

## Information Sheet for Procurement of Transformer and Accessories

#	Branch Name	Item Description	Quantity
1	Hdh. Kulhudhuffushi	Substation, 500kVA Transformer	02
2	Hdh. Kulhudhuffushi	11kV Outdoor Ring Main Unit (SF6)	02
3	Hdh. Kulhudhuffushi	LV, Feeder Panel for 500kVA Substation	02

### Item Specifications

Equipment shall be manufactured to withstand and operate under the following climatic conditions

Climate : Typical tropical coast line.

Atmosphere: Saliferous (salty), 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.

Also, the equipment shall withstand worst tropical conditions, including lightning, cyclonic rains, and high humidity.

#### **1. Substation, 500kVA Transformer**

3 phase 50Hz 500kVA Dyn11, core type double wound with copper conductor oil immersed ONAN cooled, hermetically sealed distribution transformer with corrugated tank and conservator arrangement having a no load voltage ratio of 11/0.433kV. Tappings +5% to -5% in steps of 2.5%

shall be provided at line end of HV windings. 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 50°C. The transformer shall be manufactured as per latest IEC standard, conforming to following:

- Hermetically sealed oil cooling without gas cushion
- Marker: IS:2026 / IEC 60076
- KVA: 500
- Rated V: HV:11000  
LV: 415
- Rated A: HV:26.244  
LV:695.62
- Pass/Freq: 3/50Hz
- Type of cooling: ONAN
- Oil/winding temp. rise: 50/60 °C
- Vector group: DYN-11
- High class paint (resist dust, salty weather, anti-corrosion)
- HV insulation level 12kV
- Power frequency 28kV r.m.s
- Basic impulse level 75 kV. peak
- Impedance -% at 75 °C , 4.75%
- HV/LV connection delta / Star N.pt
- With level indicator and pressure relief valve
- Dial type thermometer with contacts and control box for relays.
- level indicator and pressure relief valve and oil drain valve
- Insulating liquid type oil to B.S. 148:1998.

## **2. 11kV Outdoor Ring Main Unit (SF6)**

Ring main unit (SF6) with 630A three isolator switches and VCB 630A circuit breaker with disconnecter switch and earth mechanism (3 way with transformer switch) with remote monitoring functions.

- Free standing metal clad SF6 insulated ring main unit
- RMU shall be indoor type (2 IS+1DC) with remote monitoring and switching function
- Bottom cable entry with gland plates for 3Cx70sqmm cable
- All cable boxes shall be interlocking arrangement
- Control wires shall be color coded according to British standard
- VCB: 630A, 12kV, 21kA current for at least 3 seconds

- 630A switch disconnecter with earth switch
- Current transformers: ring type, tape wound
- Earth fault indicator with core balance transformers
- RMU shall be powder coated with paint shade RAL 7012 and thickness shall be greater than 80 micron
- IMDT relay for circuit breakers-self powered Merlin Gerin type vip35 or equivalent
- The ring switch and tee-off circuit breaker must provide with integrated earthing switches with making capacity
- Neon cable indicator for ring switches
- Shunt trip coil rated for 230v AC
- Trip push button T-off circuit breaker
- SF6 gas pressure indicator
- Padlocking facilities

### **3. LV, Feeder Panel for 500kVA Substation**

#### Outdoor free standing feeder panel

LV panel, 1 set of 415v, 2000A PVC sleeved CU busbar with measuring indications and protection

- Incoming feeders as below:
  - 1600A ACB, 50kA electrically fixed type air circuit breaker with microprocessor based protection with S/C, O/C & E/F release
- Outgoing feeders as below:
  - 250A MCCB with ELR, OCR, AMP meter and selector switch x 1
  - 400A MCCB with ELR, OCR, AMP meter and selector switch x 2
  - 600A MCCB with ELR, OCR,AMP meter and selector switch x 2
- Manually operated fixed type MCCB with thermal magnetic protection release
- Rated current shall be adjustable from 50 – 100%
- Bottom entry cable termination arrangement
- Complete with nuts and bolts to connect LV / Outgoing cables
- Measurements (1580x1050x715 mm)

## **Bid Information**

Quotation shall indicate the following;

a) **Price**

- The bidder shall quote for door-step delivery to Fenaka Head Office.
- All items shall be quoted in the bid.
- Quotation shall indicate the unit price, total price for each item and total price of the quotation. The quotation should separately indicate additional charges such as freight charges, taxes, etc.

b) **Duration**

- The delivery period shall be stated in ‘days’.
- If the delivery period indicates ‘ex-stock’, or if the duration is not specified, it shall be taken same as the party offering the longest delivery period.

c) **Credit Period**

- The credit period shall be stated in ‘days’.
- Fenaka Corporation Limited is unable to provide an advance of more than 15% of the entire project.

d) **Technical Specifications**

- All the relevant information including the brand of offered product shall be given to enable technical evaluation of the items quoted.

e) Quotation validity should be a minimum of 60 days from the date of quotation opening.

**Note:** It is in FENAKA Corporation Limited’s discretion to reject/cancel any quotation which does not fulfil or comply the above terms.



**1- Evaluation Criteria**

- **Proposal Cost:** 65 points for the price
  - o (Lowest price / proposed price) x 65
- **Payment Terms:** 10 points for the maximum days given for payment
  - o (Proposed credit period / longest credit period) x 10
- **Delivery:** 25 points for the minimum days to deliver the items
  - o (Lowest delivery period / proposed delivery period) x 25

**2. Documents to be submitted;**

- Quotation (Quote all the items and Door step delivery Value Fenaka Head Office)
- Delivery Period (shall be in days)
- Credit Period (shall be in days)
- Technical Specification
- Complete set of documents of the Company
  - o Company profile
  - o Company registration Certificate copy
  - o Contact Detail
  - o GST certificate Copy


\* Bids lacking the above documents are subjected to fail and shall be rejected.

**Bid Submission date: 12<sup>th</sup> March 2018, Monday 11:00am**

The bids will be opened on 12<sup>th</sup> March 2018, Monday 11:00am, at Fenaka Corporation Head Office, in the presence of the bidders.

The bid proposal should be addressed to the following address;

Managing Director  
Fenaka Corporation Limited  
Port Complex Building, 7<sup>th</sup> Floor,  
HilaaleeMagu, Maafannu, Male'.  
Ref No: FNK-I/IUL/2018/032

5<sup>th</sup> March 2018