



# **INFORMATION SHEET FOR PROCUREMENT OF TRANSFORMERS**

**Reference No: FNK-I/IUL/2021/327**

Issued on: 24<sup>th</sup> May 2021

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 transformers with Ring Main unit and LV Panel 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, insurance, etc.
	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 10 ,000 (Ten 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> </ul>

	<ul style="list-style-type: none"> <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 generator set to the bidder is required</p> <p>8.3 Technical compliance 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 engine panel system</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>

	9.6 One (1) compact disc with original bid document scanned and written
	9.7 Bids lacking the documents above are subjected to be rejected during the bid opening
<b>10. Format of Bid</b>	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
	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/2021/327)
<b>12. Bid Opening</b>	12.1 The bids will be opened on 05 <sup>th</sup> September 2021, 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 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

<p><b>15. Factory Acceptance Testing</b></p>	<p>15.1 Supplied items shall be fully tested at the manufacturer workshop in the presence of Client’s appointees via video conferencing</p> <p>15.2 The testing shall be conducted at internationally accepted testing standards</p> <p>15.3 The items shall undergo protection testing and operation testing</p> <p>15.4 The items shall be checked for dimension and the supplier shall provide the dimensions of the panel during the virtual factory acceptance testing.</p> <p>15.5 Video recorded while operating the units will not be accepted as virtual factory acceptance testing.</p>
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## 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

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

## Section III: Technical Specifications

(Specification provided is for one unit)

Description	Quantity
500 KVA Step Down Transformer With RMU and LV Panel	01
800 KVA Step Down Transformer With RMU and LV Panel	04

### 500 kVA, Step Down Transformer With 3-Way RMU, And LV Penal, Information

#### 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.

Equipment must withstand worst tropical conditions, including lightning, cyclonic rains, and high humidity.

#### A) Step-Down Transformer 11kV/415V, 500kVA

3 phase 50Hz 500kVA Dyn11, core type double wound with copper conductor, mineral oil immersed ONAN cooled distribution transformer with corrugated tank or conservator arrangement having a no-load voltage ratio of 11/0.433 KV. Tappings +2.5% to -2.5% in steps of 2.5% shall be provided at line end f 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 75kV. Peak.  
 HV/LV Connection Delta/ Star N. pt  
 Dial type thermometer with contacts and control box for relays.  
 Level indicator and pressure relief valve and oil drain valve.  
 Hermetically sealed without gas cushion.  
 Relevant testing standards: IEC / BS standards.



### B) Separate LV Panel for Transformer

Free standing LV Panel with 1200A, PVC sleeved Cu busbar, complete with measuring, indication and protection (ELR).

#### Incoming

1 Nos x 800A ACB motorized with O/C,E/F and S/C release

#### Outgoing

2 Nos x Outgoing feeder with 400A MCCB with ELR, OCR

4 Nos x Outgoing feeder with 300A MCCB with ELR, OCR

2 Nos x Outgoing feeder with 250A MCCB with ELR, OCR

Bottom entry Cable Termination arrangement.

Each feeder shall have Digital Power Meter capable of displaying A/V/Hz/kW/kWh/pf

Digital Amp meter, Voltmeter for each phase of each feeder

Nuts and bolts to connect LV feeders

### C) 1Nos x 3 Way Non-Extensible Unit with 2 Nos. Isolators as Incomers and 1 No. Circuit Breaker as Outgoing to 500kVA Transformer (TYPE Ringmaster: Merlin Gerin RM6 NE-IDI or equivalent)

3 Way, 11kV, indoor free-standing metal clad SF6 insulated ring main unit comprising of two numbers 630A fault making/ load breaking switches and one number 200A tee-off circuit breakers complete with all accessories listed below:

- 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
- Directional Earth Fault protection with CBCT
- 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
- With remote monitoring & control mechanism
- Bottom cable entry with gland plates for 3c x 120sqmm cable
- Powder coated with paint shade RAL 7012 and thickness greater than 80 micron



## 800 kVA, Step Down Transformer With 3-Way RMU, And LV Penal, Information

### 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.

Equipment must withstand worst tropical conditions, including lightning, cyclonic rains, and high humidity.

### **A) Step-Down Transformer 11kV/415V, 800kVA**

3 phase 50Hz 800kVA Dyn11, core type double wound with copper conductor, mineral oil immersed ONAN cooled distribution transformer with corrugated tank or conservator arrangement having a no-load voltage ratio of 11/0.433 KV. Tappings +2.5% to -2.5% 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 75kV. Peak.  
HV/LV Connection Delta/ Star N. pt  
Dial type thermometer with contacts and control box for relays.  
Level indicator and pressure relief valve and oil drain valve.  
Hermetically sealed without gas cushion.  
Relevant testing standards: IEC / BS standards.

### B) Separate LV Panel for Transformer

Free standing LV Panel with 1500A, PVC sleeved Cu busbar, complete with measuring, indication and protection (ELR).

#### Incoming

1 Nos x 1200A ACB motorized with O/C,E/F and S/C release

#### Outgoing

2 Nos x Outgoing feeder with 400A MCCB with ELR, OCR

4 Nos x Outgoing feeder with 300A MCCB with ELR, OCR

2 Nos x Outgoing feeder with 250A MCCB with ELR, OCR

Bottom entry Cable Termination arrangement.

Each feeder shall have Digital Power Meter capable of displaying A/V/Hz/kW/kWh/pf  
Digital Amp meter, Voltmeter for each phase of each feeder

Nuts and bolts to connect LV feeders

### C) 1Nos x 3 Way Non Extensible Unit with 2 Nos. Isolators as Incomers and 1 No. Circuit Breaker as Outgoing to 800kVA Transformer (TYPE Ringmaster : Merlin Gerin RM6 NE-IDI or equivalent )

3 Way, 11kV, indoor free-standing metal clad SF6 insulated ring main unit comprising of two numbers 630A fault making/ load breaking switches and one number 200A tee-off circuit breakers complete with all accessories listed below:

- 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
- Directional Earth Fault protection with CBCT
- 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
- With remote monitoring & control mechanism
- Bottom cable entry with gland plates for 3c x 120sqmm cable
- Powder coated with paint shade RAL 7012 and thickness greater than 80 micron