NOTICE INVITING TENDER

For Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur.



ALL INDIA INSTITUTE OF MEDICAL SCIENCES RAIPUR

OFFICE OF
THE EXECUTIVE ENGINEER
PROJECT CELL, AIIMS, RAIPUR

NIT NO. : 14/EE/AIIMS/2018-19

NIT Issue Date : 19th September 2018

Last Date of Submission: 1st October 2018 (3.00 PM)

"Certified that, this tender document contains Twenty Nine pages only".

Executive Engineer AIIMS, Raipur

Government of India, Ministry of Health & Family Welfare <u>Project Cell, AlIMS, Raipur</u>

Name of the work: Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur.

INDEX

1	Cover Page	01
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2	Index	02
3	Information and Instructions to the Bidders	03 to 07
4	GENERAL & COMMERCIAL TERMS AND CONDITIONS	08 to 15
5	Additional Terms & Condition	16 to 17
6	Specification and Additional condition of Diesel Generator Set	18 to 23
7	Acceptable Makes	24
7	Format I & Format-II	25 to 26
8	Affidavit form (Annex – I)	27
9	Technical Bid (Check List)	28
10	Declaration to be given by the Tenderer (Appendix-A)	29
11	Specimen Agreement Form	30 to 34
12	Performa of Schedules	35 to 37
13	Format for Performance Security/Bank Guarantee – Appendix 'B'	38 to 39
14	Financial Bid	40 to 42

INFORMATION AND INSTRUCTIONS TO THE BIDDEERS

Sealed Tenders are invited from authorised agencies of company manufacturer with valid registered class "A" Electrical licence contractor with work experience from central Govt, State Govt, Autonomous bodies, PSUs for the following work.

Ser.	Particulars	Particulars
No.		
1	NIT No.	14/EE/AIIMS/2018-19
2	Name of Work & Location	Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur.
3	Estimated Cost put to Tender (In Rs.)	Rs. 25,00,000/- (Rupees TWENTY FIVE LAKH only)
4	Earnest Money Deposit (In Rs.)	Rs. 50,000/- (Rupees FIFTY THOUSAND only)
5	Period of Completion	One Months (30 Days)
6	Last date & time of Submission of Tender	1 st October 2018 at 3.00 PM
7	Date & Time of Opening of Tender/Bid	1 st October 2018 at 3.30 PM onwards

- 1. The intending bidder must read the terms and conditions of tender document carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents / certificates required.
- 2. Information and instructions for bidders posted on web site shall form part of bid document.
- 3. The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and these to of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.aiimsraipur.edu.in
- 4. But the **Bid can only be submitted after depositing** (Non-Refundable, **Cost of Tender Paper**) for **Rs 500/-** (Rupees **FIVE HUNDRED** only) in favour of "**AIIMS**, **Raipur**" in form of **Demand Draft (DD)**.
- 5. The enlistment of the contractors should be valid on the last date of sale of Tenders. In case the last date of submission of bid is extended; the contractor should be valid on the original date of submission of bids. In case both the last date of receipt of application and Sale of Tenders are extended, the enlistment of contractor should be valid on either of the two dates i.e. original date of sale of Tender or on the extended date of sale of Tenders.

- 6. The authority competent to approve NIT for the combined cost and belonging to the Major discipline will consolidate NITs for calling the bids. He will also nominate a committee which will deal with all matters relating to the invitation of bids. For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicate the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.
- 7 Intending bidders is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-
 - (a) Criteria of eligibility for contractors: 03(Three) similar works of 250 KVA or above DG set Installation, Testing & Commissioning each of value not less than 40% of the estimated cost put to tender or 02 (Two) similar works of 250 KVA or above DG set Installation, Testing & Commissioning each of value not less than 60% of the estimated cost put to tender or 01 (One) similar works of 250 KVA or above DG set Installation, Testing & Commissioning each of value not less than 80% of the estimated cost put to tender in last Seven years. Xerox copy of work order and completion certificate must be submitted with Technical Bid.
- 8. To become eligible for issue of bid, contractors shall have to furnish an affidavit as under: -

"I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee".

- **9.** Agreement shall be drawn with the successful bidders on prescribed Form of **AIIMS**, **RAIPUR** which is available on website www.aiimsrsaipur.edu.in **Bidders** shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
- 10. The time allowed for completion of work will be **One (01) month** from the date of start as defined in schedule "B" or from the first date of handing over of the site.
- 11. The site for the work is available.
- 12. The Tender should be submitted in 02 (Two) parts i.e. Technical Bid & Financial Bid. The Technical Bid and the Financial Bid should be sealed by the Bidder in 02 (Two) separate Covers superscripted with name of work in both the envelopes as "Technical Bid and "Financial Bid" respectively. Both sealed envelopes should be kept in a main/bigger envelope superscripted as "Tender for Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur" All the document(s) should be properly tagged with page reference have to be quoted on the Index Sheet.

- (a) Envelope 1. Technical Bid must contain (Refer Page-17):-
 - (i) **Tender Processing Fee for Rs. 500/-** (Demand Draft in original).
 - (ii) Earnest Money Deposit (EMD) for Rs. 50,000/- (Demand Draft in original).
 - (iii) Xerox copy of self-attested valid class "A" electrical licence.
 - (iv) Xerox copy of self-attested PAN Card.
 - (v) GST No. / Documents for applying for GST No.
 - (vi) Xerox copy of Experience Certificate(s)
 - (viii) Xerox copy of work order and completion certificate as per 7(a)
 - (b) <u>Envelope 2</u>. Consisting of Financial Part of Tender (<u>Refer Page-29</u>).
- (c) All the above 02(Two) Envelopes (i.e. Envelope 1 & 2) shall **be put in 03**rd **Covering Envelope** and must be <u>"superscripted"</u> with the subject Tender (i.e. name of the work).
- (d) The Bidder(s)/Tenderer should also furnish their Office Address along with contact number on all the three Envelope(s) for reference.
- (e) The Tender paper/documents can be downloaded from Official website & submitted through speed Post/Courier Services or can be dropped on Tender Box available in Office of Executive Engineer,1st Floor, Hospital Administrative Block, AIIMS, Raipur-492099. For any query, Executive Engineer (Civil), AIIMS, Raipur, Phone: 0771 2572930 may be contacted.
- 13. (a) <u>Tender Processing Fee</u>: Rs. 500.00 (Rupees FIVE HUNDRED only) (Non Refundable) shall payable to "AIIMS Raipur" through Demand Draft (DD)/ Bankers Cheque (BC).
- (b) <u>Earnest Money Deposit (EMD)</u>: Rs. 50,000 (Rupees FIFTY THOUSAND only) shall payable to "AIIMS, RAIPUR" through Demand Draft (DD)/Bankers Cheque (BC).
- 14. The bids submitted shall be opened at 3.30 PM onward 19th September 2018.
- 15. The bid submitted shall be come invalid and cost of Tender processing fee shall not be refunded if:-
 - (a) The bidders are found in eligible.
 - (b) The bidders do not submit all the documents as stipulated in the bid document.

16. The successful Contractor will require furnishing a Performance Guarantee of 5% (Five Percent) of Contract Value after receiving Letter of Acceptance in the form of Demand Draft/Fixed Deposit Receipt or Bank Guarantee from any nationalized Bank duly pledged in the name of "AIIMS, RAIPUR" which shall be kept valid for a period of 60 (Sixty) days beyond completion of all the Contractual Obligations. The Security Deposit can be forfeited by order of this Institute in the event of any breach of negligence or non-observance of any condition of Contract or for unsatisfactory performance or non-observance of any condition of the Contract.

Performance Security will be discharged after completion of Contractor's Performance Obligations (including Warranty/Guarantee Period i.e minimum 01 years) under the Contract. In case the Contractor fails to deposit the said Performance Guarantee within the period including the extended period if any, the Earnest Money deposited by the Contractor shall be forfeited automatically without any notice to the Contractor. The format for Performance Security/Bank Guarantee (Page 27-28 refers) is as per Appendix `B'.

- 17. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the mean suffices to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
- 18. The Competent Authority on behalf of **Director, AIIMS, RAIPUR** does not bind itself accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
- 19. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
- 20. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
- 21. Delayed/Late/Conditional quotations/Tenders shall not be accepted at all.

- 22. Security Deposit of 5% of the Contract Value will be deducted from the final Bills.
- 23. (a) The Income Tax as applicable shall be deducted from the Bill unless exempted by the Income Tax Department.
 - (b) The quoted rates shall be inclusive of GST.
 - (c) Labour Cess will be deducted as per rule.
- 24. Conditional Bid will be rejected.
- 25. All the work shall be completed within **One (01) Month** from the date of issue of work Order by the Institute. All the aspects of safe installation shall be the exclusive responsibility of the Contractor. If the contractor fails to complete the work on or before the stipulated date, than a **penalty at the Rate of 0.50% per week of the total order value** shall be levied subject to maximum of 10% of the total order value.
- 26. All arbitration shall be held in accordance with the provision of the arbitration and conciliation Act-1996 and the venue of arbitration shall be at RAIPUR. The decision of the Arbitrator shall be final and binding on both the Parties.
- 27. The Technical Bid(s) shall be opened first on 1st October 2018 at 3.30 PM onwards. Financial Bid of Bidders, whose Technical Bid is found to be eligible, will be opened later in presence of Bidders or the representatives. The Date & Time of opening of Financial Bid will be intimated to eligible Bidder(s) in time. After the evaluation of the Bid(s), AIIMS, RAIPUR will award the contract to the lowest evaluated responsive tenderer. Conditional Bid will be treated as unresponsive and will be rejected.
- 28. Any disputes are subject to exclusive jurisdiction of Competent Court and Forum in RAIPUR (Chhattisgarh), India only.
- 29. Bidder shall submit a copy of the Tender Document and Addendum/Corrigendum thereof if any, with each page of this document should signed and stamped to confirm the acceptance of the entire Terms & conditions as mentioned in the Tender Enquiry document.
- 30. All the work should be done as per CPWD Specification and relevant Codes.

Executive Engineer AIIMS, RAIPUR

GENERAL & COMMERCIAL TERMS AND CONDITIONS

Name of work:- Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur.

1.0 GENERAL

The work shall be executed as per CPWD's general specification for Electrical Works Part -I (Internal)-2013, Part-II (External)-1994, Part-VII (DG Sets) 2013, IE Rules, Indian Standards amended upto date and as per direction of Engineer-in-Charge. The additional specifications are to be read with above and in case of any variations, specifications given along with the tender shall apply.

2.0 LOCATION

The work is to be executed at **MEDICAL GAS PLANT** at **AIIMS**, **RAIPUR** (Chattisgarh) . The contractor is advised to visit the site before submission of their tender and ensure that equipment being offered by them shall be accommodated in the spaces available.

3.0. RATES

- 3.1. The rates quoted by the tenderer, shall be firm and inclusive of all taxes (including works contract tax), entry tax, duties and levies and all charges for packing, forwarding, insurance, freight, delivery, installation, testing, commissioning etc. at site including temporary constructional storage, risks, overhead charges, general liabilities/obligations etc. The service tax, if any, shall not be included in the quoted rates. It shall be reimbursed separately on production of documentary proof by the firm for its payment for this work.
- 3.2. Octroi exemption certificate will be issued by the department, if required by the contractor. However, the department is not liable to reimburse the octroi duty in case exemption certificates are not honored by the concerned authorities.
- 3.3. The contractor has to carry out routine and preventive maintenance as per manufacturer's standards for a period of 12 months from the date of handing over. However, all consumables (fuel/lube oil etc) and spare parts including filters will be supplied by the department.

4.0 SUBMISSION OF TENDER:-

4.1 **Type of Contract:**

The work to be awarded by this tender shall be treated as indivisible works contract.

4.2 The tender shall be submitted in sealed envelope.

IMPORTANT POINTS FOR THE ATTENTION OF TENDERERS COMMERCIAL CONDITIONS

- 5.0 **Type of Contract**: The work to be awarded by this tender shall be treated as indivisible works contract.
- 5.1 The tenderers are advised not to deviate from the technical specifications/ items, commercial terms and conditions of NIT like terms of payment, guarantee, arbitration clause, escalation etc.
- 5.2 Tenders shall be opened by Executive Engineer, AIIMS Raipur on the due date and time in the presence of tenderers or their authorized representatives who wish to remain present.

- 5.3 Scrutiny/evaluation of the Tenders shall be done by the department. In case it is found that the Tenders (Technical Bid cum Price Bid) of a tenderer is not in line with NIT specifications/ requirements and/ or contains too many deviations, the department reserves the right to reject the bid of such firm(s) without making any reference to the tenderer(s).
- 5.4. Necessary clarifications/confirmations required by the department shall have to be furnished by the tenderer within the time given by AIIMS Raipur for the same. The tenderer will have to depute his representative to discuss with the officer(s) of the AIIMS Raipur as and when so desired. In case, in the opinion of the AIIMS Raipur a tenderer is taking undue long time in furnishing the desired clarifications, his bid will be rejected without making any reference.
- 5.5 AIIMS Raipur reserves the right to reject any or all the price bids and call for fresh prices/ tenders as the case may be without assigning any reason.

6.0 CONFORMITY WITH STATUTORY ACTS, RULES, STANDARDS AND CODES

- 1) All components shall conform to relevant Indian Standard Specifications, wherever existing, amended to date.
- 2) All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 2003 and Indian Electricity Rules, 1956 amended to date. They shall also conform to CPWD General Specifications for Electrical Works, Part-I: Internal 2013 and Part-II External, 1994 and Par-VII (DG Sets) 2013, amended to date.

7.0. SAFETY CODES AND LABOUR REGULATIONS

- 1) In respect of all labour employed directly or indirectly on the work for the performance of the contractor's part of work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provisions, B.I.S. recommendations, factory act, workman's compensation act, CPWD codes and instructions issued from time to time. Failure to provide such safety requirements would make the tenderer liable for penalty for Rs.200/- each violation. In addition the Engineer-in-charge shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost from the contractor.
- 2) The contractor shall provide necessary barriers, warning signals and other safety measures while executing the work of DG Set Installation, cables etc. or wherever necessary so as to avoid accident.
- 3) He shall also indemnify AIIMS Raipur against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause. AIIMS Raipur shall not be responsible for any accident occurred or damage incurred or claims arising there from during the execution of work. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.

8.0 WORKS TO BE ARRANGED BY AIIMS Raipur

Unless otherwise specified in the tender documents, the following works shall be arranged by AIIMS Raipur

- 1) Space for accommodating all the equipment's and components involved in the work. However, watch and ward shall be responsibility of the contractor.
- 2) Power supply (single/three phase).

9.0 WORKS TO BE DONE BY THE CONTRACTOR

Unless otherwise mentioned in the tender documents, the following works shall be done by the contractor and therefore, their cost shall be deemed to be included in their tendered cost – whether specifically indicated in the schedule of work or not:-

1. Necessary foundation for DG set will be done by Contractor.

- 2. Making good all damages caused to the structure during installation and restoring the same to their original finish.
- 3. Minor building works necessary for installation of equipment's, foundation trench for fuel line and cable, making of opening in all's or in floors and restoring them to their original condition/finish and necessary grouting etc., as required.
- 4. All supports for exhaust and water pipes, chimney, bus trunking (if included in scope of contract), cables, anti-vibration pads etc as are necessary.
- 5. All electrical works and neutral earthing, body earthing, required for engine and alternator, main board/control panels, and control wiring including loop earthing if specified in Schedule of work.
- 6. All pipes, bus trunking and/or cable connections.
- 7. POL i.e. HSD oil and lub oil for diesel engine for testing & commissioning and for trial run as per conditions of the contract.
- 8. Painting of all exposed metal surface of equipment's and components with appropriate colour.
- 9. Clearance/Approval of the complete installation from CPCB/State Pollution Control Board/CentralElectricity Authority (CEA)/Local Bodies and other Licensing Authorities, wherever required.

10.0. POWER SUPPLY AND WATER SUPPLY

10.1. Power Supply

- 1. Unless otherwise specified, 3 phase, 415 volts, 50 Hz power supply shall be provided by the department free of charge to the contractor at one point for installation at site suitable for 10 KW load Termination switchgear, however, shall be provided by the contractor. Further extension, if required shall be done by the contractor.
- 2. The contractor shall not use the power supply for any other purpose than that for which it is intended for. No major fabrication work shall be done at site. Power shall be used only for Welding/cutting works. The power supply shall be disconnected in case of such default and the contractor shall then have to arrange the required power supply at his cost.

10.2. Water Supply

Water supply shall be made available to the contractor by the Department free of charge at one point.

11.0. MACHINERY FOR ERECTION

All tools and tackles required for unloading/handling of equipment's and materials at site, their

assembly, erection, testing and commissioning shall be the responsibility of the contractor.

12.0. COMPLETENESS OF THE TENDER, SUBMISSION OF PROGRAMME, APPROVAL OF DRAWINGS AND COMMENCEMENT OF WORK.

1. Completeness of Tender

All sundry equipment's, fittings, assemblies, accessories, hardware items, foundation bolts, supports, termination lugs for electrical connections, cable glands, junction boxes and all other sundry items for proper assembly and installation of the various equipment's and components of the work shall be deemed to have been included in the tender, irrespective of the fact that whether such items are specifically mentioned in tender documents or not.

2. Submission of Programme

Within ten days from the date of receipt of the letter of acceptance, the successful tenderer shall submit his programme for submission of drawings, supply of equipment's, installation, testing, commissioning and handing over of the installation to the Engineer-in-Charge.

3. Submission of drawings

The contractor shall submit the drawings to the Engineer-in-Charge for approval before start of work.

4. Commencement of Work

The contractor shall commence work as soon as the drawings submitted by him are approved.

13.0. DISPATCH OF MATERIALS TO SITE AND THEIR SAFE CUSTODY

The contractor shall dispatch materials to site in consultation with the Engineer-in-Charge. Suitable lockable storage accommodation shall be made available free of charge temporarily. Watch & ward, however, shall be the responsibility of contractor. Programme of dispatch of material shall be framed keeping in view the time frame for completion of work..

14.0. CO-ORDINATION WITH OTHER AGENCIES

The contractor shall co -ordinate with all other agencies involved in the work so that the work of other agencies is not hampered due to delay in his work.

15.0. INDEMNITY

The successful tenderer shall at all times indemnify AIIMS Raipur, consequent upon this works contract. The successful tenderer shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising therefrom on AIIMS Raipur during the period of erection, construction and putting into operation the equipment's and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

16.0. QUALITY OF MATERIALS AND WORKMANSHIP

- 1) The components of the installation shall be of such design so as to satisfactorily function under all conditions of operation.
- 2) The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice. The entire installation shall be such as to cause minimum transmission of noise and vibration to the Hospital campus building structure.
- 3) All equipment's and materials to be used in work shall be manufactured in factories of good repute having excellent track record of quality manufacturing, performance and proper after sales service.

17.0. CARE OF THE BUILDING

Care shall be taken by the contractor during execution of the work to avoid damage to the building. He shall be responsible for repairing all such damages and restoring the same to the original finish at his cost. He shall also remove all unwanted and waste materials arising out of the installation from the site of work from time to time.

18.0. INSPECTION AND TESTING

It shall be as per CPWD Specifications for DG Sets Part-VII – 2013 (Para 1.15).

19.0. Safety Measures.

All equipment's shall incorporate suitable safety provisions to ensure safety of the operating personnel as per manufacturers' standard practice.

20.0. STATUTORY CLEARANCE(S)

Approval/clearance of the complete installation shall be obtained by the contractor from CPCB/State Pollution Control Board/Local Bodies/Central Electricity Authority (CEA)/other Licensing Authorities, wherever required. However, application shall be made by Department and any statutory fee, as applicable, shall be paid by Department directly to the Govt. Authorities concerned.

21.0. GUARANTEE

All equipment's shall be guaranteed, against unsatisfactory performance and/or break down due to defective design, workmanship or material, for a period of **12 months** from the date of taking over the installation by the department. The equipment's or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the department that undue delay is being caused by the contractor in attending the defect/fault removed, the same will be got done by the department at the risk cost of the contractor. The decision of the Engineer-in-Charge in this regard shallbefinal.

22.0. PAYMENT TERMS

22.1. The following percentage of contract rates shall be payable against the stages of work shown herein:

Sr.No	Stage of work	Engine and Alternator Set & AMF Panel	All other items.
I	After initial inspection (wherever specified) and delivery at site in good condition on pro- rata basis	80%	80%
Ш	On completion of pro-rata installation.	15%	15%
III	On commissioning and completion of successful running in period and taking over of the DG Set by the department.	5%	5 %

22.2. Deduction of Security Deposit shall be governed by standard/relevant clauses of CPWD-7/8.

23.0. TENDER DRAWINGS, DRAWINGS FOR APPROVAL & COMPLETION DRAWINGS.

23.1. Tender Drawings.

The drawings appended with the tender documents are intended to show space allotted for various equipment's. The equipment's offered shall be suitable for installation in the spaces shown in these drawings.

23.2. Drawings for approval on award of the work

- 1) The contractor shall prepare & submit three sets of following drawings and get them approved from the Engineer-in-Charge before the start of the work. The approval of drawings, however, does not absolve the contractor not to supply the equipment's/materials as per agreement, if there is any contradiction between the approved drawings and agreement.
- Layout drawings of the equipment's to be installed including control cables, fuel/lube
 oil pipes and supports/structure for exhaust piping, chimney and bus ducts/cable
 trays.
- 3) Drawings including section, showing the details of erection of entire equipment's.
- 4) Electrical wiring diagrams from engine-alternator set to electrical control panel,
- 5) electrical control panel to essential LT Board including the sizes and capacities of the various
- 6) electrical/control cables and equipment's.
- 7) Dimensional drawings of acoustic enclosure/engine-alternator set and electrical control panel.
- 8) Drawings showing details of supports for pipes, chimney cable trays, ducts etc.
- 9) Any other drawings relevant to the work.

23.3. Drawings/Documents to be furnished on completion of installation.

- **23.3.1** The sets of following laminated drawings shall be submitted by the contractor while handing over installation to the Department. Out of these three, one set shall be laminated on a hard base for display in the DG Set room/room where AMF panel is installed. One set shall be displayed in Junior Engineer's Room. In addition, drawings will be given on Compact Disk (CD):
 - (a) DG Set installation drawing giving complete details of all the equipment's, including their foundation.
 - (b) line diagram and layout of all electrical control/AMF panels giving switchgear ratings and their disposition, cable feeder and their layout.
 - (c) Control wiring drawings with all control components and sequence of operations to explain the operation of control circuits in AMF panel/PCC.
 - **23.3.2** Manufacturer's technical catalogues of all equipment's and accessories.

(a) Operation and Maintenance Manual of all major equipment's, detailing all adjustments, operation and maintenance procedure.

24.0. AFTER SALES SERVICES

The contractor shall ensure adequate and prompt after sales service free of cost during guarantee period, and against payment after the guarantee period is over, in the form of maintenance, spares and personnel as and when required during normal life span of the equipment's and shall minimize the breakdown period. In case of equipment supplied by other manufactures the firm furnishes a guarantee from the manufacturer for the same before the DG Set installation is taken over.

ADDITIONAL TERMS AND CONDITIONS

- 1) All the works should be carried out as per General Specifications for elect. Part-I (Internal) 2013, Part-II (External) 1994, Part-VII DG Set 2013 Amended up to date and should also comply with relevant provisions of the Indian Electricity Rules and Indian Electricity Act amended upto date.
- 2) All the materials to be used on work shall be got approved by the contractor from the Engineer-in-charge before their use on work. All rejected materials should be removed from the site of work immediately.
- 3) The work shall be carried out with good workmanship and as per instructions of Engineer-incharge.
- 4) All repairs and patch works shall be neatly carried out to match with original finish and all damages done to the building/road during the execution of electrical works shall be the responsibility of the electrical contractor and same will have to be made good immediately by him at his own cost to the entire satisfaction of the Engineer-in-charge.
- 5) The contractor/his supervisor is bound to sign the site order book as and when required by the Engineer-in-charge and carry out the instructions record therein.
- 6) The contractor is fully responsible for safety of material at site till final handing over to the department. The contractor shall have to make alls such arrangement for safe storing the materials and watch and its ward at his own cost.
- 7) The work shall not be taken over in parts unless otherwise agreed to by the Engineer-in-charge.
- 8) All debris due to electrical work shall be removed and shall be cleared by the contractor as soon as his work is completed.
- 9) The contractor shall have to make his own arrangement for transportation from the point of issue of stores to site and safe custody of the materials issued departmentally and nothing extra will be paid to him on this account.
- 10) The contractor shall ensure that all the persons executing the electrical work have the valid electrical license. Consequences arising due to the fault for not complying with the above conditions would be contractor's responsibility.
 - 11) Earthing shall have to be done in the presence of Engineer-in-charge or his representative.
- 12) The contractor will make his own arrangement at his own cost for all general and electrical tools and plants required for the work.
- 13) The DG Set, essential shall be got inspected at manufacturers works prior to dispatch by Engineer-in-charge or his authorised representative for which Contractor shall give advance intimation to Engineer-in-charge.
- 14) Manufacturers test certificates of engine; alternator and essential panel should be submitted by the firm at the time of supply for which no payment shall be made.

- 15) The firm shall have to submit calculation showing auxiliary consumption of power developed i.e. for cooling, battery charging and conversion efficiency etc. and net power available for alternator.
 - 16) The firm shall have to submit copy of environmental clearance certificate duly self attested.
- 17) KWH Meter of suitable rating shall be provided; fuel tank shall be calibrated so that oil consumption per KWH at 25 %, 50 % & 100 % of full load is measured during testing at work of manufacturer or OEM.
- 18) DG set will be working as standby to existing power supply, Contractor should visit site and understand the scheme and offer accordingly.

SPECIFICATION AND ADDITIONAL CONDITIONS OF DIESEL GENERATOR SET

1.0 Technical

Detailed technical specifications for the equipment's and installations are indicated hereunder:-

- 1.1. Diesel Engine: As per CPWD Specifications for Electrical Works Part-VII (2013) for DG Sets.
 - a) All the Engine accessories shall be as per CPWD Specifications mentioned above. The Governor shall be of at least class A1 as per ISO 3046/BS 5514 for 250 KVA.
 - b) The Silencer should be dry type spark arrestor suitable for outdoor mounting.the residential type silencer as per standard design of the manufacturer for approved model is also acceptable.
 - c) Fuel service tank of minimum as 285-300 Litres for 250 KVA (Inbuilt) DG Sets.
- **2.0 Alternator:** The Alternator shall be rated for a prime output of specified KVA and NTP and it should be as per CPWD Specifications for Electrical Works Part-VII for DG Sets 2013.
- 3.0 AMF Panel.

3.1. General Features

The AMF panel shall be fabricated out of sheet steel, totally enclosed, dust, damp and vermin proof free standing floor mounted type and front of board operated. It shall preferably be made into sections such that as far as feasible, there is no mixing of control, power D.C. and A.C. functions in the same section and they are sufficiently segregated, except where they come together on unit like relay/contactor etc is necessary. Sheet steel used for fabrication shall not be less than 2.0 mm thick. Hinged doors shall be provided at the rear and front, preferably double leaf, for each section for access to routine inspection from the rear etc. All indicating lamps, instruments meters etc. shall be in the front. The degree of protection required will be IP 42 confirming to IS 2147-1962.

3.2. Earthing arrangement

One No. 25 mm x 5 mm copper strip shall be run at the rear of the board/connecting all the sections suitable bonding to earth. Earth terminals shall be vibration proof with all hardware of nonferrous or galvanized/plated and passivated in case of ferrous hardware.

3.3. Gland Plates

Removable gland plates sectionalized for receiving various cables that are to enter on to the section and undrilled or with suitable knockout shall be provided at the bottom of the panel sections. Where heavy cables are to be brought and suitable clamps shall also be incorporated to relieve the stress on the glands due to the weight and bends of the cable covers.

3.4. Terminal blocks and wirings

Terminal blocks of robust type and generally not less than 15 Amps capacity, 250 V grade for DC upto 100 V and 660 Volts grade for AC and rest of the junctions shall be employed in such a manner that they are freely accessible for maintenance. All control and small wiring from unit to unit inside the panel shall also be done with not less than 2.5 sq.mm copper conductor PVC insulated and 660 volts grade. Suitable colour coding can be adopted. Wiring harness shall be neatly formed and run, preferably

function wise and as far as feasible the ends.	segregated voltage	ge wise. All ends s	hall be identified	with ferrules at

3.5. Labels

All internal components shall be provided with suitable identification labels suitably engraved. Labels shall be fixed on buttons, indication lamps etc.

3.6. Painting

The entire panel shall be given primer coat after proper treatment and two coats of final paint of approved shade before assembly of various items.

3.7. Equipment requirements:

The control cubical shall incorporate in the assembly, equipment's as under:-

- (a) Control system equipment's and components such as relays, contractors, circuit breakers etc as required for automatic/manual operation.
- (b) Necessary controls for testing the generating set's healthiness, with test mode, on mains.
- (c) Necessary instruments and accessories such as voltmeter power factor meter ammeter, selector switches.
- (d) Necessary indication lamps, fuses, terminal blocks, push buttons control switches etc. as required.
- (e) Necessary set shut down devices due to faults/abnormalities with indications alarm.
- (f) Necessary battery charger and wiring from mains supply.
- (g) Necessary excitation control and voltage regulating equipment.

4.0 System operation

These facilities provided the following operational requirements.

4.1. Manual Mode

- (a) In a manual mode it shall be feasible to start up the generator set only by the operator pressing the start push button.
- (b) Alternator contactor/circuit breaker close and trip preparation shall be also through operator only, by processing the appropriate button on the panel, closure shall be feasible only after alternator has built up full voltage.
- (c) Engine shut down, except otherwise due to faults, shall be manual, by pressing a 'stop' button.

4.2. Test Mode

- 1. When under 'test' mode, the engine shall get the start signal even though the main supply is healthy and the alternator start building up voltage but the set not take load by closing of alternator contractor/breaker. However, if during the test mode the power supply has failed the load shall be automatically get transferred to alternator.
- 2. However, it should be possible to load the set locally, through a TEST contactor (which cannot be closed when the set is in the normal "MANUAL" mode).

4.3. Auto mode

The DG set should be able to start on failure of mains supply and vice versa.

4.4. Engine shut down and alternator protection equipment's

Following shut down and protection system shall be integrated in the control panel.

4.4.1. Engine

- 1. Low lub. Oil pressure shut down.
- 2. High coolant (water) temp shut down.
- 3. Engine over speed shut down. The type of arrangement offered should be indicated in the tender.

4.4.2. Alternator

It shall have overload short circuit and earth leakage protection to trip the circuit breaker/contactor in the event of overloads backed up with MCCBs for short circuit protection, and/or in the vent of earth faults, the O/L trip to be adjustable between 80% to 120% E/L trip to be adjustable between 10% to 40%. An alternator over voltage trip also shall be incorporated.

5.0 Earthing System:-

This shall confirm to CPWD General Specifications for electrical works Part-I Internal 2013 upto date.

6.0 Installation

- Suitable vibration isolation mountings shall be provided by the Contractor, as per the recommendations of the manufacturer of the DG Set and approved by the Engineer-in-charge of the work.
- The scope of work include delivery of DG Set at site including loading, unloading, handling etc and also placement of the same on the foundation. All necessary tools, tackles, labours etc. Required for the purpose shall be arranged by the Contractor.
- The sets shall be accurately levelled so as to ensure trouble free and smooth operation.
- 4 All pipe work, cable work etc shall be carried out in a workman like manner to the satisfaction of the Engineer-in-Charge. The work includes all sundry materials and flexible connections as required to avoid transmission of vibrations.
- 5 The work shall also include suitable supports for pipes cable etc if required.

7.0 Battery Charger Kit

When set is not in operation, controlled from the load side so that the charger shall only be energised when mains are energised. It shall remain off when the set is in operation. This shall consist of:-

- 1. Mains transformer of adequate rating with taping on secondary side for TRICKLE/BOOST CHARGING.
- 2. Rectified Bridge type Rectifier.
- 3. DC Voltmeter 0-30 Volt, Square flush mounting type.
- 4. DC Ammeter 0-30 A Square flush mounting type.
- 5. Charge rate (Trickle/Boost) selector switch.

6. Facia window indicate to battery charger "ON" indication.

8.0. Installation of Panel

- 1. The Contractor shall also provide suitable foundation bolts for the installation of control panel.
- 2. The panel shall be accurately levelled so as to ensure trouble free and smooth operation.
- 3. All cable work etc. shall be carried out in a workman like manner to the satisfaction of the Engineer-in-Charge. The work includes all sundry materials and flexible connections as required to avoid transmission of vibrations.
- 4. For providing control & power cables required at site between Alternator to Standard Panel. No extra payment shall be made on this account.

9.0. Installation of DG Set

- 1 The alternator coupled to the diesel engine with horizontal coupling shall be mounted on a heavy duty common base plate of suitable steel channel of welded construction. The foundation shall be made as per the CPWD Specifications.
- The contractor will execute the work so as to comply all the requirements of competent Pollution Control Board.
- The Contractor shall have to extend the exhaust pipe as per CPWD Specifications.
- All exhaust joints shall be welded to prevent escape of flue gases and smoke inside the Generator room. Asbestos rope shall be fixed on full length (inside the room) of exhaust pipe which is in the scope of work.
- All the connection from tank to the Engine shall be provided with MS pipe fixed on ground with suitable clamps/saddles etc as required.
- 6 Multi core copper cable to be used for control connection from control panel to DG Set should be having size of each wire not less than 2.5 Sq. mm.
- Anti corrosive solution shall be filled (first filling) by the contractor free of cost in the cooling system.
- 8 Prevention/Protective covering on the sand filling around foundation shall be liability of contractor.

10.0 TECHNICAL SPECIFICATION FOR ACOUSTIC ENCLOSURE

10.1. As per CPWD norms, restriction has been imposed for new DG Sets upto 1000 KVA for noise level. Therefore, in terms of these norms, acoustic enclosure should be type tested at the climatic conditions specified in though one of the authorized laboratory.

10.2. Installation.

10.2.1. Acoustic enclosures are supplied with built in Anti Vibration Mountings (AVMs). As such Gen Set can be installed directly on the level surface.

10.2.2. Exhaust piping outlet should not be turned towards window/ventilator of home or occupied building. Provision of rain cap should be ensured.

10.3. Service Accessibility.

- 10.3.1. Genset/Engine control panel should be visible from outside the enclosure.
- 10.3.2. Routine/periodical check on engine/alternator (filter replacement and tappet setting etc) should be possible without dismantling acoustic enclosure.
- 10.3.3. For major repairs/overhaul, it may be required to dismantle the acoustic enclosure.
- 10.3.4. Sufficient space should be available around the Genset for inspection and service.

10.4. General Design Guidelines.

- 10.4.1. To avoid re-circulation of hot air, durable sealing between radiator and canopy is must.
- 10.4.2. Ventilation fans are must for the Gensets cooled by heat-exchanger/cooling tower system.
- 10.4.3. Exhaust piping inside the enclosures must be lagged (except below).
- 10.4.4. Temperature rise inside the enclosure should not be more than 5°C for maximum ambient above 40° C and it should be below 10° C for ambient below 40° C.
- 10.4.5. There should be provision for oil, coolant drain and fill. Fuel tank should have provision for cleaning.

10.5. Specifications for Acoustic Enclosure.

- 10.5.1. The acoustic enclosure shall be designed and manufactured confirming to relevant standards suitable for out door installation exposed to weather conditions, and to limit overall noise level to 75 dB (A) at a distance of 1 mtr. from the enclosure as per CPCB norms under free field conditions.
- 10.5.2 The construction should be such that it prevents entry of rain water splashing into the enclosure and allows free and quick flow of rain water to the ground in the event of heavy rain. The detailed construction shall confirm to the details as under:-
- 10.5.3. The enclosure shall be fabricated out of the CRCA sheet of thickness not less than 1.6 mm on the outside cover with inside cover having not less than 0.6mm thick perforated powder coated CRCA sheet.
- 10.5.4. The hinged doors shall be made from not less than 16 SWG (1.6 mm) thick CRCA sheet and will be made air tight with neoprene rubber gasket and heavy duty locks.
- 10.5.5. All sheet metal should be powder coated.
- 10.5.6. The enclosure should be powder coated.
- 10.5.7. The enclosure should accommodate the daily service fuel tank of the DG Set to make the system compact. There should be provision of gauge, which should show the level of the fuel even when the DG set is not running. The gauge should be calibrated. The fuel tank should be filled from the outside as in automobiles and should be with a lockable cap.
- 10.5.8. The batteries should be accommodated in the enclosure in battery rack.

- 10.5.9. The canopy should be provided with high enclosure temperature safety device.
- 10.5.10. The acoustic lining should be made up of high quality insulation material i.e. glass/mineral wool of minimum 50 mm thickness up to 500 KVA capacity and 75 Kg/cubic meter to 100 Kg/cubic meter for sound absorption as per standard design of manufacturer's to reduce the sound level as per the CPCB norms. The insulation material shall be covered with fine glass fiber cloth and would be supported by perforated MS sheet duly powder coated.
- 10.5.11. The enclosure shall be provided with suitable size and No. of hinged type doors along the length of the enclosure on each side for easy access inside the acoustic enclosure for inspection, operation and maintenance purpose. Sufficient space will be provided inside the enclosure on all sides of the DG set for inspection, easy maintenance and repairs.
- 10.5.12. The canopy should be as compact as possible with good aesthetic look.
- 10.5.13. The complete enclosure shall be of modular construction.
- 10.5.14. The forced ventilation shall be as per manufacturer design using either engine radiator fan or additional blower fan(s). if the acoustic enclosure is to be provided with forced ventilation then suitable size of axial flow fan (with motor and auto-start arrangement and suitable size axial flow exhaust fan to take the hot air from the enclosure complete with necessary motors and auto start arrangement should be provided. The forced ventilation arrangement should be provided with auto stop arrangement to stop after 5 minutes of the stopping of DG Sets.
- 10.5.15. The acoustic enclosure should be suitable for cable connection/connection through bus trunking. Such arrangement on acoustic enclosure should be water proof and dust-proof confirming to IP-65 protection.

Name of work:- Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur.

Acceptable Makes

Following are the makes/manufacturers for diesel engines and alternators.

a)	250 KVA Diesel Engine	i) Cummins ii) Cooper iii) Kirloskar iv) Ashok Leyland
b)	Alternators	Stamford/LeroySummer/Crompton Greaves/Kirloskar
c)	MCCB	L&T / Siemens /ABB /Legrand /Schneider Electric/C&S.
d)	Contactor	Siemens/Legrand/Schneider/ABB/L&T/C&S
e)	Battery	Exide/Prestolite/Cummins.
f)	Control Cable & Power Cable	Finolex/L&T/polycab/Havells/HPL (It should be ISI marked)
f) g) h) i) j)	Control Cable & Power Cable CTs Selector Switches Indicating Lamp MS Pipe/GI pipe	. ,
g) h) i)	CTs Selector Switches Indicating Lamp	be ISI marked) AE/ Kappa L&T/ Kay Cee/ BCH BCH/ L&T
g) h) i) j)	CTs Selector Switches Indicating Lamp MS Pipe/GI pipe	be ISI marked) AE/ Kappa L&T/ Kay Cee/ BCH BCH/ L&T Jindal (Hisar)/ TATA Manufactured by OEM/OEA of above makes

Note: Manufacturer's test certificates of all materials i.e DG Set and AMF Panel etc are required at the time of supply. The year of manufacturing should be current or not earlier than six months from the date of opening of price bid.

Format I

BRIEF DESCRPTION OF THE FIRM/ Valid License holder contractor

- a) Name of the firm/ Valid License holder contractor
- b) Year of registration (applicable in case of firm).
- c) Type of firm (Individual/Proprietary/Limited Company or any other),applicable in case of firm only:

Note:-

Provide documents in support of the details provided in above format, failing which the authenticity of the information may not be accepted.

Authorised Signatory of the Firm/ License Holder Contractor

Format II

EXPERIENCE OF COMPANY/ Valid class "A" Electrical License holder contractor

(Experience of relevant and similar work completed during last three years and ongoing works) Use separate sheet for each work.

1.	Project title & Location:	
2.	Name of the Client and Address:	
3.	Describe area of Participation (Specific Work done/Services rendered by the applicant)	
4.	Period of Work Done	
5.	Total cost of work	
6.	Status of the work undertaken.	
7.	Any other details	

NOTE:

Supporting documents like certificates from the client may be attached.

Authorised Signatory of the Firm/License Holder Contractor

On the Non-Judicial Stamp Paper of Rs.100/-

AFFIDAVIT

I / We	Name of Person / Persons who presenting the affidavit) M/s (Name of	
Contr	ctor's Firm / Company) (Executing as a company / firm) who fulfil all the	
AIIMS	ties who filling the affidavit works as a firm / Company, by this affidavit certify / certified the Raipur by inviting tender information Tender No for (Name of work)	nat
regare agree	ng the following information in certificates / documents presented, in that I / we personathat we have given all the information, documents & certificates are true to our belief and fully responsible as:-	
(1)	It is to certify that all the information given in this affidavit are true and correct.	
(2)	That I / we presented by us,	
	(a) Amount submitted for Tender fees and original EMD in the form of Demand Draft a relevant Documents are true.	anc
	(b) Information given regarding with the Financial Qualifications & Annual Turnover is to & correct.	rue
	(c) Information regarding Work in Hand is true.	
(3)	I / We have not Black Listed / Debated by Govt. of India / any Government of State Gov Department of State Govt.	t. /
(4)	That, My / Our Firm's / Company's No relative / any nearest relative is working in this firm	
	OR	
	Nearest relative works as follows:-	
	Name Post Present Post-Establishment	
(5) firm.	that, the No Criminal Case has been registered or ongoing by any court against me/our/	
	Certified by Public Notary	
	With their Seal & Sign Signature with Se	eal

Technical Bid (Check List)

[In separate sealed Cover (Envelope – 1) superscripted as "Technical Bid"]

Ser.	Details of the Tenderer/Bidder	Details	Yes	No	Remarks
No.					
1.	Name of the Tenderer/Bidder				
2.	Complete Address				
3.	State clearly whether it is sole Proprietor or				
	Partnership firm or a company or a government				
	Department or a Public Sector Organization. (If not				
	proprietorship, for which Certificate of Internship				
	/Memorandum of Arbitration)				
4.	Details of the Earnest Money Deposit (EMD) (Yes/No)				
	DD No.				
	Dated -				
	Drawn on Bank -				
	Amount - Rs. 50,000/ -				
_	(Rupees FIFTY THOUSAND only)				
5.	Details of Tender Processing Fee (The cost of Tender do	ocuments) (Yes/No)			
	DD No.				
	Dated -				
	Drawn on Bank -				
	Amount - Rs. 500/ -				
_	(Rupees FIVE HUNDRED only)	1			
6.	Whether each page of NIT and its annexure have been				
	Signed and Stamped.				
7.	Whether Bidders have quoted for each and every item				
	mentioned in financial Bid (Yes/No)				
	(If No, then please attach a list of quoted items with				
	the technical Bid without indicating price)				
8.	Copy of GST Registration No.				
9.	Permanent Account No. and latest acknowledgement				
	of IT Return				
10.	e-Mail ID if any				
11.	Contact No.				
12.	Contractor's License No(MV or Above)				
13	Validity of (MV or Above) License				
14.	Affidavit (as per Page 16)				

Business Address: -	Name:
	(Signature of Bidder with Firm's Seal)
Place:	Dated:

DECLARATIONS TO BE GIVEN BY THE TENDERERS

It is to certify that:-

		e or in the office of	of Executive Eng	•	rection Slips as available on ith the terms and conditions
	Date	:		(Signature of the Tenderer)
	docum acknow	ion that I/We will nents, failing whic	sign the enclos h I/We will sta NAKING OF THE	ed Agreement, which i nd disqualified from tl BID SHALL BE REGARD	ritation to offer made on the s an integral part of tender ne tendering process. I/We ED AS AN UNCONDITIONAL
	main d Raipur	r agree that execu contract, which wil	tion of the said I come into exis ge and accept th	Agreement shall be septence when Tender/Bid the duration of the Agree	ement in letter and spirit and parate and distinct from the is finally accepted by AIIMS, ement, which shall be in the
	and u	ment, while submi	tting the tender o disqualify th	/bid, AIIMS, Raipur sha e tenderer/bidder and	re to sign and accept the large in the large
	(d) "I, S/o Sri resident of Hereby certife none of my relative(s) is/are employed in AIIMS, Raipur (Chhattisgarh). In case at any it is found that the information given by me is false/ incorrect, AIIMS, Raipur shall has absolute right to take any action as deemed fit without any prior intimation to me".				(Signature of the Tenderer)
				isgarh). In case at any stage, AIIMS, Raipur shall have the	
		NOTE: - (To be directors in case		he partners in case of µ	partnership firms, by all the
	Date	:			(Signature of the Tenderer)
Other	Partners	s (if any):-			
3.	Sri	S/o Sri _	Si	gnature:	_
4.	Sri	S/o Sri _	S	gnature:	
5.	Sri	S/o Sri _	S	gnature:	

Sri ______ S/o Sri _____ Signature: ____

6.

(To be signed by the Bidder and same signatory competent/authorized to sign the relevant contract on behalf of AIIMS, Raipur).

(Specimen) AGREEMENT

This Agreement is made aton this Day of2018.
BETWEEN
Director, AlIMS, Raipur represented through Executive Engineer, AlIMS, RAIPUR (Hereinafter referred as the) (Address) " Principal/Owner ", which expression shall unless repugnant to the meaning or context hereof include its success or sand permitted as signs) AND
Individual/firm/Company) through
"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its success or sand permitted as signs)
Preamble
WHEREAS, the Principal/Owner has floated the Tender (NIT No)
(here in after refer red to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for "Providing Earthing for 20 Nos Modular operation Theatre installed at A-A1 Block & B-B1 Block Hospital Building, AIIMS, Raipur" hereinafter referred to as the "Contract".
AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the Land, Rules & Regulations, Economic use of resources and of fairness/ transparency in its relation with its Bidder(s) and Contractor(s).
AND WHEREAS to meet the purpose afore said both the parties have agreed to enter to this Agreement (hereinafter referred to as " Pact "), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

Article - 1: Commitment of the Principal/Owner.

agree as follows and this Pact witnesses as under:-

4. The Principal/Owner commit itself to take all measures necessary to prevent corruption and to observe the following principles:

NOW, THEREFORE, inconsideration of mutual covenants contained in this Pact, the parties hereby

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

- (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the Tender processor the Contract execution.
- (c) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- 7. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/Prevention of Corruption Act, 1988 (P C Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article - 2: Commitment of the Bidder(s)/Contractor(s)

- 5. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standard and makes, and report to the Government/Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 6. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:-
 - (a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind what so ever during the Tender process or during the execution of the Contract.
 - (b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - (c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or passion to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - (d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly

could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

- (e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to, or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- 3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
- 5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may be fall upon a person, his/her reputation or property to influence their participation in the tendering process).

Article - 3: Consequences of Breach.

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:-

- 1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article-2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may before vigor for a limited period as decided by the Principal/Owner.
- 2. **Forfeiture of EMD/Performance Guarantee/Security Deposit**: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contractor has accrued the right to terminate/determine the Contract according to Article-3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
- 3. **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive

Suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article - 4: Previous Transgression.

- 1. The Bidder declares that no previous transgressions occurred in the last 05 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender processor action can be taken for banning of business dealings/holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.
- 3. If the Bidder/Contractor can prove that he has resorted/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/ Owner may, at its own discretion, revoke the exclusion prematurely.

<u>Article - 5: Equal Treatment of all Bidders/Contractors/Sub-contractors.</u>

- 1. The Bidder(s)/Contractor(s)/undertake(s) to demand from all sub-contractors a commitment in conformity with this Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.
- 2. The Principal/Owner will enter in to Pacts on identical terms as this one with all Bidders and Contractors.
- 3. The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article - 6: Duration of the Pact.

- 1. This Pact begins when both the parties have legally sign edit. It expires for the Contractor/Vendor 12 months after the completion of work under the contractor till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.
- 2. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, AIIMS, Raipur.

Article - 7: Other Provisions.

- 1. This Pact is subject to Indian Law, place of performance and jurisdiction is the **Raipur** of the Principal/Owner, who has floated the Tender.
- 2. Changes and supplements need to be made in writing. Side agreements have not be unmade.

- 3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4. should one or several provisions of this Pact turnout to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.
- 5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Agreement/Pact, any action taken by the Owner/Principal in accordance with this Agreement/Pact or interpretation thereof shall not be subject to arbitration.

Article - 8: LEGAL AND PRIOR RIGHTS.

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Pact.

IN WITNESS WHEREOF the parties have signed and executed this Pact at the place and date first above mentioned in the presence of following witnesses:

(For and on behalf of Principal/Owner)	(For and on behalf of Bidder/Contractor)
WITNESSES:	
1(Signature, Name and address)	2(Signature, Name and address)
Place :	
Dated :	

PROFORMA OF SCHEDULES

SCHEDULE 'A'

(Reference to General conditions of Contract.)

Name Supply, installation, testing & Commissioning of 250 KVA silent type

ofWork:- DG set with AMF panel at AIIMS, Raipur

Estimated Cost of Work: Rs. 25,00,000/-

(a) Earnest Money = Rs. 50,000/-

(b) Performance Guarantee = 5% of Contract Value

(c) Security Deposit = 5% of Contract Value

SCHEDULE 'B'

GENERAL RULES & DIRECTIONS:

Officer Inviting Tender: - Executive Engineer, AIIMS, Raipur

Definitions		See below
2 (v)	Engineer-in-Charge	Executive Engineer , AIIMS, Raipur
2(viii)	Accepting Authority	Director AIIMS, Raipur
2(x)	Percentage on cost of materials and labour to cover all over heads and profit	15%
2(xi)	Standard Schedule of Rates	As per CPWD Plinth Area Rates for Specialised E&M works 2014
9(ii)	Standard AIIMS Contract Form	GCC for CPWD Works - 2014 as amended and up to and including correction slip
Clause – 1.		·
(i)	Time allowed for submission of Perguarantee, Program Chart (Time & Prograpplicable Labour Licenses, Registration w ESIC & BOCW Welfare Board or proof of thereof from the date of issue of letter of ac Maximum allowable Extension with late fee	ress) and ith EPFO, applying cceptance
(ii)	iviaximum allowable extension with late fee	: ლ U.1% · /

of Performance guarantee amount beyond the

days

period provided in (i) above.

Clause – 2.

Authority for fixing compensation under Clause 2 : Superintending Engineer/

Director, AIIMS, Raipur

Clause – 2A.

Whether Clause 2A shall be applicable : **No**

Clause – 5.

Time allowed for execution of work : ONE (1) Months (AFTER ISSUE

OF WORK ORDER).

Time of start of work: : Within seven days

Authority to decide fair & reasonable extension of time

for completion of work

Superintending Engineer/

Director, AIIMS, Raipur

Clause – 6A.

Whether Clause 6A shall be applicable : Yes

Clause 7

Gross work to be done together with net payment/adjustment of advances for material collected, if any since the last such payment for being eligible to interim payment

: Rs 5.00 lacs

Clause - 7A.

Whether clause 7A shall be applicable

: YES.

<u>Clause – 10B (ii).</u>

Whether Clause 10B(ii) shall be applicable

No.

<u>Clause – 10C.</u>

: Not applicable.

Clause - 10CA.

: Not applicable.

<u>Clause - 16.</u>

Competent Authority for deciding reduced rates

: Superintending Engineer/ Director,

AIIMS, Raipur

<u>Clause – 25.</u>

Settlement of dispute & Arbitration

Director , AIIMS, Raipur

<u>Clause – 36(i).</u>

Requirement of Technical Staff and rate of recovery in case of non-compliance shall be as per the following table:-

Value of Work	Ser. No	Minimum qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical represent- tative)	Minimum Experience in years	Num- ber	Rate at wh recovery sh made from contractor event of no provision of clause36(i) (Figures)	nall be the in the ot fulfilling of
For Agreement amount up to Rs 150 Lakhs	(a)	Graduate Engineer OR Diploma Engineer	Electrical	Principal Technical representative	02 years for Graduate Engineer/ 05 years for Diploma Engineer	1	Rs 15,000/-	Rs Fifteen Thousand Only
For Agreement amount between	(a)	Graduate Engineer	Electrical	Principal Technical representative	5years	1	Rs 25,000/-	Rs Twenty Five Thousand Only
Rs 150 Lakhs to Rs 500 Lakhs	(b)	Graduate Engineer OR Diploma Engineer	Electrical	Technical representative	02 years for Graduate Engineer/ 05 years for Diploma Engineer	1	Rs 15,000/-	Rs Fifteen Thousand Only

Apart from above, other terms and conditions of GCC (CPWD)-2014 with upto date correction slips will also be followed.

Format of <u>PERFOMANCE SECURITY/BANK GUARANTEE</u>

1. having		of the Director, AIIMS, Raipur (hereinafter called " the Government ") terms and conditions of the proposed agreement
betwe		And
		(hereinafter called " the said Contractor(s)") for the work
		(hereinafter called " the said agreement}" having agreed to
produ	ction of a irrevocable B	ank Guarantee for Rs. (Rupees only) as a
	ty/guarantee from the and conditions in the s	contractor(s) for compliance of his obligation in accordance with the aid agreement.
	I/We	(hereinafter referred to as Bank) hereby (Indicate the name
of the	Bank) undertake to (Rupees	pay to the Government an amount not exceeding Rs. only) on demand by Government.
2.	I/We	do hereby undertake to pay the (Indicate the name of
from to likely to as reg	the Government stating to be due from the said ards the amount due and the amount due and the said ards the amount due and the said ards the amount due and the said ards the said archerencements the said archerencements are said archerencements are said archerencements.	ayable under this Guarantee without any demur, merely on a demand g that the amount claimed is required to meet the recoveries due or decontractor (s). Any such demand made on the Bank shall be conclusive and payable by the bank under this Guarantee. However, our liability restricted to an amount not exceeding Rs. (Rupees
pendi	chstanding any dispute ng before any court or	undertake to pay to the Government any money so demanded or disputes raised by the contractor (s) in any suit or proceeding liability under this present being absolute and unequivocal.
4. payme		de by us under this bond shall be valid discharge of our liability for contractor (s) shall have no claim against us for making such payment.
5.	I/ We	further agree that the guarantee herein contained
(Indica	ate the name	
perfor Gover discha condit	mance of the said agr nment under or by virt rged, or till Engineer-i	all force and effect during the period that would be taken for the eement and it shall continue to be enforceable till all the dues of the ue of the said agreement have been fully paid, and its claims satisfied or n- charge on behalf of the Government, certifies that the terms and ment have been fully and properly carried out be the said contractor (s) parantee.
6.	I/We	further agree with the Government that the (Indicate
affecti said ag postpo	ng in any manner our greement or to extend one for any time or fi	ment shall have the fullest liberty without our consent, and without obligations hereunder, to vary any of the terms and conditions of the time of performance by the said contractor (s) from time to time or to rom time to time any of the powers exercisable by the Government) and to forebear or enforce any of the terms and conditions relating to

the said agreement & we shall not be relieved from our liability by reasons of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on that part of the Government or any indulgence by the Government to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

7. the coi	The guarantee wontractor (s).	vill not be discharged o	due to the change in the	e constitution of the Bank o
8.	We	I	astly undertake not to re	evoke this (Indicate the
name (of Bank) Guarante	ee except with the prev	vious consent of the Gov	ernment in writing.
9. Goverr Restric	nment, Notwithsta			s extended on demand by against this Guarantee is
month		piry or the extended d	•	is lodged with us within six rantee all our liabilities under
Dated	the d	ay of	_ for	

SCHEDULE OF QUANTITY

Name of Work: - Supply, installation, testing & Commissioning of 250 KVA silent type DG set with AMF panel at AIIMS, Raipur.

Description of Items	Qty.	Unit	Rate (In Rs)		Amount
			In Figure	In Words	(In Rs.)
Commissioning, Inspection by Statutory Local Authorities, Loading, Transportation Charges from Manufacturers Factory Site and Unloading at Medical Gas Plant site, AlIMS, Raipur of 'Silent Type' Diesel Generating set having Prime Power Rating of 250 KVA, 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 with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with dedicated DG set control panel and necessary instrumentation, having arrangement for termination of 2 nos. 3.5cx185 sqmm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required, Control Cables, Batteries, Battery Charger, Fuel Tank, Fuel Piping, Silencer, Exhaust Piping, Thermal Logging, Asbestos Rope Insulation, Cladding etc. for Exhaust Piping complete as					
assembly of suitable BHP at 1500RPM suitable for above output of alternator at 40 degree C,50% RH & at 1000 meter MSL and conforming					
(i) Start-stop Switch with key					
(ii) water temperature indication					
(iii)Lubrication oil pressure indication					
(iv) Lubrication oil temperature indication					
(v)Battery charging indication					
(vi)RPM indication	1	Nos			
(vii)Over speed indication		1103			
(viii) Low lub. Oil trip indication					
(ix) Engine Hours indication					
50Hz, AC supply with 0.8 lagging power factor at 40 Degree C, 50% RH & at 1000 Meter MSL. The alternator shall be having SPDP enclosure, brushless, continuous duty, self-excited& self-regulated through AVR conforming to IS: 4722/BS 2613 suitable for tropical conditions and with					
	Design, Supply, Erection, interconnection to existing panel, Testing, Commissioning, Inspection by Statutory Local Authorities, Loading, Transportation Charges from Manufacturers Factory Site and Unloading at Medical Gas Plant site, AlIMS, Raipur of 'Silent Type' Diesel Generating set having Prime Power Rating of 250 KVA, 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 with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with dedicated DG set control panel and necessary instrumentation, having arrangement for termination of 2 nos. 3.5cx185 sqmm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required , Control Cables, Batteries, Battery Charger, Fuel Tank, Fuel Piping, Silencer, Exhaust Piping, Thermal Logging, Asbestos Rope Insulation, Cladding etc. for Exhaust Piping complete as required. consisting of the following:- Diesel Engine: Diesel Engine: Diesel Engine 4stroke water cooled, electric start, 6 cylinder, inline assembly of suitable BHP at 1500RPM suitable for above output of alternator at 40 degree C,50% RH & at 1000 meter MSL and conforming to BS 5514, BS 649, IS 10000 capable of taking 10% overloading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories. Engine mounted Instrument Panel fitted with and having digital display for following: (ii) Start-stop Switch with key (iii) water temperature indication (ivi) Lubrication oil pressure indication (ivi) Lubrication oil temperature indication (vi)RPM indication (vi)RPM indication	Design, Supply, Erection, interconnection to existing panel, Testing, Commissioning, Inspection by Statutory Local Authorities, Loading, Transportation Charges from Manufacturers Factory Site and Unloading at Medical Gas Plant site, AlIMS, Raipur of 'Silent Type' Diesel Generating set having Prime Power Rating of 250 KVA, 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 with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with dedicated DG set control panel and necessary instrumentation, having arrangement for termination of 2 nos. 3.5cx185 sqmm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required, Control Cables, Batteries, Battery Charger, Fuel Tank, Fuel Piping, Silencer, Exhaust Piping, Thermal Logging, Asbestos Rope Insulation, Cladding etc. for Exhaust Piping complete as required. consisting of the following: Diesel Engine: Diesel Engine: Diesel Engine 4stroke water cooled, electric start, 6 cylinder, inline assembly of suitable BHP at 1500RPM suitable for above output of alternator at 40 degree C,50% RH & at 1000 meter MSL and conforming to BS 5514,BS 649,IS 10000 capable of taking 10% overloading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories. Engine mounted Instrument Panel fitted with and having digital display for following: (ii) Start-stop Switch with key (iii) water temperature indication (vi) Lubrication oil temperature indication (vii) Cover speed indication (viii) Low lub. Oil trip indication (viii) Low lub. Oil trip indication (viii) Low lub. Oil trip indication (viii) Cover speed indication (viii) Cover speed indication (viii) Cover speed indication (viii) Cover speed indication (viii) Co	Design, Supply, Erection, interconnection to existing panel, Testing, Commissioning, Inspection by Statutory Local Authorities, Loading, Transportation Charges from Manufacturers Factory Site and Unloading at Medical Gas Plant site, AlIMS, Raipur of 'Silent Type' Diesel Generating set having Prime Power Rating of 250 KVA, 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 with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with dedicated DG set control panel and necessary instrumentation, having arrangement for termination of 2 nos. 3.5cx185 sqmm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required , Control Cables, Batteries, Battery Charger, Fuel Tank, Fuel Piping, Silencer, Exhaust Piping, Thermal Logging, Asbestos Rope Insulation, Cladding etc. for Exhaust Piping complete as required. consisting of the following:- Diesel Engine: Diesel Engine Diesel engine 4stroke water cooled, electric start, 6 cylinder, inline assembly of suitable BHP at 1500RPM suitable for above output of alternator at 40 degree C,50% RH & at 1000 meter MSL and conforming to BS 5514,BS 649,IS 10000 capable of taking 10% overloading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories. Engine mounted Instrument Panel fitted with and having digital display for following: (i) Start-stop Switch with key (ii) Water temperature indication (ivi) Lubrication oil pressure indication (ivi) Lubrication oil trip indication (vii) Cow lub. Oil trip indication (viii) Low lub. Oil trip indication (viii) Low lub. Oil trip indication (viii) Cow speed indicatio	In Figure Design, Supply, Erection, interconnection to existing panel, Testing, Commissioning, Inspection by Statutory Local Authorities, Loading, Transportation Charges from Manufacturers Factory Site and Unloading at Medical Gas Plant site, AlIMS, Raipur of 'Silent Type' Diesel Generating set having Prime Power Rating of 250 KVA, 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 with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with dedicated DG set control panel and necessary instrumentation, having arrangement for termination of 2 nos. 3.5cx185 sqmm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required, Control Cables, Batteries, Battery Charger, Fuel Tank, Fuel Piping, Silencer, Exhaust Piping, Thermal Logging, Asbestos Rope Insulation, Cladding etc. for Exhaust Piping complete as required. consisting of the following: Diesel Engine: Diesel Engine: Diesel engine extroke water cooled, electric start, 6 cylinder, inline assembly of suitable BHF at 1500RPM suitable for above output of alternator at 40 degree C,50% RH & at 1000 meter MSL and conforming to BS 5514,BS 649,IS 10000 capable of taking 10% overloading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories. Engine mounted Instrument Panel fitted with and having digital display for following: (ii) Start-stop Switch with key (iii) water temperature indication (ivi) Lubrication oil temperature indication (ivi) Lubrication oil temperature indication (ivi) Low lub. Oil trip indication (ivi) Engine Hours indication Alternator: Synchronous alternator rated at 250KVA, 415 Volts at 1500RPM, 3Phase 50Hz, AC supply with 0.8 lagging power factor at 40 Degree C, 50% RH & at 1000 Meter MSL. The alternator shall be having SPDP enclosure, br	Design, Supply, Erection, interconnection to existing panel, Testing, Commissioning, Inspection by Statutory Local Authorities, Loading, Transportation Charges from Manufacturers Factory Site and Unloading at Medical Gas Plant site, AIMS, Raipur of Silent Type' Diesel Generating set having Prime Power Rating of 250 KVA, 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 with Diesel Engine, Alternator, Acoustic Enclosure with AMF Panel along with dedicated DS set control panel and necessary instrumentation, having arrangement for termination of 2 nos. 3.5cx185 sqmm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required, Constrol Cables, Batteries, Battery Charger, Fuel Tank, Fuel Piping, Silencer, Exhaust Piping, Thermal Logging, Asbestos Rope Insulation, Cladding etc. for Exhaust Piping complete as required. consisting of the following: Diesel Engine: Diesel Engine Diesel Engine 4stroke water cooled, electric start, 6 cylinder, inline assembly of suitable BHP at 1500RPM suitable for above output of alternator at 20 degree C,50% RH & at 1000 meter MSL and conforming to BS 5514,BS 649,IS 10000 capable of taking 10% overloading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories. Engine mounted Instrument Panel fitted with and having digital display for following: (ii) Start-stop Switch with key (iii) water temperature indication (ivi) Lubrication oil temperature indication (ivi) Lubrication oil temperature indication (ivi) Dever speed indication (ivi) Lover speed indication (ivi) Lover speed indication (ivi) Engine Hours indication (ivi) Engine Hours indication (ivi) Engine Hours indication (ivi) Engine Hours indication Alternator: Synchronous alternator rated at 250KVA, 415 volts at 1500RPM, 3Phase 50Hz,

		1	1	T	1
d)	Base Frame & Foundation:				
	Both the engine and the alternator shall be mounted on suitable base frame made of MS Channel with necessary reinforcement which shall be installed on suitable cement concrete foundation as per foundation diagram of manufacturer (party scope) and vibration isolation arrangement as per recommendations of manufactures.				
e)	Fuel Tank:				
<u> </u>	Daily service fuel tank of more than 350 Ltrs capacity fabricated out of 3mm thick MS 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 exhausts silencer and catalytic converter.				
g)	Starting System:				
	24V DC starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable nos. of batteries as required as per specifications.				
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 as per specifications.				
2	Supplying and fixing exhaust gas piping of suitable dia. Welded black MS. B class pipe conforming 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 & aluminium cladding etc., as required as per specifications.	3	Mtrs		
3	Fabricating, Installation, Testing & Commissioning of weather proof AUTO-MATIC MAINS FAILURE for operation of DG sets including auto bypass panel, suitable for 250 KVA 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, KVARH & provision for overload, short circuit, restricted earth fault, and elsewhere ,if required, all complete and inter locking including the following:	1	Nos.		
a)	2Nos. 400A,4Pole,50 KA MCCB				

b)	2Nos. 400A 3pole power contactor with 2Nos + 2No				
	Auto/Manual/Test/Off selector switch				
	2Nos over voltage & 2nos. Under voltage relays				
	3nos. CTs of suitable capacity				
	Energy analyzer unit to indicate current, voltage, frequency, power factor				
f)	and KWH				
g)	Indicating lamps for load on mains and load on set				
h)	MCB's for instruments				
1 11	Battery charger complete with transformer/rectifier, DC voltmeter and ammeter, selector switch for trickle ,off and boost				
j)	Mains supply failure monitor				
k)	Supply failure timer				
I)	Restoration timer				
m)	Control unit with three impulse automatic engine start/stop and failure to start lockout				
n)	On/off/Control circuit switch with indicator				
o)	Audio annunciation for				
	i) High water temperature				
	ii) Low lubricating oil pressure				
	iii) Engine over speed				
	iv) Engine fails to start				
	v) Full load warning				
р)	Providing by-pass arrangement for AMF Panel 2Nos 400 Amp on-load changeover switch for DG set and mains including connections, testing and commission etc. as required.				
4	Supplying and Fixing & termination of 2 nos. 3.5cx185 sq mm Armoured Aluminium PVC cables at incoming and outgoing sides of panels for interconnection to existing panel, along with Pipe/cable tray for laying cables along with necessary civil breaking and repair work as required.				
a)	2 x 3.5c x 185 sq mm	12	Mtr		
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.	8	No		
a)	3.5C × 185 sq mm				
6	Supplying erecting and terminating PVC armoured cable 12 core 2.5 sqmm copper conductor G.I earth wire complete erected with glands & lugs on wall/trusses/pole or laid in provided trench/pipe as per specification.	15	Mtr		
	Supply, installation, testing and commissioning 04 No's copper earth plate type 600 × 600 × 3 mm thick including all accessories & masonry enclosure with cover plate having locking arrangement & watering pipe of 2.7m long etc. with charcoal/coke and salt as required and 01 No's chemical Earthing specially for Neutral as required.	5	Each Set		

Supplying laying 25mm× 5mm copper strip at 0.50 meter below ground as strip earth electrode, including connections, terminations with nut bolt, spring, washers, soldering etc as required (jointing shall be done by overlapping and with 2 sets of brass nut bolt and spring washers spaced at 50mm)	30	Mtr		Total	
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Executive Engineer AIIMS Raipur