

TENDER DOCUMENT

FOR

**SUPPLY INSTALLATION TESTING AND COMMISSIONING OF
160KVA DG SET AT MEDICAL COLLEGE, ALAPPUZHA**

**PART-III
PRICE BID**

TENDER NO. HLL / ID / 15/ 29

September 2015

**HLL LIFECARE LIMITED.
INFRASTRUCTURE DEVELOPMENT DIVISION**

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1. COMMERCIAL CONDITIONS

1.1 THE ABSTRACT OF BILL OF QUANTITIES IN THE PRICE BID SHALL BE INVARIABLY FILLED. THOSE WHO BIDDERS DO NOT FILL WILL BE NON-RESPONSIVE AND WILL BE DISQUALIFIED FROM EVALUATION AND WILL BE TREATED AS TECHNICALLY NOT QUALIFIED.

1.2 The tendered rate shall inter alia be deemed to include for the provision of all materials, process, operation and special requirements detailed in the particular specification irrespective of whether these are mentioned in the description of equipment schedule and Bill of quantities or not. It is an express condition of the contract that the tendered rates for various items in the Bill of Quantities shall be deemed to include for the full, entire and final condition of the contractor respective items of the works in accordance with the provision of the contract.

1.3 The tendered rate shall include for all taxes, duties, etc. as applicable and shall be quoted on the works contract basis for **SUPPLY INSTALLATION TESTING AND COMMISSIONING OF 160KVA DG SET AT MEDICAL COLLEGE, ALAPPUZHA.**

1.4 The tendered rate shall remain firm and free from variation due to rise in the cost of materials/equipment labour or any other reasons whatsoever during the contract period and valid extension.

1.5 The quantum of excise duty included in the tendered price, the rate at which they were assumed etc. shall be indicated in the tender.

2. UNIT RATES

2.1 Only approved work will be measured on completion and priced as per rates quoted against the respective items.

3. BRIEF DESCRIPTION OF PRICING

3.1 The tenderer shall furnish duly certified breakup of material and labour separately for each item of work. The same shall be attached separately along with the price bid.

3.2 The quoted price shall be inclusive of all taxes and duties whether payable by the contractor or to be deducted at source. This shall include those applicable among VAT, Sales Tax, Income Tax, Customs Duty, Excise Duty, Turnover

Tax, Service Tax, Work Contract Tax, Octroi, Labour Welfare Cess or any other Taxes and Duties prevailing in respect of this contract. ANY BID STATING THAT TAXES ARE EXTRA WILL BE SUMMARILY REJECTED.

4. PRO-RATA VALUE

The detailed break up of prices for various items of equipments and materials of the full system should be provided by successful tenderers within fifteen days from the date of letter of intent to facilitate the Employer for assessment and verification and to certify payment.

5. INCOME TAX

Any payment to the contractor as per contract, will be made after deducting income tax as per the rules and regulations.

6. SALES TAX AND EXCISE DUTY

The tenderer shall clearly indicate sales tax, Excise and works contract tax and other duties as applicable in his offer for carrying out this work.

7. SUBMISSION OF BILL

- 7.1 The contractor shall from time to time prepare and submit interim bills of the work executed and on completion of the contract, he shall prepare and submit the final bill. The measurements sheets in support of the interim and final bills shall be prepared by the contractor on the basis of measurements taken by him jointly with the project engineer and the said measurement sheets shall be submitted by him with the relevant bill.

8. EXTRA ITEMS

The contractor is bound to carry out any items of work necessary for the completion of the job even though such items may not have been included in the schedule of probable quantities or rates, such items being necessary or essential for completing the job. Variation order in respect of such additional items and their quantities will be issued in writing by the Employer.

All shavings, cuttings and other rubbish as it accumulates from time to time during the progress of work and on completion including that of the sub-contractors and special tradesman and all materials condemned by the project engineer shall be cleared and removed from the site by the contractor without any extra charge.

All measuring steel taps, scaffolding, ladders instruments and tools that may be required for taking measurements shall be supplied by the contractor.

9. OVER TIME WORK

If the contractor is required to work night or on holidays in order to maintain the time schedule he shall take prior approval from the Employer. He should also provide and maintain at his own cost sufficient lights as may be necessary to enable the work to proceed satisfactorily during the night.

- 9.2 The contractor shall give full facilities to all other contractors working on site. He shall also arrange his programme of work so as not hinder the progress of other trades. The decision of the Employers on any point of dispute between the various parties shall be final and binding.
- 9.3 It is specifically pointed out that the contractor shall not be entitled to any compensation whatsoever on account of delay in procurement or supply of controlled materials and the rates quoted in the contract are fixed till the completion of the contract.
- 9.4 The contractor shall co-operate with other agencies appointed by the Employer for the work to proceed smoothly with the least possible delay and to the satisfaction.
- 9.5 The owners shall provide a source for power supply at one convenient point at site. The contractor shall at his own cost install a separate meter at the said source and lay additional cables from the said source also at his own cost. For the electricity consumed by the contractor he shall pay the owner the actual cost at the rate charged by the local authority for power for constructional purposes. The contractor shall also obtain the necessary permit for utilizing power for constructional purposes.

10. TERMS OF PAYMENT

Stage of work	Engine-Alternator set & AMF panel	Other items
After initial inspection(wher- ever specified)& delivery at site in good condition on pro-rata basis	75%	75%
On Completion of pro-rata installation	15%	15%
On commissioning and completion of successful running in period & taking over of DG set by the department	5%	5%

Balance 5% kept as security deposit for defect liability period which will be released against BG .

11.1 EXECUTION WORK

11.1.1 The whole of the work as described in the contract (including bills of materials, specification and all drawings pertaining thereto) and as advised by the Owners/Employers from time is to be carried out and completed in all parts to the entire satisfaction of the Owners/Employers. Any minor details of construction which are obviously and fairly intended, or which may not have been definitely referred to in this contract, but which are usual construction practice and essential to the work, shall be included in this contract.

11.2 MAINTENANCE & TRAINING FOR PERSONNEL

11.2.1 The contractor shall without any extra cost carry out for a period of 12 months after the installation is taken over by the owners, all routine and special maintenance and attend to any difficulties and defects that may arise in the operation of the system.

11.2.2 The contractor shall associate with the Employers' staff during erection and the maintenance period, in the maintenance/operation of the system..

11.2.3 If required, by the Employers, the contractor shall also train members of the Employers' staff at their works/service station without any extra charge.

11.3 CERTIFICATE OF COMPLETION

11.3.1 The contractor shall intimate to HLL in writing as and when the works are completed and put into beneficial use in order to enable HLL to check certify to the Employer to take over the plants.

11.3.2 The work shall not be considered as completed and put into beneficial use until HLL have certified in writing that the same has been completed and put into beneficial use.

11.3.3 The defects liability period of one year shall commence from date of such completion or any specific date mentioned therein.

11.4 OPERATIONAL AND MAINTENANCE MANUALS

11.4.1 The contractor shall also furnish the prints of all up-dated handing over along with required set of operating/maintenance manuals/instructions.

11.5 STATUTORY APPROVALS

All statutory approvals pertaining to the installations including electrical inspector approvals shall be in the scope of the contractor.

**ALL ROWS SHALL BE FILLED, THIS IS MANDATORY
(IF NIL OR NA, THAT MAY ALSO BE SHOWN)**

BILL OF QUANTITIES

ABSTRACT

Sl. No.	Item	Amount
1	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF 160KVA DG SET AT MEDICAL COLLEGE, ALAPPUZHA	
a)	Service tax component to be paid by the bidder	
b)	Service tax component to be directly paid by the HLL in case the bidder is a Proprietary firm	
	GRAND TOTAL [INCLUDING 100% SERVICE TAX (a +b)]	

Signature of the Bidder with date

Supply, Installation, Testing & Commissioning of 160 KVA DG set at CCU , Medical college Alappuzha.

SL No.	Description	Unit	Qty	Rate in words and figures	Amount in words and figures
LMR					
1	<p>Supply, Installation, Testing and Commissioning of 160KVA, silent type, water cooled, radiator type, four stroke, electric start D.G Set with acoustic enclosure and standard control panel. The engine shall be capable of taking 10% overload for one hour after 12 hours of continuous operation. The DG shall be suitable for AMF operation. The alternator shall be brushless, self excited, self regulated, brushless, SPDP enclosure, class F/H insulation, suitable for continuous operation at 1500 rpm, generating 415 V +/- 5% at 0.8 p.f, 50Hz, 0.85 load factor, 3 phase, 4 wire system generally conforming to BS: 2613 & IS: 4722.</p>				
	<p>The DG set control panel shall be provided with all engine protection equipments, indications etc The DG set shall be suitable for AMF operation.including all necessary control cabling From DG set to AMF panel. The DG set control panel shall have 250A, 25kA TPN thermal magnetic type MCCB with OL, SC and EF protection, RYB, on/off indication lamp, voltmeter, ammeter, energymeter, frequency meter etc The Low set earth fault relay shall be provided in control panel with CT of 50/5A 10VA Cl. 5P10 at DG neutral.</p>				

	Both Engine and Alternator shall be mounted on common channel iron base Frame, and with standard accessories such as antivibration pad, lead acid batteries (as specified by engine manufacturer) and engine driven battery charger along with leads, battery stand, fuel piping From fuel tank, electronic governor, Residential silencer, suitable size cable termination box, required Danger boards, signage, lettering ,external battery charger etc as required. Rate shall be inclusive of all lift, lead charges. The work should be as per Electrical Inspectorate / Pollution control board norms.	Nos	1		
2	Supply & installation of exhaust gas piping of suitable diameter as per manufactures standard welded black MS, B class pipe confirming to IS:3589 cut to required lengths and installed with necessary bends, supports and clamps, anti- vibration mountings, insulation of exhaust system with mineral wool / Rockwool, 50mm thick wire mesh & aluminum cladding etc.	m	30		
3	Supply, Installation, Testing & Commissioning of DG set AMF panel, cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalized, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				

	250A, FP, 25kA, thermal magnetic based MCCB, with adjustable overload, short circuit protection - 2 nos.				
	250A, FP, AC3 duty Power contactor - 2 set				
	Suitable electrical interlock shall be provided between the DG and EB incomer.				
	Busbar				
	1 Set of 250 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	2A, C curve SP MCB - 2 set				
	RYB indication lamp, LED type - 2 set				
	On/Off, Trip indication lamp, LED type - 2 set				
	Multi function meter to read (V,A,F) - 2 set				
	250/5A 10VA class 1 resin cast CT for metering - 2set				
	Required Danger boards, signages, lettering etc.				
	Microprocessor based AMF logic with EB sensing, protection for under / over voltage, reverse power, under / over Frequency, unbalance, programmable start/stop timings, DG battery supervision integral push button for DG stat/stop, DG breaker close/open, Auto/Manual/Off and Annunciator accept / reset. Programmable mains restoration, re-cooling timings, Micro-processor based Protection relays, 8 window LCD Annunciator for DG faults shall be provided.				
	Necessary LVMS and required control accessories and control cable shall be provided for sensing on both the EB incoming supply for the auto start of DG set.	Each	1		

4	Supply, Installation, Testing & Commissioning of LT floor panel, cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalized, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	1 no. 250A, TPN, AC23, 415V, 50Hz switch disconnecter unit (Isolator) complete with handle assembly and door interlock.				
	Busbar				
	1 Set of 250 A TPN busbars of high conductivity electrolytic quality Aluminium alloy and suitable size earthing conductor through out the panel for its earthing.				
	Instruments				
	1 No 3 phase Digital Multi function meter to read V, A, F, Acc class 1.				
	1 Set of phase indicating lamps, LED type, RYB.				
	1 Set of 2A 10kA C curve SP control MCB				
	1 Set of 250/5A, Class 1.0, 10VA, Cast Resin CT				
	Outgoing				
	200A, TPN, 25kA, thermal magnetic based MCCB, with adjustable overload, short circuit protection - 1 no.				
	100A, TPN, 25kA, thermal magnetic based MCCB, with adjustable overload, short circuit protection - 2 nos.	Each	1		

5	Supply and installation of 250A, Four pole, AC23A, On load Change over switch with all required accessories, extended rotary handle, in sheet steel enclosure, including connecting the existing cables complete as required.	Each	2		
6	Supply and installation of 250A, FP, 25kA, MCCB, with adjustable thermal magnetic OL release with all required accessories, in sheet steel enclosure, including connecting the existing cables complete as required.	Each	1		
7	Supplying and installing 300 mm W x 100 mm H x 4mm T FRP ladder type cable tray made of vinylester resins and shall meet NEMA FG 1 standard. The cable tray has to be ultra violet resistant, corrosion resistant and fire retardant. The side runner shall be 100x30x4 mm thick. The rungs shall be of square tube of 25 x 25mm. The item shall include all necessary accessories like FRP coupler plates, bends, SS bolt, nuts and washers etc as required.	m	35		
8	Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) amended upto date.				
a	3.5 C x 240 sq.mm	m	220		
b	3.5 C x 185 sq.mm	m	60		
c	3.5 C x 50 sq.mm	m	45		

9	Supply & laying ISI marked following electrical grade chequered type rubber mat.				
	2m x 1m x 6 mm for 415V grade				
		Nos	2		
10	Supply, fabrication and fixing 3 nos MS Fire buckets on suitable fabricated MS angle iron stand with hook, painting with red paint & filled with dry sand as required with all required accessories.	Set	1		
11	Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.	Each	2		
12	Supply and providing Electrical main single line Diagram duly Framed and placed in a conspicuous location for clear vision.	Each	1		
13	Preparation of electrical drawing, submission of drawings to Electrical inspectorate, KSEB and obtaining approval, arranging inspection for entire installation in this scope of work and other utilities, obtaining road cutting permission obtaining sanction order	Job	1		
	Total Amount in Rs (LMR Items)				
DSR Item					
14	Supplying and making end termination with brass compression gland and aluminium lugs including gland earthing for following size of PVC insulated and				

	PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
a	3.5 C x 240 sq.mm	Each	8		
b	3.5 C x 185 sq.mm	Each	8		
c	3.5 C x 50 sq.mm	Each	2		
15	Supplying and installing following size of perforated GI cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with GI suspenders including bolts & nuts, horizontal & vertical bends, reducers, tees, cross members & all other accessories as required.				
	300 mm width x 50 mm depth x 1.6 mm thickness	m	40		
	150 mm width x 50 mm depth x 1.6 mm thickness	m	25		
16	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				

	Upto 35 sq. mm	m	15		
	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	40		
	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	m	40		
	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	m	40		
17	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
a	Upto 35 sq. mm	m	70		
b	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	m	20		
c	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	m	40		
d	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	m	200		

18	Earthing with copper earth plate 600 mm x 600 mm x 3 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc with charcoal or coke and salt complete as required.	Set	2		
19	Earthing with GI earth plate 600 mm x 600 mm x 6 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal or coke and salt complete as required.	Set	2		
20	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	m	20		
21	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	m	30		
22	Providing and fixing 25 mm x 5 mm Copper strip on surface or in recess for earth connections etc. as required.	m	80		
23	Providing and fixing 25 mm x 5 mm GI strip on surface or in recess for earth connections etc. as required.	m	260		

24	Providing and fixing 4.0 mm copper wire on surface or in recess for earth connection	m	60		
25	Providing, laying & fixing 100 mm dia GI pipe (medium class) in ground / surface complete with GI fittings etc as required.	m	10		
	Grant Total				

The quoted rate should be inclusive of all applicable taxes including the work contract tax.