

Procurement of Panel Board

Fenaka Corporation Limited request quotations from interested and eligible parties for panel boards as per the specifications below herewith. This tender is open to both local and international bidders.

Specifications

#	Description	Brand	Unit	Qty
1	Generator synchronising panel complete with		No	1
a)	Engine control panel with 4 cubicles each with minimum dimension (2055x880x660 mm) complete with:		No	4
	2000A ACB Motorised TP, 2000A ACB c/w UVT coil AC 230V 'MERLIN GERLIN' – in 2 cubicles		No	2
	800A 3pole MCCB motoralised with UVT coil –with 2 cubicles		No	2
	Tin / zinc coated bus bar 3000 A (or higher)		No	1
	Amp meter, 0-600 A – Analog (Rudolf or equivalent)		No	3
	Voltmeter, c/w selector switch – Analog (Rudolf or equivalent)		No	1
	Frequency meter, 0-55Hz – Analog (Rudolf or equivalent)		No	1
	Power factor meter – Analog (Rudolf or equivalent)		No	1
	kW meter - Analog (Rudolf or equivalent)		No	1
	kWH meter – Analog (Rudolf or equivalent)		No	1
	Over current relay		No	1

	Earth fault relay		No	1
	Starting and load-sharing modules DEEPSEA 8810		No	1
	Luboil pressure gauges		No	1
	HT water temperature gauges		No	1
	Power meter PM1000		No	1
	Protection and metering CTs		Lot	1
	RPM meter, hour run meter, DC Voltmeter, and DC ammeter		Lot	1
	Flexible coded cables to wire relays, timers, and control circuitry (wiring completed)		Lot	1
	Powder coated anti-corrosive paint enclosure (80 micron or higher)		Lot	1
	Battery charger		No	1
b)	Feeders cubicles, complete with (2055x660x880) mm			
	Powder coated anti-corrosive paint enclosure (80 micron or higher)		No	1
	300A 3 pole MCCB with shunt trip-coil voltage 220 V		No	4
	400A 3 pole MCCB with shunt trip-coil voltage 220 V		No	4
	Earth fault relay		No	8
	Amp meter, 0-500A – Analog with selector switch (Rudolf or equivalent)		No	8
	Protection and metering CTs		Lot	1
	Terminal block 4 pole 400 A installed in horizontal position		Lot	8
	Flexible coded cables to wire relays, timer and control circuitry (wiring complete)		Lot	1
c)	ACB Panel for transformers (2055x660x880) mm			
	Power coated anti-corrosive paint enclosure (80 micron or higher)		No	2

2000A ACB motorised TP, 2000A ACB c/w UVT coil AC 230V 'MERLIN GERIN' – in 2 cubicles	No	2
Analog ampere meters (0-2000 A, 2000/5 A) for measuring phase current (R, Y, B)	No	6
Digital multifunction meter	No	2
Over current relay	No	2
Earth fault relay	No	2
Transformer power indication (R, Y, B) led indication light	Set	2
ACB ON/OFF led indication light (red, green)	Set	2
Accessories:		
Computer system	No	1
Network cables to connect PC to deepsea module	Lot	1

* All cubicles must be bottom cable entry type

* Panel board should carry a warranty of one year from the date of commissioning the equipment

Synchronised Panel

1. The panel dimensions shall meet the given minimum dimensions for each cubicle (**2000 X 650 X 660 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 issuing high quality MS plates, treated and power coated.
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 for 2000 amps bus bar, the size shall be **100 x 10 mm** (minimum), and copper content shall meet the relevant IEC and BS standards.
9. The panel internal wiring shall be wired using suitable copper cables.
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. 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.
17. One computer system must be provided with all necessary items to install and monitor engine by using DSE module 8801.
18. A battery charger must be installed for every engine, inside the engine control panel.

Transformer Feeding Panel

Cubicles shall be made from high quality steel frame and plates. Paints applied on the cubicles shall be durable and suitable for harsh environment.

Components such as isolators, bus bars, relays, switches and instruments shall be from reputable manufacturers, and shall fully comply with relevant international standards.

The panel shall be manufactured using powder coated mild steel sheets of 1.6 mm thickness. The thickness of the front door panel shall be 2.4 mm. A strong base frame of 100 mm tall shall be provided with the panel board. The panel board shall be a free standing, bottom cable entry type panel.

1) Bus Bar

TP and N (same size neutral) hard drain high copper conductivity air insulated tinned bus bars shall be provided at the back of the enclosure, suitably braced for 30kA – 80kA 1-second fault ratings. The current rating of bus bars will be 3000A.

2) Circuit Breaker

A 3-pole Merlin Gerin or equivalent ACB, rated at 2000 Amp @ 660/1000V with 220 Volt under Voltage Trip Coil and 5 Ampere rated auxiliary switches shall be used as a main circuit breaker.

3) Analogue Metering

3 numbers of Analogue Ampere meters (0 – 2000A, 2000/5A) for measuring phase currents (R, Y, B).

4) Digital measurements a multifunction meter with following digital measurements shall be installed on front panel.

Volts: L1-N, L2-N, L3-N, L1-L2, L2-L3, L3-L1

Amps: L1, L2, L3

KW: L1, L2, L3 total

KVA: L1, L2, L3, total

Power factory: L1, L2, L3 average

Generator frequency

5) General Indications and Warnings

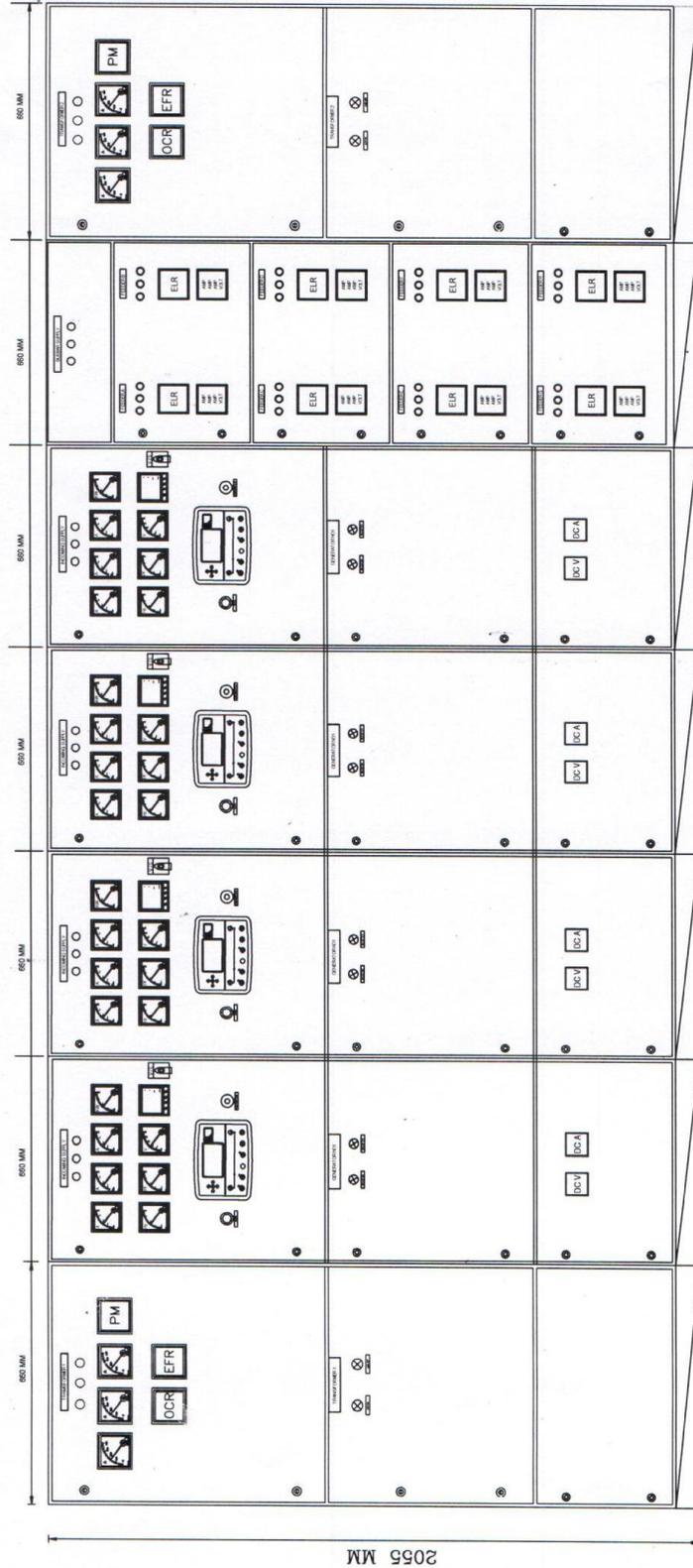
Transformer power indication (R, Y, B Led indicators)

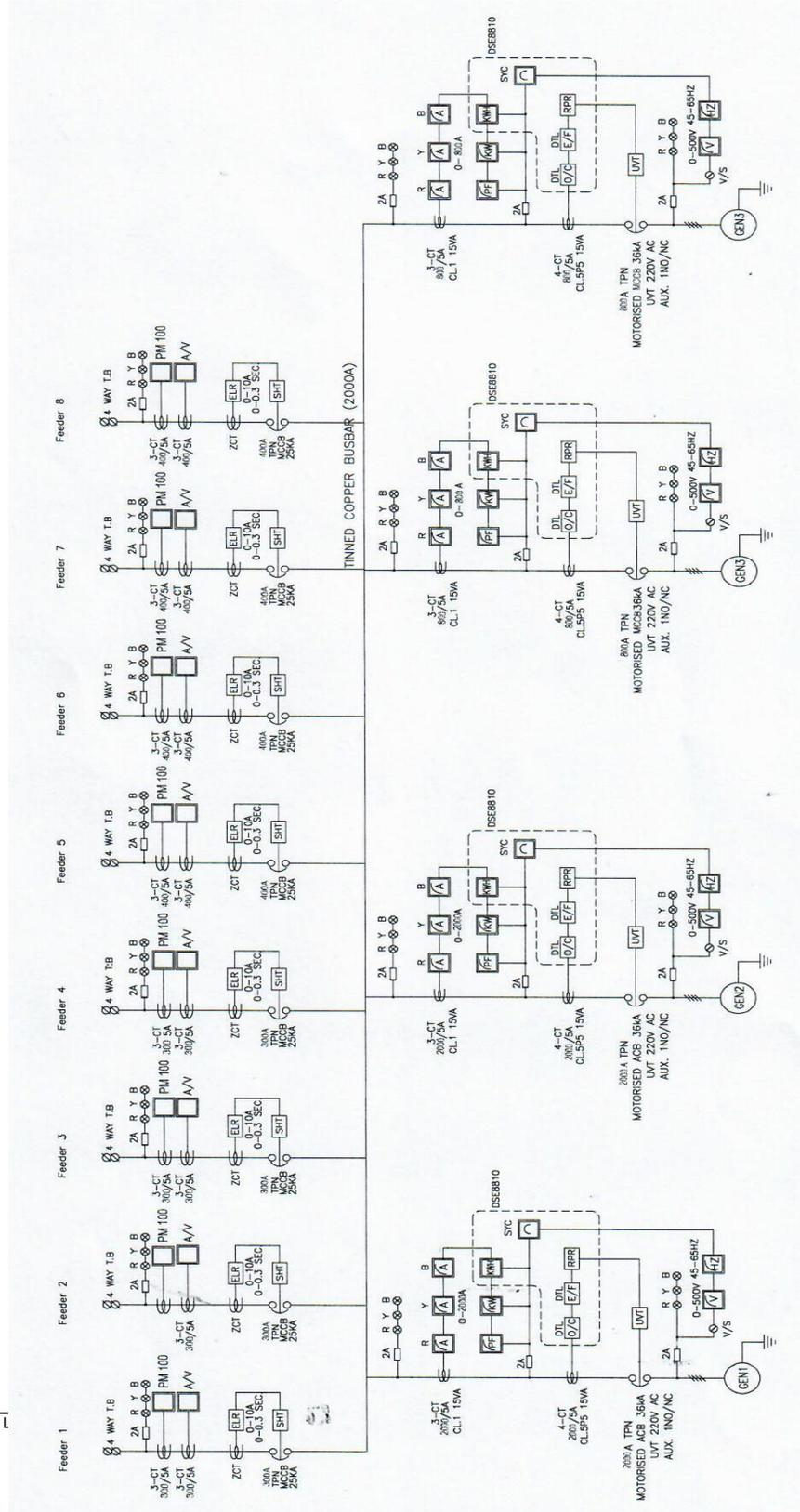
ACB ON/OFF led indicators (Red / Green)

6) Protections

Over current protection relay, Delab or equivalent

Earth fault protection relay, Delab or equivalent





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 shall separately indicate additional charges such as freight charges, taxes, etc.
 - b) **Technical Specifications**
 - All the relevant information shall be given to enable technical evaluation of the items quoted.
 - c) **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.
 - d) **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.
 - 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.

Please make sure the items are properly packaged and labelled separately as specifications given above. FENAKA Corporation Limited will only accept items that meet OEM standards. In case the items do not meet the required standards, they will be rejected / returned.

Required Documents

- Quoted price
- Duration
- Credit Period
- Technical Specification of the offered product
- Company Details
 - Company Profile
 - Company Registration Certificate
 - GST Registration Certificate (for local bidders)
 - TAX clearance report (for local bidders)
 - Contact Details

Bids lacking the documents above are subjected to fail.

Evaluation Criteria

- **Proposal Cost:** 60 points
 - (Lowest proposed price / Proposed price) x 60 points
- **Delivery:** 25 points
 - (Lowest delivery period / Proposed delivery period) x 25 points
- **Payment Terms:** 15 points
 - (Proposed credit period / Longest credit period) x 15 points

Please submit your bids by 23rd January 2018 (Tuesday) at 1100 hrs, addressed to;

Managing Director
Fenaka Corporation Ltd
Port Complex Building, 7th Floor
Hilaalee Magu, Maafannu
K. Male'
Iulaan No: FNK(I)/IUL/2018/016

The bids will be opened on 23rd January 2018 (Tuesday) at 11:00 am, in the presence of the bidders.

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