



THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

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Dr. K. SIVASANGEETHA, M.D.
REGISTRAR (FAC)
SI(3)/11917/2025

Dated 09.06.2026

To

The firms

Sir,

Sub	Store – The Tamil Nadu Dr. M.G.R. Medical University – Chennai – New Diesel Generator for Silver Jubilee Auditorium Of this University – Estimated Cost Called for – Regarding.
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I am to request you to send Estimate Cost your rate for the following 100KVA Diesel Generator with AMF Control Panel for Silver Jubilee Auditorium of The Tamil Nadu Dr. M.G.R. Medical Univeristy.

Sl. No	Qty	Description of Work
	1 set	<p>Safety system of Engine: The engines shall trip for the following conditions with Visual alarm device. 1.Low lubricating oil pressure 2. High water temperature 3.Vee - belt failure and over speed 4. Low battery indication The Engine should be capable of providing 10% over load for one hour for every 11 hours continuous running at full load.</p> <p>B. ALTERNATOR Alternator capacity of 100KVA/80KW, AC 3phase, 50HZ, 415Volts, 0.8P.F, 4 wire self excited, self regulated design to run at 1500 RPM under NTP conditions conforming to BS 5000/IS 13364 (part-II) 1992 to be coupled directly to the Diesel engine and test certificate (Make Kirloskar/ Cummins/ Ashok Leyland/ Greaves/ Equivalent)</p> <p>3) AMF CONTROL PANEL: The AMF control panel (cubical) should be fabricated with vermin proof and dust proof best quality sheet steel and floor mounted with removable rear panels and hinged front doors with enamel painted and incorporating the following with suitable provision for connection incoming and outgoing leads having been made on the control panel.</p> <p>1. 1No AC Ammeter 2.3Nos current transformer with suitable Ratio 3.1No Ammeter selector switch 4.1No AC voltmeter 5.1No Voltmeter selector switch 6.1No Frequency meter 7.1No KWH meter 8.1No KW meter 10. Battery charging set comprising of the following for charging the battery from mains. a) Transformer/Rectifierb) b.DC Ammeterc) c.Charging rate selector switchd) d.DC voltmeter e. Circuit breaker f.Voltage Regulator g. ON/OFF switch</p> <p>Notes: This will be in addition to the battery charging alternator fitted to the Engine. 11) 1set Air break contactor with auxiliary neutral contactor for main supply 12) 1set low voltage HRC fuse for the short circuit protection of the main supply. 13) 1set alternator contactor with auxiliary neutral contactor 14) 1set three pole bimetal release for over load protection of the alternator 15) 1set low voltage HRC fuse for the short circuit protection of the alternator</p>

- 16) 1set DC control relays incorporating engine start/stop and failure to start/lockout
- 17) 1set selector switch auto/manual
- 18) 1No push button "Start"
- 19) 1No push button "Stop"
- 20) 1No push button "Reset"
- 21) 1No signal lamp for indicating load on mains
- 22) 1No signal lamp for indicating load on set
- 23) 1No signal lamp for indicating set fails to start
- 24) 1No signal lamp for indicating 'Set running'
- 25) 1No signal lamp for indicating 'Battery charger ON'
- 26) 1set pilot lamps of 3Nos
- 27) MCCB of 100A capacity with magnetic thermal over load release, instant start circuit trip and under voltage release
- 28) Rectangular copper bus bars (1No for each phase, neutral and earthing terminal) of adequate capacity duly colour coded with head shrinkable PVC sleeves.
- 29) 1No mains voltage monitor
- 30) Hooter/Audio alarm for indication set fails to start and for DG O/L
- 31) 1set timers
- 32) Audio and visual indication
 - a) Low lubricating oil pressure
 - b) High water temperature
 - c) Over speed
33. 1 No Earth fault relay
34. Isolator to Isolate the neutral

Note:

1. The control panel should be complete with necessary fuses, cables, labels, other accessories with neutral isolation arrangements.
2. The engine should trip for the following conditions.
 - a) Low lubricating oil pressure
 - b) High water temperature
 - c) Over speed

4) ACOUSTIC ENCLOSURE:

Acoustic enclosure shall be powder coated and fabricated of 16SWG CRCA MS sheet. The silent canopy shall be nut bolt type construction. Critical processes of punching are done on CNC machine to maintain dimensional accuracy of hole within 0.1mm. Power coating done after seven-tank surface preparation process of sheet metal. Canopy panel and door shall have inside lining of FIRE-RETARDANT 64kg/m density mineral wool of 100mm thickness as acoustic material. Four hinged doors. The maximum permissible sound pressure level should be as per the norms prescribed by the Central Pollution Control Board / State Pollution Control Board/ Competent Authority concerned or should be 75db(A) at 1 meter from the enclosure surface whichever is lower. The emergency stop should be available on the enclosure panel.

The enclosure provided shall be duly approved by the Engine Manufacturer of the Engine provided for Diesel Generator Sets mounted inside and should be to the satisfaction of inspection / testing. **SURFACE TREATMENT – PAINTING**

The enclosure shall be suitably treated for degreasing, de-rusting and phosphating. The canopies are passed through seven-tank treatment thoroughly. **ADDITIONAL FEATURES OF CANOPIES** db(A) at 1 meter from the enclosure surface whichever is lower. The emergency stop should be available on the enclosure panel.

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SURFACE TREATMENT – PAINTING

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Canopy fabricated on CNC machines with dimensional accuracy of 0.1mm so as to increase its durability. Special designed supporting ribs/structures are used in canopies so as to give sturdiness and to reduce the vibrations of the DG sets if any.

WORLD CLASS COOLING PACKAGE:

Canopies shall have cooling package for which it can perform at 45 deg c/ambient temperature. No grounding required on the ground, only a level surface capable of with standing the DG weight. Lifting hooks shall be provided for the acoustic enclosure, which should be unloaded independently of the DG set. The Gen set frame shall also be provided with hooks for unloading.

Temperature rise inside the canopy:

Canopies shall be designed so as to maintain the temperature difference between ambient and air inlet at cleaner within the enclosure well with in 5-7 deg centigrade.

5) Base Frame

Base frame should be fabricated in sheet metal. The base frame is rugged in construction and designed for mounting engine and brush less alternator closely coupled, with cross members mounted on AVM. The base frame shall have provision for mounting of acoustic enclosure on it. The supply of Gen set includes loading, unloading and transportation charges.

		<p>6) Fuel Tank 250 Ltrs. Removable Fuel tank shall be fabricated out of 14 SWG CRCA MS sheet and is part of base frame. It is duly painted and fitted with inlet an outlet connections and mechanical fuel gauge. Fuel tank can be easily removed for cleaning or any maintenance.</p> <p>7) Battery 12V 180 AH battery</p>
2	40 mtrs	Supply and Run of 12 core 2.5 sqmm armoured copper control cable FRLS in suitable PVC rigid pipe on wall/Ground/ceiling with connection (For Genset to AMF) (DATA-01)
3.	5 mtrs	Exhaust Piping: Supply and fixing of DG Set should be offered complete with exhaust piping, ie, silencer is mounted and connected by means of MS pipe through flexible pipe to the engine manifold. Entire exhaust piping inside the canopy (Cold Zone) is insulated by means of ceramic wool and
4.	1 job	Construction of a RCC concrete foundation of size for 100 KVA generator Bed Size 340(L) x 2740(B) x 2095(H)mm (approx weight 4100 KG) with cement concrete 1:2:4 with sand cushion all around the foundation for the erection of 100 KVA Generator set with proper alignment with necessary ramp arrangements. (MR)
5	6 nos	Earthing as per ISI specification with earth electrode of 2.1 mtr length Class "B" GI pipe of dia not less than 40mm with copper earth plate of size 125mmX50mmX6mm with necessary funneling arrangements with necessary masonry work and with 38mm RCC cover slab for the brick masonry for alternator and control panel (SD 221)
6	30 mtrs	Supply and run of 25mmx3mm tinned copper flat with necessary clamps/supports on wall/floor/ground for earth connection (SD 76)
7	250 ltrs	Providing fuel oil to run the set for 8 hours on load testing and commissioning using water rheostat or suitable leading element. First charging of fuel oil to full capacity and first charging of battery while handing over to dept.
8	1 set	Supply of tools like: 13" cutting plier- 1No Screw driver 9"X6" - 2 Nos DE spanners (6 Nos) - 1set Adjustable spanner - 1No 1/216 Hammer - 1 No Line tester - 1 No
9	1 set	Supply and demonstration of the following safety accessories. a) 1 meter x 1 meter x 1/2 inch 11kv rubber mat - 2 nos. b) one set of 4 nos. 9 liters fire buckets with metal stand frame - 1set c) first aid box with medicine - 1no d) 11 kV rubber hand gloves - 2 nos. e) 2 Kg capacity dry powder type fire extinguishers - 2 nos f) Hand operated pump to transfer fuel from standard barrel to fuel tank - 1 no. g) First aid chart in Tamil and English - 1no. h) Battery water acidity tester - 1 no.
10	1 set	Preparation of site plan, physical layout, electrical line schematic diagram in 10 sets getting drawing approval from CEIG preparation of completion report, rectification report and arranging CEIG inspection and obtaining safety certificate preparation of 1 set of approved drawing and a copy of safety certificate in a neat frame work to be fixed in generator room and payment of CEIG inspection fees.
11.	2 Nos	Supply and fixing of 200 A Three phase 500V 4 Pole Change over Switch on suitable angle iron frame work with MS cable entry boxes with Earthing. (SD-659)
12.	125 mt	Supply and Laying of 3 1/2 x 150 sq.mm. PVC armoured LTUG cable in suitable size HDPE pipe in a trench to be excavated at a depth of 0.75 metre and refilling the earth to make good. (From Genset to AMF Switch, From 250A Switch to AMF, From AMF to C/O Switch and C/o Switch to Second C/O Switch in Electrical Room) (SD-674)
13	25mt	Supply and clamping of 3 1/2 x 150sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. (From AMF to C/O Switch and From 250A Switch to AMF (SD-211)
14	8 Nos	Supply and fixing of brass cable gland for 3 1/2 x 150 sq.mm PVC LTUG armoured cable with earth connection. (SD-170)
15	8Nos	Supply and providing cable end termination of 3 1/2 x 150 sq. mm PVC LTUG Aluminium armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete. (SD-229)
16	8 Nos	Supply and fixing of 250A 4Pole MCCB with enclosure on suitable angle iron frame work with 2 Nos cable entry boxes of size 15" x12" x10" and 250A bus bar box for incoming cable connected to proper termination and with earth connection only, including suitable size copper Flat 25mm x6mm interconnection between the 250A bus-bar box to 250A Incoming terminal with complete etc. (Make. L&T/ Siemens or Equiv) (DATA-02)
17		<p>Genset Panel:- Supply and fixing of 125A capacity dust and proof cubical panel board of size 6' ft x 5' ft x 2' ft CRCA 16 SWG sheet for outer body and stiffness and doors switches supports respectively and with supply and fixing of the following cubical mounting switches with centre bus bar chamber and vertical covers, and cable chamber on both side of the buss bar chamber at the extreme ends on both side and confirming in I.S specifications.</p> <p>Incomer</p> <p>1) 125A 4pole Change over Switch-1No Outgoing</p> <p>2) 63A TPN MCCB-6 Nos</p> <p>A Separate chamber on Top of one side should be built with (0-500 V) Voltmeter (0-250A) Ammeter with C.T and selector switches with one set of LED pilot lamps set with fuse base, top with 10A HRC link for 3 phases the bus will have 4 Nos of 1x1/4 bus for phase and neutral and 2 Nos. 1x1/8 earth bus all round the panel to provide double earth connection to the cubical switches cable glands cable adopter box etc, bus should be mounted on synthetic enamel compound bus supports at equal interval as per IS specifications. The incoming 250A switches should be connected to the bus with same size of 1 x 1/4 fixed copper flat and 125A switches should be connected to the bus by 1x1/8 fixed copper flat. The switch should be separated by 6mm thick hylem sheet separators and properly (double) earthed as per IE rules, CEIG specification. The panel should be powder coat painting</p>

		Siemens grey complete with LED Digital Display for VAF Meter chamber. The cable size, capacity of switch and location should be marked with white paint (L&T/Siemens) @ lift Machine Room Essential-1No & Non Essential-1No)(DATA-03)
18	1Nos	Supply and fixing of 8 way Vertical Triple pole and neutral MCB sheet steel enclosure distribution board with double door (metal) with 1 no. 63A 4P MCB as incoming and 3 nos. 32A 3P MCB, 15 nos. 6A to 32A SP MCB as outgoing on wall with earth connection only. Higher End.(SD-586)
19	39Mt.	Supply and Laying of 3 1/2 x 50 sq.mm. PVC armoured LTUG cable in suitable size HDPE pipe in a trench to be excavated at a depth of 0.75 metre and refilling the earth to make good.(From Genset to AMF Switch, From 250A Switch to AMF, From AMF to C/O Switch and C/o Switch to Second C/O Switch in Electrical Room) (SD-670)
20	79Mt.	Supply and clamping of 3 1/2 x 50sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. (From AMF to C/O Switch and From 250A Switch to AMF, From DB to FP MCB) (SD-207)
21	2 Nos	Supply and fixing of brass cable gland for 3 1/2 x 50 sq.mm PVC LTUG armoured cable with earth connection. (SD-166)
22	2 Nos	Supply and providing cable end termination of 3 1/2 x 50 sq. mm PVC LTUG Aluminium armoured cable with necessary aluminium cable sockets by crimping etc. with electrical connection complete. (SD-225)
23	3 Nos	Supply and fixing of 63A FP MCB in Metal box FP enclosure on wall and making good of the concealed portion with earth connection. (Legrand (MDS)/ Hager (L&T) make)(Video Wall, Lighting standby)(DATA-04)

Your Estimation amount should be addressed to the Registrar of this University at the earliest.

S.d./-
for REGISTRAR