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CORPORATE OFFICE,
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PART - 2 : PRICE BID

Tender document for Supply Installation, Testing and Commissioning of 625 kVA Diesel Generator Sets under buyback of old Diesel Gensets at Indian Bank's IMAGE Campus at MRC Nagar, Raja Annamalaipuram, Chennai - 600 028 through GeM

ISSUED TO

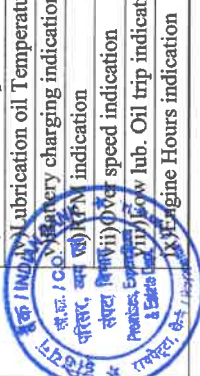
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(This document contains 06 pages)

Works: Tender document for Supply Installation, Testing and Commissioning of 625 kVA and 400 kVA Diesel Generator Sets under buyback of old Diesel Generator Sets of 1no. 500kVA & 1no. 380kVA at Indian Bank's IMAGE Campus at MRC Nagar, Raja Annamalaipuram, Chennai - 600 028

Sl.No.	Description	Qty	Unit	Supply		Erection		Total Amount (Rs)
				Rate(Rs)	Amount(Rs)	Rate(Rs)	Amount(Rs)	
1	<p>625 KVA DG Set</p> <p>GENERAL:</p> <p>Supply, installation, testing & commissioning of 'Silent Type' Diesel Generating set having Prime Power Rating of 625kVA/500kW, 415volts at 1500RPM, 0.8 lagging power factor at 415Volts suitable for 50HZ, 3phase system, & for 0.85 Load Factor, complete with all accessories like engine, alternator, batteries with leads control panel, base frame, antivibration mounts, residential silencer, fuel tank of minimum 800 Litres, intake & exhaust piping, Motorized pump for pumping diesel from Barrel to fuel tank, other miscellaneous accessories for the total set including test trial run at load for 24 hrs at factory. (Inclusive of consumables, vide clause 60.1 of General conditions of contract.) necessary Control wiring, annunciation etc. as per specifications give below and consisting of the followings:</p> <p>a)Engine:</p> <p>Diesel engine 4 stroke water cooled, electric start, of suitable BHP at 1500RPM suitable for above output of alternator at 40Degree C, 50% RH & at 50 Meter MSL and conforming to BS 5514, BS 649, IS 10000, capable of taking 10% over loading for one hour in 12hours of continuous operation. The engine will be fitted complete with all the required accessories. The engine shall be of radiator water cooled, high tensile strength steel forged crank shaft, induction hardened bearings, alloy cast iron removable wet liner cylinder block, corrosion resistant cylinder heads with supply and return lines and valves, crank shaft actuated injectors with integral fly wheel, ball type governor for fuel system, forced feed gear type pump for lubrication, aluminum alloy ring carrier piston with provision for thermal expansion, exhaust gas driven turbocharger for fuel economy and low smoke and noise, heat and corrosion resistant intake and exhaust valves etc. It shall also be fitted with standard components like breather crank case, air filter, coolant filter, oil filter, fuel filter, electronic governor, central pump, panel instruments provided with ammeter, hour meter, water temperature gauge, lubricating oil temperature gauge, lubricating oil pressure gauge, starting key switch, belt driven centrifuged coolant, heavy duty radiator, supports to engine from base frame with pedestal type support in the front and rear, residential silencer, alternator directly coupled to the engine, complete painting, lubricating oil measuring lever, base frame with cushion / antivibration pads, 24 volts electric static equipment complete with starter motor alternator and batteries with cable etc.</p> <p>b)Engine mounted Instrument Panel fitted with and having digital display for following:</p> <p>i)Start-stop switch with key.</p> <p>ii)Water temperature indication</p> <p>iii)Lubrication oil pressure indication.</p> <p>iv)Lubrication oil Temperature indication.</p> <p>v)Battery charging indication</p> <p>vi)Oil level indication</p> <p>vii)Over speed indication</p> <p>viii)Oil trip indication</p> <p>ix)Engine Hours indication</p>							



MRC Nagar, Raja Annamalaipuram, Chennai

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c)Alternator	Synchronous alternator rated at 625kVA/500kW, 415 volts at 1500RPM, 3Phase 50HZ, AC supply with 0.8 lagging power factor at 40 Degree C, 50% RH & at 1000Metre MSL. The alternator shall be having SPDP(Screen Protected Drip Proof) enclosure, brushless, continuous duty, self-excited and self-regulated through AVR conforming to IS:4722/BS 2613 suitable for tropical conditions and with class F/H insulation and provision for connecting I/C M.S cable adaptor Box (made of 14SWG steel sheet) with suitable copper bus extension link for alternator. The adaptor box shall have tinned copper bus bar of suitable size for phases and neutral with suitable holes for cable termination (3 run 3.5 x 400.0 Sq.mm Al.armoured XLPE insulated,PVC Sheathed Cable.). Necessary rubber gasket between alternator and cable box shall be provided to avoid vibration between adaptor box and alternator.							
d)Base Frame	Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on RCC Foundation and vibration isolation arrangement as per recommendations of manufacturer. Civil works of Rcc wall with necessary reinforcement as foundation cum raised platform for all around DG set fill with PCC for entire platform from existing ground level at height of 610mm to 750mm and steel framed structure shall be rest on the RCC wall and angles for cables trench.							
e)Fuel Tank:	Inbuilt fuel tank capacity as per OEM complete with valves, level indicator suitable fuel hoses & accessories etc. as required.							
f)Exhaust System:	Dry exhaust manifold with suitable residential exhaust silencer to reduce the noise level.							
g)Starting System:	24V DC Starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable nos. of batteries (2 Nos 25 plates, 200 AH capacity lead acid type) as required as per specifications & manufacturers standard i/c Connecting cable between Starter motor and batteries. The batteries shall be mounted on 0.5' thick hylam sheet base with suitable angle iron frame work support on the floor							
h)Acoustic Enclosure	Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine and alternator, extraction, discharging hot air into the atmosphere as per specifications and according to approval by designated CPCB authorities suitable to accommodate item (a) to (g) above.							
	625KVA DG Set as described above in item(a) to (h)	1	Set					

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Sl.No.	Description	Qty	Unit	Supply		Erection		Total Amount (Rs)
				Rate(Rs)	Amount(Rs)	Rate(Rs)	Amount(Rs)	
2	Insulation for the residential silencer with mineral wool of suitable thick (density 120kg/m3), wrapped in wire mesh & cladding with 0.8mm aluminium sheet etc. as required as per specifications for the 625kVA DG set including scaffolding etc. as required. (supply of residential silencer to be included under item for DG Sets).	1	Job					
3	EXHAUST PIPE Supplying and fixing exhaust gas piping made up of suitable diameter (As per OEM standards) 'B' class MS black pipe conforming to IS: 3589 including accessories like bends, reducer at silencer end and clamps, anti-vibration mountings, bellows, insulation of exhaust system with mineral wool of suitable thick (density 120 kg/m3), wrapped in wire mesh & cladding with 0.8mm aluminium sheet etc. as required as per specifications for the 625kVA DG set including scaffolding etc. as required. (The item shall be measured on linear basis per circuit of exhaust piping from outlet of silencer to end of exhaust piping. The measurement of exhaust piping shall start one feet away from the silencer outlet). The exhaust pipe shall be supported to wall of adjacent building with suitable channel/angle iron brackets. The cost includes necessary support MS structure for exhaust pipe	20	Mtrs					
4	Supply & fabrication of MS Frame supports "L" angle for Exhaust hood of Size 75x75mm (cost will be consider in running length of angles). The cost shall includes finishing with 2coats of enamel paint over one coat of primer (approved colour)	300	Mtrs					
5	Supply and installation of stainless steel rain hood / rain cap / bend at top of the exhaust pipe to prevent rain water entry to exhaust pipe with provision of drain plug in the system.	1	Nos.					
6	Supply and installation of M.S. cable adopter box (made of 14 SWG sheet steel) with suitable copper bus extension link from alternator. The adopter box shall have tinned copper bus bar of suitable size for phases and neutral with suitable holes for cable termination (3R x 3.5 core, 400 Sq.mm). Necessary rubber gaskets between alternator and cable box shall be provided to avoid vibration between adopter box and alternator.	1	Set					
7	AMF Panel Supply, installation, testing and commissioning of Outdoor type Automatic mains failure (AMF) control Panel suitable for 625kVA silent type DG set with bypass facility fabricated out of 2mm thick CRCA sheet finishing with 7 tank process, with bottom/top entry for the cable with Suitable aluminium bus bars complete with the following including connections control cabler between DG set & AMF Panel with suitable size multicore copper conductor armoured cable etc as required. It shall be provided with 1000A 4Pole ACB with U/V coil and thermal magnetic release, variable settings, current transformers with suitable ratio for metering and protection, earth fault relay, square digital type ammeter (0 – 600A), square digital type voltmeter (0 - 600V), digital type frequency meter, KWH meter, indicating lamps, fuses, etc. The panel shall be equipped with tinned copper bus bars of suitable size, duly provided with heat shrink PVC sleeves mounted on suitable support insulators. Separate bus bars for incoming and outgoing with cable entry at bottom of panel with removable gland plate separately for incoming and outgoing cables, panel lifting hooks, base frame etc.							


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	b)Micro processor control based AMF and Engine Control function unit for Emergency and standby power supply system. - 1No c)Numerical/digital Relay for over current and earth fault protection with necessary CT's - 1 set d)Combined meter for Voltage/Ampere/Frequency with selector switch for selecting mains/alternator/ load voltage & frequency -1No. e)Combined Meter for KW/Power Factor /KVA - 1 No. f)Electronic KWH meter - 1No. g)3Nos. Current transformers 15VA class-1 for metering h)Indicating lamps (LED type) for Mains ON, DG ON, Load on DG & Load on mains. i)BATTERY CHARGER: SMPS Based Unit with inbuilt Auto/Manual, current adjustment & Float/Boost Facility with DC Voltmeter & Ammeter (Separate)- 1Set j)Monitoring and all other items required as per the technical specifications-1set k) Base platform: the panel shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on RCC Foundation and vibration isolation arrangement as per recommendations of manufacturer. AMF Panel as described above in item (a) to (j)	1	Set					
	EARTHING & EARTH CONNECTION							
8	Earthing with copper earth plate 600mm X 600mm X 3mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7metre long with funnel arrangement etc. with charcoal/coke and salt as required. for DG Neutral	2	Set					
9	Earthing with G.I. earth plate 600mm X 600mm X 6mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7metre long etc. with charcoal/coke and salt as required. for DG and AMF Panel Body Earthing	3	Set					
10	Providing and fixing 32mm X 6mm copper flat on surface or in recess for connections etc. as required.	30	Mtrs					
11	Providing and fixing 25mm X 6mm G.I. flat on surface or in recess for connections etc. as required.	40	Mtrs					
	Fire Extinguisher							
12	Supply and installation of CO2 fire extinguisher 4.5 Kg capacity near the DG set and necessary safety mat as required for operating personnel at the DG set ; panel board and identification tag / danger symbols etc as per electrical inspectorate norms	2	Nos.					
	Fire Bucket (Galvanized Mild Steel Sheet-body of bucket-1 mm thick) of minimum quantity eight (08) numbers and Fire Bucket Stand of minimum quantity two (02) shall be provided at DG area. Each fire Bucket holding stand (Triangular type) shall have the arrangement to hold four (04) numbers of fire buckets(10 Litres). The Fire Bucket stand must be as per IS 2546. The stand will be installed at the side of the DG Set. The minimum technical specification is as follows: IS 2546/	1	Set					
Subtotal (A) (Supply & Erection)- Excluding GST								
MISC.ITEMS								



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SL.No.	Description	Qty	Unit	Supply		Erection		Total Amount (Rs)
				Rate(Rs)	Amount(Rs)	Rate(Rs)	Amount(Rs)	
APPROVAL FROM CEIG / CEA								
14	Preparation of necessary drawings for both DG sets approval by Chief Electrical Inspector to Government/CEA, obtain approval for the same, arrange for the inspection by the Electrical Inspector/CEA Officials and obtain safety certificate from them for commissioning the DG set (This building is fed by HT power supply).	1	Set					
Subtotal (B) Misc item								
Total (C) = (A) + (B) - Excluding GST								
BUY BACK								
15	BUY Back of existing 500kVA Genset (Dismantling of the existing DG Set room acoustic, power cabling, earthing, exhaust piping , AMF panel etc/ Transportation charges from premises to the godown (as required), unloading the same) - including GST	1	Job					
SUB TOTAL - (D) (Inclu GST) Buyback								
TOTAL (E) = (C) - (D)								
GST								
GRAND TOTAL (Including GST & BUYBACK)								

Amount in words including tax

(Rs)

DATE:Only

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