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Bihar Police Building Construction Corporation
Kautilya Nagar, Patna-14

NOTICE INVITING QUOTATION

MEMO NO:- 140 2708

Dated- 3/8/23

The Chief Engineer Bihar Police Building Construction Corporation, Kautilya Nagar Patna-14 invites sealed quotations from reputed manufacturers or suppliers for Supplying, Installation, Testing & Commissioning of 82.5 Kva DG Set AT BPBCC Head Quarter Patna in the District of Patna.

Sl. No	Description	Unit	Quantity	Rate in FIG.	Amount Rs. P.
1	Supplying Installation, Testing and Commissioning of Silent Type 82.5 KVA/3 Phase DG Set With Microprocessor Controller with engine safeties & Protection, Residential Silencer With AMF Panal (B Type) Including Foundation Construction etc As Required with Three years Defect Liability.	Each	1.00		
2	Providing Chemical/mineral maintenance free earthing system comprising of copper coated earth electrode 3 metre length and 17.2 mm outer dia along with 25 kg earth conductivity enhancing back fill mineral compound for earth electrode to fill up the excavated earth and earth inspection pit etc. as required.	Set	2.00		
3	3.5 core, 95 sq. mm ZXPE/PVC insulated PVC sheathed (Heavy duty) armored electric cable with aluminum conductor.	MTR	85.00		
4	Less for Buy Back of old 35 KVA DG Set and its accessories (exhaust Pipe/battery etc) in as and where is condition.	Each (-)	1.00		
Total					

Quotations must be submitted in a sealed envelope marked with the words "Quotation for 82.5 KVA/3 phase DG Set for BPBCC. The envelope should be addressed to:

The Chief Engineer, Bihar Police Building Construction Corporation, Kautilya Nagar, Patna-14, Bihar

The last date for submission of quotations is 10/08/2023 upto 05:00 PM.

Quotations received after the due date and time will not be considered.

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I. TECHNICAL SPECIFICATION FOR SILENT DIESEL GENDRATOR SET

1. DIESEL ENGINE:

- Make:Kirloskar/Cummins/Greaves/Mahindra/AshoLeyland/Mahindra/ Eicher
- Multi Cylinders, water cooled, 1500 RPM, Diesel engine

2. Alternator Specification:

- Make: Stamford/Kirloskar/Kirloskar Electric/Crompton Greaves.
- Capacity:7.5/ 10/ 15/ 20/ 25/ 30 KVA at 0.85 PF, 230 Volts, Single Phase, 50 Hz.
- 30/ 35/ 40/ 50/ 62.5/ 75/ 82.5/ 100/ 125 /250/ 500KVA at 0.85PF415 Volts, 3 Phases, 4 wires, 50 Hz

(Single Phase DG set up to 25 KVA depending on site conditions, may be hired)

- The regulation from no-load to full load shall not exceed 2.0 %
- The alternator shall be of brush less type design, self excited of robust construction. The alternator shall be suitable for continuous rating with ambient temperatures of 40 degrees centigrade. The voltage control shall be through automatic voltage regulator unit (AVR). The AVR unit shall de-excite the alternator in case of short circuit.
- It shall withstand 10% overload for one hour every 12 hour duration on operation.
- The alternator shall confirm drip Proof constructions as per IS: 4722 (At least IP 23).

II. SOUND PROOF ENCLOSURE:

- Noise Level Permitted: Wherever acoustic insulation is Provided 75 db at 1.0 meter from DG set under free field condition meeting latest CPCB norm.
- Shall be factory fabricated specially with superior quality acoustic insulation so as to achieve the Permissible nose level within the Prescribed norms of state/Central Pollution Control Board.
- The container shall be weather Proof housing the D.G. Set, fuel tank. Fresh air will enter from the alternator end. Blowers of adequate capacity will be Provided, if necessary, to Provide sufficient air for cooling & ensure operating temperature is within Prescribed limits specified by engine manufactures.
- Hinged/ sliding door will be Provided on either side. Sufficient maintenance access shall be Provided in the design of the acoustic enclosure.
- The diesel engine shall be robust heavy duty construction. It shall deliver the required KW/BHP at the shaft of the coupled alternator to deliver the rated output of required KVA. The speed Governor shall be mechanical auto controlled, adjusting automatically to the desired load conditions.

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- f. The Engine shall be fitted with all standard accessories as detailed above. It shall be Possible to start the engine from the AMF Panel & locally.
- g. The operation of the DG set shall be on Automatically on Mains Failure with a Pre-set time (if required). The Engine will be shut down automatically on resumption of mains Power with a Pre-set time delay through AMF Panel.
- h. The DG set shall be mounted on foundation as required.

III. AUTOMATIC MAINS FAILURE PANEL (WHEREVER REQUIRED):

- a. AMF control Panel for auto starting of the DG set shall be fabricated from the MS sheet steel 14 gauge and shall be of compartmental design. The main supporting framework shall be of angle from or of heavier gauge sheet metal. The Panel shall be isolating switches. The Panel mounted switches shall have defeat interlocks for testing and inspection.
- b. The panel shall be designed so as to facilitate inspection, clearing and repairs, The clearance between Phase to Phase and phase to earth or metal parts shall be as per relevant IS standards. The metering instruments like volt meter, ammeter, etc. shall be flush mounted and shall be of 1.0 class accuracy and of standard design size shall be 96 mm x 96. All indication lamps shall be of neon type / digital. The Panel shall be tested at site before commissioning.
- c. All wiring inside the panel shall be done with copper conductors / cables/solid copper links. All the hinge doors shall be earthed. Adequate ventilation for the panel shall be provided. Logic diagram of operation of switches shall be painted on the panel. The name plates for each feeder shall be of engraved design and pasted to the respective switch gear.

Type : Cubical, front operated with detachable cable gland plates at top and bottom.

Enclosure : 14G CRCA suitably rust inhibited with power coated with 7 tank treatment Process and Provided with square section rubber gaskets IP52 enclosure.

Mounting : Floor /Wall mounted with supporting legs or blank Panel.

Circuit breakers : Double Breaker for DG set and Mains isolation.

Instrument Panel : AC Voltmeter (0-600V) Voltmeter Selector switch fitted with AC-Ammeter of suitable range, Ammeter selector switch, KWH Meter, Frequency Meter, Running Hour Meter

- d. Indicating lamps – for Load on Mains, Load on Generator, Set fails to start, Low Lubricating oil Pressure, High water temperature / High water temperature.
- e. Sets of Push Buttons – for Generator start / stop, Emergency trip, Auto Hooter, Auto / Manual / Test / Selector switch, Generator ON / OFF – Manually, Mains On / OFF – Manually
- f. Battery charger static – comprising of Transformer Rectifier Trickle / Boost auto, DC Ammeter, Mains Voltage Monitor, AMF Logic with three attempt starting facility
- g. Protection – Over Voltage, under voltage, over load, short circuit, over speed.
- h. The operation of the AMF panel shall be as follows:

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- i. In the event of mains failure or failure of any one phase of incoming mains voltage / frequency beyond the specified limits, signal will be given to start the generator set after pre-set time. On firing of DG set and built up of voltage which if within the specified limits of voltage & frequency, the output breaker / contactor shall be energized of the incoming power and outgoing power of DG set.
- j. Once the Mains power resumes / stabilized within the set limits, the AMD panel shall trip the DG Set after disconnection of the DG output with the present time.
- k. The AMF panel shall have facility to operate the set under test, Auto, Manual mode.

Note:- A bypass switch for AMF panel sound also be Provided so it can be used in case of malfunction of AMF panel. A suitable Battery charger of reputed make with DC Volt & Ammeter, trickle & boost charge options is also included along with the item DG set with accessories for all ratings. Full Provision with wiring up the the connector inside the control panel is to be Provided to connect the cable for remote ON-OFF push button with indication.

IV. TERMS & CONDITIONS:-

1. The firm will be required to Supply all the items within a week from the date of placing order.
2. Only such manufactures/authorized dealers and authorized suppliers of manufacturing firm who fulfill above conditions should quote for supply of items.
3. Change in condition will be accepted if at The time of supply any updated technology is mentioned..
4. The manufacturer/firm should have authority from company to Supply the Product.
5. Eco friendly CPC2 product will be preferred.
6. Payment for the delivered items will be made after receiving OK report from the Inspection Committee.
7. The DG set shall conform to the standard specification supplied with the notice and if any deviation Comes to notice suitable penalty will be imposed quotation are not acceptable.
8. Date of Defect liability will start after commissioning/Energization.
9. Rate shall include all taxes including GST.
10. All testing instruments and diesel etc required to carry out tests shall be provided by the Supplier at their cost.

8/10/2023

Chief Engineer
 Bihar Police Building Construction Corporation
 Kautilya Nagar, Patna
 Contact No.-9471006801

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