

Information Sheet for Supply of network upgrading items for L.Gan Thundi, Mathimaradhoo and Mukurimagu

Section A

a) Bid Information

#	Description	Quantity
a)	500KVA Transformer C/W Ring main Switch	01 Nos
b)	500KVA Package Transformer C/W 3 way ring main unit	03 Nos
c)	Engine Panel System C/W 10 Distribution feeder 4000A	01 Nos
d)	Ring Main Unit 3/2 Way 11KV	03 Nos
	Total	08 Nos

Quotation shall indicate the following;

a) **Price**

- The bidder shall quote for door step delivery value to Male' port
- All items shall be quoted in the bid, please refer section (b) specifications
- Bidder shall quote for 02 person travelling and accommodation chargers in the bid for factory testing
- Quotation shall indicate the unit price, total price for each item and total price of the quotation. The quotation shall separately indicate additional charges such as freight charges, insurance, taxes, etc.
- Bidders should mention the currency the of the price in the quotation otherwise the bid will be rejected.

b) **Delivery Period**

- The delivery period shall be stated in 'calendar 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) **Payment Terms**

- The payment terms shall be stated in 'days or months', and the payments will be released in equal monthly instalments.



- No points will be given for payment terms if the bidder requests for Letter of Credit (LC).
- A maximum of 15% of the entire project can be provided as an advance if requested in the bid, however, it cannot be tied to the project starting date.
- For 15% advance bid awarded party has to submit bank guarantee letter along with performer invoice.

d) Technical Specifications

- All the relevant information including the brand shall be given to enable technical evaluation of the items quoted.
- Technical compliance letter will be required to enable technical evaluation
- Transformers and Transformers accessories should comply our requirements, if not the bid will be rejected

e) Factory Testing:

- The Transformer and accessories should be fully tested at the manufacturer workshop in the presence of client's appointees to check the ratings, overload, functional tests on a dummy load prior to dispatch. The testing shall be conducted to internationally accept testing standards. The bidder shall arrange airfare, transportation, accommodation and lodging for two of client's technicians for the testing (minimum of two day for testing)
- 02 engineers from Fenaka Corporation shall carry out necessary inspection and testing of equipment prior to shipment in supplier's warehouse in order to ensure that the equipment has been manufactured in accordance with the contract document.

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

g) Bid Security validity is valid for Twenty (20) days beyond the validity of the bid

h) Clarification Time: Please send your Queries to tender@fenaka.com.mv from 02nd April 2019 till 07th April 2019

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Section B

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Specifications

a) 500KVA Transformer C/W Ring main Switch

DISTRIBUTION TRANSFORMER, RMU AND LV PANEL
General information
<p><u>Climatic Conditions</u> Materials supplied shall be suitable for operating under the following climatic conditions</p> <p>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.</p> <p>Equipment must withstand worst tropical conditions, including lightning, cyclonic rains, and high humidity.</p>
A) Step-Down Transformer 11kV/415V, 500kVA
<p>3 phase 50Hz 500kVA Dyn11, core type double wound with copper conductor, mineral oil immersed ONAN cooled distribution transformer with corrugated tank & 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 f HV winding. Changing of taps shall be carried out by means of OFF Load Tap Changer.</p> <p>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.</p>
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
I Nos x 800A ACB motorized - main circuit breaker

Outgoing
1 Nos x Outgoing feeder with 630A MCCB
2 Nos x Outgoing feeder with 400A MCCB
5 Nos x Outgoing feeder with 200A MCCB
Bottom entry Cable Termination arrangement.
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-IIIDI 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.

b) 500KVA Package Transformer C/W 3 way ring main unit

General information
<p><u>Climatic Conditions</u> Materials supplied shall be suitable for operating under the following climatic conditions</p> <p>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.</p> <p>Equipment must withstand worst tropical conditions, including lightning, cyclonic rains, and high humidity.</p>
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 & 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 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) 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-IIID 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.

c) Engine Panel System C/W 10 Distribution feeder 4000A

Technical Specification of Panel Board
Free Standing Synchronizing Panel complete with the following
A) 4 Nos x Generator cubicles (size: minimum 2100 x 660 x 900 mm) powder coated, anti-corrosive enclosure with cable bottom entry type. Each complete with;
- 1 Nos x 2500A, 3Pole, ACB, motorized with UVT 220Vac Coil
- Tin coated copper bus bar, 8000A
- Synchronizing and load share module; DEEP SEA 8810
- Analog Amp meter, volt meter, frequency meter, power factor meter, kW meter and kWh meter
- Over current and Earth fault protection
- RPM, Run hour, Lub oil pressure, water temperature readings
- ACB ON/OFF indicator lights and generator incoming lights
- Battery Charger, 24V, 5A
- Protection and measuring CTs, set of Relays, fuses and terminations.
- Internal wiring, termination and labelling
B) 1 Nos x Feeder Cubicle (size: minimum 2100 x 660 x 900 mm) powder coated anti-corrosive enclosure with cable bottom entry type, complete with;
- 4 Nos x 250A, 3Pole, MCCB with shunt trip-coil, volt: 220V
- 4 Nos x 300A, 3Pole, MCCB with shunt trip-coil, volt: 220V
- 2 Nos x 100A, 3Pole, MCCB with shunt trip-coil, volt: 220V
- 10 Nos x Earth leakage relays
- 10 Nos x Amp meter with selector switch
- 10 Nos x 4Pole Terminal Block
- 1 Lot protection and measuring CTs

-	1 Lot flexible power cables with terminations
-	1 Lot Control cable, internal wiring, termination and labelling
-	All MCCBs make: Schneider, ABB , Terasaki or equivalent
C)	2 Nos, Transformer Feeder Cubicle (size: minimum 2100 x 660 x 900 mm) powder coated anti-corrosive enclosure with cable bottom entry, complete with;
-	ACB, 3Pole, 4000A, motorized. Make: Schneider, ABB or Terasaki
-	Bus bar rating, 8000A, Copper, tin coated
-	Breaker ON/OFF control with push button, with indicating lights
-	Analog Amp meter for R, Y, B and digital multifunction power meter
-	Over current protection relay and earth fault protection relay
-	1 Lot flexible power cable with termination
-	1 lot control cable with internal wiring, termination and labelling
1.	The panel dimensions shall meet the given minimum dimensions for each cubicle (2100 X 660 X 900 mm) to allow same panel to be upgraded to larger size generator in future.
2.	Bus bar shall be arranged to fit the full length of the panel board including the feeder panel.
3.	Panel shall be designed in such a way that it could be transported to the islands in separate cubicles as there won't be any lifting mechanism if the whole panel set is sent to the island as a single object.
4.	The generator controller DSE8810 cannot be replaced with any other model. The supplier shall provide the manufacturer's authorisation to confirm the origin of the controller.
5.	The panel shall be manufactured using high quality electro galvanized MS plates, treated and powder coated upto 80 micron or higher.
6.	The thickness of the metal sheet shall be at least 1.2 mm, and other plates shall be 1 mm. The thickness of the main frame shall not be less than 1.5 mm.
7.	Bus bar to breaker connections shall use tin plated copper bus bars.
8.	Main bus bar shall be tin plated, and rated 8000 amps, and copper content shall meet the relevant IEC and BS standards.
9.	The panel internal wiring shall be wired using 2.5sqmm thick flexible copper cables. All the wires shall be properly labelled and terminated with suitable terminal.
10.	The relays, battery chargers, and meters shall be from reputable brands and the drawings and technical specification must be provided with the bid documents.
11.	Free technical support shall be provided during installation, and training for engineers must be given to install the panels.
12.	A single line diagram must be provided with the technical specification of the materials used in the panels.
13.	Feeder panel breakers must be labelled on both ends.
14.	Stainless Steel Bolts and nuts must be provided to connect the outgoing feeder cables.
15.	The cubicles must be arranged as the drawing given.
16.	The ACB'S must be draw out type.

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| 17. One computer system must be provided with all necessary items to install and monitor engine by using DSE module 8810. |
| 18. A battery charger must be installed for every engine, inside the engine control panel. |
| 19. The panel rate shall include commissioning charges. |

d) **Ring Main Unit 3/2 Way 11KV**

Ring Main Unit (RMU), 11kV, 50Hz, 630A, 21kA for 3 sec.
Non-extensible; (2IS +1DC) 3x3 Poles, 630A Load Breaker Switch.
1 x Motor operated 200A Vacuum Circuit Breaker in SF6 insulated SS Enclosure.
O/C and E/F self-powered Relays with protection CTs.
Motorized spring charged, remote and manual close and open.
Push button with ON/OFF indicator; Passage Fault indicator.
Cable Termination in vertical position. RMU for outdoor application.
Powder Coated paint shade with RAL 7012 or 7035
RMU complies to IEC 62271- 100/200
IEC 60265-1 ; IEC 60044-1; IEC 61243-5
Quality Standard: ISO9001 and 14001
Test Reports and manuals.

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Section C

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Required Document and Evaluation criteria



Required Documents

- Quotation (inclusive of the delivery period and the payment terms)
- 3 set of the bid (One Original and 2 copy set) separately packed and sealed with company stamp. All the pages in bid documents should be stamped and Bind properly
- Specification of the offered product
- Single line diagram of engine panel system
- Bid Security Original
 - Please refer announcement
- Related Completion Letter of past 5 years (If available)
- Details of the company
 - Company profile (This should include the list of board of Directors of company and background of the company with the products they supply)
 - Company registration certificate
 - GST registration certificate (For local suppliers only)
 - Contact details (Name, Designation, Mobile number and Email)

Important Note:

- Bids lacking the documents above are subjected to be rejected during bid opening, Except “Related Completion Letter of past 5 years”. Also it is in FENAKA’s discretion to cancel this invitation to bid at any time.
- Bidders can submit maximum of 2 options.

Evaluation Criteria

- **Proposal Cost:** 40 points
 - $(\text{Lowest proposed price} / \text{proposed price}) \times 40$ points
- **Delivery:** 30 Point
 - $(\text{Shortest Delivery Period}) / (\text{Quoted Delivery Period}) \times 30$
- **Payment Terms:** 20 points for the maximum days given for payment
 - $(\text{Proposed credit period} / \text{longest credit period}) \times 20$
- **Experience** 10 points (Point will be given by analyzing Related completion letters of past 5 years depending on the value of the project)

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Please submit your bids by 16th April 2019, Tuesday 11:00am. (Maldivian time), addressed to;

Tender Ref No: FNK-I/IUL/2019/069

Managing Director

Fenaka Corporation Ltd

Port Complex Building, 7th Floor

Hilaalee Magu, Maafannu

K. Male'

The proposal and the envelope must bear the reference number of the tender. All envelopes must be duly sealed and stamped. Fenaka Corporation will not be liable for the misplacement or premature opening of unlabelled sealed proposals. The bids will be opened on 16th April 2019, Tuesday 11:00am (Maldivian time), in the presence of the bidders. The bids received after the stated time, and the bids received via email will not be accepted.

For more information and clarifications, please email us at tender@fenaka.com.mv

25th March 2019