

**TENDER DOCUMENT  
VOL II  
(FINANCIAL BID)**

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 125 KVA DG SET  
COMPLIANT TO LATEST CPCB/HSPCB GUIDELINES**

**AT**

**THE INSTITUTE OF COMPANY SECRETARIES OF INDIA,  
CENTRE FOR CORPORATE GOVERNANCE, RESEARCH & TRAINING  
(ICSI-CCGRT),**

**AT**

**PLOT NO- 3, SECTOR-02, IMT MANESAR, GURUGRAM.**

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**THE INSTITUTE OF  
Company Secretaries of India**

**भारतीय कम्पनी सचिव संस्थान**

**IN PURSUIT OF PROFESSIONAL EXCELLENCE**

**Statutory body under an Act of Parliament**

**(Under the jurisdiction of Ministry of Corporate Affairs)**

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**FINANCIAL BID FOR SUPPLY, INSTALLATION TESTING & COMMISSIONING OF 125  
KVA DG SET**

Sr. No.	Description	Unit	Qty	Rate	Amount (in ₹)
1	<b>DIESEL GENERATOR SET</b>				
	Supplying, Installation, Testing & Commissioning of 'Silent Type Diesel Generating set as per CPCB IV + or better norms along with having Prime Power Rating of KVA as below, 415 volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz, 3 phase system & for 0.85 Load Factor, including testing at factory and site with fuel, load for test and other necessary arrangements Complete as per CPWD specifications, should have QR code which should contain drawing, test report OEM manual, Geo- Tag of manufacturing location, rating plate as per relevant IS Code etc. and consisting of the followings:				
	(A) Diesel Engine: Turbocharged Diesel engine 4 stroke water cooled, multi cylinder, dynamically balanced fly wheel, electric start of suitable BHP at 1500 RPM suitable for above output of alternator at 40 0C, 50% RH & at 1000 Meter MSL , capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine will be with Electronic governor, Dry type Air filter with service indicator, first filling of engine fuel (after commissioning) lubricating Oil, Coolant and other consumables complete with all the required accessories, the Electronic governor shall be as per ISO 8528. The engine shall comply to the latest CPCB norms (CPCB IV + or better) and Conforming to BS 5514, BS 649, IS 10000, IS 10002, IS 13018 and as per CPWD specifications.				
	(B) Engine mounted Instrument Panel fitted with and having digital dis Plate for following:				
	(i) Start-stop switch with key(ii) Water temperature indication(iii) Lubrication oil pressure indication(iv) Lubrication oil temperature indication(v) Battery charging indication and Voltage indication(vi) RPM indication(vii) Over speed indication(viii) Low lubrication Oil trip indication(ix) Engine Running Hours indication(x) Fuel Level				
	(C) Alternator: Synchronous alternator rated of appropriate KVA, 415 volts at 1500 RPM, 3 phase 50 Hz, AC supply with 0.8 lagging power factor at 40 0C, 50% RH & at 1000 Meter MSL. The alternator shall be having Screen Protected Drip Proof (SPDP) enclosure IP23, brushless, continuous duty, dynamically balanced rotor, capable of taking 10% over loading for one hour after 12 hours of continuous operation, self cooled, self-excited and self-regulated through AVR conforming to IS13364(Part 2)/IS: 4722/BS 2613 suitable for tropical conditions and with class- H insulation.				

	(D) Base Frame & Foundation: Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendations of manufacturer.				
	(E) FUEL TANK: Daily service fuel tank of suitable liters capacity as per CPWD Specifications, fabricated out of 3 mm thick M.S. sheet complete with all standard accessories and fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. Complete with valves, level indications & accessories as required as per specifications.				
	(F) Exhaust System: Dry exhaust manifold with hospital type exhaust silencer and catalytic convertor.				
	(G) Starting System:12V/24V DC starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable numbers of batteries (180 AH capacity lead acid SMF type) as required as per specifications. The battery shall be housed inside the acoustic enclosure of DG Set.				
	(H) Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere and the temperature rise inside the enclosure, noise level outside enclosure. The acoustic enclosure should be suitable for cable connection/connection through bus-trunking. Such arrangements on acoustic enclosure should be water proof & dust-proof conforming to IP-65 protection. The enclosure shall be as per CPCB IV + or better norms etc. and as per CPWD specifications.				
	(I) AMF Panel: Free standing floor mounted IP 42 automatic mains failure control panel including auto by-pass, suitable for KVA as below for silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyser to indicate currents, phase and line voltages, frequency, power factor, KWH, Kilo Volt Ampere Reative Hour (KVARH), KVA (Phase & Total), KW & provision for overload, short circuit, restricted earth fault, under frequency, power (aluminium) and control (copper ) cabling of suitable size upto 15 meter between AMF panel, LT Panel and DG Set including connection interconnection etc. as required, all complete and inter locking and communication/ Ethernet /RS485/SNMP port open protocol for BMS integration including suitable software, the panel shall be of DG Set OEM make etc. as per approved by Engineering in charge and including the following: 1. Suitable numbers and appropriate capacity 4 pole motorised electrically operated draw out with cradle type 3 position ACB/ MCCB with electronic release for O/C & E/F and shunt trip.				
	2. Auto/Manual/Test/Off selector switch 3. Protection for under and over voltage phase reversal (2 nos Over voltage relay, 2 Nos. reverse power relay and 2 Nos. under voltage relay). 4. 3 Sets of current transformers 15 P 10 accuracy for protection and 15 VA class-I for metering				

	5. Energy analyser unit to indicate current, Voltage( LN & L L), kW, kVA (Phase & Total), Frequency, KWH, PF. 6. LED Indicating lamps for load on mains and load on set 7. Fuse/ MCB for instruments 8. Battery charger, complete with transformer/rectifier,D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current adjustment.				
	9. Main supply failure monitor 10. Supply failure timer 11. Restoration timer 12. Control unit with three impulse automatic engine start/stop and failure to start lockout. 13. Impulse counter with locking and reset facility. 14. ON/OFF/Control circuit switch with indicator 15. Audio/Video annunciation for (i) High water temperature (ii) Low lubricating oil pressure (iii) Engine over speed (iv) Engine fails to start (v) Full load/maximum load warning				
	16. Protection for over/under Frequency, Loss of AC sensing, Over Current, Unbalancing load with suitable number of relays and accessories 17. Maintenance notification based on Engine Run Hour & due date. 18. Load Management through PLC to achieve auto opening and closing of incomer breakers, bus coupler switching of essential panel , interlocking providing signal to AMF Panel for load status and AMF shall give command to DG Set to auto start / auto stop depending upon load status and requirement etc. and necessary hardware and software required to perform the operation shall be provided by the contractor including all control wiring.				
1.1	<b>125KVA</b>	Each	1		
2	<b><u>EXHAUST SYSTEM FOR DG</u></b>				
2.1	Design, Supply, fixing and testing of exhaust piping of following sizes MS C Class exhaust pipes conforming to IS:1239/Class II of IS 3589 with welding joint including bends, clamps, dash fastener, flanges, nuts, bolts etc. complete as required and as per specifications detailed below.				
2.1.1	4" dia. (100 mm NB), MS, 4.85 mm thick plate, Exhaust pipe	RM	25		
2.1.2	6" dia. (150 mm NB), MS, 4.85 mm thick plate, Exhaust pipe	RM	5		
2.2	Design, Supply, fixing and testing of 50mm thick glass wool /mineral wool, wire chicken mesh over insulation and 26 gauge aluminium sheet cladding over the following sizes exhaust pipes from silencer to atmosphere.				
2.2.1	4" dia. (100 mm NB), MS, 4.85 mm thick plate, Exhaust pipe	RM	25		
2.2.2	6" dia. (150 mm NB), MS, 4.85 mm thick plate, Exhaust pipe	RM	5		

2.3	Design, Supply, installation and testing of of MS Support structure The MS Structure. will be duly coated with two coats of red-oxide primer and two coats of enamel paint. The colour shade of final paint will be as decided by the client.	Kg.	1000		
2.4	Supply and installation of SS Flexible Bellows, 4"/6" dia. (100/150 mm NB), complete with counter flanges, heat resistant gaskets, nuts-bolts-washers etc., complete as required.	No.	2		
2.6	Supply and installation of Lightning Arrestors Non Seamer Type with GI Strip upto Earth Pit	No.	1		
2.7	Supply and installation of Aviation light with UPS and Cable upto light	No.	1		
<b>3</b>	<b>Structural Support work for basement slab- STEEL WORK</b>				
3.1	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	1082.00		
3.2	Providing and fixing bolts including nuts and washers complete.	Kg	17.50		
	-				
3.3	Providing and fixing 16x150 mm chemical fastener complete.	Each	8.00		
3.4	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications:				
3.5	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied 0.90 ltr/10 Sqm over an under coat of primer applied @ 0.80 ltr/10 Sqm of approved brand and manufacture	Sqm	42.00		
<b>4</b>	<b>BUYBACK OF 180 KVA DG SET</b>				
	Buyback of Old 180 KVA DG Set of Cummins make Engine and Sudhir Enclosure, on "as is, where is" basis, including lifting, shifting etc. all complete in all respect as per instruction of engg In-charge. (Credit Price to be quoted). The date of Manufacturing of DG Set is July 2008. Total running hour usage of 330 Hours (approx.)	No.	1		
	<b>TOTAL</b>				
	<b>Total in Words:</b>				

Note:

1. Above Rate/Amount will be inclusive of all Taxes, GST, Charges, Transportation, Cess, liasoning Etc.
2. The Vendor shall attend all the defect and services/maintenance required for the system free of cost in the defect liability period i.e. 1 year from the date of completion and handing over of the work.

**Seal & Signature of Bidder**