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Price schedule

Name of work:Supply installation testing and commissioning of L.T. Diesel generator set at new administrative building at NIT Silchar

sl no	Description of item	Unit	Qty.	Rate in Rs. & in words	Amount in Rs
1					
	Supplying including installation, testing and commissioning of Air/Water Cooled Diesel Generator set coupled to suitable alternator of 220/415 V, AC, 1/3-Phase 0.8 p.f.(la mounted on a 1) M.S. Fabricated base frame.,2) M.S. fuel tank of required capacity.,3) Residual Silencer.,4) Standard Control Panel along with separate panel to accomodate 1000 Amps on load handle type change over switch.5) Suitable batteries with lead5) First fill of lube oil 6) Acoustic Enclosure 7) Appropriate Earthing-2 nos pipe earthing and 2 nos plate earthing(cu) 8) CC base foundation as per the drawing/design supplied by the manufacturer & duly approved by the department.Base of the foundation will be minimum 30 cm above floor level/GL as specified and directed by the department conforming to IS comprising the Technical Specification.. as per manufacturer. (RANGE 500 KVA) Caterpillar/MTU/Cummins(KTAA19G10) or equivalent/any reputed make as directed by the department.				
	500 KVA 3Phase 6200x2000x2555 Size (Approx) 6655 Kg W/C(approx)	Each	1		
	Supply and laying of following numbers and size of armoured cable in same trench, PVC/XLPE insulated and PVC sheathed 1.1 KV G Solid Aluminium conductor up to 10 sq mm balance stranded conductor, XLPE Insulated, cores laid up, PVC tape inner sheathed, unarmoured/Armour (Aluminium for single core up to 70 sq mm balance Aluminium strip, Galvanised for cables up to 2x10 sq mm.3x10 sq mm,4x6 sq mm balance all galvanised steel strip) , extruded PVC Type ST2 sheathed, 650/1100V grade as per IS 7908(Part 1) 1988 armoured U.G. cable laid in ground/partially in air (as required for termination over ground including excavation of cable trench up to depth of 75cm, refilling, protective brick covering, Sand cushioning etc complete handling of surplus spoil, debris et to				
	4x 500.00 Sq. mm. 1 Core armoured U.G. cable(i.e.4 run of single core 500 sqmm cable)	RM	70.00		

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3	Supplying with fitting and fixing four pole 415 V front handle operated on load changeover switch(IP-20 protection powder painted sheet steel enclosure fitted on angle iron frame of the following capacity complete with making necessary connection as approved ,specified and directed by the deptt.C&S,Havells,Indo Asian,HPL,GECO make) 1000 A	Each	1		

Total Rs.

(Rupees.....)

Signature of the agency

Generator Set Specification	
Power Rating kVA / kWe	500/400
No. of Phases	3
Output Voltage and Frequency (V and Hz)	415 V, 50 Hz
Power Factor	0.8 (lagging)
Current (A)	695
RPM	1500
Engine Specification	
MoEF Certified Power (hp)	587
Required Power for Rated kVA (hp)	587
Cooling	Liquid Cooled (EG Compleat 50:50)
Aspiration	Turbocharged, Charge air Cooled
No. of cylinders	6, In-line
Bore(mm) x Stroke(mm)	159 x 159
Compression ratio	16.7:1
Displacement(litre)	19
Performance class of genset	ISO 8528-5 G2
Starting system	24 V DC Electrical
Lube oil sump capacity, High-Low level (litre)	38-32
Total lubrication system capacity (litre)	50
Total coolant capacity (litre)	85
Exhaust pipe size (inch)	10
Total wet weight (Engine+Radiator) (Kg)##	2300
Length x Width x Height (Engine) (mm)	1744 x 916 x 1402
Mean piston speed (m/s)	7.95
Combustion air intake @100% load (±5%) (cfm)	1278
Exhaust Temperature (°C)	464
Alternator specification	
Make	Stamford Or equivalent
Enclosure	IP 23
Voltage regulation (Max.)	±1%
Class of Insulation	H Class
Winding Pitch	2/3

Stator Winding	Double layer lap
Rotor	Dynamically Balanced
Waveform distortion/ Total Harmonic Distortion	No load < 1.5 %, Non distorting balanced linear load < 5 %
Maximum Unbalanced Load across phases#	less than or equal to 25%
Telephonic Harmonic factor	< 2%

SCOPE OF WORK

Work requirements

1.1.1 The work included in this Tender comprises the following:

1.1.1.1 Design, Manufacture, Supply, Erection, Tests, & Commissioning of 500 kVA Diesel Generator Set with all necessary peripherals including cabling and civil work for foundation and powerhouse and all necessary temporary and enabling works. The proposed DG set will serve as a standby source of power supply when state utility power supply through existing 11 kV sub-station will not be available. Hence, suitable cable termination at the changeover switching needs to be provided.

1.1.1.2 Documentation for all the systems and equipment, including operation and maintenance manuals, spare part lists, licenses and certification by relevant authorities and other statutory bodies.

1.1.1.3 Training of the Centre's staff in operation, maintenance and defect diagnosis of the system.

1.1.1.4 Maintenance of the DG Set and peripherals supplied under the contract over a period of two years from the date of completion of Commissioning. Refer 3.1(iii)&(iv) of NIT

1.1.1.5 Full load testing shall be conducted at the supplier's works and delivery of equipment will be done only after satisfactory testing at factory site, clearance and due approval by the institute. The agency is to make necessary arrangements in consultation with the site engineer for the same.