikerai | Community | 2090 |
| Tebikerai | Iotaake | 3690 |
| Tebikerai | Catholic church | 2520 |
| Jun-18 | | |
| Tebikerai | KPC | 2288 |
| Tebikerai | Kateinang | buried |
| Tebikerai | Community | 2098 |
| Tebikerai | Iotaake | 3720 |
| Tebikerai | Catholic church | 2600 |
| Jul-18 | | |
| Tebikerai | KPC | |
| Tebikerai | Kateinang | |
| Tebikerai | Community | |
| Tebikerai | Iotaake | |
| Tebikerai | Catholic church | |
| Aug-18 | | |
| Tebikerai | hh1 | 3670 |
| Tebikerai | main village | 2040 |
| Tebikerai | KPC | 2274 |
| Tebikerai | Clinic | 2154 |
| Tebikerai | hh2 | 5410 |
| Tebikerai | hh3 | 2241 |

In the year 2018, Kiribati experienced drought and monthly rainfall were below normal average. Identified in the table are the conductivity for wells monitored by the outer island water technician. The monitoring only considers the Electrical Conductivity of wells as a parameter.

Tebikerai Islet of Maiana overall monitoring results indicated that the islet has conductivity of <10,000uS/cm overall. This identified that the wells are mostly brackish during dry periods however the issue is the overtopping as few wells are prone to disasters, hence would be the worst case scenario.

For islets, during dry periods conductivity range from 2500 – 10,000uS/cm, prolonged drought >10,000 and in times of seawater intrusion or overtopping, wells would reach 50,000uS/cm or greater.