



**INFORMATION SHEET FOR  
PROCUREMENT OF 1000kVA STEP-  
DOWN TRANSFORMER with Separate  
LV panel & 3 Way RMU**

**Reference No: FNK-I/IUL/2023/266**

Issued on: 12<sup>th</sup> September 2023

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 transformer(s) in accordance with <i>Section III, Technical Specifications</i>
	1.2 It is in Fenaka Corporation Limited's discretion to cancel this bid invitation 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 2,000 (Two 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 If the manufacturer or assembler is not the same as the bidder, a document indicating that manufacturer or assembler is willing to sell the item to the bidder is required</p> <p>8.3 Manufacturer's Authorization letter will be required to enable technical evaluation</p> <p>8.4 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>
<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 Single-line diagram of offered product</p> <p>9.4 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>9.5 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>9.6 One (1) compact disc with original bid document scanned and written</p> <p>9.7 Bids lacking the documents above are subjected to be rejected during the bid opening</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>

	10.2 All pages of the bid document shall be stamped and bound properly (excluding the bid security)
<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/2023/266)
<b>12. Bid Opening</b>	12.1 The bids will be opened on <u>19<sup>th</sup> September 2022, 1130hrs</u> 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 Fenaka Corporation Limited shall not consider any bidders that arrive after the deadline for submission 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 9.5 <i>Experience letters</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>	14.1 An advance payment will not be released for this project 14.2 Proposed payment terms should not be tied with submission of Bill of Lading.
<b>15. Factory Acceptance Testing</b>	15.1 The transformer(s) shall be fully tested at the manufacturer workshop in the presence of Client's appointees via video conferencing 15.2 The testing shall be conducted at internationally accepted testing standards 15.3 The transformer(s) shall undergo protection testing and operation testing 15.4 The transformer(s) shall be checked for dimension and the supplier shall provide the dimensions of the transformer(s) during the virtual factory acceptance testing. 15.5 Recorded video clips while operating the units will not be accepted as virtual factory acceptance testing.

## 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



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### 1000 kVA Step-Down Transformer with Separate LV panel & 3 Way RMU

#### Climatic Conditions

Materials supplied shall be suitable for operating under the following climatic conditions

- Climate : Typical tropical coast line.
- Atmosphere : Saliferous, corrosive and dusty.
- Altitude : 2 meter above mean sea water level.
- Temperature : 32 °C (mean maximum) 25 °C (mean minimum).
- Barometric air pressure: 1010 millibars.
- Relative humidity : 90%.
- Average rainfall : 145 days/year.
- Average sunshine : 24 days/month.
- Mean wind speed : 10.8 knots.
- Maximum wind speed : 15.1 knots.

#### A) Step-Down Transformer 11kV/415V, 1000kVA

3 phase 50Hz 1000kVA Dyn11, core type double wound with copper conductor, mineral oil immersed ONAN cooled distribution transformer with corrugated tank with oil conservator arrangement having a no-load voltage ratio of 11/0.433 KV. Tappings +5% to -5% in steps of 2.5% shall be provided at line end of HV winding. Changing of taps shall be carried out by means of OFF Load Tap Changer.

Temperature rise shall be 50/60 °C in oil/winding respectively over a maximum ambient of 40°C. The transformer shall be manufactured as per latest IEC.

- HV Insulation Level 12kV
- Power frequency 28kV. r.m.s.
- Basic impulse level 75 Kv – Peak.
- HV/LV Connection Delta/ Star N. pt
- Dial type thermometer with contacts and control box for relays.
- Oil Level indicator and pressure relief valve and oil drain valve.
- Hermetically sealed without gas cushion.
- Terminal Box cover for LV and HV connection
- Paint class: Marine grade (CS standard). Powder coated with epoxy resin to withstand high saline and high temperature weather and humid environment
- Connecting Bolts and Nuts and other accessories included
- Insulating Liquid Type Oil to B.S. 148: 1998. Hermetically sealed
- Relevant testing standards : IEC / BS standards.

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#### TESTS

The transformer shall be subjected to the following routine tests at the manufacturer's works before dispatch.

- a) Measurement of winding resistance.
- b) Voltage ratio, polarity and phase relationship.
- c) Measurement of impedance voltage.
- d) Load losses.
- e) No load losses and no load current.
- f) Induced over voltage withstand.
- g) Separate source voltage withstands.
- i) Vector group.
- j) DV/DF Test
- k) Magnetic Balance Test
- l) High Voltage Test.
- m) Insulation Resistance Test
- n) All other test as specified in relevant BS Code.

#### **B) Separate LV Panel for Transformer**

Free standing LV Panel with 2000A, PVC sleeved Cu busbar, complete with measuring, indication and protection (ELR).

##### **Incoming**

- 1 Nos x 1600A ACB motorized - main circuit breaker

##### **Outgoing**

- 1 Nos x Outgoing feeder with 630A MCCB
- 3 Nos x Outgoing feeder with 400A MCCB
- 4 Nos x Outgoing feeder with 300A MCCB
- (Rated current shall be adjustable from 50 to 100%); with Adjustable ELR with trip level from 30mA to 30A, Amp meter & selector switch.
- Bottom entry Cable Termination arrangement.
- Complete with nuts and bolts to connect LV cables.



**C) 1Nos x 3 Way Non Extensible Unit with 2 Nos. Isolators as Incomers and 1 No. Circuit Breaker as Outgoing to 1000kVA Transformer ( TYPE Ringmaster : Merlin Gerin RM6 NE-IDI or equivalent )**

3 Way, 11kV, indoor extensible free standing metal clad SF6 insulated ring main unit comprising of three numbers 630A fault making/ load breaking switches and one number 200A tee-off circuit breakers complete with all necessary measurement and protection devices and remote terminal unit for automation.

- IDMT RELAY for Circuit Breakers – Self Powered, Merlin Gerin type VIP35 OR Equivalent
- The Ring Switches and Tee –Off Circuit Breaker are provided with Integrated Earthing Switches with Making Capacity
- Neon cable indicator for ring switches
- Integral earthing facility for ring switches
- Shunt trip coil rated for 230V AC
- Trip push button for T-off circuit breaker
- SF6 Gas pressure indicator
- Padlocking facility
- Powder coated with paint shade RAL 7012 and thickness greater than 80 micron

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