

Information Sheet for Procurement of 160 kW Generator Set

#	Description	Unit	Qty
1	<p>160 kW prime rated diesel generator set with parameters 0.8 P.F, 415 Volts, 3 Phase, 4 wires, 50 Hz at 1500 r.p.m. Powered by Cummins engine coupled with Stamford Alternator. The Generator set shall be powered by a Cummins engine origin (UK, USA) or assembled/manufactured by an Original Cummin's Licensed OEM manufacturer/assembler.</p> <p>The engine must produce a mechanical power output (kW_m) which should meet the required electric power (kWe) of 160kW and must be coupled with a 160kW Stamford Alternator with pre-installed Droop CT and remote mounted control panel. The controller should be Deepsea model: 8810 / 8860 engine controller. Motorised TP, 300A MCCB c/w UVT Coil AC 230 V, brand "MERLIN GERIN") or equivalent.</p> <p>Engine to be complete with following auxilliary items:</p> <ul style="list-style-type: none"> • Heavy electrical flywheel • SAE flywheel housing • Air filters, Lubricating Oil Filters, Fuel Filters and all other such filter required for operation of the engine • Low lubricating oil pressure switch • High engine temperature switch • lub oil sender • Water Temperature Sender • All necessary items to run and to protect the engine • Starting equipment fitted to engine, consisting of : <ul style="list-style-type: none"> ▪ 24 Volt charging alternator (Brushless) ▪ 24 Volt starting motor ▪ Fuel Shut-off solenoid ▪ Heavy duty lead acid batteries, supplied in a dry charged condition • Governing System <p>The engine to be fitted with a close tolerance Cummins Electronic Governing system, which should include efc, actuators, magnetic pickups, etc, including wiring</p> <ul style="list-style-type: none"> • Cooling Equipment <p>Cooling equipment comprising a heavy-duty tropical radiator, together with pusher type cooling fan and guards to be fitted. The radiator core should be electroplated with silver solder tin plated to prevent early failure due to corrosion. Coupon plated radiators are acceptable. Radiator has to be mounted on vibration mounts with enough strength to withstand the radiator and vibrations.</p> <p>Radiator must be designed to adequately cool the generator at an ambient temperature of 50°C</p> <ul style="list-style-type: none"> • Exhaust system <p>450 mm of stainless steel below type flexible exhaust, together with suitable flanges and fittings shall be supplied for each silencer.</p>	1	No

	<p>• Alternator</p> <p>The alternator shall be brushless revolving type alternator, having class H insulation on both the stator and field windings. It shall be built and rated to BS 5000, tropically impregnated with voltage regulation being in the order of +/- 1.5% from no load to full load under the steady state conditions assuming a speed variation not exceeding 4% on the engine. Anti-Condensation Coil to be fitted in the Alternator.</p> <p>• Generator arrangement and drive</p> <p>The simplex type base plate is of heavy duty rolled steel constructed, bolted and electrically welded, drilled on the underside to allow the fitting of foundation bolts. The engine and the alternator are to be mounted on a base plate and vibration mounts to be mounted underside of the base plate. The vibration mounts are to be supplied as loose item.</p> <p>• Finishing</p> <p>After assembling the genset zinc coated self-etching primer should be applied to the complete set.</p>		
1.2	<p>Fuel system</p> <p>A fuel day tank of 12 hours capacity complete with level indicator, drain plug, filler, fuel return with fuel outlet connections and a fuel filter fitted with outlet connection is to be mounted. These mounts are to be supplied as loose item. All necessary fittings to be supplied in conformity with fuel flow diagram.</p>	1	No
1.3	<p>Factory testing</p> <p>The generator should be fully tested at the manufacturer workshop in the presence of client/appointees to check the ratings, overload, functional tests on a dummy load prior to dispatch in case the bidder is unable to provide factory test as required the bidder shall provide an extended warranty of one extra year than mentioned in item no 10 of this document.</p>	1	No
1.4	<p>Literature and drawings consisting of :</p> <ul style="list-style-type: none"> • 1 No x Manual on How to handle the generation equipment • 1 No x Electrical wiring diagram • 1 No x Engine operation and maintenance manual • 1 No x Engine parts catalogue • 1 No x Generator parts catalogue • 1 No x Generator operation and maintenance manual • 1 No x Generator AVR manual • 1 No x Governor control unit manual • 1 No x Engine shop manual 	1	Lot
1.5	<p>Accessories</p> <p>The Components shall meet the British Standard and ISO standards. Items are for the above mentioned generator sets.</p>		
1.5.1	Primary silencer barrel (to match engine exhaust)	2	No
1.5.2	Secondary silencer barrel (to match engine exhaust)	2	No
1.5.3	3m Exhaust pipe dia (to match engine exhaust)	4	No
1.5.4	Elbows having dia (to match the engine exhaust)	6	No
1.5.5	Flanges having dia (to match the engine exhaust)	8	No
1.5.6	Bolts, Nuts and Washers for the Flanges. (Each set shall include 1 bolt, 2 washers, 1 spring washer 2 Nuts)	1	Lot
1.5.7	Split type rockwool insulation lagging suitable for 75 to 125mm dia. Exhaust pipes. The lagging shall be covered with High Quality Aluminium foil.	1	Lot
1.6	<p>Warranty</p> <p>Generator set should carry a warranty of one year from the date of commissioning</p>	1	Lot



Bid Information

Quotation shall indicate the following;

a) Price

- The bidder shall quote for door-step delivery to Male', capital of Maldives.
- 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, insurance, taxes, etc.

b) Delivery Period

- The delivery period shall be stated in 'calendar days'.
- The maximum days for delivery is 15 days. If the delivery is over 15 days, the bid will be rejected.
- 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 '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.

d) Technical Specifications

- All the relevant information including the brand shall be given to enable technical evaluation of the items quoted.
- The documents required for technical evaluation are:
 - Technical data sheets of engine
 - Datasheets specifying cooling system rated at ambient temperature 50°C
 - Technical data sheets of alternator



- Certificate of authenticity specifying assembler is a Cummins OEM

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.

Required Documents

- Quotation (inclusive of the delivery period and the payment terms)
- Technical specification of the offered product
- Certificate of authenticity
- Details of the company
 - Company profile
 - Company registration certificate
 - GST registration certificate
 - Contact details

Bids lacking the documents above are subjected to fail.

Evaluation Criteria

- **Proposal Cost:** 65 points
 - (Lowest proposed price / proposed price) x 65 points
- **Payment Terms:** 30 points
 - (Proposed number of instalments / most number of instalments proposed amongst all bidders) x 30 points
- **Technical component :** 5 points

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Please submit your bids by 15th May 2018 (Tuesday) on or before 1100 hrs (Maldivian time), addressed to;

Tender Ref No: FNK-I/IUL/2018/068

Deputy 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 15th May 2018 (Tuesday), 11:00 am, 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 foreign.purchase@fenaka.com.mv

10 May 2018