TENDER DOCUMENT

FOR

SUPPLY AND INSTALLATION OF

DIESEL GENERATOR (DG) SET

IN

CIVIL COURT

BIHARSHARIF

S.No. 01

Authorised Office Signatory

Requirement of Diesel Generator of 160 KVA

This tender is floated for supply, installation and commissioning of prime silent type 160 KVA DG SET as per latest CPCB-IV+ / MoEFCC (NCAP) or any other regulatory body norms applicable on DG set. DG set to be supplied at Civil Court, Biharsharif. Civil and foundation works for DG will be in the scope of vendor and vendor has to quote the rates considering the same.

Supplied DG should be of KIRLOSKAR / GREAVES / CUMMINS / CATERPILLAR INC / VOLVO make.

The vendor should inspect the site at his own expense and make himself familiar with exact scope and criteria of supply. Nonfamiliarity of the site requirement will not be a reason either for extra claim or for not supplying the material in conformity with the requirements, and specifications.

Eligibilty Criteria

Company/ firm/ agency means original equipment manufacturer/ firm/ authorised dealer

(1) *Technical Evaluation of Proposal*

(1) *Company / firm/ agency/authorised dealer should have at least two years' experience of operating such establishment.*

(2) *Company/ firm/ agency/ authorised dealer's turnover in the last two years should be minimum of Rs.* 20,00,000/- (Twenty lakh only) *per annum .*

(3) *Earnest money of Rs.* 30,000/- (Thirty Thousand only)*is to be paid along with the technical bid through D.D. in favour of Principal District & Sessions Judge, payable at Bihar Sharif.*

(4) *Company/ firm/ agency/ authorised dealer must provide photo copy of Pan Card.*

(5) *The original equipment manufacturer/ firm/ agency/authorised dealer shall submit catalogue/ brochure of the D.G Set along with the technical bid. Details of the specifications, quality and features should be provided along with the technical bid. Only the product qualified thereon shall be considered for financial evaluation.*

(2) *Financial Evaluation of proposal* would be as per the lowest price (L1) quoted amongst the technically qualified proposals of the bidders. **Financial proposal would be the net amount payable inclusive of all taxes.**

a) The bidder fulfilling Technical Stage will only be shortlisted for financial evaluation. Claims without documentary evidence will not be considered.

b) Bidders shall not claim any cost whatsoever for submission of catalogue/ brochure of the D.G Set quoted in the bid at the opening of tender for assessing product quality as per the laid down specifications in the tender document.

c) Bidders may bid for a single brand or multiple brands, amongst brands like KIRLOSKAR / GREAVES / CUMMINS / CATERPILLAR INC / VOLVO make with specifications as mentioned in this document.

d) The office of the Principal District & Sessions Judge, Nalanda reserves the right to verify the claims made by the Bidders and the Principal District & Sessions Judge, Nalanda's decision shall be final in this regard. Principal District & Sessions Judge, Nalanda may, in his/her absolute discretion, waive any of the condition/s and/or requirements in the TENDER in respect of any or all of the bidders.

SCOPE OF WORK

160 KVA DG SET CPCB-IV+ compliant

Supply:

The scope covers supply, installation, testing and commissioning of 160 KVA Diesel Generator set compliant to latest CPCB-IV+ norms applicable on DG set.

The scope of supply for DG set shall include the following:

(a) Diesel engine complete with all accessories such as Engine Cooling and lubrication system, Engine air filtering system, Exhaust silencer package, Fuel Intake System etc.

(b) An alternator directly coupled to the engine through coupling, complete with all accessories including Automatic voltage regulator etc.

(c) Complete starting arrangement, including two sets of batteries & swich mode power supply (SMPS) based battery chargers.

(d) Base frame, mounting pads, foundation bolts, etc (as required)

(e) Fuel Tank (Inside/Outside the Acoustic Enclosure)

(f) All lubricants, consumable, touch up paints etc. for first filling, testing & commissioning at site. The fuel oil for commissioning will also be provided by the tenderer.

(g) AMF panel & Microprocessor based controller for control, metering and alarm

(h) Enclosure for silent type D.G. Set enclosing Engine & the Alternator to make it work silently (with in permissible noise level as per latest CPCB norms) and suitable for outdoor installation.

(i) Engine Exhaust should meet the latest applicable CPCB norms of Exhaust gases for DG sets. Necessary thermal Insulator / cladding system to be provided.

Services:

The vendor shall provide following services:

(a) Quality, manufacture, shop testing including assembly testing of DG Set

(b) Despatch & transportation to site

(c) Installation, testing & commissioning with all equipments/materials required for the purpose

Control and instrumentation including AMF Panel:

(a) Each D.G. Set shall be provided with suitable instruments, interlock and protection arrangement, suitable annunciation and indications etc. for proper start up, control, monitoring and safe operation of

the unit. One AMF control panel along with D.G. set shall be provided by the Supplier to accommodate these instruments, protective relays, indication lamps, annunciations, battery chargers etc.

(b) The D.G. sets shall be provided with automatic start facility to make it possible to take full load within 10 seconds of Power Supply failure.

(c) Testing facility for automatic operation of D.G. Set shall be provided in AMF panel.

(d) Microprocessor based controller shall be supplied for DG Set monitoring, metering and control system. A summary of all basic functions to be available in the DG Set Microcontroller are specified at Annexure-B.

(e) DG set shall be capable of being started/stopped manually from remote as well as local.

D.G. SET Technical Parameters:

ALTERNATOR		
1	Output	160 KVA
2	Terminal Voltage	415V AC
3	No. of Phases	3
4	Rated Speed	1500 RPM
5	Frequency	50 Hz
6	Standard	BS 2613/IS 4722/ IEC 60034-1:2022.; latest edition/CPCB-IV+
7	Type of Exciter Used	Brushless, Self-Excited
8	Class of Winding Insulation	Class H
9	Permissible Temperature Rise	Class H
10	Degree of Protection	IP-23
11	Overload Capacity	10% Overload for 1 hour in every 12 hours of continuous running

ENGINE		
1	Standard	IS 10002/BS 5514/ISO 3046/ISO 8528/ IS 13018; latest edition
2	Rating	Prime

3	Speed	1500 RPM
4	No. of Strokes	6
5	Cylinder Quality	Multi-Cylinder
6	Type of Cylinder Arrangement	V-Type or Inline Type
7	Method of Aspiration	Turbo-Charged
8	Method of Engine Cooling	Water-Cooled (Through Radiator)
9	Method of Starting	Battery Operated Auto Start
10	Type of Governor	Electronic as per ISO 8528 or latest IS/BS standards
11	Balancing	Dynamically balanced flywheel
12	Air-Suction & Exhaust	Suction of air shall be from indoor for ventilation and exhaust flue gasses will be let out to outside atmosphere. &Condensate traps shall be provided on the exhaust pipe.
13	Air Filter	Dry Type (Replaceable)
14	Lubricating System	Forced (Closed Loop)
15	Emission Levels	In accordance with latest Notifications of MOEF/CPCB (certificate to be furnished)

ENGINE-ALTERNATOR SET		
1	Maximum Starting Time	10 sec
2	Balancing	Dynamic Balanced Rotor to minimize vibration
3	Mounting Arrangement	DG set enclosed in the acoustic enclosure shall be installed on Concrete Pedestal. Adequate number of anti-vibration mounting pads shall be fixed on the common base frame on which the engine and the alternator shall be mounted to isolate the vibration from passing on to the common base frame or the foundation of the D.G. Set.

Besides that, best standard **Battery, battery charger, Fuel tank, acoustic enclosure and other accessories** would have to be provided.

Automatic Mains Failure (AMF) Control Panel

Specification:

AMF panel with protective and metering function for each DG set, automatic changeover switch qualityed to monitor & to start Generator control panel automatically when the mains source fails partially or fully. This panel shall be qualityed to control & monitor and to start DG sets automatically when the mains source fails partially or fully and auto stop when grid supply resumes as per the Operational requirement.

The panels shall be provided with individual incoming from each DG set & outgoing to main feeder Panel.

The vendor shall depute technical expert for supervision of Erection and Commissioning of both 160KVA DG Sets along with all accessories and AMF panels etc including charges towards travelling, boarding, lodging of technical expert(s) for the location.

The vendor would have to-

a) Supply and lay exhaust pipes from DG set.
b) Aluminium cladding 50mm thick rockwool with aluminium sheet.
c) Structural Steel.
d) Supply and lay 1R 3.5C 185SQMM aluminium armoured power cable for DG. The cable being supplied should be of POLYCAB/FINOLEX/KEI/KEC make.
e) All the necessary material, fittings, tools, instrumentation required for successful termination of power cable at either DG side or panel side.
f) Supply and lay 1R 12C 2.5SQMM copper armoured power cable (control cable) for DG. The cable being supplied should be of POLYCAB/FINOLEX/KEI/KEC make.
g) Construction of earth pit. Provision of galvanized iron pipe earthing with 4.0 metre long 100 mm diameter galvanized iron pipe minimum B class including connection to DG terminal with 50 x 6 mm galvanized iron flats with all materials and labour, as per IS 3043. Vendor to provide the earth pit board with the details of serial number, equipment name, bit value, grid value.
h) Supply and installation of 50X6MM GI earth strips.
i) Installation of ducting for DG. Ducting should come with chimney and the outlet to be

provided outside DG room.

j) Construction of new foundation bed for DG set. All the activities, material, equipment including manpower required for construction of new bed suitable for 160 KVA DG would be borne by the vendor. Construction of foundation for 160 KVA DG with RCC foundation bed suitable for DG supplied to be done as per manufacturer's data sheet.

k) Hiring of hydra / crane / forklift for successful placement and installation and commissioning of new DG in DG room will be in the scope of vendor.

l) All the materials should be supplied with Operating Manuals which shall include technical drawings and required data sheet.

m) Any damage caused to the structure/ fitting/ appliances any ware shall be repaired and made good by the Company/ Firm/ Agency.

The time schedule for completion of supply and installation work at site is 12 weeks from date of issue of work order.

Declaration of Successful Bidder

Principal District and Sessions Judge, Nalanda may either choose to accept the Proposal of the successful tenderer or invite him for negotiations. Approval of the proposed product, quality and installation of the D.G set would require approval from the office of Principal District and Sessions Judge, Nalanda before the bidder is declared successful. The product, quality and specification of the D.G set can be amended or modified by office of Principal District and Sessions Judge, Nalanda.

Upon acceptance of the Proposal of the tenderer financially qualified with or without negotiations, Principal District and Sessions Judge, Nalanda shall declare the tenderer as the Successful Bidder.

All of the approved quoted amount of the successful bidder for supply and installation of D.G set shall be paid only after the completion of all supply and works.

Supply/ Work Order

Principal District and Sessions Judge, Nalanda will notify the Successful Bidder by a Letter of Award (LOA) that its Proposal has been accepted, and accordingly **Supply/work order** would be issued.

Right to accept or reject proposal

Principal District and Sessions Judge, Nalanda reserves the right to accept or reject any or all of the Proposals without assigning any reason.

Principal District and Sessions Judge, Nalanda reserves the right to invite revised Proposals from Tenderers/Bidders with or without amendment of the Tender Document at any stage, without liability or any obligation for such invitation and without assigning any reason.

Obligations of the Successful Bidder

1. Guarantee/ warranty papers, and all other necessary papers of the manufacturing firm attached with the supplied products must be submitted in the office.
2. The D.G set items are to be supplied and installed at Civil Court campus in Bihar Sharif.

The bidder must submit financial bid in the following format-

Amount for the D.G Set		Amount for all other supplementary work required for supply, installation and commissioning including civil and electrical work as mentioned in the tender document.	Total Amount

The Principal District & Sessions Judge, Nalanda at Bihar Sharif reserves right to reject any or all the tenders without assigning any reason whatsoever.

Place:-
Date :- **Signature and seal of the bidder**