



**INFORMATION SHEET FOR  
PROCUREMENT OF 2 UNITS OF 50TON  
RO PLANTS AND 1000T STORAGE  
TANK**

**Reference No.: FNK-I/IUL/2022/471**

Issued on 05<sup>th</sup> July 2022

Issued by:

Fenaka Corporation Limited

Male', Republic of Maldives

## Section I: Instruction to Bidders

A. General	
<b>1. Scope of Bid</b>	1.1 Fenaka Corporation Limited requests quotations for 2 units of 50T RO Plants and 1000T storage tank in accordance with <i>Section III, Technical Specifications</i>
	1.2 It is in Fenaka Corporation Limited's discretion to cancel the bid invitation mentioned in 1.1 at any time.
<b>2. Eligible Participants</b>	2.1 Local companies registered in Maldives are eligible to participate in the tender
	2.2 Foreign companies are eligible to participate in the tender only if the total bid value is above 2,500,000 Maldivian Rufiyaa.
B. Preparation of the Bid	
<b>3. Bid Prices</b>	3.1 The unit price of each item and the total price shall be clearly indicated in the quotation
	3.2 All items shall be quoted in the bid (please refer to <i>Section III, Technical Specifications</i> for the details of required items)
	3.3 Quotation shall separately indicate the additional charges such as freight charges and insurance.
	3.4 The bidder shall submit quotation on CIF basis to Male' port
<b>4. Currency</b>	4.1 The bidder shall quote entirely in Maldivian Rufiyaa
<b>5. Alternative Bids</b>	5.1 Bidders can submit a maximum of two (2) options
<b>6. Validity of Bids</b>	6.1 Quotation shall remain valid for minimum sixty (60) days from the date of bid opening
<b>7. Bid Security</b>	7.1 All bids should be accompanied with a bid security of USD 3,000 (Three Thousand US Dollars) or its equivalent in Maldivian Rufiyaa
	7.2 The bid security should be: <ul style="list-style-type: none"> <li>- Original bank guarantee letter (or)</li> <li>- Bank guaranteed and stamped check (or)</li> <li>- An insurance policy from Maldives Monetary Authority (MMA) registered insurance company</li> </ul>

	<p>7.3 Any bid not accompanied by a Bid Security shall be rejected during bid opening</p> <p>7.4 The bid security must be valid for a minimum of twenty (20) additional days beyond the validity of quotation</p>
<b>8. Technical Compliance</b>	<p>8.1 All relevant information including the brand shall be given to enable technical evaluation of quoted items</p> <p>8.2 Fenaka Corporation Limited will only accept items that meet OEM standards</p> <p>8.3 If the goods do not comply with the requirements mentioned in <i>Section III, Technical Specifications</i>, the bid will be rejected during evaluation</p> <p>8.4 In case supplied items do not meet the required items, they will be rejected and returned</p>
<b>9. Documents Comprising the Bid</b>	<p>9.1 Quotation (inclusive of the delivery period and payment terms)</p> <p>9.2 Specifications of the offered product</p> <p>9.3 Details of the company</p> <ul style="list-style-type: none"> <li>- Company profile/background</li> <li>- Company registration certificate</li> <li>- GST registration certificate (for local bidders only)</li> <li>- TAX clearance report (6 months validity)</li> <li>- Contact details (name, designation, mobile number and e-mail address)</li> </ul> <p>9.4 Experience letters, if available</p> <ul style="list-style-type: none"> <li>- Letters within past five (5) years</li> <li>- Relevant experience letters</li> <li>- Letters with project name and value</li> </ul> <p>9.5 One (1) compact disc with original bid document scanned and written</p>
<b>10. Format of Bid</b>	<p>10.1 The Bidder shall submit two (2) sets of the bid document (1 original and 1 copy), enclosed separately in two envelopes and sealed with company stamp</p> <p>10.2 All pages of the bid document shall be stamped and bound properly (excluding the bid security)</p>
<b>C. Bid Submission</b>	

<b>11. Sealing and Marking Bid Document</b>	11.1 The bid document shall be sealed properly in an envelope clearly marked ‘ORIGINAL’ or ‘COPY’, with the name of the company and the tender reference number (FNK-I/IUL/2022/471)
<b>12. Bid Opening</b>	12.1 The bids will be opened on 31 <sup>st</sup> July 2022, 1100hrs in the presence of bidders 12.2 Bids will be opened at: Fenaka Corporation Limited Hilaalee Magu, K. Male’, Republic of Maldives 12.3 Bids received electronically will not be accepted
<b>13. Bid Rejection</b>	13.1 Bidders that arrive after bid submission deadline shall not be able to participate in the bid 13.2 Bidders that do not register for the tender are unable to participate in the bid opening 13.3 Bids lacking the documents mentioned in 9. <i>Documents Comprising the Bid</i> (except 9.4 <i>Experience</i> ) and that do not comply with 10. <i>Format of Bid</i> are subjected to be rejected
<b>D. Awarding of Contract</b>	
<b>14. Payment Terms</b>	15.1 An advance payment will not be released for this project 15.2 Proposed payment terms should not be tied with submission of Bill of Lading.

## Section II: Evaluation Criteria

**Proposal Cost:** 70 points for the lowest price

- $(\text{Lowest price} / \text{proposed price}) \times 70$

**Delivery:** 20 points for the lowest delivery period

- $(\text{Lowest delivery period} / \text{proposed delivery period}) \times 20$
- If the delivery period indicates 'ex-stock', it shall be taken same as the party offering the longest delivery period.

**Credit Period:** 10 points for the maximum credit period

- $(\text{Proposed credit period} / \text{longest credit period}) \times 10$

**Note:** Any discrepancy in technical details specified in quotation with technical specification document, the specification shall prevail.

## Section III: Technical Specifications / Packing List

### Technical Specification – Provision of 1 nos 1000 ton portable water storage tanks at HA. Ihavandhoo

The following specifications are for the tank to be erected. The Contractors shall price for the water storage tank as per below technical specification or equivalent. Contractors shall submit tank drawings and should accommodate all accessories when pricing.

#### Tank Foundation

All foundation drawings, calculations, and materials to be used in the tank foundation must be approved by the client's engineer prior to commencement of works. Foundation must be adequate to the size and dimensions of the tank and free from any defects or cracks.

#### Tank Design Criteria

##### Tank Capacity, size, and shape

Tank must be cylindrical in shape with nominal diameter not exceeding 15 meters and a nominal eave height not exceeding 13 meters. Usable capacity of the tank must be greater than or equal to 1000 tons.

##### Tank design parameters

- Roof live load: > 70 kg/m<sup>2</sup>
- Wind load: > 140 km/hr
- Seismic zone: Eurocode 8 0,0 / AWWA D103-97 zone = 1, I = 1.00
- Operating pressure: atmospheric
- Tank medium: Potable water
- Maximum operating temperature: >40°C / ambient
- Specific gravity: 1.0
- Applicable product pH range: 4-7

##### Tank material of construction and coating

Tank must be of steel material suitable for potable water and completely leakproof. Exact material of construction of sheets and plates, and coating details are up to the contractor, to be approved by the client prior to application. Details must be attached in initial specifications provided. The tank must have a fully enclosed roofing as well as a baseplate. Adequate padding must be provided between foundation and base of the tank.

#### Tank roofing

- A manway (minimum 600mm) must be provided for access to the tank from the roof. This manway must be closed and sealed during operation.
- A vent with insect screening must be provided.
- Roof must be sloped to prevent accumulation of rainwater.
- Railing must be provided around the roof for safety during access.

#### Additional tank details

- Tank exterior color: Pastel Blue (RAL 5024) or similar blue.
- Tank inlet size: 160mm Outside Diameter (Inlet down Pipe Size can reduce up to 75mm)
- Tank outlet size: 160mm Outside Diameter
- Tank overflow size: 160mm Outside Diameter. Bottom of the overflow piping must have a wire mesh acting as an insect trap.
- Tank extension Outlet: 160mm Outside Diameter (Must be sealed and end-capped). This outlet is to connect two tanks when necessary, during operation.
- Tank access manway at base of tank: 600mm Outside diameter (sealed during operation)
- Ladder with a hinged lockable entry device complying with OSHA 1910.28 (b) (9) for access to the roof. Ladder must be caged with step-off platforms in the middle and at the top of tank.
- Tank Level indicator nozzle. Level must be clearly legible.

#### Piping, Valves, and fittings

All piping and fittings used must be of Polyethylene material (PE100) of black/blue color. SDR 11 and PN 16 are acceptable. Fittings should be attached to piping through butt-fusion welding where possible. Electrofusion welding is acceptable for buried piping. All bends of 90° must be done by butt welding two 45° elbows or three 30° elbows.

All valves must be gate valves with PE100, SDR11, PN16 ends. Gate valves must be of ductile iron material with epoxy exterior coating.

The following sizes of gate valves must be used for the tank:

- Tank inlet gate valve size: DN150, 160mm Outside Diameter (as the size of pipe)
- Tank outlet gate valve size: DN150, 160mm Outside Diameter

Gate valves must be stem capped, and a floating surface box (Polyamide body and ductile iron lid/surface plate with blue/black epoxy) must be provided for each gate valve. Total 1 nos T-key must be provided for operation of the valves.

### **Technical specifications for 50 m<sup>3</sup>/day RO plant**

- Plant should be capable of producing minimum 50 m<sup>3</sup>/day based on 20 hours of operation per day (2500 L/hr.) It should be compact and easily disassembled for portability.

Component	Requirement
<b>Feed Water</b>	Sea water of TDS 25000-45000ppm is the medium of feedwater.
<b>Feed Pump</b>	Centrifugal or positive displacement pump of corrosion resistant material.
<b>Prefiltration</b>	10 & 5-micron bag/cartridge filters and media filter (sand filter) must be present (spares should be readily available locally).
<b>Reverse Osmosis membranes</b>	RO membranes of sufficient quantity and compact vessel size. Plant efficiency must be higher than 30%
<b>High pressure pump</b>	Duplex SS axial piston pump, and motor sized for 2300-2500 L/hr (frequency controlled) production capacity preferred. Triplex Plunger pump will be accepted with consumables for 12 months of operations.
<b>Plant backwash/rinse system</b>	Backwash pump, and HDPE tank or a dichlorination system (if chlorination is done) sized for full backwash of the RO plant.
<b>Low pressure pipes and fittings</b>	u-PVC (grey) or PP (green) pipes and fittings of minimum PN10. All inlets and outlets must be of u-PVC.
<b>Additional requirements</b>	Visible product flow meter, conductivity of product water, pressure gauges for feed, reject, membrane inlet and product water. Pressure switches/transmitters for high pressure pump. All automatic valves should be motorized valves. And SS lines in duplex.
<b>Control Panel</b>	A single compartment panel should be supplied containing all pump starters with auto/manual switches to give manual and automatic operation based on tank level signals. It Should include Synoptic system showing a flow diagram with indicators for pump functions. Also, panel should fully control the operations of plant and needed auto generation of logs. Panel should be separate.
<b>Antiscalant Dosing</b>	A small amount of antiscalant must be dosed to prevent formation of CaSO <sub>4</sub> , CaCO <sub>3</sub> scale.
<b>Disinfection system</b>	Sufficiently sized UV-C system with two light tubes, or chlorination system with pump for disinfection of product water.

- Sufficient valves (non-return/check, air release, ball/butterfly) for operation and safety should be present in the plant.
- All items should be incorporated in compact SS skid systems.
- Critical spares for 12 months of operation must be provided. It includes valves, manometers (Pressure Gauges), sensors, pressure switches, contactor and relay (Panel Items)
- Plant operation & maintenance manual (written in English) must be provided